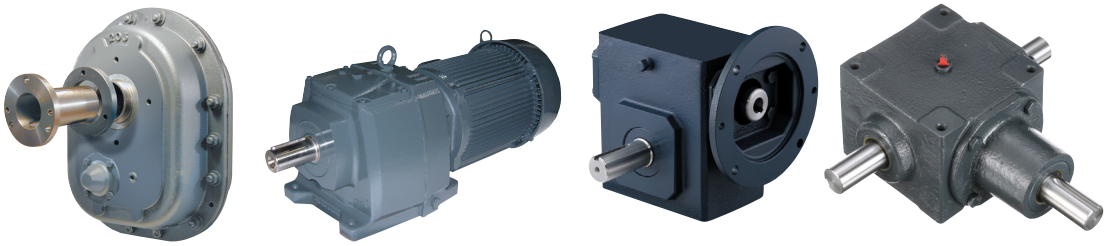
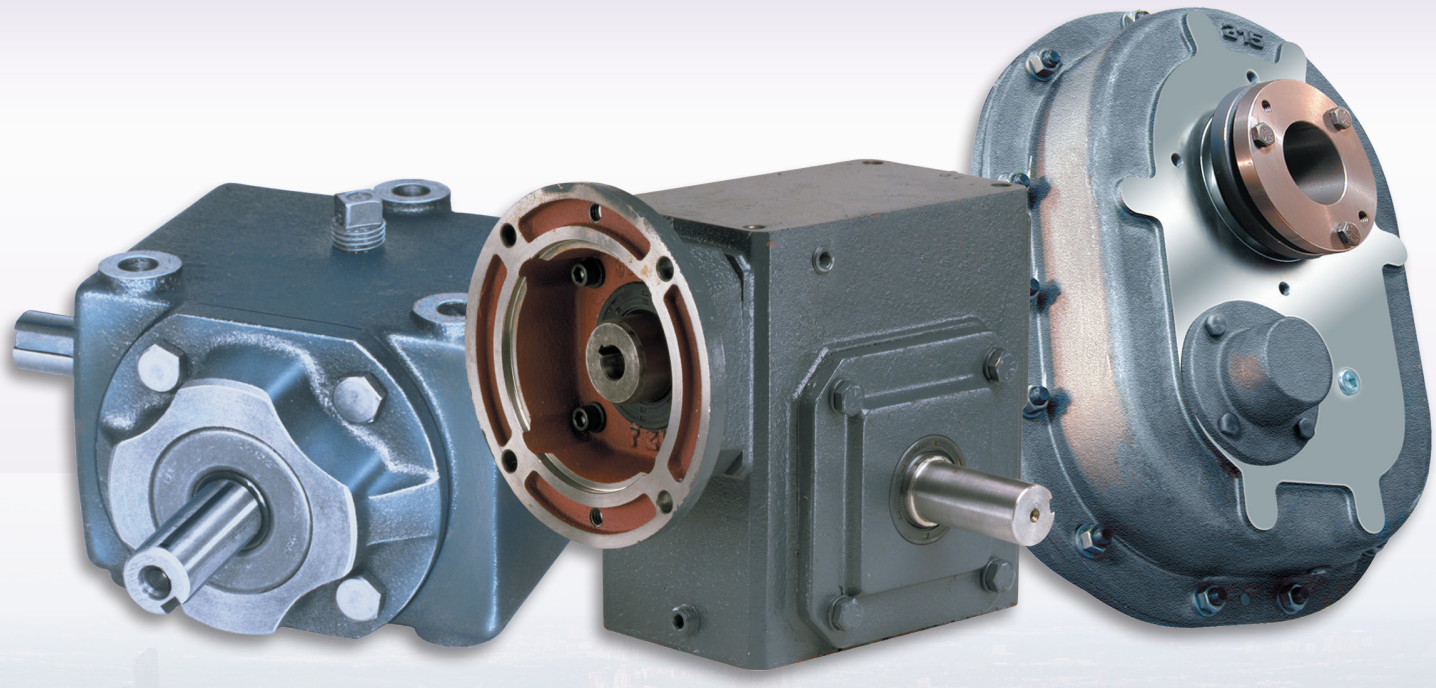
Browning®

Morse®



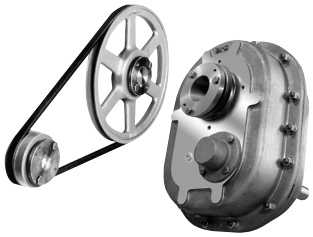
GEARING CATALOG

REGAL®



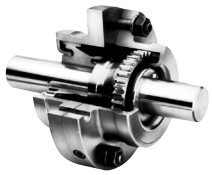
Browning®

Belt drive and helical shaft mounts with innovative bushing systems for ease of installation and maximum shaft locking capacity.



KOP-FLEX®

Heavy-duty industrial shaft couplings and the supporting technology for the toughest applications. Coupling types include gear, tapered grid, flexible metallic disc, universal joints, elastomeric and resilient shaft types.



McGILL®

The McGill® Camrol® cam follower was patented more than sixty years ago. Today, cam follower bearings are offered in over 1,400 different combinations and configurations.

Morse®

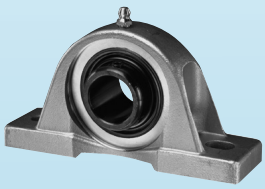
Self-contained clutch products for high torque demanding back-stopping conveyor applications. Specialized sealing to reduce contamination and lengthen clutch operation.

ROLLWAY®

Highly engineered cylindrical roller bearings for heavy duty, off-highway motorized wheels, screens and crusher applications.

SEALMASTER®

Problem solver bearings designed with application-specific sealing and inherent lubrication features to extend bearing life and reduce downtime.



SYSTEM PLAST®

System Plast® steel and engineered plastic conveying chains and chain tracks, modular plastic belts, composite housed bearings and Valu Guide® conveyor components and guide rolls are supplied globally.

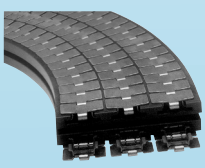


Table of Contents

Page

SMTP Shaft Mount TorqTaper Plus® Shaft Mounted Speed Reducers/SMFP Shaft Mount Finished Bore

Features and Benefits ..... A-4 - A-7
Selection and Ordering Information ..... A-8 - A-9
AGMA Application Classification ..... A-10 - A-11
AGMA Class Speed Reducer Selection Chart ..... A-12 - A-23
Dimensions ..... A-24 - A-27

HMTP Hydraulic Mount TorqTaper Plus Shaft Mounted Speed Reducers

Features and Benefits ..... A-28 - A-29
Selection and Ordering Information ..... A-30 - A-31
AGMA Application Classification ..... A-32 - A-33
AGMA Class Speed Reducer Selection Chart ..... A-34 - A-45
Dimensions ..... A-46 - A-47

CMTP C-Face Mount TorqTaper Plus Shaft Mounted Speed Reducers

Features and Benefits ..... A-48 - A-49
Selection and Ordering Information ..... A-50 - A-51
AGMA Application Classification ..... A-52 - A-53
AGMA Class Speed Reducer Selection Chart ..... A-54 - A-59
Dimensions ..... A-60 - A-61

Page

Shaft Mount Accessories Section

Features and Benefits ..... A-62 - A-63
Bushing Kits – Tapered Bore Type ..... A-64 - A-67
Bushings – Finished Bore Type ..... A-68 - A-69
Motor Mounts ..... A-70 - A-73
Belt Drives ..... A-74 - A-121
Belt Guards A-122
Bushing Guards A-123
Screw Conveyor Components ..... A-124 - A-130
Backstops and Torque Arm Kits A-131
Fan Kits/Pump and Cooler Kits/Breather Kits ..... A-132 - A-133

Shaft Mount Engineering Section

Input Shaft Overhung Load Capacity ..... A-136 - A-137
Output Thrust and Overhung Loads ..... A-138 - A-141
Minimum Shaft Requirements A-142
Face Mounting ..... A-144 - A-145
Lubrication ..... A-146 - A-149

Waste Water Treatment Drives

Features and Ratings A-150
Dimensions A-151

Bevel Reducers - Cast Iron

Features and Benefits ..... B-1 - B-2
Selection and Ordering Information B-3
AGMA Application Classification B-4
Engineering Data ..... B-5 - B-8
Dimensions ..... B-9 - B-10

Table of Contents

Page

Raider® Plus Worm Gear Reducers

Features and Benefits ..... C-1 - C-6
Selection and Ordering Information ..... C-7 - C-10
AGMA Application Classification ..... C-11 - C-12
Engineering Data ..... C-13 - C-17
Dimensions ..... C-19 - C-67

PowerGear® Worm Gear Speed Reducers - W Series

Features and Benefits ..... D-1 - D-2
Selection and Ordering Information ..... D-3 - D-4
AGMA Application Classification ..... D-5 - D-6
Engineering Data ..... D-7 - D-6
Ratings and Dimensions ..... D-11 - D-36

PowerGear Worm Gear Speed Reducers - V Series

Features and Benefits ..... D-37 - D-38
Selection and Ordering Information ..... D-39 - D-40
AGMA Application Classification ..... D-41 - D-42
Engineering Data ..... D-43 - D-46
Ratings and Dimensions ..... D-47 - D-58

PowerGear Worm Gear Speed Reducers - G Series

Features and Benefits ..... D-59 - D-60
Selection and Ordering Information ..... D-61 - D-63
AGMA Application Classification ..... D-64 - D-65
Engineering Data ..... D-66 - D-72
Ratings and Dimensions ..... D-73 - D-110

Page

PowerGear Worm Gear Speed Reducers - S Series

Features and Benefits ..... D-111 - D-112
Selection and Ordering Information ..... D-113 - D-114
AGMA Application Classification ..... D-115 - D-116
Engineering Data ..... D-117 - D-120
Ratings and Dimensions ..... D-121 - D-128

CbN Series

Gearmotors ..... E-1 - E-110
Reducers ..... E-111 - E-223

OtN Series

Gearmotors ..... F-1 - F-103
Reducers ..... F-104 - F-212

IRA Series

Gearmotors ..... G-1 - G-30
Reducers ..... G-31 - G-49

Motor Technical Data ..... H-1 - H-8

Standard Terms and Conditions H-9

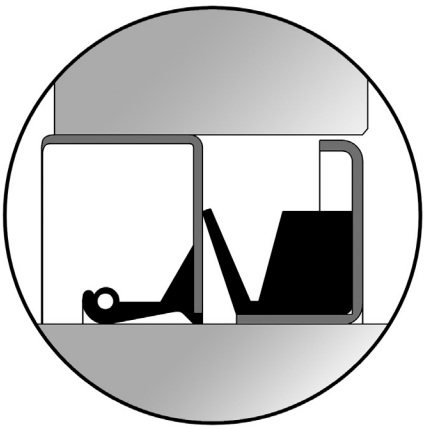
The American Standard

Browning® TorqTaper Plus® Shaft Mounts...

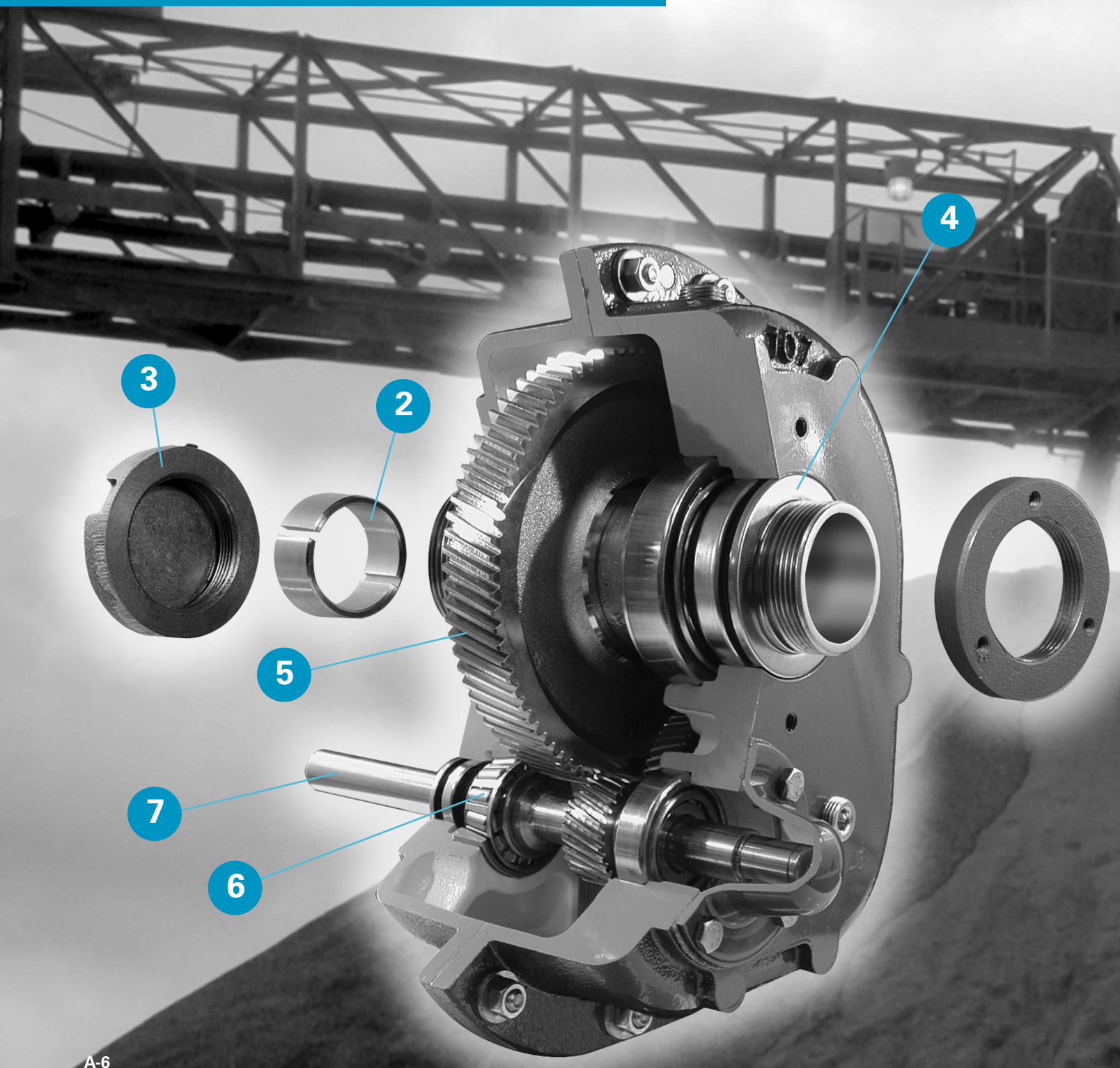
Unlike competitor bushing systems that mount only from the front or back of the reducer (or require bushings on both sides), TorqTaper Plus shaft mounted speed reducers use a single tapered bushing that easily installs from either front or back – depending on your space limitations and available shaft length. This patented feature simplifies replacement of any competitive unit.

Patented Barrier Seal System

Combines a v-ring face seal, grease filled labyrinth and rotating outer flinger to provide triple protection against contamination and oil seal damage. Standard on all shafts.



The New Way... Your Way



Check Out These Additional Features of TorqTaper Plus® Reducers

1. Unique, patented single bushing mounting system
    - Tapered bushing mounts from either side on the 107-315
2. Tapered stabilizer ring minimizes wobble and resists fretting corrosion
3. End cap seals quill end from contamination
4. Industrial strength seal systems
    - Patented barrier seal system includes standard double lip oil seals with v-ring face seal, grease packed labyrinth and external flinger
5. Carburized and ground gearing throughout
    - AGMA class 12 minimum
6. Tapered roller bearings on all shafts
7. Increased shaft diameters; higher overhung load ratings

Plus...

- Depending upon size, available ratios include 5, 9, 15, 25 and new 35:1 ratio
- Increased horsepower ratings, allows downsizing on many applications
- Pre-drilled and tapped face mount holes

Ordering Information

Example No. 1
Shaft Mount Application

A shaft mount reducer and belt drive are required for a bucket conveyor, which will be uniformly loaded and operated 16 to 24 hours per day at 81 rpm.

The conveyor requires 15 hp. The reducer will be mounted on the conveyor head shaft, which is 2 7/16" diameter. The customer wants to mount the 1750 rpm 254T frame motor on the reducer. The customer has also requested a backstop for the reducer.

1. Determine the Load Classification

From the AGMA Application Classification numbers, note that the load class is II for a uniformly loaded bucket conveyor operating over 10 hours per day.

2. Determine the Speed Reducer Required

From the Reducer Selection Chart for Class II Service, select a reducer for 15 hp and 81-89 rpm, which in this case is a 207SMTP15 or 207SMTP09. Choose the 207SMTP15, as the larger ratio will require the most compact and generally most economical belt drive. Refer to the Shaft Mount Accessories section for a bushing and torque arm. A 207TBP207 bushing is required for the reducer. Select the 207TAP-H torque arm.

3. Select the Motor Mount

Determine if a top mount or side mount configuration is required. Reference the motor mount tables in the Shaft Mount Accessories section for dimensions. After consulting the customer, it was determined that the top mount configuration was desired. Select the correct motor mount supports, motor mount adapter and motor base: MMS207L, MMA207, MB203-207.

4. Select the Backstop

Select the 207BSP backstop from the Shaft Mount Accessories section.

5. Select the Belt Drive

Note that the belt centers for this motor and reducer combination are 22.34 to 39.66. Note that 4.3" is the minimum sheave pitch diameter for the 207SMTP15 reducer chosen in Step 2. Reducer input speed = 81 (conveyor speed) x 14.787 (Exact Reducer Ratio) = 1197 rpm. From the Shaft Mount Accessories section pre-selected belt drive tables select a belt drive with a center distance near the midpoint of the 22.34 to 39.66. This drive (1197 driven speed) consists of a 2B5V68 sheave with a B 1 5/8 bushing, a 2B5V94 sheave with a B 1 7/16 bushing and two 5VX660 Gripnotch® belts.

6. Select the Belt Guard

Select the guard. Notice from the table that the CD range with the belt guard is 22.00 to 34.00" and the maximum reducer sheave that will fit into the belt guard in the top mount position is 24". Note that the part number, BGP24 24-38 with 207BGMKP, kit hardware required to mount the guard onto the reducer.

7. List Components:

- 1, **207SMTP15** Reducer
- 1, **207TBP207** Bushing
- 1, **207TAP-H** Torque Arm
- 1, **MMS207L** Motor Mount Support
- 1, **MMA207** Motor Mount Adapter
- 1, **MB203-207** Motor Base
- 1, **207BSP** Backstop
- 1, **B 1 5/8** Bushing
- 1, **2B5V68** Sheave
- 1, **B 1 7/16** Bushing
- 1, **2B5V94** Sheave
- 2, **5VX660** Belts
- 1, **BGP24 24-38/ 207BGMKP** Belt Guard

Note: See “Application Considerations” on back cover.

Example No. 2
Screw Conveyor Application

A screw conveyor drive is required to convey dry cement powder. The conveyor will be uniformly fed and operated 12 to 16 hours per day. The screw is 14" diameter and has a 2 7/16" bore with two holes. The conveyor requires 5 hp and will operate at 60 rpm. The motor is a 1750 rpm 184T frame. The customer wants the trough end, waste pack, belt drive, belt guard and motor mount.

1. Determine the Load Classification

From the AGMA Application Classification numbers, note that the load class is II for a uniformly fed screw conveyor operating over 10 hours per day.

2. Determine the Speed Reducer Size Required

From the Reducer Selection Chart for Class II Service select a reducer for 5 hp and 60 rpm, which in this case is a 115SMTP09, 115SMTP15 or 115SMTP25 for 55-77 rpm. Choose the 115SMTP25 as the larger ratio will require the most compact and generally most economical belt drive.

3. Establish Sealing Required for Screw Conveyor

The waste pack cartridge is well suited for dry, abrasive materials such as cement powder. Specify the optional waste pack cartridge for the 115 shaft mount selected. From the Shaft Mount Accessories section, select part 115-203WPP.

4. Select the Screw Conveyor Adapter and Screw Conveyor Shaft

Note that the customer requested a 2 7/16" drive shaft with a two hole arrangement for the 14" diameter screw. From the table, select the 115SCA-P and the 115DSP207 using the basic reducer size, screw diameter and shaft size.

5. Select the Trough End

From the Shaft Mount Accessories section, select the SCTE14 x 2 7/16 trough end.

6. Select the Motor Mount

First determine if the top mount or side mount configuration is required. Reference the motor mount tables in the Shaft Mount Accessories section for dimensions. After consulting with the customer, it was determined that the top mount was desired. Select the MMS115H, MMA107-115 and MB107-115. Check the dimensions from the motor mount table. Note that the high motor mount must be used with this size screw. The value of 4.32" needs to be added to the minimum center distance on the high supports to ensure that the motor mount clears the screw conveyor.

7. Select the Belt Drive

Note that the belt center distance range for this reducer and motor combination is 17.50" to 34.24". Note the minimum sheave pitch diameter for the 115SMTP25 is 3.4". Reducer input speed = 60 (conveyor speed) x 24.8558 (Exact Reducer Ratio) = 1491 rpm. From the pre-selected belt drive tables, select a belt drive with a center distance greater than 17.5 + 4.32 = 21.82". This drive (1496 driven speed) consists of a 2AK54H sheave with H 1 1/8" bushing, 2AK64H sheave with H 1 1/8" bushing and two AX58 Gripnotch® belts.

8. Select the Belt Guard

Select the guard. Notice from the table that the CD range with the belt guard is 18.30 to 30.00" and the maximum reducer sheave that will fit into the belt guard in the top mount position is 14". Note that the part number is BGP14 18-30/115BGMKP, kit hardware required to mount the guard onto the reducer.

9. List the Components:

- 1, **115SMTP25** Reducer
- 1, **115-203WWP** Waste Pack Cartridge
- 1, **115SCA-P** Screw Conveyor Adapter
- 1, **115DSP207** Screw Conveyor Drive Shaft Kit
- 1, **SCTE14x2 7/16** Trough End
- 1, **MMS115H** Motor Mount Support
- 1, **MMA107-115** Motor Mount Adapter
- 1, **MB107-115** Motor Base
- 2, **H 1 1/8** Bushing
- 1, **AK54H** Sheave
- 1, **2AK64H** Sheave
- 1, **AX64** Belt
- 1, **BGP14 18-30/ 115BGMKP** Belt Guard

SMTP Exact Ratios

Reducer Size	Ratio Symbols				
	05	09	15	25	35
107 115	5.0588 4.7000	8.8205 8.8125	14.8276 14.7759	24.7250 24.8558	34.8778 34.9487
203 207 215	5.1053 5.1579 5.1667	8.8732 8.8308 8.8482	14.9231 14.7870 14.8187	24.7409 24.7094 24.8502	34.6429 35.0000 34.8154
307 315	5.1111 4.8824	8.7925 8.8620	14.9704 14.5744	24.7692 24.4118	34.8791 34.0513
407 415	5.0000 5.0833	- -	13.6842 13.9792	25.0000 25.8403	- -
507	-	-	13.6842	25.3846	-
608	-	-	13.9118	25.6555	-
800	-	-	-	24.9648	-

Note: See “Application Considerations” on back cover.

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
AGITATORS (Mixers)			
Pure Liquids	I	I	II
Liquids and Solids	I	II	II
Liquids - Variable Density	I	II	II
BLOWERS			
Centrifugal & Vane	I	I	II
Lobe	I	II	II
Vane	I	II	II
BREWING AND DISTILLING			
Bottling Machinery	I	I	II
Brew Kettles - Continuous Duty	II	II	II
Cookers - Continuous Duty	II	II	II
Mash Tubs - Continuous Duty	II	II	II
Scale Hopper - Frequent Starts	II	II	II
CAN FILLING MACHINES	I	I	II
CAR DUMPERS	II	III	III
CAR PULLERS	I	II	II
CLARIFIERS	I	I	II
CLASSIFIERS	I	II	II
CLAY WORKING MACHINERY			
Brick Presses	II	III	III
Briquette Machines	II	III	III
Pug Mills	I	II	II
COMPACTORS	♦	♦	♦
COMPRESSORS			
Centrifugal	I	I	II
Lobe	I	II	II
Reciprocating, Multi-Cylinder	II	II	III
Reciprocating, Single-Cylinder	III	III	III
CONVEYORS - GENERAL PURPOSE			
Includes Apron, Assembly, Belt, Bucket			
Chain, Flight, Oven, and Screw			
Uniformly Loaded or Fed	I	I	II
Heavy Duty - Not Uniformly Fed	I	II	II
Severe Duty - Reciprocating or Shaker	II	III	III
CRANES			
Dry Dock			
Main Hoist	♦	♦	♦
Auxiliary Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Slewing Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Container			
Main Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Trolley Drive			
Gantry Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Mill Duty			
Main Hoist	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
Industrial Duty			
Main	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
CRUSHERS			
Stone or Ore	III	III	III
DREDGES			
Cable Reels	II	II	II
Conveyors	II	II	II
Cutter Head Drives	III	III	III
Pumps	III	III	III
Screen Drives	III	III	III
Stackers	II	II	II
Winches	II	II	II
ELEVATORS			
Bucket	I	II	II
Centrifugal Discharge	I	I	II
Escalators	I	I	II
Freight	I	II	II
Gravity Discharge	I	I	II
EXTRUDERS			
General	II	II	II
Plastics			
Variable Speed Drive	III	III	III
Fixed Speed Drive	III	III	III
Rubber			
Continuous Screw Operation	III	III	III
Intermittent Screw Operation	III	III	III
FANS			
Centrifugal	I	I	II

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
FANS (Cont'd)			
Cooling Towers	III	III	III
Forced Draft	II	II	II
Induced Draft	II	II	II
Industrial & Mine	II	II	II
FEEDERS			
Apron	I	II	II
Belt	I	II	II
Disc		I	I
II			
Reciprocating	II	III	III
Screw	I	II	II
FOOD INDUSTRY			
Cereal Cooker	I	I	II
Dough Mixer	II	II	II
Meat Grinders	II	II	II
Slicers	I	II	II
GENERATORS AND EXCITERS	II	II	II
HAMMER MILLS	III	III	III
HOISTS			
Heavy Duty	♦	♦	♦
Medium Duty	♦	♦	♦
Skip Hoist	♦	♦	♦
LAUNDRY TUMBLERS	II	II	II
LAUNDRY WASHERS	II	II	III
LUMBER INDUSTRY			
Barkers			
Spindle Feed	II	II	II
Main Drive	III	III	III
Conveyors			
Burner	II	II	II
Main or Heavy Duty	II	II	II
Main Log	III	III	III
Re-saw, Merry-Go-Round	II	II	II
Slab	III	III	III
Transfer	II	II	II
Chains			
Floor	II	II	II
Green	II	II	III
Cut-Off-Saws			
Chain	II	II	III
Drag	II	II	III
Debarking Drums	III	III	III
Feeds			
Edger	II	II	II
Gang	II	III	III
Trimmer	II	II	II
Log Deck	III	III	III
Log Hauls - Incline - Well Type	III	III	III
Log Turning Devices	III	III	III
Planer Feed	II	II	II
Planer Tilting Hoists	II	II	II
Rolls - Live-Off Brg - Roll Cases	III	III	III
Sorting Table	II	II	II
Tipple Hoist	II	II	II
Transfer			
Chain	II	II	III
Craneway	II	II	III
Tray Drives	II	II	II
Veneer Lathe Drives	II	II	II
METAL MILLS			
Draw Bench Carriage and Main Drive	II	II	II
Runout Table			
Non-Reversing			
Group Drives	II	II	II
Individual Drives	III	III	III
Reversing	III	III	III
Slab Pushers	II	II	II
Shears	III	III	III
Wire Drawing	II	II	II
Wire Winding Machine	II	II	II
METAL STRIP PROCESSING MACHINERY			
Bridges	II	II	II
Collers & Uncoilers	I	I	II
Edge Trimmers	I	II	II
Flatteners	II	II	II
Loopers (Accumulators)	I	I	I
Pinch Rolls	II	II	II
Scrap Choppers	II	II	II
Shears	III	III	III
Slitters	I	II	II
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	III	III	III
Helical Ring Gear	II	II	II

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
Direct Connected	III	III	III
MILLS, ROTARY TYPE (Cont'd)			
Cement Kilns	II	II	II
Dryers & Coolers	II	II	II
PAPER MILLS[1]			
Agitator (Mixer)	II	II	II
Agitator For Pure Liquors	II	II	II
Barking Drums	III	III	III
Barkers - Mechanical	III	III	III
Beater	II	II	II
Breaker Stack	II	II	II
Calendar[2]	II	II	II
Chipper	III	III	III
Chip Feeder	II	II	II
Coating Rolls	II	II	II
Conveyors			
Chip, Bark, Chemical	II	II	II
Log (Including Slab)	III	III	III
Couch Rolls	II	II	II
Cutter	III	III	III
Cylinder Molds	II	II	II
Dryers[2]			
Paper Machine	II	II	II
Conveyor Type	II	II	II
Embosser	II	II	II
Extruder	II	II	II
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	II	II	II
Jordan	II	II	II
Kiln Drive	II	II	II
Mt. Hope Roll	II	II	II
Paper Rolls	II	II	II
Platter	II	II	II
Presses - Felt Suction	II	II	II
Pulper	III	III	III
Pumps - Vacuum	II	II	II
Reel (Surface - Type)	II	II	II
Screens			
Chip	II	II	II
Rotary	II	II	II
Vibrating	III	III	III
Size Press	II	II	II
Supercalendar	II	II	II
Thickener (AC Motor)	II	II	II
Thickener (DC Motor)	II	II	II
Washer (AC Motor)	II	II	II
Washer (DC Motor)	II	II	II
Wind and Unwind Stand	I	II	II
PLASTICS INDUSTRY			
PRIMARY PROCESSING			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Continuous Feed, Holding & Blend Mill	II	II	II
Calendars	II	II	II
PLASTICS INDUSTRY			
SECONDARY PROCESSING			
Blow Molders	II	II	II
Coating	II	II	II
Film	II	II	II
Pipe	II	II	II
Pre-Plasticizers	II	II	II
Rods	II	II	II
Sheet	II	II	II
Tubing	II	II	II
PULLERS - BARGE HAUL	II	II	II
PUMPS			
Centrifugal	I	I	II
Proportioning	II	II	II
Reciprocating			
Single Acting, 3 or more Cylinders	II	II	II
Double Acting, 2 or more Cylinders	II	II	II
Rotary			
Gear Type	I	I	II
Lobe	I	I	II
Vane	I	I	II
RUBBER INDUSTRY			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Mixing Mill			
2 Smooth Rolls	II	II	II
1 or 2 Corrugated Rolls	III	III	III
RUBBER INDUSTRY (Cont'd)			

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Cracker Warmer - 2 Roll, 1 Corrugated Roll	III	III	III
Cracker - 2 Corrugated Rolls	III	III	III
Holding, Feed & Blend Mill - 2 Rolls	II	II	II
Refiner - 2 Rolls	II	II	II
Calendars	II	II	II
SAND MULLER	II	II	II
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	II	II	II
Chemical Feeder	II	II	II
Dewatering Screens	II	II	II
Scum Breakers	II	II	II
Slow or Rapid Mixers	II	II	II
Sludge Collectors	II	II	II
Thickener	II	II	II
Vacuum Filters	II	II	II
SCREENS			
Air Washing	I	I	II
Rotary - Stone or Gravel	II	II	II
Traveling Water Intake	I	I	I
SCREW CONVEYORS			
Uniformly Loaded or Fed	I	I	II
Heavy Duty	I	II	II
SUGAR INDUSTRY			
Beet Slicer	III	III	III
Cane Knives	II	II	II
Crushers	II	II	II
Mills (Low Speed End)	III	III	III
TEXTILE INDUSTRY			
Batchers	II	II	II
Calendars	II	II	II
Cards	II	II	II
Dry Cans	II	II	II
Dyeing Machinery	II	II	II
Looms	II	II	II
Mangles	II	II	II
Nappers	II	II	II
Pads	II	II	II
Slashers	II	II	II
Soapers	II	II	II
Spinners	II	II	II
Tenter Frames	II	II	II
Washers	II	II	II
Winders	II	II	II

Notes:

1) The Class numbers listed in the table for paper mill applications are consistent with those shown in TAPPI *(Technical Association of Pulp and Paper Industry)* Technical information sheet 0406-18 1967, *Service Factors for Gears on Major Equipment in the Pulp and Paper Industry.*

2) Anti-friction bearings only.

♦ Contact Application Engineering (1 800 626 2093) for the selection of AGMA Class Numbers in these applications.

SMTP/SMFP Selection Chart

Class I Service (1.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
1/4 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
51 - 80	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
81 - 89	107SMTP15	2.8
	107SMTP09	4.7
90 - 130	107SMTP15	2.8
	107SMTP09	4.7
	107SMTP05	4.6
131 - 200	107SMTP09	4.7
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
1/3 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
51 - 80	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
81 - 89	107SMTP15	2.8
	107SMTP09	4.7
90 - 130	107SMTP15	2.8
	107SMTP09	4.7
	107SMTP05	4.6
131 - 200	107SMTP09	4.7
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
1/2 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
51 - 80	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
81 - 89	107SMTP15	2.8
	107SMTP09	4.7
90 - 130	107SMTP15	2.8
	107SMTP09	4.7
	107SMTP05	4.6
131 - 200	107SMTP09	4.7
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
3/4 HP MOTOR		
5	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
6 - 7	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
8 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
81 - 89	107SMTP15	2.6
	107SMTP09	4.4
90 - 130	107SMTP15	2.6
	107SMTP09	4.4
	107SMTP05	4.6
131 - 200	107SMTP09	4.4
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
1 HP MOTOR		
5 - 6	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
7 - 9	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
10 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
51 - 80	107SMTP25	2.3
	107SMTP15	2.8
	107SMTP09	4.7
81 - 89	107SMTP15	2.8
	107SMTP09	4.7
90 - 130	107SMTP15	2.8
	107SMTP09	4.7
	107SMTP05	4.6
131 - 200	107SMTP09	4.7
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
1 1/2 HP MOTOR		
5	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.4
6 - 10	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	4.3
11 - 15	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
16 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
81 - 89	107SMTP15	2.6
	107SMTP09	4.4
90 - 130	107SMTP15	2.6
	107SMTP09	4.4
	107SMTP05	4.6
131 - 200	107SMTP09	4.4
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
2 HP MOTOR		
5 - 8	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.4
9 - 14	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
15 - 20	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
21 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.7
	107SMTP09	4.5
51 - 80	107SMTP25	2.3
	107SMTP15	2.7
	107SMTP09	4.5
81 - 89	107SMTP15	2.7
	107SMTP09	4.5
90 - 130	107SMTP15	2.7
	107SMTP09	4.5
	107SMTP05	4.6
131 - 200	107SMTP09	4.5
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
3 HP MOTOR		
5 - 7	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
8 - 12	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
13 - 22	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	4.0
23 - 31	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
32 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.6
	107SMTP09	4.4
81 - 89	107SMTP15	2.6
	107SMTP09	4.4
90 - 130	107SMTP15	2.6
	107SMTP09	4.4
	107SMTP05	4.6

SMTP/SMFP Selection Chart

Class I Service (1.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
3 HP MOTOR (Cont'd)		
131 - 200	107SMTP09	4.4
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
5 HP MOTOR		
5-7	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
8 - 13	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
14 - 21	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
22 - 38	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
39 - 50	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
51 - 54	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
55 - 80	107SMTP25	2.8
	107SMTP15	2.8
	107SMTP09	4.3
81 - 89	107SMTP15	2.8
	107SMTP09	4.3
90 - 130	107SMTP15	2.8
	107SMTP09	4.3
	107SMTP05	4.6
131 - 200	107SMTP09	4.3
	107SMTP05	4.6
201 - 400	107SMTP05	4.6
7 1/2 HP MOTOR		
5	407SMTP25B	6.4
	407SMTP15B	6.4
6	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.1
7 - 12	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.5
13 - 20	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
21 - 33	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
34 - 50	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8

Output RPM	Reducer Size	Minimum Sheave P.D.
7 1/2 HP MOTOR (Cont'd)		
51 - 58	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
59 - 80	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
81 - 83	115SMTP15	3.4
	115SMTP09	3.4
84 - 89	107SMTP15	2.8
	107SMTP09	4.2
90 - 130	107SMTP15	2.8
	107SMTP09	4.2
	115SMTP05	9.8
131 - 160	107SMTP09	4.2
	115SMTP05	9.8
161 - 200	107SMTP09	4.2
	107SMTP05	3.8
201 - 400	107SMTP05	3.8
10 HP MOTOR		
5 - 7	407SMTP25B	6.4
	407SMTP15B	6.4
8 - 9	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.1
10 - 16	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.1
17 - 27	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
28 - 46	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
47 - 50	207SMTP35	4.3
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
51 - 80	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
81 - 89	115SMTP15	3.6
	115SMTP09	3.6
90 - 114	115SMTP15	3.6
	115SMTP09	3.6
	115SMTP05	9.8
115 - 130	107SMTP15	3.6
	107SMTP09	4.1
	115SMTP05	9.8
131 - 200	107SMTP09	4.1
	115SMTP05	9.8
201 - 244	115SMTP05	9.8
245 - 400	107SMTP05	3.6
15 HP MOTOR		
5 - 7	415SMTP25B	7.1
	415SMTP15B	7.1

Output RPM	Reducer Size	Minimum Sheave P.D.
15 HP MOTOR (Cont'd)		
8 - 11	407SMTP25B	6.4
	407SMTP15B	6.4
12 - 14	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.1
15 - 25	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.1
26 - 42	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
43 - 50	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
51 - 80	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
81 - 89	203SMTP15	3.8
	203SMTP09	3.8
90 - 121	203SMTP15	3.8
	203SMTP09	3.8
	203SMTP05	6.4
122 - 130	203SMTP15	3.8
	115SMTP09	3.4
	203SMTP05	6.4
131 - 161	115SMTP09	3.4
	203SMTP05	6.4
162 - 200	115SMTP09	3.4
	115SMTP05	9.6
201 - 400	115SMTP05	9.6
20 HP MOTOR		
5 - 6	507SMTP25B	7.9
	507SMTP15B	8.3
7 - 9	415SMTP25B	7.1
	415SMTP15B	7.1
10 - 14	407SMTP25B	6.4
	407SMTP15B	6.4
15 - 19	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.6
20 - 34	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.1
35 - 50	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
51 - 61	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
61 - 80	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3

SMTP/SMFP Selection Chart

Class I Service (1.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
20 HP MOTOR (Cont'd)		
81 - 89	207SMTP15	4.3
	207SMTP09	4.3
90 - 120	207SMTP15	4.3
	207SMTP09	4.3
	207SMTP05	9.8
121 - 130	203SMTP15	3.8
	203SMTP09	3.8
	203SMTP05	6.8
131 - 200	203SMTP09	3.8
	203SMTP05	6.8
201 - 244	203SMTP05	6.8
245 - 400	115SMTP05	9.4
25 HP MOTOR		
5	608SMTP25B	8.0
	608SMTP15B	11.4
6 - 8	507SMTP25B	7.9
	507SMTP15B	8.7
9 - 12	415SMTP25B	7.1
	415SMTP15B	7.1
13 - 18	407SMTP25B	6.4
	407SMTP15B	6.4
19 - 24	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.5
25 - 44	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.1
45 - 50	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
51 - 80	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
81 - 89	207SMTP15	4.3
	207SMTP09	4.7
90 - 125	207SMTP15	4.3
	207SMTP09	4.7
	215SMTP05	6.2
126 - 130	207SMTP15	4.3
	207SMTP09	4.7
	207SMTP05	9.6
131 - 159	207SMTP09	4.7
	207SMTP05	9.6
160 - 200	203SMTP09	3.8
	203SMTP05	6.8
201 - 337	203SMTP05	6.8
338 - 400	115SMTP05	9.3
30 HP MOTOR		
5 - 6	608SMTP25B	8.1
	608SMTP15B	11.4
7 - 10	507SMTP25B	7.9
	507SMTP15B	8.9
11 - 15	415SMTP25B	7.1
	415SMTP15B	7.1
16 - 23	407SMTP25B	6.4
	407SMTP15B	6.4
30 HP MOTOR (Cont'd)		
24 - 30	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.1
31 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
51 - 55	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
56 - 80	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
81 - 89	215SMTP15	5.6
	215SMTP09	5.6
90 - 103	215SMTP15	5.6
	215SMTP09	5.6
	215SMTP05	6.2
104 - 130	207SMTP15	4.3
	207SMTP09	5.2
	215SMTP05	6.2
131 - 162	207SMTP09	5.2
	215SMTP05	6.2
163 - 200	207SMTP09	5.2
	207SMTP05	9.5
201 - 215	207SMTP05	9.5
215 - 400	203SMTP05	6.7
40 HP MOTOR		
5	800SMTP25	12.0
6 - 9	608SMTP25B	8.1
	608SMTP15B	12.7
10 - 14	507SMTP25B	7.9
	507SMTP15B	8.3
15 - 20	415SMTP25B	7.1
	415SMTP15B	7.1
21 - 31	407SMTP25B	6.4
	407SMTP15B	6.4
32 - 43	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	7.4
44 - 50	307SMTP35●	6.0
	307SMTP25●	6.0
	307SMTP15	6.0
	307SMTP09	6.9
51 - 76	307SMTP25●	6.0
	307SMTP15	6.0
	307SMTP09	6.9
77 - 80	307SMTP25●	6.0
	307SMTP15	6.0
	215SMTP09	5.7
81 - 89	307SMTP15	6.0
	215SMTP09	5.6
90 - 130	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	7.8
131 - 156	215SMTP09	5.8
	215SMTP05	6.3
40 HP MOTOR (Cont'd)		
157 - 200	207SMTP09	5.8
	215SMTP05	6.3
201 - 246	215SMTP05	6.3
247 - 327	207SMTP05	9.3
328 - 400	203SMTP05	6.5
50 HP MOTOR		
5 - 7	800SMTP25	12.0
8 - 11	608SMTP25B	8.1
	608SMTP15B	11.9
12 - 18	507SMTP25B	7.9
	507SMTP15B	8.7
19 - 25	415SMTP25B	7.1
	415SMTP15B	7.1
26 - 39	407SMTP25B●	6.4
	407SMTP15B	6.4
40 - 50	315SMTP35●	6.4
	315SMTP25●	6.4
	315SMTP15	6.4
	315SMTP09	8.6
51 - 58	315SMTP25●	6.4
	315SMTP15	6.4
	315SMTP09	8.6
59 - 80	307SMTP25●	6.0
	307SMTP15●	6.0
	307SMTP09●	7.8
81 - 89	307SMTP15●	6.0
	307SMTP09●	7.8
90 - 99	307SMTP15●	6.0
	307SMTP09●	7.8
	315SMTP05	20.3
100 - 104	307SMTP15●	6.0
	307SMTP09●	7.8
	307SMTP05	9.0
105 - 130	307SMTP15●	6.0
	215SMTP09	5.6
	307SMTP05	9.0
131 - 182	215SMTP09	5.6
	307SMTP05	9.0
183 - 200	215SMTP09	5.6
	215SMTP05	6.2
201 - 340	215SMTP05	6.2
341 - 400	207SMTP05	9.1
60 HP MOTOR		
5	◆	
6 - 9	800SMTP25	12.0
10 - 14	608SMTP25B	8.1
	608SMTP15B	11.4
15 - 22	507SMTP25B	7.9
	507SMTP15B	8.3
23 - 31	415SMTP25B	7.1
	415SMTP15B	7.1
32 - 48	407SMTP25B●	6.4
	407SMTP15B●	6.4
49 - 50	315SMTP35●	6.4
	315SMTP25●	6.4
	315SMTP15●	6.4
	315SMTP09●	9.9
51 - 74	315SMTP25●	6.4
	315SMTP15●	6.4
	315SMTP09●	9.9
60 HP MOTOR (Cont'd)		
75 - 80	307SMTP25●	6.0
	307SMTP15●	6.0
	307SMTP09●	8.9
81 - 89	307SMTP15●	6.0
	307SMTP09●	8.9
90 - 130	307SMTP15●	6.0
	307SMTP09●	8.9
	315SMTP05●	20.3

Notes:
● Requires fan kit.

SMTP/SMFP Selection Chart

Class I Service (1.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
131 - 200	307SMTP09●	8.9
	307SMTP05	8.8
201 - 240	307SMTP05	8.8
241 - 400	215SMTP05	6.1
	75 HP MOTOR	
5 - 7	◆	
8 - 11	800SMTP25	12.0
12 - 18	608SMTP25B	8.1
	608SMTP15B	11.9
19 - 28	507SMTP25B	7.9
	507SMTP15B	8.2
29 - 40	415SMTP25B●	7.1
	415SMTP15B	7.1
41 - 61	407SMTP25B●	6.4
	407SMTP15B●	6.6
62 - 80	315SMTP25●	6.4
	315SMTP15●	6.4
	315SMTP09●	12.0
81 - 89	315SMTP15●	6.4
	315SMTP09●	12.0
90 - 103	315SMTP15●	6.4
	315SMTP09●	12.0
	407SMTP05B	28.0
103 - 123	307SMTP15●	6.0
	307SMTP09●	9.8
	407SMTP05B	28.0
124 - 130	307SMTP15●	6.0
	307SMTP09●	9.8
	315SMTP05	19.9
131 - 181	307SMTP09●	9.8
	315SMTP05	19.9
182 - 200	307SMTP09●	9.8
	307SMTP05	8.7
201 - 337	307SMTP05	8.7
338 - 400	215SMTP05	6.0
	100 HP MOTOR	
5 - 9	◆	
10 - 15	800SMTP25	12.0
16 - 24	608SMTP25B	8.1
	608SMTP15B	12.7
25 - 38	507SMTP25B●	7.9
	507SMTP15B	9.9
39 - 54	415SMTP25B●	7.1
	415SMTP15B●	7.1
55 - 80	407SMTP25B●	6.7
	407SMTP15B●	6.7
81 - 87	407SMTP15B●	6.7
88 - 89	407SMTP15B●	6.7
	315SMTP09●	14.3
	100 HP MOTOR (Cont'd)	
90 - 95	407SMTP15B●	6.7
	315SMTP09●	14.3
	415SMTP05B	40.5
96 - 106	315SMTP15●	6.4
	315SMTP09●	14.3
	415SMTP05B	40.5
107 - 117	315SMTP15●	6.4
	315SMTP09●	14.3
	407SMTP05B	32.7
118 - 130	315SMTP15●	6.4
	315SMTP09●	14.3
	407SMTP05B	30.4
131 - 155	315SMTP09●	14.3
	407SMTP05B	30.4
156 - 186	307SMTP09▲	9.6
	407SMTP05B	30.4
187 - 200	307SMTP09▲	9.6
	315SMTP05	19.6
201 - 280	315SMTP05	19.6
281 - 400	307SMTP05●	8.4
	125 HP MOTOR	
5 - 12	◆	
13 - 20	800SMTP25	12.0
21 - 31	608SMTP25B●	8.3
	608SMTP15B	17.3
32 - 51	507SMTP25B●	7.9
	507SMTP15B	11.7
52 - 74	415SMTP25B●	7.1
	415SMTP15B●	7.1
75 - 80	407SMTP25B●	6.7
	407SMTP15B●	6.7
81 - 121	407SMTP15B●	6.7
	415SMTP05B	40.5
122 - 130	407SMTP15B●	6.7
	315SMTP09▲	14.0
	415SMTP05B	40.5
131 - 146	315SMTP09▲	14.0
	415SMTP05B	40.5
147 - 200	315SMTP09▲	14.0
	407SMTP05B	29.9
201 - 256	407SMTP05B	29.9
257 - 394	315SMTP05●	19.2
395 - 400	307SMTP05●	8.2
	150 HP MOTOR	
5 - 15	◆	
16 - 24	800SMTP25	12.0
25 - 40	608SMTP25B●	10.5
	608SMTP15B	23.4
41 - 67	507SMTP25B●	7.9
	507SMTP15B	11.9
68 - 80	415SMTP25B▲	7.1
	415SMTP15B●	7.1
81 - 111	415SMTP15B●	7.1
112 - 130	415SMTP15B●	7.1
	415SMTP05B	41.3
131 - 159	415SMTP05B	41.3
160 - 190	315SMTP09▲	13.6
	415SMTP05B	41.3
191 - 200	315SMTP09▲	13.6
	407SMTP05B●	29.4
201 - 334	407SMTP05B●	29.4
335 - 400	315SMTP05●	19.0
	200 HP MOTOR	
5 - 20	◆	
21 - 35	800SMTP25●	12.0
36 - 61	608SMTP25B●	11.5
	608SMTP15B●	20.9
62 - 80	507SMTP25B▲	11.5
	507SMTP15B●	11.9
81 - 101	507SMTP15B●	11.9
102 - 130	415SMTP15B▲	7.1
131 - 168	◆	
169 - 317	415SMTP05B●	40.4
318 - 400	407SMTP05B●	28.5
	250 HP MOTOR	
5 - 26	◆	
27 - 50	800SMTP25●	12.0
51 - 80	608SMTP25B▲	10.5
	608SMTP15B▲	19.1
81 - 84	608SMTP15B▲	19.1
85 - 130	507SMTP15B▲	11.9
131 - 232	◆	
233 - 400	415SMTP05B●	39.9
	300 HP MOTOR	
5 - 32	◆	
33 - 66	800SMTP25▲	12.0
67 - 80	608SMTP25B▲	10.4
	608SMTP15B▲	17.9
81 - 110	608SMTP15B▲	17.9
111 - 130	507SMTP15B▲	11.8
131 - 302	◆	
303 - 400	415SMTP05B▲	39.4
	350 HP MOTOR	
5 -38	◆	
39 - 80	800SMTP25▲	12.0
81 - 84	◆	
85 - 130	608SMTP15B▲	16.8
131 - 378	◆	
379 - 400	415SMTP05B▲	39.0
	400 HP MOTOR	
5 - 44	◆	
45 - 80	800SMTP25▲	12.0
81 - 104	◆	
105 - 130	608SMTP15B▲	15.8
131 - 400	◆	
	450 HP MOTOR	
5 - 50	◆	
51 - 80	800SMTP25▲	12.0
81 - 125	◆	
126 - 130	608SMTP15B▲	15.1
131 - 400	◆	
	500 HP MOTOR	
5 - 56	◆	
57 - 80	800SMTP25▲	12.0
81 - 400	◆	
	600 HP MOTOR	
5 - 68	◆	
69 - 80	800SMTP25▲	12.0
81-400	◆	
	700 HP MOTOR	
5 - 400	◆	

Notes:
- ● Requires fan kit.
- ▲ Requires pump and cooler kit.
- ◆ Contact Application Engineering (1 800 626 2093) for the selection of an enclosed gear drive.

SMTP/SMFP Selection Chart

Class II Service (1.4 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
1/4 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.2
	107SMTP15	2.2
	107SMTP09	3.2
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
81 - 89	107SMTP15	2.3
	107SMTP09	3.2
90 - 130	107SMTP15	2.3
	107SMTP09	3.2
	107SMTP05	2.8
131 - 200	107SMTP09	3.2
	107SMTP05	2.8
201 - 400	107SMTP05	2.7
1/3 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
81 - 89	107SMTP15	2.3
	107SMTP09	3.2
90 - 130	107SMTP15	2.3
	107SMTP09	3.2
	107SMTP05	2.8
131 - 200	107SMTP09	3.2
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
1/2 HP MOTOR		
5 - 6	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
7 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.4
81 - 89	107SMTP15	2.3
	107SMTP09	3.4
90 - 130	107SMTP15	2.3
	107SMTP09	3.4
	107SMTP05	2.8
131 - 200	107SMTP09	3.4
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
3/4 HP MOTOR		
5 - 7	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8

Output RPM	Reducer Size	Minimum Sheave P.D.
3/4 HP MOTOR (Cont'd)		
8 - 10	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
11 - 50	107SMTP35	2.2
	107SMTP25	2.2
	107SMTP15	2.3
	107SMTP09	3.2
51 - 80	107SMTP25	2.2
	107SMTP15	2.3
	107SMTP09	3.2
81 - 89	107SMTP15	2.3
	107SMTP09	3.2
90 - 130	107SMTP15	2.3
	107SMTP09	3.2
	107SMTP05	2.8
131 - 200	107SMTP09	3.2
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
1 HP MOTOR		
5	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
6 - 10	203SMTP35	3.7
	203SMTP25	3.7
	203SMTP15	3.7
	203SMTP09	3.7
11 - 13	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
14 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.4
81 - 89	107SMTP15	2.3
	107SMTP09	3.4
90 - 130	107SMTP15	2.3
	107SMTP09	3.4
	107SMTP05	2.8
131 - 200	107SMTP09	3.4
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
1 1/2 HP MOTOR		
5	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
6 - 8	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3

Output RPM	Reducer Size	Minimum Sheave P.D.
1 1/2 HP MOTOR (Cont'd)		
9 - 15	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
16 - 21	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
22 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
81 - 89	107SMTP15	2.3
	107SMTP09	3.2
90 - 130	107SMTP15	2.3
	107SMTP09	3.2
	107SMTP05	2.8
131 - 200	107SMTP09	3.2
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
2 HP MOTOR		
5 - 7	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
8 - 11	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
12-20	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
21-28	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
29-50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.3
51-80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.3
81-89	107SMTP15	2.3
	107SMTP09	3.3
90-130	107SMTP15	2.3
	107SMTP09	3.3
	107SMTP05	2.8
131-200	107SMTP09	3.3
	107SMTP05	2.8
201-400	107SMTP05	2.8

Browning®

SMTP/SMFP Selection Chart

TAPER-LOCK® Plus

Class II Service (1.4 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
3 HP MOTOR		
5-6	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
7-11	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
12-18	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
19-31	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
32-44	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
45-50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
51-80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.2
81-89	107SMTP15	2.3
	107SMTP09	3.2
90-130	107SMTP15	2.3
	107SMTP09	3.2
	107SMTP05	2.8
131-200	107SMTP09	3.2
	107SMTP05	2.8
201-400	107SMTP05	2.8
5 HP MOTOR		
5 - 6	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
7 - 11	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
12 - 19	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
20 - 30	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
31 - 50	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
51 - 54	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8

Output RPM	Reducer Size	Minimum Sheave P.D.
5 HP MOTOR (Cont'd)		
55 - 77	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
78 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	3.0
81 - 89	107SMTP15	2.3
	107SMTP09	3.0
90 - 130	107SMTP15	2.3
	107SMTP09	3.0
	115SMTP05	4.9
131 - 144	107SMTP09	3.0
	115SMTP05	4.9
145 - 200	107SMTP09	3.0
	107SMTP05	2.8
201 - 400	107SMTP05	2.8
7 1/2 HP MOTOR		
5 - 7	407SMTP25B	6.4
	407SMTP15B	6.4
8 - 9	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
10 - 17	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
18 - 29	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
30 - 46	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
47 - 50	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
51 - 80	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
81 - 82	203SMTP15	3.8
	203SMTP09	3.8
83 - 89	115SMTP15	3.4
	115SMTP09	3.4
90 - 96	115SMTP15	3.4
	115SMTP09	3.4
	203SMTP05	4.2
97 - 119	115SMTP15	3.4
	115SMTP09	3.4
	115SMTP05	7.0
120 - 130	107SMTP15	2.3
	107SMTP09	3.0
	115SMTP05	7.0
131 - 200	107SMTP09	3.0
	115SMTP05	7.0

Output RPM	Reducer Size	Minimum Sheave P.D.
7 1/2 HP MOTOR (Cont'd)		
201 - 261	115SMTP05	7.0
262 - 400	107SMTP05	2.4
10 HP MOTOR		
5 - 6	415SMTP25B	7.1
	415SMTP15B	7.1
7 - 10	407SMTP25B	6.4
	407SMTP15B	6.4
11 - 13	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
14 - 23	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
24 - 39	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
40 - 50	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
51 - 71	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
72 - 80	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
81 - 89	203SMTP15	3.8
	203SMTP09	3.8
90 - 111	203SMTP15	3.8
	203SMTP09	3.8
	203SMTP05	4.2
112 - 130	115SMTP15	3.4
	115SMTP09	3.4
	203SMTP05	4.2
131 - 145	115SMTP09	3.4
	203SMTP05	4.2
146 - 175	115SMTP09	3.4
	115SMTP05	6.9
176 - 200	107SMTP09	2.7
	115SMTP05	6.9
201 - 400	115SMTP05	6.9
15 HP MOTOR		
5 - 7	507SMTP25B	7.9
	507SMTP15B	7.9
8 - 10	415SMTP25B	7.1
	415SMTP15B	7.1
11 - 15	407SMTP25B	6.4
	407SMTP15B	6.4
16 - 20	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
21 - 36	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0

SMTP/SMFP Selection Chart

Class II Service (1.4 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
15 HP MOTOR (Cont'd)		
37 - 50	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
51 - 66	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
67 - 80	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
81 - 89	207SMTP15	4.3
	207SMTP09	4.3
90 - 97	207SMTP15	4.3
	207SMTP09	4.3
	215SMTP05	5.6
98 - 122	207SMTP15	4.3
	207SMTP09	4.3
	207SMTP05	6.9
123 - 130	203SMTP15	3.8
	203SMTP09	3.8
	203SMTP05	4.9
131 - 181	203SMTP09	3.8
	203SMTP05	4.9
182 - 200	115SMTP09	3.4
	203SMTP05	4.9
201 - 261	203SMTP05	4.9
262 - 400	115SMTP05	6.7
20 HP MOTOR		
5 - 6	608SMTP25B	8.1
	608SMTP15B	8.1
7 - 9	507SMTP25B	7.9
	507SMTP15B	7.9
10 - 13	415SMTP25B	7.1
	415SMTP15B	7.1
14 - 21	407SMTP25B	6.4
	407SMTP15B	6.4
22 - 27	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
28 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
51 - 80	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
81 - 89	215SMTP15	5.6
	215SMTP09	5.6
90 - 96	215SMTP15	5.6
	215SMTP09	5.6
	215SMTP05	5.6
97 - 130	207SMTP15	4.3
	207SMTP09	4.3
	215SMTP05	5.6
131 - 147	207SMTP09	4.3
	215SMTP05	5.6
148 - 189	207SMTP09	4.3
	207SMTP05	6.8

Output RPM	Reducer Size	Minimum Sheave P.D.
20 HP MOTOR (Cont'd)		
190 - 200	203SMTP09	3.8
	203SMTP05	4.8
201 - 396	203SMTP05	4.8
397 - 400	115SMTP05	6.5
25 HP MOTOR		
5	◆	
6 - 7	608SMTP25B	8.1
	608SMTP15B	8.1
8 - 12	507SMTP25B	7.9
	507SMTP15B	7.9
13 - 17	415SMTP25B	7.1
	415SMTP15B	7.1
18 - 27	407SMTP25B	6.4
	407SMTP15B	6.4
28 - 35	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
36 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
51 - 62	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
63 - 80	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
81 - 89	215SMTP15	5.6
	215SMTP09	5.6
90 - 107	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	6.0
108 - 130	215SMTP15	5.6
	215SMTP09	5.6
	215SMTP05	5.6
131 - 200	207SMTP09	4.3
	215SMTP05	5.6
201 - 269	207SMTP05	6.7
270 - 400	203SMTP05	4.7
30 HP MOTOR		
5 - 6	800SMTP25	12.0
7 - 9	608SMTP25B	8.1
	608SMTP15B	8.2
10 - 15	507SMTP25B	7.9
	507SMTP15B	7.9
16 - 21	415SMTP25B	7.1
	415SMTP15B	7.1
22 - 33	407SMTP25B	6.4
	407SMTP15B	6.4
34 - 45	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
46 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0

Output RPM	Reducer Size	Minimum Sheave P.D.
30 HP MOTOR (Cont'd)		
51 - 80	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
81 - 89	307SMTP15	6.0
	215SMTP09	5.6
90 - 130	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	6.0
131 - 140	215SMTP09	5.6
	307SMTP05	6.0
141 - 167	215SMTP09	5.6
	215SMTP05	5.6
168 - 200	207SMTP09	4.3
	215SMTP05	5.6
201 - 264	215SMTP05	5.6
265 - 351	207SMTP05	6.6
352 - 400	203SMTP05	4.6
40 HP MOTOR		
5	◆	
6- 8	800SMTP25	12.0
9 - 13	608SMTP25B	8.1
	608SMTP15B	8.5
14 - 20	507SMTP25B	7.9
	507SMTP15B	7.9
21 - 29	415SMTP25B	7.1
	415SMTP15B	7.1
30 - 45	407SMTP25B	6.4
	407SMTP15B	6.4
46 - 50	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.7
51 - 70	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.7
71 - 80	307SMTP25●	6.0
	307SMTP15	6.0
	307SMTP09	6.0
81 - 89	307SMTP15	6.0
	307SMTP09	6.0
90 - 117	307SMTP15	6.0
	307SMTP09	6.0
	315SMTP05	13.5
118 - 122	307SMTP15	6.0
	307SMTP09	6.0
	307SMTP05	6.4
123 - 130	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	6.4
131 - 200	215SMTP09	5.6
	307SMTP05	6.4
201 - 216	307SMTP05	6.4
217 - 400	215SMTP05	5.6
50 HP MOTOR		
5 - 6	◆	
7 - 10	800SMTP25	12.0
11 - 16	608SMTP25B	8.1
	608SMTP15B	8.6
17 - 26	507SMTP25B	7.9
	507SMTP15B	7.9

Notes:
- ● Requires fan kit.
- ◆ Contact Application Engineering (1 800 626 2093) for the selection of an enclosed gear drive.

Class II Service (1.4 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
50 HP MOTOR (Cont'd)		
27 - 37	415SMTP25B	7.1
	415SMTP15B	7.1
38 - 57	407SMTP25B●	6.4
	407SMTP15B	6.4
58 - 80	315SMTP25●	6.4
	315SMTP15	6.4
	315SMTP09	8.0
81 - 89	315SMTP15	6.4
	315SMTP09	8.0
90 - 111	307SMTP15●	6.0
	307SMTP09●	7.2
	307SMTP05	18.7
112 - 130	307SMTP15●	6.0
	307SMTP09●	7.2
	315SMTP05	14.4
131 - 163	307SMTP09●	7.2
	315SMTP05	14.3
164 - 169	307SMTP09●	7.2
	307SMTP05	6.3
170 - 200	215SMTP09	5.6
	307SMTP05	6.3
201 - 304	307SMTP05	6.3
305 - 400	215SMTP05	5.6
60 HP MOTOR		
5 - 8	◆	
9 - 13	800SMTP25	12.0
14 - 20	608SMTP25B	8.1
	608SMTP15B	8.2
21 - 32	507SMTP25B	7.9
	507SMTP15B	7.9
33 - 44	415SMTP25B	7.1
	415SMTP15B	7.1
45 - 70	407SMTP25B●	6.4
	407SMTP15B●	6.4
71 - 80	315SMTP25●	6.4
	315SMTP15●	6.4
	315SMTP09●	9.6
81 - 89	315SMTP15●	6.4
	315SMTP09●	9.6
90 - 120	315SMTP15●	6.4
	315SMTP09●	9.6
	407SMTP05B	22.0
121 - 130	307SMTP15●	6.0
	307SMTP09●	7.0
	407SMTP05B	22.0
131 - 144	307SMTP09●	7.0
	407SMTP05B	22.0
145 - 200	307SMTP09●	7.0
	315SMTP05	14.2
201 - 215	315SMTP05	14.2
216 - 400	307SMTP05	6.1
75 HP MOTOR		
5 - 10	◆	
11 - 16	800SMTP25	12.0
17 - 26	608SMTP25B	8.1
	608SMTP15B	9.6
27 - 41	507SMTP25B	7.9
	507SMTP15B	7.9

Output RPM	Reducer Size	Minimum Sheave P.D.
75 HP MOTOR (Cont'd)		
42 - 58	415SMTP25B●	7.1
	415SMTP15B	7.1
59 - 80	407SMTP25B●	6.4
	407SMTP15B●	6.4
81 - 89	407SMTP15B●	6.4
90 - 94	407SMTP15B●	6.4
	415SMTP05B	24.3
95 - 102	407SMTP15B●	6.4
	315SMTP09●	10.1
	415SMTP05B	24.3
103 - 125	315SMTP15●	6.4
	315SMTP09●	10.1
	415SMTP05B	24.3
126 - 130	315SMTP15●	6.4
	315SMTP09●	10.1
	407SMTP05B	21.8
131 - 166	315SMTP09●	10.1
	407SMTP05B	21.8
167 - 200	307SMTP09●	6.8
	407SMTP05B	21.8
201 - 301	315SMTP05	13.9
302 - 400	307SMTP05	6.0
100 HP MOTOR		
5 - 14	◆	
15 - 22	800SMTP25	12.0
23 - 37	608SMTP25B	8.1
	608SMTP15B	14.6
38 - 61	507SMTP25B●	7.9
	507SMTP15B	8.4
62 - 80	415SMTP25B●	7.1
	415SMTP15B●	7.1
81 - 89	415SMTP15B●	7.1
90 - 130	407SMTP15B●	6.4
	415SMTP05B	29.6
131 - 143	415SMTP05B	29.6
144 - 172	315SMTP09●	9.8
	415SMTP05B	29.6
173 - 190	315SMTP09●	9.8
	407SMTP05B●	21.1
191 - 200	315SMTP09●	9.8
	407SMTP05B●	21.1
201 - 302	407SMTP05B●	21.1
303 - 400	315SMTP05	13.7
125 HP MOTOR		
5 - 18	◆	
19 - 29	800SMTP25	12.0
30 - 50	608SMTP25B●	9.8
	608SMTP15B	15.0
51 - 80	507SMTP25B●	7.9
	507SMTP15B	8.5
81 - 121	415SMTP15B●	7.1
122-130	407SMTP15B●	6.4
139 - 199	415SMTP05B	29.3
200 - 236	◆	
237 - 400	407SMTP05B●	20.7
150 HP MOTOR		
5 - 22	◆	
23 - 30	800SMTP25	12.0
39 - 66	608SMTP25B●	8.1
	608SMTP15B	14.7

Output RPM	Reducer Size	Minimum Sheave P.D.
150 HP MOTOR (Cont'd)		
67 - 80	507SMTP25B●	7.9
	507SMTP15B	8.4
81 - 108	507SMTP15B	8.4
109 - 130	415SMTP15B●	7.1
131 - 180	◆	
181 - 340	415SMTP05B●	28.9
341 - 400	407SMTP05B●	20.3
200 HP MOTOR		
5 - 30	◆	
31 - 59	800SMTP25	12.0
60 - 80	608SMTP25B●	8.1
	608SMTP15B●	13.2
81 - 99	608SMTP15B●	13.2
100 - 130	507SMTP15B●	8.5
131 - 273	◆	
274 - 400	415SMTP05B●	28.3
250 HP MOTOR		
5 - 38	◆	
39 - 80	800SMTP25●	12.0
81 - 84	◆	
85 - 130	608SMTP15B●	12.0
131 - 378	◆	
379 - 400	415SMTP05B▲	27.9
300 HP MOTOR		
5 - 46	◆	
47 - 80	800SMTP25▲	12.0
81 - 112	◆	
113 - 130	608SMTP15B▲	11.1
131 - 400	◆	
350 HP MOTOR		
5 - 55	◆	
56 - 80	800SMTP25▲	12.0
81 - 400	◆	
400 HP MOTOR		
5 - 63	◆	
64 - 80	800SMTP25▲	12.0
81 - 400	◆	
450 HP MOTOR		
5 - 72	◆	
73 - 80	800SMTP25▲	12.0
81 - 400	◆	
500 HP MOTOR		
5 - 400	◆	

Notes:
- ● Requires fan kit.
- ▲ Requires pump and cooler kit.
- ◆ Contact Application Engineering (1 800 626 2093) for the selection of an enclosed gear drive.

SMTP/SMFP Selection Chart

Class III Service (2.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
1/4 HP MOTOR		
5 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
81 - 89	107SMTP15	2.3
	107SMTP09	2.4
90 - 130	107SMTP15	2.3
	107SMTP09	2.4
	107SMTP05	2.3
131 - 200	107SMTP09	2.4
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
1/3 HP MOTOR		
5 - 6	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
7 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
81 - 89	107SMTP15	2.3
	107SMTP09	2.3
90 - 130	107SMTP15	2.3
	107SMTP09	2.3
	107SMTP05	2.3
131 - 200	107SMTP09	2.3
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
1/2 HP MOTOR		
5 - 6	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
7 - 9	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
10 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
81 - 89	107SMTP15	2.3
	107SMTP09	2.4
90 - 130	107SMTP15	2.3
	107SMTP09	2.4
	107SMTP05	2.3
131 - 200	107SMTP09	2.4
	107SMTP05	2.3
201 - 400	107SMTP05	2.3

Output RPM	Reducer Size	Minimum Sheave P.D.
3/4 HP MOTOR		
5	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
6 - 10	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
11 - 14	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
15 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.4
81 - 89	107SMTP15	2.3
	107SMTP09	2.4
90 - 130	107SMTP15	2.3
	107SMTP09	2.4
	107SMTP05	2.3
131 - 200	107SMTP09	2.4
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
1 HP MOTOR		
5 - 8	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
9 - 14	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
15 - 20	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
21 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
81 - 89	107SMTP15	2.3
	107SMTP09	2.3
90 - 130	107SMTP15	2.3
	107SMTP09	2.3
	107SMTP05	2.3
131 - 200	107SMTP09	2.3
	107SMTP05	2.3
201 - 400	107SMTP05	2.3

Output RPM	Reducer Size	Minimum Sheave P.D.
1 1/2 HP MOTOR		
5 - 7	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
8 - 12	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
13 - 22	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
23 - 31	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
32 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
81 - 89	107SMTP15	2.3
	107SMTP09	2.3
90 - 130	107SMTP15	2.3
	107SMTP09	2.3
	107SMTP05	2.3
131 - 200	107SMTP09	2.3
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
2 HP MOTOR		
5 - 6	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
7 - 10	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
11 - 17	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
18 - 30	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
31 - 42	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
43 - 50	107SMTP35	2.3
	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
51 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3

SMTP/SMFP Selection Chart

Class III Service (2.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
2 HP MOTOR (Cont'd)		
81 - 89	107SMTP15	2.3
	107SMTP09	2.3
90 - 130	107SMTP15	2.3
	107SMTP09	2.3
	107SMTP05	2.3
131 - 200	107SMTP09	2.3
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
3 HP MOTOR		
5	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
6 - 9	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
10 - 16	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
17 - 26	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
27 - 46	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
47 - 50	115SMTP35	3.4
	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
51 - 65	115SMTP25	3.4
	115SMTP15	3.4
	115SMTP09	3.4
66 - 80	107SMTP25	2.3
	107SMTP15	2.3
	107SMTP09	2.3
81 - 89	107SMTP15	2.3
	107SMTP09	2.3
90 - 115	107SMTP15	2.3
	107SMTP09	2.3
	115SMTP05	4.9
116 - 130	107SMTP15	2.3
	107SMTP09	2.3
	107SMTP05	2.3
131 - 200	107SMTP09	2.3
	107SMTP05	2.3
201 - 400	107SMTP05	2.3
5 HP MOTOR		
5 - 7	407SMTP25B	6.4
	407SMTP15B	6.4
8 - 9	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4

Output RPM	Reducer Size	Minimum Sheave P.D.
5 HP MOTOR (Cont'd)		
10 - 16	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
17 - 27	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
28 - 44	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
45 - 50	203SMTP35	3.8
	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
51 - 80	203SMTP25	3.8
	203SMTP15	3.8
	203SMTP09	3.8
81 - 89	115SMTP15	3.4
	115SMTP09	3.4
90 - 113	115SMTP15	3.4
	115SMTP09	3.4
	115SMTP05	4.9
114 - 130	107SMTP15	2.3
	107SMTP09	2.3
	115SMTP05	4.9
131 - 200	107SMTP09	2.3
	115SMTP05	4.9
201 - 244	115SMTP05	4.9
245 - 400	107SMTP05	2.3
7 1/2 HP MOTOR		
5 - 6	415SMTP25B	7.1
	415SMTP15B	7.1
7 - 11	407SMTP25B	6.4
	407SMTP15B	6.4
12 - 14	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
15 - 25	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
26 - 42	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
43 - 50	207SMTP35	4.3
	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
51 - 80	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
81 - 89	203SMTP15	3.8
	203SMTP09	3.8

Output RPM	Reducer Size	Minimum Sheave P.D.
7 1/2 HP MOTOR (Cont'd)		
90 - 120	203SMTP15	3.8
	203SMTP09	3.8
	203SMTP05	3.8
121 - 130	115SMTP15	3.4
	115SMTP09	3.4
	203SMTP05	3.8
131 - 161	115SMTP09	3.4
	203SMTP05	3.8
162 - 194	115SMTP09	3.4
	115SMTP05	4.8
195 - 200	107SMTP09	2.3
	115SMTP05	4.8
201 - 400	115SMTP05	4.8
10 HP MOTOR		
5 - 6	507SMTP25B	7.9
	507SMTP15B	7.9
7 - 9	415SMTP25B	7.1
	415SMTP15B	7.1
10 - 14	407SMTP25B	6.4
	407SMTP15B	6.4
15 - 19	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
20 - 34	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
35 - 50	215SMTP35	5.6
	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
51 - 61	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
61 - 80	207SMTP25	4.3
	207SMTP15	4.3
	207SMTP09	4.3
81 - 89	207SMTP15	4.3
	207SMTP09	4.3
90 - 119	207SMTP15	4.3
	207SMTP09	4.3
	207SMTP05	4.9
120 - 130	203SMTP15	3.8
	203SMTP09	3.8
131 - 168	203SMTP09	3.8
	203SMTP05	3.8
169 - 200	115SMTP09	3.4
	203SMTP05	3.8
201 - 244	203SMTP05	3.8
245 - 400	115SMTP05	4.7
15 HP MOTOR		
5 - 6	608SMTP25B	8.1
	608SMTP15B	8.1
7 - 10	507SMTP25B	7.9
	507SMTP15B	7.9
11 - 15	415SMTP25B	7.1
	415SMTP15B	7.1

SMTP/SMFP Selection Chart

Class III Service (2.0 S.F.)

Output RPM	Reducer Size	Minimum Sheave P.D.
15 HP MOTOR (Cont'd)		
16 - 23	407SMTP25B	6.4
	407SMTP15B	6.4
24 - 30	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
31 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
51 - 80	215SMTP25	5.6
	215SMTP15	5.6
	215SMTP09	5.6
81 - 89	215SMTP15	5.6
	215SMTP09	5.6
90 - 105	215SMTP15	5.6
	215SMTP09	5.6
	215SMTP05	5.6
106 - 130	207SMTP15	4.3
	207SMTP09	4.3
	215SMTP05	5.6
131 - 162	207SMTP09	4.3
	215SMTP05	5.6
163 - 200	207SMTP09	4.3
	207SMTP05	4.8
201 - 215	207SMTP05	4.8
216 - 400	203SMTP05	3.8
20 HP MOTOR		
5	800SMTP25	12.0
6 - 9	608SMTP25B	8.1
	608SMTP15B	8.1
10 - 14	507SMTP25B	7.9
	507SMTP15B	7.9
15 - 29	415SMTP25B	7.1
	415SMTP15B	7.1
21 - 31	407SMTP25B	6.4
	407SMTP15B	6.4
32 - 43	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
43 - 50	307SMTP35	6.0
	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
51 - 80	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
81 - 89	215SMTP15	5.6
	215SMTP09	5.6
90 - 130	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	6.0
131 - 156	215SMTP09	5.6
	215SMTP05	5.6
157 - 200	207SMTP09	4.3
	215SMTP05	5.6
201 - 246	215SMTP05	5.6

Output RPM	Reducer Size	Minimum Sheave P.D.
20 HP MOTOR (Cont'd)		
247 - 327	207SMTP05	4.6
328 - 400	203SMTP05	3.8
25 HP MOTOR		
5 - 7	800SMTP25	12.0
8 - 11	608SMTP25B	8.1
	608SMTP15B	8.1
12 - 18	507SMTP25B	7.9
	507SMTP15B	7.9
19 - 25	415SMTP25B	7.1
	415SMTP15B	7.1
26 - 39	407SMTP25B	6.4
	407SMTP15B	6.4
40 - 50	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
51 - 59	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
60 - 80	307SMTP25	6.0
	307SMTP15	6.0
	307SMTP09	6.0
81 - 89	307SMTP15	6.0
	307SMTP09	6.0
90 - 99	307SMTP15	6.0
	307SMTP09	6.0
	315SMTP05	10.1
100 - 110	307SMTP15	6.0
	307SMTP09	6.0
	307SMTP05	6.0
111 - 130	215SMTP15	5.6
	215SMTP09	5.6
	307SMTP05	6.0
131 - 182	215SMTP09	5.6
	307SMTP05	6.0
183 - 200	215SMTP09	5.6
	215SMTP05	5.6
201 - 340	215SMTP05	5.6
341 - 400	207SMTP05	4.6
30 HP MOTOR		
6 - 9	800SMTP25	12.0
10 - 14	608SMTP25B	8.1
	608SMTP15B	8.1
15 - 22	507SMTP25B	7.9
	507SMTP15B	7.9
23 - 31	415SMTP25B	7.1
	415SMTP15B	7.1
32 - 48	407SMTP25B	6.4
	407SMTP15B	6.4
49 - 50	315SMTP35	6.4
	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
51 - 80	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
81 - 89	307SMTP15	6.0
	307SMTP09	6.0

Output RPM	Reducer Size	Minimum Sheave P.D.
30 HP MOTOR (Cont'd)		
90 - 130	307SMTP15	6.0
	307SMTP09	6.0
	315SMTP05	10.1
131 - 200	215SMTP09	5.6
	307SMTP05	6.0
201 - 240	307SMTP05	6.0
241 - 400	215SMTP05	5.6
40 HP MOTOR		
5 - 7	◆	
8 - 12	800SMTP25	12.0
13 - 19	608SMTP25B	8.1
	608SMTP15B	8.1
20 - 30	507SMTP25B	7.9
	507SMTP15B	7.9
31 - 42	415SMTP25B	7.1
	415SMTP15B	7.1
43 - 69	407SMTP25B	6.4
	407SMTP15B	6.4
70 - 80	315SMTP25	6.4
	315SMTP15	6.4
	315SMTP09	6.4
81 - 89	315SMTP15	6.4
	315SMTP09	6.4
90 - 113	315SMTP15	6.4
	315SMTP09	6.4
	407SMTP05B	14.9
114 - 130	307SMTP15	6.0
	307SMTP09	6.0
	407SMTP05B	14.9
131 - 200	307SMTP09	6.0
	315SMTP05	9.9
201 - 372	307SMTP05	6.0
373 - 400	215SMTP05	5.6
50 HP MOTOR		
5 - 9	◆	
10 - 15	800SMTP25	12.0
16 - 24	608SMTP25B	8.1
	608SMTP15B	8.1
25 - 38	507SMTP25B	7.9
	507SMTP15B	7.9
39 - 54	415SMTP25B	7.1
	415SMTP15B	7.1
55 - 80	407SMTP25B●	6.4
	407SMTP15B	6.4
81 - 89	407SMTP15B	6.4
90 - 95	407SMTP15B	6.4
	315SMTP09	7.1
	415SMTP05B	19.5
96 - 106	315SMTP15	6.4
	315SMTP09	7.2
	415SMTP05B	19.5
107 - 130	315SMTP15	6.4
	315SMTP09	7.2
	407SMTP05B	15.2
131 - 155	315SMTP09	7.2
	407SMTP05B	15.2
156 - 186	307SMTP09●	6.0
	407SMTP05B	15.2

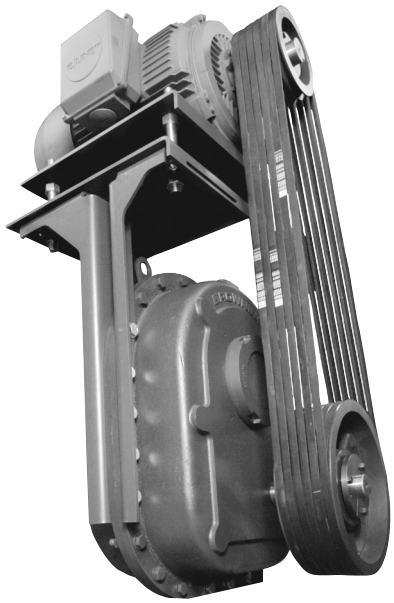
Notes:
- ● Requires fan kit.
- ▲ Requires pump and cooler kit.
- ◆ Contact Application Engineering (1 800 626 2093) for the selection of an enclosed gear drive.

SMTP/SMFP Selection Chart

Class III Service (2.0 S.F.)

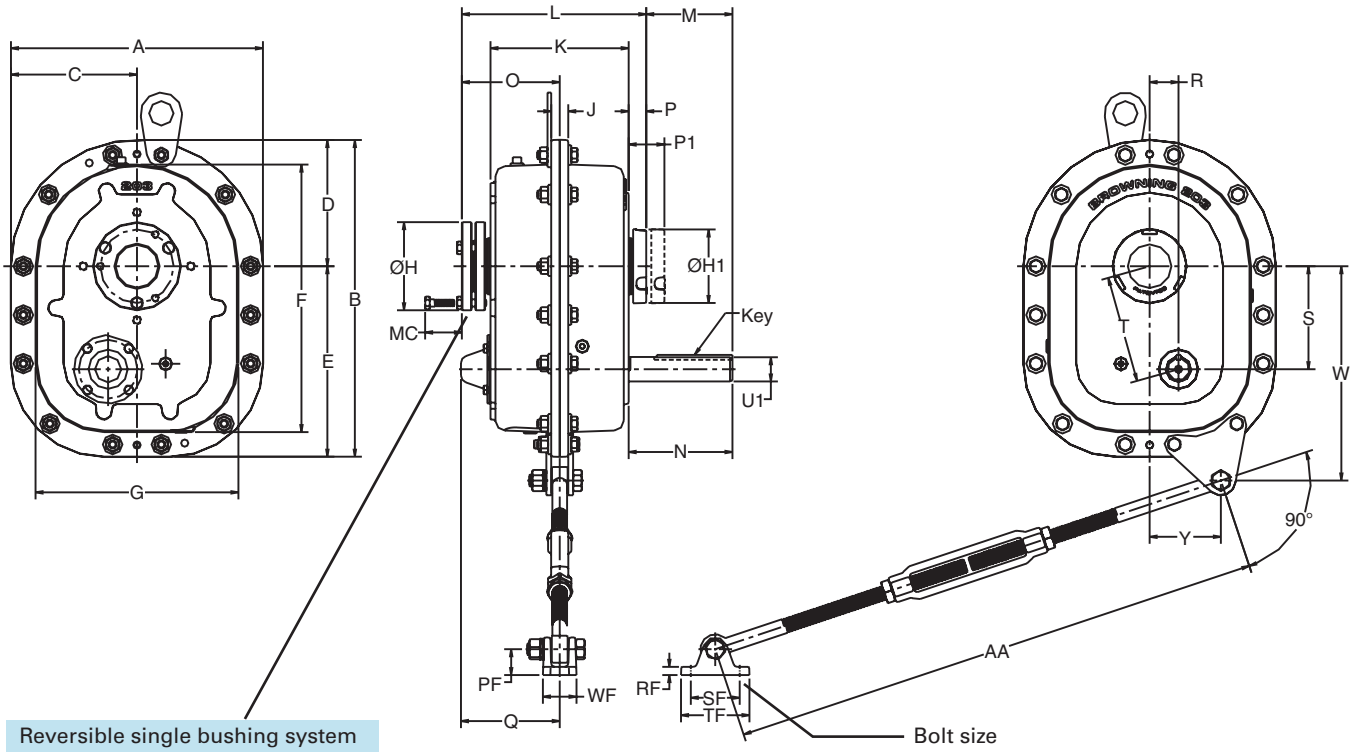
Output RPM	Reducer Size	Minimum Sheave P.D.
50 HP MOTOR (Cont'd)		
187 - 200	307SMTP09●	6.0
	315SMTP05	9.8
201 - 280	315SMTP05	9.8
281 - 400	307SMTP05	6.0
60 HP MOTOR		
5 - 12	◆	
13 - 19	800SMTP25	12.0
20 - 30	608SMTP25B	8.1
	608SMTP15B	8.1
31 - 48	507SMTP25B	7.9
	507SMTP15B	7.9
49 - 70	415SMTP25B	7.1
	415SMTP15B	7.1
71 - 80	407SMTP25B●	6.4
	407SMTP15B●	6.4
81 - 89	407SMTP15B	6.4
90 - 114	407SMTP15B●	6.4
	415SMTP05B	19.5
115 - 123	407SMTP15B●	6.4
	315SMTP09●	7.0
	415SMTP05B	19.5
124 - 130	315SMTP15●	6.4
	315SMTP09●	7.0
	415SMTP05B	19.5
131 - 152	315SMTP09●	7.0
	407SMTP05B	15.0
153 - 200	315SMTP09●	7.0
	407SMTP05B	15.0
201 - 242	407SMTP05B	15.0
243 - 370	315SMTP05	9.7
371 - 400	307SMTP05	6.0
75 HP MOTOR		
5 - 15	◆	
16 - 24	800SMTP25	12.0
25 - 40	608SMTP25B	8.1
	608SMTP15B	11.7
41 - 67	507SMTP25B	7.9
	507SMTP15B	7.9
68 - 80	415SMTP25B●	7.1
	415SMTP15B	7.1
81 - 89	415SMTP15B	7.1
90 - 97	415SMTP15B	7.1
	415SMTP05B	20.7
98-130	407SMTP15B●	6.4
131 - 159	415SMTP05B	20.7
160 - 190	315SMTP09●	6.8
191 - 200	315SMTP09●	6.8
	407SMTP05B	14.7
201 - 334	407SMTP05B	14.7
335 - 400	315SMTP05	9.5
100 HP MOTOR		
5 - 20	◆	
21 - 35	800SMTP25	12.0
36 - 61	608SMTP25B	8.1
	608SMTP15B	10.5
62 - 80	507SMTP25B●	7.9
	507SMTP15B	7.9
81 - 101	507SMTP15B	7.9
102 - 130	415SMTP15B●	7.1

Output RPM	Reducer Size	Minimum Sheave P.D.
100 HP MOTOR (Cont'd)		
131 - 168	◆	
169 - 286	415SMTP05B	20.3
287 - 400	407SMTP05B●	14.2
125 HP MOTOR		
5 - 26	◆	
27 - 50	800SMTP25●	12.0
51 - 80	608SMTP25B●	8.1
	608SMTP15B	9.6
81 - 84	608SMTP15B	9.6
85 - 130	507SMTP15B	7.9
131 - 232	◆	
233 - 400	415SMTP05B●	20.1
150 HP MOTOR		
5 - 32	◆	
33 - 66	800SMTP25●	12.0
67 - 80	608SMTP25B●	8.1
	608SMTP15B	9.0
81 - 110	608SMTP15B	9.0
111 - 130	507SMTP15B	7.9
131 - 302	◆	
303 - 400	415SMTP05B●	19.7
200 HP MOTOR		
5 - 44	◆	
45 - 80	800SMTP25●	12.0
81 - 104	◆	
105 - 130	608SMTP15B●	8.1
131 - 400	◆	
250 HP MOTOR		
5 - 56	◆	
57 - 80	800SMTP25●	12.0
81 - 400	◆	
300 HP MOTOR		
5 - 68	◆	
69 - 80	800SMTP25▲	12.0
81 - 400	◆	
350 HP MOTOR		
5 - 400	◆	

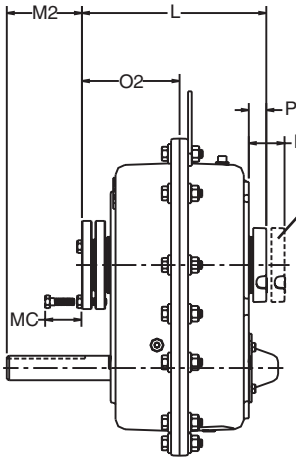


Notes:
- ● Requires fan kit.
- ▲ Requires pump and cooler kit.
- ◆ Contact Application Engineering (1 800 626 2093) for the selection of an enclosed gear drive.

SMTP TorqTaper Plus® Unit Sizes 107-315

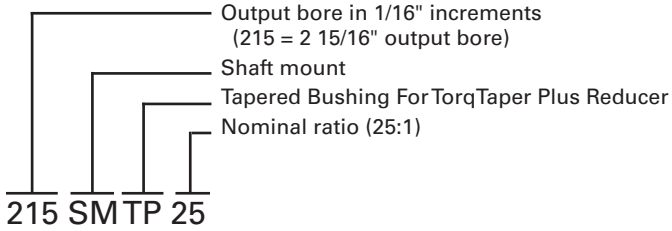


Reversible single bushing system mounted on the back side.



Reversible single bushing system mounted on the front side.

Part Number Explanation



SMTP TorqTaper Plus® Unit Sizes 107-315

PART NO. ★	DIMENSIONS IN INCHES									
	A	B	C	D	E	F	G	H	H1	J
107SMTP	9.76	12.07	4.88	4.88	7.19	10.07	7.75	3.25	3	0.63
115SMTP	11	14.08	5.5	5.5	8.58	11.78	8.69	4.13	3.5	0.75
203SMTP	12.88	16.16	6.44	6.44	9.72	13.66	10.38	4.5	3.75	0.87
207SMTP	14.5	18.47	7.25	7.25	11.22	15.73	11.76	4.88	4.25	1.01
215SMTP	16.25	20.88	8.13	8.13	12.76	18.07	13.44	5.31	4.75	1.07
307SMTP	19.04	24.37	9.52	9.52	14.85	21	15.67	6.44	5.69	1.25
315SMTP	19.9	26.35	9.95	9.95	16.4	23.02	16.57	7.13	6.7	1.25

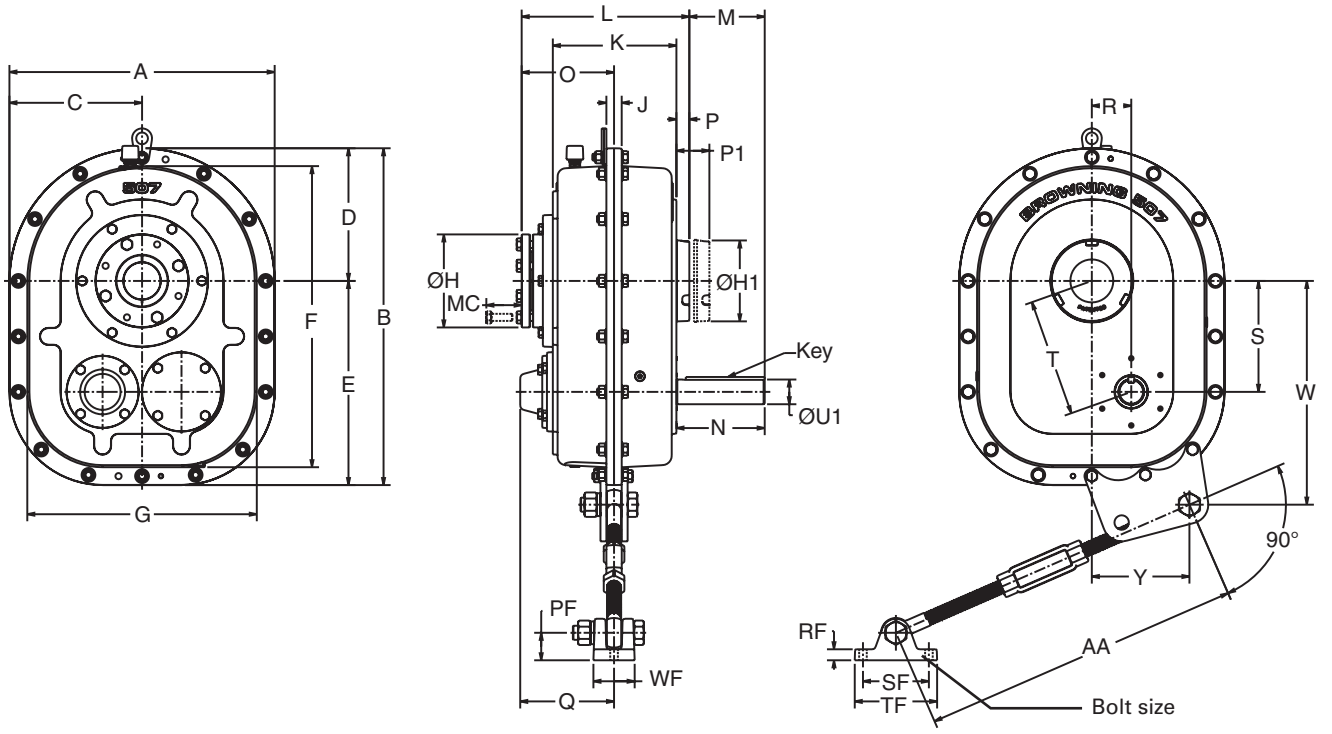
PART NO. ★	DIMENSIONS IN INCHES									
	K	L	M	M2	MC	N	O	O2	P	P1
107SMTP	5.52	7.89	3.18	2.61	1.75	4.08	4.25	4.21	0.9	1.84
115SMTP	5.99	8.36	3.34	2.77	1.88	4.24	4.48	4.45	0.9	1.83
203SMTP	7.07	9.43	4.42	3.84	1.88	5.31	5.01	4.99	0.89	1.83
207SMTP	7.39	9.75	4.23	3.65	1.88	5.12	5.14	5.19	0.89	1.86
215SMTP	8.24	10.85	4.85	4.28	1.88	5.87	5.69	5.74	1.02	1.96
307SMTP	9.27	12.57	6.09	5.47	2.25	7.45	6.58	6.61	1.36	2.75
315SMTP	10.51	14.5	6.59	5.96	2.75	8.32	7.51	7.61	1.73	3.25

PART NO. ★	DIMENSIONS IN INCHES									
	PF	Q	R	RF	S	SF	T	TF	U1	W
107SMTP	1.14	4.24	1.18	0.36	3.77	2.50	3.95	3.38	0.75	7.88
115SMTP	1.14	4.51	1.35	0.36	4.36	2.50	4.56	3.38	1.12	9.14
203SMTP	1.32	5.04	1.48	0.42	5.26	2.50	5.46	3.50	1.25	10.94
207SMTP	1.51	5.57	1.63	0.48	6.08	3.00	6.29	4.25	1.44	12.68
215SMTP	1.51	6.24	2.12	0.48	7.01	3.00	7.32	4.25	1.87	14.19
307SMTP	1.81	6.79	2.25	0.61	7.78	4.00	8.10	5.38	2.00	17.00
315SMTP	2.22	8.05	2.63	0.72	8.53	4.75	8.93	6.50	2.13	18.12

PART NO. ★	DIMENSIONS IN INCHES						MAX. OUTPUT BORE	WT. LBS
	WF	Y	AA		BOLT SIZE	KEY		
			MIN.	MAX.				
107SMTP	1.44	2.73	24.00	30.00	3/8	.188 x .188 x 2.88	1 7/16	53
115SMTP	1.44	3.12	24.00	30.00	3/8	.250 x .250 x 2.75	1 15/16	75
203SMTP	1.72	3.64	24.00	30.00	3/8	.250 x .250 x 3.88	2 3/16	112
207SMTP	2.19	4.16	27.00	33.00	7/16	.375 x .375 x 3.75	2 7/16	155
215SMTP	2.19	4.65	27.00	33.00	7/16	.500 x .500 x 3.75	2 15/16	226
307SMTP	2.78	5.58	29.00	35.00	1/2	.500 x .500 x 6.50	3 7/16	367
315SMTP	3.63	6.2	29.50	35.50	5/8	.500 x .500 x 7.50	3 15/16	480

★ Complete part number by adding ratio symbol, for example, "107SMTP05".
Note - "05" is symbol for 5:1 nominal ratio: see page A-9 for exact ratios and ratio symbols.
Dimension "MC" is minimum clearance for bushing removal.
Order bushings from pages A-64 thru A-67 for shaft size required.

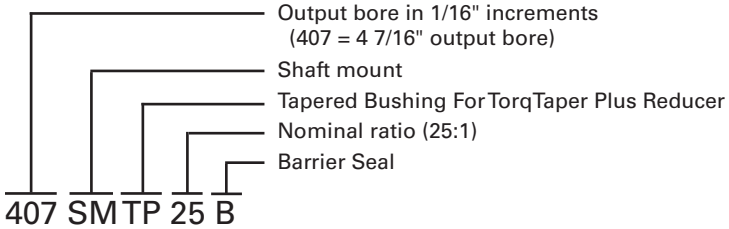
SMTP TorqTaper Plus® Unit Sizes 407 - 800



Part No.★	Dimensions in Inches																				
	A	B	C	D	E	F	G	H	H1	J	K	L	M	N	O	P	P1	PF	Q	R	RF
407SMTP-B	21.69	27.80	10.85	10.85	16.96	24.48	18.37	7.69	7.00	1.38	10.13	13.88	5.50	6.70	7.55	1.20	3.00	2.22	8.25	3.13	0.72
415SMTP-B	25.04	31.80	12.52	12.52	19.28	28.01	21.25	9.44	7.88	1.63	12.63	16.78	8.00	9.23	9.18	1.23	3.25	2.92	9.43	3.63	1.17
507SMTP-B	28.16	35.75	14.08	14.08	21.67	31.96	24.37	9.88	8.50	1.63	13.12	17.80	8.00	9.37	9.81	1.37	3.50	2.92	9.96	4.19	1.17
608SMTP-B	30.23	39.58	15.11	15.11	24.47	35.78	26.43	11.56	10.94	1.88	16.74	21.96	8.00	9.51	12.09	1.51	3.75	3.52	12.50	4.25	1.36
800SMTP	36.56	46.93	18.28	18.28	28.65	41.22	30.84	14.50	12.75	2.38	18.78	24.40	10.81	12.75	12.99	1.94	4.75	4.25	13.57	4.88	1.63

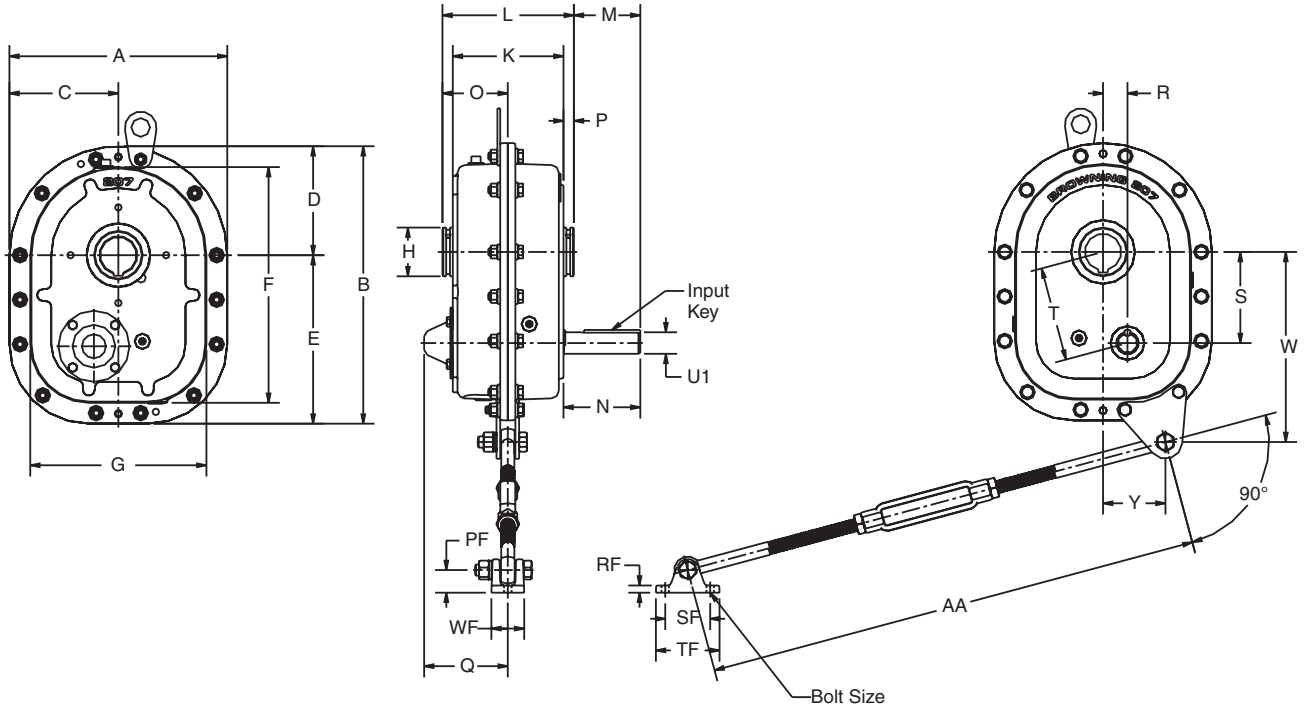
Part No.★	Dimensions in Inches								AA		Bolt Size	Key	Max. Output Bore	MC	Wt. Lbs.
	S	SF	T	TF	U1	W	WF	Y	Min.	Max.					
407SMTP-B	9.24	4.75	9.75	6.50	2.12	19.72	3.63	3.56	29.50	35.50	5/8	1/2 Sq. x 6.00" Key	4 7/16	2.75	609
415SMTP-B	10.39	7.00	11.00	8.75	2.37	21.79	4.38	7.16	28.00	34.00	3/4	5/8 Sq. x 8.38" Key	4 15/16	3.25	957
507SMTP-B	11.78	7.00	12.50	8.75	2.62	23.75	4.38	10.36	28.00	34.00	3/4	5/8 Sq. x 8.38" Key	5 7/16	3.75	1217
608SMTP-B	13.60	7.00	14.25	9.25	2.69	26.05	4.96	11.71	28.00	34.00	3/4	5/8 Sq. x 8.75" Key	6 1/2	4.25	1913
800SMTP	15.24	9.00	16.00	11.88	2.94	31.36	5.75	10.62	31.00	37.00	7/8	3/4 Sq. x 12.00" Key	8	4.50	2894

Part Number Explanation



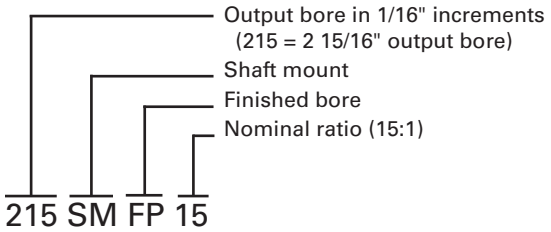
★ Complete part number by adding ratio symbol, for example, "407SMTP05B".

SMFP Finished Bore Sizes 107-315



Note: SMFP units are made-to-order.
Contact Regal for delivery.

Part Number Explanation



PART NO. ★	DIMENSIONS IN INCHES														OUTPUT BORE*	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	DIA.	KEYWAY
107SMFP	9.76	12.07	4.88	4.88	7.19	10.07	7.75	2.00	0.63	5.52	6.52	3.58	4.08	3.26	1.4375	.375 x .125
115SMFP	11.00	14.08	5.50	5.50	8.58	11.78	8.69	2.63	0.75	5.99	7.13	3.67	4.24	3.57	1.9375	.500 x .125
203SMFP	12.88	16.16	6.44	6.44	9.72	13.66	10.38	2.88	0.87	7.07	8.45	4.62	5.31	4.23	2.1875	.500 x .187
207SMFP	14.50	18.47	7.25	7.25	11.22	15.73	11.76	3.25	1.01	7.39	8.77	4.43	5.12	4.39	2.4375	.625 x .187
215SMFP	16.25	20.88	8.13	8.13	12.76	18.07	13.44	3.88	1.07	8.24	10.25	4.86	5.87	5.13	2.9375	.750 x .250
307SMFP	19.04	24.37	9.52	9.52	14.85	21.00	15.67	5.00	1.25	9.27	11.70	6.24	7.45	5.85	3.4375	.875 x .250
315SMFP	19.90	26.35	9.95	9.95	16.40	23.02	16.57	5.38	1.25	10.51	13.00	7.08	8.32	6.50	3.9375	1.000 x .250

PART NO. ★	DIMENSIONS IN INCHES																	WT. LBS.
	P	PF	a	R	RF	S	SF	T	TF	U1	W	WF	Y	BOLT SIZE	AA MIN.	AA MAX.	INPUT KEY	
107SMFP	0.50	1.14	4.24	1.18	0.36	3.77	2.50	3.95	3.38	0.75	7.88	1.44	2.73	3/8	24	30	.188 x .188 x 2.88	53
115SMFP	0.57	1.14	4.51	1.35	0.36	4.36	2.50	4.56	3.38	1.13	9.14	1.44	3.12	3/8	24	30	.250 x .250 x 2.75	75
203SMFP	0.69	1.32	5.04	1.48	0.42	5.26	2.50	5.46	3.50	1.25	10.94	1.72	3.64	3/8	24	30	.250 x .250 x 3.88	112
207SMFP	0.69	1.51	5.57	1.63	0.48	6.08	3.00	6.29	4.25	1.44	12.68	2.19	4.16	7/16	27	33	.375 x .375 x 3.75	155
215SMFP	1.01	1.51	6.24	2.12	0.48	7.01	3.00	7.32	4.25	1.88	14.19	2.19	4.65	7/16	27	33	.500 x .500 x 3.75	226
307SMFP	1.22	1.81	6.79	2.25	0.61	7.78	4.00	8.10	5.38	2.00	17.00	2.78	5.58	1/2	29	35	.500 x .500 x 6.50	365
315SMFP	1.25	2.22	8.05	2.83	0.72	8.53	4.75	8.93	6.50	2.13	18.12	3.83	6.20	5/8	29.5	35.5	.500 x .500 x 7.50	477

★ Complete part number by adding ratio symbol, for example, "107SMFP05".
Note - "05" is symbol for 5:1 nominal ratio: see page A-9 for exact ratios and ratio symbols.
* If smaller shaft than the output bore is used, order bushing from page Accessories Section.

Application Inspired... Hydraulically Driven

Browning® Hydraulic TorqTaper Plus® Shaft Mount Reducers

With over 25 years in developing innovative solutions for industries, Regal® engineers designed the newest member of the TorqTaper Plus reducer family. The hydraulic TorqTaper Plus reducer is appropriate for applications where fluid power is required.

- For applications where electric motors are not available, such as portable equipment
- Compatible with many hydraulic motors currently used in similar applications – standard SAE mounting patterns
- Can be configured with screw conveyor components or as a shaft mounted reducer
- Patented mounting system, barrier seal system and increased ratings
- Replaces all popular hydraulic shaft mounted reducers
- Available with involute or straight sided input splines

Example No. 1

Units 107 - 315 Hydraulic Shaft Mounts

A hydraulic shaft mount reducer is required for a portable aggregate conveyor which can be loaded and operated 16 to 24 hours per day at 30 rpm.

The conveyor requires 3 hp. The reducer will be mounted on the conveyor drive pulley shaft, which is 2 3/16" diameter.

1. Determine the Load Classification

From the *AGMA Application Classification Numbers* section, note the AGMA Class Number is II for a uniformly loaded or fed conveyor operating over 10 hours per day.

2. Determine the Speed Reducer Required

From the *Hydraulic Reducer Selection Chart* section, there are four tables for selecting hydraulic shaft mounts for Class II Service. Locate the 30 rpm row, if available, in each table. Read across the row to find a column with a rating of 3 hp or greater. Read up the column to determine the basic reducer size that corresponds to the design hp. For this application, a 203HMTP15 13T SAE-B 2, 203HMTP25 9T SAE-A 2, 203HMTP05 6B SAE-A 2 or a 203HMTP25 6B SAE-A 2 may be used. Select the reducer based upon hydraulic motor characteristics, such as spline dimensions and flow rates.

(Note: Hydraulic motors are not included with the reducer.)

For this example, select 203HMTP15 13T SAE-B 2.

A 203TBP203 bushing is required to mount any of the three reducers to the 2 3/16" driven shaft.

A 203TAP-H torque arm kit is required to restrain the gearbox in operation.

3. List Components

1, **203HMTP15 13T SAE-B 2** reducer
1,**203TBP203** bushing
1,**203TAP-H** torque arm kit
1,Hydraulic motor (separate)

Example No. 2

Units 107 - 315 Hydraulic Screw Conveyor

A hydraulic shaft mount reducer is required to convey dry cement powder. The conveyor will be uniformly fed and operated 12 to 16 hours per day. The screw is 14" diameter and has a 2 7/16" bore with two holes. The conveyor requires 4 1/2 hp and will operate at 60 rpm. The application requires a waste pack.

1. Determine the Load Classification

From the *AGMA Application Classification Numbers* section, note the AGMA Class Number is II for a uniformly loaded or fed screw conveyor, operating over 10 hours per day.

2. Determine the Speed Reducer Required

From the *Hydraulic Reducer Selection Chart* section, there are four tables for selecting hydraulic shaft mounts for Class II Service. Locate the 60 rpm row, if available, in each table. Read across the row to find a column with a rating of 4 1/2 hp or greater. Read up the column to determine the basic reducer size that corresponds to the design hp. For this application, a 115HMTP15 9T SAE-A 2, 115HMTP25 9T SAE-A 2, 203HMTP25 6B SAE-A 2 or a 203HMTP05 6B SAE-A 2 may be used. Generally, the smaller case size is more economical, but the total system should be considered. Select the reducer based upon hydraulic motor characteristics such as spline dimensions and flow rates. (Note: Hydraulic motors are not included with the reducer.) For this example, select a 115HMTP15 9T SAE-A 2.

3. Establish Sealing Required for Screw Conveyor

The waste pack cartridge is well suited for dry, abrasive materials such as cement powder. Specify the optional waste pack cartridge for the 115 shaft mount selected. From the *Accessories* section, select part 115-203WPP.

4. Select the Screw Conveyor Adapter and Screw Conveyor Shaft

Using the basic reducer size, required drive shaft and screw diameter for the selection; refer to *Screw Conveyor Drives* in the *Accessories* section. Note the specification was for a 2 7/16" drive shaft with a two hole arrangement for the 14" diameter screw. From the table select the 115SCA-P and the 115DSP207.

5. Select the Trough End

From the *Screw Conveyor Trough Ends Sizes 107-407* table, select the SCTE14 X 2 7/16 trough end.

6. List of Components:

1, **115HMTP15** 9T SAE-A 2 reducer
1, **115SCA-P** screw conveyor adapter
1, **115DSP207** screw conveyor drive shaft kit
1, **115-203WPP** waste pack cartridge
1, **SCTE14X2 7/16** trough end
1, Hydraulic motor (separate)

HMTP Exact Ratios

Reducer Size	Ratio Symbols		
	05	15	25
107	5.0588	14.8276	24.7250
115	4.7000	14.7759	24.8558
203	5.1053	14.9231	24.7409
207	5.1579	14.7870	24.7094
215	5.1667	14.8187	24.8502
307	5.1111	14.9704	24.7692
315	4.8824	14.5744	24.4118

Note: See “Application Considerations” on back cover.

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
AGITATORS (Mixers)			
Pure Liquids	I	I	II
Liquids and Solids	I	II	II
Liquids - Variable Density	I	II	II
BLOWERS			
Centrifugal & Vane	I	I	II
Lobe	I	II	II
Vane	I	II	II
BREWING AND DISTILLING			
Bottling Machinery	I	I	II
Brew Kettles - Continuous Duty	II	II	II
Cookers - Continuous Duty	II	II	II
Mash Tubs - Continuous Duty	II	II	II
Scale Hopper - Frequent Starts	II	II	II
CAN FILLING MACHINES	I	I	II
CAR DUMPERS	II	III	III
CAR PULLERS	I	II	II
CLARIFIERS	I	I	II
CLASSIFIERS	I	II	II
CLAY WORKING MACHINERY			
Brick Presses	II	III	III
Briquette Machines	II	III	III
Pug Mills	I	II	II
COMPACTORS	♦	♦	♦
COMPRESSORS			
Centrifugal	I	I	II
Lobe	I	II	II
Reciprocating, Multi-Cylinder	II	II	III
Reciprocating, Single-Cylinder	III	III	III
CONVEYORS - GENERAL PURPOSE			
Includes Apron, Assembly, Belt, Bucket			
Chain, Flight, Oven, and Screw			
Uniformly Loaded or Fed	I	I	II
Heavy Duty - Not Uniformly Fed	I	II	II
Severe Duty - Reciprocating or Shaker	II	III	III
CRANES			
Dry Dock			
Main Hoist	♦	♦	♦
Auxiliary Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Slewing Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Container			
Main Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Trolley Drive			
Gantry Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Mill Duty			
Main Hoist	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
Industrial Duty			
Main	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
CRUSHERS			
Stone or Ore	III	III	III
DREDGES			
Cable Reels	II	II	II
Conveyors	II	II	II
Cutter Head Drives	III	III	III
Pumps	III	III	III
Screen Drives	III	III	III
Stackers	II	II	II
Winches	II	II	II
ELEVATORS			
Bucket	I	II	II
Centrifugal Discharge	I	I	II
Escalators	I	I	II
Freight	I	II	II
Gravity Discharge	I	I	II
EXTRUDERS			
General	II	II	II
Plastics			
Variable Speed Drive	III	III	III
Fixed Speed Drive	III	III	III
Rubber			
Continuous Screw Operation	III	III	III
Intermittent Screw Operation	III	III	III
FANS			
Centrifugal	I	I	II

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
FANS (Cont'd)			
Cooling Towers	III	III	III
Forced Draft	II	II	II
Induced Draft	II	II	II
Industrial & Mine	II	II	II
FEEDERS			
Apron	I	II	II
Belt	I	II	II
Disc	I	I	II
Reciprocating	II	III	III
Screw	I	II	II
FOOD INDUSTRY			
Cereal Cooker	I	I	II
Dough Mixer	II	II	II
Meat Grinders	II	II	II
Slicers	I	II	II
GENERATORS AND EXCITERS	II	II	II
HAMMER MILLS	III	III	III
HOISTS			
Heavy Duty	♦	♦	♦
Medium Duty	♦	♦	♦
Skip Hoist	♦	♦	♦
LAUNDRY TUMBLERS	II	II	II
LAUNDRY WASHERS	II	II	III
LUMBER INDUSTRY			
Barkers			
Spindle Feed	II	II	II
Main Drive	III	III	III
Conveyors			
Burner	II	II	II
Main or Heavy Duty	II	II	II
Main Log	III	III	III
Re-saw, Merry-Go-Round	II	II	II
Slab	III	III	III
Transfer	II	II	II
Chains			
Floor	II	II	II
Green	II	II	III
Cut-Off-Saws			
Chain	II	II	III
Drag	II	II	III
Debarking Drums	III	III	III
Feeds			
Edger	II	II	II
Gang	II	III	III
Trimmer	II	II	II
Log Deck	III	III	III
Log Hauls - Incline - Well Type	III	III	III
Log Turning Devices	III	III	III
Planer Feed	II	II	II
Planer Tilting Hoists	II	II	II
Rolls - Live-Off Brg - Roll Cases	III	III	III
Sorting Table	II	II	II
Tipple Hoist	II	II	II
Transfer			
Chain	II	II	III
Craneway	II	II	III
Tray Drives	II	II	II
Veneer Lathe Drives	II	II	II
METAL MILLS			
Draw Bench Carriage and Main Drive	II	II	II
Runout Table			
Non-Reversing			
Group Drives	II	II	II
Individual Drives	III	III	III
Reversing	III	III	III
Slab Pushers	II	II	II
Shears	III	III	III
Wire Drawing	II	II	II
Wire Winding Machine	II	II	II
METAL STRIP PROCESSING MACHINERY			
Bridges	II	II	II
Collers & Uncoilers	I	I	II
Edge Trimmers	I	II	II
Flatteners	II	II	II
Loopers (Accumulators)	I	I	I
Pinch Rolls	II	II	II
Scrap Choppers	II	II	II
Shears	III	III	III
Slitters	I	II	II
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	III	III	III
Helical Ring Gear	II	II	II
Direct Connected	III	III	III

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
MILLS, ROTARY TYPE (Cont'd)			
Cement Kilns	II	II	II
Dryers & Coolers	II	II	II
PAPER MILLS[1]			
Agitator (Mixer)	II	II	II
Agitator For Pure Liquors	II	II	II
Barking Drums	III	III	III
Barkers - Mechanical	III	III	III
Beater	II	II	II
Breaker Stack	II	II	II
Calendar[2]	II	II	II
Chipper	III	III	III
Chip Feeder	II	II	II
Coating Rolls	II	II	II
Conveyors			
Chip, Bark, Chemical	II	II	II
Log (Including Slab)	III	III	III
Couch Rolls	II	II	II
Cutter	III	III	III
Cylinder Molds	II	II	II
Dryers[2]			
Paper Machine	II	II	II
Conveyor Type	II	II	II
Embosser	II	II	II
Extruder	II	II	II
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	II	II	II
Jordan	II	II	II
Kiln Drive	II	II	II
Mt. Hope Roll	II	II	II
Paper Rolls	II	II	II
Platter	II	II	II
Presses - Felt Suction	II	II	II
Pulper	III	III	III
Pumps - Vacuum	II	II	II
Reel (Surface - Type)	II	II	II
Screens			
Chip	II	II	II
R otary	II	II	II
Vibrating	III	III	III
Size Press	II	II	II
Supercalendar	II	II	II
Thickener (AC Motor)	II	II	II
Thickener (DC Motor)	II	II	II
Washer (AC Motor)	II	II	II
Washer (DC Motor)	II	II	II
Wind and Unwind Stand	I	I	I
Winders (Surface Type)	II	II	II
Yankee Dryers[2]	II	II	II
PLASTICS INDUSTRY			
PRIMARY PROCESSING			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Continuous Feed, Holding & Blend Mill	II	II	II
Calendars	II	II	II
PLASTICS INDUSTRY			
SECONDARY PROCESSING			
Blow Molders	II	II	II
Coating	II	II	II
Film		II	II
II			
Pipe	II	II	II
Pre-Plasticizers	II	II	II
Rods	II	II	II
Sheet	II	II	II
Tubing	II	II	II
PULLERS - BARGE HAUL	II	II	II
PUMPS			
Centrifugal	I	I	II
Proportioning	II	II	II
Reciprocating			
Single Acting, 3 or more Cylinders	II	II	II
Double Acting, 2 or more Cylinders	II	II	II
Rotary			
Gear Type	I	I	II
Lobe	I	I	II
Vane	I	I	II
RUBBER INDUSTRY			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Mixing Mill			
2 Smooth Rolls	II	II	II
1 or 2 Corrugated Rolls	III	III	III
RUBBER INDUSTRY (Cont'd)			
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Cracker Warmer - 2 Roll, 1 Corrugated Roll	III	III	III
Cracker - 2 Corrugated Rolls	III	III	III
Holding, Feed & Blend Mill - 2 Rolls	II	II	II
Refiner - 2 Rolls	II	II	II
Calendars	II	II	II
SAND MULLER	II	II	II
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	II	II	II
Chemical Feeder	II	II	II
Dewatering Screens	II	II	II
Scum Breakers	II	II	II
Slow or Rapid Mixers	II	II	II
Sludge Collectors	II	II	II
Thickener	II	II	II
Vacuum Filters	II	II	II
SCREENS			
Air Washing	I	I	II
Rotary - Stone or Gravel	II	II	II
Traveling Water Intake	I	I	I
SCREW CONVEYORS			
Uniformly Loaded or Fed	I	I	II
Heavy Duty	I	II	II
SUGAR INDUSTRY			
Beet Slicer	III	III	III
Cane Knives	II	II	II
Crushers	II	II	II
Mills (Low Speed End)	III	III	III
TEXTILE INDUSTRY			
Batchers	II	II	II
Calendars	II	II	II
Cards	II	II	II
Dry Cans	II	II	II
Dyeing Machinery	II	II	II
Looms	II	II	II
Mangles	II	II	II
Nappers	II	II	II
Pads	II	II	II
Slashers	II	II	II
Soapers	II	II	II
Spinners	II	II	II
Tenter Frames	II	II	II
Washers	II	II	II
Winders	II	II	II

Notes:

1) The Class numbers listed in the table for paper mill applications are consistent with those shown in TAPPI *(Technical Association of Pulp and Paper Industry)* Technical information sheet 0406-18 1967, *Service Factors for Gears on Major Equipment in the Pulp and Paper Industry.*
2) Anti-friction bearings only.
♦ Contact Application Engineering (1 800 626 2093) for the selection of an AGMA Class Numbers in these applications.

Class I Service (1.0 S.F.)

Involute Spline Input

Single Reduction										
Output RPM	107HMTP05 13T SAE-B2		115HMTP05 13T SAE-B2		203HMTP05 14T SAE-C4		207HMTP05 14T SAE-C4		215HMTP05 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
90	4.55	3,078	7.55	5,111	14.74	9,980	17.93	12,137	28.16	19,064
100	4.89	2,978	8.39	5,111	15.86	9,663	19.27	11,740	30.08	18,327
110	5.22	2,890	9.23	5,111	16.94	9,383	20.59	11,402	32.07	17,762
120	5.54	2,813	10.07	5,111	17.99	9,136	21.87	11,102	33.99	17,255
130	5.85	2,743	10.91	5,111	19.02	8,914	23.12	10,833	35.85	16,803
140	6.16	2,680	11.75	5,111	20.02	8,713	24.33	10,587	36.00	15,666
150	6.45	2,622	12.58	5,111	20.09	8,159	25.52	10,365	36.00	14,622
160	6.75	2,569	13.42	5,111	20.09	7,649	26.69	10,164	36.00	13,708
170	7.03	2,520	14.01	5,020	20.09	7,199	27.83	9,975	36.00	12,902
180	7.31	2,475	14.58	4,934	20.09	6,799	28.97	9,804	36.00	12,185
190	7.59	2,434	14.58	4,675	20.09	6,441	30.07	9,642	36.00	11,544
200	7.86	2,394	14.58	4,441	20.09	6,119	31.15	9,490	36.00	10,966
210	8.13	2,357	14.58	4,230	20.09	5,828	31.50	9,139	36.00	10,444
220	8.39	2,322	14.58	4,038	20.09	5,563	31.50	8,723	36.00	9,969
230	8.65	2,290	14.58	3,862	20.09	5,321	31.50	8,344	36.00	9,536
240	8.90	2,259	14.58	3,701	20.09	5,099	31.50	7,996	36.00	9,139
250	9.15	2,230	14.58	3,553	20.09	4,895	31.50	7,676	36.00	8,773
260	9.40	2,202	14.58	3,416	20.09	4,707	31.50	7,381	36.00	8,436
270	9.64	2,176	14.58	3,290	20.09	4,533	31.50	7,108	36.00	8,123
280	9.88	2,151	14.58	3,172	20.09	4,371	31.50	6,854	36.00	7,833
290	10.12	2,127	14.58	3,063	20.09	4,220	31.50	6,618	36.00	7,563
300	10.36	2,104	14.58	2,961	20.09	4,079	31.50	6,397	36.00	7,311
310	10.60	2,083	14.58	2,865	20.09	3,948	31.50	6,191	36.00	7,075
320	10.83	2,061	14.58	2,776	20.09	3,825	31.50	5,997	36.00	6,854
330	11.05	2,041	14.58	2,692	20.09	3,709	31.50	5,815	36.00	6,646
340	11.28	2,021	14.58	2,613	20.09	3,600	31.50	5,644	36.00	6,451
350	11.34	1,974	14.58	2,538	20.09	3,497	31.50	5,483	36.00	6,266
360	11.34	1,919	14.58	2,467	20.09	3,400	31.50	5,331	36.00	6,092
370	11.34	1,867	14.58	2,401	20.09	3,308	31.50	5,187	36.00	5,928
380	11.34	1,818	14.58	2,338	20.09	3,221	31.50	5,050	36.00	5,772
390	11.34	1,771	14.58	2,278	20.09	3,138	31.50	4,921	36.00	5,624
400	11.34	1,727	14.58	2,221	20.09	3,060	31.50	4,798	36.00	5,483

Class I Service (1.0 S.F.)

Involute Spline Input

Double Reduction														
Output RPM	107HMTP15 9T SAE-A2		107HMTP25 9T SAE-A2		115HMTP15 9T SAE-A2		115HMTP25 9T SAE-A2		203HMTP15 13T SAE-B2		203HMTP25 9T SAE-A2		207HMTP15 13T SAE-B2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	0.93	5,658	0.93	5,658	1.26	7,655	1.26	7,655	2.18	13,260	2.12	12,915	2.64	16,081
20	1.78	5,434	1.78	5,434	2.41	7,341	2.41	7,341	4.16	12,684	4.16	12,684	5.28	16,081
30	2.61	5,301	2.61	5,301	3.57	7,242	3.57	7,242	6.16	12,506	6.16	12,506	7.92	16,081
40	3.42	5,204	3.42	5,204	4.71	7,168	4.71	7,168	8.12	12,372	8.12	12,372	10.56	16,081
50	4.21	5,128	4.21	5,128	5.83	7,107	5.83	7,107	10.06	12,262	9.46	11,531	13.20	16,081
60	4.99	5,065	4.99	5,065	6.95	7,055	6.95	7,055	11.32	11,498	10.68	10,847	15.84	16,081
70	5.76	5,011	5.76	5,011	8.05	7,009	8.05	7,009	12.45	10,837	11.72	10,203	18.48	16,081
80	6.52	4,964	6.52	4,964	9.15	6,969	9.15	6,969	13.50	10,285	12.69	9,667	21.12	16,081
90	7.27	4,922	-	-	10.24	6,932	-	-	14.51	9,820	-	-	23.73	16,064
100	8.02	4,884	-	-	11.32	6,899	-	-	15.46	9,420	-	-	25.54	15,563
110	8.76	4,850	-	-	12.40	6,868	-	-	16.47	9,121	-	-	27.31	15,125
120	9.49	4,818	-	-	12.60	6,397	-	-	17.45	8,857	-	-	29.02	14,736
130	10.22	4,788	-	-	12.60	5,905	-	-	18.39	8,620	-	-	30.70	14,387

Double Reduction														
Output RPM	207HMTP25 13T SAE-B2		215HMTP15 14T SAE-C4		215HMTP25 13T SAE-B2		307HMTP15 14T SAE-C4		307HMTP25 14T SAE-C4		315HMTP15 14T SAE-C4		315HMTP25 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	3.44	20,966	5.59	34,066	4.44	27,025	9.64	58,758	9.64	58,758	12.34	75,206	12.34	75,206
20	6.58	20,059	10.65	32,436	8.87	27,025	18.47	56,266	18.47	56,266	23.67	72,105	23.67	72,105
30	9.73	19,769	15.73	31,951	13.31	27,025	26.97	54,771	26.97	54,771	34.55	70,167	34.55	70,167
40	12.83	19,549	20.73	31,582	17.74	27,025	34.29	52,228	33.68	51,292	45.13	68,741	45.13	68,741
50	15.43	18,796	24.54	29,905	22.18	27,025	40.09	48,847	39.37	47,973	54.00	65,798	50.40	61,412
60	17.53	17,796	27.88	28,314	26.61	27,025	45.00	45,693	41.40	42,038	54.00	54,832	50.40	51,176
70	19.52	16,991	31.06	27,033	29.70	25,849	45.00	39,166	41.40	36,032	54.00	46,999	50.40	43,865
80	21.43	16,323	34.10	25,972	29.70	22,618	45.00	34,270	41.40	31,528	54.00	41,124	50.40	38,382
90	-	-	36.00	24,370	-	-	45.00	30,462	-	-	54.00	36,555	-	-
100	-	-	36.00	21,933	-	-	45.00	27,416	-	-	54.00	32,899	-	-
110	-	-	36.00	19,939	-	-	45.00	24,924	-	-	54.00	29,908	-	-
120	-	-	36.00	18,277	-	-	45.00	22,847	-	-	54.00	27,416	-	-
130	-	-	36.00	16,871	-	-	45.00	21,089	-	-	54.00	25,307	-	-

Class I Service (1.0 S.F.)

Straight Sided Spline Input

Single Reduction										
Output RPM	107HMTP05 6B SAE-A2		115HMTP05 6B SAE-A2		203HMTP05 6B SAE-A2		207HMTP-05 6B SAE-A2		215HMTP05 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.07	4,089	0.12	7,496	0.18	10,905	0.25	14,994	0.26	15,733
5	0.27	3,271	0.52	6,366	0.83	10,156	1.04	12,683	1.29	15,733
10	0.52	3,169	1.02	6,225	1.65	10,063	2.03	12,394	2.58	15,733
20	1.02	3,118	2.02	6,154	3.29	10,016	4.02	12,249	5.16	15,733
30	1.53	3,101	3.02	6,131	4.92	10,000	6.01	12,201	7.75	15,733
40	2.03	3,092	4.02	6,119	6.56	9,992	7.99	12,177	10.33	15,733
50	2.53	3,087	5.02	6,112	8.20	9,988	9.98	12,162	12.91	15,733
60	3.04	3,084	6.01	6,107	9.83	9,985	11.97	12,153	15.49	15,733
70	3.54	3,081	7.01	6,104	11.47	9,982	13.95	12,146	18.08	15,733
80	4.04	3,080	8.01	6,101	13.11	9,981	15.94	12,141	20.66	15,733
90	4.55	3,078	9.01	6,099	14.74	9,980	17.93	12,137	23.24	15,733
100	4.89	2,978	9.69	5,906	15.86	9,663	19.27	11,740	25.82	15,733
110	5.22	2,890	10.36	5,737	16.94	9,383	20.59	11,402	28.40	15,733
120	5.54	2,813	11.00	5,586	17.99	9,136	21.87	11,102	30.99	15,733
130	5.85	2,743	11.63	5,450	19.02	8,914	23.12	10,833	33.57	15,733
140	6.16	2,680	12.24	5,328	20.02	8,713	24.33	10,587	36.00	15,666
150	6.45	2,622	12.60	5,118	20.09	8,159	25.52	10,365	36.00	14,622
160	6.75	2,569	12.60	4,798	20.09	7,649	26.69	10,164	36.00	13,708
170	7.03	2,520	12.60	4,516	20.09	7,199	27.83	9,975	36.00	12,902
180	7.31	2,475	12.60	4,265	20.09	6,799	28.97	9,804	36.00	12,185
190	7.59	2,434	12.60	4,040	20.09	6,441	30.07	9,642	36.00	11,544
200	7.86	2,394	12.60	3,838	20.09	6,119	31.15	9,490	36.00	10,966
210	8.13	2,357	12.60	3,655	20.09	5,828	31.50	9,139	36.00	10,444
220	8.39	2,322	12.60	3,489	20.09	5,563	31.50	8,723	36.00	9,969
230	8.65	2,290	12.60	3,338	20.09	5,321	31.50	8,344	36.00	9,536
240	8.90	2,259	12.60	3,199	20.09	5,099	31.50	7,996	36.00	9,139
250	9.15	2,230	12.60	3,071	20.09	4,895	31.50	7,676	36.00	8,773
260	9.40	2,202	12.60	2,952	20.09	4,707	31.50	7,381	36.00	8,436
270	9.64	2,176	12.60	2,843	20.09	4,533	31.50	7,108	36.00	8,123
280	9.88	2,151	12.60	2,742	20.09	4,371	31.50	6,854	36.00	7,833
290	10.12	2,127	12.60	2,647	20.09	4,220	31.50	6,618	36.00	7,563
300	10.36	2,104	12.60	2,559	20.09	4,079	31.50	6,397	36.00	7,311
310	10.60	2,083	12.60	2,476	20.09	3,948	31.50	6,191	36.00	7,075
320	10.83	2,061	12.60	2,399	20.09	3,825	31.50	5,997	36.00	6,854
330	11.05	2,041	12.60	2,326	20.09	3,709	31.50	5,815	36.00	6,646
340	11.28	2,021	12.60	2,258	20.09	3,600	31.50	5,644	36.00	6,451
350	11.34	1,974	12.60	2,193	20.09	3,497	31.50	5,483	36.00	6,266
360	11.34	1,919	12.60	2,132	20.09	3,400	31.50	5,331	36.00	6,092
370	11.34	1,867	12.60	2,075	20.09	3,308	31.50	5,187	36.00	5,928
380	11.34	1,818	12.60	2,020	20.09	3,221	31.50	5,050	36.00	5,772
390	11.34	1,771	12.60	1,968	20.09	3,138	31.50	4,921	36.00	5,624
400	11.34	1,727	12.60	1,919	20.09	3,060	31.50	4,798	36.00	5,483

Class I Service (1.0 S.F.)

Straight Sided Spline Input

Output RPM	Double Reduction											
	203HMTP25 6B SAE-A2		207HMTP15 6B SAE-A2		207HMTP25 6B SAE-A2		215HMTP25 6B SAE-A2		307HMTP25 6B SAE-A2		315HMTP25 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.19	11,569	0.29	17,721	0.29	17,721	0.49	29,989	0.91	55,479	1.12	68,156
5	1.17	14,268	1.85	22,570	1.85	22,570	2.99	36,404	4.98	60,698	6.10	74,334
10	2.18	13,260	3.44	20,966	3.44	20,966	5.59	34,066	9.64	58,758	12.20	74,334
20	4.16	12,684	6.58	20,059	6.58	20,059	10.65	32,436	18.47	56,266	23.67	72,105
30	6.16	12,506	9.73	19,769	9.73	19,769	15.73	31,951	26.97	54,771	34.55	70,167
40	8.12	12,372	12.83	19,549	12.83	19,549	20.73	31,582	33.68	51,292	45.13	68,741
50	9.46	11,531	15.73	19,162	15.43	18,796	24.99	30,450	39.37	47,973	50.40	61,412
60	10.68	10,847	17.87	18,141	17.53	17,796	28.39	28,829	41.40	42,038	50.40	51,176
70	11.72	10,203	19.90	17,321	19.52	16,991	29.70	25,849	41.40	36,032	50.40	43,865
80	12.69	9,667	21.85	16,641	21.43	16,323	29.70	22,618	41.40	31,528	50.40	38,382
90	-	-	23.73	16,064	-	-	-	-	-	-	-	-
100	-	-	25.54	15,563	-	-	-	-	-	-	-	-
110	-	-	27.31	15,125	-	-	-	-	-	-	-	-
120	-	-	29.02	14,736	-	-	-	-	-	-	-	-
130	-	-	30.70	14,387	-	-	-	-	-	-	-	-

Class II Service (1.4 S.F.)

Involute Spline Input

Single Reduction										
Output RPM	107HMTP05 13T SAE-B2		115HMTP05 13T SAE-B2		203HMTP05 14T SAE-C4		207HMTP05 14T SAE-C4		215HMTP05 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
90	3.25	2,199	5.39	3,651	10.53	7,128	12.81	8,669	20.12	13,617
100	3.49	2,127	5.99	3,651	11.33	6,902	13.76	8,386	21.49	13,091
110	3.73	2,064	6.59	3,651	12.10	6,702	14.70	8,144	22.91	12,687
120	3.96	2,009	7.19	3,651	12.85	6,526	15.62	7,930	24.28	12,325
130	4.18	1,959	7.79	3,651	13.59	6,367	16.51	7,738	25.61	12,002
140	4.40	1,914	8.39	3,651	14.30	6,224	17.38	7,562	26.91	11,709
150	4.61	1,873	8.99	3,651	15.00	6,093	18.23	7,404	28.18	11,444
160	4.82	1,835	9.59	3,651	15.69	5,973	19.07	7,260	29.41	11,199
170	5.02	1,800	10.01	3,586	16.35	5,861	19.88	7,125	30.62	10,973
180	5.22	1,768	10.41	3,524	17.01	5,759	20.69	7,003	31.81	10,765
190	5.42	1,738	10.81	3,465	17.66	5,664	21.48	6,887	32.97	10,572
200	5.61	1,710	11.20	3,411	18.30	5,576	22.25	6,778	34.11	10,390
210	5.80	1,684	11.58	3,361	18.93	5,491	23.01	6,676	35.23	10,220
220	5.99	1,659	11.96	3,314	19.55	5,413	23.77	6,581	36.00	9,969
230	6.18	1,636	12.34	3,268	20.09	5,321	24.52	6,494	36.00	9,536
240	6.36	1,614	12.70	3,225	20.09	5,099	25.24	6,407	36.00	9,139
250	6.54	1,593	13.07	3,186	20.09	4,895	25.96	6,327	36.00	8,773
260	6.71	1,573	13.43	3,147	20.09	4,707	26.68	6,252	36.00	8,436
270	6.89	1,554	13.79	3,111	20.09	4,533	27.39	6,180	36.00	8,123
280	7.06	1,536	14.13	3,076	20.09	4,371	28.09	6,113	36.00	7,833
290	7.23	1,519	14.48	3,043	20.09	4,220	28.78	6,046	36.00	7,563
300	7.40	1,503	14.58	2,961	20.09	4,079	29.46	5,983	36.00	7,311
310	7.57	1,488	14.58	2,865	20.09	3,948	30.14	5,924	36.00	7,075
320	7.73	1,472	14.58	2,776	20.09	3,825	30.81	5,866	36.00	6,854
330	7.90	1,458	14.58	2,692	20.09	3,709	31.45	5,807	36.00	6,646
340	8.06	1,444	14.58	2,613	20.09	3,600	31.50	5,644	36.00	6,451
350	8.22	1,431	14.58	2,538	20.09	3,497	31.50	5,483	36.00	6,266
360	8.38	1,418	14.58	2,467	20.09	3,400	31.50	5,331	36.00	6,092
370	8.53	1,405	14.58	2,401	20.09	3,308	31.50	5,187	36.00	5,928
380	8.69	1,393	14.58	2,338	20.09	3,221	31.50	5,050	36.00	5,772
390	8.85	1,382	14.58	2,278	20.09	3,138	31.50	4,921	36.00	5,624
400	9.00	1,371	14.58	2,221	20.09	3,060	31.50	4,798	36.00	5,483

Class II Service (1.4 S.F.)

Involute Spline Input

Double Reduction														
Output RPM	107HMTP15 9T SAE-A2		107HMTP25 9T SAE-A2		115HMTP15 9T SAE-A2		115HMTP25 9T SAE-A2		203HMTP15 13T SAE-B2		203HMTP25 9T SAE-A2		207HMTP15 13T SAE-B2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	0.66	4,041	0.66	4,041	0.90	5,468	0.90	5,468	1.55	9,472	1.51	9,225	1.89	11,486
20	1.27	3,882	1.27	3,882	1.72	5,244	1.72	5,244	2.97	9,060	2.97	9,060	3.77	11,486
30	1.86	3,786	1.86	3,786	2.55	5,173	2.55	5,173	4.40	8,933	4.40	8,933	5.66	11,486
40	2.44	3,717	2.44	3,717	3.36	5,120	3.36	5,120	5.80	8,837	5.80	8,837	7.54	11,486
50	3.01	3,663	3.01	3,663	4.17	5,076	4.17	5,076	7.19	8,758	6.76	8,236	9.43	11,486
60	3.56	3,618	3.56	3,618	4.96	5,039	4.96	5,039	8.09	8,213	7.63	7,748	11.31	11,486
70	4.11	3,580	4.11	3,580	5.75	5,007	5.75	5,007	8.89	7,741	8.37	7,288	13.20	11,486
80	4.66	3,546	4.66	3,546	6.54	4,978	6.54	4,978	9.65	7,346	9.07	6,905	15.08	11,486
90	5.19	3,516	-	-	7.31	4,952	-	-	10.36	7,014	-	-	16.95	11,475
100	5.73	3,489	-	-	8.09	4,928	-	-	11.04	6,728	-	-	18.25	11,117
110	6.25	3,464	-	-	8.86	4,905	-	-	11.76	6,515	-	-	19.51	10,804
120	6.78	3,441	-	-	9.62	4,885	-	-	12.46	6,327	-	-	20.73	10,526
130	7.30	3,420	-	-	10.38	4,865	-	-	13.14	6,157	-	-	21.93	10,276

Double Reduction														
Output RPM	207HMTP25 13T SAE-B2		215HMTP15 14T SAE-C4		215HMTP25 13T SAE-B2		307HMTP15 14T SAE-C4		307HMTP25 14T SAE-C4		315HMTP15 14T SAE-C4		315HMTP25 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	2.46	14,976	3.99	24,333	3.17	19,303	6.89	41,970	6.89	41,970	8.82	53,719	8.82	53,719
20	4.70	14,328	7.61	23,168	6.34	19,303	13.19	40,190	13.19	40,190	16.91	51,503	16.91	51,503
30	6.95	14,121	11.24	22,822	9.51	19,303	19.26	39,122	19.26	39,122	24.68	50,119	24.68	50,119
40	9.17	13,963	14.81	22,559	12.67	19,303	24.49	37,306	24.05	36,637	32.24	49,100	32.24	49,100
50	11.02	13,426	17.53	21,361	15.84	19,303	28.63	34,891	28.12	34,267	39.64	48,299	39.64	48,299
60	12.52	12,711	19.92	20,225	19.01	19,303	32.53	33,033	31.95	32,441	46.47	47,185	46.54	47,261
70	13.94	12,136	22.19	19,309	22.18	19,303	36.24	31,540	35.59	30,977	51.76	45,050	50.40	43,865
80	15.31	11,660	24.36	18,552	24.80	18,889	39.79	30,301	39.08	29,758	54.00	41,124	50.40	38,382
90	-	-	26.45	17,908	-	-	43.21	29,249	-	-	54.00	36,555	-	-
100	-	-	28.48	17,351	-	-	45.00	27,416	-	-	54.00	32,899	-	-
110	-	-	30.44	16,861	-	-	45.00	24,924	-	-	54.00	29,908	-	-
120	-	-	32.35	16,426	-	-	45.00	22,847	-	-	54.00	27,416	-	-
130	-	-	34.22	16,037	-	-	45.00	21,089	-	-	54.00	25,307	-	-

Class II Service (1.4 S.F.)

Straight Sided Spline Input

Single Reduction										
Output RPM	107HMTP05 6B SAE-A2		115HMTP05 6B SAE-A2		203HMTP05 6B SAE-A2		207HMTP-05 6B SAE-A2		215HMTP05 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.05	2,921	0.09	5,354	0.13	7,789	0.18	10,710	0.18	11,238
5	0.19	2,337	0.37	4,547	0.60	7,254	0.74	9,059	0.92	11,238
10	0.37	2,264	0.73	4,446	1.18	7,188	1.45	8,853	1.84	11,238
20	0.73	2,227	1.44	4,396	2.35	7,154	2.87	8,749	3.69	11,238
30	1.09	2,215	2.16	4,379	3.52	7,143	4.29	8,715	5.53	11,238
40	1.45	2,209	2.87	4,371	4.69	7,137	5.71	8,698	7.38	11,238
50	1.81	2,205	3.58	4,366	5.85	7,134	7.13	8,687	9.22	11,238
60	2.17	2,203	4.30	4,362	7.02	7,132	8.55	8,681	11.07	11,238
70	2.53	2,201	5.01	4,360	8.19	7,130	9.97	8,676	12.91	11,238
80	2.89	2,200	5.72	4,358	9.36	7,129	11.39	8,672	14.76	11,238
90	3.25	2,199	6.44	4,357	10.53	7,128	12.81	8,669	16.60	11,238
100	3.49	2,127	6.92	4,219	11.33	6,902	13.76	8,386	18.44	11,238
110	3.73	2,064	7.40	4,098	12.10	6,702	14.70	8,144	20.29	11,238
120	3.96	2,009	7.86	3,990	12.85	6,526	15.62	7,930	22.13	11,238
130	4.18	1,959	8.31	3,893	13.59	6,367	16.51	7,738	23.98	11,238
140	4.40	1,914	8.75	3,806	14.30	6,224	17.38	7,562	25.82	11,238
150	4.61	1,873	9.17	3,726	15.00	6,093	18.23	7,404	27.67	11,238
160	4.82	1,835	9.59	3,653	15.69	5,973	19.07	7,260	29.41	11,199
170	5.02	1,800	10.01	3,586	16.35	5,861	19.88	7,125	30.62	10,973
180	5.22	1,768	10.41	3,524	17.01	5,759	20.69	7,003	31.81	10,765
190	5.42	1,738	10.81	3,465	17.66	5,664	21.48	6,887	32.97	10,572
200	5.61	1,710	11.20	3,411	18.30	5,576	22.25	6,778	34.11	10,390
210	5.80	1,684	11.58	3,361	18.93	5,491	23.01	6,676	35.23	10,220
220	5.99	1,659	11.96	3,314	19.55	5,413	23.77	6,581	36.00	9,969
230	6.18	1,636	12.34	3,268	20.09	5,321	24.52	6,494	36.00	9,536
240	6.36	1,614	12.70	3,225	20.09	5,099	25.24	6,407	36.00	9,139
250	6.54	1,593	13.07	3,186	20.09	4,895	25.96	6,327	36.00	8,773
260	6.71	1,573	13.43	3,147	20.09	4,707	26.68	6,252	36.00	8,436
270	6.89	1,554	13.79	3,111	20.09	4,533	27.39	6,180	36.00	8,123
280	7.06	1,536	14.13	3,076	20.09	4,371	28.09	6,113	36.00	7,833
290	7.23	1,519	14.48	3,043	20.09	4,220	28.78	6,046	36.00	7,563
300	7.40	1,503	14.58	2,961	20.09	4,079	29.46	5,983	36.00	7,311
310	7.57	1,488	14.58	2,865	20.09	3,948	30.14	5,924	36.00	7,075
320	7.73	1,472	14.58	2,776	20.09	3,825	30.81	5,866	36.00	6,854
330	7.90	1,458	14.58	2,692	20.09	3,709	31.45	5,807	36.00	6,646
340	8.06	1,444	14.58	2,613	20.09	3,600	31.50	5,644	36.00	6,451
350	8.22	1,431	14.58	2,538	20.09	3,497	31.50	5,483	36.00	6,266
360	8.38	1,418	14.58	2,467	20.09	3,400	31.50	5,331	36.00	6,092
370	8.53	1,405	14.58	2,401	20.09	3,308	31.50	5,187	36.00	5,928
380	8.69	1,393	14.58	2,338	20.09	3,221	31.50	5,050	36.00	5,772
390	8.85	1,382	14.58	2,278	20.09	3,138	31.50	4,921	36.00	5,624
400	9.00	1,371	14.58	2,221	20.09	3,060	31.50	4,798	36.00	5,483

Class II Service (1.4 S.F.)

Straight Sided Spline Input

Double Reduction												
Output RPM	203HMTP25 6B SAE-A2		207HMTP15 6B SAE-A2		207HMTP25 6B SAE-A2		215HMTP25 6B SAE-A2		307HMTP25 6B SAE-A2		315HMTP25 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.14	8,264	0.21	12,658	0.21	12,658	0.35	21,420	0.65	39,628	0.80	48,683
5	0.84	10,192	1.32	16,121	1.32	16,121	2.13	26,003	3.56	43,356	4.36	53,096
10	1.55	9,472	2.46	14,976	2.46	14,976	3.99	24,333	6.89	41,970	8.71	53,096
20	2.97	9,060	4.70	14,328	4.70	14,328	7.61	23,168	13.19	40,190	16.91	51,503
30	4.40	8,933	6.95	14,121	6.95	14,121	11.24	22,822	19.26	39,122	24.68	50,119
40	5.80	8,837	9.17	13,963	9.17	13,963	14.81	22,559	24.05	36,637	32.24	49,100
50	6.76	8,236	11.23	13,687	11.02	13,426	17.85	21,750	28.12	34,267	39.64	48,299
60	7.63	7,748	12.76	12,958	12.52	12,711	20.28	20,592	31.95	32,441	46.54	47,261
70	8.37	7,288	14.22	12,372	13.94	12,136	22.59	19,662	35.59	30,977	50.40	43,865
80	9.07	6,905	15.61	11,886	15.31	11,660	24.80	18,889	39.08	29,758	50.40	38,382
90	-	-	16.95	11,475	-	-	-	-	-	-	-	-
100	-	-	18.25	11,117	-	-	-	-	-	-	-	-
110	-	-	19.51	10,804	-	-	-	-	-	-	-	-
120	-	-	20.73	10,526	-	-	-	-	-	-	-	-
130	-	-	21.93	10,276	-	-	-	-	-	-	-	-

Class III Service (2.0 S.F.)

Involute Spline Input

Output RPM	Single Reduction									
	107HMTP05 13T SAE-B2		115HMTP05 13T SAE-B2		203HMTP05 14T SAE-C4		207HMTP05 14T SAE-C4		215HMTP05 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
90	2.27	1,539	3.78	2,556	7.37	4,990	8.96	6,068	14.08	9,532
100	2.44	1,489	4.19	2,556	7.93	4,831	9.63	5,870	15.04	9,164
110	2.61	1,445	4.61	2,556	8.47	4,692	10.29	5,701	16.03	8,881
120	2.77	1,406	5.03	2,556	9.00	4,568	10.93	5,551	16.99	8,627
130	2.93	1,371	5.45	2,556	9.51	4,457	11.56	5,417	17.93	8,402
140	3.08	1,340	5.87	2,556	10.01	4,357	12.16	5,294	18.83	8,197
150	3.23	1,311	6.29	2,556	10.50	4,265	12.76	5,182	19.72	8,011
160	3.37	1,284	6.71	2,556	10.98	4,181	13.35	5,082	20.59	7,839
170	3.52	1,260	7.00	2,510	11.45	4,103	13.92	4,987	21.43	7,681
180	3.66	1,238	7.29	2,467	11.91	4,031	14.48	4,902	22.26	7,536
190	3.79	1,217	7.57	2,426	12.36	3,965	15.03	4,821	23.08	7,401
200	3.93	1,197	7.84	2,388	12.81	3,903	15.58	4,745	23.88	7,273
210	4.06	1,179	8.11	2,353	13.25	3,844	16.11	4,673	24.66	7,154
220	4.19	1,161	8.38	2,319	13.68	3,789	16.64	4,607	25.43	7,043
230	4.32	1,145	8.64	2,287	14.11	3,737	17.16	4,546	26.19	6,939
240	4.45	1,129	8.89	2,258	14.53	3,689	17.67	4,485	26.94	6,840
250	4.57	1,115	9.15	2,230	14.95	3,643	18.17	4,429	27.67	6,744
260	4.70	1,101	9.40	2,203	15.36	3,599	18.67	4,376	28.40	6,654
270	4.82	1,088	9.65	2,178	15.76	3,556	19.17	4,326	29.12	6,571
280	4.94	1,075	9.89	2,153	16.16	3,517	19.67	4,279	29.82	6,488
290	5.06	1,063	10.14	2,130	16.56	3,479	20.14	4,232	30.52	6,412
300	5.18	1,052	10.38	2,108	16.95	3,442	20.62	4,188	31.21	6,339
310	5.30	1,041	10.62	2,087	17.34	3,408	21.10	4,147	31.88	6,266
320	5.41	1,031	10.85	2,066	17.72	3,374	21.57	4,106	32.57	6,200
330	5.53	1,020	11.08	2,046	18.10	3,342	22.02	4,065	33.23	6,135
340	5.64	1,011	11.32	2,029	18.48	3,311	22.47	4,027	33.89	6,073
350	5.75	1,001	11.55	2,011	18.85	3,282	22.94	3,993	34.53	6,011
360	5.86	993	11.77	1,992	19.22	3,252	23.39	3,958	35.17	5,953
370	5.97	984	12.00	1,976	19.59	3,225	23.83	3,924	35.83	5,899
380	6.08	975	12.23	1,960	19.95	3,198	24.28	3,893	36.00	5,772
390	6.19	967	12.44	1,944	20.09	3,138	24.72	3,862	36.00	5,624
400	6.30	959	12.66	1,929	20.09	3,060	25.15	3,831	36.00	5,483

Class III Service (2.0 S.F.)

Involute Spline Input

Double Reduction														
Output RPM	107HMTP15 9T SAE-A2		107HMTP25 9T SAE-A2		115HMTP15 9T SAE-A2		115HMTP25 9T SAE-A2		203HMTP15 13T SAE-B2		203HMTP25 9T SAE-A2		207HMTP15 13T SAE-B2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	0.46	2,829	0.46	2,829	0.63	3,827	0.63	3,827	1.09	6,630	1.06	6,457	1.32	8,040
20	0.89	2,717	0.89	2,717	1.20	3,671	1.20	3,671	2.08	6,342	2.08	6,342	2.64	8,040
30	1.31	2,650	1.31	2,650	1.78	3,621	1.78	3,621	3.08	6,253	3.08	6,253	3.96	8,040
40	1.71	2,602	1.71	2,602	2.35	3,584	2.35	3,584	4.06	6,186	4.06	6,186	5.28	8,040
50	2.10	2,564	2.10	2,564	2.92	3,553	2.92	3,553	5.03	6,131	4.73	5,765	6.60	8,040
60	2.49	2,533	2.49	2,533	3.47	3,527	3.47	3,527	5.66	5,749	5.34	5,423	7.92	8,040
70	2.88	2,506	2.88	2,506	4.03	3,505	4.03	3,505	6.23	5,419	5.86	5,102	9.24	8,040
80	3.26	2,482	3.26	2,482	4.58	3,484	4.58	3,484	6.75	5,142	6.35	4,833	10.56	8,040
90	3.64	2,461	-	-	5.12	3,466	-	-	7.25	4,910	-	-	11.87	8,032
100	4.01	2,442	-	-	5.66	3,449	-	-	7.73	4,710	-	-	12.77	7,782
110	4.38	2,425	-	-	6.20	3,434	-	-	8.23	4,561	-	-	13.65	7,563
120	4.74	2,409	-	-	6.73	3,419	-	-	8.72	4,429	-	-	14.51	7,368
130	5.11	2,394	-	-	7.27	3,406	-	-	9.20	4,310	-	-	15.35	7,193

Double Reduction														
Output RPM	207HMTP25 13T SAE-B2		215HMTP15 14T SAE-C4		215HMTP25 13T SAE-B2		307HMTP15 14T SAE-C4		307HMTP25 14T SAE-C4		315HMTP15 14T SAE-C4		315HMTP25 14T SAE-C4	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
10	1.72	10,483	2.80	17,033	2.22	13,512	4.82	29,379	4.82	29,379	6.17	37,603	6.17	37,603
20	3.29	10,029	5.32	16,218	4.44	13,512	9.24	28,133	9.24	28,133	11.83	36,052	11.83	36,052
30	4.87	9,884	7.87	15,975	6.65	13,512	13.48	27,385	13.48	27,385	17.28	35,083	17.28	35,083
40	6.42	9,774	10.37	15,791	8.87	13,512	17.14	26,114	16.84	25,646	22.57	34,370	22.57	34,370
50	7.71	9,398	12.27	14,953	11.09	13,512	20.04	24,423	19.69	23,987	27.75	33,810	27.75	33,810
60	8.76	8,898	13.94	14,157	13.31	13,512	22.77	23,123	22.36	22,708	32.53	33,029	32.58	33,082
70	9.76	8,496	15.53	13,516	15.52	13,512	25.37	22,078	24.91	21,684	36.23	31,535	36.08	31,406
80	10.72	8,162	17.05	12,986	17.36	13,222	27.85	21,211	27.35	20,831	39.78	30,297	39.44	30,037
90	-	-	18.52	12,535	-	-	30.24	20,474	-	-	43.20	29,247	-	-
100	-	-	19.94	12,146	-	-	32.56	19,838	-	-	46.51	28,336	-	-
110	-	-	21.31	11,803	-	-	34.81	19,279	-	-	49.72	27,537	-	-
120	-	-	22.65	11,498	-	-	36.99	18,783	-	-	52.84	26,827	-	-
130	-	-	23.95	11,226	-	-	39.12	18,336	-	-	54.00	25,307	-	-

Class III Service (2.0 S.F.)

Straight Sided Spline Input

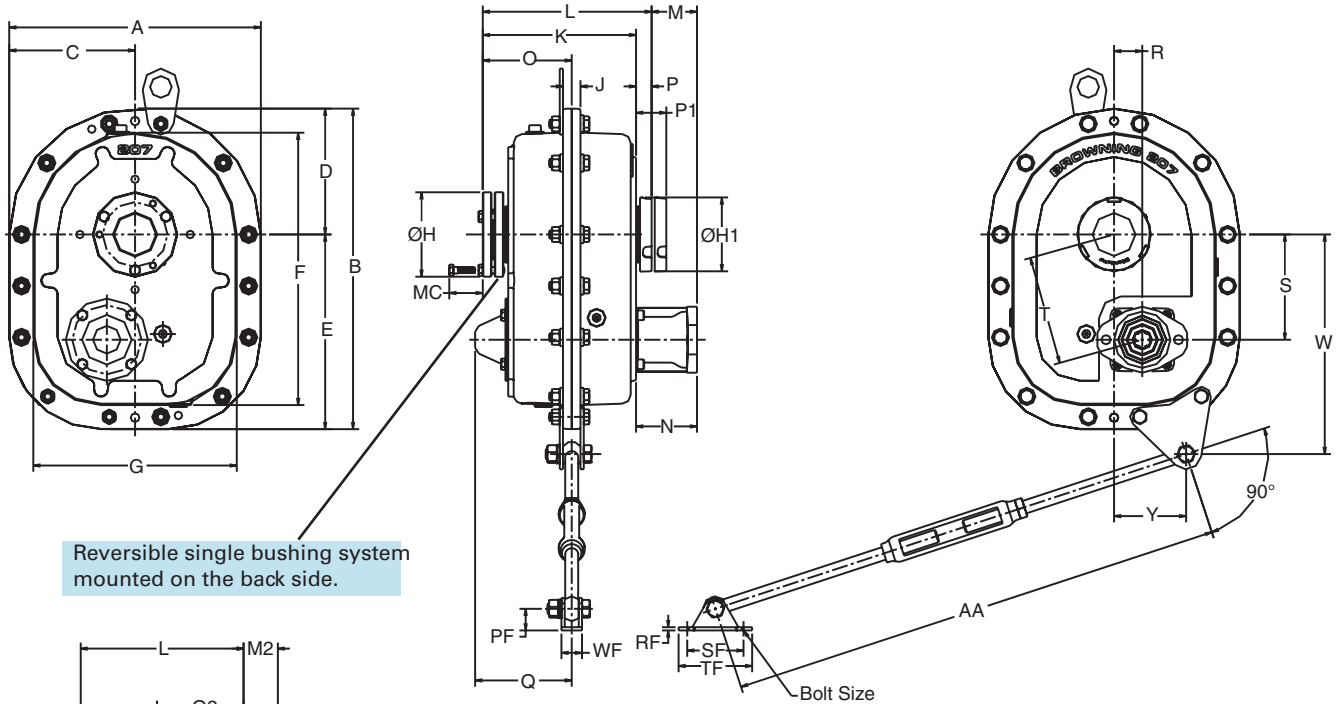
Single Reduction										
Output RPM	107HMTP05 6B SAE-A2		115HMTP05 6B SAE-A2		203HMTP05 6B SAE-A2		207HMTP-05 6B SAE-A2		215HMTP05 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.03	2,045	0.06	3,748	0.09	5,452	0.12	7,497	0.13	7,866
5	0.13	1,636	0.26	3,183	0.42	5,078	0.52	6,341	0.65	7,866
10	0.26	1,585	0.51	3,112	0.83	5,031	1.02	6,197	1.29	7,866
20	0.51	1,559	1.01	3,077	1.64	5,008	2.01	6,125	2.58	7,866
30	0.76	1,550	1.51	3,065	2.46	5,000	3.00	6,100	3.87	7,866
40	1.02	1,546	2.01	3,059	3.28	4,996	4.00	6,088	5.16	7,866
50	1.27	1,544	2.51	3,056	4.10	4,994	4.99	6,081	6.46	7,866
60	1.52	1,542	3.01	3,054	4.92	4,992	5.98	6,076	7.75	7,866
70	1.77	1,541	3.51	3,052	5.73	4,991	6.98	6,073	9.04	7,866
80	2.02	1,540	4.01	3,051	6.55	4,990	7.97	6,070	10.33	7,866
90	2.27	1,539	4.51	3,050	7.37	4,990	8.96	6,068	11.62	7,866
100	2.44	1,489	4.85	2,953	7.93	4,831	9.63	5,870	12.91	7,866
110	2.61	1,445	5.18	2,868	8.47	4,692	10.29	5,701	14.20	7,866
120	2.77	1,406	5.50	2,793	9.00	4,568	10.93	5,551	15.49	7,866
130	2.93	1,371	5.81	2,725	9.51	4,457	11.56	5,417	16.78	7,866
140	3.08	1,340	6.12	2,664	10.01	4,357	12.16	5,294	18.08	7,866
150	3.23	1,311	6.42	2,609	10.50	4,265	12.76	5,182	19.37	7,866
160	3.37	1,284	6.72	2,557	10.98	4,181	13.35	5,082	20.59	7,839
170	3.52	1,260	7.00	2,510	11.45	4,103	13.92	4,987	21.43	7,681
180	3.66	1,238	7.29	2,467	11.91	4,031	14.48	4,902	22.26	7,536
190	3.79	1,217	7.57	2,426	12.36	3,965	15.03	4,821	23.08	7,401
200	3.93	1,197	7.84	2,388	12.81	3,903	15.58	4,745	23.88	7,273
210	4.06	1,179	8.11	2,353	13.25	3,844	16.11	4,673	24.66	7,154
220	4.19	1,161	8.38	2,319	13.68	3,789	16.64	4,607	25.43	7,043
230	4.32	1,145	8.64	2,287	14.11	3,737	17.16	4,546	26.19	6,939
240	4.45	1,129	8.89	2,258	14.53	3,689	17.67	4,485	26.94	6,840
250	4.57	1,115	9.15	2,230	14.95	3,643	18.17	4,429	27.67	6,744
260	4.70	1,101	9.40	2,203	15.36	3,599	18.67	4,376	28.40	6,654
270	4.82	1,088	9.65	2,178	15.76	3,556	19.17	4,326	29.12	6,571
280	4.94	1,075	9.89	2,153	16.16	3,517	19.67	4,279	29.82	6,488
290	5.06	1,063	10.14	2,130	16.56	3,479	20.14	4,232	30.52	6,412
300	5.18	1,052	10.38	2,108	16.95	3,442	20.62	4,188	31.21	6,339
310	5.30	1,041	10.62	2,087	17.34	3,408	21.10	4,147	31.88	6,266
320	5.41	1,031	10.85	2,066	17.72	3,374	21.57	4,106	32.57	6,200
330	5.53	1,020	11.08	2,046	18.10	3,342	22.02	4,065	33.23	6,135
340	5.64	1,011	11.32	2,029	18.48	3,311	22.47	4,027	33.89	6,073
350	5.75	1,001	11.55	2,011	18.85	3,282	22.94	3,993	34.53	6,011
360	5.86	993	11.77	1,992	19.22	3,252	23.39	3,958	35.17	5,953
370	5.97	984	12.00	1,976	19.59	3,225	23.83	3,924	35.83	5,899
380	6.08	975	12.23	1,960	19.95	3,198	24.28	3,893	36.00	5,772
390	6.19	967	12.44	1,944	20.09	3,138	24.72	3,862	36.00	5,624
400	6.30	959	12.66	1,929	20.09	3,060	25.15	3,831	36.00	5,483

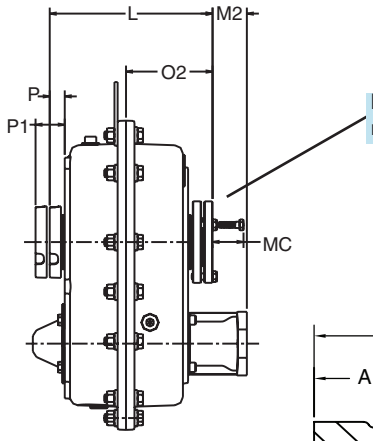
Class III Service (2.0 S.F.)

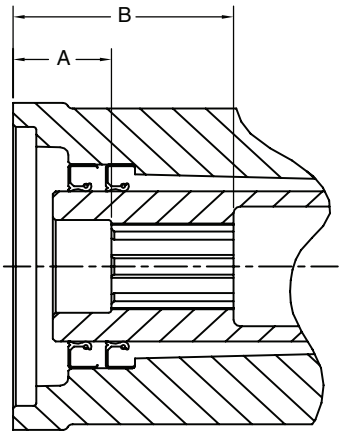
Straight Sided Spline Input

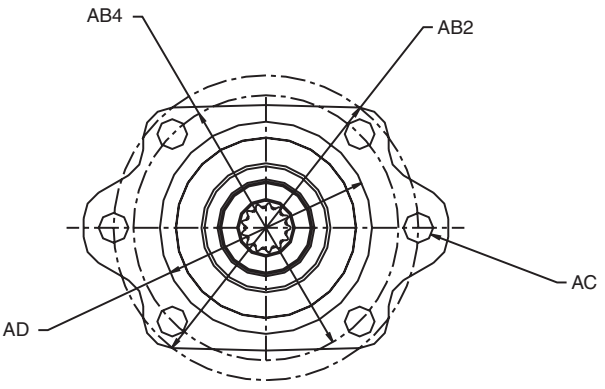
Output RPM	Double Reduction											
	203HMTP25 6B SAE-A2		207HMTP15 6B SAE-A2		207HMTP25 6B SAE-A2		215HMTP25 6B SAE-A2		307HMTP25 6B SAE-A2		315HMTP25 6B SAE-A2	
	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)	Input HP	Output Torque (lb-ins)
1	0.09	5,785	0.15	8,860	0.15	8,860	0.25	14,994	0.46	27,739	0.56	34,078
5	0.59	7,134	0.93	11,285	0.93	11,285	1.49	18,202	2.49	30,349	3.05	37,167
10	1.09	6,630	1.72	10,483	1.72	10,483	2.80	17,033	4.82	29,379	6.10	37,167
20	2.08	6,342	3.29	10,029	3.29	10,029	5.32	16,218	9.24	28,133	11.83	36,052
30	3.08	6,253	4.87	9,884	4.87	9,884	7.87	15,975	13.48	27,385	17.28	35,083
40	4.06	6,186	6.42	9,774	6.42	9,774	10.37	15,791	16.84	25,646	22.57	34,370
50	4.73	5,765	7.86	9,581	7.71	9,398	12.49	15,225	19.69	23,987	27.75	33,810
60	5.34	5,423	8.93	9,071	8.76	8,898	14.20	14,414	22.36	22,708	32.58	33,082
70	5.86	5,102	9.95	8,661	9.76	8,496	15.81	13,763	24.91	21,684	36.08	31,406
80	6.35	4,833	10.93	8,320	10.72	8,162	17.36	13,222	27.35	20,831	39.44	30,037
90	-	-	11.87	8,032	-	-	-	-	-	-	-	-
100	-	-	12.77	7,782	-	-	-	-	-	-	-	-
110	-	-	13.65	7,563	-	-	-	-	-	-	-	-
120	-	-	14.51	7,368	-	-	-	-	-	-	-	-
130	-	-	15.35	7,193	-	-	-	-	-	-	-	-

HMTP TorqTaper Plus® Unit Sizes 107-315









UNIT NO.	HYDRAULIC MOTOR MOUNTING STYLES							
	6B		9T		13T		14T	
	A	B	A	B	A	B	A	B
107	1.03	2.38	0.64	1.89	-	-	-	-
115	1.01	2.36	0.62	1.87	1.28	2.15	-	-
203	1.06	2.37	0.73	1.98	1.12	1.93	1.40	2.92
207	1.10	2.41	-		1.16	1.97	1.39	2.91
215	1.02	2.39	-		0.91	2.10	1.43	2.94
307	1.06	2.43	-	-	-	-	1.47	2.98
315	1.13	2.50	-	-	-	-	1.54	3.05

HMTP TorqTaper Plus® Shaft Mounted Speed Reducers Unit Sizes 107-315

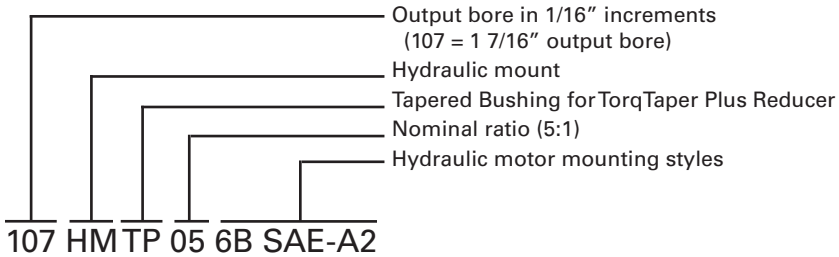
PART NO.	DIMENSIONS IN INCHES																	
	A	B	C	D	E	F	G	H	H1	J	K	L	MC	O	O2	P	P1	PF
107HMTP	9.76	12.07	4.88	4.88	7.19	10.07	7.75	3.25	3.00	0.63	5.52	7.89	1.75	4.25	4.21	0.90	1.84	1.14
115HMTP	11.00	14.08	5.50	5.50	8.58	11.78	8.69	4.13	3.50	0.75	5.99	8.36	1.88	4.48	4.45	0.90	1.83	1.14
203HMTP	12.88	16.16	6.44	6.44	9.72	13.66	10.38	4.50	3.75	0.87	7.07	9.43	1.88	5.01	4.99	0.89	1.83	1.32
207HMTP	14.50	16.47	7.25	7.25	11.22	15.73	11.76	4.88	4.25	1.01	7.39	9.75	1.88	5.14	5.19	0.89	1.86	1.51
215HMTP	16.25	20.88	8.13	8.13	12.76	18.07	13.44	5.31	4.75	1.07	8.24	10.85	1.88	5.89	5.74	1.02	1.96	1.51
307HMTP	19.04	24.37	9.52	9.52	14.85	21.00	15.67	6.44	5.69	1.25	9.27	12.57	2.25	6.58	6.61	1.36	2.75	1.81
315HMTP	19.90	26.35	9.95	9.95	16.40	23.02	16.57	7.13	6.70	1.25	10.51	14.50	2.75	7.51	7.61	1.73	3.25	2.22

PART NO.	DIMENSIONS IN INCHES														
	Q	R	RF	S	SF	T	TF	W	WF	Y	AA		BOLT SIZE	MAX. OUTPUT BORE	WT. LBS.
											MIN.	MAX.			
107HMTP	4.24	1.18	0.36	3.77	2.50	3.95	3.38	7.88	1.44	2.73	24.00	30.00	3/8	1 7/16	58
115HMTP	4.51	1.35	0.36	4.36	2.50	4.56	3.38	9.14	1.44	3.12	24.00	30.00	3/8	1 15/16	79
203HMTP	5.04	1.48	0.42	5.26	2.50	5.46	3.50	10.94	1.72	3.64	24.00	30.00	3/8	2 3/16	120
207HMTP	5.57	1.63	0.48	6.08	3.00	6.29	4.25	12.68	2.19	4.16	27.00	33.00	7/16	2 7/16	162
215HMTP	6.24	2.12	0.48	7.01	3.00	7.32	4.25	14.19	2.19	4.65	27.00	33.00	7/16	2 15/16	234
307HMTP	6.79	2.25	0.61	7.78	4.00	8.10	5.38	17.00	2.78	5.58	29.00	35.00	1/2	3 7/16	365
315HMTP	8.05	2.63	0.72	8.53	4.75	8.93	6.50	18.12	3.63	6.20	29.50	35.50	5/8	3 15/16	473

PART NO.	DIMENSIONS IN INCHES									
	M	M2	N	AB2	AB4	AC	AD	SPLINE DATA ★		
								NT	DP	OD
107HMTP 6B SAE-A2	2.18	1.60	3.08	4.19	-	0.50	3.25	6	-	1.00
107HMTP 9T SAE-A2	2.18	1.60	3.08	4.19	-	0.38	3.25	9	16/32	.609
107HMTP 13T SAE-B2	2.66	2.08	3.56	5.75	5.00	0.50	4.00	13	16/32	.875
115HMTP 6B SAE-A2	2.18	1.60	3.08	4.19	-	0.50	3.25	6	-	1.00
115HMTP 9T SAE-A2	2.18	1.60	3.08	4.19	-	0.38	3.25	9	16/32	.609
115HMTP 13T SAE- B2	2.66	2.08	3.56	5.75	5.00	0.50	4.00	13	16/32	.875
203HMTP 6B SAE-A2	2.68	2.14	3.58	4.19	-	0.50	3.25	6	-	1.00
203HMTP 9T SAE-A2	2.68	2.14	3.58	4.19	-	0.38	3.25	9	16/32	.609
203HMTP 13T SAE-B2	2.87	2.33	3.77	5.75	5.00	0.50	4.00	13	16/32	.875
203HMTP 14T SAE-C4	3.18	2.64	4.08	6.38	-	0.50	5.00	14	12/24	1.234
207HMTP 6B SAE-A2	2.62	2.07	3.52	4.19	-	0.50	3.25	6	-	1.00
207HMTP 13T SAE-B2	2.81	2.26	3.71	5.75	5.00	0.50	4.00	13	16/32	.875
207HMTP 14T SAE-C4	3.12	2.57	4.02	6.38	-	0.50	5.00	14	12/24	1.234
215HMTP 6B SAE-A2	2.69	2.12	3.72	4.19	-	0.50	3.25	6	-	1.00
215HMTP 13T SAE-B2	2.68	2.11	3.71	5.75	5.00	0.50	4.00	13	16/32	.875
215HMTP 14T SAE-C4	3.24	2.67	4.27	6.38	-	0.50	5.00	14	12/24	1.234
307HMTP 6B SAE-A2	2.29	1.67	3.65	4.19	-	0.50	3.25	6	-	1.00
307HMTP 14T SAE-C4	2.84	2.22	4.20	6.38	-	0.50	5.00	14	12/24	1.234
315HMTP 6B SAE-A2	1.92	1.29	3.65	4.19	-	0.50	3.25	6	-	1.00
315HMTP 14T SAE-C4	2.47	1.84	4.20	6.38	-	0.50	5.00	14	12/24	1.234

★ NT - Number of spline teeth.
DP - Involute spline diametral pitch.
OD - Internal spline major outside diameter.

Part Number Explanation

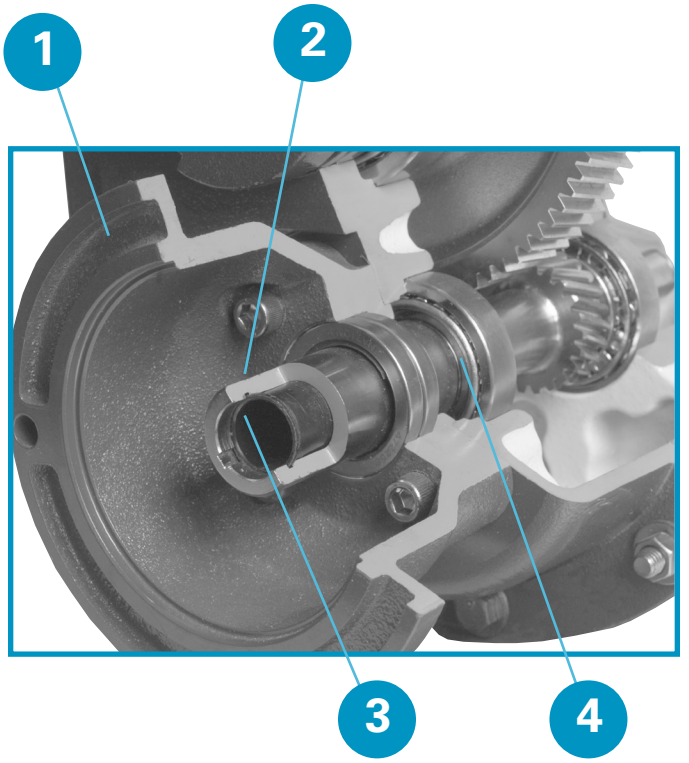


Innovative C-Face Motor Connections

Browning® C-Face TorqTaper Plus® Shaft Mount Reducers

Experience the latest in technology with the new C-Face TorqTaper Plus shaft mounted reducers. Regal® engineers continue to create innovative new designs to solve industry needs.

- Eliminate belt guards, belt drives and motor mounts
- Combine with Intelligear® motor for variable speed control
- Patented mounting system, barrier seal system and increased ratings



1. Rugged C-Face adapters — designed for standard NEMA frame sizes
2. Metal key — provides positive torque transmission
3. Non metallic quill liner — eliminates fretting and allows for easier motor removal
4. Bearing supported quill input — minimizes shaft wobble and increases seal life

Example No. 1

Units 107 - 315 C-face Shaft Mounts

A C-face shaft mount reducer is required for a grain bucket elevator, which will be uniformly loaded and operated 8 hours per day at 50 rpm.

The elevator requires 20 hp. The reducer will be mounted on the elevator drive pulley shaft with a 3 7/16" diameter extension.

1. Determine the Load Classification

From the *AGMA Application Classification Numbers* section, note the AGMA Class Number is II for a bucket elevator operating 3 to 10 hours per day.

2. Determine the Speed Reducer Required

From the *C-face Reducer Selection Chart* section, there are two tables for Class II Service. Locate the 50 rpm row in each table. Read across the row to find a column with a rating of 20 hp or greater. Read up the column to determine the basic reducer size that corresponds to the design hp. For this application, a 315CMTP05, 307CMTP09, 307CMTP15, 307CMTP25 or a 307CMTP35 may be used. Generally, the smaller case size is more economical, but the total system should be considered. For this example, select a 307CMTP35. When used with a 1750 rpm C-face motor, the 35:1 ratio will provide an output speed closest to the desired 50 rpm speed. Other ratios may be used, but to obtain the desired speed a variable frequency drive may be required. (Note: The motor and variable frequency drives are not included with the reducer.)

From the *CMTP Availability Table*, locate the row with the basic reducer size. At the top of the table, locate the column with the C-face motor frame designation required. The complete reducer part number is at the intersection of the selected row and column. For this example, a 307CMTP35 Q250 is selected.

A 307TBP307 bushing is required to mount the reducer to a 3 7/16 shaft.

The 307TAP-H kit is required to restrain the gearbox in operation.

3. List Components

1, **307CMTP35 Q250** reducer
1, **307TBP307** bushing
1, **307TAP-H** torque arm kit
1, C-face motor purchased separately ▲

▲ Refer to C-Face standard and stainless steel motors section for product information.

CMTP Availability Table

PART NO.	RATIO	Q56	Q140	Q180	Q210	Q250
107CMTP05	5.0588	107CMTP05 Q56	107CMTP05 Q140	-	-	-
107CMTP09	8.8205	107CMTP09 Q56	107CMTP09 Q140	-	-	-
107CMTP15	14.8276	107CMTP15 Q56	107CMTP15 Q140	-	-	-
107CMTP25	24.7250	107CMTP25 Q56	107CMTP25 Q140	-	-	-
107CMTP35	34.8778	107CMTP35 Q56	107CMTP35 Q140	-	-	-
115CMTP05	4.7000	115CMTP05 Q56	115CMTP05 Q140	115CMTP05 Q180	-	-
115CMTP09	8.8125	115CMTP09 Q56	115CMTP09 Q140	115CMTP09 Q180	-	-
115CMTP15	14.7759	115CMTP15 Q56	115CMTP15 Q140	115CMTP15 Q180	-	-
115CMTP25	24.8558	115CMTP25 Q56	115CMTP25 Q140	115CMTP25 Q180	-	-
115CMTP35	34.9487	115CMTP35 Q56	115CMTP35 Q140	115CMTP35 Q180	-	-
203CMTP05	5.1053	203CMTP05 Q56	203CMTP05 Q140	203CMTP05 Q180	203CMTP05 Q210	-
203CMTP09	8.8732	203CMTP09 Q56	203CMTP09 Q140	203CMTP09 Q180	203CMTP09 Q210	-
203CMTP15	14.9231	203CMTP15 Q56	203CMTP15 Q140	203CMTP15 Q180	203CMTP15 Q210	-
203CMTP25	24.7409	203CMTP25 Q56	203CMTP25 Q140	203CMTP25 Q180	203CMTP25 Q210	-
203CMTP35	34.6429	203CMTP35 Q56	203CMTP35 Q140	203CMTP35 Q180	203CMTP35 Q210	-
207CMTP05	5.1579	207CMTP05 Q56	207CMTP05 Q140	207CMTP05 Q180	207CMTP05 Q210	-
207CMTP09	8.8308	207CMTP09 Q56	207CMTP09 Q140	207CMTP09 Q180	207CMTP09 Q210	-
207CMTP15	14.7870	207CMTP15 Q56	207CMTP15 Q140	207CMTP15 Q180	207CMTP15 Q210	-
207CMTP25	24.7094	207CMTP25 Q56	207CMTP25 Q140	207CMTP25 Q180	207CMTP25 Q210	-
207CMTP35	35.0000	207CMTP35 Q56	207CMTP35 Q140	207CMTP35 Q180	207CMTP35 Q210	-
215CMTP05	5.1667	215CMTP05 Q56	215CMTP05 Q140	215CMTP05 Q180	215CMTP05 Q210	215CMTP05 Q250
215CMTP09	8.8482	215CMTP09 Q56	215CMTP09 Q140	215CMTP09 Q180	215CMTP09 Q210	215CMTP09 Q250
215CMTP15	14.8187	215CMTP15 Q56	215CMTP15 Q140	215CMTP15 Q180	215CMTP15 Q210	215CMTP15 Q250
215CMTP25	24.8502	215CMTP25 Q56	215CMTP25 Q140	215CMTP25 Q180	215CMTP25 Q210	215CMTP25 Q250
215CMTP35	34.8154	215CMTP35 Q56	215CMTP35 Q140	215CMTP35 Q180	215CMTP35 Q210	215CMTP35 Q250
307CMTP05	5.1111	307CMTP05 Q56	307CMTP05 Q140	307CMTP05 Q180	307CMTP05 Q210	307CMTP05 Q250
307CMTP09	8.7925	307CMTP09 Q56	307CMTP09 Q140	307CMTP09 Q180	307CMTP09 Q210	307CMTP09 Q250
307CMTP15	14.9704	307CMTP15 Q56	307CMTP15 Q140	307CMTP15 Q180	307CMTP15 Q210	307CMTP15 Q250
307CMTP25	24.7692	307CMTP25 Q56	307CMTP25 Q140	307CMTP25 Q180	307CMTP25 Q210	307CMTP25 Q250
307CMTP35	34.8791	307CMTP35 Q56	307CMTP35 Q140	307CMTP35 Q180	307CMTP35 Q210	307CMTP35 Q250
315CMTP05	4.8824	315CMTP05 Q56	315CMTP05 Q140	315CMTP05 Q180	315CMTP05 Q210	315CMTP05 Q250
315CMTP09	8.8620	315CMTP09 Q56	315CMTP09 Q140	315CMTP09 Q180	315CMTP09 Q210	315CMTP09 Q250
315CMTP15	14.5744	315CMTP15 Q56	315CMTP15 Q140	315CMTP15 Q180	315CMTP15 Q210	315CMTP15 Q250
315CMTP25	24.4118	315CMTP25 Q56	315CMTP25 Q140	315CMTP25 Q180	315CMTP25 Q210	315CMTP25 Q250
315CMTP35	34.0513	315CMTP35 Q56	315CMTP35 Q140	315CMTP35 Q180	315CMTP35 Q210	315CMTP35 Q250

Note: See "Application Considerations" on back cover.

Example No. 2

Units 107 - 315 C-face Screw Conveyor Drive

A C-face shaft mount reducer is required for a screw conveyor transporting rice. The conveyor will be uniformly loaded and operates 18 to 24 hours per day. The screw is 12" diameter and has a 2" bore with three holes. The conveyor requires 5 hp and will operate at 70 rpm. The application requires a waste pack.

1. Determine the Load Classification

From the *AGMA Application Classification Numbers* section, note the AGMA Class Number is II for a uniformly loaded or fed screw conveyor operating over 10 hours per day.

2. Determine the Speed Reducer Required

From the *C-face Reducer Selection Chart* section, there are two tables for Class II Service. Locate the 70 rpm row in each table. Read across the row to find a column with a rating of 5 hp or greater. Read up the column to determine the basic reducer size that corresponds to the design hp. For this application, a 115CMTP05, 115CMTP09, 115CMTP15 or a 115CMTP25 may be used. For this example, select a 115CMTP25. When used with a 1750 rpm C-face motor, the 25:1 ratio will provide an output speed closest to the desired 70 rpm speed. Other ratios may be used, but to obtain the desired speed a variable frequency drive may be required. (Note: The motor and variable frequency drives are not included with the reducer.)

From the *CMTP Availability Table*, locate the row with the basic reducer size. At the top of the table, locate the column with the C-face motor frame designation required. The complete reducer part number is at the intersection of the selected row and column. For this example, a 115CMTP25 Q180 is selected.

3. Establish Sealing Required for Screw Conveyor

The waste pack cartridge is well suited for dry materials, such as rice. Specify the optional waste pack cartridge for the 115 shaft mount selected. From the *Accessories* section, select part 115-203WPP.

4. Select the Screw Conveyor Adapter and Screw Conveyor Shaft

Using the basic reducer size, required drive shaft and screw diameter for the selection; refer to *Screw Conveyor Drives* in the *Accessories* section. Note the specification was for a 2" drive shaft with a three hole arrangement for the 12" diameter screw. From the table select the 115SCA-P and the 115DSP200-3.

5. Select the Trough End

From the *Screw Conveyor Trough Ends Sizes 107-407* table, select the SCTE12 X 2 trough end.

6. List of Components:

1, **115CMTP25 Q180** reducer
1, **115SCA-P** screw conveyor adapter
1, **115DSP200-3** screw conveyor drive shaft kit
1, **115-203WPP** waste pack cartridge
1, **SCTE12X2** trough end
1, C-face motor (separate) ▲

▲ Refer to C-Face standard and stainless steel motors section for product information.

CMTP Exact Ratios

Reducer Size	Ratio Symbols				
	05	09	15	25	35
107	5.0588	8.8205	14.8276	24.7250	34.8778
115	4.7000	8.8125	14.7759	24.8558	34.9487
203	5.1053	8.8732	14.9231	24.7409	34.6429
207	5.1579	8.8308	14.7870	24.7094	35.0000
215	5.1667	8.8482	14.8187	24.8502	34.8154
307	5.1111	8.7925	14.9704	24.7692	34.8791
315	4.8824	8.8620	14.5744	24.4118	34.0513

Note: See “Application Considerations” on back cover.

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
AGITATORS (Mixers)			
Pure Liquids	I	I	II
Liquids and Solids	I	II	II
Liquids - Variable Density	I	II	II
BLOWERS			
Centrifugal & Vane	I	I	II
Lobe	I	II	II
Vane	I	II	II
BREWING AND DISTILLING			
Bottling Machinery	I	I	II
Brew Kettles - Continuous Duty	II	II	II
Cookers - Continuous Duty	II	II	II
Mash Tubs - Continuous Duty	II	II	II
Scale Hopper - Frequent Starts	II	II	II
CAN FILLING MACHINES	I	I	II
CAR DUMPERS	II	III	III
CAR PULLERS	I	II	II
CLARIFIERS	I	I	II
CLASSIFIERS	I	II	II
CLAY WORKING MACHINERY			
Brick Presses	II	III	III
Briquette Machines	II	III	III
Pug Mills	I	II	II
COMPACTORS	♦	♦	♦
COMPRESSORS			
Centrifugal	I	I	II
Lobe	I	II	II
Reciprocating, Multi-Cylinder	II	II	III
Reciprocating, Single-Cylinder	III	III	III
CONVEYORS - GENERAL PURPOSE			
Includes Apron, Assembly, Belt, Bucket			
Chain, Flight, Oven, and Screw			
Uniformly Loaded or Fed	I	I	II
Heavy Duty - Not Uniformly Fed	I	II	II
Severe Duty - Reciprocating or Shaker	II	III	III
CRANES			
Dry Dock			
Main Hoist	♦	♦	♦
Auxiliary Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Slewing Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Container			
Main Hoist	♦	♦	♦
Boom Hoist	♦	♦	♦
Trolley Drive			
Gantry Drive	♦	♦	♦
Traction Drive	♦	♦	♦
Mill Duty			
Main Hoist	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
Industrial Duty			
Main	♦	♦	♦
Auxiliary	♦	♦	♦
Bridge Travel	♦	♦	♦
Trolley Travel	♦	♦	♦
CRUSHERS			
Stone or Ore	III	III	III
DREDGES			
Cable Reels	II	II	II
Conveyors	II	II	II
Cutter Head Drives	III	III	III
Pumps	III	III	III
Screen Drives	III	III	III
Stackers	II	II	II
Winches	II	II	II
ELEVATORS			
Bucket	I	II	II
Centrifugal Discharge	I	I	II
Escalators	I	I	II
Freight	I	II	II
Gravity Discharge	I	I	II
EXTRUDERS			
General	II	II	II
Plastics			
Variable Speed Drive	III	III	III
Fixed Speed Drive	III	III	III
Rubber			
Continuous Screw Operation	III	III	III
Intermittent Screw Operation	III	III	III
FANS			
Centrifugal	I	I	II

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
FANS (Cont'd)			
Cooling Towers	III	III	III
Forced Draft	II	II	II
Induced Draft	II	II	II
Industrial & Mine	II	II	II
FEEDERS			
Apron	I	II	II
Belt	I	II	II
Disc	I	I	II
Reciprocating	II	III	III
Screw	I	II	II
FOOD INDUSTRY			
Cereal Cooker	I	I	II
Dough Mixer	II	II	II
Meat Grinders	II	II	II
Slicers	I	II	II
GENERATORS AND EXCITERS	II	II	II
HAMMER MILLS	III	III	III
HOISTS			
Heavy Duty	♦	♦	♦
Medium Duty	♦	♦	♦
Skip Hoist	♦	♦	♦
LAUNDRY TUMBLERS	II	II	II
LAUNDRY WASHERS	II	II	III
LUMBER INDUSTRY			
Barkers			
Spindle Feed	II	II	II
Main Drive	III	III	III
Conveyors			
Burner	II	II	II
Main or Heavy Duty	II	II	II
Main Log	III	III	III
Re-saw, Merry-Go-Round	II	II	II
Slab	III	III	III
Transfer	II	II	II
Chains			
Floor	II	II	II
Green	II	II	III
Cut-Off-Saws			
Chain	II	II	III
Drag	II	II	III
Debarking Drums	III	III	III
Feeds			
Edger	II	II	II
Gang	II	III	III
Trimmer	II	II	II
Log Deck	III	III	III
Log Hauls - Incline - Well Type	III	III	III
Log Turning Devices	III	III	III
Planer Feed	II	II	II
Planer Tilting Hoists	II	II	II
Rolls - Live-Off Brg - Roll Cases	III	III	III
Sorting Table	II	II	II
Tipple Hoist	II	II	II
Transfer			
Chain	II	II	III
Craneway	II	II	III
Tray Drives	II	II	II
Veneer Lathe Drives	II	II	II
METAL MILLS			
Draw Bench Carriage and Main Drive	II	II	II
Runout Table			
Non-Reversing			
Group Drives	II	II	II
Individual Drives	III	III	III
Reversing	III	III	III
Slab Pushers	II	II	II
Shears	III	III	III
Wire Drawing	II	II	II
Wire Winding Machine	II	II	II
METAL STRIP PROCESSING MACHINERY			
Bridges	II	II	II
Collers & Uncoilers	I	I	II
Edge Trimmers	I	II	II
Flatteners	II	II	II
Loopers (Accumulators)	I	I	I
Pinch Rolls	II	II	II
Scrap Choppers	II	II	II
Shears	III	III	III
Slitters	I	II	II
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	III	III	III
Helical Ring Gear	II	II	II
Direct Connected	III	III	III

Classification Numbers

Application	AGMA Class Numbers		
	Up to 3 Hours Per Day	3-10 Hours Per Day	Over 10 Hours Per Day
MILLS, ROTARY TYPE (Cont'd)			
Cement Kilns	II	II	II
Dryers & Coolers	II	II	II
PAPER MILLS[1]			
Agitator (Mixer)	II	II	II
Agitator For Pure Liquors	II	II	II
Barking Drums	III	III	III
Barkers - Mechanical	III	III	III
Beater	II	II	II
Breaker Stack	II	II	II
Calendar[2]	II	II	II
Chipper	III	III	III
Chip Feeder	II	II	II
Coating Rolls	II	II	II
Conveyors			
Chip, Bark, Chemical	II	II	II
Log (Including Slab)	III	III	III
Couch Rolls	II	II	II
Cutter	III	III	III
Cylinder Molds	II	II	II
Dryers[2]			
Paper Machine	II	II	II
Conveyor Type	II	II	II
Embosser	II	II	II
Extruder	II	II	II
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	II	II	II
Jordan	II	II	II
Kiln Drive	II	II	II
Mt. Hope Roll	II	II	II
Paper Rolls	II	II	II
Platter	II	II	II
Presses - Felt Suction	II	II	II
Pulper	III	III	III
Pumps - Vacuum	II	II	II
Reel (Surface - Type)	II	II	II
Screens			
Chip	II	II	II
R otary	II	II	II
Vibrating	III	III	III
Size Press	II	II	II
Supercalendar	II	II	II
Thickener (AC Motor)	II	II	II
Thickener (DC Motor)	II	II	II
Washer (AC Motor)	II	II	II
Washer (DC Motor)	II	II	II
Wind and Unwind Stand	I	I	I
Winders (Surface Type)	II	II	II
Yankee Dryers[2]	II	II	II
PLASTICS INDUSTRY			
PRIMARY PROCESSING			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Continuous Feed, Holding & Blend Mill	II	II	II
Calendars	II	II	II
PLASTICS INDUSTRY			
SECONDARY PROCESSING			
Blow Molders	II	II	II
Coating	II	II	II
Film		II	II
II			
Pipe	II	II	II
Pre-Plasticizers	II	II	II
Rods	II	II	II
Sheet	II	II	II
Tubing	II	II	II
PULLERS - BARGE HAUL	II	II	II
PUMPS			
Centrifugal	I	I	II
Proportioning	II	II	II
Reciprocating			
Single Acting, 3 or more Cylinders	II	II	II
Double Acting, 2 or more Cylinders	II	II	II
Rotary			
Gear Type	I	I	II
Lobe	I	I	II
Vane	I	I	II
RUBBER INDUSTRY			
Intensive Internal Mixers			
Batch Mixers	III	III	III
Continuous Mixers	II	II	II
Mixing Mill			
2 Smooth Rolls	II	II	II
1 or 2 Corrugated Rolls	III	III	III
RUBBER INDUSTRY (Cont'd)			
Batch Drop Mill - 2 Smooth Rolls	II	II	II
Cracker Warmer - 2 Roll, 1 Corrugated Roll	III	III	III
Cracker - 2 Corrugated Rolls	III	III	III
Holding, Feed & Blend Mill - 2 Rolls	II	II	II
Refiner - 2 Rolls	II	II	II
Calendars	II	II	II
SAND MULLER	II	II	II
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	II	II	II
Chemical Feeder	II	II	II
Dewatering Screens	II	II	II
Scum Breakers	II	II	II
Slow or Rapid Mixers	II	II	II
Sludge Collectors	II	II	II
Thickener	II	II	II
Vacuum Filters	II	II	II
SCREENS			
Air Washing	I	I	II
Rotary - Stone or Gravel	II	II	II
Traveling Water Intake	I	I	I
SCREW CONVEYORS			
Uniformly Loaded or Fed	I	I	II
Heavy Duty	I	II	II
SUGAR INDUSTRY			
Beet Slicer	III	III	III
Cane Knives	II	II	II
Crushers	II	II	II
Mills (Low Speed End)	III	III	III
TEXTILE INDUSTRY			
Batchers	II	II	II
Calendars	II	II	II
Cards	II	II	II
Dry Cans	II	II	II
Dyeing Machinery	II	II	II
Looms	II	II	II
Mangles	II	II	II
Nappers	II	II	II
Pads	II	II	II
Slashers	II	II	II
Soapers	II	II	II
Spinners	II	II	II
Tenter Frames	II	II	II
Washers	II	II	II
Winders	II	II	II

Notes:

1) The Class numbers listed in the table for paper mill applications are consistent with those shown in TAPPI *(Technical Association of Pulp and Paper Industry)* Technical information sheet 0406-18 1967, *Service Factors for Gears on Major Equipment in the Pulp and Paper Industry.*
2) Anti-friction bearings only.
♦ Contact Application Engineering (1 800 626 2093) for the selection of an AGMA Class Numbers in these applications.

CMTP Selection Chart

Class I Service (1.0 S.F.)

Single Reduction														
Output RPM	107CMTP05		115CMTP05		203CMTP05		207CMTP05		215CMTP05		307CMTP05		315CMTP05	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.26	3,184	0.52	6,310	0.85	10,324	1.04	12,555	1.63	19,721	2.45	29,661	3.14	38,026
10	0.53	3,184	1.04	6,310	1.71	10,324	2.08	12,555	3.26	19,721	4.90	29,661	6.28	38,026
20	1.05	3,184	2.09	6,310	3.41	10,324	4.15	12,555	6.52	19,721	9.80	29,661	12.57	38,026
30	1.58	3,184	3.13	6,310	5.12	10,324	6.23	12,555	9.78	19,721	14.71	29,661	18.85	38,026
40	2.11	3,184	4.17	6,310	6.83	10,324	8.30	12,555	13.04	19,721	19.61	29,661	25.14	38,026
50	2.63	3,184	5.21	6,310	8.53	10,324	10.38	12,555	16.30	19,721	24.51	29,661	31.42	38,026
60	3.16	3,184	6.26	6,310	10.24	10,324	12.45	12,555	19.56	19,721	29.41	29,661	37.71	38,026
70	3.68	3,184	7.30	6,310	11.94	10,324	14.53	12,555	22.82	19,721	34.32	29,661	43.99	38,026
80	4.21	3,184	8.34	6,310	13.65	10,324	16.60	12,555	26.08	19,721	39.22	29,661	50.28	38,026
90	4.74	3,184	9.39	6,310	15.36	10,324	18.68	12,555	29.34	19,721	44.12	29,661	56.25	37,815
100	5.09	3,081	10.10	6,110	16.52	9,996	20.07	12,145	31.34	18,959	46.88	28,361	56.25	34,034
110	5.44	2,990	10.79	5,935	17.65	9,707	21.44	11,795	33.41	18,374	46.88	25,783	56.25	30,940
120	5.77	2,910	11.46	5,779	18.75	9,451	22.78	11,484	35.40	17,850	46.88	23,634	56.25	28,361
130	6.10	2,837	12.11	5,638	19.81	9,221	24.08	11,207	37.35	17,383	46.88	21,816	56.25	26,180
140	6.41	2,772	12.75	5,512	20.86	9,014	25.34	10,952	37.50	16,206	46.88	20,258	56.25	24,310
150	6.72	2,712	13.38	5,397	20.93	8,440	26.58	10,722	37.50	15,126	46.88	18,908	56.25	22,689
160	7.03	2,657	13.99	5,290	20.93	7,913	27.80	10,514	37.50	14,181	46.88	17,726	56.25	21,271
170	7.33	2,607	14.59	5,193	20.93	7,447	28.99	10,319	37.50	13,346	46.88	16,683	56.25	20,020
180	7.62	2,561	15.18	5,104	20.93	7,034	30.17	10,142	37.50	12,605	46.88	15,756	56.25	18,908
190	7.91	2,517	15.19	4,836	20.93	6,663	31.32	9,975	37.50	11,942	46.88	14,927	56.25	17,912
200	8.19	2,477	15.19	4,595	20.93	6,330	32.45	9,817	37.50	11,345	46.88	14,181	56.25	17,017
210	8.46	2,439	15.19	4,376	20.93	6,029	32.81	9,454	37.50	10,804	46.88	13,505	56.25	16,206
220	8.74	2,402	15.19	4,177	20.93	5,755	32.81	9,024	37.50	10,313	46.88	12,891	56.25	15,470
230	9.01	2,369	15.19	3,995	20.93	5,505	32.81	8,632	37.50	9,865	46.88	12,331	56.25	14,797
240	9.27	2,337	15.19	3,829	20.93	5,275	32.81	8,272	37.50	9,454	46.88	11,817	56.25	14,181
250	9.53	2,307	15.19	3,676	20.93	5,064	32.81	7,941	37.50	9,076	46.88	11,345	56.25	13,613
260	9.79	2,278	15.19	3,534	20.93	4,869	32.81	7,636	37.50	8,727	46.88	10,908	56.25	13,090
270	10.05	2,251	15.19	3,403	20.93	4,689	32.81	7,353	37.50	8,403	46.88	10,504	56.25	12,605
280	10.30	2,225	15.19	3,282	20.93	4,522	32.81	7,090	37.50	8,103	46.88	10,129	56.25	12,155
290	10.55	2,200	15.19	3,169	20.93	4,366	32.81	6,846	37.50	7,824	46.88	9,780	56.25	11,736
300	10.79	2,176	15.19	3,063	20.93	4,220	32.81	6,618	37.50	7,563	46.88	9,454	56.25	11,345
310	11.04	2,154	15.19	2,964	20.93	4,084	32.81	6,404	37.50	7,319	46.88	9,149	56.25	10,979
320	11.28	2,132	15.19	2,872	20.93	3,956	32.81	6,204	37.50	7,090	46.88	8,863	56.25	10,635
330	11.52	2,111	15.19	2,785	20.93	3,837	32.81	6,016	37.50	6,875	46.88	8,594	56.25	10,313
340	11.75	2,091	15.19	2,703	20.93	3,724	32.81	5,839	37.50	6,673	46.88	8,342	56.25	10,010
350	11.81	2,042	15.19	2,625	20.93	3,617	32.81	5,672	37.50	6,483	46.88	8,103	56.25	9,724
360	11.81	1,985	15.19	2,553	20.93	3,517	32.81	5,515	37.50	6,303	46.88	7,878	56.25	9,454
370	11.81	1,932	15.19	2,484	20.93	3,422	32.81	5,366	37.50	6,132	46.88	7,665	56.25	9,198
380	11.81	1,881	15.19	2,418	20.93	3,332	32.81	5,224	37.50	5,971	46.88	7,463	56.25	8,956
390	11.81	1,833	15.19	2,356	20.93	3,246	32.81	5,090	37.50	5,818	46.88	7,272	56.25	8,727
400	11.81	1,787	15.19	2,297	20.93	3,165	32.81	4,963	37.50	5,672	46.88	7,090	56.25	8,508

CMTP Selection Chart

Class I Service (1.0 S.F.)

Double Reduction														
Output RPM	107CMTP09 107CMTP15 107CMTP25 107CMTP35		115CMTP09 115CMTP15 115CMTP25 115CMTP35		203CMTP09 203CMTP15 203CMTP25 203CMTP35		207CMTP09 207CMTP15 207CMTP25 207CMTP35		215CMTP09 215CMTP15 215CMTP25 215CMTP35		307CMTP09 307CMTP15 307CMTP25 307CMTP35		315CMTP09 315CMTP15 315CMTP25 315CMTP35	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.50	6,081	0.70	8,516	1.22	14,760	1.93	23,348	3.11	37,659	5.19	62,791	5.76	69,693
10	0.97	5,853	1.31	7,919	2.27	13,718	3.58	21,689	5.82	35,241	10.05	60,784	11.52	69,693
20	1.86	5,622	2.51	7,594	4.34	13,121	6.86	20,750	11.09	33,554	19.24	58,206	23.04	69,693
30	2.72	5,483	3.71	7,492	6.41	12,937	10.14	20,450	16.39	33,053	28.09	56,660	34.56	69,693
40	3.56	5,384	4.90	7,415	8.46	12,798	13.37	20,223	21.60	32,671	36.30	54,904	46.07	69,693
50	4.38	5,305	6.08	7,352	10.48	12,685	16.56	20,037	26.74	32,360	42.43	51,349	56.25	68,067
60	5.20	5,240	7.24	7,298	12.48	12,588	19.19	19,352	31.77	32,038	46.88	47,269	56.25	56,723
70	6.00	5,184	8.39	7,251	13.76	11,892	21.38	18,477	35.39	30,588	46.88	40,516	56.25	48,619
80	6.79	5,135	9.53	7,209	14.95	11,307	23.47	17,752	37.50	28,361	46.88	35,452	56.25	42,542
90	7.57	5,092	10.67	7,171	16.09	10,815	25.49	17,136	37.50	25,210	46.88	31,513	56.25	37,815
100	8.35	5,053	11.80	7,137	17.17	10,390	27.44	16,602	37.50	22,689	46.88	28,361	56.25	34,034
110	9.12	5,017	12.92	7,104	18.30	10,066	29.33	16,134	37.50	20,626	46.88	25,783	56.25	30,940
120	9.88	4,984	14.03	7,074	19.40	9,779	31.18	15,719	37.50	18,908	46.88	23,634	56.25	28,361
130	10.64	4,953	15.14	7,046	20.46	9,521	32.81	15,271	37.50	17,453	46.88	21,816	56.25	26,180
140	11.40	4,925	15.19	6,564	20.93	9,043	32.81	14,181	37.50	16,206	46.88	20,258	56.25	24,310
150	11.81	4,765	15.19	6,126	20.93	8,440	32.81	13,235	37.50	15,126	46.88	18,908	56.25	22,689
160	11.81	4,467	15.19	5,743	20.93	7,913	32.81	12,408	37.50	14,181	46.88	17,726	56.25	21,271
170	11.81	4,204	15.19	5,405	20.93	7,447	32.81	11,678	37.50	13,346	46.88	16,683	56.25	20,020
180	11.81	3,971	15.19	5,105	20.93	7,034	32.81	11,029	37.50	12,605	46.88	15,756	56.25	18,908
190	11.81	3,762	15.19	4,836	20.93	6,663	32.81	10,449	37.50	11,942	46.88	14,927	56.25	17,912
200	11.81	3,574	15.19	4,595	20.93	6,330	32.81	9,926	37.50	11,345	46.88	14,181	56.25	17,017

CMTP Selection Chart

Class II Service (1.4 S.F.)

Single Reduction														
Output RPM	107CMTP05		115CMTP05		203CMTP05		207CMTP05		215CMTP05		307CMTP05		315CMTP05	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.19	2,274	0.37	4,507	0.61	7,374	0.74	8,968	1.16	14,087	1.75	21,187	2.24	27,162
10	0.38	2,274	0.74	4,507	1.22	7,374	1.48	8,968	2.33	14,087	3.50	21,187	4.49	27,162
20	0.75	2,274	1.49	4,507	2.44	7,374	2.96	8,968	4.66	14,087	7.00	21,187	8.98	27,162
30	1.13	2,274	2.23	4,507	3.66	7,374	4.45	8,968	6.98	14,087	10.51	21,187	13.47	27,162
40	1.50	2,274	2.98	4,507	4.88	7,374	5.93	8,968	9.31	14,087	14.01	21,187	17.96	27,162
50	1.88	2,274	3.72	4,507	6.09	7,374	7.41	8,968	11.64	14,087	17.51	21,187	22.45	27,162
60	2.26	2,274	4.47	4,507	7.31	7,374	8.89	8,968	13.97	14,087	21.01	21,187	26.94	27,162
70	2.63	2,274	5.21	4,507	8.53	7,374	10.38	8,968	16.30	14,087	24.51	21,187	31.42	27,162
80	3.01	2,274	5.96	4,507	9.75	7,374	11.86	8,968	18.63	14,087	28.01	21,187	35.91	27,162
90	3.38	2,274	6.70	4,507	10.97	7,374	13.34	8,968	20.95	14,087	31.52	21,187	40.40	27,162
100	3.64	2,201	7.21	4,364	11.80	7,140	14.34	8,675	22.38	13,542	33.68	20,376	43.46	26,294
110	3.88	2,136	7.71	4,239	12.61	6,934	15.32	8,425	23.86	13,125	35.89	19,743	46.45	25,548
120	4.12	2,078	8.19	4,128	13.39	6,751	16.27	8,203	25.29	12,750	38.07	19,194	49.34	24,879
130	4.35	2,027	8.65	4,027	14.15	6,587	17.20	8,005	26.68	12,416	40.15	18,688	52.15	24,274
140	4.58	1,980	9.11	3,937	14.90	6,438	18.10	7,823	28.03	12,113	42.19	18,234	54.93	23,738
150	4.80	1,937	9.56	3,855	15.63	6,303	18.99	7,659	29.35	11,839	44.18	17,821	56.25	22,689
160	5.02	1,898	9.99	3,779	16.34	6,179	19.86	7,510	30.64	11,585	46.12	17,441	56.25	21,271
170	5.23	1,862	10.42	3,710	17.04	6,063	20.71	7,370	31.89	11,351	46.88	16,683	56.25	20,020
180	5.44	1,829	10.85	3,646	17.72	5,958	21.55	7,244	33.13	11,136	46.88	15,756	56.25	18,908
190	5.65	1,798	11.26	3,585	18.40	5,860	22.37	7,125	34.34	10,937	46.88	14,927	56.25	17,912
200	5.85	1,769	11.67	3,529	19.07	5,768	23.18	7,012	35.53	10,748	46.88	14,181	56.25	17,017
210	6.05	1,742	12.07	3,477	19.72	5,681	23.97	6,906	36.69	10,572	46.88	13,505	56.25	16,206
220	6.24	1,716	12.46	3,428	20.36	5,600	24.76	6,808	37.50	10,313	46.88	12,891	56.25	15,470
230	6.43	1,692	12.85	3,380	20.93	5,505	25.54	6,718	37.50	9,865	46.88	12,331	56.25	14,797
240	6.62	1,669	13.23	3,336	20.93	5,275	26.29	6,628	37.50	9,454	46.88	11,817	56.25	14,181
250	6.81	1,648	13.62	3,296	20.93	5,064	27.04	6,545	37.50	9,076	46.88	11,345	56.25	13,613
260	6.99	1,627	13.99	3,256	20.93	4,869	27.79	6,467	37.50	8,727	46.88	10,908	56.25	13,090
270	7.18	1,608	14.36	3,218	20.93	4,689	28.53	6,393	37.50	8,403	46.88	10,504	56.25	12,605
280	7.35	1,589	14.72	3,182	20.93	4,522	29.27	6,324	37.50	8,103	46.88	10,129	56.25	12,155
290	7.53	1,572	15.09	3,148	20.93	4,366	29.98	6,254	37.50	7,824	46.88	9,780	56.25	11,736
300	7.71	1,555	15.19	3,063	20.93	4,220	30.69	6,189	37.50	7,563	46.88	9,454	56.25	11,345
310	7.88	1,539	15.19	2,964	20.93	4,084	31.40	6,128	37.50	7,319	46.88	9,149	56.25	10,979
320	8.06	1,523	15.19	2,872	20.93	3,956	32.09	6,068	37.50	7,090	46.88	8,863	56.25	10,635
330	8.23	1,508	15.19	2,785	20.93	3,837	32.76	6,007	37.50	6,875	46.88	8,594	56.25	10,313
340	8.39	1,494	15.19	2,703	20.93	3,724	32.81	5,839	37.50	6,673	46.88	8,342	56.25	10,010
350	8.56	1,480	15.19	2,625	20.93	3,617	32.81	5,672	37.50	6,483	46.88	8,103	56.25	9,724
360	8.73	1,467	15.19	2,553	20.93	3,517	32.81	5,515	37.50	6,303	46.88	7,878	56.25	9,454
370	8.89	1,454	15.19	2,484	20.93	3,422	32.81	5,366	37.50	6,132	46.88	7,665	56.25	9,198
380	9.05	1,441	15.19	2,418	20.93	3,332	32.81	5,224	37.50	5,971	46.88	7,463	56.25	8,956
390	9.22	1,430	15.19	2,356	20.93	3,246	32.81	5,090	37.50	5,818	46.88	7,272	56.25	8,727
400	9.37	1,418	15.19	2,297	20.93	3,165	32.81	4,963	37.50	5,672	46.88	7,090	56.25	8,508

CMTP Selection Chart

Class II Service (1.4 S.F.)

Double Reduction														
Output RPM	107CMTP09 107CMTP15 107CMTP25 107CMTP35		115CMTP09 115CMTP15 115CMTP25 115CMTP35		203CMTP09 203CMTP15 203CMTP25 203CMTP35		207CMTP09 207CMTP15 207CMTP25 207CMTP35		215CMTP09 215CMTP15 215CMTP25 215CMTP35		307CMTP09 307CMTP15 307CMTP25 307CMTP35		315CMTP09 315CMTP15 315CMTP25 315CMTP35	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.36	4,343	0.50	6,083	0.87	10,543	1.38	16,677	2.22	26,899	3.71	44,851	4.11	49,780
10	0.69	4,181	0.93	5,656	1.62	9,798	2.56	15,492	4.16	25,172	7.18	43,417	8.23	49,780
20	1.33	4,016	1.79	5,425	3.10	9,372	4.90	14,822	7.92	23,967	13.74	41,576	16.46	49,780
30	1.94	3,917	2.65	5,352	4.58	9,241	7.24	14,607	11.71	23,609	20.07	40,471	24.68	49,780
40	2.54	3,845	3.50	5,296	6.04	9,142	9.55	14,445	15.43	23,337	25.93	39,217	32.91	49,780
50	3.13	3,789	4.34	5,251	7.49	9,060	11.83	14,312	19.10	23,114	30.31	36,678	41.14	49,780
60	3.71	3,743	5.17	5,213	8.92	8,991	13.71	13,823	22.69	22,884	34.44	34,725	48.86	49,269
70	4.28	3,703	5.99	5,179	9.83	8,494	15.27	13,198	25.28	21,849	38.36	33,156	56.25	48,619
80	4.85	3,668	6.81	5,149	10.68	8,077	16.77	12,680	27.76	20,992	42.12	31,855	56.25	42,542
90	5.41	3,637	7.62	5,122	11.49	7,725	18.21	12,240	30.14	20,263	45.74	30,747	56.25	37,815
100	5.96	3,609	8.43	5,098	12.27	7,421	19.60	11,858	32.45	19,632	46.88	28,361	56.25	34,034
110	6.51	3,583	9.23	5,075	13.07	7,190	20.95	11,524	34.69	19,078	46.88	25,783	56.25	30,940
120	7.06	3,560	10.02	5,053	13.85	6,985	22.27	11,228	36.87	18,588	46.88	23,634	56.25	28,361
130	7.60	3,538	10.81	5,033	14.61	6,801	23.55	10,961	37.50	17,453	46.88	21,816	56.25	26,180
140	8.14	3,518	11.60	5,014	15.35	6,635	24.80	10,720	37.50	16,206	46.88	20,258	56.25	24,310
150	8.67	3,499	12.32	4,971	16.07	6,483	26.03	10,501	37.50	15,126	46.88	18,908	56.25	22,689
160	8.84	3,342	12.89	4,875	16.78	6,344	27.24	10,299	37.50	14,181	46.88	17,726	56.25	21,271
170	9.20	3,273	13.45	4,788	17.46	6,215	28.42	10,113	37.50	13,346	46.88	16,683	56.25	20,020
180	9.55	3,209	14.00	4,706	18.14	6,097	29.57	9,941	37.50	12,605	46.88	15,756	56.25	18,908
190	9.89	3,149	14.54	4,631	18.80	5,986	30.71	9,781	37.50	11,942	46.88	14,927	56.25	17,912
200	10.23	3,094	15.07	4,560	19.45	5,884	31.84	9,632	37.50	11,345	46.88	14,181	56.25	17,017

CMTP Selection Chart

Class III Service (2.0 S.F.)

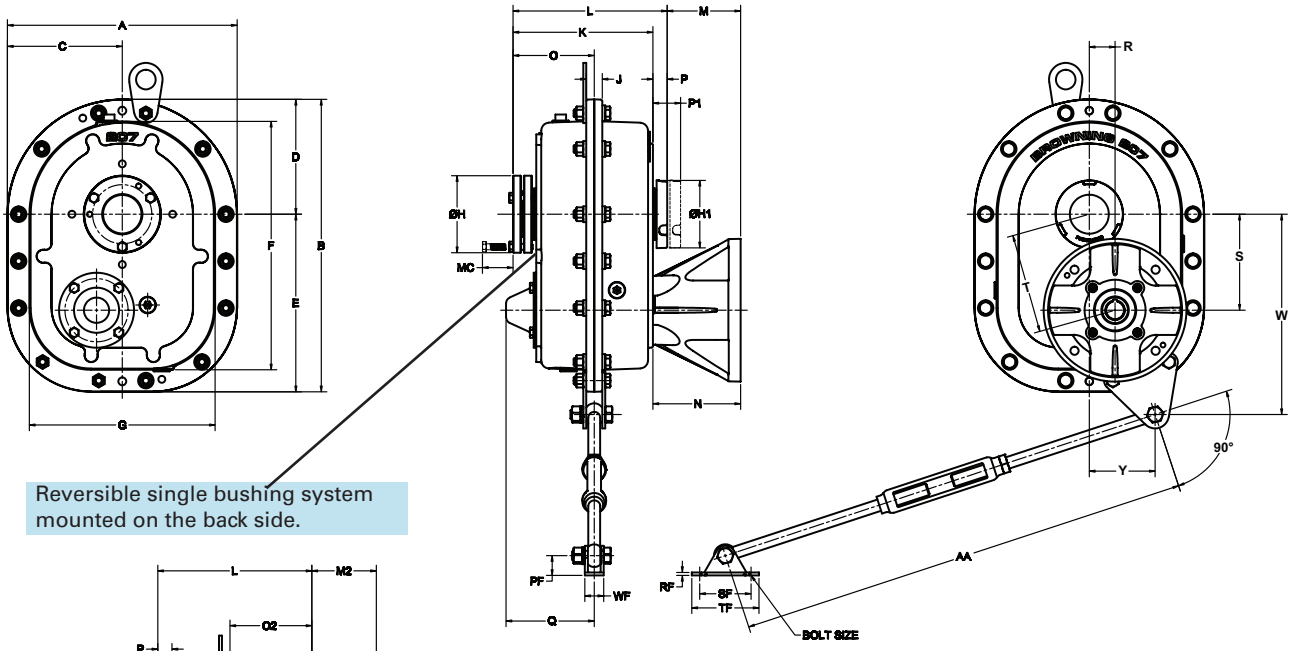
Single Reduction														
Output RPM	107CMTP05		115CMTP05		203CMTP05		207CMTP05		215CMTP05		307CMTP05		315CMTP05	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.13	1,592	0.26	3,155	0.43	5,162	0.52	6,278	0.81	9,861	1.23	14,831	1.57	19,013
10	0.26	1,592	0.52	3,155	0.85	5,162	1.04	6,278	1.63	9,861	2.45	14,831	3.14	19,013
20	0.53	1,592	1.04	3,155	1.71	5,162	2.08	6,278	3.26	9,861	4.90	14,831	6.28	19,013
30	0.79	1,592	1.56	3,155	2.56	5,162	3.11	6,278	4.89	9,861	7.35	14,831	9.43	19,013
40	1.05	1,592	2.09	3,155	3.41	5,162	4.15	6,278	6.52	9,861	9.80	14,831	12.57	19,013
50	1.32	1,592	2.61	3,155	4.27	5,162	5.19	6,278	8.15	9,861	12.26	14,831	15.71	19,013
60	1.58	1,592	3.13	3,155	5.12	5,162	6.23	6,278	9.78	9,861	14.71	14,831	18.85	19,013
70	1.84	1,592	3.65	3,155	5.97	5,162	7.26	6,278	11.41	9,861	17.16	14,831	22.00	19,013
80	2.11	1,592	4.17	3,155	6.83	5,162	8.30	6,278	13.04	9,861	19.61	14,831	25.14	19,013
90	2.37	1,592	4.69	3,155	7.68	5,162	9.34	6,278	14.67	9,861	22.06	14,831	28.28	19,013
100	2.55	1,540	5.05	3,055	8.26	4,998	10.04	6,073	15.67	9,480	23.57	14,263	30.42	18,406
110	2.72	1,495	5.39	2,967	8.82	4,853	10.72	5,898	16.70	9,187	25.13	13,820	32.51	17,884
120	2.89	1,455	5.73	2,889	9.37	4,726	11.39	5,742	17.70	8,925	26.65	13,436	34.54	17,415
130	3.05	1,419	6.06	2,819	9.91	4,611	12.04	5,603	18.67	8,691	28.11	13,082	36.51	16,991
140	3.21	1,386	6.38	2,756	10.43	4,507	12.67	5,476	19.62	8,479	29.53	12,764	38.45	16,617
150	3.36	1,356	6.69	2,698	10.94	4,412	13.29	5,361	20.55	8,287	30.93	12,475	40.33	16,266
160	3.51	1,329	7.00	2,645	11.44	4,325	13.90	5,257	21.44	8,109	32.29	12,209	42.20	15,957
170	3.66	1,304	7.30	2,597	11.93	4,244	14.50	5,159	22.33	7,946	33.63	11,967	44.00	15,659
180	3.81	1,280	7.59	2,552	12.41	4,170	15.09	5,071	23.19	7,796	34.93	11,742	45.79	15,391
190	3.95	1,259	7.88	2,509	12.88	4,102	15.66	4,987	24.04	7,656	36.19	11,524	47.53	15,136
200	4.09	1,238	8.17	2,470	13.35	4,038	16.23	4,908	24.87	7,524	37.47	11,335	49.24	14,897
210	4.23	1,219	8.45	2,434	13.80	3,977	16.78	4,834	25.69	7,401	38.68	11,145	50.99	14,690
220	4.37	1,201	8.72	2,399	14.25	3,920	17.33	4,766	26.49	7,286	39.90	10,973	52.66	14,482
230	4.50	1,185	9.00	2,366	14.70	3,866	17.88	4,703	27.29	7,178	41.10	10,812	54.25	14,272
240	4.63	1,168	9.26	2,335	15.14	3,816	18.40	4,639	28.07	7,076	42.29	10,662	55.93	14,099
250	4.77	1,153	9.53	2,307	15.57	3,768	18.93	4,582	28.83	6,976	43.42	10,509	56.25	13,613
260	4.89	1,139	9.79	2,279	16.00	3,723	19.45	4,527	29.58	6,883	44.55	10,368	56.25	13,090
270	5.02	1,126	10.05	2,253	16.42	3,679	19.97	4,475	30.34	6,798	45.69	10,238	56.25	12,605
280	5.15	1,112	10.31	2,227	16.84	3,638	20.49	4,427	31.06	6,712	46.83	10,120	56.25	12,155
290	5.27	1,100	10.56	2,203	17.25	3,599	20.98	4,378	31.79	6,633	46.88	9,780	56.25	11,736
300	5.40	1,088	10.81	2,180	17.66	3,561	21.48	4,332	32.51	6,558	46.88	9,454	56.25	11,345
310	5.52	1,077	11.06	2,159	18.06	3,525	21.98	4,290	33.21	6,482	46.88	9,149	56.25	10,979
320	5.64	1,066	11.31	2,138	18.46	3,490	22.46	4,247	33.92	6,414	46.88	8,863	56.25	10,635
330	5.76	1,056	11.55	2,117	18.85	3,457	22.93	4,205	34.61	6,346	46.88	8,594	56.25	10,313
340	5.88	1,046	11.79	2,099	19.25	3,425	23.41	4,166	35.30	6,282	46.88	8,342	56.25	10,010
350	5.99	1,036	12.03	2,080	19.64	3,395	23.89	4,130	35.97	6,218	46.88	8,103	56.25	9,724
360	6.11	1,027	12.26	2,061	20.02	3,365	24.36	4,095	36.64	6,158	46.88	7,878	56.25	9,454
370	6.22	1,018	12.50	2,044	20.40	3,337	24.82	4,059	37.32	6,103	46.88	7,665	56.25	9,198
380	6.34	1,009	12.73	2,028	20.78	3,308	25.29	4,027	37.50	5,971	46.88	7,463	56.25	8,956
390	6.45	1,001	12.96	2,011	20.93	3,246	25.75	3,995	37.50	5,818	46.88	7,272	56.25	8,727
400	6.56	993	13.19	1,995	20.93	3,165	26.20	3,963	37.50	5,672	46.88	7,090	56.25	8,508

CMTP Selection Chart

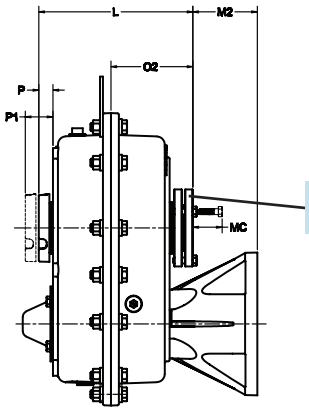
Class III Service (2.0 S.F.)

Double Reduction														
Output RPM	107CMTP09 107CMTP15 107CMTP25 107CMTP35		115CMTP09 115CMTP15 115CMTP25 115CMTP35		203CMTP09 203CMTP15 203CMTP25 203CMTP35		207CMTP09 207CMTP15 207CMTP25 207CMTP35		215CMTP09 215CMTP15 215CMTP25 215CMTP35		307CMTP09 307CMTP15 307CMTP25 307CMTP35		315CMTP09 315CMTP15 315CMTP25 315CMTP35	
	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)	Input HP	Output Torque (In-lbs)
5	0.25	3,040	0.35	4,258	0.61	7,380	0.96	11,674	1.56	18,830	2.59	31,396	2.88	34,846
10	0.48	2,927	0.65	3,959	1.13	6,859	1.79	10,845	2.91	17,621	5.02	30,392	5.76	34,846
20	0.93	2,811	1.26	3,797	2.17	6,561	3.43	10,375	5.55	16,777	9.62	29,103	11.52	34,846
30	1.36	2,742	1.86	3,746	3.21	6,469	5.07	10,225	8.19	16,526	14.05	28,330	17.28	34,846
40	1.78	2,692	2.45	3,707	4.23	6,399	6.68	10,111	10.80	16,336	18.15	27,452	23.04	34,846
50	2.19	2,652	3.04	3,676	5.24	6,342	8.28	10,019	13.37	16,180	21.22	25,675	28.80	34,846
60	2.60	2,620	3.62	3,649	6.24	6,294	9.60	9,676	15.89	16,019	24.11	24,308	34.20	34,488
70	3.00	2,592	4.19	3,626	6.88	5,946	10.69	9,238	17.69	15,294	26.85	23,209	39.42	34,071
80	3.40	2,568	4.77	3,605	7.48	5,654	11.74	8,876	19.43	14,695	29.48	22,298	44.57	33,708
90	3.79	2,546	5.33	3,586	8.04	5,407	12.74	8,568	21.10	14,184	32.02	21,523	47.63	32,019
100	4.18	2,526	5.90	3,568	8.59	5,195	13.72	8,301	22.71	13,742	34.47	20,854	51.19	30,973
110	4.56	2,508	6.46	3,552	9.15	5,033	14.67	8,067	24.28	13,355	36.84	20,266	54.64	30,053
120	4.94	2,492	7.02	3,537	9.70	4,890	15.59	7,860	25.81	13,012	39.16	19,744	56.25	28,361
130	5.32	2,477	7.57	3,523	10.23	4,761	16.49	7,673	27.29	12,703	41.41	19,274	56.25	26,180
140	5.70	2,462	8.12	3,510	10.75	4,644	17.36	7,504	28.75	12,423	43.62	18,853	56.25	24,310
150	6.07	2,449	8.63	3,480	11.25	4,538	18.22	7,351	30.17	12,169	45.78	18,466	56.25	22,689
160	6.19	2,339	9.03	3,413	11.74	4,441	19.07	7,210	31.56	11,936	46.88	17,726	56.25	21,271
170	6.44	2,291	9.42	3,351	12.22	4,351	19.89	7,079	32.93	11,721	46.88	16,683	56.25	20,020
180	6.68	2,246	9.80	3,294	12.70	4,268	20.70	6,959	34.28	11,522	46.88	15,756	56.25	18,908
190	6.92	2,204	10.18	3,242	13.16	4,190	21.50	6,847	35.60	11,335	46.88	14,927	56.25	17,912
200	7.16	2,166	10.55	3,192	13.61	4,119	22.29	6,742	36.90	11,162	46.88	14,181	56.25	17,017

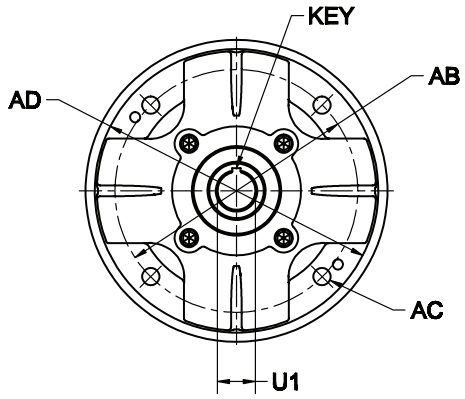
CMTP TorqTaper Plus® Unit Sizes 107-315

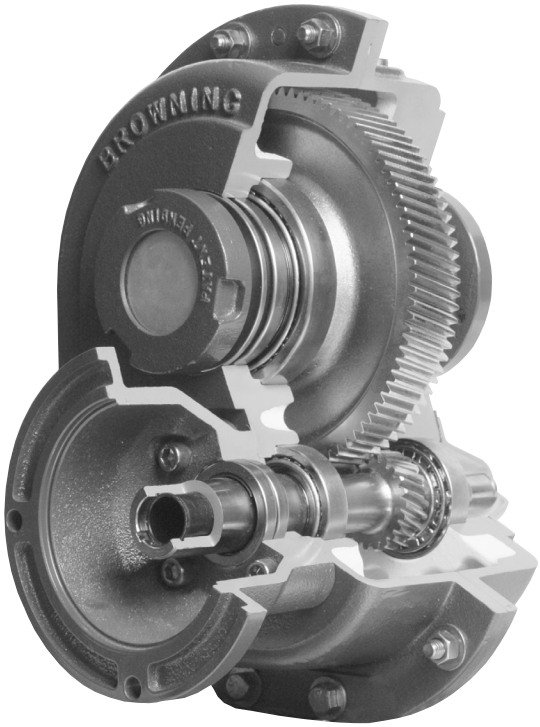


Reversible single bushing system mounted on the back side.



Reversible single bushing system mounted on the front side.





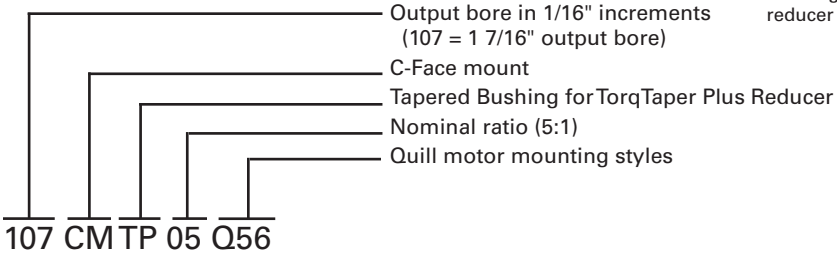
CMTP TorqTaper Plus® Unit Sizes 107-315

PART NO.	DIMENSIONS IN INCHES																			
	A	B	C	D	E	F	G	H	H1	J	K	L	M	M2	MC	N	O	P	P1	PF
107CMTP	9.76	12.07	4.88	4.88	7.19	10.07	7.75	3.25	3.00	0.63	5.52	7.89	3.18	2.61	1.75	4.08	4.25	0.90	1.84	1.14
115CMTP	11.00	14.08	5.50	5.50	8.58	11.78	8.69	4.13	3.50	0.75	5.99	8.36	3.34	2.77	1.88	4.24	4.48	0.90	1.83	1.14
203CMTP	12.88	16.16	6.44	6.44	9.72	13.66	10.38	4.50	3.75	0.87	7.07	9.43	4.42	3,84	1.88	5.31	5.01	0.89	1.83	1.32
207CMTP	14.50	16.47	7.25	7.25	11.22	15.73	11.76	4.88	4.25	1.01	7.39	9.75	4.23	3.65	1.88	5.12	5.14	0.89	1.86	1.51
215CMTP	16.25	20.88	8.13	8.13	12.76	18.07	13.44	5.31	4.75	1.07	8.24	10.85	4.85	4.28	1.88	5.87	5.89	1.02	1.96	1.51
307CMTP	19.04	24.37	9.52	9.52	14.85	21.00	15.67	6.44	5.69	1.25	9.27	12.57	6.09	5.47	2.25	7.45	6.58	1.36	2.75	1.81
315CMTP	19.90	26.35	9.95	9.95	16.40	23.02	16.57	7.13	6.70	1.25	10.51	14.50	6.59	5.96	2.75	8.32	7.51	1.73	3.25	2.22

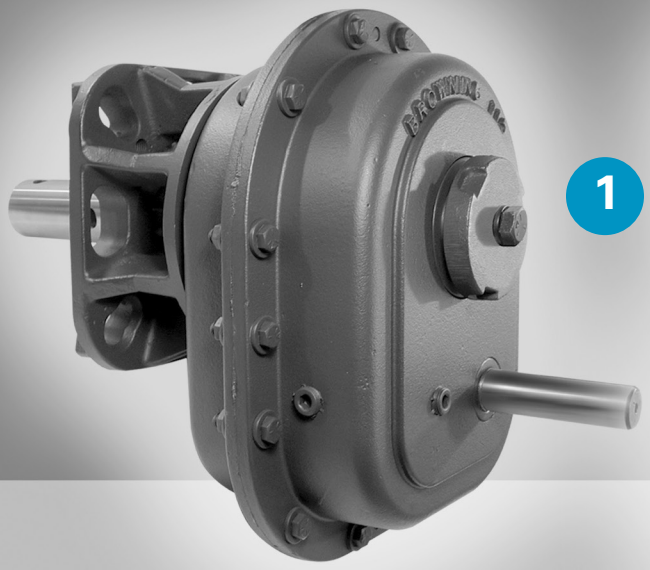
PART NO.	DIMENSIONS IN INCHES															
	Q	R	RF	S	SF	T	TF	U1	W	WF	Y	AA		BOLT SIZE	KEY	MAX. OUTPUT BORE	WT. LBS.
												MIN.	MAX.				
107CMTP	4.34	1.18	0.36	3.77	2.50	3.95	3.38	0.75	7.88	1.44	2.73	24.00	30.00	3/8	.188 x .188 x 2.88	1 7/16	61
115CMTP	4.51	1.35	0.36	4.36	2.50	4.56	3.38	1.13	9.14	1.44	3.12	24.00	30.00	3/8	.250 x .250 x 2.75	1 15/16	92
203CMTP	5.04	1.48	0.42	5.26	2.50	5.46	3.50	1.25	10.94	1.72	3.64	24.00	30.00	3/8	.250 x .250 x 2.75	2 3/16	130
207CMTP	5.57	1.63	0.48	6.08	3.00	6.29	4.25	1.44	12.68	2.19	4.16	27.00	33.00	7/16	.375 x .375 x 3.75	2 7/16	171
215CMTP	6.24	2.12	0.48	7.01	3.00	7.32	4.25	1.88	14.19	2.19	4.65	27.00	33.00	7/16	.500 x .500 x 3.75	2 15/16	250
307CMTP	6.79	2.25	0.61	7.78	4.00	8.10	5.38	2.00	17.00	2.78	5.58	29.00	35.00	1/2	.500 x .500 x 6.50	3 7/16	381
315CMTP	8.05	2.63	0.72	8.53	4.75	8.93	6.50	2.13	18.12	3.63	6.20	29.50	35.50	5/8	.500 x .500 x 7.50	3 15/16	490

PART NO.	DIMENSIONS IN INCHES							
	M	M2	N	O2	U1	KEY	AB	AC	AD
107CMTP Q56	2.41	▲	3.32	▲	0.63	0.188	5.88	0.38	4.50
107CMTP Q140	2.41	▲	3.32	▲	0.88	0.188	5.88	0.38	4.50
115CMTP Q56	2.41	▲	3.32	▲	0.63	0.188	5.88	0.38	4.50
115CMTP Q140	2.41	▲	3.32	▲	0.88	0.188	5.88	0.38	4.50
115CMTP Q180	4.70	▲	5.61	▲	1.13	0.250	7.25	0.50	8.50
203CMTP Q56	2.92	2.38	3.82	4.99	0.63	0.188	5.88	0.38	4.50
203CMTP Q140	2.92	2.38	3.82	4.99	0.88	0.188	5.88	0.38	4.50
203CMTP Q180	4.71	▲	5.61	▲	1.13	0.250	7.25	0.50	8.50
203CMTP Q210	4.71	▲	5.61	▲	1.38	0.313	7.25	0.50	8.50
207CMTP Q56	2.86	2.31	3.76	5.19	0.63	0.188	5.88	0.38	4.50
207CMTP Q140	2.86	2.31	3.76	5.19	0.88	0.188	5.88	0.38	4.50
207CMTP Q180	4.65	4.10	5.55	5.19	1.13	0.250	7.25	0.50	8.50
207CMTP Q210	4.65	4.10	5.55	5.19	1.38	0.313	7.25	0.50	8.50
215CMTP Q56	2.80	2.23	3.83	5.74	0.63	0.188	5.88	0.38	4.50
215CMTP Q140	2.80	2.23	3.83	5.74	0.88	0.188	5.88	0.38	4.50
215CMTP Q180	4.83	4.26	5.86	5.74	1.13	0.250	7.25	0.50	8.50
215CMTP Q210	4.83	4.26	5.86	5.74	1.38	0.313	7.25	0.50	8.50
215CMTP Q250	4.83	4.26	5.86	5.74	1.63	0.375	7.25	0.50	8.50
307CMTP Q56	2.40	1.78	3.76	6.61	0.63	0.188	5.88	0.38	4.50
307CMTP Q140	2.40	1.78	3.76	6.61	0.88	0.188	5.88	0.38	4.50
307CMTP Q180	4.43	3.81	5.79	6.61	1.13	0.250	7.25	0.50	8.50
307CMTP Q210	4.43	3.81	5.79	6.61	1.38	0.313	7.25	0.50	8.50
307CMTP Q250	4.43	3.81	5.79	6.61	1.63	0.375	7.25	0.50	8.50
315CMTP Q56	2.03	1.40	3.76	7.61	0.63	0.188	5.88	0.38	4.50
315CMTP Q140	2.03	1.40	3.76	7.61	0.88	0.188	5.88	0.38	4.50
315CMTP Q180	4.06	3.43	5.79	7.61	1.13	0.250	7.25	0.50	8.50
315CMTP Q210	4.06	3.43	5.79	7.61	1.38	0.313	7.25	0.50	8.50
315CMTP Q250	4.06	3.43	5.79	7.61	1.63	0.375	7.25	0.50	8.50

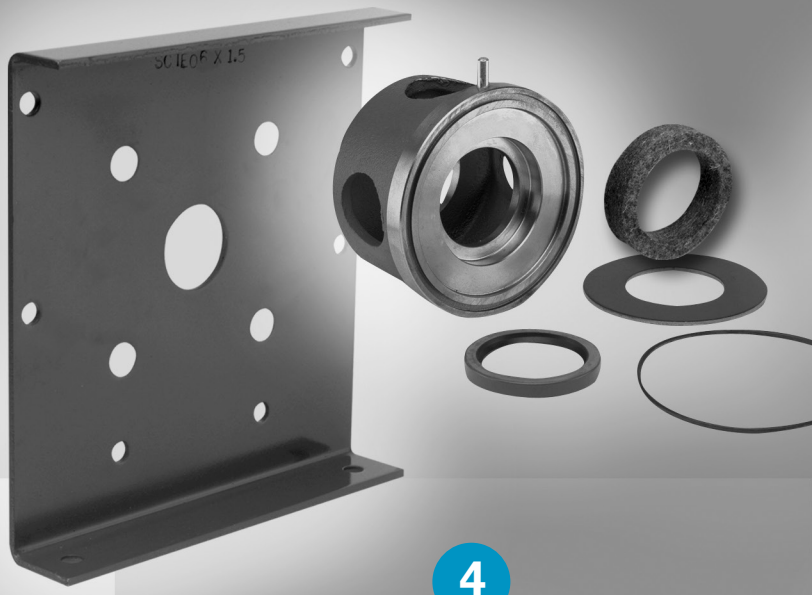
Part Number Explanation



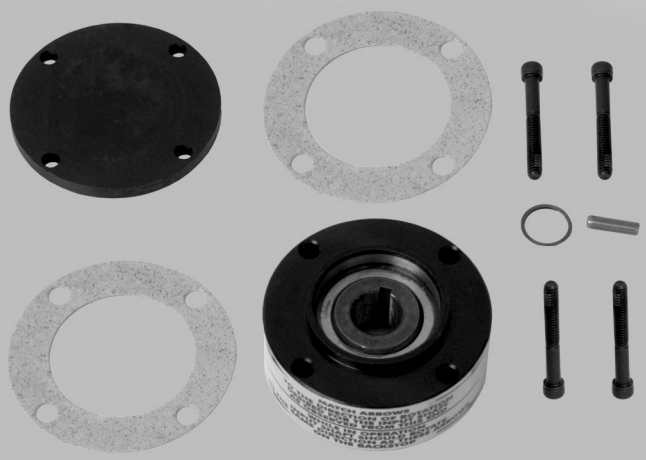
▲ Bushing system cannot be mounted on the front side with this reducer and motor combination.



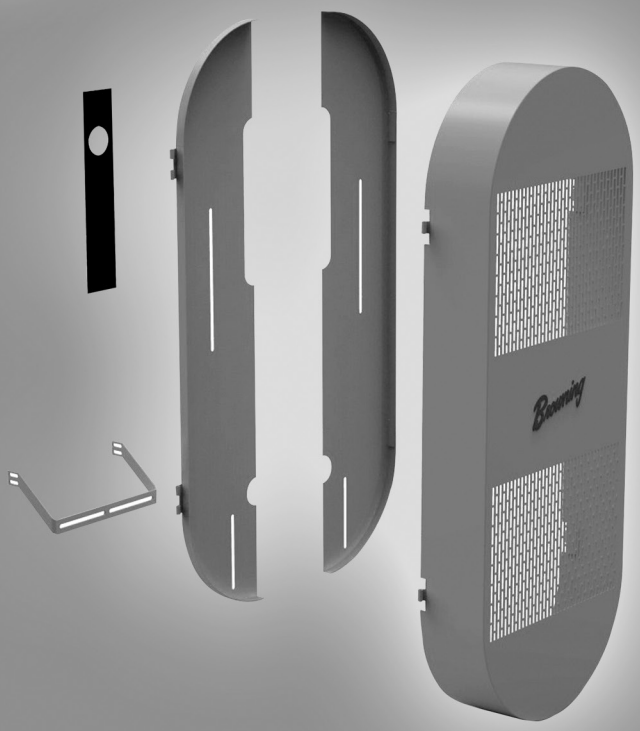
1



2

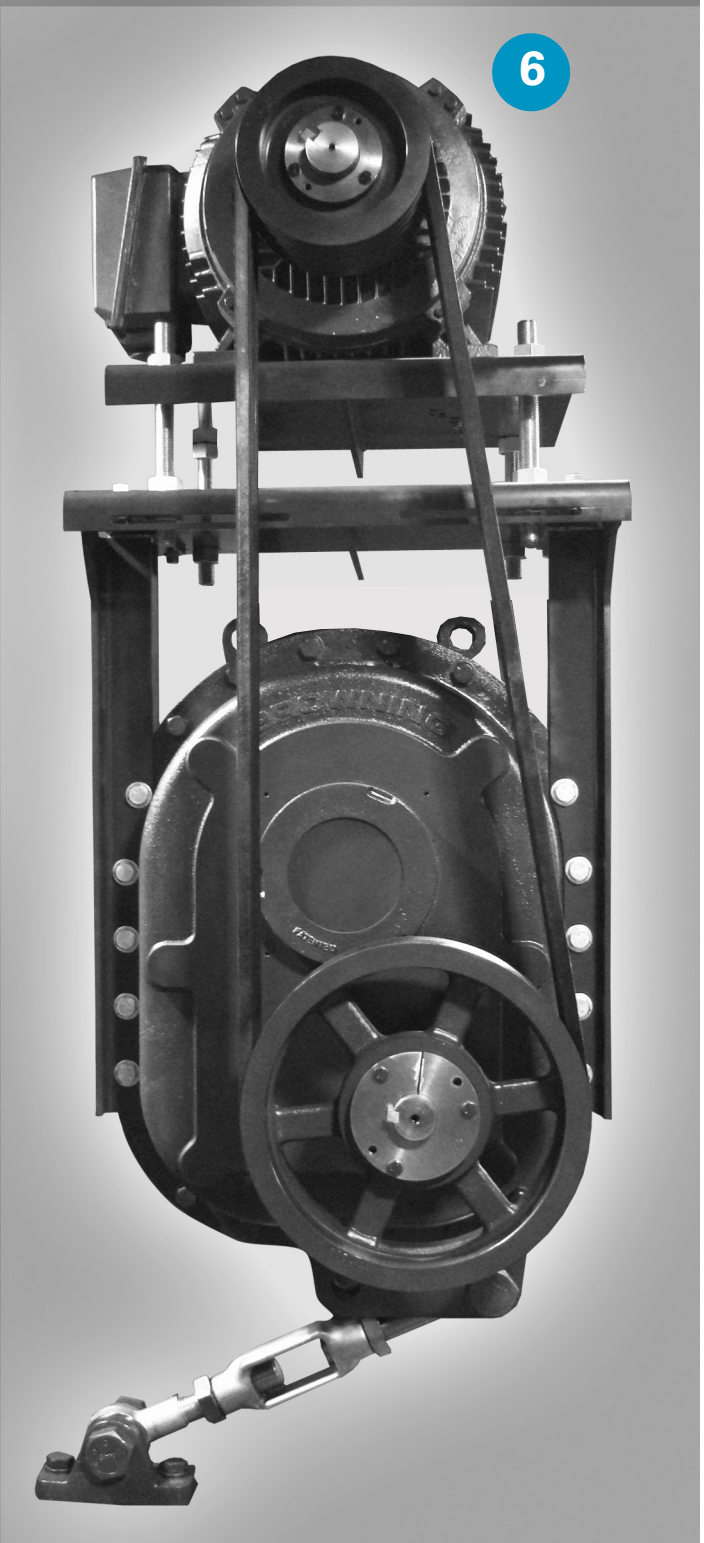


4



3

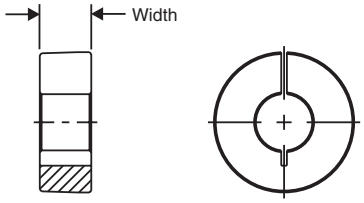
5



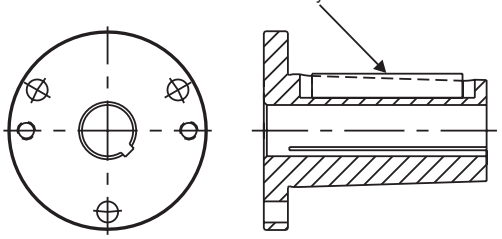
Check Out These Options for TorqTaper Plus® Reducers

1. Modular screw conveyor – standard shaft mount converts to a screw conveyor drive using stock components.
2. Backstop kits
3. Patented bushing kits
4. Belt guard kits
5. Bushing guard kits
6. Motor mount kits

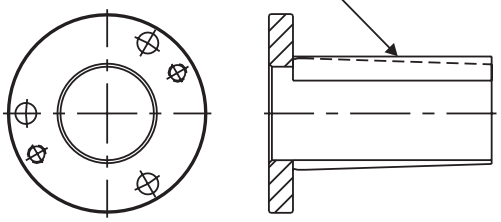
TorqTaper Plus® Bushing Kits Unit Sizes 107-115



Stabilizer Ring



Type 1



Type 2

REDUCER SIZE	BUSHING NO.	BORE SIZE	SHAFT KEYSEAT REQUIRED	TYPE	STABILIZER RING WIDTH	BOLT TORQUE		WEIGHT
						BOLT SIZE	FT.LBS.	
107SMTP	107TBP012	3/4	3/16 x 3/32 x 3 7/8	1	0.793	5/16-18 x 1 1/4	16	2.6
	107TBP014	7/8	3/16 x 3/32 x 3 7/8	1				2.5
	107TBP015	15/16	1/4 x 1/8 x 3 7/8	2				2.4
	107TBP100	1	1/4 x 1/8 x 3 7/8	2				2.3
	107TBP101	1 1/16	1/4 x 1/8 x 3 7/8	2				2.1
	107TBP102	1 1/8	1/4 x 1/8 x 3 7/8	2				2.0
	107TBP103	1 3/16	1/4 x 1/8 x 3 7/8	2				1.9
	107TBP104	1 1/4	1/4 x 1/8 x 3 7/8	2				1.8
	107TBP105	1 5/16	5/16 x 5/32 x 3 7/8	2				1.6
	107TBP106	1 3/8	5/16 x 5/32 x 3 7/8	2				1.5
	107TBP107	1 7/16	3/8 x 3/16 x 3 7/8	2				1.5
115SMTP	115TBP015	15/16	1/4 x 1/8 x 4 1/8	1	0.855	3/8-16 x 1 1/4	29	6.0
	115TBP100	1	1/4 x 1/8 x 4 1/8	1				5.9
	115TBP101	1 1/16	1/4 x 1/8 x 4 1/8	1				5.7
	115TBP102	1 1/8	1/4 x 1/8 x 4 1/8	1				5.6
	115TBP103	1 3/16	1/4 x 1/8 x 4 1/8	1				5.4
	115TBP104	1 1/4	1/4 x 1/8 x 4 1/8	1				5.3
	115TBP105	1 5/16	5/16 x 5/32 x 4 1/8	2				5.1
	115TBP106	1 3/8	5/16 x 5/32 x 4 1/8	2				4.8
	115TBP107	1 7/16	3/8 x 3/16 x 4 1/8	2				4.7
	115TBP108	1 1/2	3/8 x 3/16 x 4 1/8	2				4.4
	115TBP110	1 5/8	3/8 x 3/16 x 4 1/8	2				4.0
	115TBP111	1 11/16	3/8 x 3/16 x 4 1/8	2				3.7
	115TBP112	1 3/4	3/8 x 3/16 x 4 1/8	2				3.5
	115TBP115	1 15/16	1/2 x 1/4 x 4 1/8	2				2.7

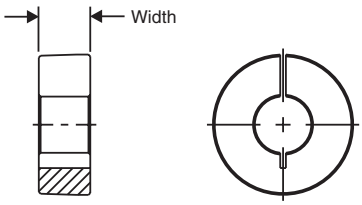
Note: When using shafts smaller than the largest bushing bore shown for a specific reducer, shaft stress based on the transmitted load must always be checked to ensure shaft can handle torque produced.

TorqTaper Plus® Bushing Kits Unit Sizes 203-215

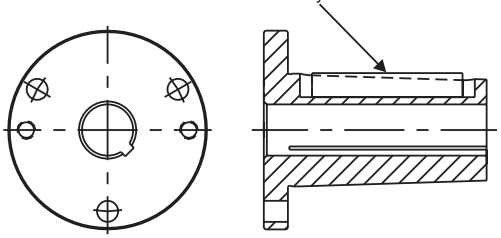
REDUCER SIZE	BUSHING NO.	BORE SIZE	SHAFT KEYSEAT REQUIRED	TYPE	STABILIZER RING WIDTH	BOLT TORQUE		WEIGHT
						BOLT SIZE	FT.LBS.	
	203TBP103	1 3/16	1/4 x 1/8 x 4 5/8	1				7.5
	203TBP104	1 1/4	1/4 x 1/8 x 4 5/8	1				7.3
	203TBP105	1 5/16	5/16 x 5/32 x 4 5/8	1				7.1
	203TBP106	1 3/8	5/16 x 5/32 x 4 5/8	1				6.9
	203TBP107	1 7/16	3/8 x 3/16 x 4 5/8	1				6.6
	203TBP108	1 1/2	3/8 x 3/16 x 4 5/8	2				6.1
203SMTP	203TBP110	1 5/8	3/8 x 3/16 x 4 5/8	2	0.980	3/8-16 x 1 1/4	29	5.9
	203TBP111	1 11/16	3/8 x 3/16 x 4 5/8	2				5.6
	203TBP112	1 3/4	3/8 x 3/16 x 4 5/8	2				5.4
	203TBP114	1 7/8	1/2 x 1/4 x 4 5/8	2				4.8
	203TBP115	1 15/16	1/2 x 1/4 x 4 5/8	2				4.4
	203TBP200	2	1/2 x 1/4 x 4 5/8	2				4.2
	203TBP203	2 3/16	1/2 x 1/4 x 4 5/8	2				3.1
	207TBP106	1 3/8	5/16 x 5/32 x 5 1/8	1				9.6
	207TBP107	1 7/16	3/8 x 3/16 x 5 1/8	1				9.3
	207TBP108	1 1/2	3/8 x 3/16 x 5 1/8	1				9.1
	207TBP110	1 5/8	3/8 x 3/16 x 5 1/8	2				8.5
	207TBP111	1 11/16	3/8 x 3/16 x 5 1/8	2				8.3
	207TBP112	1 3/4	3/8 x 3/16 x 5 1/8	2				7.9
207SMTP	207TBP114	1 7/8	1/2 x 1/4 x 5 1/8	2	1.040	3/8-16 x 1 1/4	29	7.3
	207TBP115	1 15/16	1/2 x 1/4 x 5 1/8	2				6.9
	207TBP200	2	1/2 x 1/4 x 5 1/8	2				6.6
	207TBP202	2 1/8	1/2 x 1/4 x 5 1/8	2				5.9
	207TBP203	2 3/16	1/2 x 1/4 x 5 1/8	2				5.5
	207TBP204	2 1/4	1/2 x 1/4 x 5 1/8	2				5.1
	207TBP207	2 7/16	5/8 x 5/16 x 5 1/8	2				3.9
	215TBP107	1 7/16	3/8 x 3/16 x 5 5/8	1				14.9
	215TBP108	1 1/2	3/8 x 3/16 x 5 5/8	1				14.5
	215TBP111	1 11/16	3/8 x 3/16 x 5 5/8	1				13.6
	215TBP112	1 3/4	3/8 x 3/16 x 5 5/8	1				13.2
	215TBP114	1 7/8	1/2 x 1/4 x 5 5/8	2				12.6
	215TBP115	1 15/16	1/2 x 1/4 x 5 5/8	2				12.2
215SMTP	215TBP200	2	1/2 x 1/4 x 5 5/8	2	1.140	3/8-16 x 1 3/8	29	11.9
	215TBP203	2 3/16	1/2 x 1/4 x 5 5/8	2				10.7
	215TBP204	2 1/4	1/2 x 1/4 x 5 5/8	2				9.80
	215TBP207	2 7/16	5/8 x 5/16 x 5 5/8	2				8.90
	215TBP208	2 1/2	5/8 x 5/16 x 5 5/8	2				8.50
	215TBP211	2 11/16	5/8 x 5/16 x 5 5/8	2				7.00
	215TBP215	2 15/16	3/4 x 3/8 x 5 5/8	2				5.00

Note: When using shafts smaller than the largest bushing bore shown for a specific reducer, shaft stress based on the transmitted load must always be checked to ensure shaft can handle torque produced.

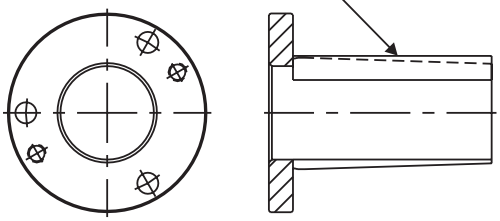
TorqTaper Plus® Bushing Kits Unit Sizes 307-315



Stabilizer Ring



Type 1



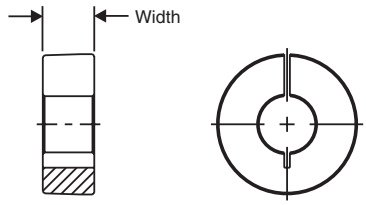
Type 2

REDUCER SIZE	BUSHING NO.	BORE SIZE	SHAFT KEYSEAT REQUIRED	TYPE	STABILIZER RING WIDTH	BOLT TORQUE		WEIGHT
						BOLT SIZE	FT.LBS.	
307SMTP	307TBP115	1 15/16	1/2 x 1/4 x 6 3/4	1	1.45	1/2-13 x 1 5/8	65	21.61
	307TBP200	2	1/2 x 1/4 x 6 3/4	1				21.13
	307TBP203	2 3/16	1/2 x 1/4 x 6 3/4	1				19.76
	307TBP204	2 1/4	1/2 x 1/4 x 6 3/4	1				19.27
	307TBP206	2 3/8	5/8 x 5/16 x 6 3/4	2				18.28
	307TBP207	2 7/16	5/8 x 5/16 x 6 3/4	2				17.68
	307TBP208	2 1/2	5/8 x 5/16 x 6 3/4	2				17.08
	307TBP211	2 11/16	5/8 x 5/16 x 6 3/4	2				15.36
	307TBP214	2 7/8	3/4 x 3/8 x 6 3/4	2				13.51
	307TBP215	2 15/16	3/4 x 3/8 x 6 3/4	2				12.89
	307TBP300	3	3/4 x 3/8 x 6 3/4	2				12.76
	307TBP306	3 3/8	7/8 x 7/16 x 6 3/4	2				7.55
	307TBP307	3 7/16	7/8 x 7/16 x 6 3/4	2				7.11

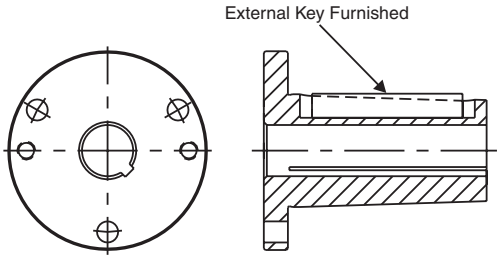
REDUCER SIZE	BUSHING NO.	BORE SIZE	SHAFT KEYSEAT REQUIRED	TYPE	STABILIZER RING WIDTH	BOLT TORQUE		WEIGHT
						BOLT SIZE	FT.LBS.	
315SMTP	315TBP207	2 7/16	5/8 x 5/16 x 7 15/16	1	1.69	1/2-13 x 1 3/4	65	30.89
	315TBP208	2 1/2	5/8 x 5/16 x 7 15/16	1				30.47
	315TBP211	2 11/16	5/8 x 5/16 x 7 15/16	1				28.09
	315TBP213	2 13/16	3/4 x 3/8 x 7 15/16	1				26.83
	315TBP214	2 7/8	3/4 x 3/8 x 7 15/16	1				26.09
	315TBP215	2 15/16	3/4 x 3/8 x 7 15/16	2				23.95
	315TBP300	3	3/4 x 3/8 x 7 15/16	2				22.90
	315TBP303	3 3/16	3/4 x 3/8 x 7 15/16	2				20.65
	315TBP307	3 7/16	7/8 x 7/16 x 7 15/16	2				17.10
	315TBP315	3 15/16	1 x 1/2 x 7 15/16	2				11.24

Note: When using shafts smaller than the largest bushing bore shown for a specific reducer, shaft stress based on the transmitted load must always be checked to ensure shaft can handle torque produced.

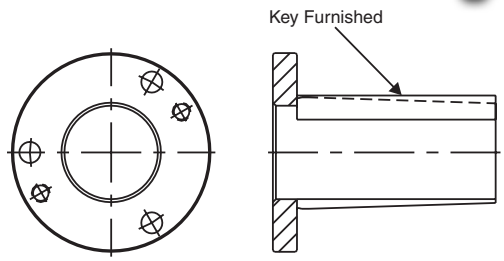
TorqTaper Plus® Bushing Kits Unit Sizes 407-800



Stabilizer Ring



Type 1



Type 2

Reducer Size	Bushing No.	Bore Size	Shaft Keyseat Required	Type	Stabilizer Ring Width	Bolt Torque		Weight
						Bolt Size	Ft. Lbs.	
407SMTP_B	407TBP215B	2 15/16	3/4 x 3/8 x 7 1/2	1	1.56	1/2-13 x 1 3/4	65	30.2
	407TBP303B	3 3/16	3/4 x 3/8 x 7 1/2	2				29.3
	407TBP307B	3 7/16	7/8 x 7/16 x 7 1/2	2				26.5
	407TBP315B	3 15/16	1 x 1/2 x 7 1/2	2				20.1
	407TBP403B	4 3/16	1 x 1/2 x 7 1/2	2				16.5
	407TBP407B	4 7/16	1 x 1/2 x 7 1/2	2				12.6

Reducer Size	Bushing No.	Bore Size	Shaft Keyseat Required	Type	Stabilizer Ring Width	Bolt Torque		Weight
						Bolt Size	Ft. Lbs.	
415SMTP_B	415TBP307B	3 7/16	7/8 x 7/16 x 9 1/4	2	1.59	5/8-11 x 2	140	53.1
	415TBP315B	3 15/16	1 x 1/2 x 9 1/4	2				44.4
	415TBP403B	4 3/16	1 x 1/2 x 9 1/4	2				40.1
	415TBP407B	4 7/16	1 x 1/2 x 9 1/4	2				35.5
	415TBP408B	4 1/2	1 x 1/2 x 9 1/4	2				34.2
	415TBP415B	4 15/16	1 1/4 x 5/8 x 9 1/4	2				25.6

Reducer Size	Bushing No.	Bore Size	Shaft Keyseat Required	Type	Stabilizer Ring Width	Bolt Torque		Weight
						Bolt Size	Ft. Lbs.	
507SMTP_B	507TBP315B	3 15/16	1 x 1/2 x 10 3/8	2	1.56	3/4-10 x 2 1/4	250	65.0
	507TBP403B	4 3/16	1 x 1/2 x 10 3/8	2				59.0
	507TBP407B	4 7/16	1 x 1/2 x 10 3/8	2				54.0
	507TBP415B	4 15/16	1 1/4 x 5/8 x 10 3/8	2				45.0
	507TBP507B	5 7/16	1 1/4 x 5/8 x 10 3/8	2				37.0

Reducer Size	Bushing No.	Bore Size	Shaft Keyseat Required	Type	Stabilizer Ring Width	Bolt Torque		Weight
						Bolt Size	Ft. Lbs.	
608SMTP_B	608TBP507B	5 7/16	1 1/4 x 5/8 x 11	2	1.71	3/4-10 x 2 3/4	250	80.0
	608TBP515B	5 15/16	1 1/2 x 3/4 x 11	2				72.0
	608TBP600B	6	1 1/2 x 3/4 x 11	2				70.0
	608TBP607B	6 7/16	1 1/2 x 3/4 x 11	2				64.0
	608TBP608B	6 1/2	1 1/2 x 3/4 x 11	2				63.0

Reducer Size	Bushing No.	Bore Size	Shaft Keyseat Required	Type	Stabilizer Ring Width	Bolt Torque		Weight
						Bolt Size	Ft.Lbs.	
800SMTP	800TBP515	5 15/16	1 1/2 x 3/4 x 11	2	1.88	7/8-9 x 2 3/4	400	168.0
	800TBP600	6	1 1/2 x 3/4 x 11	2				165.0
	800TBP608	6 1/2	1 1/2 x 3/4 x 11	2				147.0
	800TBP700	7	1 3/4 x 7/8 x 11	2				128.0
	800TBP800	8	2 x 1 x 11	2				84.0

Note: When using shafts smaller than the largest bushing bore shown for a specific reducer, shaft stress based on the transmitted load must always be checked to ensure shaft can handle torque produced.

Finished Bore Bushings Unit Sizes 107-207

Browning® shaft mount reducers may be mounted on shafts smaller than the output bore of the reducer by using the wide selection of bushings offered. These stock bushing kits contain one keyed bushing, one plain bushing, keys and setscrews necessary to fit the smaller shaft.

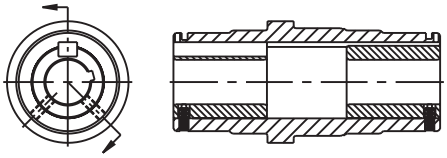


Figure 1 - Thick wall bushing internal key

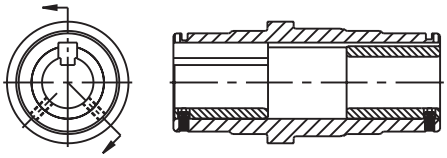


Figure 2 - Thin wall bushing offset key

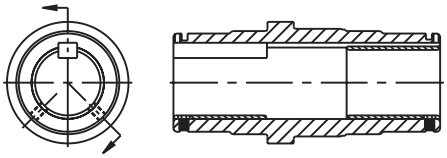


Figure 3 - Thin wall bushing rectangular or square key

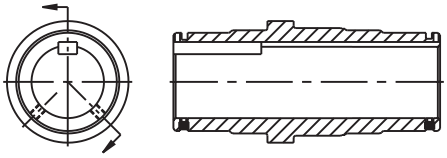


Figure 4 - No bushing

Reducer Size	Shaft Dia.	Shaft Keyseat	Bushing Kit No	Fig.	Wt. Lbs.
107SMFP	3/4"	3/16 x 3/32 x 2"	107BU012	1	1.4
	7/8	3/16 x 3/32 x 2	107BU014	1	1.2
	15/16	1/4 x 1/8 x 2	107BU015	2	1.1
	1	1/4 x 1/8 x 2	107BU100	2	1.0
	1 1/16	1/4 x 1/8 x 2	107BU101	2	.9
	1 1/8	1/4 x 1/8 x 2	107BU102	2	.8
	1 3/16	1/4 x 1/8 x 2	107BU103	2	.6
	1 1/4	1/4 x 1/8 x 2	107BU104	2	.5
	1 5/16	5/16 x 5/32 x 2	107BU105	2	.4
	1 7/16	3/8 x 3/16 x 2	NONE	4	-
115SMFP	15/16	1/4 x 1/8 x 2 1/2	115BU015	1	3.2
	1	1/4 x 1/8 x 2 1/2	115BU100	1	3.1
	1 1/16	1/4 x 1/8 x 2 1/2	115BU101	1	3.0
	1 1/8	1/4 x 1/8 x 2 1/2	115BU102	1	2.8
	1 3/16	1/4 x 1/8 x 2 1/2	115BU103	1	2.7
	1 1/4	1/4 x 1/8 x 2 1/2	115BU104	1	2.5
	1 5/16	5/16 x 5/32 x 2 1/2	115BU105	2	2.3
	1 3/8	5/16 x 5/32 x 2 1/2	115BU106	2	2.1
	1 7/16	3/8 x 3/16 x 2 1/2	115BU107	2	1.9
	1 1/2	3/8 x 3/16 x 2 1/2	115BU108	2	1.7
	1 5/8	3/8 x 3/16 x 2 1/2	115BU110	2	1.3
	1 11/16	3/8 x 3/16 x 2 1/2	115BU111	2	1.1
	1 3/4	3/8 x 3/16 x 2 1/2	115BU112	2	.8
	1 15/16	1/2 x 1/4 x 2 1/2	NONE	4	-
203SMFP	1 3/16	1/4 x 1/8 x 2 1/2	203BU103	1	3.8
	1 1/4	1/4 x 1/8 x 2 1/2	203BU104	1	3.6
	1 5/16	5/16 x 5/32 x 2 1/2	203BU105	1	3.5
	1 3/8	5/16 x 5/32 x 2 1/2	203BU106	1	3.4
	1 7/16	3/8 x 3/16 x 2 1/2	203BU107	1	3.1
	1 1/2	3/8 x 3/16 x 2 1/2	203BU108	2	2.9
	1 5/8	3/8 x 3/16 x 2 1/2	203BU110	2	2.4
	1 11/16	3/8 x 3/16 x 2 1/2	203BU111	2	2.2
	1 3/4	3/8 x 3/16 x 2 1/2	203BU112	2	2.0
	1 7/8	1/2 x 1/4 x 2 1/2	203BU114	3	1.5
	1 15/16	1/2 x 1/4 x 2 1/2	203BU115	3	1.2
	2	1/2 x 1/4 x 2 1/2	203BU200	3	.9
	2 3/16	1/2 x 1/4 x 2 1/2	NONE	4	-
207SMFP	1 3/8	5/16 x 5/32 x 3 1/2	207BU106	1	6.4
	1 7/16	3/8 x 3/16 x 3 1/2	207BU107	1	6.1
	1 1/2	3/8 x 3/16 x 3 1/2	207BU108	1	5.8
	1 5/8	3/8 x 3/16 x 3 1/2	207BU110	2	5.2
	1 11/16	3/8 x 3/16 x 3 1/2	207BU111	2	4.9
	1 3/4	3/8 x 3/16 x 3 1/2	207BU112	2	4.5
	1 7/8	1/2 x 1/4 x 3 1/2	207BU114	2	3.8
	1 15/16	1/2 x 1/4 x 3 1/2	207BU115	2	3.5
	2	1/2 x 1/4 x 3 1/2	207BU200	2	3.1
	2 1/8	1/2 x 1/4 x 3 1/2	207BU202	2	2.3
	2 3/16	1/2 x 1/4 x 3 1/2	207BU203	2	1.8
	2 1/4	1/2 x 1/4 x 3 1/2	207BU204	2	1.4
	2 7/16	5/8 x 5/16 x 3 1/2	NONE	4	-

Note: When using bushings to adapt a SMFP shaft mount reducer to a smaller shaft, the shaft stress based on the transmitted load must always be checked.

Finished Bore Bushings Unit Sizes 215-315

Browning® shaft mount reducers may be mounted on shafts smaller than the output bore of the reducer by using the wide selection of bushings offered. These stock bushing kits contain one keyed bushing, one plain bushing, keys and setscrews necessary to fit the smaller shaft.

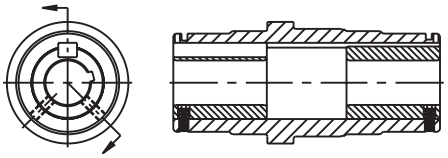


Figure 1 - Thick wall bushing internal key

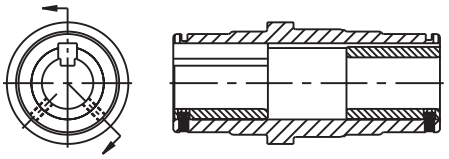


Figure 2 - Thin wall bushing offset key

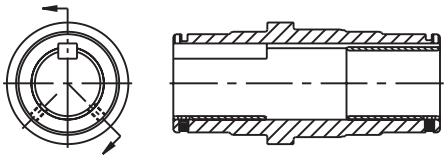


Figure 3 - Thin wall bushing rectangular or square key

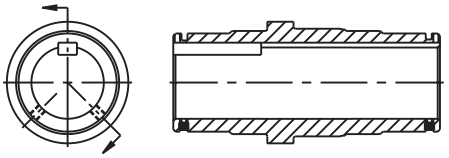


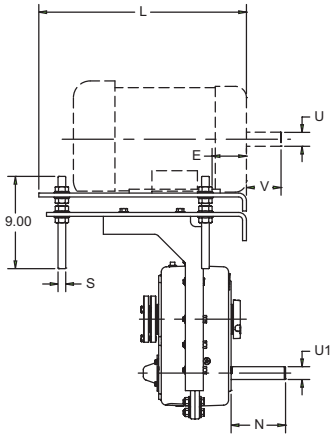
Figure 4 - No bushing

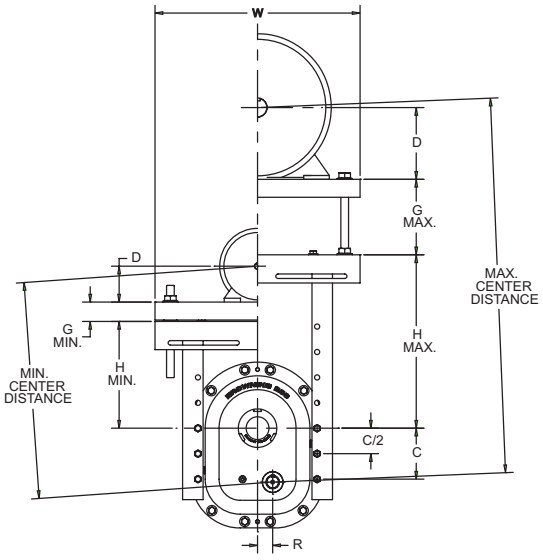
Reducer Size	Shaft Dia.	Shaft Keyseat	**Bushing Kit No.**	Fig.	Wt. Lbs.
215SMFP	1 7/16	3/8 x 3/16 x 4	**215BU107**	1	11.7
	1 1/2	3/8 x 3/16 x 4	**215BU108**	1	11.4
	1 11/16	3/8 x 3/16 x 4	**215BU111**	1	10.3
	1 3/4	3/8 x 3/16 x 4	**215BU112**	1	9.9
	1 7/8	1/2 x 1/4 x 4	**215BU114**	1	9.1
	1 15/16	1/2 x 1/4 x 4	**215BU115**	2	8.7
	2	1/2 x 1/4 x 4	**215BU200**	2	8.3
	2 3/16	1/2 x 1/4 x 4	**215BU203**	2	6.9
	2 1/4	1/2 x 1/4 x 4	**215BU204**	2	6.4
	2 7/16	5/8 x 5/16 x 4	**215BU207**	2	4.8
	2 1/2	5/8 x 5/16 x 4	**215BU208**	2	4.3
	2 11/16	5/8 x 5/16 x 4	**215BU211**	2	2.5
	2 15/16	3/4 x 3/8 x 4	**None**	4	-
307SMFP	1 15/16	1/2 x 1/4 x 4 1/2	**307BU115**	1	16.2
	2	1/2 x 1/4 x 4 1/2	**307BU200**	1	15.7
	2 3/16	1/2 x 1/4 x 4 1/2	**307BU203**	1	14.1
	2 1/4	1/2 x 1/4 x 4 1/2	**307BU204**	1	13.6
	2 7/16	5/8 x 5/16 x 4 1/2	**307BU207**	2	11.8
	2 1/2	5/8 x 5/16 x 4 1/2	**307BU208**	2	11.2
	2 11/16	5/8 x 5/16 x 4 1/2	**307BU211**	2	9.3
	2 7/8	3/4 x 3/8 x 4 1/2	**307BU214**	2	7.1
	2 15/16	3/4 x 3/8 x 4 1/2	**307BU215**	2	6.4
	3 7/16	7/8 x 7/16 x 4 1/2	**None**	4	-
315SMFP	2 7/16	5/8 x 5/16 x 4 1/2	**315BU207**	1	19.2
	2 1/2	5/8 x 5/16 x 4 1/2	**315BU208**	1	18.6
	2 11/16	5/8 x 5/16 x 4 1/2	**315BU211**	2	16.6
	2 13/16	3/4 x 3/8 x 4 1/2	**315BU213**	2	15.2
	2 7/8	3/4 x 3/8 x 4 1/2	**315BU214**	2	14.5
	2 15/16	3/4 x 3/8 x 4 1/2	**315BU215**	2	13.8
	3	3/4 x 3/8 x 4 1/2	**315BU300**	2	13.1
	3 3/16	3/4 x 3/8 x 4 1/2	**315BU303**	2	10.7
	3 7/16	7/8 x 7/16 x 4 1/2	**315BU307**	2	7.4
	3 15/16	1 x 1/2 x 4 1/2	**None**	4	-

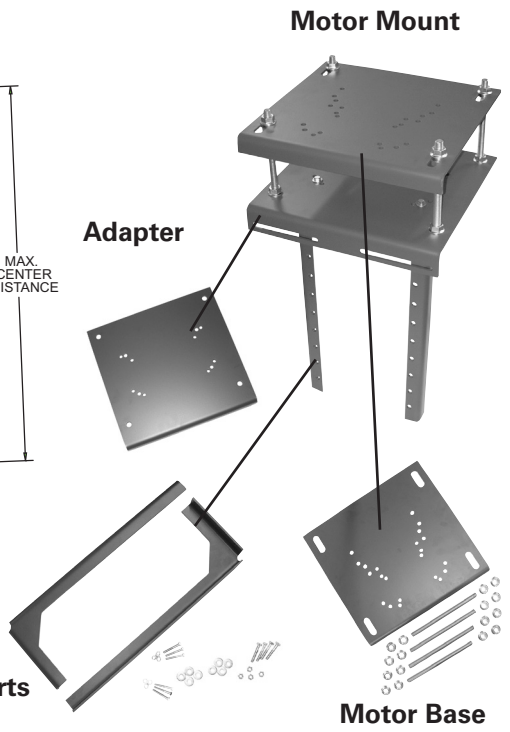
Note: SMFP units and bushings are made-to-order. Contact Regal for delivery.

Note: When using bushings to adapt a SMFP shaft mount reducer to a smaller shaft, the shaft stress based on the transmitted load must always be checked.

Top Mount Motor Mounts







Motor Frame Size *	Dimensions in Inches				
	D	E	U		V
			Dia.	Keyseat	
56	3.50	2.75	0.63	3/16 x 3/32	1.88
143T, 145T	3.50	2.25	0.88	3/16 x 3/32	2.25
182T, 184T	4.50	2.75	1.13	1/4 x 1/8	2.75
213T, 215T	5.25	3.50	1.38	5/16 x 5/32	3.38
254T, 256T	6.25	4.25	1.63	3/8 x 3/16	4.00
284T, 286T	7.00	4.75	1.88	1/2 x 1/4	5.63
324T, 326T	8.00	5.25	2.13	1/2 x 1/4	5.25
364T, 365T	9.00	5.88	2.38	5/8 x 5/16	5.88
404T, 405T	11.00	6.62	2.88	3/4 x 3/8	7.25
444T, 447T	11.00	7.50	3.38	7/8 X 7/16	8.50

*To determine usable input shaft length, see pages A-24 - A-26.

Part Number Explanation

Motor Mount components may be ordered individually or as a kit. To order the complete kit use the following format:

Top Mount Motor Mounts

Basic Reducer Size	Motor Mount Support	Motor Mount Adapter	Motor Base	Motor Mount Assy. Wt. Lbs.	DIMENSIONS											
					C	G		H		L	N*	R	S	W	Input Shaft U1	
						Min.	Max.	Min.	Max.						Dia.	Keyseat
107 HIGH	MMS107H	MMA107-115	MB107-115	51.0	3.75	1.64	7.61	8.78	18.15	15.50	4.08	1.18	0.63	16.50	0.75	3/16 x 3/32
107 LOW	MMS107L			48.0				5.75	9.50							
115 HIGH	MMS115H			51.0	4.32	1.64	7.61	6.94	17.74	15.50	4.24	1.35	0.63	16.50	1.12	1/4x1/8
115 LOW	MMS115L			48.0				7.77	9.93							
203 HIGH	MMS203H	MMA203	MB203-207	112.8	4.96	1.89	7.36	7.00	16.91	20.25	5.31	1.48	0.75	20.00	1.25	1/4 x 1/8
203 LOW	MMS203L			107.8				7.94	10.41							
207 HIGH	MMS207H	MMA207		118.6	5.94	1.89	7.36	8.06	19.94	20.25	5.12	1.63	0.75	20.00	1.44	3/8x3/16
207 LOW	MMS207L			112.6				10.44	10.44							
215 HIGH	MMS215H	MMA215	MB215-307	134.4	6.88	1.89	7.36	11.43	21.75	20.25	5.87	2.13	0.75	24.00	1.87	1/2 x 1/4
215 LOW	MMS215L			126.4				10.50	10.50							
307 HIGH	MMS307H	MMA307	MB215-307	150.0	7.95	1.89	7.36	10.28	26.18	20.00	7.45	2.25	0.75	24.00	2.00	1/2 x 1/4
307 LOW	MMS307L			141.0					14.25							
315 HIGH	MMS315H	MMA315	MB315	177.0	8.29	1.89	7.36	10.50	27.09	23.50	8.32	2.63	0.75	24.00	2.13	1/2x1/4
315 LOW	MMS315L			168.0					14.65							
407 HIGH	MMS407H	MMA407-415	MB407-415	326.0	9.25	3.09	12.98	14.59	19.21	27.00	6.70	3.13	1.50	32.50	2.12	1/2 x 1/4
415 HIGH	MMS415H			333.0	10.38	3.09	12.98	13.34	18.53	27.00	9.23	3.63	1.50	32.50	2.37	5/8 x 5/16
507 HIGH	MMS507H	MMA507-608	MB507-608	392.0	11.78	3.09	12.98	15.08	20.97	30.00	9.37	4.19	1.50	37.00	2.62	5/8 x 5/16
608 HIGH	MMS608H			403.0	9.06	3.09	12.98	16.26	20.79	30.00	9.51	4.25	1.50	37.00	2.69	5/8 x 5/16
800 HIGH	MMS800H	MMA800	MB800	604.0	-	3.27	12.87	27.26	27.26	31.00	12.75	4.88	1.50	39.50	2.94	3/4 x 3/8

Basic Reducer Size	Motor Mount Support	Motor Mount Adapter	Motor Base	Minimum and Maximum Center Distances (in inches) for Motor Frame Sizes																	
				56		143T, 145T		182T, 184T		213T, 215T		254T,256T		284T, 286T		324T, 326T		364T, 365T		404T, 405T		444T, 447T	
				Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
107 HIGH	MMS107H	MMA107-115	MB107-115	17.73	33.05	17.73	33.05	18.72	34.05	19.47	34.80	-	-	-	-	-	-	-	-	-	-	-	-
107 LOW	MMS107L			14.71	24.41	14.71	24.41	15.71	25.41	16.45	26.16												
115 HIGH	MMS115H			16.50	33.24	16.50	33.24	17.50	34.24	18.25	34.99	-	-	-	-	-	-	-	-	-	-	-	-
115 LOW	MMS115L			17.32	25.43	17.32	25.43	18.32	26.43	19.06	27.18												
203 HIGH	MMS203H	MMA203	MB203-207	17.70	33.06	17.70	33.06	18.70	34.06	19.44	34.81	20.44	35.81	21.19	36.56	-	-	-	-	-	-	-	-
203 LOW	MMS203L			18.64	26.57	18.64	26.57	19.63	27.57	20.38	28.32	21.38	29.31	22.13	30.06								
207 HIGH	MMS207H	MMA207		19.59	36.91	19.59	36.91	20.59	37.91	21.34	38.66	22.34	39.66	23.08	40.41	-	-	-	-	-	-	-	-
207 LOW	MMS207L			21.97	27.42	21.97	27.42	22.96	28.42	23.71	29.17	24.71	30.17	25.46	30.92								
215 HIGH	MMS215H	MMA215	MB215-307	-	-	23.92	39.67	24.92	40.67	25.67	41.42	26.66	42.42	27.41	43.17	28.41	44.17	29.41	45.17	-	-	-	-
215 LOW	MMS215L					23.00	28.45	23.99	29.44	24.74	30.19	25.74	31.19	26.48	31.94	27.48	32.94	28.48	33.94				
307 HIGH	MMS307H	MMA307	MB215-307	-	-	-	-	24.56	45.88	25.30	46.63	26.30	47.63	27.05	48.38	28.05	49.38	29.05	50.38	-	-	-	-
307 LOW	MMS307L								33.97		34.72		35.72		36.47		37.47		38.47				
315 HIGH	MMS315H	MMA315	MB315	-	-	-	-	25.57	47.55	26.31	48.30	27.31	49.30	28.05	50.05	29.05	51.05	30.05	52.05	-	-	-	-
315 LOW	MMS315L								35.14		35.89		36.89		37.64		38.64		39.64				
407 HIGH	MMS407H	MMA407-415	MB407-415	-	-	-	-	-	-	32.56	47.04	33.55	48.03	34.30	48.78	35.29	49.78	36.29	50.78	37.29	51.78	38.28	52.77
415 HIGH	MMS415H			-	-	-	-	-	-	32.27	47.29	33.26	48.29	34.00	49.04	35.00	50.03	36.00	51.03	37.00	52.03	38.00	53.03
507 HIGH	MMS507H	MMA507-608	MB507-608	-	-	-	-	-	-	-	-	36.43	52.15	37.18	52.90	38.17	53.90	39.17	54.89	40.16	55.89	41.16	56.89
608 HIGH	MMS608H			-	-	-	-	-	-	-	-	39.43	53.80	40.17	54.54	41.17	55.54	42.16	56.54	43.16	57.53	44.15	58.53
800 HIGH	MMS800H	MMA800	MB800	-	-	-	-	-	-	-	-	-	-	-	-	54.00	63.55	54.98	64.55	55.98	65.55	56.97	66.54

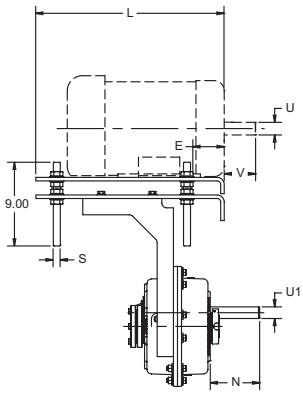
Screw Conveyor Trough Clearance Table

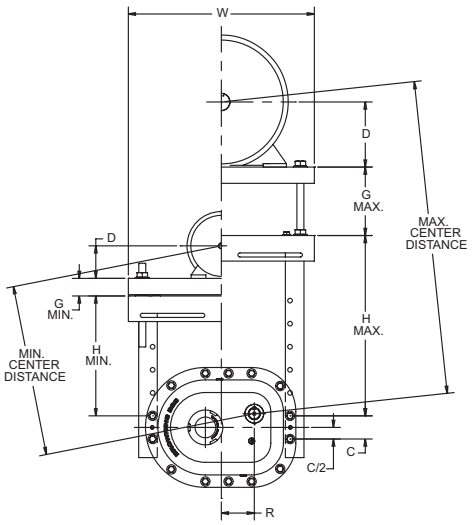
When a motor mount is used on screw conveyor drives, the amount shown in the table below must be added to the minimum center distance shown above. Maximum center distance is unchanged.

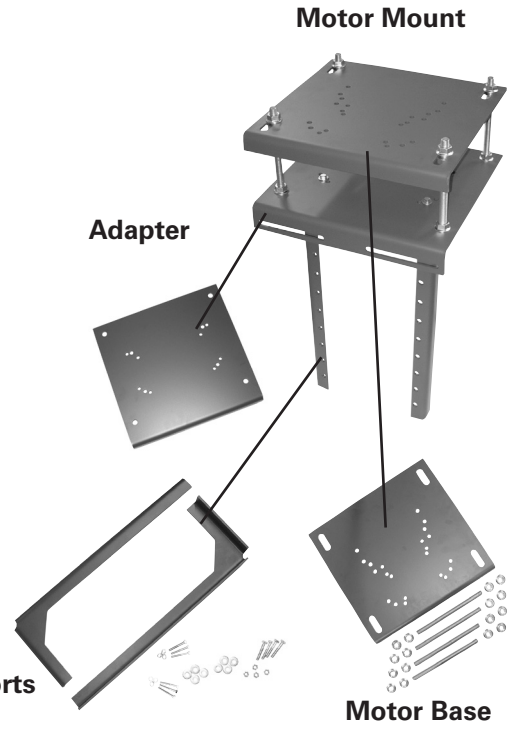
Basic Reducer Size	Conveyor Diameter								
	6	9	10	12	14	16	18	20	24
107 HIGH	0	0	1.88	3.75	3.75	3.75	5.63	7.50	N/A
107 LOW	1.88	3.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A
115 HIGH	0	2.16	2.16	4.32	4.32	6.68	8.64	8.64	N/A
115 LOW	0	2.16	2.16	2.16	N/A	N/A	N/A	N/A	N/A
203 HIGH	0	2.48	2.48	4.96	4.96	7.44	9.92	9.92	N/A
203 LOW	0	2.48	2.48	2.48	N/A	N/A	N/A	N/A	N/A
207 HIGH	N/A	2.97	2.97	2.97	5.94	5.94	8.91	8.91	N/A
207 LOW	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A
215 HIGH	N/A	0	0	0	3.44	3.44	3.44	6.88	10.32
215 LOW	N/A	0	0	0	N/A	N/A	N/A	N/A	N/A
307 HIGH	N/A	N/A	N/A	0	3.98	3.98	3.98	7.95	11.93
307 LOW	N/A	N/A	N/A	0	3.98	3.98	3.98	N/A	N/A
315 HIGH	N/A	N/A	N/A	0	4.15	4.15	4.15	8.30	12.45
315 LOW	N/A	N/A	N/A	0	4.15	4.15	4.15	N/A	N/A
407 HIGH	N/A	N/A	N/A	0	4.69	4.69	4.69	4.69	*

* Refer to Application Engineering (1 800 626 2093).

Side Mount Motor Mounts







Motor Frame Size	Dimensions in Inches				
	D	E	U		V
			Dia.	Keyseat	
56	3.50	2.75	0.63	3/16 x 3/32	1.88
143T, 145T	3.50	2.25	0.88	3/16 x 3/32	2.25
182T, 184T	4.50	2.75	1.13	1/4 x 1/8	2.75
213T, 215T	5.25	3.50	1.38	5/16 x 5/32	3.38
254T, 256T	6.25	4.25	1.63	3/8 x 3/16	4.00
284T, 286T	7.00	4.75	1.88	1/2 x 1/4	5.63
324T, 326T	8.00	5.25	2.13	1/2 x 1/4	5.25
364T, 365T	9.00	5.88	2.38	5/8 x 5/16	5.88

Part Number Explanation

Motor Mount components may be ordered individually or as a kit. To order the complete kit use the following format:

Side Mount Motor Mounts

Basic Reducer Size	Motor Mount Support	Motor Mount Adapter	Motor Base	Motor Mount Assy. Wt. Lbs.	Dimensions										
					C	G		H		L	N*	R	S	W	Input Shaft U1	
						Min.	Max.	Min.	Max.						Dia.	Keyseat
107 HIGH	MMS107H	MMA107-115	MB107-115	51.0	1.88	1.64	7.61	8.78	18.15	15.50	4.08	2.56	0.63	16.50	0.75	3/16 x 3/32
107 LOW	MMS107L			48.0				5.75	9.50							
115 HIGH	MMS115H	MMA203		51.0	2.16	1.64	7.61	6.94	17.74	15.50	4.24	2.74	0.63	16.50	1.12	1/4 x 1/8
115 LOW	MMS115L			48.0				7.77	9.93							
203 HIGH	MMS203H	MMA207	MB203-207	112.8	2.48	1.89	7.36	7.00	16.91	20.25	5.31	3.54	0.75	20.00	1.25	1/4 x 1/8
203 LOW	MMS203L			107.8				7.94	10.41							
207 HIGH	MMS207H	MMA215	MB215-307	118.6	2.97	1.89	7.36	8.06	19.94	20.25	5.12	4.00	0.75	20.00	1.44	3/8 x 3/16
207 LOW	MMS207L			112.6				10.44	10.44							
215 HIGH	MMS215H	MMA307	MB215-307	134.4	3.44	1.89	7.36	11.43	21.75	20.25	5.87	4.59	0.75	24.00	1.87	1/2 x 1/4
215 LOW	MMS215L			126.4				10.50	10.50							
307 HIGH	MMS307H	MMA315	MB315	150.0	3.97	1.89	7.36	10.28	30.15	23.00	7.45	5.01	0.75	24.00	2.00	1/2 x 1/4
307 LOW	MMS307L			141.0					18.23							
315 HIGH	MMS315H	MMA315-S	MB315	177.0	4.16	1.89	7.36	10.50	31.22	23.50	8.32	5.26	0.75	24.00	2.13	1/2 x 1/4
315 LOW	MMS315L			168.0					18.80							

Basic Reducer Size	Motor Mount Support	Motor Mount Adapter	Motor Base	Minimum and Maximum Center Distances (in inches) for Motor Frame Sizes													
				56		143T, 145T		182T, 184T		213T, 215T		254T,256T		284T, 286T		324T, 326T		364T, 365T	
				Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
107 HIGH	MMS107H	MMA107-115	MB107-115	13.91	31.00	13.91	31.00	14.89	32.00	15.63	32.74	-	-	-	-	-	-	-	-
107 LOW	MMS107L			10.95	22.39	10.95	22.39	11.92	22.38	12.66	24.13								
115 HIGH	MMS115H	MMA203		12.25	31.00	12.25	31.00	13.23	32.00	13.96	32.74	-	-	-	-	-	-	-	-
115 LOW	MMS115L			10.96	23.22	10.96	23.22	11.93	24.22	12.66	24.96								
203 HIGH	MMS203H	MMA207	MB203-207	12.66	30.23	12.66	30.23	13.62	31.22	14.34	31.97	15.31	32.96	16.05	33.71	-	-	-	-
203 LOW	MMS203L			13.56	23.76	13.26	23.78	14.53	24.77	15.26	25.52	16.23	26.51	16.96	27.25				
207 HIGH	MMS207H	MMA215	MB215-307	13.89	33.86	13.89	33.86	14.85	34.85	15.57	35.60	16.54	36.59	17.27	37.34	-	-	-	-
207 LOW	MMS207L			13.33	24.45	13.33	24.45	14.28	25.44	15.00	26.18	15.97	27.17	16.70	27.91				
215 HIGH	MMS215H	MMA307	MB215-307	-	-	13.76	35.94	14.71	36.93	15.42	37.68	16.38	38.67	17.10	39.41	18.07	40.41	19.04	41.41
215 LOW	MMS215L					12.89	24.82	13.83	25.81	14.54	25.54	15.49	27.53	16.21	28.27	19.17	29.26	20.13	30.25
307 HIGH	MMS307H	MMA315	MB315	-	-	-	-	17.15	42.05	17.87	42.79	18.83	43.79	19.56	44.53	20.53	45.53	21.50	46.52
307 LOW	MMS307L								30.24		30.98		31.97		32.71	20.53	33.70	21.50	34.69
315 HIGH	MMS315H	MMA315-S	MB315	-	-	-	-	17.16	42.86	17.88	43.86	18.84	44.60	19.56	45.34	20.52	46.33	21.49	47.33
315 LOW	MMS315L								30.56		31.29		32.28		33.02	20.52	34.01	34.01	35.00

Screw Conveyor Trough Clearance Table

When a motor mount is used on screw conveyor drives, the amount shown in the table below must be added to the minimum center distance shown on page A-71. Maximum center distance is unchanged.

Basic Reducer Size	Conveyor Diameter								
	6	9	10	12	14	16	18	20	24
107 HIGH	0	0	0	0	1.88	3.75	5.63	7.50	N/A
107 LOW	0	1.88	1.88	3.75	5.63	N/A	N/A	N/A	N/A
115 HIGH	0	2.16	2.16	216	4.32	6.48	6.48	8.64	N/A
115 LOW	0	2.16	2.16	4.32	N/A	6.48	N/A	N/A	N/A
203 HIGH	0	2.48	2.48	2.48	4.96	4.96	7.44	9.92	N/A
203 LOW	0	0	0	2.48	2.48	4.96	N/A	N/A	N/A
207 HIGH	N/A	0	0	2.97	2.97	5.94	5.94	8.91	11.88
207 LOW	N/A	0	0	2.97	2.97	5.94	5.94	N/A	N/A
215 HIGH	N/A	0	0	3.44	3.44	6.88	6.88	6.88	10.32
215 LOW	N/A	0	3.44	3.44	3.44	6.88	6.88	N/A	N/A
307 HIGH	N/A	N/A	N/A	0	0	3.98	3.98	3.98	7.95
307 LOW	N/A	N/A	N/A	0	0	3.98	3.98	3.98	7.95
315 HIGH	N/A	N/A	N/A	0	0	4.15	4.15	4.15	8.30
315 LOW	N/A	N/A	N/A	0	0	4.15	4.15	4.15	8.30

CAUTION
TIGHTEN SETSCREW OVER KEYWAY BEFORE OPERATING
FOR PITCH DIAMETER ADJUSTMENT
Screws Only, Do Not Remove
Retighten Screws
Loosen Outer Locking Ring
Turn Outer Locking Ring
5VX800
5VX850

Browning® Belt Drives

For over 120 years, innovations in quality Browning belt drives have been used for demanding applications and varied equipment. The Browning belt drive product portfolio is among the most extensive in the world.

Key Product Offerings:

Complete Line of FHP sheaves

Complete Line of Multiple Q-D® and Browning SplitTaper® Designs

Browning Split Taper Bushings

- Better concentricity for easy assembly
- Key-to-key drive
- 3/4" ft. self-locking taper
- Available in inch and metric bores

Browning Patented B5V® Sheaves (*Not for use with Banded Belts)*

- Interchanges with popular Q-D and Browning SplitTaper sheave designs
- Patented design provides the power of 5V belts in the economy of a B section sheave.
- Serves 90% of all applications from 10-125 HP
- Increases HP by 40% (or reduces cost by 40%)

Browning Brand V-belts

- Unique design enhances performance, provides increased horsepower capacity in short center drives
- Single fabric design reduces vibration (wrapped belt)
- Ground form edges reduce center distance variation and drive vibration (raw edge)

Browning VP Vortex® Variable Pitch Sheaves

- Increased wall thickness and hub design for increased horsepower capacity and shorter center drives
- Tighter tolerances for reduced vibration
- External rib design provides extra cooling for longer belt life

Browning MVP® Variable Pitch Sheaves

- Economical and infinite mechanical speed adjustment
- Offered up to 10 grooves
- Serves applications up to 750 hp
- **An excellent solution for dual drive applications**

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 107SMTP05

107SMTP05 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 96	2VP50	-	2B5V160	B	BX	2
97 - 108	2VP56				AX	
109 - 124	2VP50		2AK124H	H		
125 - 140			2B5V110	B		
141 - 160	2VP42		2B5V80		BX	
161 - 181	2VP60		2BK110H	H		
182 - 196	2VP65					
197 - 206	2VP60		2B5V90	B	5VX	
207 - 220	2VP65				AX	
221 - 227					5VX	
228 - 235	2VP71				AX	
236 - 246					BX	
247 - 252					5VX	
253 - 273	2VP65		2BK80	-	BX	
274 - 285	2VP71					
286 - 296	2VP62		2B5V52	B	5VX	
297 - 303	2VP65		2B5V62		BX	
304 - 307	2VP62				5VX	
308 - 309	2VP65					
310 - 324					BX	
325 - 350	2VP71					
351 - 353	2VP60		2B5V52			
354 - 383	2VP65					
384 - 400	2VP71					

107SMTP05 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 93	2AK39	-	2AK144H	H	AX	2
94 - 97	2AK41					
98 - 104	2BK36		2B5V124	B		
105 - 110	2TB40	P1				
111 - 115	2B5V42					
116 - 121	2BK32	-	2BK100	-	BX	
122 - 129	2BK34					
130 - 136	2BK36					
137 - 143	2BK40					
144 - 147	2TB40	P1			AX	
148 - 151	2BK36		2BK90		BX	
152 - 160	2BK40	-				
161 - 164	2TB38	P1				
165 - 172	2BK45	-				
173 - 180	2BK47					
181 - 184	2B5V42	P1				
185 - 192	2BK50	-		-		
193 - 200	2BK52					
201 - 213	2BK55					
214 - 226	2AK54		2AK84		AX	
227 - 234	2AK56					
235 - 244	2AK84					
245 - 250	2BK57		2BK80			
251 - 263	2BK60					
264 - 273	2BK62				BX	
274 - 280	2BK65					
281 - 283	2B5V50	B				
284 - 300	2BK57					
301 - 317	2BK60					
318 - 328	2BK62		2BK67H	H		
329 - 337	2BK57		2BK60			
338 - 356	2BK60					
357 - 369	2BK62					
370 - 387	2BK65					
388 - 400	2BK67					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 107SMTP09

107SMTP09 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
16 - 20	2VP36	-	2TB300	Q1	AX	2
21 - 23	2VP42					
24 - 30	2VP36		2B5V200	B	BX	
31	2VP42				AX	
32 - 37					BX	
38 - 44	2VP50				AX	
45 - 49	2VP56		2AK184H	H		
50 - 54						
55 - 56	2VP60					
57 - 58	2VP65					
59 - 61	2VP50		2B5V136	B		
62 - 65						
66 - 73	2VP56					
74 - 81	2VP42		2B5V90	H	BX	
82 - 83	2VP56		2BK120H			
84 - 95	2VP60					
96 - 103	2VP65		2B5V110	B	AX	
104 - 106					BX	
107 - 113	2VP71				AX	
114 - 117					BX	
118 - 123	2VP75					
124 - 125	2VP60		2B5V86			
126 - 135	2VP65					
136 - 138					5VX	
139 - 148	2VP71				BX	
149 - 156	2VP60		2B5V68			
157 - 170	2VP65					
171 - 186	2VP71					
187 - 200	2VP65		2B5V58		5VX	

107SMTP09 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
12	2AK23	-	2TB380	Q1	AX	2
13	2AK25					
14	2AK26					
15	3BK32		3TB380			3
16	3BK34					
17	3BK36					
18	3BK40					
19 - 20	3BK45H	H				
21	3BK47H					
22	2AK22	-	2B5V200	B		2
23	2AK23					
24	2BK28					
25	2AK25					
26	2AK26					
27	2AK27					
28 - 29	2AK28		2TA195	Q1		
30 - 31	2AK30					
32 - 33	2AK32					
34	2AK34					
35 - 36	2BK32		2BK190H	H	BX	
37 - 38	2BK34					
39 - 40	2BK36					
41 - 42	2BK40					
43 - 44	2TB38	P1				
45	2BK45	-	2B5V110	B	AX	
46	2BK47					
47 - 49	2BK30		2AK144H	H		
50 - 53	2BK32					
54 - 56	2AK41					
57 - 60	2AK44					
61 - 63	2AK46					
64 - 67	2AK49					
68 - 69	2AK51					
70 - 73	2AK39		2AK104	-		
74 - 79	2AK41					
80 - 83	2AK39		2AK94			
84 - 88	2AK54		2AK124H	H		
89 - 91	2AK56					
92 - 96	2AK59					
97 - 99	2AK51		2AK104	-		
100 - 105	2AK54					
106 - 109	2AK56					
110 - 114	2AK59					
115 - 120	2BK55		2B5V86	B	BX	
121 - 125	2BK57					
126 - 132	2BK60					
133 - 135	2BK62					
136 - 144	2AK74		2AK104	-	AX	
145 - 146	2B5V50	B	2B5V68	B	BX	
147 - 155	2BK57	-				
156 - 164	2BK60					
165 - 170	2B5V50	B	2BK65H	H		
171 - 178	2BK57	-				
179 - 188	2BK60					
189 - 194	2BK62					
195 - 198	2B5V66	B	2B5V68	B		
199 - 200	2B5V68					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 107SMTP15

107SMTP15 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
10 - 13	2VP36	-	2B5V278	B	AX	2
14 - 16	2VP42					
17	2VP50					
18 - 23	2VP36		2AK154H	H		
24 - 29			2AK124H			
30 - 31	2VP42					
32 - 38			2AK114H			
39 - 46			2AK94	-		
47 - 52			2AK84			
53 - 59	2VP50		2B5V90	B		
60 - 65	2VP56					
66 - 71	2VP50		2AK74	-		
72 - 80			2B5V66	B		
81 - 83			2AK61	-		
84 - 93	2VP60		2B5V68	B	BX	
94	2VP65					
95 - 100					AX	
101 - 105	2VP60		2B5V60			
106 - 113						
114 - 126	2VP65		2BK60	-	BX	
127 - 130	2VP71					

107SMTP15 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	2AK22	-	2TB380	Q1	AX	2
8	2AK25					
9	2AK21		2B5V278	B		
10	2AK23					
11	2AK25					
12	2BK25		2B5V200			
13	2AK22					
14	2AK23					
15	2AK25					
16	2AK27					
17	2AK22		2BK160H	H		
18	2AK28		2AK184H			
19 - 20	2AK30					
21	2AK32					
22	2AK34					
23	2AK22		2BK120H			
24	2AK23					
25 - 26	2BK28					
27 - 28	2AK26					
29	2AK27					
30	2AK28		2AK114H			
31 - 32	2AK30					
33 - 34	2AK32					
35 - 36	2AK34					
37 - 38	2AK32		2AK104	-		
39 - 40	2AK34					
41 - 43	2AK30		2TA82	Q1		
44 - 46	2AK32					
47 - 49	2AK34					
50	2AK44		2AK104	-		
51 - 52	2AK46					
53 - 56	2AK49					
57 - 58	2AK51					
59 - 62	2AK44		2AK84			
63 - 65	2AK46					
66 - 69	2AK49					
70 - 72	2AK51					
73 - 77	2AK54					
78 - 82	2AK44		2AK64			
83	2AK46					
84 - 87	2AK54		2AK74			
88 - 91	2AK56					
92 - 96	2AK59					
97 - 99	2AK61					
100 - 104	2AK64					
105 - 107	2AK54		2AK61			
108 - 111	2AK46					
112 - 113	2AK59					
114 - 119	2BK57		2B5V52	B	BX	
120 - 126	2BK60					
127 - 130	2BK62					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 107SMTP25

107SMTP25 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
6 - 7	2VP36	-	2B5V278	B	AX	2
8 - 10			2B5V200			
11 - 14			2AK154H	H		
15 - 19			2AK114H			
20 - 26			2AK84	-		
27 - 31	2VP42					
32 - 38			2B5V88	B		
39 - 47			2AK56	-		
48 - 53			2AK49			
54 - 57	2VP50		2AK56			
58 - 64	2VP56					
65 - 70	2VP50		2B5V42	P1	BX	
71 - 77					AX	
78 - 80	2VP56					

107SMTP25 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2AK20	-	2B5V278	B	AX	2
6	2AK23					
7	2AK27					
8	2AK20		2BK190H	H		
9	2AK23					
10	2AK25					
11	2AK28		2AK184H			
12	2AK30					
13	2AK34					
14	2BK25		2BK110H			
15	2AK22					
16	2AK23					
17	2AK25					
18 - 19	2AK22		2B5V86	-		
20	2BK28					
21	2AK25					
22	2AK26					
23 - 24	2AK34		2AK104			
25 - 26	2AK39					
27 - 28	2AK28		2AK74			
29 - 30	2AK30					
31 - 32	2AK32					
33 - 34	2AK34					
35	2AK30		2AK64			
36 - 37	2AK32					
38 - 40	2AK34					
41 - 43	2AK39		2AK61			
44 - 45						
46 - 48	2AK41					
49 - 51	2AK44					
52 - 54	2AK46					
55 - 58	2AK49					
59 - 62	2AK44		2AK51			
63 - 65	2AK46					
66 - 69	2AK49					
70 - 72	2AK51					
73 - 77	2AK54					
78 - 80	2AK56					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 107SMTP35

107SMTP35 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5 - 6	2VP36	-	2TA45	Q1	AX	2
7	2VP42					
8	2VP50					
9 - 11	2VP36		2AK134H	H		
12 - 13	2VP42					
14	2VP36		2AK104	-		
15 - 17	2VP42					
18 - 21	2VP36		2AK74			
22 - 25	2VP42					
26 - 31	2VP36		2AK49			
32 - 38	2VP42					
39 - 45			2B5V42	P1		
46 - 50			2TB38			

107SMTP35 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2AK20	-	2B5V200	B	AX	2
6	2AK23					
7	2AK27					
8	2AK20		2B5V124			
9	2AK22					
10	2AK25					
11	2AK26					
12	2AK25		2B5V86			
13	2AK22					
14	2AK23					
15	2AK25					
16	2AK26					
17	2AK22		2B5V68			
18	2AK23					
19	2AK25					
20	2AK22		2B5V56			
21 - 22	2AK23					
23	2AK25					
24	2AK26					
25	2AK23		2BK55H	H		
26 - 27	2AK25					
28	2AK26					
29	2AK27					
30 - 31	2AK32		2AK54	-		
32 - 33	2AK34					
34 - 35	2AK32		2AK49			
36 - 37	2AK34					
38 - 39	2AK39		2AK51			
40 - 41	2AK41					
42 - 44	2AK44					
45 - 46	2AK46					
47 - 48	2AK49					
49 - 50	2AK32		2AK32			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 115SMTP05

115SMTP05 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 95	2VP65	-	2B5V34	B	BX	2
96 - 105	2VP71					
106 - 110	2VP75					
111 - 113	2VP62		2B5V184		5VX	
114 - 122	2VP65					
123 - 134	2VP71					
135 - 140	2VP75					
141 - 150	2VP60		2B5V136		BX	
151 - 164	2VP65					
165 - 179						
180 - 193	2VP71		2B5V124		5VX	
194 - 196						
197 - 208	2VP75					
209 - 210	2VP65		2Q5V109	Q1		
211 - 229	2VP71					
230 - 242	2VP75					
243 - 261	2VP71		2B5V94	B		
262 - 276	2VP75			-		
277 - 280	2VP65		2B5V80			
281 - 306	2VP71					
307 - 310	2VP75					
311 - 330	2VP71		2B5V74			
331 - 337	2VP75					
338 - 349	2V58B70					
350 - 367	2V68B80		2B5V80			
368 - 386	2MVP80B94Q		2B5V86		BX	
387 - 400	2V58B70		1B5V64		5VX	

115SMTP05 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 91	3TB36	P2	3B5V160	B	BX	3
92 - 96	3TB38	P1				
97 - 98	3BK45H	H				
99 - 100	3BK47H					
101 - 104	3BK52H				AX	
105 - 106	2BK55	-	2BK190H	H	BX	2
107 - 110	2BK57					
111 - 116	2BK60					
117 - 121	2BK62					
122 - 124	2BK65					
125 - 132	2B5V42	P1	2B5V124	B	5VX	
133 - 138	2B5V44					
139 - 143	2BK55	-	2B5V136		BX	
144 - 149	2BK57					
150	2B5V52	B				
151 - 157	2BK60	-				
158 - 161	2BK62					
162 - 168	2B5V54	B	2B5V124		5VX	
169 - 174	2B5V56					
175 - 181	2B5V58					
182 - 187	2B5V60					
188 - 193	2B5V62					
194 - 202	2B5V64				BX	
203 - 208	2B5V66					
209 - 214	2B5V68					
215 - 224	2B5V50		2B5V86		5VX	
225 - 233	2B5V52					
234 - 242	2B5V54					
243 - 244	2B5V56					
245 - 257	2B5V60		2B5V90			
258 - 265	2B5V62					
266 - 274	2B5V64					
275 - 282	2B5V66					
283 - 290	2B5V68					
291 - 297	2B5V80		2BK110H	H	BX	
298 - 312	2B5V60		2B5V74	B	5VX	
313 - 322	2B5V62					
323 - 330	2B5V64					
331 - 333	2B5V90		2BK110H	H	BX	
334 - 347	2B5V94					
348 - 363	2B5V70		2B5V74	B	5VX	
364 - 383	2B5V74					
384 - 394	3V5V70		3B5V68		BX	3
395 - 400	3B5V74					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 115SMTP09

115SMTP09 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
16 - 20	2VP36	-	2TB300	Q1	AX	2
21 - 25	2VP42					
26 - 29	2VP50					
30 - 33	2VP56					
34 - 38	2VP50		2B5V234	B	BX	
39 - 43	2VP56					
44 - 46	2VP60					
47 - 54	2VP42		2B5V136			
55 - 58	2VP56		2B5V160		AX	
59 - 64	2VP60					
65 - 70	2VP65					
61 - 75					5VX	
76 - 78	2VP71				BX	
79 - 85	2VP65		2B5V136			
86 - 95	2VP71					
96 - 100	2VP75					
101 - 107	2VP65		2B5V110			
108 - 117	2VP71					
118 - 133	2VP65		2B5V90		5VX	
134 - 142	2VP71				BX	
143 - 145					5VX	
146 - 160	2VP65		2B5V74			
161 - 175	2VP71					
176 - 185	2VP75					
186 - 191	2VP65		2B5V62			
192 - 200	2VP71					

115SMTP09 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
12	2AK23	-	2TB380	Q1	AX	2
13	2AK25					
14	2AK26					
15	2AK23		2TB300			
16	2BK28					
17	2AK25					
18	2AK27					
19	2AK23		2B5V250	B		
20	2AK25					
21	2AK26					
22	2AK27					
23	2BK32					
24 - 25	2H3V31	H	2Q3V250	Q1	3VX	
26 - 27	2H3V33					
28 - 29	2H3V36					
30 - 31	3BK32	-	3BK190H	H	AX	3
32 - 33	3BK34					
34 - 36	3BK36					
36 - 38	3BK40			B		
39 - 40	3TB38	P1		H		2
41 - 43	2BK32	-	2BK160H		BX	
44 - 45	2BK34					
46 - 48	2TB38	P1			AX	
49 - 51	2TB40					
52 - 54	2BK45	-	2B5V124	B	BX	
55 - 56	2BK34					
57 - 58	2TB38	P1			AX	
59 - 61	2BK45	-	2B5V136		BX	
62 - 64	2BK47	-				
65 - 66	2B5V42	P1				
67 - 69	2BK50	-				
70 - 72	2BK52					
73 - 74	2B5V52	B			AX	
75 - 78	2BK52	-	2B5V124		BX	
79 - 83	2BK55					
84 - 87	2BK57					
88 - 91	2BK60					
92 - 93	2BK52		2BK110H	H		
94 - 99	2BK55					
100 - 103	2BK57					
104 - 109	2BK60					
110 - 112	2BK62					
113 - 119	2BK55		2B5V86	B	5VX	
120	2BK57					
121 - 124	2B5V52	B				
125 - 129	2B5V54					
130 - 134	2B5V56					
135 - 141	2B5V64		2B5V94		BX	
142 - 145	2B5V66					
146 - 149	2B5V68					
150 - 157	2B5V64		2BK90	-		
158 - 162	2B5V66					
163 - 167	2B5V68					
168	2B5V70					
169 - 171	2B5V62		2B5V74	B	5VX	
172 - 175	2B5V64					
176 - 186	2B5V80		2B5V66			
187 - 192	2B5V62					
193 - 198	2B5V64					
199 - 200	2B5V86		2BK90	-	BX	

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 115SMTP15

115SMTP15 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
10 - 13	2VP36	-	2V5V278	B	AX	2
14 - 16	2VP42					
17 - 19	2VP50					
20 - 22	2VP36		2AK154H	H		
23 - 28	2VP42					
29 - 32			2AK134H			
33 - 36	2VP50		2AK144H			
37 - 41	2VP56					
42 - 50	2VP42		2B5V86	B	BX	
51 - 58			2BK80	-		
59 - 61	2VP65		2B5V110	B	AX	
62 - 63					BX	
64 - 67	2VP71					
68 - 69						
70 - 73	2VP60		2B5V86		AX	
74 - 78	2VP65					
79 - 81					BX	
82 - 87	2VP71				AX	
88					BX	
89 - 93	2VP60		2B5V68			
94 - 101	2VP65					
102 - 106	2VP71					
107 - 111					AX	
112 - 120	2VP65		2BK62	-	BX	
121 - 130	2VP71		2B5V58	B		

115SMTP15 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	3BK27	-	3TB380	Q1	AX	3
8	3BK30					
9	3BK32					
10	3BK36					
11	2AK23		2B5V250	B		2
12	2AK25					
13	2AK27					
14	2AK22		2BK190H	H		
15	2AK23					
16	2AK26					
17	2AK27					
18	2AK22		2B5V136	B		
19 - 20						
21	2BK28					
22	2AK25					
23	2BK30					
24	2AK30		2AK154H	H		
25	2AK32					
26 - 27	2AK34					
28 - 29	2AK39					
30 - 31	2AK41					
32 - 33	2AK44					
34	2AK34		2AK124H			
35 - 37	2AK39					
38 - 39	2AK41					
40 - 42	2AK44					
43 - 44	2AK46					
45 - 46	2AK49					
47 - 49	2BK34		2BK90	-	BX	
50 - 51	2BK36					
52 - 53	2TB38	P1			AX	
54 - 56	2TB40					
57 - 58	2B5V42					
59 - 61	2BK47	-				
62 - 63	2B5V42	P1				
64 - 65	2BK50	-	2AK94			
66 - 68	2BK52					
69 - 72	2BK56					
73 - 75	2AK59					
76 - 78	2AK61					
79 - 82	2AK64					
83 - 85	2BK57		2BK80		BX	
86 - 90	2BK60					
91 - 93	2BK62					
94 - 99	2BK55		2BK67			
100 - 103	2BK57					
104 - 108	2BK60					
109 - 111	2BK62					
112 - 119	2BK57		2B5V52			
120	2BK60					
121 - 122	2B5V52					
123 - 126	2B5V54			B	5VX	
127 - 130	2B5V68		2B5V62		BX	

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 115SMTP25

115SMTP25 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
6 - 7	2VP36	-	2B5V278	B	AX	2
8 - 9	2VP42					
10 - 11	2VP50					
12 - 14	2VP36		2AK154H	H		
15 - 16	2VP42					
17 - 21	2VP36		2AK104H			
22 - 24	2VP42		2B5V86	B		
25 - 30						
31 - 35			2BK80	-		
36 - 38			2B5V62	B		
39 - 41					BX	
42 - 50			2B5V50			
51 - 57	2VP50		2AK56	-		
58 - 61	2VP60		2AK61		AX	
62 - 67	2BP65		2BK55			
68 - 76	2VP60				BX	
77 - 80			2BK50			

115SMTP25 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2AK20	-	2B5V278	B	AX	2
6	2AK23					
7	2BK25		2B5V200			
8	2AK22					
9	2AK25					
10	2AK22		2BK160H	H		
11	2BK28					
12	2AK26					
13	2AK22		2B5V124	B		
14	2BK28					
15	2AK26					
16	2AK27					
17	2AK22		2B5V94			
18	2AK23					
19	2AK25					
20	2AK26					
21	2AK27					
22	2AK26		2B5V86			
23 - 24	2BK32					
25	2AK41		2AK114H	H		
26 - 27	2AK44					
28	2AK46					
29 - 30	2AK49					
31 - 32	2AK32		2AK74H			
33 - 34	2AK34					
35	2AK30		2AK64	-		
36 - 37	2AK32					
38	2AK34					
39 - 40	2BK32		2BK62		BX	
41 - 43	2BK34					
44 - 45	2BK36					
46 - 47	2BK40					
48 - 50	2BK32		2BK50			
51 - 54	2BK34					
55 - 57	2BK36					
58	2BK40				AX	
59 - 60	2AK54		2AK64			
61 - 63	2AK56					
64 - 66	2AK59					
67 - 69	2AK61					
70 - 71	2AK64					
72	2AK54		2AK54			
73 - 75	2AK56					
76 - 78	2AK59					
79 - 80	2BK62		2BK55		BX	

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 115SMTP35

115SMTP35 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5 - 6	2VP36	-	2TA245	Q1	AX	2
7	2VP42					
8	2VP50					
9 - 11	2VP36		2AK134H	H		
12 - 14	2VP42					
15 - 17			2AK104H			
18 - 20			2AK84	-		
21 - 22	2VP36		2B5V66	B		
23 - 26	2VP42					
27 - 32			2BK62	-	BX	
33 - 38			2AK49		AX	
39 - 42	2VP50		2AK54			
43 - 45	2VP56					
46 - 50	2VP50		2AK44			

115SMTP35 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2AK20	-	2B5V200	B	AX	2
6	2BK28					
7	2AK27					
8	2BK25		2B5V124			
9	2AK22					
10	2AK25					
11	2AK26					
12	2BK25		2B5V86			
13	2AK22					
14	2AK23					
15	2AK25					
16	2AK27					
17	2AK22		2B5V66			
18	2AK23					
19 - 20	2AK25					
21	2AK22		2BK60	-		
22	2AK23					
23 - 24	2AK34		2AK74H	H		
25 - 26	2AK39					
27	2AK41					
28	2AK34		2AK64	-		
29 - 30	2AK39					
31 - 32	2AK41					
33	2AK44					
34 - 35	2AK39		2AK56			
36 - 37	2AK41					
38 - 40	2AK44					
41 - 42	2AK46					
43 - 44	2AK49					
45 - 46	2AK51					
47 - 49	2AK54					
50	2AK44		2AK44			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 203SMTP05

203SMTP05 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 99	2VP65	-	2R5V212	R1	5VX	2
100 - 108	2VP71					
109 - 114	2VP75					
115 - 120			2B5V200	B		
121 - 129	2VP65		2B5V154			
130 - 141	2VP71		2B5V160			
142 - 152	2VP75					
153 - 165	2VP71		2B5V136			
166 - 176	2V58B70					
177 - 201	2MVP75C97Q	Q2	2TC160	Q1	CX	
202 - 204	2MVP85C107Q					
205 - 215	2V58B70	-	2B5V110	B	5VX	
216 - 228	2MVP75C97Q	Q2	2C140R	R1	CX	
229 - 239	2MVP85C107Q					
240 - 246	2MVP75C97Q		2TC130	Q1		
247 - 272	2MVP85C107Q					
273 - 279	2MVP75C97Q		2TC114			
280 - 291	2MVP85C107Q					
292 - 305	3MVP70B84	-	3MVB90Q		BX	3
306 - 322	4MVP60B74		4MVB74Q	Q2		4
323 - 327	2V68B80		2B5V80	B	5VX	2
328 - 334	2MVP95C117Q	Q2	2TC114	Q1	CX	
335 - 360	2MVP105C127Q		2TC114			
361 - 387	2MVP95C117Q					
388 - 400	2MVP105C127Q		2TC98			

203SMTP05 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 92	3B5V46	B	3BK190H	H	BX	3
93 - 96	3V5V48					
97 - 100	3V5V50					
101 - 103	3B5V52					
104 - 107	3B5V54					
108 - 109	3B5V56					
110 - 116	3B5V62				AX	
117 - 120	2B5V52		2B5V154	B	5VX	2
121 - 122	2B5V62		3BK190H	H	BX	3
123 - 126	3B5V64					
127 - 129	3B5V68					
130 - 134	2B5V58		2B5V154	B	5VX	2
135 - 139	2B5V60					
140 - 143	2B5V62					
144 - 147	2B5V64					
148 - 155	3B5V58		3B5V136		BX	3
156 - 160	3B5V60					
161 - 165	3B5V62					
166 - 175	3B5V66					
176 - 180	3B5V68					
181 - 183	2B5V70		2B5V136		5VX	2
184 - 193	2B5V74					
194 - 200	2B5V70		2B5V124			
201 - 212	2B5V74					
213 - 224	2B5V86		2B5V136			
225 - 234	2B5V90					
235 - 244	2B5V94					
245 - 246	3B5V60		3B5V86			3
247 - 254	3B5V62					
255 - 262	3B5V64					
263 - 271	3B5V66					
272 - 286	3B5V60		3B5V74			
287 - 295	3B5V62					
296 - 305	3B5V64					
306 - 308	3B5V66					
309 - 326	2B5V80		2B5V86			2
327 - 331	2Q4V109	Q1		Q1		
332 - 352	2B5V110	B	2B5V110	B		
353 - 372	3B5V110		3BK110H	H	BX	3
373 - 386	2B5V136		2B5V124	B	5VX	2
387 - 400	3B5V110		3B5V94		BX	3

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 203SMTP09

203SMTP09 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
20 - 24	2VP42	-	2TB300	Q1	AX	2
25 - 29			2B5V250	B		
30 - 32	2VP50		2B5V278			
37 - 39	2VP60				BX	
40 - 42	2VP65					
43 - 47	2VP71					
48 - 52	2MVP35B49		2BK190H	H		
53 - 59	2VP60					
60 - 64	2VP65					
65 - 70	2VP71					
71 - 74	2VP75					
75 - 80	2VP65		2R5V150	R1	5VX	
81 - 88	2VP71					
89 - 92	2VP75					
93 - 95	2VP71		2B5V136	B	BX	
96 - 100	2VP75					
101 - 108	2VP65		2B5V110		5VX	
109 - 114	2VP71				BX	
115 - 118					5VX	
119 - 125	2VP75					
126 - 135	2VP71		2Q5V97	Q1		
136 - 143	2VP75					
144 - 151	2VP71		2B5V86	B		
152 - 159	2VP75					
161 - 165	2V58B70		2Q5V85	Q1		
166 - 173	4MVP45B59		4MVB64Q	Q2	BX	4
174 - 187	4MVP59B64					
188 - 200	2V58B70		2B5V68	B	5VX	2

203SMTP09 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
12	2AK23	-	2TB380	Q1	AX	2
13	3BK28		3TB380			3
14	3BK30					
15	3BK32					
16	3BK34					
17	3BK36					
18	3BK40					
19 - 20	3BK45H	H				
21 - 22	2BK32	-	2TB300		BX	2
23	2BK34					
24	2BK36					
25 - 26	2BK40					
27 - 28	2BK32		2B5V234	B		
29 - 30	2BK34					
31	2BK36					
32	2BK40					
33	2BK40H	H				
34 - 36	2BK45	-				
37 - 39	2BK40H	H	2B5V200			
40 - 42	2BK45	-				
43 - 45	2VP71	P2	3BK160H	H		3
46 - 47	3TB34					
48 - 50	3TB36					
51 - 53	3TB38	P1				
54 - 56	2BK47	-	2BK160H			2
57 - 59	2BK50					
60 - 62	2BK52					
63 - 67	2BK55					
68 - 69	2BK57					
70 - 71	2B5V52	B	2B5V136	B	5VX	
72 - 75	2B5V50					
76 - 78	2B5V52					
79 - 81	2B5V54					
82 - 84	2B5V56					
85 - 87	2B5V58					
88 - 89	2B5V54		2B5V124			
90 - 92	2B5V56					
93 - 95	2B5V58					
96 - 99	2B5V60					
100 - 101	2B5V62					
102 - 107	2B5V64				BX	
108 - 110	2B5V66					
111 - 113	2B5V68					
114 - 115	2B5V62		2B5V110		5VX	
116 - 118	2B5V64					
119 - 122	2B5V66					
123 - 126	2B5V68					
127 - 128	2B5V70					
129 - 136	2B5V60		2B5V90			
137 - 140	2B5V62					
141 - 145	2B5V64					
146 - 149	2B5V66					
150 - 154	2B5V68					
155 - 156	2B5V66		2B5V86			
157 - 161	2B5V68					
162 - 165	2B5V70					
166 - 175	2B5V74					
176 - 178	2B5V70		2B8V80			
179 - 188	2B5V74					
189 - 192	2B5V70		2B5V74			
193 - 200	2B5V74					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 203SMTP15

203SMTP15 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
10 - 12	2VP36	-	2B5V278	B	AX	2
13 - 15	2VP42					
16 - 17			2B5V250			
18 - 20	2VP50					
21 - 24	2VP56					
25 - 28	2VP50		2AK184H	H		
29 - 32	2VP56					
33 - 35	2VP60		2BK190H		BX	
36 - 38	2VP65					
39 - 41	2VP71					
42 - 44	2VP75					
45 - 50	2VP65		2B5V136	B		
51 - 56	2VP71					
57 - 58	2VP60		2B5V110			
59 - 62	2VP65					
63 - 69	2VP71					
70 - 73	2VP60		2B5V86		5VX	
74 - 79	2VP65					
80 - 82						
83 - 87	2VP71					
88 - 95	2VP65		2B5V74			
96 - 101	2VP71					
102 - 113	2VP65		2B5V62			
114 - 123	2VP71					
124 - 130			2B5V58			

203SMTP15 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	2AK22	-	2TB380	Q1	AX	2
8	2AK25					
9	2AK23		2TB300			
10	2AK25					
11	2AK27					
12	3BK30		3BK190H	B		3
13	3BK32					
14	3BK34					
15	3BK36					
16	3BK40					
17	3BK30		3BK190H	H		
18	3BK32					
19	3BK34					
20 - 21	3BK36					
22	3BK40					
23	3TB38	P1				
24	3BK45H	H				
25	3BK47H					
26	3B5V42	P1	2BK160H			2
27 - 29	2TB38					
30 - 31	2TB40					
32	2B5V42				BX	
33 - 34	2BK47	-				
35 - 36	2BK50					
37	2BK52					
38 - 40	2BK45		2B5V124	B		
41 - 42	2BK47					
43 - 45	2BK50					
46 - 47	2BK52					
48 - 49	2B5V48	B				
50 - 52	2BK57	-	2BK110H	H		
53 - 55	2BK60					
56 -57	2BK62					
58 - 59	2BK55					
60 - 61	2BK57					
62 - 65	2BK60					
66 - 67	2BK62					
68 - 71	2BK55		2B5V86	B		
72 - 74	2BK57					
75 - 78	2BK60					
79 - 80	2BK62					
81 - 85	2B5V62	B	2B5V90			
86 - 88	2B5V64					
89 - 90	2B5V66					
91 - 93	2B5V68					
94 - 98	2B5V64		2B5V80			
99 - 101	2B5V66					
102 - 104	2B5V68					
105 - 106	2B5V64		2BK80H	H		
107 - 109	2B5V66					
110 - 112	2B5V68					
113 - 118	2B5V64		2B5V66	B		
119 - 121	2B5V66					
122 - 125	2B5V68					
126 - 128	2B5V66		2B5V62		5VX	
129 - 130	2B5V64		2B5V58			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 203SMTP25

203SMTP25 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
6 - 7	2VP36	-	2B5V278	B	AX	2
8 - 9	2VP42					
10 - 11	2VP50					
12 - 14	2VP42		2AK184H	H		
15 - 17	2VP50					
18 - 19	2VP56					
20 - 23	2VP42		2B4V110	B		
24 - 27	2VP50		2AK114H	H		
28 - 32	2VP56					
33 - 35	2VP60		2AK104H			
36 - 38	2VP65					
39 - 43	2VP60		2B5V86	B		
44 - 48	2VP65					
49 - 52	2VP71					
53 - 55	2VP60		2B5V68		BX	
56 - 61	2VP65					
62 - 69	2VP60		2B5V54			
70 - 71	2VP65					
72 - 80	2VP60		2B5V46			

203SMTP25 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2BK25	-	2B5V278	B	AX	2
6	2AK23					
7	2AK27					
8	2BK25		2BK190H	H		
9	2AK23					
10	2AK25					
11	2AK28		2AK184H			
12	2AK30					
13	2AK34					
14	2AK39					
15	2AK41					
16	2AK44					
17	2AK34		2AK144H			
18 - 19	2AK39					
20	2AK41					
21	2AK44					
22	2AK46					
23 - 24	2AK49					
25 - 26	2AK39		2AK104H			
27	2AK41					
28 - 29	2AK39		2AK94H			
30	2AK41					
31 - 32	2TB38	P1	2BK90H			
33 - 34						
35 - 36	2TB40					
37	2B5V42					
38 - 39	2BK50	-	2BK80H		BX	
40 - 41	2BK52					
42 - 44	2BK50					
45 - 46	2BK52					
47 - 49	2BK55					
50 - 51	2BK57					
52 - 53	2BK60					
54 - 55	2BK62					
56 - 59	2BK55		2BK67H			
60 - 61	2BK57					
62 - 64	2BK60					
65 - 66	2BK62			B		
67 - 69	2BK57		2B5V54			
70 - 72	2BK60					
73 - 75	2BK62					
76 - 80	2BK60		2BK55H	H		

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 203SMTP35

203SMTP35 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5 - 6	2VP36	-	2TA245	Q1	AX	2
7	2VP42					
8	2VP50					
9 - 11	2VP36		2B5V136	B		
12 - 13	2VP42		2AK114H	H		
14 -16						
17 - 19			2AK94H			
20 - 21	2VP50		2AK104H			
22 - 24	2VP56					
25 - 30	2VP42		2BK67H		B	
31 - 36			2BK55H			
37 - 38			2BK47H			
39 - 43	2VP60		2B5V62	B	AX	
44 - 47	2VP65					
48 - 50	2VP60		2B5V52			

203SMTP35 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2BK25	-	2B5V200	B	AX	2
6	2AK23					
7	2AK27					
8	2BK36					
9	2AK22		2B5V124			
10	2BK28					
11	2AK26					
12	2AK32		2AK134H	H		
13	2AK34					
14	2AK39					
15	2AK41					
16	2AK44					
17	2AK46					
18	2AK49					
19	2AK51					
20	2AK39		2AK94H			
21 - 22	2AK41					
23	2AK44					
24	2AK46					
25 - 26	2BK32		2B5V62	B	BX	
27 - 28	2BK34					
29	2BK36					
30 - 31	2BK32		2BK57H	H		
32 - 33	2BK34					
34 - 35	2BK32		2B5V46	B		
36 - 37	2BK34					
38	2BK36					
39	2BK45		2B5V52			
40 - 41	2BK47					
42 - 44	2BK50					
45 - 47	2AK54		2AK59H	H	AX	
48 - 49	2AK56					
50	2AK59					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 207SMTP05

207SMTP05 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 96	2VP71	-	2B5V234	B	5VX	2
97 - 101	2VP75					
102 - 111	2VP65		2B5V184			
112 - 122	2VP71					
123 - 125	2VP75					
126 - 129	2V58B70					
130 - 137	2V68B80		2B5V200			
138 - 148	2V58B70		2B5V160			
149 - 160	2V58B70		2R5V150	R1		
161 - 168	2V68B80		2B5V160	B		
169 - 177	2V58B70		2B5V140	R1		
178 - 187			2B5V124	B		
188 - 198	2v68B80		2B5V136			
199 - 207			2Q5V132	Q1		
208 - 219			2Q5V125			
220 - 232			2Q5V118			
233 - 246			2B5V110	B		
247 - 253	2MVP105C127Q	Q2	2TC160	Q1	CX	
254 - 272	2MVP95C117Q		2C140R	R1		
273 - 294	2MVP105C127Q					
295 - 315			2TC130	Q1		
316 - 331	2MVP95C117Q		2TC114			
332 - 340			2TC106			
341 - 357	3MVP85C107Q		3MVC96Q	Q2		3
358 - 362	3MVP75C97Q		3MBV86Q			
363 - 381	3MVP80C102Q					
382 - 400	3MVP85C107Q					

207SMTP05 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 91	4B5V46	B	4B5V184	B	BX	4
92 - 95	4B5V48					
96 - 99	4B5V50					
100 - 101	4B5V52					
102 - 104	4B5V54					
105 - 110	4B5V56					
111 - 113	3B5V58		3BK190H	H		3
114 - 121	3B5V62					
122 - 125	3B5V64					
126 - 129	3B5V66					
130 - 132	3B5V68					
133 - 136	3B5V70					
137 - 148	3B5V74					
149 - 151	2B5V66		2B5V154	B	5VX	2
152 - 155	2B5V68					
156 - 160	2B5V70					
161 - 162	2B5V74					
163 - 165	3B5V58		3B5V124			3
166 - 170	3B5V60					
171 - 176	3B5V62					
177 - 181	3B5V64					
182 - 187	3B5V66					
188 - 193	3B5V68					
194 - 196	2B5V86		2B5V154			2
197 - 205	2B5V90					
206 - 210	2B5V94					
211 - 222	2B5V86		2B5V136			
223 - 232	2B5V90					
233 - 242	2B5V94					
243 - 246	2Q5V97					
247 - 253	4B5V64		4B5V86			4
254 - 258						
259 - 271	2Q5V97	Q1	2B5V124			2
272 - 285	2Q5V103					
286 - 302	2Q5V109					
303 - 310	2B5V110	B				
311 - 321	2Q5V103	Q1	2B5V110			
322 - 329	2Q5V109					
330 - 340	2B5V110	B				
341 - 349	2B5V124					
350 - 361	2Q5V132	Q1	2B5V124			
362 - 383	2B5V136	B				
384 - 393	2B5V124		2B5V110			
394 - 400	2Q5V132	Q1				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 207SMTP09

207SMTP09 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
23 - 25	2MVP35B49	-	2TB380	Q1	AX	2
26 - 29	3MVP35B49		3MVB300R	R1		3
30 - 31	3MVP40B54					
32 - 34	2MVP35B49		2B5V278	B	BX	2
35 - 39	2VP60					
40 - 43	2VP65					
44 - 47	2VP71					
48 - 50	2VP75					
51 - 55	2VP71		2B5V234			
56 - 58	2VP75					
59 - 60	2VP65		2B5V200		5VX	
61 - 65	2VP71					
66 - 69	2VP75					
70 - 75	2VP65		2B5V160			
76 - 79	2VP71					
80 - 84	3MVP45B59		3MVB136R	R1	BX	3
85 - 90	3MVP50B64					
91 - 97	3MVP55B69					
98 - 104	3MVP60B74					
105 - 113	2MVP85C107Q	Q2	2C180R	Q1	CX	2
114 - 116	2MVP75C97Q		2TC160			
117 - 128	2MVP85C107Q					
129 - 135	2V68B80	-	2Q5V118		5VX	
136 - 146	2V58B70		2Q5V97			
147 - 153	2MVP75C97Q	Q2	2TC120	Q1	CX	
154 - 156	2VMP85C107Q					
157 - 171	2MVP105C127Q		2C140R	R1		
172 - 184	4MVP70B84	-	4MVB86Q	Q2	BX	4
185 - 200			4MVB80Q			

207SMTP09 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
15	3BK32	-	3TB380	Q1	AX	3
16	3BK34					
17	3BK36					
18	3BK40					
19 - 20	3BK45H	H				
21	3BK47H					
22	3BK50H					
23	3BK52H					
24 - 25	3TB36	P2	3B5V278	B	BX	
26 - 27	3BK45H	H				
28	3TB36	P2				
29 - 30	3BK45H	H			AX	
31	3BK50H					
32	3BK52H					
33	3BK55H					
34 - 35	2BK52	-	2B5V278		BX	2
36 - 37	2BK55					
38 - 39	2BK57					
40	4TB38	P1	4B5V184		AX	4
41 - 42	4TB40					
43 - 44	4TB38				BX	
45 - 46	4TB40					
47 - 49	4B5V42					
50 - 51	4B5V44					
52 - 53	4B5V50	B			AX	
54 - 56	4B5V52					
57 - 58	3B5V44	P1	3B5V154		5VX	3
59 - 61	3B5V46	B				
62 - 64	3B5V48					
65 - 67	3B5V50					
68 - 69	3B5V52					
70 - 74	3B5V56		3B5V160		BX	
75 - 76	3B5V58					
77 - 79	3B5V60					
80 - 84	2B5V66		2B5V160		5VX	2
85 - 87	2B5V68					
88 - 90	2B5V70					
91 - 95	2B5V74					
96 - 101	3B5V54		3B5V110			3
102 - 103	3B5V56					
104 - 108	3B5V58					
109 - 112	3B5V60					
113 - 115	3B5V62					
116 - 119	3B5V64					
120 - 123	3B5V66					
124 - 125	3B5V68					
126 - 129	2B5V86		2B5V136			2
130 - 135	2B5V90					
136 - 141	2B5V94					
142 - 143	3B5V60		3B5V86			3
144 - 147	3B5V62					
148 - 152	3B5V64					
153 - 156	2B5V86		2B5V110			2
157 - 158	2Q5V97	Q1	2B5V124			
159 - 166	2Q5V103					
167 - 171	2Q5V109					
172 - 181	2B5V110	B				
182 - 187	2Q5V103	Q1	2B5V110			
188 - 192	2Q5V109					
193 - 200	2B5V110	B				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 207SMTP15

207SMTP15 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
11 - 13	2VP42	-	2TB380	Q1	AX	2
14 - 16						
17 - 19	2VP50		2B5V278	B	BX	
20 - 23	2VP60					
24 - 25	2VP65					
26 - 28	2VP71					
29 - 33	2VP62		2B5V200			
34 - 35	2VP65					
36 - 39	2VP71					
40 - 44	2VP65		2B5V160			
45 - 48	2VP71					
49 - 51	2VP75					
52 - 57	2VP71		2B5V136			
58 - 61	2VP65		2Q5V118	Q1	5VX	
62 - 69	2VP71					
70 - 74	2VP65		2Q5V97			
75 - 83	2VP71					
84 - 91	2V58B70		2B5V90	B		
92 - 99			2Q5V85	Q1		
100 - 105			2Q5V80			
106 - 110			2B5V74	B		
111 - 116	2V68B80		2B5V80			
117 - 119			2Q5V80	Q1		
120 - 126			2B5V74			
127 - 130			2B5V70	B		

207SMTP15 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	3BK27	-	3TB380	Q1	AX	3
8	3BK30					
9	3BK32					
10	3BK36					
11	3TB38	P1				
12	3BK45H	H				
13	2BK36	-	2TB300			2
14	2TB38	P1				
15	2TB40					
16	2B5V42					
17	3BK32	-	3B5V200	B		3
18	3BK34					
19	3BK36					
20	3BK40					
21	3TB38	P1				
22						
23 - 24			3BK190H	H		
25 - 26	3BK47H	H				
27 - 28	3BK50H					
29	3BK52H					
30 - 31	3BK55H					
32 - 33	2BK55	-	2BK190H		BX	2
34 - 35	2BK57					
36 - 37	2BK60					
38 - 40	2B5V58	B				
41 - 42	2BK52	-	2B5V136	B	5VX	
43 - 45	2B5V50	B				
46 - 47	2B5V52					
48 - 50	2B5V56					
51 - 53	2B5V54		2B5V124			
54 - 55	2B5V56					
56 - 57	2B5V58					
58 - 60	2B5V82					
61 - 63	2B5V64					
64 - 67	2B5V68					
68 - 71	2B5V64		2B5V110			
72 - 75	2B5V68					
76 - 78	2B5V60		2B5V94			
79 - 83	2B5V64					
84 - 88	2B5V68					
89 - 91	2B5V70					
92 - 96	2B5V74					
97 - 99	2B5V70		2B5V86			
100 - 105	2B5V74					
106 - 111	2B5V86		2B5V94			
112 - 116	2B5V90					
117 - 122	2B5V94					
123 - 126	2B5V90		2B5V86			
127 - 130	2B5V94					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 207SMTP25

207SMTP25 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
6 - 7	2VP36	-	2B5V278	B	AX	2
8 - 9	2VP42					
10 - 11	2VP50					
12 - 13	2VP56					
14 - 16	2VP42		2B5V160			
17 - 20	2VP50					
21 - 23	2VP60					
24 - 25	2VP65					
26 - 28	2VP71					
29 - 31	2VP65		2AK134H	H		
32 - 34	2VP71					
35 - 38	2VP65		2B5V110	B		
39 - 40	2VP71					
41 - 42	2VP60		2B5V90			
43 - 47	2VP65				BX	
48 - 51	2VP71					
52 - 57	2VP65		2B5V74		5VX	
58 - 62	2VP71					
63 - 66	2VP75					
67 - 68	2VP65		2B5V62			
69 - 74	2VP71					
75 - 80	2VP65		2B5V52			

207SMTP25 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	3BK30	-	3TB380	Q1	AX	3
6	3BK36					
7	2BK28		2B5V250	B		2
8	2BK32					
9	3BK36					
10	2BK38	P1				
11	2TB40					
12	2AK30	-	2AK184H	H		
13	2AK34					
14	2AK39					
15	2AK41					
16	2AK44					
17	2AK46					
18	2BK34		2B5V136	B	BX	
19	2BK36H	H				
20	2BK40	P1				
21	2TB38					
22	2BK45	-				
23	2BK47					
24	2BK50					
25	2BK47		2B5V124			
26 - 27	2BK50					
28	2BK52					
29	2BK55					
30 - 31	2B5V52	B				
32 - 33	2BK62	-				
34 - 35	2BK55		2BK110	-		
36 - 37	2B5V52	B				
38 - 40	2BK62	-				
41 - 42	2BK55		2B5V86	B	5VX	
43 - 44	2B5V52	B				
45 - 46	2B5V54					
47 - 48	2B5V62		2BK100	-	BX	
49 - 51	2B5V66					
52 - 53	2B5V68					
54 - 57	2B5V62		2B5V80	B		
58 - 60	2B5V66					
61 - 62	2B5V68					
63 - 65	2B5V80		2B5V90			
66 - 69	2B5V66					
70 - 74	3B5V60		3BK65H	H		3
75 - 78	3B5V64					
79 - 80	3B5V66					

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 207SMTP35

207SMTP35 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5	2VP36	-	2B5V78	B	AX	2
6	2VP42					
7 - 8	2VP50					
9	2VP56					
10 - 11	2VP42		2B5V160			
12 - 14	2VP50					
15	2VP56					
16	2VP42		2AK114	-		
17 - 20	2VP50					
21 - 23	2VP60					
24 - 27	2VP65		2B5V110	B	BX	
28 - 30	2VP71					
31 - 34	2VP65		2B5V80			
35 - 36	2VP65					
37 - 40	2VP71					
41 - 44	2VP60		2B5V60			
45 - 47	2VP65					
48 - 50	2VP71		2BK67H	H		

207SMTP35 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2AK25	-	2B5V250	B	AX	2
6	2BK34					
7	2AK22		2B5V160			
8	2BK30					
9	2BK32					
10	2BK36					
11	2BK40					
12	2AK32		2AK134H	H		
13	2AK34					
14	2AK39					
15	2AK41					
16	2AK44					
17	2AK46					
18	2AK49					
19	2AK51					
20	2AK46		2AK114	-		
21	2AK49					
22	2AK51					
23	2AK54					
24	2AK56					
25 - 26	2AK59					
27	2AK64					
28	2B5V48	B	2B5V86	B	BX	
29 - 30	2BK55	-				
31	2BK57					
32 - 33	2BK60					
34	2BK62					
35	2B5V48	B	2B5V68			
36 - 37	2BK55	-				
38 - 39	2BK57					
40	2BK60					
41 - 44	2BK55		2BK65H	H		
45 - 46	2B5V66	B	2BK80	-		
47	2B5V68					
48 - 50	2B5V64		2B5V66	B		

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 215SMTP05

215SMTP05 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 98	2V58B70	-	2B5V250	B	5VX	2
99 - 111	2V58B80					
112 - 117	2V58B70		2B5V200			
118 - 130			2B5V184			
131 - 139	2MVP105C127Q	Q2	2C300R	R1	CX	
140 - 142	2VMP95C117Q		2C270R			
143 - 154	2MVP104C127Q		2TC240	Q1		
155 - 178						
179 - 194	2MVP95C117Q		2TC200			
195 - 212	2MVP105C127Q					
213 - 230			2C180R	R1		3
231 - 240	3MVP85C107Q		3MVC140R			
241 - 262	3MVP90C112Q					
263 - 281	3MVP95C117Q					
282 - 313	3MVP85C107Q		3MVC110Q	Q2		
314 - 324	3MVP90C112Q					
325 - 337						
338 - 375	3MVP115C137Q		3MVC120Q			
376 - 400			3MVC110Q			

215SMTP05 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 96	4B5V50	B	4B5V184	B	5VX	4
97 - 99	4B5V52					
100 - 103	4B5V54					
104 - 107	4B5V56					
108 - 111	3B5V58		3B5V184			3
112 - 118	3B5V62					
119 - 122	3B5V64					
123 - 130	3B5V68					
131 - 134	3B5V70					
135 - 141	3B5V74					
142 - 144	3R5V80	R1				
145 - 152	3B5V80	B				
153 - 162	4Q5V59	Q1	4B5V124			4
163 - 170	4B5V60	B				
171 - 181	4B5V64					
182 - 192	4B5V68					
193 - 198	4V5V70					
199 - 209	4B5V74					
210 - 222	3B5V86		3B5V136			3
223 - 232	3B5V90					
233 - 241	3B5V94					
242 - 248	3R5V97	R1				
249 - 261	3R5V103					
262 - 276	3R5V109					
277 - 283	3B5V110	B				
284 - 291	3R5V118	R1	3B5V110			
292 - 305	3R5V97					
306 - 320	3R5V103					
321 - 328	3R5V109					
329 - 337	3B5V110	B				
338 - 349	3B5V124		3B5V124			
350 - 365	3R5V132	R1				
366 - 382	3B5V136	B				
383 - 400	3B5V124		3R5V109			

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 215SMTP09

215SMTP09 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
20 - 24	3MVP35B49	-	3MVB380R	R1	AX	3
25 - 29	3MVP40B54				BX	
30 - 35	3MVP40B54		3MVB300R			
36 - 38	3MVP45B99					
39 - 41	3MVP50B64					
42 - 46	3MVP55B69					
47 - 51	3MVP55B69		3MVB250R			
52 - 57	3MVP60B74					
58 - 62	2MVP75C97Q	Q2	2C300R		CX	2
63 - 68	2MVP85C107Q					
69 - 74	2MVP95C117Q					
75 - 81	2MVP105C127Q					
82 - 86	2MVP85C107Q		2TC240	Q1		
87 - 92	2MVP95C117Q					
93 - 103	3MVP75C97Q		3MVC180R	R1		3
104 - 113	3MVP85C107Q					
114 - 123	3MVP95C117Q					
214 - 142	3MVP75C97Q		3MVC130Q	Q2		
143 - 161	3MVP90C112Q					
162 - 172	3MVP95C117Q					
173 - 189	3MVP105C127Q					
190 - 200	3MVP115C137Q					

215SMTP09 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
20	3TB36	P2	3TB380	Q1	BX	3
21	3TB38	P1				
22	3TB40					
23	3BK47H	H				
24	3BK50H					
25	3BK52H					
26 - 27	3B5V48	B				
28	3B5V50					
29	3B5V52					
30	3B5V54					
31	3B5V56					
32	3B5V42		3B5V278	B	5VX	
33 - 34	3B5V44					
35	3B5V48					
36 - 37	3B5V50					
38	3B5V52					
39 - 40	3B5V46		3B5V234			
41 - 42	3B5V48					
43	3B5V50					
44 - 45	3B5V52					
46 - 47	3B5V54					
48 - 49	3B5V56					
50 - 52	3B5V60					
53 - 54	3B5V62					
55 - 56	3B5V64					
57 - 58	4B5V52		4B5V184			4
59 - 60	4B5V54					
61 - 62	4B5V56					
63 - 64	4B5V58					
65 - 68	4B5V60				BX	
69 - 73	4B5V64					
74 - 75	4B5V66					
76 - 78	3B5V70		3B5V184		5VX	3
79 - 82	3B5V74					
83 - 84	3R5V80	R1				
85 - 89	3B5V80	B				
90 - 94	4Q5V59	Q1	4B5V124			4
95 - 99	4B5V60	B				
100 - 104	4B5V64					
105 - 110	3R5V85	R1	3B5V154			3
111 - 114	3B5V86	B				
115 - 119	3B5V90					
120 - 124	3B5V94					
125 - 132	3R5V90	R1	3B5V136			
133 - 135	3R5V92					
136 - 144	3R5V97					
145 - 151	3R5V103					
152 - 160	3R5V109					
161 - 165	3B5V110	B				
166 - 176	3R5V109	R1	3B5V124			
177 - 181	3B5V110	B				
182 - 186	3B5V124					
187 - 192	3R5V132	R1	3B5V136			
193 - 200	3B5V136	B				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 215SMTP15

215SMTP15 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
11 - 14	2VP42	-	2TB380	Q1	AX	2
15 - 19	2MVP35B49		3TB300		BX	
20 - 23	2VP60		2B5V250	B		
24 - 25						
26 - 28	2VP65					
29 - 32	2VP71					
33 - 34	2MVP60B74P	P2				
35 - 39	2VP71	-	2B5V200		5VX	
40 - 44	2VP75					
45 - 48	2V68B80					
49 - 54	2V58B70		2R5V160	R1		
55 - 61	2MVP75C97Q	Q2	2C180R		CX	
62 - 67	2MVP85C107Q					
68 - 75	2MVP95C117Q					
76 - 86	2V58B70	-	2Q5V97	Q1	5VX	
87 - 94	2MVP95C117Q	Q2	2C140R	R1	CX	
95 - 102	2MVP105C127Q					
103 - 118	2MVP85C107Q		2TC106	Q1		
119 - 130	3MVP80C102		3MVC86Q	Q2		3

215SMTP15 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
9	3BK32	-	3TB380	Q1	AX	3
10	3BK36					
11	3TB38	P1				
12	3BK45H	H				
13	3BK50H					
14	3BK52H					
15	3TB36	P2	3B5V278	B		
16	3TB40	P1				
17	3B5V42					
18	3BK50H	H				
19	3BK52H					
20	2BK50	-	2B5V278		BX	2
21	2BK52					
22	2BK55					
23	2BK57					
24 - 25	4TB36	P2	4B5V154			4
26	4TB38	P1				
27 - 28	4TB40					
29 - 30	4B5V44					
31 - 32	4B5V46					
33 - 34	3B5V42	B	3B5V154		5VX	3
35 - 37	3B5V46					
38 - 40	3B5V50					
41 - 43	3B5V48		3B5V136			
44 - 47	3B5V52					
48 - 51	3B5V56					
52 - 54	2B5V68		2B5V154			2
55 - 57	2B5V74					
58 - 60	2Q5V80	Q1				
61 - 63	2B5V80	B				
64 - 66	2Q5V85	Q1				
67 - 68	2B5V86	B	2B5V136			
69 - 72	2B5V80					
73 - 77	2B5V86					
78 - 81	2B5V90					
82 - 84	2B5V94					
85 - 86	2Q5V90	Q1	2B5V124			
87 - 89	2Q5V92					
90 - 94	2Q5V97					
95 - 99	2Q5V103					
100 - 105	2Q5V109					
106 - 108	2B5V110	B				
109 - 112	2Q5V103	Q1	2B5V110			
113 - 114	2Q5V109					
115 - 118	2B5V110	B				
119 - 122	2B5V124		2B5V124			
123 - 125	2Q5V132	Q1				
126 - 130	2B5V136	B				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 215SMTP25

215SMTP25 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
7 - 8	2VP42	-	2TB300	Q1	AX	2
9 - 10	2VP50					
11 -12			2TA245			
13 - 14	2VP60					
15 - 16	2VP65					
17 - 18	2VP71					
19 - 21	2VP65		2B5V184	B		
22 - 23	2MVP50B64					
24 - 25	2VP75					
26 - 28					5VX	
29 - 32	2VP65		2R5V140	R1		
33 - 35	2VP75					
36 - 38	2VP65		2B5V110	B		
39 - 43	2VP71					
44 - 50	2V58B70		2Q5V103	Q1		
51 - 58	2V68B80					
59 - 69	2V58B70		2B5V74	B		
70 - 80	2V68B70		2Q5V75	Q1		

215SMTP25 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2BK30	-	2TB380	Q1	AX	2
6	2BK36					
7	2TB40	P1				
8	2TB50	-				
9	2TB38	P1	2B5V278	B		
10	2TB40					
11	3BK36	-	3B5V200			3
12	3BK40					
13	3TB38	P1				
14	3B5V42					
15	3TB36	P2	3B5V160			
16 - 17	3BK45H	H				
18	3B5V42	P1				
19	3BK50H	H				
20	3BK52H					
21 - 22	3TB36	P2	3B5V124		BX	
23	3TB38	P1				
24 - 25	3BK47H	H				
26	3B5V44	P1				
27 - 28	3B5V46	B				
29	3B5V48					
30 - 31	2B5V58		2B5V136			2
32 - 33	2B5V62					
34 - 35	2B5V66					
36	2B5V66					
37 - 38	2B5V58		2B5V110		5VX	
39 - 41	2B5V62					
42 - 43	2B5V66					
44 - 46	2B5V70					
47 - 49	2B5V74					
50 - 52	2B5V80					
53 - 54	2B5V70		2B5V94			
55 - 56	2B5V74					
57 - 58	2Q5V80	Q1				
59 - 62	2B5V80	B				
63 - 65	2B5V86		2B5V90			
66 - 69						
70 - 72	2B5V90					
73 - 75	2B5V94					
76 - 77	2B5V86		2B5V80			
78 - 80	2Q5V92	Q1				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 215SMTP35

215SMTP35 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5 - 6	2VP42	-	2TB300	Q1	AX	2
7	2VP50					
8	2VP56					
9	2VP42		2B5V200	B		
10 - 11	2VP50					
12	2VP56					
13 - 14	2VP65					
15 - 17	2MVP55B69					
18 - 20	2VP60		2B5V136			
21 - 23	2MVP50B64					
24 - 25	2VP65		2B5V110			
26 - 28					BX	
29 - 32	2VP75					
33 - 36	2VP65		2B5V86		5VX	
37 - 41	2VP75					
42 - 46	2VP65		2B5V68			
47 - 50	2V58B70					

215SMTP35 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	2BK32	-	2B5V278	B	AX	2
6	2BK36					
7	2TB40	P1	2B5V200			
8	2B5V42					
9	2TB38					3
10						
11	3BK34	-	3B5V136			
12	3BK36					
13	3TB36	P2				
14	3BK45H	H				
15	3BL47H					
16	3BK50H					
17	3BK52H					
18	3BK55H					
19 - 20	2BK52	-	2B5V124		BX	2
21	2BK55					
22	2BK57					
23 - 24	2BK62					
25	2BK65					
26 - 27	2B5V64	B				
28	2B5V66					
29	2B5V70					
30 - 31	2B5V50		2B5V86			
32 - 33	2B5V54					
34 - 36	2B5V86		2B5V124			
37	2B5V90					
38 - 39	2B5V94					
40 - 42	2B5V60		2B5V74			
43 - 44	2B5V80		2B5V94			
45 - 46	2B5V86					
47 - 48	2B5V90					
49 - 50	2B5V94					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 307SMTP05

307SMTP05 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 99	3MVP85C107Q	Q2	3MVC360R	R2	CX	3
100 - 108	3MVP95C117Q					
109 - 122	3MVP85C107Q		3MVC300R			
123 - 134	3MVP815V95Q		3MV5V240S	S1	5VX	
135 - 148	3MVP915V105Q					
149 - 161	3MVP1015V115Q					
162 - 177	3MVP1115V125Q					
178 - 194	3MVP1015V115Q		3MV5V200R	R1		
195 - 213	3MVP1015V125Q					
214 - 237	3MVP1115V125Q		3MV5V180R			
238 - 262	3MVP1015V115Q		3MV5V150R			
263 - 280	3MVP1015V125Q					
281 - 296	4MVP1015V115	-	4MV5V132R			4
297 - 332			4MV5V118R			
333 - 362	4MVP1115V125					
363 - 394			4MV5B109R			
395 - 400	5MVP1015V115		5MV5V97R	R2		5

307SMTP05 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 91	4B5V60	B	4B5V234	B	5VX	4
92 - 97	4B5V64					
98 - 100	4B5V66					
101 - 103	4B5V68					
104 - 106	4B5V70					
107 - 112	4B5V74					
113 - 117	4B5V66		4B5V200			
118 - 121	4B5V68					
122 - 125	4B5V70					
126 - 130	4B5V74					
131 - 138	4B5V80	R1				
139 - 142	4B5V80	B				
143 - 147	4R5V85	R1				
148 - 152	4B5V86	B				
153 - 158	4B5V90					
159 - 165	4B5V86		4B5V184			
166 - 172	4B5V90					
173 - 180	4B5V94					
181 - 183	4R5V97	R1				
184 - 193	4R5V103					
194 - 196	4R5V109					
197 - 206	4B5V90	B	4B5V154			
207 - 215	4B5V94					
216 - 219	4R5V97	R1				
220 - 228	4R5V103					
229 - 233	4B5V90	B	4B5V136			
234 - 243	4B5V94					
244 - 248	4R5V97	R1				
249 - 255	4B5V90	B	4B5V124			
256 - 267	4B5V94					
268 - 273	4R5V97	R1				
274 - 279	4R5V103					
280 - 297	4R5V132		4B5V154			
298 - 305	4R5V140					
306 - 318	4R5V125		4B5V136			
319 - 336	4R5V132					
337 - 353	4R5V140					
354 - 368	4R5V132		4B5V124			
369 - 388	4R5V140					
389 - 394	4R5V125		4B5V110			
395 - 400	5B5V124		5R5V109			5

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 307SMTP09

307SMTP09 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
23 - 27	5MVP40B54	-	5MVB380R	R2	AX	5
28 - 30	5MVP45B59					
31 - 35	5MVP40B54		5MVB300R		BX	
36 - 41	5MVP50B64					
42 - 45	5MVP55B69					
46 - 48	5MVP60B74					
49 - 55	3MVP80C102Q	Q2	3MVC360R		CX	3
56 - 59	3MVP90C112Q					
60 - 63	3MVP95C117Q					
64 - 69	3MVP85C107Q					
70 - 75	3MVP95C117Q					
76 - 81	3MVP105C127Q					
82 - 94	3MVP815V95Q		3MV5V200R	R1	5VX	
95 - 104	3MVP915V105Q					
105 - 114	3MVP1015V115Q					
115 - 130	3MVP915V105Q		3MV5V160R			
131 - 146			3MV5V140R			
147 - 155			3MV5V132R			
156 - 170	4MVP1015V115	-	4MV5V132R			4
171 - 182			4MV5V125R			
183 - 200	4MVP1115V125					

307SMTP09 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
23 - 24	4B5V42	P1	4S5V375	S1	5VX	4
25	4B5V46	B				
26	4B5V48					
27 - 28	4B5V50					
29	5B5V52	Q1	5TB380	Q2	BX	5
30	5TB54					
31	5TB56					
32	5TB58					
33	5TB60					
34	5TB62					
35	5TB64					
36 - 37	4B5V50	B	4B5V278	B	5VX	4
38	4B5V52					
39 - 40	4B5V54					
41	4B5V56					
42 - 43	4B5V58					
44 - 46	4B5V62					
47 - 49	4B5V66					
50 - 51	4B5V58		4B5V234			
52 - 54	4B5V62					
55 - 56	4B5V64					
57	4B5V66					
58 - 60	4B5V68					
61 - 62	4B5V70					
63 - 65	4B5V74					
66 - 68	3R5V85	R1	3B5V250			3
69 - 71	3B5V86	B				
72 - 74	3B5V90					
75 - 77	3B5V94					
78 - 79	3R5V97	R1				
80 - 83	3R5V103					
84 - 87	4R5V80		4B5V184			4
88 - 93	4R5V85					
94 - 96	4B5V86	B				
97 - 100	4B5V90					
101 - 105	4B5V94					
106 - 107	4R5V97	R1				
108 - 113	4R5V103					
114 - 115	4R5V109					
116 - 123	4B5V110	B				
124 - 129	3R5V118	R1	3B5V184			3
130 - 137	3R5V125					
138 - 140	3R5V132					
141 - 149	4B5V90	B	4B5V124			4
150 - 155	4B5V94					
156 - 164	4R5V125	R1	4B5V154			
165 - 173	4R5V132					
174 - 178	4R5V140					
179 - 185	4R5V125		4B5V136			
186 - 196	4R5V132					
197 - 200	4R5V140					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 307SMTP15

307SMTP15 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
15 - 16	4MVP40B54	-	4MVB380R	R1	AX	4
17 - 19			4MVB300R		BX	
20						
21 - 22	4MVP45B59					
23 - 25	4MVP50B64					
26 - 27	4MVP60B74					
28 - 30	2MVP75C971	Q2	2C360R		CX	2
31 - 35	2MVP85C107Q					
36 - 42	2MVP75C97Q		2C270R			
43 - 46	2MVP85C107Q					
47 - 49	2MVP95C117Q					
50 - 53	2MVP105C127Q					
54 - 61	3MVP75C97Q		3MVC180R			3
62 - 67	3MVP85C107Q					
68 - 73	3MVP95C117Q					
74 - 82	3MVP95C117Q		3MVC160R			
83 - 92	3MVP815V95Q		3MV5V118R		5VX	
93 - 104	3MVP915V105Q					
105 - 119	3MVP915V105Q		3MV5V103R			
120 - 130	3MVP1015V115Q					

307SMTP15 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
12	3TB36	P2	3TB380	Q1	BX	3
13	3BK45H	H				
14	3B5V42	P1				
15	3B5V46	B				
16	3B5V48					
17	4B5V42	P1	4TB300			4
18	4B5V44					
19	4B5V46	B				
20 - 21	4B5V50					
22	3B5V54		3TB300			3
23	3B5V56					
24	3B5V58					
25 - 26	3B5V54		3B5V250	B	5VX	
27	3B5V56					
28 - 29	4Q5V46	Q2	4B5V184			4
30	4B5V46	B				
31	4B5V48					
32 - 33	4B5V50					
34 - 35	4B5V54					
36 - 37	4B5V56					
38 - 39	3B5V60		3B5V184			3
40 - 42	3B5V64					
43	3Q5V71	Q1				
44 - 46	3B5V70	B				
47 - 48	3B5V74					
49	3R5V80	R1				
50 - 52	3B5V80	B				
53 - 55	3B5V70		3B5V154			4
56 - 58	3B5V74					
59 - 62	4B5V70		4B5V136			
63 - 65	4B5V74					
66 - 67	3B5V86		3B5V154			
68 - 70	3B5V90					
71 - 73	3B5V94					
74 - 78	4B5V80		4B5V124			
79 - 83	4B5V86					
84 - 87	4B5V90					
88 - 91	4B5V94					
92 - 93	3R5V97	R1	3B5V124			3
94 - 98	3R5V103					
99 - 104	3R5V109					
105 - 109	3B5V124	B	3B5V136			
110 - 113	3R5V132	R1				
114 - 119	3B5V124	B	3B5V124			
120 - 126	3R5V132	R1				
127 - 130	3B5V136	B				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 307SMTP25

307SMTP25 Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
7 - 9	2MVP35B49	-	2TB380	Q1	BX	2
10 - 12			2B5V278	B		
13 - 14	2VP60					
15 - 17	2VP71					
18 - 20	2VP75		2B5V250			
21 - 23	2MVP70B84P	P2				
24 - 27	2MVP80B94Q	Q2	2TC200	Q1	CX	
28 - 33	2MVP75C97Q					
34 - 37	2MVP85C107Q					
38 - 41	2MVP95C117Q					
42 - 43	2MVP105C127Q					
44 - 52	2MVP95C117Q		2TC160			
53 - 56	2MVP95C117Q		2C140R	R1		
57 - 60	2MVP105C127Q					
61 - 73	3MVP80C102Q		3MVC96Q	Q2		3
74 - 80	3MVP95C117Q					

307SMTP25 Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
6	3BK36	-	3TB380	Q1	AX	3
7	3BK45H	H				
8	3BK50H					
9	3TB36	P2	3B5V278	B		
10	3BK47H	H				
11	3BK50H					
12	2BK50	-	2B5V278		BX	2
13	2BK55					
14	2BK60					
15	2B5V56	B				
16	2B5V60					
17	3B5V42	P1	3B5V184			3
18	3B5V44					
19	3B5V46	B				
20	3B5V50					
21 - 22	3B5V46		3B5V154		5VX	
23	3B5V48					
24	3B5V52					
25	3B5V54					
26	6B5V66					
27 - 28	3B5V60					
29 - 30	3B5V56		3B5V136			
31 - 32	3B5V60					
33 - 34	3B5V64					
35 - 36	3B5V68					
37 - 38	3B5V58		3B5V110			
39 - 41	3B5V62					
42 - 43	3B5V66					
44 - 46	3B5V70					
47 - 49	3B5V74					
50 - 51	2Q5V97	Q1	2B5V136			2
52 - 54	2Q5V103					
55	2Q5V109					
56 - 59	2B5V110	B				
60	3B5V80		3B5V94			3
61 - 64	3R5V85	R1				
65	3R5V90					
66 - 69	3B5V90	B				
70 - 72	3B5V94					
73 - 76	3B5V90		3B5V86			
77 - 78	3B5V94					
79 - 80	3R5V109	R1	3B5V94			

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 307SMTP35

307SMTP35 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
5 - 6	2VP42	-	2TB300	Q1	AX	2
7 - 8	2MVP35B49					
9 - 15	2BP65		2B5V234	B	BX	
16 - 18	2VP75		2B5V184			
19 - 22	2VP71		2B5V154		5VX	
23 - 24			2B5V136			
25 - 27	2V58B70					
28 - 30	2V58B80					
31 - 34	2V58B70		2Q5V109	Q1		
35 - 38	2V68B80					
39 - 42	2V58B70		2B5V86	B		
43 - 46	2V68B80					
47 - 50	2MVP85C107Q	Q2	2TC100	Q1	CX	

307SMTP35 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	3BK34	-	3TB300	Q1	AX	3
6	3TB30	P1				
7	3B5V42					
8	2B5V48	B	2B5V278	B		2
9	2B5V52					
10	2B5V60	-	2B5V234		BX	
11	2BK55					
12	2BK57					
13	2BK62					
14	2B5V44	P1	2B5V160		5VX	
15	2B5V48	B				
16	2B5V50					
17	2B5V52					
18	2B5V56					
19	2B5V60					
20	2B5V62					
21	2B5V68					
22 - 23	2B5V60		2B5V136			
24	2B5V64					
25 - 26	2B5V68					
27 - 28	2B5V74					
29 - 30	2B5V80					
31 - 32	2B5V86					
33 - 34	2B5V90					
35	2B5V94		2B5V110			
36 - 38	2B5V80					
39 - 40	2B5V86					
41	2B5V90					
42 - 44	2B5V94	Q1	3B5V86			3
45 - 46	2Q5V103					
47 - 48	3B5V80					
49 - 50	3B5V86					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 315SMTP05

315SMTP05 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
90 - 98	3MVP75C97Q	Q2	3MVC260R	R2	CX	3
99 - 112	3MVP815V95Q		3MV5V300S	S1	5VX	
113 - 123	3MVP915V105Q					
124 - 137	3MVP1015V115Q					
138 - 155	3MVP915V105Q		3MV5V240S			
156 - 171	3MVP1015V115Q					
172 - 186	3MVP1115V125Q					
187 - 204	4MVP1015V115	-	4MV5V200R	R1		4
205 - 227			4MV5V180R			
228 - 246	4MVP1115V125					
247 - 266	5MVP915V105		5MV5V140S	S1		5
267 - 295	5MVP1015V115					
296 - 327			5MV5V125S			
328 - 356	5MVP1115V125					
357 - 379			5MV5V118S			
380 - 400			5MV5V198R	R1		

315SMTP05 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 94	3B5V94	B	3S5V375	S1	5VX	3
95 - 100	3R5V103	R1				
101 - 106	3R5V109					
107 - 110	4B5V74	B	4B5V250	B		4
111 - 112	4R5V80	R1				
113 - 119	4B5V80	B				
120 - 126	4B5V86					
127 - 134	4B5V90					
135 - 139	4B5V94					
140 - 142	4R5V97	R1				
143 - 148	4R5V103					
149 - 155	3R5V118		3B5V278			3
156 - 165	3B5V124	B				
166 - 168	3R5V132					
169 - 177	4R5V90	R1	4B5V184			4
178 - 183	4R5V92					
184 - 186	4B5V94	B				
187 - 189	5B5V94	R1	5B5V184	R1		5
190 - 193	5R5V97					
194 - 203	5R5V103					
204 - 208	5R5V109					
209 - 221	5B5V110					
221 - 233	4R5V118		4B5V184	B		4
234 - 247	4R5V125					
248 - 256	4R5V132					
257 - 270	5R5V118		5B5V160	R1		5
271 - 286	5B5V124					
287 - 297	5R5V132					
298 - 302	5B5V136					
303 - 315	5B5R116		5B5V136			
316 - 321	5R5V125					
322 - 334	5B5V124					
335 - 345	6R5V118		6B5V124			6
346 - 348	6S5V125	S1				
349 - 369	6B5V124	R1				
370 - 381	6S5V132	S1				
382 - 400	6B5V136	R1				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 315SMTP09

315SMTP09 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
24 - 29	6MVP40B54	-	6MVB380R	R2	BX	6
30 - 34	6MVP40B54					
35 - 37	5MVP55B69		5MVB380R			5
38 - 54			5MVB300R			
46 - 52	3MVP75C97Q	Q2	3MVC360R		CX	3
53 - 59	3MVP85C107Q					
60 - 70	3MVP105C127Q					
71 - 76	3MVP115C137Q					
77 - 87	3MVP915V105Q		3MV5V240S	S1	5VX	
88 - 95	4MVP1015V115	-	4MV5V240S			4
96 - 108			4MV5V212S			
109 - 121	4MVP1115V125		4MV5V200R	R1		
122 - 130	5MVP915V105		5MV5V180S	S1		5
131 - 143	5MVP1015V115		5MV5V160S			
144 - 159			5MV5V140S			
160 - 177	5MVP1115V125					
178 - 200			5MV5V125S			

315SMTP09 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
25	4C60Q	Q2	4C500R	R1	CX	4
26	4B5V48	B	4S5V375	S1	5VX	
27	4B5V50					
28	4B5V52					
29	4B5V54					
30	4B5V56					
31	4B5V58					
32 - 33	4B5V60					
34	4B5V62					
35	4B5V64					
36	4B5V66					
37 - 38	4B5V70					
39 - 41	4B5V74					
42 - 44	4B5V80					
45 - 46	4B5V86					
47 - 48	3B5V90		3S5V375			3
49 - 51	3B5V94					
52 - 55	3R5V103	R1				
56 - 59	3R5V109					
60 - 63	3R5V118					
64 - 67	3R5V125					
68 - 71	3R5V132					
72 - 73	4B5V90	B	4B5V250	B		4
74 - 78	4B5V94					
79 - 82	4R5V103	R1				
83 - 87	4R5V109					
88 - 93			4B5V234			
94 - 100	4R5V125		4B5V250			
101 - 106	4R5V132					
107 - 112			4B5V234			
113 - 115	5R5V109		5B5V184	R1		5
116 - 121	5B5V110					
122 - 129	5R5V118					
130 - 137	5B5V124					
138 - 142	5R5V132					
143 - 150	5B5V136					
151 - 158	5B5V124					
159 - 163	6S5V132	S1	6B5V160			6
164 - 173	6B5V136	R1				
174 - 185	6B5V124		6B5V136			
186 - 191	6S5V132	S1				
192 - 200	6B5V136					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 315SMTP15

315SMTP15 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
17 - 22	5MVP40B54	-	5MVB300R	R2	BX	5
23 - 27	5MVP55B69					
28 - 31	5MVP50B64		5MVB250R			
32 - 35	5MVP60B74					
36 - 41	5MVP70B74					
42 - 48	3MVP75C97Q	Q2	3MVC240R	R1	CX	3
49 - 55	3MVP90C112Q					
56 - 63	3MVP85C107Q		3MVC200R			
64 - 69	3MVP915V105Q		3M5V180R		5VX	
70 - 76	3MVP1015V115Q					
77 - 86			3MV5V160R			
87 - 95	3MVP915V105Q		3MV5V132R			
96 - 104	4MVP1015V115	-	4MV5V132R			4
105 - 114	4MVP1115V125					
115 - 130	5MVP915V105		5MV5V97R	R2		5

315SMTP15 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
13	5B5V42	P2	5TB380	Q2	AX	5
14	5B5V46					
15	5TB50					
16	5TB52					
17	5TB54	Q1				
18	4B5V42	P1	4B5V278	B	5VX	4
19	4Q5V46	Q2				
20	4B5V46	B				
21	4B5V48					
22 - 23	4B5V46		4B5V250			
24 - 25	4B5V50					
26	4B5V52		3B5V250			3
27 - 28	3B5V56					
29 - 30	3B5V60					
31 - 32	3B5V66					
33 - 35	3B5V70					
36 - 37	3B5V74					
38 - 39	4B5V64		4B5V200			4
40	4B5V66					
41 - 42	4B5V68					
43	4B5V70					
44 - 46	4B5V74					
47 - 48	4B5V80					
49 - 50	4R5V85	R1				
51 - 53	4B5V86	B				
54 - 55	4B5V90					
56 - 58	4B5V94					
59	4R5V97	R1				
60 - 62	4R5V103					
63 - 65	4R5V109					
66 - 67	4B5V110	B				
68 - 69	4B5V90		4B5V160			
70 - 73	4B5V94					
74 - 78	4R5V103	R1				
80 - 82	4R5V109					
83 - 85	4B5V110	B				
86 - 89	4R5V118	R1				
90 - 95	4R5V125					
96 - 100	4R5V132					
101 - 105	4R5V140					
106 - 112	4R5V125		4B5V136			
113 - 118	4R5V132					
119 - 124	4R5V140					
125 - 130	4R5V132		4B5V124			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 315SMTP25

315SMTP25 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
10	3MVP35B49	-	3MVB300R	R1	BX	3
11 - 12	3MVP40B54					
13	3MVP45B59					
14 - 15	3MVP50B64					
16 - 17	3MVP55B69					
18 - 20	4MVP45B59		4MVB200R			4
21 - 23	4MVP55B69					
24 - 26	4MVP60B74					
27 - 29	4MVP70B84					
30 - 33	4MVP80B94Q	Q2	3MVC180R		CX	3
34 - 39	3MVP75C97Q					
40 - 45	3MVP95C117Q					
46 - 49	3MVP105C127Q					
50 - 56	3MVP915V105Q		3MV5V132R		5VX	3
57 - 63			3MV5V118R			
64 - 70	3MVP1015V115Q	-				
71 - 80			3MV5V103R			

315SMTP25 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
6	4TB34	P2	4TB380	Q1	AX	4
7	4TB38	P1				
8	4B5V44					
9	4B5V48	B				
10	3TB36	P2	3B5V278	B	BX	3
11	3BK45H	H				
12	3B5V44	P1				
13	3B5V48	B				
14	3B5V52					
15	3B5V56					
16	3B5V58					
17	4B5V42	P1	4B5V184			4
18	4B5V44					
19	4B5V48	B				
20	4B5V50					
21	4B5V52					
22 - 23	4B5V56					
24	4B5V60					
25	4B5V62					
26	4B5V64					
27	4B5V66					
28	4B5V68					
29 - 30	3B5V62		3B5V154		5VX	3
31	3B5V66					
32 - 33	3B5V70					
34 - 35	3B5V74					
36 - 37	3R5V80	R1				
38 - 39	3R5V85					
40 - 42	3R5V90					
43 - 44	3B5V94	B				
45 - 46	3B5V86		3B5V136			
47 - 48	3B5V90					
49 - 51	3B5V94					
52 - 55	3R5V103	R1				
56 - 59	3B5V110	B				
60 - 63	3R5V118	R1				
64 - 67	3B5V124	B				
68 - 69	3R5V132	R1				
70 - 73	3B5V136	B				
74 - 77	3R5V132	R1	3B5V124			
78 - 80	3B5V136	B				

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 315SMTP35

315SMTP35 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
7 - 8	3MVP35B49	-	3MVB300R	R1	AX	3
9 - 10	2MVP35B49		2B5V250	B	BX	2
11 - 12	2MVP45B59					
13 - 14	2VP71					
15 - 16	2MVP70B84P	P2				
17 - 18	2MVP80B94Q	Q2				
19 - 20	2V58B70	-	2B5V184		5VX	
21 - 23	2V68B80					
24 - 27	2MVP85C107Q	Q2	2TC200	Q1	CX	3
28 - 30	2MVP95C117Q					
31 - 38	3MVP75C97Q		3MBV130Q	Q2		
39 - 43	3MVP90C112Q					
44 - 50	3MVP105C127Q					

315SMTP35 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5	3BK32	-	3TB300	Q1	AX	3
6	3TB36	P2				
7	3B5V42	P1				
8	3BK55H	H				
9	3B5V54	B				
10	3TB36	P2	3B5V200	B	BX	
11	3B5V44	P1				
12	3B5V48	B				
13	3B5V52					
14	3B5V56					
15	3B5V60					
16 - 17	3B5V66					
18	3B5V52		3B5V154		5VX	
19	3B5V56					
20	3B5V58					
21	3B5V62					
22 - 23	3B5V54		3B5V124			
24 - 25	3B5V58					
26	3B5V62					
27	3B5V64					
28	3B5V66					
29	3B5V68					
30 - 31	3B5V74					
32 - 33	3B5V86		2B5V136			
34 - 35	3B5V90					
36	3B5V94					
37	3R5V92	R1				
38 - 39	3R5V103					
40 - 41	3B5V86	B	3B5V110			
42 - 43	3B5V90					
44 - 45	3B5V94					
46 - 48	3R5V103	R1				
49 - 50	3R5V109					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 407SMTP05B

407SMTP05B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
112 - 117	3MVP915V105Q	Q1	3MV5V300S	S1	5VX	3
118 - 137	4MVP1015V115	-	4MV5V300S			4
138 - 151	4MVP1115V125		4MV5V280S			
152 - 161	4MVP1015V115		4MB5V140S			
162 - 185	5MVP915V105		5MV5V200S			5
186 - 202	5MVP1015V115					
203 - 220	5MVP1115V125					
221 - 244			5MV5V180S			
245 - 270	6MVP1015V115		6MV5V150S			6
271 - 302			6MB5V132S			
303 - 315	6MVP1115V125		6MV5V140S			

407SMTP05B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 93	4R5V97	R1	4S5V375	S1	5VX	4
94 - 98	4R5V103					
99 - 102	4R5V109					
103 - 107	4B5V110	B				
108 - 113	4R5V118	R1				
114 - 117	4R5V125					
118 - 125	6B5V86		6B5V250	R1		6
126 - 130	6B5V90					
131 - 136	6B5V94					
137 - 139	6R5V97					
140 - 146	6R5V103					
147 - 155	5R5V109		5B5V250			5
156 - 159	5B5V110					
160 - 168	5R5V118					
169 - 178	5R5V125					
179 - 188	5R5V132					
189 - 196	5B5V136					
197 - 199	5R5V140					
200 - 210	6R5V109		6B5V184			6
211 - 222	6S5V125	S1	6B5V200			
223 - 235	6S5V132					
236 - 249	6S5V140					
250 - 255	6S5V132		6B5V184			
256 - 261	6S5V140					
262 - 267	6B5V136					
268 - 272	6R5V118	R1	6B5V154			
273 - 288	6S5V125	S1				
289 - 300	6S5V132					
301 - 317	6S5V136	R1				
318 - 327	8S5V140	S1	8S5V150	S1		8
328 - 340	8S5V132		8S5V132			
341 - 359						
360 - 381	8S5V140		8S5V125			
382 - 400						

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 407SMTP15B

407SMTP15B Variable Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
31 - 33	3MVP75C97Q	Q2	3MVC360R	R2	CX	3
34 - 37	3MVP85C107Q					
38 - 40	3MVP95C117Q					
41 - 43	3MVP105C127Q					
44 - 48	3MVP815V95Q		3MV5V240S	S1	5VX	
49 - 55	3MVP915V105Q					
56 - 60	3MVP1015V115Q					
61 - 67	3MVP915V105Q		3MV5V200R	R1		
68 - 72	3MVP1015V115Q					
73 - 80	4MVP1115V125	-	4MV5V200R			4
81 - 89			4MV5V180R			
90 - 99			4MV5V160R			
100 - 108	5MVP915V105		5MV5V125S	S1		5
109 - 123			5MV5V109R	R2		
124 - 130	5MVP1115V125		5MV5V118S	S1		

407SMTP15B Fixed Pitch

Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
15	4Q5V46	Q2	4S5V375	S1	5VX	4
16	4B5V46	B				
17	4B5V48					
18	4B5V52					
19	4B5V54					
20	4B5V58					
21	4B5V60					
22	4B5V62					
23	4B5V66					
24 - 25	4B5V70					
26	4B5V56		4B5V278	B		
27	4B5V58					
28	4B5V60					
29 - 30	4B5V64					
31	4B5V66					
32 - 33	4B5V70					
34 - 35	4B5V74					
36 - 37	4B5V70		4B5V250			
38 - 39	4B5V74					
40 - 41	4R5V80	R1				
42	4B5V80	B				
43	4R5V85	R1				
44 - 45	4B5V86	B				
46 - 47	4B5V90					
48	4B5V86		4B5V234			
49 - 51	4B5V90					
52 - 53	4B5V94					
54 - 55	4R5V103	R1	4B5V200			
56 - 58	4R5V90					
59 - 60	4R5V92					
61 - 62	4B5V94	B				
63	4R5V97	R1				
64 - 66	4R5V103					
67 - 68	4R5V109					
69 - 72	4B5V110	B				
73 - 76	4R5V118	R1				
77 - 81	4R5V125					
82 - 85	4R5V132					
86 - 88	4R5V125		4B5V184			
89 - 93	4R5V132					
94 - 99	4R5V140					
100 - 102	6R5V97		6B5V124	R1		6
103 - 107	6R5V103					
108 - 110	6R5V109					
111 - 117	6B5V110					
118 - 123	6R5V118					
124 - 128	6R5V109		6B5V110			
129 - 130	6R5V110					

Notes: Pre-selected belt drives are based on the following guidelines:

- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 407SMTP25B

407SMTP25B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
9 - 10	4MVP45B59	-	4MBV380R	R1	AX	4
11 - 12	4MVP40B54		4MVB300R		BX	
13 - 16	4MVP55B69					
17 - 19	4MVP70B84					
20 - 21	4MVP80B94Q	Q2	2C270R		CX	2
22 - 24	2MVP75C97Q					
25 - 27	2MVP85C107Q					
28 - 19	2MVP95C117Q					
30 - 33			2TC240	Q1		
34 - 37	2MVP105C127Q		3MV5V180R	R1	5VX	3
38 - 40	3MVP915V105Q					
41 - 44	3MVP1015V115Q					
45 - 48	3MVP1115V125Q					
49 - 52	3MVP915V105Q		3MV5V140R			
53 - 57	3MVP1015V115Q					
58 - 62	3MVP1115V125Q					
63 - 68	3MVP1015V115Q		3MV5V118R			
69 - 72	4MVP1015V115	-	4MV5V103R			
73 - 80			4MV5V97R			

407SMTP25B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	4TB40	P2	4TB380	Q1	AX	4
8	4B5V44	P1				
9	4B5V50	B				
10	4B5V56					
11	3B5V42	P1	3B5V278	B	5VX	3
12	3B5V46	B				
13	3B5V52					
14	3B5V54					
15	3B5V58					
16	3B5V54		3B5V234			
17	3B5V56					
18	3B5V60					
19	3B5V64					
20	3B5V66					
21	4B5V48		4B5V160			4
22	4B5V50					
23	4B5V52					
24	4B5V54					
25 - 26	4B5V58					
27	4B5V60					
28	4B5V62					
29	4B5V64					
30 - 31	3B5V80		3B5V184			3
32 - 33	3B5V86					
34	3R5V90	R1				
35 - 37	3B5V94	B				
38 - 39	3R5V103	R1				
40 - 41	3R5V109					
42 - 43	3B5V110	B				
44 - 45	3R5V118	R1				
46 - 48	3B5V124	B				
49	3R5V132	R1				
50 - 52	3R5V118		3B5V160			
53 - 56	3B5V124	B				
57	3R5V136					
58 - 62	3B5V136					
63 - 64	3R5V125	R1	3B5V136			
65 - 67	3R5V132					
68 - 72	3B5V136	B				
73 - 77	5R5V103	R1	5B5V94	R1		5
78 - 80	5R5V109					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 415SMTP05B

415SMTP05B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
93 - 104	5MVP1015V115	-	5MV5V375	U0	5VX	5
105 - 111	5MVP105C127		5MVC360S	S2	CX	
146 - 165	6MVP1015V115		6MV5V240U	U0	5VX	6

415SMTP05B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
90 - 92	5R5V132	R1	5U5V500	U0	5VX	5
93 - 96	5B5V136					
97 - 102	6R5V109		6U5V375			6
103 - 105	6B5V110					
106 - 111	6R5V118					
112 - 113	6B5V124					
114 - 117	6S5V125	S1				
118 - 122	6S5V132					
123 - 129	6B5V136	R1				
130 - 131	6S5V140	S1				
132 - 137	6R5V109	R1	6S5V280	S1		
138 - 140	6B5V110					
141 - 148	6R5V118					
149 - 157	6S5V125	S1				
158 - 165	6S5V132					
166 - 168	6B5V136	R1				
169 - 176	8S5V125	S1	8U5V250	U1		8
177 - 186	8S5V132					
187 - 199	8S5V140					
200 - 208	8S5V125		8U5V212			
209 - 220	8S5V132					
221 - 232	8S5V140					
233 - 235	105V1250J	J	105V1870J	J		10
236 - 249	105V1320J					
250 - 261	105V1400J					
262 - 275	10U5V125	U1	10U5V160	U1		
276 - 292	10U5V132					
293 - 309	10U5V140					
310 - 332			10U5V150			
333 - 354			10U5V140			
355 - 372			10U5V132			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 415SMTP15B

415SMTP15B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
24 - 28	5MVP75C97	-	5MVC440U	U0	CX	5
29 - 33			5MVC360S	S2		
34 - 38	5VMP85C107					
39 - 44	5MVP105C127					
45 - 48	4MVP1015V115		4MV5V300S	S1	5VX	4
49 - 52	4MVP1115V125					
53 - 56			4MV5V280S			
57 - 62	5MVP915V105		5MV5V212U	U0		5
63 - 67	5MVP1015V115					
68 - 74	5MVP11115V115					
75 - 80	6MVP1015V115		6MV5V180S	S2		6
81 - 90			6MV5V160S			
91 - 101			6MV5V140S			

415SMTP15B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
12	4Q5V49	Q1	4U5V500	U0	5VX	4
13	4B5V52	B				
14	4B5V54					
15	4B5V60					
16	4B5V62					
17	4B5V66					
18	4B5V70					
19	4B5V74					
20	4B5V80					
21	4R5V85	R1				
22	4R5V86	B				
23	4B5V90					
24	4B5V94					
25 - 26	4B5V74		4S5V375	S1		
27	4R5V80	R1				
28	4R5V85					
29 - 30	4R5V90					
31 - 32	4B5V94	B				
33	4R5V97	R1				
34 - 35	4R5V103					
36	4R5V109					
37	4B5V110	B				
38	6B5V86	R1	6S5V280			6
39 - 41	6R5V90					
42 - 43	6B5V94					
44	6B5V86		6B5V250	R1		
45 - 46	6B5V90					
47 - 48	6B5V94					
49	6R5V97					
50 - 52	6R5V103					
53 - 55	6R5V109					
56 - 57	6B5V110					
58 - 60	6R5V118					
61 - 64	6B5V124					
65 - 66	6S5V132	S1				
67	6B5V136	R1				
68 - 71	6S5V140	S1				
72 - 75	6R5V118	R1	6B5V200			
76 - 79	6B5V124					
80 - 83	6S5V132	S1				
84 - 86	6B5V136	R1				
87 - 88	6S5V140	S1				
89 - 92	6R5V118	R1	6B5V160			
93 - 98	6S5V125	S1				
99 - 101	6S5V132					
102 - 106	8S5V132		8S5V160			8
107 - 112	8S5V140					
113 - 120			8S5V150	S1		
121 - 128	8S5V132		8S5V132			
129 - 130	8S5V140					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 415SMTP25B

415SMTP25B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
11 - 12	5MVP40B54	-	5MVB300R	R2	BX	5
13 - 14	5MVP50B64					
15 - 16	5MVP60B74					
17 - 19	3MVP85C107Q	Q2	3MVC360R		CX	3
20 - 21	3MVP95C117Q					
22 - 24	4MVP75C97Q	Q3	4MVC270R			4
25 - 28	4MVP95C117Q					
29 - 33	4MVP115C137Q					
34 - 38	4MVP95C117Q		4MVC200R			
39 - 46	4MVP1015V115	-	4MV5V180R	R1	5VX	5
47 - 51	5MVP915V105		5MV5V140S	S1		
52 - 56	5MVP1015V115					
57 - 61	5MVP1115V125					
62 - 67			5MV5V125S			
68 - 72			5MV5V118S			
73 - 80			5MV4V109R	R2		

415SMTP25B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
6	3B5V42	P1	3U5V500	U0	5VX	3
7	3B3V50	B				
8	3B5V44	P1	3S5V375	S1		
9	3V5B50	B				
10	3B5V54					
11	3B5V60					
12	3B5V66					
13	3B5V70					
14	4B5V50		4B5V250	B		4
15	4B5V56					
16	4B5V58					
17	4B5V62					
18	4B5V64					
19	4B5V68					
20	4B5V74					
21	3B5V86		3B5V278			3
22	3B5V90					
23	3R5V92	R1				
24	3R5V97					
25	3R5V103					
26	3R5V109					
27	3B5V110	B				
28 - 29	3R5V118	R1				
30 - 31	3B5V124	B				
32 - 33	4R5V90	R1	4B5V184			4
34	4B5V90	B				
35	4B5V94					
36	4B5V97	R1				
37 - 38	4R5V103					
39 - 41	5B5V94		5B5V160	R1		5
42	5R5V97					
43 - 44	5R5V103					
45	5R5V109					
46 - 47	5B5V110					
48 - 50	5R5V118					
51	5R5V125					
52 - 54	6R5V97		6B5V124			6
55 - 56	6R5V103					
57 - 58	6R5V109					
59 - 62	6B5V110					
63 - 66			6R5V118			
67 - 70	6R5V118					
71 - 74	6B5V124	S1				
75 - 78	6S5V132					
79 - 80	6S5V140					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 507SMTP15B

507SMTP15B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
28 - 30	5MVP915V105	-	5MV5V440U	U0	5VX	5
31 - 35			5MV5V375U			
36 - 39	5MVP1015V115					
40 - 43	5MVP1115V125					
44 - 49	6MVP1015V115		6MV5V300U			6
50 - 53			6MV5V280U			
54 - 61			6M5V240U			

507SMTP15B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
22	5B5V86	R1	5U5V500	U0	5VX	5
23 - 24	5B5V90					
25	5B5V94					
26	5R5V103					
27 - 28	6B5V80		6U5V375			6
29 - 30	6V5V86					
31	6B5V90					
32 - 33	6R5V97					
34 - 35	6R5V103					
36 - 38	6R5V109					
39 - 41	6R5V118					
42 - 44	6B5V124					
45 - 46	6S5V132	S1				
47 - 48	6B5V136	R1				
49 - 51	6R5V109		6S5V280	S1		
52 - 54	6R5V118					
55 - 58	6B5V110		6B5V250	R1		
59 - 61	6R5V118					
62 - 65	8S5V125	S1	8U5V250	U1		8
66 - 69	8S5V132					
70 - 72	8S5V140					
73 - 77	8S5V125		8U5V212			
78 - 81	8S5V132					
82 - 87	8S5V140					
88 - 92	105V1320J	J	105V1870J	J		10
93 - 97	105V1400J					
98 - 102	10U5V125	U1	10U5V160	U1		
103 - 108	10U5V132					
109 - 115	10U5V140					
116 - 123			10U5V150			
124 - 130			10U5V140			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 507SMTP25B

507SMTP25B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
12 - 14	6MVP60B74	-	6MVB380R	R2	BX	6
15 - 17	3MVP85C107Q	Q2	3MVC440U	U0	CX	3
18 - 20	3MVP105C127Q					
21 - 24	3MVP915V105Q		3MV5V300S	S1	5VX	
25 - 28	4MVP1015V115	-	4MV5V280S			4
29 - 31	4MVP1115V125					5
32 - 36	5MVP915V105		5MV5V200S			
37 - 40			5MV5V180S			
41 - 44	5MVP1015V115					
45 - 48	5MVP1115V125					
49 - 53	5MVP1015V115		5MV5V150S			
54 - 61	5MVP1115V125		5MV5V140S			

507SMTP25B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
7	4B5V50	B	4U5V500	U0	5VX	4
8	4B5V56					
9	4B5V64					
10	5B5V52	Q1	5U5V375	R1		5
11	5B5V58					
12	5B5V64					
13	5B5V68					
14	5B5V74					
15	5B5V80	R1				
16	5R5V90					
17	5B5V90					
18	5B5V94					
19	5R5V103					
20 - 21	5B5V110					
22	5B5V80		5B5V250			
23	5R5V85					
24	5B5V86					
25	5B5V90					
26	5B5V94					
27	5B5V97					
28	5R5V103					
29	5R5V109					
30 - 31	5B5V110					
32 - 33	5R5V118					
34	5B5V124					
35 - 36	6R5V103		6B5V200			6
37 - 39	6B5V110					
40 - 41	6R5V118					
42 - 44	6B5V124					
45 - 46	6S5V132	S1				
47 - 49	6S5V140					
50 - 53	6R5V118	R1	6B5V154			
54 - 57	6B5V124					
58 - 59	6S5V132					
60 - 61	6B5V136					
62 - 66	8S5V140	S1	8S5V150	S1		8
67 - 71	8S5V132		8S5V132			
72 - 80	8S5V140		8S5V125			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 608SMTP15B

608SMTP15B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
No Drives Available						

608SMTP15B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
20	8R5V80	R2	8U5V500	U1	5VX	8
21	8R5V85					
22 - 23	8R5V90					
24	8S5V97	S1				
25 - 26	8S5V103					
27 - 28	8S5V109					
29 - 30	8S5V118					
31 - 32	8S5V125					
33 - 34	8S5V132					
35 - 37	8S5V140					
38 - 40	8S5V118		8U5V375			
41 - 42	8S5V125					
43 - 45	8S5V132					
46 - 48	8S5V140					
49 - 51	10U5V125	U1	105V3150M	M		10
52 - 54	10U5V132					
55 - 57	10U5V140					
58 - 60	10U5V132		10U5V280	U1		
61 - 64	10U5V140					
65 - 68	10U5V132		10U5V250			
69 - 72	10U5V140		10U5V250			
73 - 75	10U5V125		10U5V212			
76 - 80	10U5V132					
81 - 84	10U5V140					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Accessories Shaft Mount Reducers

Pre-selected Belt Drives - 608SMTP25B

608SMTP25B Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
13 - 14	5MVP75C97	-	5MVC440U	U0	CX	5
15 - 16	5MVP85C107					
17 - 20	5MVP915V105		5MV5V375U		5VX	
21 - 24			5MV5V300U			6
25 - 28	6MVP1015V115		6MV5V280U			
29 - 32			6MV5V240U			
33 - 35			6MV5V212U			

608SMTP25B Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
9	5B5V66	Q1	5U5V500	U0	5VX	5
10	5Q5V75	Q2				
11	5B5V80	R1				
12	5B5V66					
13	5B5V94					
14	5R5V80		5U5V375			
15	5B5V80					
16	5R5V90					
17	5B5V90					
18	5R5V97					
19	5R5V103					
20	5B5V110					
21 - 22	5R5V118					
23	5R5V125					
24	5R5V132					
25	5B5V136					
26	5R5V140					
27	6B5V110		6S5V280	S1		6
28 - 29	6R5V118					
30 - 31	6B5V124					
32 - 33	6S5V132	S1				
34 - 35	6S5V140					
36 - 37	8S5V132		8U5V250	U1		8
38 - 39	8S5V140					
40 - 41			85V2360J	J		
42 - 43	8S5V132		8U5V212	U1		
44 - 46	8S5V140					
47 - 49	8S5V132		85V1870J	J		
50 - 52	8S5V140					
53 - 54	10U5V125	U1	10U5V160	U1		10
55 - 57	10U5V132					
58 - 62	10U5V140					
63 - 66	10U5V132		10U5V140			
67 - 70	10U5V132					
71 - 74	10U5V140		10U5V132			
75 - 78			10U5V125			
79 - 80			10S5V118			

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Pre-selected Belt Drives - 800SMTP25

800SMTP25 Variable Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Variable Pitch	Bushing	Fixed Pitch	Bushing		
No Drives Available						

800SMTP25 Fixed Pitch						
Output rpm	Driver		Driven		Belts	Belt Qty.
	Fixed Pitch	Bushing	Fixed Pitch	Bushing		
5 - 9	No Drives Available					
10	85V710SF	SF	8U5V500	U1	5V	8
11	6R5V80	R1	6U5V500	U0	5V	6
12	6B5V86	R1	6U5V500	U0	5V	6
13	6B5V90	R1	6U5V500	U0	5V	6
14	6R5V103	R1	6U5V500	U0	5V	6
15	6R5V109	R1	6U5V500	U0	5V	6
16	6B5V110	R1	6U5V500	U0	5V	6
17	6S5V125	S1	6U5V500	U0	5V	6
18	6B5V124	R1	6U5V500	U0	5V	6
19	6B5V136	R1	6U5V500	U0	5V	6
20	6S5V140	S1	6U5V500	U0	5V	6
21	5S8V132	S1	58V4450N	N	8V	5
22	5S8V140	S1	58V4450N	N	8V	5
23	5S8V132	S1	5U8V400	U0	8V	5
24 - 25	5S8V140	S1	5U8V400	U0	8V	5
26	6S8V132	S1	68V3550N	N	8V	6
27 - 28	6S8V140	S1	68V3550N	N	8V	6
29 - 30	8S5V132	S1	85V3150M	M	5VX	8
31	8S5V140	S1	85V3150M	M	5VX	8
32 - 33	10U5V132	U1	10U5V280	U1	5VX	10
34 - 35	10U5V140	U1	10U5V280	U1	5VX	10
36 - 38	10U5V132	U1	10U5V250	U1	5VX	10
39 - 40	10U5V140	U1	10U5V250	U1	5VX	10
41 - 42	10U5V140	U1	105V2360M	M	5VX	10
43 - 44	8S8V140	S2	8U8V224	U1	8V	8
45 - 47	10U8V140	U1	10U8V212	U1	8V	10
48 - 50	10U8V140	U1	10U8V200	U1	8V	10
51 - 80	No Drives Available					

Notes: Pre-selected belt drives are based on the following guidelines:
- NEMA Recommendations for Sheave Diameter and Width
- Average Service at Reducer Rated Load
- 2 Belt Minimum

For assistance in selecting a belt drive and for other information pertaining to application conditions (including, but not limited to, fire hazard, explosion hazard, or choked input), contact Application Engineering (1-800-626-2093).

It is recommended that, for motors 250HP and larger, the above sheave diameters should be checked with the motor manufacturer to be sure they meet recommendations for minimum pitch diameter.

Belt Guard

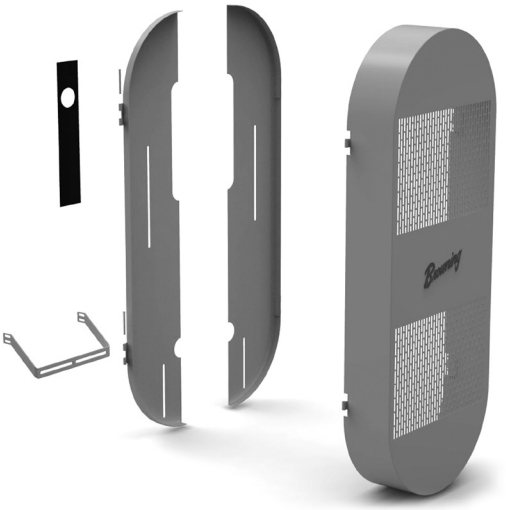
Belt guard assemblies consist of a guard kit and a mounting bracket kit as shown in the tables. Mounting bracket kit must be purchased separately. These belt guards may also be used with screw conveyor drives.

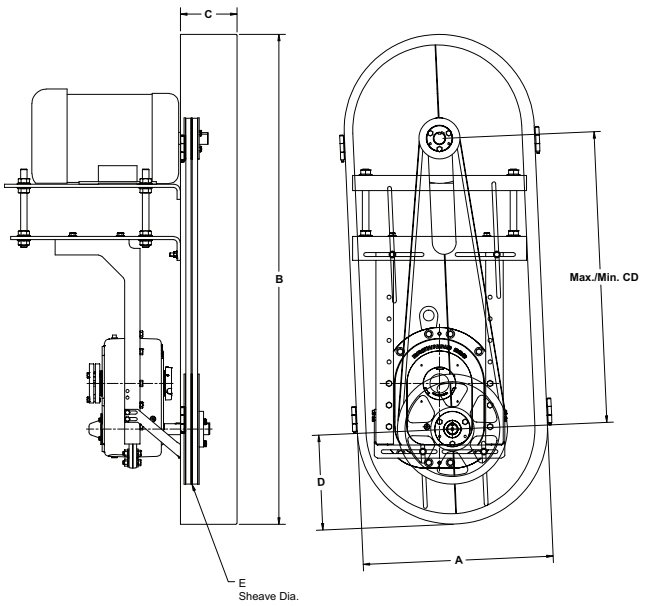
Belt guard standard color is yellow. Brackets supplied can accommodate fan kits when required.

Plated fasteners providing protection in outdoor applications are supplied with the guard assembly.

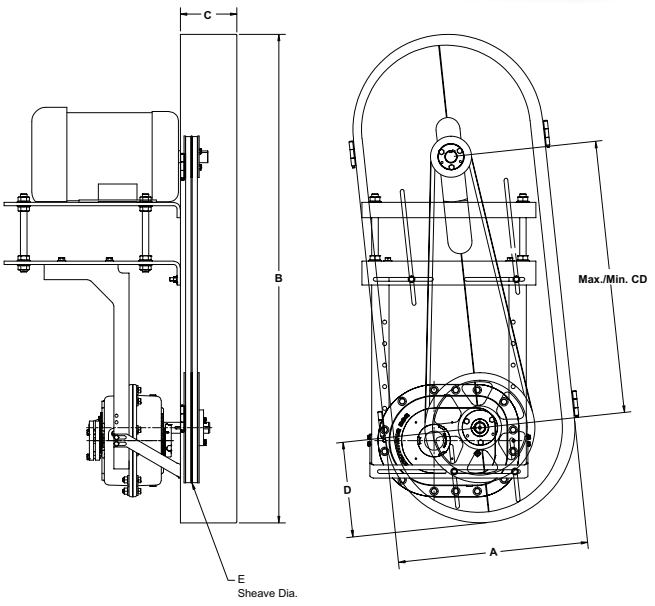
Belt guards have a hinged, removable cover.

Belt guards may be assembled with the belt drive already installed.





Top Mount



Side Mount

Dimensions in Inches

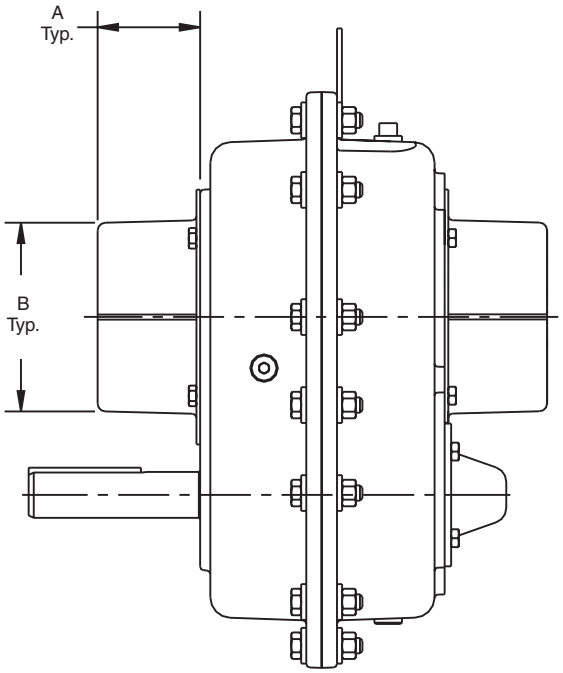
Belt Guard Kit No.	Center distance		A	B	C	D	E
	Min.	Max.					Max.
BGP10 13-20	13.00	20.00	11.00	31.50	6.50	5.50	10.00
BGP14 18-30	18.00	30.00	15.00	45.50	6.50	7.50	14.00
BGP20 22-34	22.00	34.00	21.00	55.50	6.50	10.50	20.00
BGP24 24-38	24.00	38.00	25.00	63.50	8.50	12.50	24.00
BGP28 32-48	32.00	48.00	29.00	77.50	8.50	14.50	28.00
BGP32 42-67	42.00	67.00	33.00	95.50	8.50	16.50	32.00

Top Mount		Side Mount	
Mounting Bracket Kit No.	Reducer Size	Mounting Bracket Kit No.	Reducer Size
107BGMKPT	107	107BGMKPS	107
115BGMKPT	115	115BGMKPS	115
203BGMKPT	203	203BGMKPS	203
207BGMKPT	207	207BGMKPS	207
215BGMKPT	215	215BGMKPS	215
307BGMKPT	307	307BGMKPS	307
315BGMKPT	315	315BGMKPS	315
407BGMKPT	407		
415BGMKPT	415		
507BGMKPT	507		
608BGMKPT	608		
800BGMKPT	800		

Bushing Guard

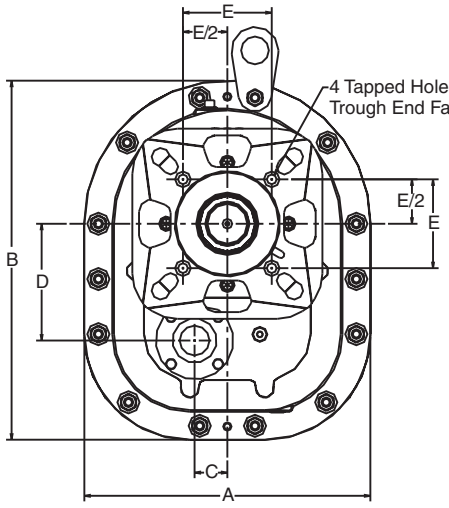
Bushing guard kits have the following features:

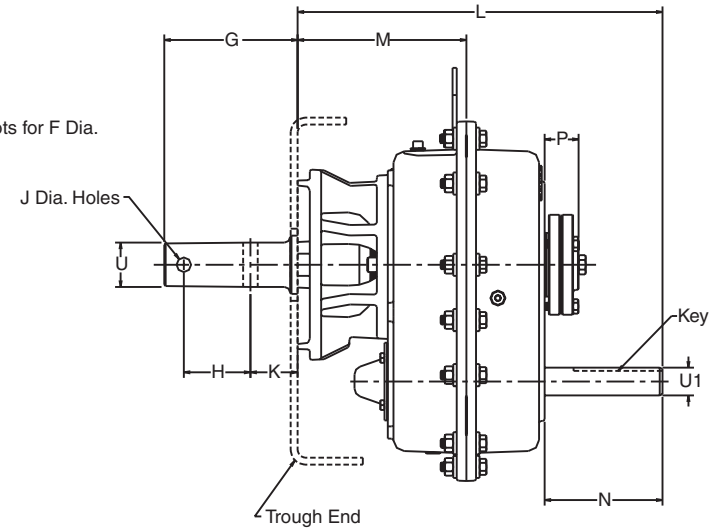
- One kit will cover the bushing and end cap
- Kit may be used with bushing on the front or rear of the reducer housing
- Guard may be installed after the reducer and bushing are mounted to the equipment
- Guard has the ability to mount on several different shaft sizes

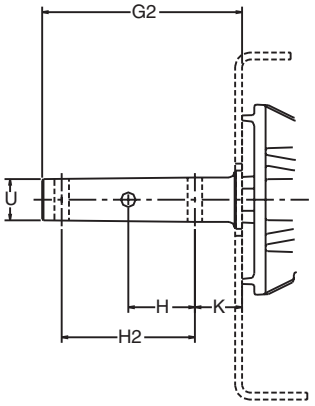


Reducer Size	Bushing Guard Kit	Bushing Guard Kit when used with optional Fan Kit	A	B
107	107 Bushing Guard Kit	NA	2.44	3.88
115	115 Bushing Guard Kit	NA	2.51	4.74
203	203 Bushing Guard Kit	NA	2.62	5.12
207	207 Bushing Guard Kit	NA	2.75	5.50
215	215 Bushing Guard Kit	NA	2.19	5.93
307	307 Bushing Guard Kit	307 Bushing Guard Fan Kit	3.00	7.10
315	315 Bushing Guard Kit	315 Bushing Guard Fan Kit	3.02	7.81
407	407 Bushing Guard Kit	407 Bushing Guard Fan Kit	2.50	8.75
415	415 Bushing Guard Kit	415 Bushing Guard Fan Kit	2.75	10.25
507	507 Bushing Guard Kit	507 Bushing Guard Fan Kit	3.15	11.00
608	608 Bushing Guard Kit	608 Bushing Guard Fan Kit	3.69	12.50
800	NA	NA	NA	NA

SMTP Screw Conveyor Drives







Optional 3 Hole Shaft

BASIC UNIT SIZE	DIMENSIONS IN INCHES									KEY
	A	B	C	D	L	M	N	P	U1	
107SMTP	9.76	12.07	1.18	3.77	13.73	6.90	4.08	1.61	0.75	.188 x .188 x 2.88
115SMTP	11.00	14.08	1.35	4.36	14.35	7.14	4.24	1.72	1.13	.250 x .250 x 2.75
203SMTP	12.88	16.16	1.48	5.26	16.44	7.60	5.31	1.72	1.25	.250 x .250 x 3.88
207SMTP	14.50	18.47	1.63	6.08	17.35	8.51	5.12	1.80	1.44	.375 x .375 x 3.75
215SMTP	16.25	20.88	2.12	7.01	19.27	9.25	5.87	1.93	1.88	.500 x .500 x 3.75
307SMTP	19.04	24.37	2.25	7.78	23.03	10.94	7.45	2.52	2.00	.500 x .500 x 6.50
315SMTP	19.90	26.35	2.63	8.53	25.14	11.56	8.32	2.90	2.13	.500 x .500 x 7.50
407SMTP_B	21.69	27.80	3.13	9.24	23.89	12.06	6.70	2.58	2.13	.500 x .500 x 6.00

DRIVE SHAFT DIA. "U"	FOR SCREW DIA.	DIMENSIONS IN INCHES							
		E	F	G	G2	H	H2	J	K
1.50	6,9	4.00	0.50	6.00	9.00	3.00	6.00	0.53	2.13
2.00	9-12	5.13	0.63	6.00	9.00	3.00	6.00	0.66	2.13
2.44	12,14	5.63	0.63	6.69	9.69	3.00	6.00	0.66	2.75
3.00	12-20	6.00	0.75	6.88	9.88	3.00	6.00	0.78	2.88
3.44	18-24	6.75	0.75	9.13	13.13	4.00	8.00	0.91	3.88

SMTP Screw Conveyor Drives

STOCK SMTP REDUCER (1)	TYPE SMTP SCREW CONVEYOR ADAPTER	TYPE SMTP SCREW CONVEYOR SHAFT (2)	OPTIONAL SEAL CARTRIDGES		FELT SEAL (3)
			WASTE PACK KIT	PACKING GLAND KIT	
1 1/2" DRIVE SHAFT - FOR SCREW DIAMETERS 6 - 10"					
107SMTP_ _	107SCA-P	107DSP108_ _	107WPP	107PGP	FR200
115SMTP_ _	115SCA-P	115DSP108_ _	115-203WPP	115-203PGP	FR210
203SMTP_ _	203SCA-P	203DSP108_ _			
2" DRIVE SHAFT - FOR SCREW DIAMETERS 9 - 12"					
107SMTP_ _	107SCA-P	107DSP200_ _	107WPP	107PGP	FR200
115SMTP_ _	115SCA-P	115DSP200_ _	115-203WPP	115-203PGP	FR210
203SMTP_ _	203SCA-P	203DSP200_ _			
207SMTP_ _	207SCA-P	207DSP200_ _	207-407WPP	207-407PGP	FR308
215SMTP_ _	215SCA-P	215DSP200_ _			
2 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 12 and 14"					
107SMTP_ _	107SCA-P	107DSP207_ _	107WPP	107PGP	FR200
115SMTP_ _	115SCA-P	115DSP207_ _	115-203WPP	115-203PGP	FR210
203SMTP_ _	203SCA-P	203DSP207_ _			
207SMTP_ _	207SCA-P	207DSP207_ _	207-407WPP	207-407PGP	FR308
215SMTP_ _	215SCA-P	215DSP207_ _			
3" DRIVE SHAFT - FOR SCREW DIAMETERS 12 - 20"					
107SMTP_ _	107SCA-P	107DSP300_ _	107WPP	107PGP	FR200
115SMTP_ _	115SCA-P	115DSP300_ _	115-203WPP	115-203PGP	FR210
203SMTP_ _	203SCA-P	203DSP300_ _			
207SMTP_ _	207SCA-P	207DSP300_ _	207-407WPP	207-407PGP	FR308
215SMTP_ _	215SCA-P	215DSP300_ _			
307SMTP_ _	307SCA-P	307DSP300_ _	207-407WPP	207-407PGP	FR308
315SMTP_ _	315SCA-P	315DSP300_ _			
407SMTP_ _B	407SCA-PB	407DSP300_ _B			
3 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 18 - 24"					
207SMTP_ _	207SCA-P	207DSP307_ _	207-407WPP	207-407PGP	FR308
215SMTP_ _	215SCA-P	215DSP307_ _			
307SMTP_ _	307SCA-P	307DSP307_ _	207-407WPP	207-407PGP	FR308
315SMTP_ _	315SCA-P	315DSP307_ _			
407SMTP_ _B	407SCA-PB	407DSP307_ _B			

Shaft stress based on transmitted load must always be checked. Calculations must account for drilled holes on shaft.

SMTP screw conveyor drives may be assembled in the field.

Required components include:
- SMTP reducer
- SMTP screw conveyor adapter
- SMTP screw conveyor shaft

Optional components include:
- Waste pack
- Packing gland
- Felt seal

(1) Complete part number by adding ratio, ie: 05, 09, 15, 25 or 35

(2) Complete part number by adding shaft type

Standard — 2 hole steel shaft = leave blank (example 107DSP108)

Optional:
- 3 hole steel shaft = -3 (example 107DSP108-3)
- 2 hole stainless steel shaft= SS (example 107DSP108SS)
- 3 hole stainless steel shaft= -3SS (example 107DSP108-3SS)

(3) Felt seal can be added to the waste pack or packing gland seal cartridge.

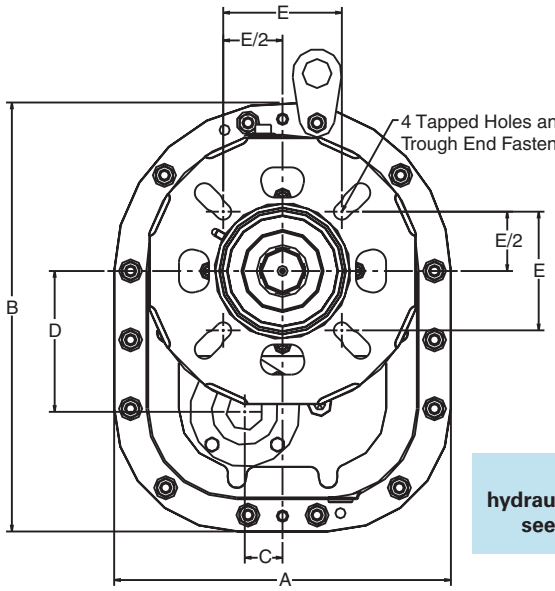
Screw Conveyor Adapter Kit

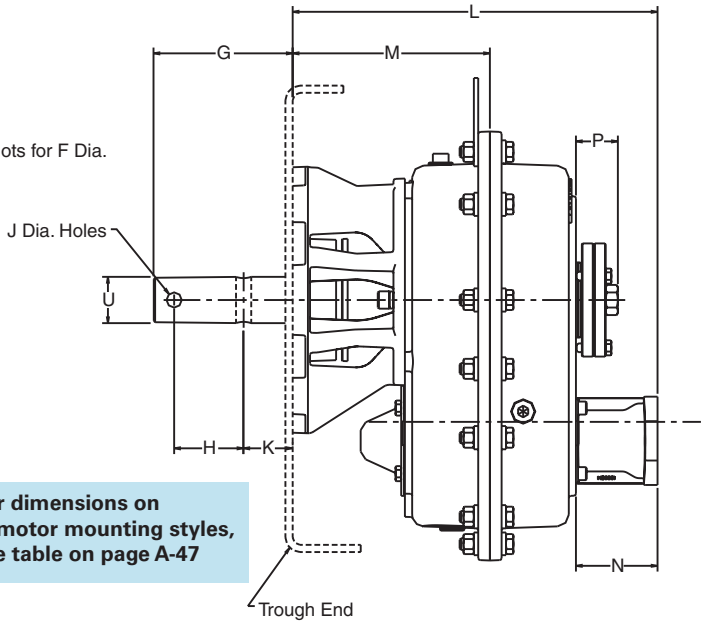
Waste Pack Kit

Packing Gland Kit

Screw Conveyor Drive Shaft Kit

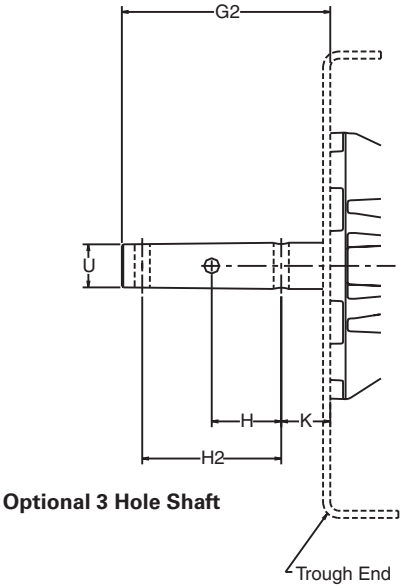
HMTP Screw Conveyor Drives





Standard 2 Hole Shaft

For dimensions on hydraulic motor mounting styles, see the table on page A-47



Optional 3 Hole Shaft

BASIC UNIT SIZE	DIMENSIONS IN INCHES	
	L	N
107HMTP 6B SAE-A2	12.72	3.08
107HMTP 9T SAE-A2	12.72	3.08
107HMTP 13T SAE-B2	13.21	3.56
115HMTP 6B SAE-A2	13.19	3.08
115HMTP 9T SAE-A2	13.19	3.08
115HMTP 13T SAE-B2	13.67	3.56
203HMTP 6B SAE-A2	14.71	3.58
203HMTP 9T SAE-A2	14.71	3.58
203HMTP 13T SAE-B2	14.90	3.77
203HMTP 14T SAE-C4	15.21	4.08
207HMTP 6B SAE-A2	15.75	3.52
207HMTP 13T SAE-B2	15.94	3.71
207HMTP 14T SAE-C4	16.25	4.02
215HMTP 6B SAE-A2	17.11	3.72
215HMTP 13T SAE-B2	17.10	3.71
215HMTP 14T SAE-C4	17.66	4.27
307HMTP 6B SAE-A2	19.23	3.65
307HMTP 14T SAE-C4	19.78	4.20
315HMTP 6B SAE-A2	20.47	3.65
315HMTP 14T SAE-C4	21.02	4.20

BASIC UNIT SIZE	DIMENSIONS IN INCHES					
	A	B	C	D	M	P
107HMTP	9.76	12.07	1.18	3.77	6.90	1.61
115HMTP	11.00	14.08	1.35	4.36	7.14	1.72
203HMTP	12.88	16.16	1.48	5.26	7.60	1.72
207HMTP	14.50	18.47	1.63	6.08	8.51	1.80
215HMTP	16.25	20.88	2.12	7.01	9.25	1.93
307HMTP	19.04	24.37	2.25	7.78	10.94	2.52
315HMTP	19.90	26.35	2.63	8.53	11.56	2.90

DRIVE SHAFT DIA. U" "	FOR SCREW DIA.	DIMENSIONS IN INCHES							
		E	F	G	G2	H	H2	J	K
1.50	6,9	4.00	0.50	6.00	9.00	3.00	6.00	0.53	2.13
2.00	9-12	5.13	0.63	6.00	9.00	3.00	6.00	0.66	2.13
2.44	12,14	5.63	0.63	6.69	9.69	3.00	6.00	0.66	2.75
3.00	12-20	6.00	0.75	6.88	9.88	3.00	6.00	0.78	2.88
3.44	18-24	6.75	0.75	9.13	13.13	4.00	8.00	0.91	3.88

HMTP Screw Conveyor Drives

STOCK HMTP REDUCER (1)	TYPE SMTP SCREW CONVEYOR ADAPTER	TYPE SMTP SCREW CONVEYOR SHAFT (2)	OPTIONAL SEAL CARTRIDGES		FELT SEAL (3)
			WASTE PACK KIT	PACKING GLAND KIT	
1 1/2" DRIVE SHAFT - FOR SCREW DIAMETERS 6 - 10"					
107HMTP_ _	107SCA-P	107DSP108_ _	107WPP	107PGP	FR200
115HMTP_ _	115SCA-P	115DSP108_ _	115-203WPP	115-203PGP	FR210
203HMTP_ _	203SCA-P	203DSP108_ _			
2" DRIVE SHAFT - FOR SCREW DIAMETERS 9 - 12"					
107HMTP_ _	107SCA-P	107DSP200_ _	107WPP	107PGP	FR200
115HMTP_ _	115SCA-P	115DSP200_ _	115-203WPP	115-203PGP	FR210
203HMTP_ _	203SCA-P	203DSP200_ _			
207HMTP_ _	207SCA-P	207DSP200_ _	207-407WPP	207-407PGP	FR308
215HMTP_ _	215SCA-P	215DSP200_ _			
2 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 12 and 14"					
107HMTP_ _	107SCA-P	107DSP207_ _	107WPP	107PGP	FR200
115HMTP_ _	115SCA-P	115DSP207_ _	115-203WPP	115-203PGP	FR210
203HMTP_ _	203SCA-P	203DSP207_ _			
207HMTP_ _	207SCA-P	207DSP207_ _	207-407WPP	207-407PGP	FR308
215HMTP_ _	215SCA-P	215DSP207_ _			
3" DRIVE SHAFT - FOR SCREW DIAMETERS 12 - 20"					
107HMTP_ _	107SCA-P	107DSP300_ _	107WPP	107PGP	FR200
115HMTP_ _	115SCA-P	115DSP300_ _	115-203WPP	115-203PGP	FR210
203HMTP_ _	203SCA-P	203DSP300_ _			
207HMTP_ _	207SCA-P	207DSP300_ _	207-407WPP	207-407PGP	FR308
215HMTP_ _	215SCA-P	215DSP300_ _			
307HMTP_ _	307SCA-P	307DSP300_ _	207-407WPP	207-407PGP	FR308
315HMTP_ _	315SCA-P	315DSP300_ _			
3 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 18 - 24"					
207HMTP_ _	207SCA-P	207DSP307_ _	207-407WPP	207-407PGP	FR308
215HMTP_ _	215SCA-P	215DSP307_ _			
307HMTP_ _	307SCA-P	307DSP307_ _	207-407WPP	207-407PGP	FR308
315HMTP_ _	315SCA-P	315DSP307_ _			

Shaft stress based on transmitted load must always be checked. Calculations must account for drilled holes on shaft.

HMTP screw conveyor drives may be assembled in the field.

Required components include:
- HMTP reducer
- SMTP screw conveyor adapter
- SMTP screw conveyor shaft

Optional components include:
- Waste pack
- Packing gland
- Felt seal

(1) Complete part number by adding ratio, ie: 05, 09, 15, 25 or 35

(2) Complete part number by adding shaft type

- Standard — 2 hole steel shaft = leave blank (example 107DSP108)
- Optional — 3 hole steel shaft = -3 (example 107DSP108-3)
- Optional — 2 hole stainless steel shaft= SS (example 107DSP108SS)
- Optional — 3 hole stainless steel shaft= -3SS (example 107DSP108-3SS)

(3) Felt seal can be added to the waste or packing gland pack seal cartridge.

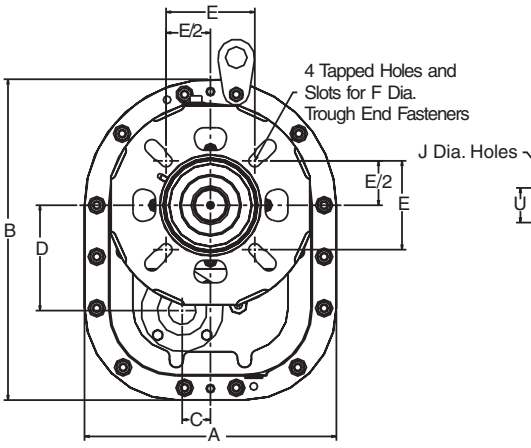
Screw Conveyor Adapter Kit

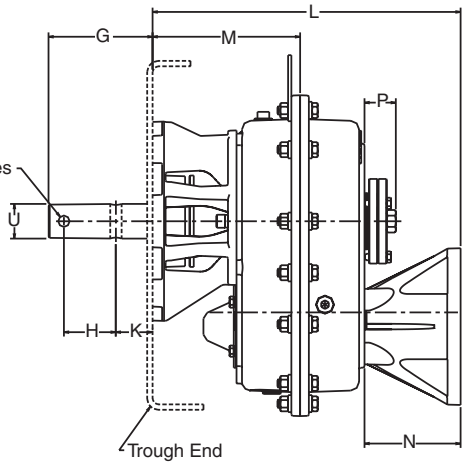
Waste Pack Kit

Packing Gland Kit

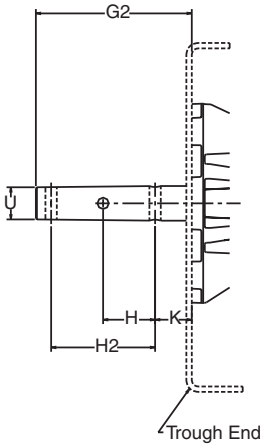
Screw Conveyor Drive Shaft Kit

CMTP Screw Conveyor Drives





Standard 2 Hole Shaft



Optional 3 Hole Shaft

PART NO.	DIMENSIONS IN INCHES	
	L	N
107CMTP Q56	12.97	3.32
107CMTP Q140	12.97	3.32
115CMTP Q56	13.43	3.32
115CMTP Q140	13.43	3.32
115CMTP Q180	15.72	5.61
203CMTP Q56	14.95	3.82
203CMTP Q140	14.95	3.82
203CMTP Q180	16.73	5.61
203CMTP Q210	16.73	5.61
207CMTP Q56	16.00	3.76
207CMTP Q140	16.00	3.76
207CMTP Q180	17.77	5.55
207CMTP Q210	17.77	5.55
215CMTP Q56	17.22	3.83
215CMTP Q140	17.22	3.83
215CMTP Q180	19.25	5.86
215CMTP Q210	19.25	5.86
215CMTP Q250	19.25	5.86
307CMTP Q56	19.34	3.76
307CMTP Q140	19.34	3.76
307CMTP Q180	21.37	5.79
307CMTP Q210	21.37	5.79
307CMTP Q250	21.37	5.79
315CMTP Q56	20.58	3.76
315CMTP Q140	20.58	3.76
315CMTP Q180	22.61	5.79
315CMTP Q210	22.61	5.79
315CMTP Q250	22.61	5.79

BASIC UNIT SIZE	DIMENSIONS IN INCHES					
	A	B	C	D	M	P
107CMTP	9.76	12.07	1.18	3.77	6.90	1.61
115CMTP	11.00	14.08	1.35	4.36	7.14	1.72
203CMTP	12.88	16.16	1.48	5.26	7.60	1.72
207CMTP	14.50	18.47	1.63	6.08	8.51	1.80
215CMTP	16.25	20.88	2.12	7.01	9.25	1.93
307CMTP	19.04	24.37	2.25	7.78	10.94	2.52
315CMTP	19.90	26.35	2.63	8.53	11.56	2.90

DRIVE SHAFT DIA. "U"	FOR SCREW DIA.	DIMENSIONS IN INCHES							
		E	F	G	G2	H	H2	J	K
1.50	6,9	4.00	0.50	6.00	9.00	3.00	6.00	0.53	2.13
2.00	9-12	5.13	0.63	6.00	9.00	3.00	6.00	0.66	2.13
2.44	12,14	5.63	0.63	6.69	9.69	3.00	6.00	0.66	2.75
3.00	12-20	6.00	0.75	6.88	9.88	3.00	6.00	0.78	2.88
3.44	18-24	6.75	0.75	9.13	13.13	4.00	8.00	0.91	3.88

CMTP Screw Conveyor Drives

STOCK CMTP REDUCER (1)	TYPE SMTP SCREW CONVEYOR ADAPTER	TYPE SMTP SCREW CONVEYOR SHAFT (2)	OPTIONAL SEAL CARTRIDGES		FELT SEAL (3)
			WASTE PACK KIT	PACKING GLAND KIT	
1 1/2" DRIVE SHAFT - FOR SCREW DIAMETERS 6 -10"					
107CMTP_ _	107SCA-P	107DSP108_ _	107WPP	107PGP	FR200
115CMTP_ _	115SCA-P	115DSP108_ _	115-203WPP	115-203PGP	FR210
203CMTP_ _	203SCA-P	203DSP108_ _			
2" DRIVE SHAFT - FOR SCREW DIAMETERS 9 - 12"					
107CMTP_ _	107SCA-P	107DSP200_ _	107WPP	107PGP	FR200
115CMTP_ _	115SCA-P	115DSP200_ _	115-203WPP	115-203PGP	FR210
203CMTP_ _	203SCA-P	203DSP200_ _			
207CMTP_ _	207SCA-P	207DSP200_ _	207-407WPP	207-407PGP	FR308
215CMTP_ _	215SCA-P	215DSP200_ _			
2 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 12 and 14"					
107CMTP_ _	107SCA-P	107DSP207_ _	107WPP	107PGP	FR200
115CMTP_ _	115SCA-P	115DSP207_ _	115-203WPP	115-203PGP	FR210
203CMTP_ _	203SCA-P	203DSP207_ _			
207CMTP_ _	207SCA-P	207DSP207_ _	207-407WPP	207-407PGP	FR308
215CMTP_ _	215SCA-P	215DSP207_ _			
3" DRIVE SHAFT - FOR SCREW DIAMETERS 12 - 20"					
107CMTP_ _	107SCA-P	107DSP300_ _	107WPP	107PGP	FR200
115CMTP_ _	115SCA-P	115DSP300_ _	115-203WPP	115-203PGP	FR210
203CMTP_ _	203SCA-P	203DSP300_ _			
207CMTP_ _	207SCA-P	207DSP300_ _	207-407WPP	207-407PGP	FR308
215CMTP_ _	215SCA-P	215DSP300_ _			
307CMTP_ _	307SCA-P	307DSP300_ _	207-407WPP	207-407PGP	FR308
315CMTP_ _	315SCA-P	315DSP300_ _			
3 7/16" DRIVE SHAFT - FOR SCREW DIAMETERS 18 - 24"					
207CMTP_ _	207SCA-P	207DSP307_ _	207-407WPP	207-407PGP	FR308
215CMTP_ _	215SCA-P	215DSP307_ _			
307CMTP_ _	307SCA-P	307DSP307_ _	207-407WPP	207-407PGP	FR308
315CMTP_ _	315SCA-P	315DSP307_ _			

Shaft stress based on transmitted load must always be checked. Calculations must account for drilled holes on shaft.

CMTP screw conveyor drives may be assembled in the field.

Required components include:
- CMTP reducer
- SMTP screw conveyor adapter
- SMTP screw conveyor shaft

Optional components include:
- Waste pack
- Packing gland
- Felt seal

(1) Complete part number by adding ratio, ie: 05, 09, 15, 25 or 35

(2) Complete part number by adding shaft type

Standard	2 hole steel shaft	= leave blank (example 107DSP108)
Optional	3 hole steel shaft	= -3 (example 107DSP108-3)
	2 hole stainless steel shaft	= SS (example 107DSP108SS)
	3 hole stainless steel shaft	= -3SS (example 107DSP108-3SS)

(3) Felt seal can be added to the waste pack or packing gland seal cartridge.

Screw Conveyor Adapter Kit

Waste Pack Kit

Packing Gland Kit

Screw Conveyor Drive Shaft Kit

Screw Conveyor Trough Ends Sizes 107-407

Formed Hot Roll Plate Steel

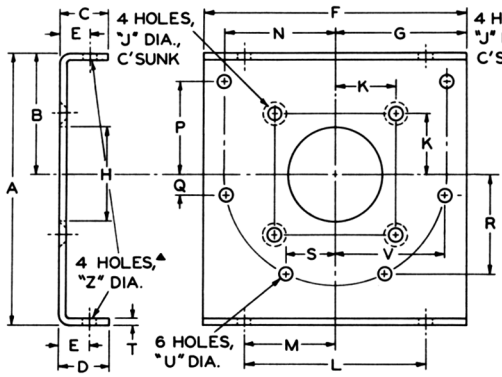


FIG 1 - 6 HOLE TYPE

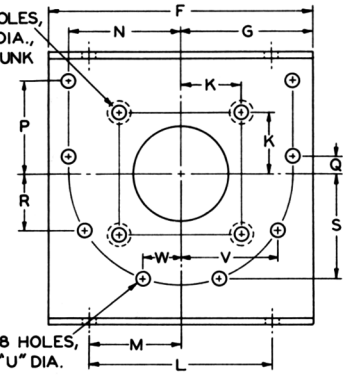


FIG 2 - 8 HOLE TYPE

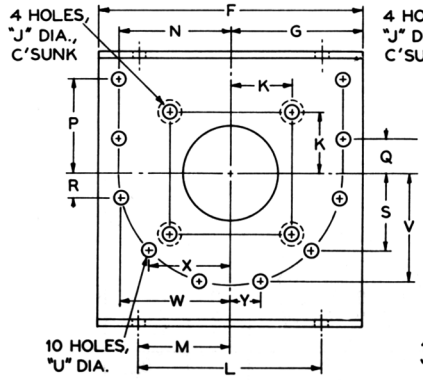


FIG 3 -10 HOLE TYPE

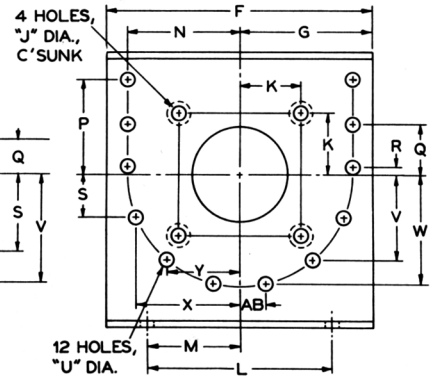


FIG 4 - 12 HOLE TYPE

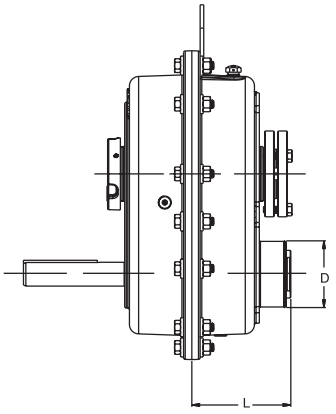
Specifications

Part No.	Conveyor Screw Dia.	Drive Shaft Dia.	Fig.	Type	Dimensions										
					A	B	C	D	E	F	G	H	J	K	L
SCTE06 x 1 1/2"	6"	1 1/2"	1	6-Hole	10 1/8"	4 1/2"	1 1/2"	1 3/4"	1"	9 3/4"	4 7/8"	1 3/4"	9/16"	2"	8 1/8"
SCTE09 x 1 1/2	9	1 1/2	2	8-Hole	14	6 1/8	1 5/8	2 5/8	1 1/2	13 3/4	6 7/8	1 3/4	9/16	2	9 3/8
SCTE09 x 2	9	2	2	8-Hole	14	6 1/8	1 5/8	2 5/8	1 1/2	13 3/4	6 7/8	2 1/4	11/16	2 9/16	9 3/8
SCTE10 x 1 1/2	10	1 1/2	2	8-Hole	15 1/4	6 3/8	2 3/8	2 7/8	1 3/4	14 3/4	7 3/8	1 3/4	9/16	2	9 1/2
SCTE10 x 2	10	2	2	8-Hole	15 1/4	6 3/8	2 7/8	2 7/8	1 3/4	14 3/4	7 3/8	2 1/4	11/16	2 9/16	9 1/2
SCTE12 x 2	12	2	2	8-Hole	17 3/8	7 3/4	2	2 3/4	1 5/8	17 1/4	8 5/8	2 1/4	11/16	2 9/16	12 1/4
SCTE12 x 2 7/16	12	2 7/16	2	8-Hole	17 3/8	7 3/4	2	2 3/4	1 5/8	17 1/4	8 5/8	2 11/16	11/16	2 13/16	12 1/4
SCTE12 x 3	12	3	2	8-Hole	17 3/8	7 3/4	2	2 3/4	1 5/8	17 1/4	8 5/8	3 1/4	13/16	3	12 1/4
SCTE14 x 2 7/16	14	2 7/16	2	8-Hole	20 1/8	9 1/4	2	2 7/8	1 5/8	19 1/4	9 5/8	2 11/16	11/16	2 13/16	13 1/2
SCTE14 x 3	14	3	2	8-Hole	20 1/8	9 1/4	2	2 7/8	1 5/8	19 1/4	9 5/8	3 1/4	13/16	3	13 1/2
SCTE16 x 3	16	3	2	8-Hole	22 5/8	10 5/8	2 1/2	3 1/4	2	21 1/4	10 5/8	3 1/4	13/16	3	14 7/8
SCTE18 x 3	18	3	3	10-Hole	25 1/2	12 1/8	2 1/2	3 1/4	2	24 1/4	12 1/8	3 1/4	13/16	3	16
SCTE18 x 3 7/16	18	3 7/16	3	10-Hole	25 1/2	12 1/8	2 1/2	3 1/4	2	24 1/4	12 1/8	3 11/16	13/16	3 3/8	16
SCTE20 x 3	20	3	3	10-Hole	28 1/2	13 1/2	2 1/2	3 3/4	2 1/4	26 1/4	13 1/8	3 1/4	13/16	3	19 1/4
SCTE20 x 3 7/16	20	3 7/16	3	10-Hole	28 1/2	13 1/2	2 1/2	3 3/4	2 1/4	26 1/4	13 1/8	3 11/16	13/16	3 3/8	19 1/4
SCTE24 x 3 7/16	24	3 7/16	4	12-Hole	34 5/8	16 1/2	2 1/2	4 1/8	2 1/2	30 1/4	15 1/8	3 11/16	13/16	3 3/8	20

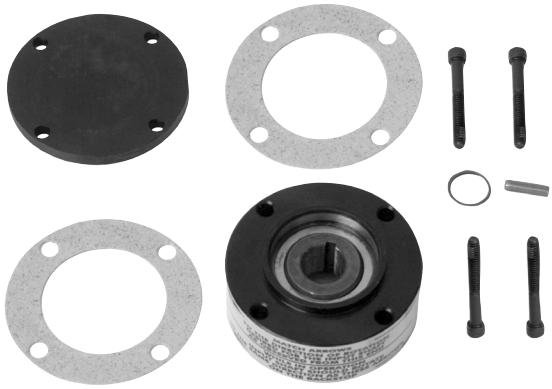
Part No.	Dimensions														Wt. Lbs.
	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AB	
SCTE06 x 1 1/2"	4 1/16"	4 7/16"	3 15/32"	5/8"	3 15/16"	2 1/32"	3/16"	7/16"	4 25/64"	-	-	-	7/16"	-	6.7
SCTE09 x 1 1/2	4 11/16	6 1/4	4 15/16	13/16	3 13/64	5 45/64	1/4	7/16	5 23/64	2 9/16"	-	-	9/16	-	17.8
SCTE09 x 2	4 11/16	6 1/4	4 15/16	13/16	3 13/64	5 45/64	1/4	7/16	5 23/64	2 9/16	-	-	9/16	-	17.7
SCTE10 x 1 1/2	4 3/4	6 5/8	4 1/8	5/8	3 3/8	6 1/8	1/4	7/16	5 45/64	2 17/32	-	-	9/16	-	20.6
SCTE10 x 2	4 3/4	6 5/8	4 1/8	5/8	3 3/8	6 1/8	1/4	7/16	5 45/64	2 17/32	-	-	9/16	-	20.5
SCTE12 x 2	6 1/8	7 15/16	6 1/4	15/16	4 7/64	6 59/64	5/16	9/16	6 51/64	3 7/8	-	-	11/16	-	33.8
SCTE12 x 2 7/16	6 1/8	7 15/16	6 1/4	15/16	4 7/64	6 59/64	5/16	9/16	6 51/64	3 7/8	-	-	11/16	-	33.5
SCTE12 x 3	6 1/8	7 15/16	6 1/4	15/16	4 7/64	6 59/64	5/16	9/16	6 51/64	3 7/8	-	-	11/16	-	33.3
SCTE14 x 2 7/16	6 3/4	8 15/16	6 23/32	1 3/32	4 11/16	8 27/64	5/16	9/16	7 39/64	3	-	-	11/16	-	42.4
SCTE14 x 3	6 3/4	8 15/16	6 23/32	1 3/32	4 11/16	8 27/64	5/16	9/16	7 39/64	3	-	-	11/16	-	42.2
SCTE16 x 3	7 7/16	10	8	1 5/8	4 57/64	9 17/64	5/16	11/16	8 23/32	3 3/4	-	-	11/16	-	51.1
SCTE18 x 3	8	11	9 1/2	3 9/16	2 25/64	7 37/64	5/16	11/16	10 19/32	10 47/64	7 63/64"	2 15/16"	11/16	-	67.9
SCTE18 x 3 7/16	8	11	9 1/2	3 9/16	2 25/64	7 37/64	5/16	11/16	10 19/32	10 47/64	7 63/64	2 15/16	11/16	-	67.7
SCTE20 x 3	9 5/8	12 3/16	10 23/32	4 15/32	2 13/64	8 3/16	3/8	11/16	11 23/32	11 63/64	9 1/32	3 11/32	13/16	-	96.9
SCTE20 x 3 7/16	9 5/8	12 3/16	10 23/32	4 15/32	2 13/64	8 3/16	3/8	11/16	11 23/32	11 63/64	9 1/32	3 11/32	13/16	-	96.7
SCTE24 x 3 7/16	10	14 1/4	13 23/32	7 19/32	31/32	5 33/64	3/8	11/16	10 7/8	13 55/64	13 1/8	9 7/32	13/16 ▲	3 5/16"	133.0

Notes: Browning® trough ends are drilled to fit CEMA Standard Troughs. The center holes are drilled to fit Browning screw conveyor drives.
▲2 "Z" holes in bottom flange only; no holes in top flange.

Options and Accessories Sizes 107-800



Size 107-800



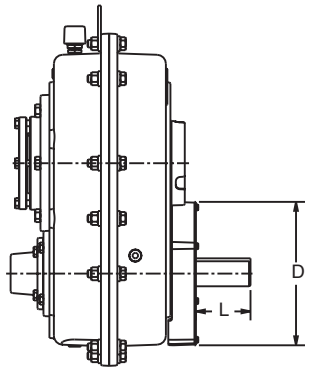
Backstop Kits

REDUCER SIZE	USE BACKSTOP KIT		DIMENSIONS		WT. LBS.
	PART NO.	RATIOS	D	L	
107	107BSP	ALL	3.000	4.336	2.4
115	115-203BSP		3.438	4.573	3.1
203			3.438	5.100	3.1
207	207BSP		4.750	5.695	7.4
215	215-307BSP		5.000	6.230	8.4
307			5.000	6.770	8.4
315	315BSP		6.000	7.780	16.2
407	407BSP		6.125	6.625	10.0
415	415BSP		6.815	7.500	13.0
507	507BSP		7.625	7.969	15.0
608	608BSP		8.375	9.500	17.0
800	800BSP		9.380	13.290	60.0

Torque Arm Kits

REDUCER SIZE	PART NO.
107	107TAP-H
115	115TAP-H
203	203TAP-H
207	207TAP-H
215	215TAP-H
307	307TAP-H
315	315TAP-H
407	407TAP-HB
415	415TAP-HB
507	507TAP-HB
608	608TAP-HB
800	800TAP-H

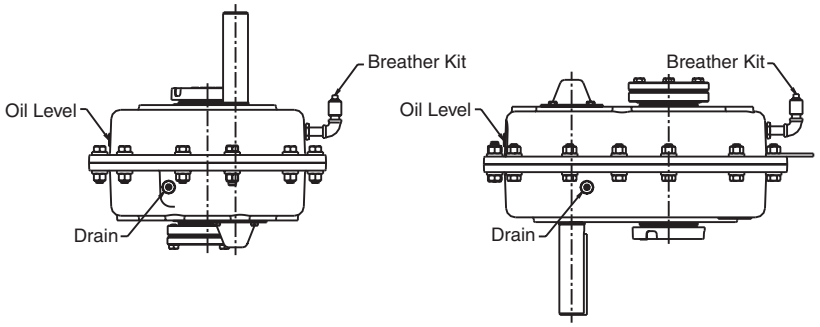
Fan Kits

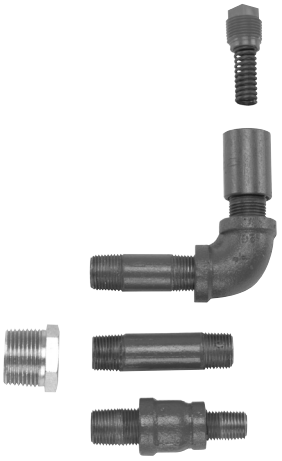


Reducer Size	Fan Kit No.	Dimensions		Wt. Lbs.
		D	L	
307	**307FKP**	9.5	4.9	4.5
315	**315FKP**	10.4	5.7	4.9
407	**407FKPB**	12.66	4.56	6.4
415	**415FKPB**	14.38	6.92	8.3
507	**507FKPB**	16.41	6.56	13.2
608	**608FKPB**	16.41	6.69	13.2
800	**800FKP**	16.41	9.93	13.2

107-800 SMTP VBK Vertical Breather Kit

When a shaft mount speed reducer is mounted with the shaft vertical, a vertical breather kit is needed.





107-800 SMTP FBK Filtered Breather Kit

A filtered breather is recommended in applications where abrasive particles may contaminate the gearbox lubricant.

307-800 SMTP PC Pump and Cooler Kit

The pump and cooler kit is required for specific operating conditions noted in the Class I, II, and III selection tables.

BROWNING

Shaft Mount Engineering Section

Input Shaft Overhung Load Capacity.....A-136 - A-137

Output Thrust and Overhung Loads.....A-138 - A-141

Minimum Shaft Requirements A-142

Face Mounting .....A-144 - A-145

Lubrication .....A-146 - A-149

Load Capacity (Lbs.) Unit Size 107-608

5:1 Ratio Reducers

Output RPM	Reducer Size								
	107	115	203	207	215	307	315	407	415
90	354	442	967	795	1992	2132	1285	1143	1282
100	354	430	938	777	1941	2077	1254	1113	1251
110	354	420	917	760	1890	2027	1224	1088	1221
120	354	410	893	740	1844	1976	1194	1067	1191
130	354	400	877	725	1804	1936	1174	1045	1171
140	354	395	858	710	1768	1896	1148	1027	1146
150	354	385	843	700	1733	1861	1129	1012	1126
160	354	380	828	688	1702	1826	1108	995	1106
170	354	375	818	675	1676	1795	1093	980	1091
180	354	370	803	668	1650	1770	1078	965	1076
190	354	365	793	658	1625	1745	1063	954	1061
200	354	360	783	648	1604	1720	1053	944	1051
210	354	355	773	638	1580	1699	1033	935	1031
220	354	350	763	633	1559	1675	1018	924	1016
230	354	347	758	623	1543	1654	1018	914	1016
240	354	342	748	618	1524	1639	998	904	996
250	354	340	738	613	1508	1619	988	894	986
260	354	335	733	605	1493	1604	983	889	981
270	354	332	723	600	1477	1589	973	879	971
280	354	330	718	593	1462	1569	958	869	956
290	354	327	713	588	1447	1554	958	868	956
300	354	322	708	583	1436	1544	948	859	946
310	354	322	698	578	1422	1529	933	849	931
320	354	317	693	575	1411	1514	933	848	931
330	354	317	688	570	1396	1504	923	838	921
340	354	312	683	565	1386	1494	918	833	916
350	354	312	678	560	1376	1479	916	828	915
360	354	307	673	555	1365	1468	901	823	900
370	354	307	668	555	1355	1458	906	818	905
380	354	305	668	550	1345	1448	896	814	895
390	354	302	663	545	1335	1438	891	808	890
400	354	302	658	540	1329	1428	886	803	885

9:1 Ratio Reducers

Output RPM	Reducer Size						
	107	115	203	207	215	307	315
10	354	992	1212	1717	3172	3555	4004
20	354	992	1212	1717	3172	3555	4004
30	354	992	1212	1717	3172	3545	3856
40	354	992	1212	1717	3121	3077	3165
50	354	992	1212	1682	3021	2655	2656
60	354	992	1212	1627	2838	2324	2264
70	354	992	1212	1496	2695	2054	1941
80	354	989	1212	1372	2577	1823	1670
90	354	967	1212	1265	2476	1638	1716
100	354	950	1212	1173	2385	1497	1675
110	354	931	1212	1161	2309	1578	1635
120	354	896	1212	1136	2242	1543	1600
130	354	863	1212	1116	2181	1508	1574
140	354	836	1212	1094	2125	1483	1544
150	354	808	1212	1074	2074	1458	1519
160	354	783	1212	1059	2029	1437	1498
170	354	761	1212	1044	1987	1412	1474
180	354	739	1212	1029	1951	1397	1456
190	354	721	1212	1014	1911	1377	1438
200	354	701	1212	1001	1880	1362	1421

Overhung Loads

$$OHL = \frac{2TKP}{D}$$

Where:

OHL = Overhung load (pounds)
T = Actual shaft torque (inch-pounds)
D = P.D. of sprocket, sheave, pulley or gear
K = 1.0 for chain drives
1.25 for gear drives
1.25 for gearbelt drives
1.50 for V-belt drives
P = Load position factor

Note: Input overhung loads shown are with center of load at one input shaft diameter from seal. For loads located at other distances, use input load position factor.

Load Capacity (Lbs.) Unit Size 107-608

15:1 Ratio Reducers

Output RPM	Reducer Size										
	107	115	203	207	215	307	315	407	415	507	608
10	354	992	1212	1717	3172	3555	4004	4472	5505	6729	7040
20	354	992	1212	1717	3172	3553	4004	4346	5505	6601	5009
30	354	992	1212	1717	3094	3358	3935	3860	5498	4873	3754
40	354	992	1212	1641	2853	2866	3775	3484	5172	4301	3545
50	354	992	1212	1551	2649	2495	3499	3040	4830	4024	3480
60	354	965	1212	1456	2492	2204	3255	2877	4573	3809	3425
70	354	938	1212	1379	2365	1963	2976	2747	4367	3638	3380
80	354	891	1212	1317	2263	1758	2743	2639	4196	3493	3340
90	354	848	1212	1264	2176	1587	2720	2548	4050	3372	3305
100	354	811	1212	1210	2100	1592	2649	2468	3924	3267	3275
110	354	778	1212	1141	2033	1552	2586	2400	3814	3177	3250
120	354	748	1212	1138	1977	1517	2531	2338	3716	3096	3225
130	354	721	1212	1110	1921	1487	2480	2280	3625	3021	3205

25:1 Ratio Reducers

Output RPM	Reducer Size											
	107	115	203	207	215	307	315	407	415	507	608	800
10	354	992	1212	1717	3172	3555	4004	4472	5505	6780	7040	8603
20	354	992	1212	1716	3082	3458	3920	3812	5390	5943	5573	8603
30	354	992	1212	1598	2695	3027	3585	3323	4830	4305	3144	8603
40	354	955	1212	1451	2452	2620	3259	3014	4296	3781	3513	8603
50	354	913	1212	1342	2278	2284	3023	2794	3905	3533	3443	8603
60	354	861	1212	1259	2145	2013	2733	2646	3697	3345	3282	8504
70	354	819	1212	1195	2038	1787	2658	2525	3531	3197	3136	8173
80	354	784	1212	1143	1947	1592	2566	2425	3393	3070	3011	7892

35:1 Ratio Reducers

Output RPM	Reducer Size						
	107	115	203	207	215	307	315
10	354	992	1226	1717	3168	3552	4004
20	354	992	1226	1632	2792	3132	3713
30	354	950	1226	1441	2446	2741	3248
40	354	886	1226	1309	2227	2495	2951
50	354	824	1226	1212	2068	2315	2726

Input Load Position Factors (P)

Reducer Size	Distance in inches from face of the housing																		
	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2
107	1.00	1.13	1.36	1.60	1.84	2.08	2.32	2.55	-	-	-	-	-	-	-	-	-	-	-
115	1.00	1.00	1.16	1.36	1.55	1.75	1.95	2.15	-	-	-	-	-	-	-	-	-	-	-
203	1.00	1.00	1.09	1.27	1.44	1.62	1.79	1.97	2.15	2.32	-	-	-	-	-	-	-	-	-
207	1.00	1.00	1.03	1.19	1.36	1.52	1.69	1.85	2.01	2.18	-	-	-	-	-	-	-	-	-
215	1.00	1.00	1.00	1.04	1.18	1.31	1.45	1.59	1.72	1.86	2.13	-	-	-	-	-	-	-	-
307	1.00	1.00	1.00	1.00	1.11	1.20	1.31	1.44	1.60	1.80	2.05	2.39	2.85	3.55			-	-	-
315	1.00	1.00	1.00	1.00	1.06	1.13	1.21	1.31	1.42	1.56	1.72	1.92	2.18	2.51	2.97	3.62	-	-	-
407	1.00	1.00	1.00	1.02	1.16	1.30	1.44	1.57	1.72	1.86	1.99	2.11	-	-	-	-	-	-	-
415	1.00	1.00	1.00	1.00	1.03	1.15	1.27	1.39	1.52	1.64	1.76	1.88	2.00	2.12	2.24	2.36	2.47	2.59	-
507	1.00	1.00	1.00	1.00	1.08	1.19	1.30	1.41	1.52	1.63	1.73	1.84	1.95	2.06	2.17	2.27	2.38	2.49	-
608	1.00	1.00	1.00	1.00	1.00	1.05	1.14	1.22	1.30	1.38	1.47	1.55	1.64	1.72	1.80	1.89	1.97	2.05	2.13
800	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.09	1.14	1.20	1.26	1.33	1.40	1.49	1.59	1.70	1.83	1.98	2.15

Note: Input overhung loads shown are with center of load at one input shaft diameter from seal. For loads located at other distances, use input load position factor.

Overhung Load Capacity (Lbs.) Unit Size 107-215

Single Reduction Reducers

Output R.P.M.	107_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	2040	975	802	535
100	1980	943	802	535
110	1920	908	802	535
120	1870	873	772	535
130	1820	858	757	535
140	1796	828	732	535
150	1772	810	715	535
160	1746	792	698	535
170	1707	778	687	535
180	1669	757	668	535
190	1630	747	658	535
200	1608	733	647	535
210	1585	720	635	535
220	1563	707	623	535
230	1540	693	612	530
240	1523	680	600	520
250	1505	672	593	515
260	1488	658	582	505
270	1470	653	577	500
280	1455	648	572	495
290	1440	640	565	490
300	1425	640	565	490
310	1410	640	565	490
320	1400	640	565	490
330	1390	640	565	490
340	1380	640	565	490
350	1370	640	565	490
360	1358	640	565	490
370	1345	640	565	490
380	1333	640	565	490
390	1320	640	565	490
400	1310	640	565	490

Output R.P.M.	115_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	3190	1208	1067	925
100	3105	1160	1025	890
110	3020	1123	992	860
120	2953	1083	957	830
130	2885	1048	927	805
140	2818	1025	905	785
150	2750	998	882	765
160	2708	972	858	745
170	2662	953	842	730
180	2616	927	818	710
190	2570	913	807	700
200	2538	895	790	685
210	2505	873	772	670
220	2473	860	760	660
230	2440	850	750	650
240	2418	828	732	635
250	2395	815	720	625
260	2373	810	715	620
270	2350	797	703	610
280	2333	783	692	600
290	2315	770	680	590
300	2298	765	675	585
310	2280	748	662	575
320	2265	743	657	570
330	2250	730	645	560
340	2235	725	640	555
350	2220	717	633	550
360	2203	712	628	545
370	2185	698	617	535
380	2168	690	610	530
390	2150	685	605	525
400	2130	677	598	520

Output R.P.M.	203_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	3620	1525	1350	1175
100	3620	1458	1292	1125
110	3620	1408	1247	1085
120	3620	1363	1207	1050
130	3560	1315	1165	1015
140	3500	1287	1138	990
150	3440	1247	1103	960
160	3380	1212	1073	935
170	3338	1188	1052	915
180	3295	1162	1028	895
190	3253	1135	1005	875
200	3210	1108	982	855
210	3200	1090	965	840
220	3190	1072	948	825
230	3180	1050	930	810
240	3170	1032	913	795
250	3158	1010	895	780
260	3145	1000	885	770
270	3133	978	867	755
280	3120	965	855	745
290	3105	955	845	735
300	3090	942	833	725
310	3075	928	822	715
320	3060	915	810	705
330	3048	902	798	695
340	3035	888	787	685
350	3023	883	782	680
360	3010	870	770	670
370	2995	865	765	665
380	2980	848	752	655
390	2965	843	747	650
400	2950	830	735	640

Output R.P.M.	207_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	4910	1907	1688	1470
100	4910	1827	1618	1410
110	4910	1755	1555	1355
120	4910	1692	1498	1305
130	4910	1633	1447	1260
140	4818	1580	1400	1220
150	4725	1535	1360	1185
160	4633	1490	1320	1150
170	4540	1450	1285	1120
180	4473	1413	1252	1090
190	4405	1378	1222	1065
200	4338	1347	1193	1040
210	4270	1323	1172	1020
220	4233	1288	1142	995
230	4195	1262	1118	975
240	4158	1238	1097	955
250	4120	1220	1080	940
260	4088	1197	1058	920
270	4055	1178	1042	905
280	4023	1160	1025	890
290	3990	1145	1010	875
300	3950	1127	993	860
310	3910	1105	975	845
320	3870	1078	952	825
330	3830	1060	935	810
340	3793	1042	918	795
350	3755	1020	900	780
360	3718	1002	883	765
370	3680	980	865	750
380	3647	962	848	735
390	3613	948	837	725
400	3580	930	820	710

Output R.P.M.	215_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	5400	2718	2412	2105
100	5400	2615	2320	2025
110	5400	2520	2235	1950
120	5288	2427	2153	1880
130	5175	2350	2085	1820
140	5063	2278	2022	1765
150	4950	2215	1965	1715
160	4865	2157	1913	1670
170	4780	2107	1868	1630
180	4695	2053	1822	1590
190	4610	2008	1782	1555
200	4573	1963	1742	1520
210	4535	1923	1707	1490
220	4498	1887	1673	1460
230	4460	1855	1645	1435
240	4428	1815	1610	1405
250	4395	2822	2503	2185
260	4363	2790	2475	2160
270	4330	2758	2447	2135
280	4293	2727	2418	2110
290	4255	2700	2395	2090
300	4218	2673	2372	2070
310	4180	2650	2350	2050
320	4147	2623	2327	2030
330	4113	2597	2303	2010
340	4080	2578	2287	1995
350	4047	2552	2263	1975
360	4013	2533	2247	1960
370	3980	2515	2230	1945
380	3947	2493	2212	1930
390	3913	2475	2195	1915
400	3880	2457	2178	1900

Notes: Above thrust and overhung loads are not applicable for combined thrust and overhung loads; refer such applications to Application Engineering (1 800 626 2093).
Interpolate for loads at other distances from the housing surface.
Overhung load must be applied on the same side as the bushing.

Overhung Load Capacity (Lbs.) Unit Size 307-415

Single Reduction Reducers

Output R.P.M.	307_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	8350	3843	3412	2980
100	8332	3687	3273	2860
110	8121	3538	3142	2745
120	7909	3412	3028	2645
130	7698	3295	2925	2555
140	7487	3192	2833	2475
150	7275	3093	2747	2400
160	7064	3012	2673	2335
170	6853	2927	2598	2270
180	6641	2855	2535	2215
190	6430	2783	2472	2160
200	6219	2720	2415	2110
210	6007	4442	3943	3445
220	5796	4383	3892	3400
230	5585	4328	3842	3355
240	5373	4267	3788	3310
250	5162	4217	3743	3270
260	4951	4172	3703	3235
270	4739	4118	3657	3195
280	4528	4082	3623	3165
290	4317	4037	3583	3130
300	4106	4000	3550	3100
310	3894	3952	3508	3065
320	3683	3920	3480	3040
330	3472	3880	3445	3010
340	3260	3848	3417	2985
350	3049	3817	3388	2960
360	2838	3785	3360	2935
370	2626	3753	3332	2910
380	2415	3722	3303	2885
390	2204	3695	3280	2865
400	1992	3663	3252	2840

Output R.P.M.	315_MTP05			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	7019	5493	4887	4280
100	6937	5242	4663	4085
110	6844	5025	4470	3915
120	6734	4832	4298	3765
130	6627	4660	4145	3630
140	6521	4507	4008	3510
150	6414	4363	3882	3400
160	6308	4237	3768	3300
170	6201	4115	3660	3205
180	6095	4003	3562	3120
190	5988	3910	3475	3040
200	5881	3822	3393	2965
210	5775	3738	3317	2895
220	5668	3663	3247	2830
230	5562	3597	3183	2770
240	5455	3523	3117	2710
250	5455	3428	3032	2635
260	5455	3327	2943	2560
270	5455	3245	2870	2495
280	5455	3160	2795	2430
290	5455	3075	2720	2365
300	5455	2995	2650	2305
310	5455	2923	2587	2250
320	5455	2852	2523	2195
330	5455	2788	2467	2145
340	5455	2722	2408	2095
350	5455	2658	2352	2045
360	5455	2600	2300	2000
370	5455	2542	2248	1955
380	5455	2480	2195	1910
390	5455	2430	2150	1870
400	5455	2377	2103	1830

Output R.P.M.	407SMTP05B			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	5557	6638	5897	5155
100	5385	6638	5897	5155
110	5238	6490	5765	5040
120	5105	6320	5615	4910
130	4985	6175	5485	4795
140	4930	6040	5365	4690
150	4875	5918	5257	4595
160	4820	5802	5153	4505
170	4765	5698	5062	4425
180	4710	5600	4975	4350
190	4655	5510	4895	4280
200	4600	5428	4822	4215
210	4545	5352	4753	4155
220	4490	5272	4683	4095
230	4435	5200	4620	4040
240	4380	5137	4563	3990
250	4325	5073	4507	3940
260	4270	5015	4455	3895
270	4270	4957	4403	3850
280	4270	4907	4358	3810
290	4270	4853	4312	3770
300	4270	4803	4267	3730
310	4270	4758	4227	3695
320	4270	4713	4187	3660
330	4270	4668	4147	3625
340	4270	4628	4112	3595
350	4270	4592	4078	3565
360	4270	4552	4043	3535
370	4270	4512	4008	3505
380	4270	4475	3975	3475
390	4270	4443	3947	3450
400	4270	4412	3918	3425

Output R.P.M.	415SMTP05B			
	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
90	12583	13970	12480	10990
100	12479	13400	11970	10540
110	12375	12895	11520	10145
120	12270	12452	11123	9795
130	12166	12050	10765	9480
140	12062	11688	10442	9195
150	11958	11363	10152	8940
160	11853	11065	9885	8705
170	11749	10785	9635	8485
180	11645	10532	9408	8285
190	11541	10297	9198	8100
200	11437	10080	9005	7930
210	11332	9877	8823	7770
220	11228	9678	8647	7615
230	11124	9502	8488	7475
240	11020	9330	8335	7340
250	10915	9172	8193	7215
260	10811	9018	8057	7095
270	10707	8873	7927	6980
280	10603	8738	7807	6875
290	10498	8603	7687	6770
300	10394	8485	7580	6675
310	10290	8363	7472	6580
320	10186	8250	7370	6490
330	10082	8142	7273	6405
340	9977	8042	7183	6325
350	9873	7938	7092	6245
360	9769	7843	7007	6170
370	9665	7748	6922	6095
380	9560	7658	6842	6025
390	9456	7568	6762	5955
400	9352	7487	6688	5890

Notes: Above thrust and overhung loads are not applicable for combined thrust and overhung loads; refer such applications to Application Engineering (1 800 626 2093).
Interpolate for loads at other distances from the housing surface.
Overhung load must be applied on the same side as the bushing.

Browning® SMTP, HMTP, CMTP Output Thrust and TAPER-LOCK® Plus

Overhung Load Capacity (Lbs.) Unit Size 107-215

Double Reduction Reducers

Reducer Size	107_MTP09 107_MTP15 107_MTP25 107_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	2040	1604	802	535
20	2040	1597	802	535
30	2040	1387	802	535
40	2040	1253	802	535
50	2040	1163	802	535
60	2020	1092	802	535
70	1890	1033	802	535
80	1780	988	802	535
90	1670	940	802	535
100	1590	908	802	535
110	1510	873	772	535
120	1475	850	750	535
130	1440	832	733	535
140	1405	805	710	535
150	1370	783	692	535
160	1348	765	675	535
170	1325	752	663	535
180	1303	730	645	535
190	1280	720	635	535
200	1260	707	623	535

Reducer Size	115_MTP09 115_MTP15 115_MTP25 115_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	3190	2677	1964	1309
20	3190	2127	1878	1309
30	3190	1862	1643	1309
40	3190	1683	1487	1290
50	3190	1558	1377	1195
60	3050	1460	1290	1120
70	2910	1383	1222	1060
80	2770	1325	1170	1015
90	2630	1267	1118	970
100	2553	1218	1077	935
110	2475	1182	1043	905
120	2398	1150	1015	880
130	2320	1115	985	855
140	2273	1083	957	830
150	2225	1057	933	810
160	2178	1030	910	790
170	2130	1012	893	775
180	2097	993	877	760
190	2063	972	858	745
200	2030	953	842	730

Reducer Size	203_MTP09 203_MTP15 203_MTP25 203_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	3620	3408	2826	1884
20	3620	2695	2385	1884
30	3620	2328	2062	1795
40	3620	2103	1862	1620
50	3620	1942	1718	1495
60	3425	1808	1602	1395
70	3230	1722	1523	1325
80	3035	1642	1453	1265
90	2840	1570	1390	1210
100	2789	1520	1345	1170
110	2738	1458	1292	1125
120	2687	1413	1252	1090
130	2636	1368	1212	1055
140	2583	1337	1183	1030
150	2517	1297	1148	1000
160	2450	1265	1120	975
170	2383	1238	1097	955
180	2317	1215	1075	935
190	2250	1188	1052	915
200	2200	1162	1028	895

Reducer Size	207_MTP09 207_MTP15 207_MTP25 207_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	4910	4528	3910	2607
20	4910	3545	3140	2607
30	4910	3052	2703	2355
40	4910	2733	2422	2110
50	4910	2508	2222	1935
60	4910	2338	2072	1805
70	4673	2195	1945	1695
80	4435	2087	1848	1610
90	4198	1997	1768	1540
100	3960	1912	1693	1475
110	3790	1840	1630	1420
120	3620	1782	1578	1375
130	3450	1723	1527	1330
140	3280	1670	1480	1290
150	3225	1625	1440	1255
160	3170	1588	1407	1225
170	3115	1548	1372	1195
180	3060	1508	1337	1165
190	3010	1477	1308	1140
200	2960	1445	1280	1115

Reducer Size	215_MTP09 215_MTP15 215_MTP25 215_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	5400	6127	5433	4562
20	5400	4793	4252	3710
30	5400	4120	3655	3190
40	5400	3693	3277	2860
50	5055	3392	3008	2625
60	4710	3158	2802	2445
70	4365	2978	2642	2305
80	4020	2822	2503	2185
90	3900	2700	2395	2090
100	3780	2592	2298	2005
110	3660	2493	2212	1930
120	3540	2408	2137	1865
130	3470	2332	2068	1805
140	3400	2268	2012	1755
150	3330	2202	1953	1705
160	3260	2143	1902	1660
170	3198	2093	1857	1620
180	3135	2048	1817	1585
190	3073	2003	1777	1550
200	3010	1958	1737	1515

Notes: Above thrust and overhung loads are not applicable for combined thrust and overhung loads; refer such applications to Application Engineering (1 800 626 2093).
Interpolate for loads at other distances from the housing surface.
Overhung load must be applied on the same side as the bushing.

Browning® SMTP, HMTP, CMTP Output Thrust and TAPER-LOCK® Plus

Overhung Load Capacity (Lbs.) Unit Size 307-608

Double Reduction Reducers

Reducer Size	307_MTP09 307_MTP15 307_MTP25 307_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	8350	9072	8053	7035
20	8350	7080	6285	5490
30	8350	6100	5415	4730
40	8350	5480	4865	4250
50	8350	5035	4470	3905
60	8350	4693	4167	3640
70	8350	4423	3927	3430
80	8350	4203	3732	3260
90	8350	4018	3567	3115
100	8332	3862	3428	2995
110	8121	3713	3297	2880
120	7909	3587	3183	2780
130	7698	3470	3080	2690
140	7487	3367	2988	2610
150	7275	3268	2902	2535
160	7064	3183	2827	2470
170	6853	3107	2758	2410
180	6641	3035	2695	2355
190	6430	2972	2638	2305
200	6219	2908	2582	2255

Reducer Size	315_MTP09 315_MTP15 315_MTP25 315_MTP35			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	8840	13882	12348	10815
20	8840	10865	9665	8465
30	8840	9383	8347	7310
40	8840	8447	7513	6580
50	7410	7780	6920	6060
60	6750	7267	6463	5660
70	6220	6853	6097	5340
80	5820	6515	5795	5075
90	5430	6223	5537	4850
100	5210	5983	5322	4660
110	5070	5763	5127	4490
120	4940	5570	4955	4340
130	4820	5403	4807	4210
140	4720	5250	4670	4090
150	4593	5110	4545	3980
160	4476	4980	4430	3880
170	4360	4858	4322	3785
180	4243	4750	4225	3700
190	4126	4655	4140	3625
200	4009	4557	4053	3550

Reducer Size	407SMTP15B 407SMTP25B			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	9000	11072	9838	8605
20	8298	8022	7128	6235
30	6586	6518	5792	5065
40	4874	5570	4950	4330
50	4344	4900	4355	3810
60	3813	4392	3903	3415
70	3283	3995	3550	3105
80	2931	4017	3566	3115
90	2579	4038	3582	3125
100	2226	4060	3598	3135
110	1874	4082	3613	3145
120	1760	4103	3629	3155
130	1645	4125	3645	3165

Reducer Size	415SMTP15B 415SMTP25B			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	12200	13575	12075	10575
20	12200	9742	8613	7485
30	12200	7462	6598	5735
40	11700	6055	5355	4655
50	10600	5477	4843	4210
60	9777	5185	4585	3985
70	8953	4948	4377	3805
80	8130	4755	4205	3655
90	7675	4593	4062	3530
100	7220	4450	3935	3420
110	6960	4317	3818	3320
120	6700	4208	3722	3235
130	6440	4110	3635	3160

Reducer Size	507SMTP15B 507SMTP25B			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	12900	16922	15108	13295
20	12900	12825	11450	10075
30	12900	10830	9670	8510
40	12900	9853	8797	7740
50	12900	9217	8228	7240
60	12300	8725	7790	6855
70	11500	8332	7438	6545
80	10800	7998	7142	6285
90	10100	7727	6898	6070
100	10000	7483	6682	5880
110	9950	7275	6495	5715
120	9900	7082	6323	5565
130	9820	6918	6177	5435

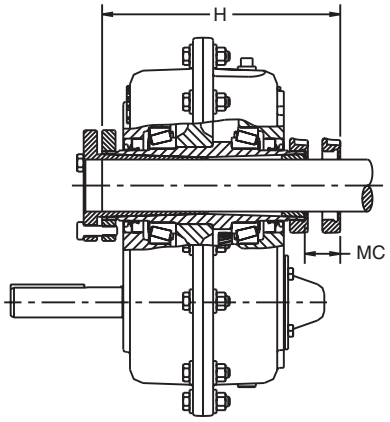
Reducer Size	608SMTP15B 608SMTP25B			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	22000	30878	27742	24605
20	22000	23938	21507	19075
30	21600	20557	18468	16380
40	19100	18542	16658	14775
50	17600	17343	15582	13820
60	16400	16422	14753	13085
70	15450	15673	14082	12490
80	14500	15060	13530	12000
90	13116	14538	13062	11585
100	11909	14088	12657	11225
110	10703	13693	12302	10910
120	9497	13332	11978	10625
130	8291	13022	11698	10375

Reducer Size	800SMTP25			
Output R.P.M.	Thrust Load	OHL at Inches from Machined Housing Surface		
		4	8	12
10	30360	56746	55828	54910
20	30360	43503	42799	42095
30	29808	37012	36414	35815
40	26358	32916	32383	31850
50	24288	30005	29520	29035
60	22632	27790	27340	26890
70	21321	26023	25602	25180
80	20010	24560	24163	23765

Notes: Above thrust and overhung loads are not applicable for combined thrust and overhung loads; refer such applications to Application Engineering (1 800 626 2093).
Interpolate for loads at other distances from the housing surface.
Overhung load must be applied on the same side as the bushing.

Length Requirements

Front Mounting Configuration with Stabilizer Ring



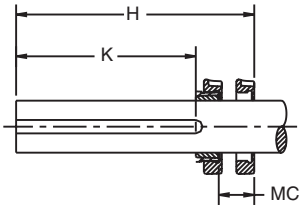
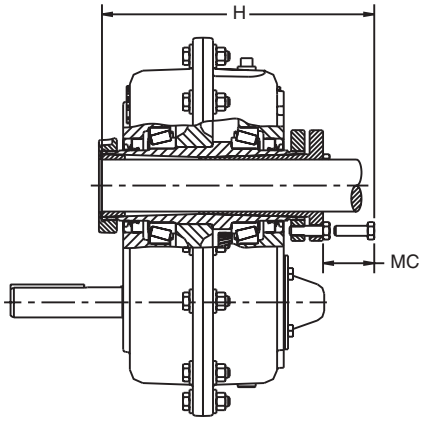


Fig. 1

Unit Size	Endcap Clearance	Minimum Shaft Mounting Length	Minimum Key Connection Length
	MC	H	K*
107	0.97	8.06	3.69
115	1.03	8.59	3.88
203	1.15	9.78	4.32
207	1.21	10.16	4.81
215	1.31	11.36	5.25
307	1.44	13.04	6.31
315	1.69	15.20	7.38
407	-	-	-
415	-	-	-
507	-	-	-
608	-	-	-
800	-	-	-

Rear Mounting Configuration with Stabilizer Ring



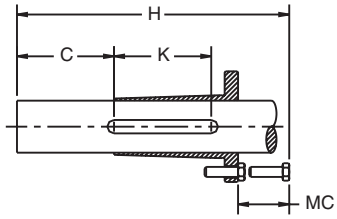
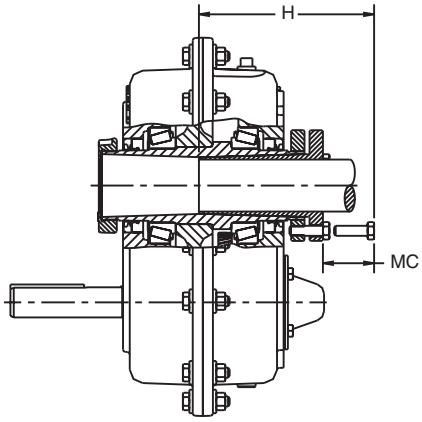


Fig. 2

Unit Size	Bolt Clearance	Minimum Shaft Mounting Length	Minimum Key Connection Length	Remaining Shaft for Stabilizer Ring
	MC	H	K*	C
107	1.75	9.53	3.69	3.40
115	1.88	10.13	3.88	3.62
203	1.88	11.19	4.32	4.19
207	1.88	11.52	4.81	4.01
215	1.88	12.62	5.25	4.61
307	2.25	14.64	6.31	5.01
315	2.75	17.07	7.38	5.76
407	2.75	16.42	6.91	5.54
415	3.25	19.76	8.53	6.51
507	3.75	21.27	9.66	6.27
608	4.25	25.93	10.15	9.68
800	4.50	28.62	10.73	11.12

Rear Mounting Configuration without Stabilizer Ring



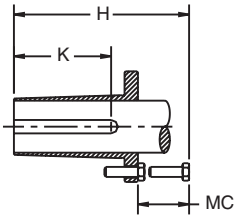


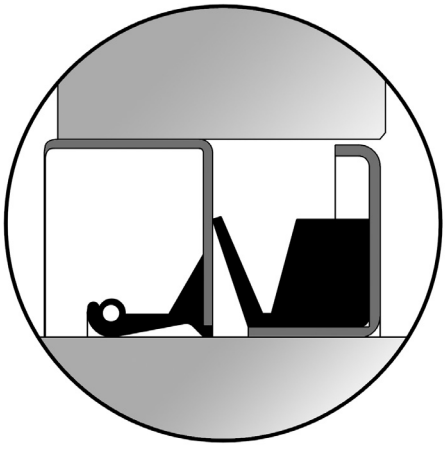
Fig. 3

Unit Size	Bolt Clearance	Minimum Shaft Mounting Length	Minimum Key Connection Length
	MC	H	K*
107	1.75	6.12	3.69
115	1.88	6.50	3.88
203	1.88	7.00	4.32
207	1.88	7.50	4.81
215	1.88	8.00	5.25
307	2.25	9.63	6.31
315	2.75	11.31	7.38
407	2.75	10.88	6.91
415	3.25	13.25	8.53
507	3.75	15.00	9.66
608	4.25	16.25	10.15
800	4.50	17.50	10.73

★K — Minimum key connection length is measured from the end of the driven shaft to the end of the usable keyseat.

Note: 407-800 mounting systems available in rear configuration only. Contact Application Engineering (1 800 626 2093) for front configuration mounting systems on these sizes.

Don't Let An Ounce of Dirt Stop 1,000 Tons of Rock!!

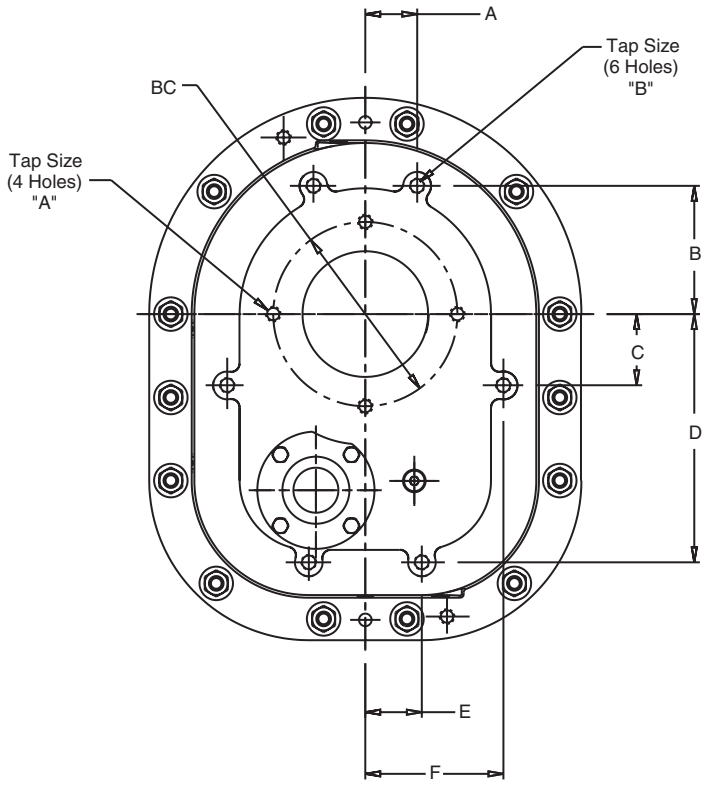


Performance is Our Pledge

Browning® Patented Barrier Seal System

Combines a v-ring face seal, grease filled labyrinth and rotating outer flinger to provide triple protection to reduce contamination and oil seal damage. Standard on all shafts.

Face Mounting Drill and Tap Instructions Unit Sizes 107-315



"A" Pre-Machined Face Mount Holes (Machined at Factory)

Reducer Size	Holes	Tap Size	Tap Depth	Drill Depth	BC
107	4	5/16-18	0.63	0.75	4.125
115		3/8-16	0.88	1.13	5.060
203		7/16-14	0.88	1.13	5.500
207		1/2-13	1.06	1.31	6.375
215			0.81	1.13	6.875
307		5/8-11	1.16	1.44	8.375
315			1.25	1.50	9.125

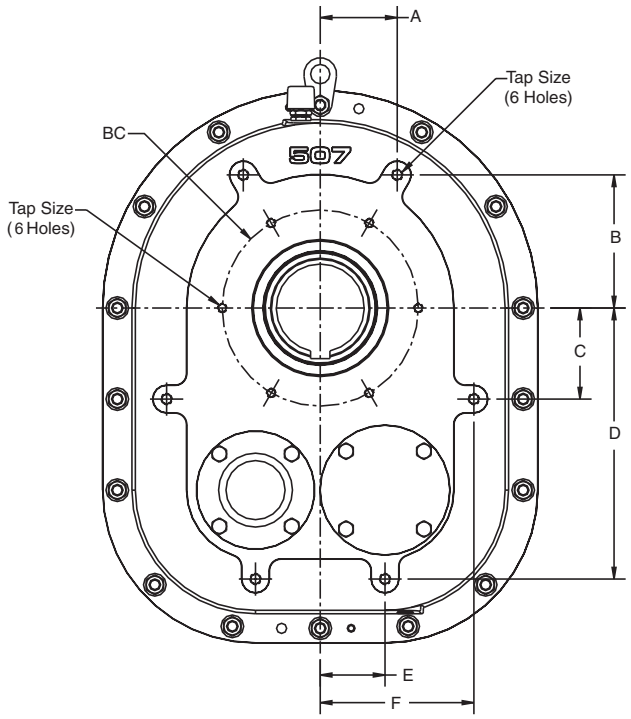
"B" Optional Face Mount Holes (Not Machined)

Reducer Size	A	B	C	D	E	F
107	1.14	2.81	1.59	5.59	1.19	3.00
115	1.27	3.13	1.53	6.41	1.28	3.01
203	1.55	3.83	2.13	7.41	1.69	4.13
207	1.87	4.64	2.66	8.94	1.97	5.00
215	2.15	5.33	2.63	10.38	2.25	5.75
307	2.44	6.02	3.75	11.83	2.63	6.50
315	2.53	6.25	1.81	13.21	2.75	6.75

Reducer Size	Holes	Tap Size	Tap Depth	Drill Depth
107	6	5/16-18	0.56	0.75
115		3/8-16	0.69	0.88
203		7/16-14	0.69	0.88
207			0.81	1.00
215		1/2-13	0.81	1.00
307		5/8-11	1.00	1.19
315				

Notes: No extra charge for drilled and tapped holes. Please specify at time of order.
Full diameter of drill must not exceed specified drill depth because point of drill may break through housing and contaminate the oil with metal chips.

Face Mounting Drill and Tap Instructions Unit Sizes 407-800



"A" Face Mount Holes (Machined at Factory)

Reducer Size	Holes	Tap Size	Tap Depth	Drill Depth	BC
407	6	5/8-11	1.06	1.37	10.125
415			1.12	1.44	12.250
507			1.31	1.63	12.688
608	8	3/4-10	1.56	1.88	15.750
800		7/8-9	2.00	2.25	18.250

"B" Face Mount Holes (Not Machined)

Reducer Size	A	B	C	D	E	F
407	7.48	2.00	4.63	13.86	3.13	7.75
415	8.42	2.25	5.19	15.47	3.63	8.72
507	4.98	8.61	5.89	17.53	4.19	9.94
608	7.5	7.50	6.81	20.00	4.25	10.59
800	9.75	8.13	6.50	20.78	10.41	12.75

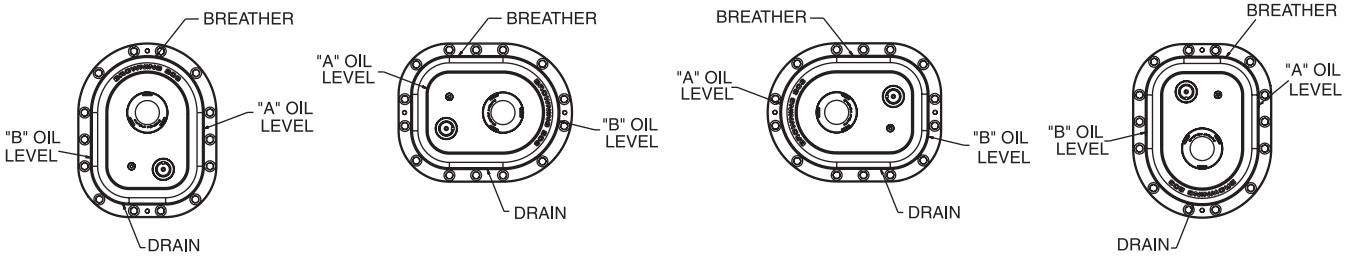
Reducer Size	Holes	Tap Size	Tap Depth	Drill Depth
407	6	3/4-10	1.00	1.19
415				
507				
608			1.38	1.69
800		1-8	1.56	1.88

Notes: No extra charge for drilled and tapped holes. Please specify at time of order.
Full diameter of drill must not exceed specified drill depth because point of drill may break through housing and contaminate the oil with metal chips.

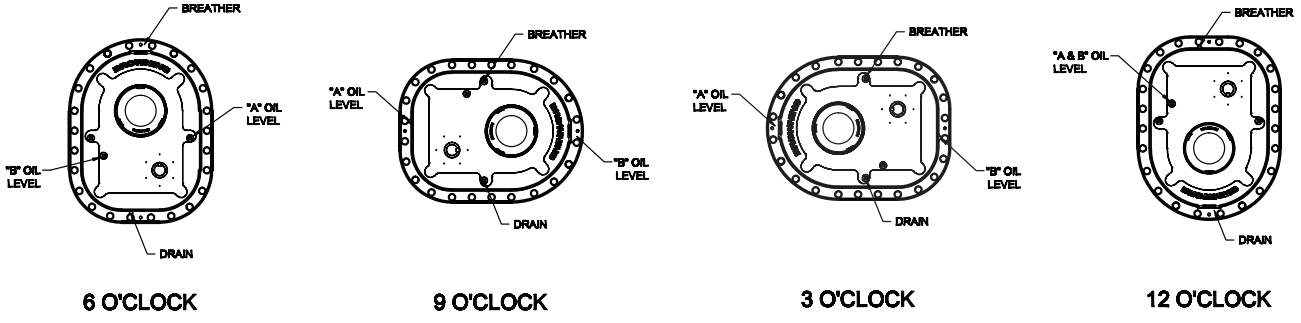
Lubrication Sizes 107-800

The drawing below shows the breather, magnetic drain and oil level plug locations for the standard mounting positions. The breather is installed in the fill hole in the top and the magnetic drain plug is installed in the bottom of the reducer in its relative position. Use oil level "A" for speeds slower than those shown in the table below. Use oil level "B" for speeds faster than those shown in the table below.

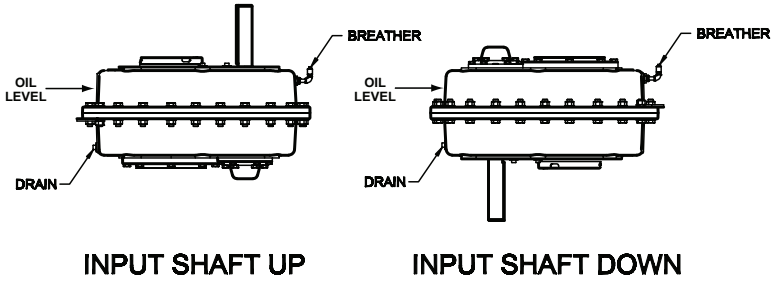
Refer to mounting positions and lubrication tables shown below for proper oil levels on 107-608 sizes.



Refer to mounting positions and lubrication tables shown below for proper oil levels on 800SMTP.



Vertical shaft mounting positions



Lubrication Sizes 107-800

Shaft mount reducers require different amounts of oil in the various mounting positions. For the convenience of having enough oil at the installation site, the table below shows the approximate amount of oil for each mounting position.

Refer to mounting positions and lubrication tables shown below for proper oil levels.

Use Oil Level "B" For Speeds Faster Than Those Shown Below

Reducer Size	Output rpm for Reducer Ratios				
	5:1	9:1	15:1	25:1	35:1
107	400	184	120	70	40
115	382	173	120	70	40
203	326	128	113	70	40
207	275	112	99	70	40
215	236	97	85	70	40
307	204	90	79	70	40
315	202	85	62	70	40
407	176	-	63	55	-
415	156	-	53	46	-
507	-	-	47	41	-
608	-	-	46	40	-
800	-	-	-	40	-

Approximate Oil Capacities in Quarts

Output Orientation	Horizontal															
Ratio	5:1								9,15,25,35:1							
Oil Level	A				B				A				B			
Mounting Position	3	6	9	12	3	6	9	12	3	6	9	12	3	6	9	12
107	2.0	2.0	2.5	2.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	1.0	1.0	1.5	1.5
115	3.0	3.0	3.0	3.0	1.5	2.0	2.0	2.0	3.0	3.0	3.0	3.0	1.5	2.0	2.0	2.0
203	5.0	5.0	6.0	5.0	2.5	3.0	3.5	3.5	4.5	4.5	5.5	5.0	2.5	3.0	3.5	3.5
207	6.5	7.0	7.5	7.0	3.0	4.0	4.5	4.5	6.0	6.5	7.5	7.0	3.0	4.0	4.5	4.5
215	9.0	10.0	11.5	10.5	4.0	5.5	7.0	6.0	8.0	9.0	11.0	10.0	4.0	5.0	7.0	6.0
307	13.0	13.5	15.5	14.0	7.0	8.5	10.0	9.5	12.0	12.5	15.0	14.0	7.0	8.0	10.0	9.5
315	17.0	19.5	19.5	17.5	10.0	12.5	13.0	11.0	15.5	18.0	19.0	17.0	9.5	11.5	13.0	11.0
407	19.0	20.1	23.5	19.8	8.4	12.3	13.5	12.7	15.9	17.1	21.7	19.3	7.8	10.3	13.8	12.7
415	32.5	34.0	40.0	34.8	15.3	20.9	23.8	22.5	27.8	29.7	37.5	33.8	14.2	18.0	24.3	22.5
507	-	-	-	-	-	-	-	-	38.3	40.3	52.9	49.4	19.7	23.5	34.8	32.9
608	-	-	-	-	-	-	-	-	55.0	61.5	65.4	68.2	40.3	36.8	50.4	43.9
800	-	-	-	-	-	-	-	-	94.6	90.0	91.0	-	74.3	-	69.5	-

Output Orientation	Vertical			
Ratio	5:1		9,15,25,35:1	
Mounting Position	Input Shaft Up	Input Shaft Down	Input Shaft Up	Input Shaft Down
107	2.5	2.5	2.5	2.5
115	3.5	4.0	3.5	4.0
203	6.0	7.0	6.0	7.0
207	8.5	9.0	8.5	9.0
215	13.0	12.5	12.0	12.0
307	18.5	20.0	17.5	19.0
315	24.0	26.0	22.5	25.0
407	26.5	29.0	24.0	26.5
415	46.3	50.2	42.5	46.3
507	-	-	60.8	65.8
608	-	-	87.9	93.9
800	-	-	144.3	145.3

Notes: Contact Application Engineering (1 800 626 2093) for vertical shaft mounting lubrication instructions.
SMTP, SMFP, HMTP and CMTP reducers are shipped without oil. Gearboxes must be filled to the proper level before operation.
Synthetic or mineral oil may be used in SMTP, SMFP, HMTP and CMTP shaft mount reducers.
For complete lubrication instructions, refer to the installation manual provided with the unit.

Reference page A-148 - A-149 for additional lubrication specifications.

NOTICE: Petroleum-based and synthetic lubricants which contain anti-wear/extreme pressure additives must not be used in units with internal backstops. These additives decrease the backstop's ability to prevent reverse rotation and will result in backstop failure.

Note: Reducers operating more than 10° from standard position should have a stand pipe or sight glass installed and marked at proper oil level in order to monitor oil level while in operating position. Contact Application Engineering Department (1 800 626 2093) for assistance in selecting and installing required material.

Relubrication

The following are some general recommendations regarding relubrication. Your experience in your specific application is the best determination of relubrication intervals.

Petroleum-based lubricants

For normal operating conditions, oil should be changed every 2,500 hours of operation or six months, whichever occurs first. If temperatures vary by season, the oil should be changed to suit the ambient operating temperature.

Synthetic Lubricants

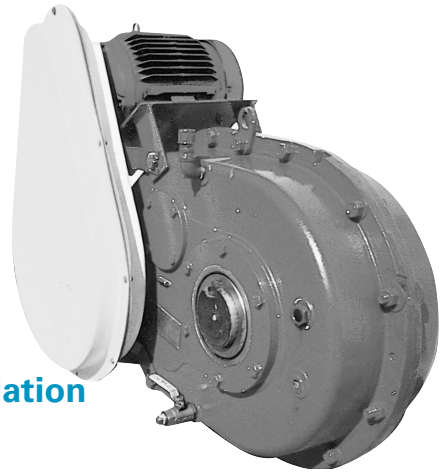
Some type of synthetic lubricants can be used in shaft mount reducers. These lubricants can extend oil change intervals to as much as 8,000 to 10,000 hours of operation based on operating temperatures and lubricant contamination. If temperatures vary by season, the oil should be changed to suit the ambient operating temperature.

Lubrication Sizes 107-800

AGMA Oil Viscosity Grades for Ambient Operating Temperature between 14 deg F and 50 deg F												
Output RPM	Reducer Size											
	107_MTP	115_MTP	203_MTP	207_MTP	215_MTP	307_MTP	315_MTP	407SMTP	415SMTP	507SMTP	608SMTP	800SMTP
5-20	5	5	5	5	5	5	5	5	5	5	5	5
21-40	5	5	5	5	5	5	5	5	5	5	5	5
41-60	5	5	5	5	5	5	5	5	5	5	5	5
61-80	5	5	5	5	5	5	5	5	5	5	5	5
81-100	5	5	5	5	5	5	5	5	5	5	5	
101-120	5	5	5	5	5	5	5	5	5	5	5	
121-140	5	5	5	5	5	5	5	5	5			
141-160	5	5	5	5	5	5	5	5	5			
161-180	5	5	5	5	5	5	5	5	5			
181-200	5	5	5	5	5	5	5	5	5			
201-220	5	5	5	5	5	5	5	5	4			
221-240	5	5	5	5	5	5	5	4	4			
241-260	5	5	5	5	5	5	5	4	4			
261-280	5	5	5	5	5	5	4	4	4			
281-300	5	5	5	5	5	4	4	4	4			
301-320	5	5	5	5	4	4	4	4	4			
321-340	5	5	5	5	4	4	4	4	4			
341-360	5	5	5	5	4	4	4	4	4			
361-380	5	5	5	4	4	4	4	4	4			
381-400	5	5	5	4	4	4	4	4	4			

AGMA Oil Viscosity Grades for Ambient Operating Temperature between 50 deg F and 95 deg F												
Output RPM	Reducer Size											
	107_MTP	115_MTP	203_MTP	207_MTP	215_MTP	307_MTP	315_MTP	407SMTP	415SMTP	507SMTP	608SMTP	800SMTP
5-20	6	6	6	6	6	6	6	6	6	6	6	6
21-40	6	6	6	6	6	6	6	6	6	6	6	6
41-60	6	6	6	6	6	6	6	6	6	6	6	6
61-80	6	6	6	6	6	6	6	6	6	6	6	6
81-100	6	6	6	6	6	6	6	6	6	6	6	
101-120	6	6	6	6	6	6	6	6	6	6	6	
121-140	6	6	6	6	6	6	6	6	6			
141-160	6	6	6	6	6	6	6	6	6			
161-180	6	6	6	6	6	6	6	6	6			
181-200	6	6	6	6	6	6	6	6	5			
201-220	6	6	6	6	6	6	6	5	5			
221-240	6	6	6	6	6	6	5	5	5			
241-260	6	6	6	6	6	6	5	5	5			
261-280	6	6	6	6	6	5	5	5	5			
281-300	6	6	6	6	6	5	5	5	5			
301-320	6	6	6	6	5	5	5	5	5			
321-340	6	6	6	6	5	5	5	5	5			
341-360	6	6	6	6	5	5	5	5	5			
361-380	6	6	6	5	5	5	5	5	5			
381-400	6	6	6	5	5	5	5	5	5			

Features and Ratings



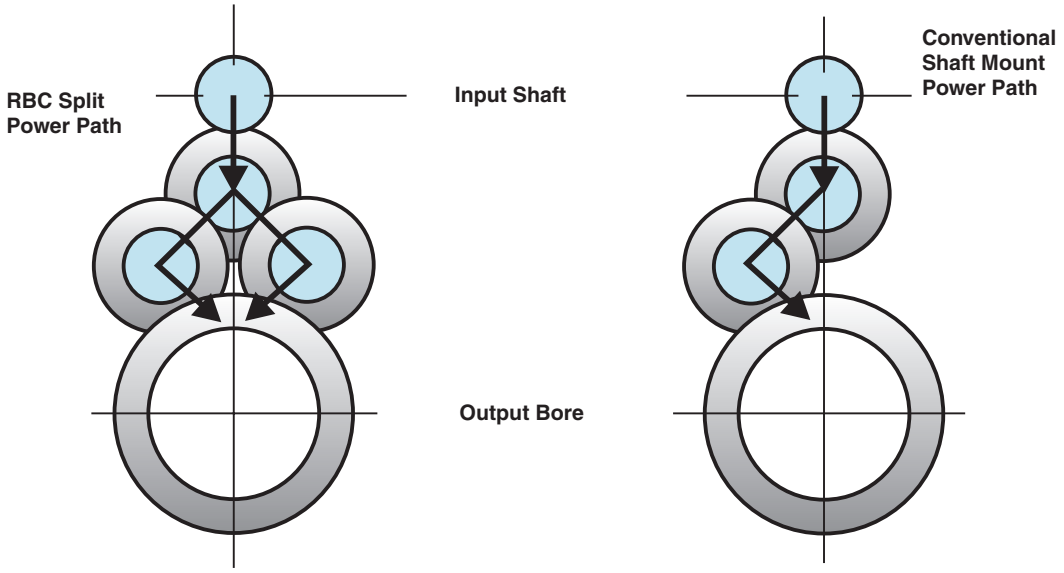
Water treatment maintenance superintendents, design engineers and consultants agree...

Browning® products meet all your needs for rotating biological contactor drives.

Specify the Browning solution on your next RBC installation or retrofit.

Superior Water Treatment Drives Solutions

Built Rugged and Dependable for Minimal Maintenance and Downtime

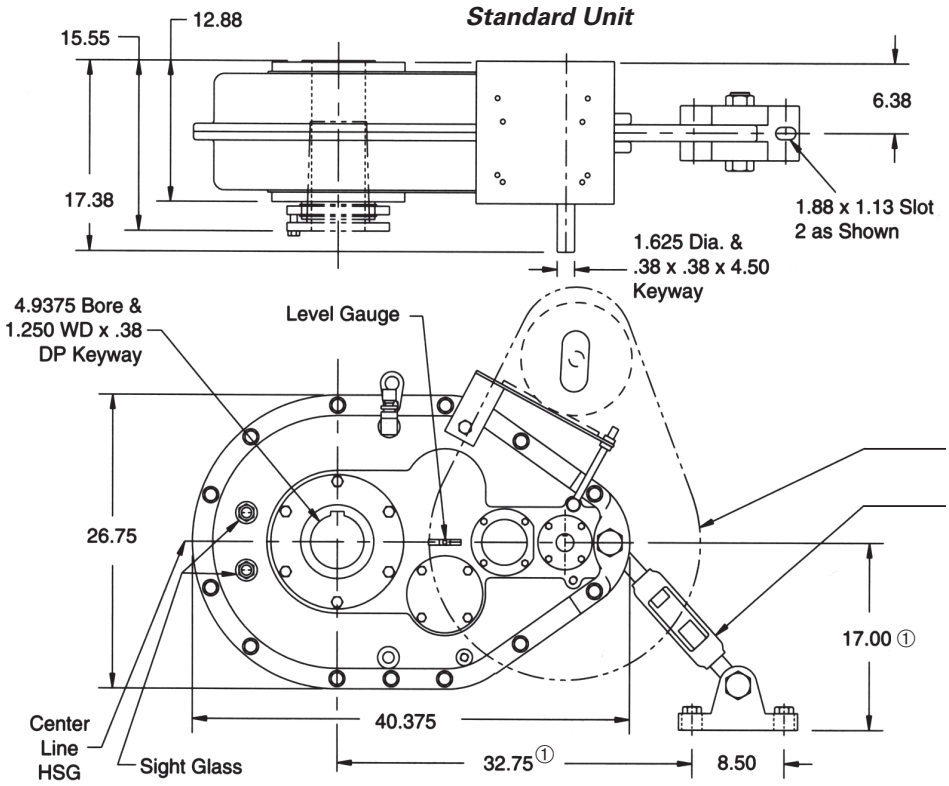


- **Split Power Path Design**
  Provides twice the tooth engagement when compared to conventional drives
- **Leak Free Operation**
  Plunge ground shafts with dual lip oil seals
- **High Quality Bearings**
  100,000 hour B-10 life at 5 hp Class II service
- **Generous Shaft Diameters**
  Support overhung loads generated by V-belt drive assembly
- **Compact design and drop-in features allow for quick replacement of problem drives**
  Universal housings allow for left or right-hand installations
  Reducer, belt guard, torque arm, belt drive and motor are to be ordered separately

Dimensions

- **COMPACT DESIGN AND DROP-IN FEATURES ALLOW FOR QUICK REPLACEMENT OF PROBLEM DRIVES**

  Universal housings allow for left or right-hand installations
  Reducer, Belt Guard, Torque Arm, Belt Drive and Motor are to be ordered separately



DRIVE ASSEMBLY

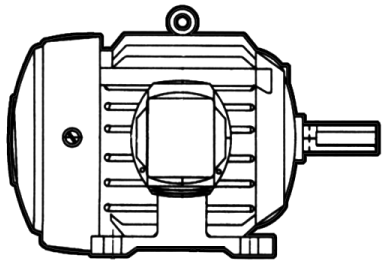
- **TAPERED BUSHED UNIT**
  P/N 415SMT148 includes 4 15/16" tapered bushing and standard motor mount.
- **STRAIGHT BORE UNIT**
  P/N 415SMF148 Includes Std. Motor Mount
  Motor Mount will accept...
  184T, 213T & 254T frame motors and a VBelt drive CD of 14 to 20"
- **FIBERGLASS V-BELT GUARD**
  P/N BG415-RBC
- **TORQUE ARM** ①
  P/N TA415-RBC/1
- **5 HP BELT DRIVE**
  Driver Sheave - 3P3V36
  Bushing - P1 1 3/8 5/16
  Driven Sheave - 3R3V190
  Bushing - R1 1 5/8
  Belts - 3VX710 (quantity 3)
- **7.5 HP BELT DRIVE**
  Driver Sheave - 4P3V36
  Bushing - P1 1 5/8
  Driven Sheave - 4R3V190
  Bushing - R1 1 5/8
  Belts - 3VX710 (quantity 4)

① If torque arm arrangement is longer than 32.75" in the horizontal, or smaller than 17.00" in the vertical dimension, consult Application Engineering.

marathon® Motors

- **SEVERE DUTY TOTALLY ENCLOSED FAN COOLED MOTORS**

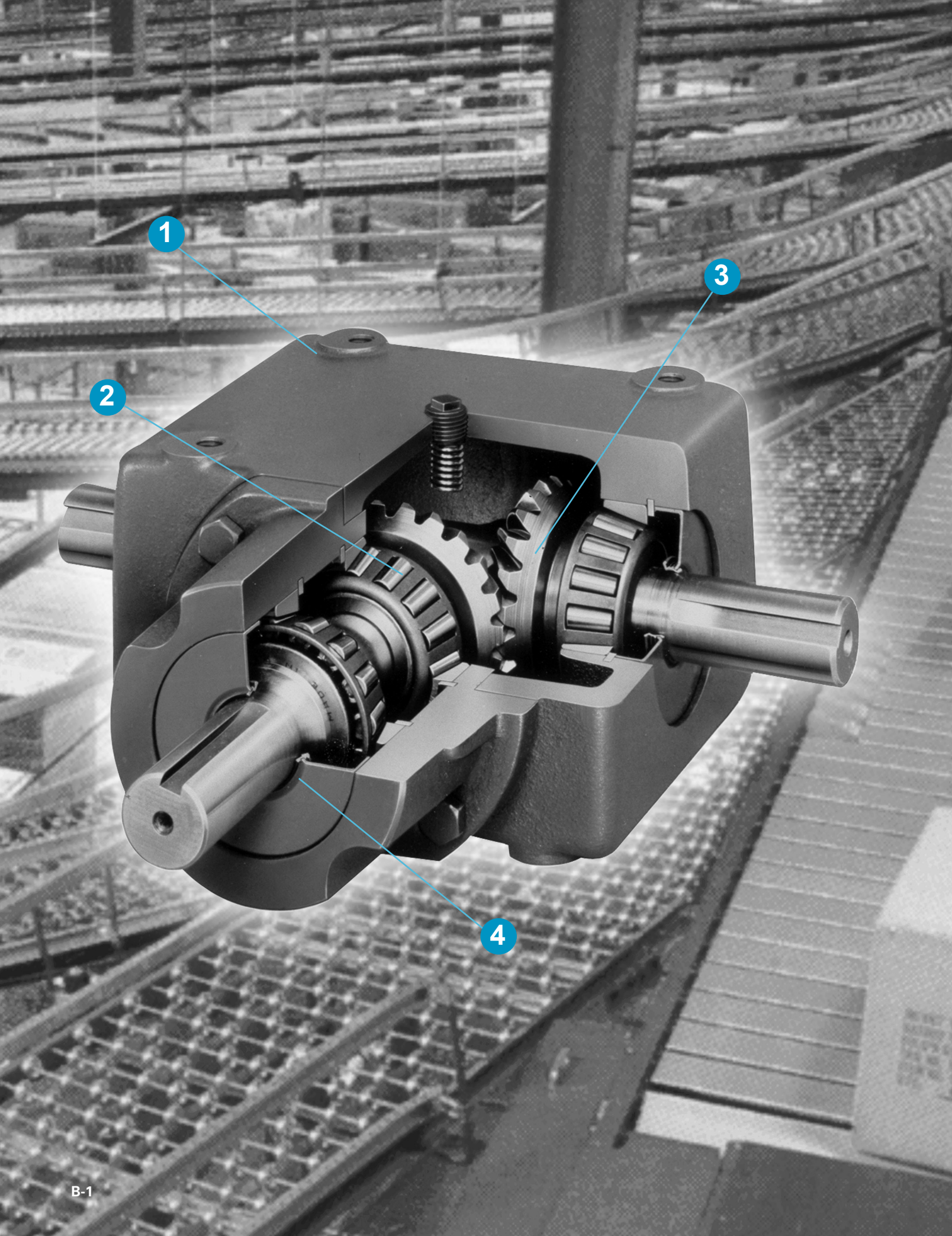
  Designed for Waste Water Treatment Plant Operation



- NEMA Premium Efficient TEFC
- Cast Iron Frames
- Hostile-Duty Paint
- Stainless Steel Nameplates

5 HP/1150 RPM 215T Frame P/N 215TTFS6881

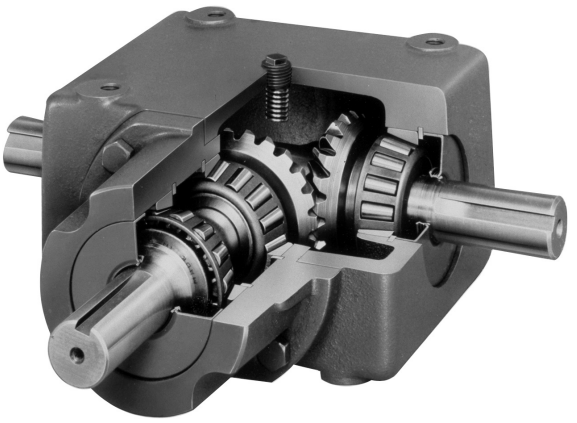
7.5 HP/1150 RPM 254T Frame P/N 254TTFNA6590


1
2
3
4

Browning®

HB and HSB
Bevel and Spiral Bevel

1. Rugged cast iron housings, line bored for precise gear and bearing alignment.
2. Commercially available tapered roller and ball bearings catalog load capacity.
3. Carburized alloy steel straight or spiral gears manufactured to AGMA standard for long life and quiet operation.
4. Double lip contact oil seals ride on hardened plunge ground shafts.



- 6 Sizes
- Spiral bevel and straight bevel gears
- Ratios 1:1 to 3:1 with speed up ratios available
- Torque ratings from 99 to 6,508 in.-lbs.

Selection and Ordering Information

Overload Service Factors

Load and operating characteristics of both driver and driven units must be considered thoroughly when selecting Browning® Bevel Gear Boxes. It is essential that all gear boxes be selected for maximum load conditions to be encountered. Browning Bevel Gear Boxes will safely transmit momentary starting loads as great as 200% of the mechanical input ratings.

First determine the load classification of the driven unit from the table on page B-4. Then from the table below, select an overload service factor for this classification, for duration of service to be involved and for the type of prime mover to be used.

Prime Mover	Duration of Service	Driven Machine Load Classification		
		U Uniform	M Moderate Shock	H Heavy Shock
Electric Motor	Occasional - 1.2 hour per day	0.50	0.80	1.25
	Intermittent - 3 hours per day	0.80	1.00	1.50
	Up to 10 hours per day	1.00	1.25	1.75
	24 hours per day	1.25	1.50	2.00
Multi-Cylinder Internal Combustion Engine	Occasional - 1.2 hour per day	0.80	1.00	1.50
	Intermittent - 3 hours per day	1.00	1.25	1.75
	Up to 10 hours per day	1.25	1.50	2.00
	24 hours per day	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional - 1.2 hour per day	1.00	1.25	1.75
	Intermittent - 3 hours per day	1.25	1.50	2.00
	Up to 10 hours per day	1.50	1.75	2.25
	24 hours per day	1.75	2.00	2.50

Overhung Loads

When a gear box is driven by any belt, chain, or gear drive, or when the gear box drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown in the tables on pages B-5 - B-8. Use the following formula to calculate the overhung load.

$$OL = \frac{2TK}{D}$$

Where:

OL = Overhung Load (pounds)
T = Actual Shaft Torque (Inch-Pounds)
D = P.D. of Sprocket, Sheave, Pulley or Gear
K = 1.0 for Chain Drives
1.25 for Gear Drives
1.25 for Gearbelt Drives
1.50 for V-Belt Drives

No overhung loads are encountered when the gear box is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings by misalignment.

Selection Example

A right angle gear box is needed for a line shaft driving processing machinery which requires 1330 inch-pounds torque and will operate about 10 hours per day. This line shaft will be coupling connected at a right angle to an existing line shaft which is driven by an 1150 rpm electric motor. Existing line shaft is 1 7/16" diameter and the new line shaft is 1 3/16" diameter.

1. **Determine the Load Classification of the driven unit.**

   From page B-4, the load class for a line shaft driving processing machinery is "M".

2. **Determine the Overload Service Factor.**

   From the table on this page, the service factor for a moderate shock (M) load driven by an electric motor 10 hours per day is 1.25.

3. **Determine the Normal Torque (or the Normal hp).**

   Multiply the required torque by the service factor:

   1330 x 1.25 =1662.5 Normal Torque

4. **Select the Gear Box.**

   From page B-6 under the 1150 RPM column, select a gear box which has a mechanical rating of 1663, or slightly greater, which in this case is 1670 and the gear box is 12HSB1-LR10. Check to see that the thermal rating (1670) exceeds the transmitted load (1330).

5. **Select the Couplings Required.**

   Note: If a chain drive or the other drive has been specified for either or both input or output shafts, the overhung loads would have to be checked from the formula above and from the table on page B-6.

6. **List Components**

   1, **12HSB1-LR10** Spiral Bevel Gear Box

Load Classifications - Typical Applications**

Application	Load Class
AGITATORS	
Pure Liquids	U
Liquids and Solids	M
Liquids - Variable Density	M
BLOWERS	
Centrifugal	U
Lobe	M
Vane	U
BREWING AND DISTILLING	
Bottling Machinery	U
Brew Kettles, Continuous Duty	U
Cookers, Continuous Duty	U
Mash Tubs, Continuous Duty	U
Scale Hopper, Frequent Starts	M
CAN FILLING MACHINES	U
CANE KNIVES	M*
CAR DUMPERS	H
CAR PULLERS	M
CLARIFIERS	U
CLASSIFIERS	M
CLAY WORKING MACHINERY	
Brick Press	H
Briquette Machine	H
Clay Working Machinery	M
Pub Mill	M
COMPRESSORS	
Centrifugal	U
Lobe	M
Reciprocating, Multi-Cylinder	M
Reciprocating, Single Cylinder	H
CONVEYORS-UNIFORMLY LOADED OR FED	
Apron	U
Assembly	U
Belt	U
Bucket	U
Chain	U
Flight	U
Oven	U
Screw	U
CONVEYORS-HEAVY DUTY NOT UNIFORMLY FED	
Apron	M
Assembly	M
Belt	M
Bucket	M
Chain	M
Flight	M
Live Roll	★
Oven	M
Reciprocating	H
Screw	M
Shaker	H
CRANES	
Main Hoists	U
Bridge	★
Trolley Travel	★
CRUSHER	
Ore	H
Stone	H
Sugar	M*
DREDGES	
Cable Reels	M
Conveyors	M
Cutter Head Drives	H
Jig Drives	H
Maneuvering Winches	M
Pumps	M
Screen Drive	H
Stackers	M
Utility Winches	M
ELEVATORS	
Bucket-Uniform Load	U
Bucket-Heavy Load	M
Bucket-Continuous	U
Centrifugal Discharge	U
Escalators	U
Freight	M
Gravity Discharge	U
Man Lifts	★
Passenger	★
EXTRUDERS (Plastic)	
Film	U
Sheet	U
Coating	U
Rods	U
EXTRUDERS (Plastic)-Continued	
Pipe	U
Tubing	U
Blow Molders	M
Pre-plasticizers	M
FANS	
Centrifugal	U
Cooling Towers-Induced Draft	★
Forced Draft	U*
Induced Draft	M
Large (Mine, etc.)	M
Large (Industrial)	M
Light (Small Diameter)	U
FEEDERS	
Apron	M
Belt	M
Disc	U
Reciprocating	H
Screw	M
FOOD INDUSTRY	
Beet Slicers	M
Cereal Cookers	U
Dough Mixers	M
Meat Grinders	M
GENERATORS - (Not Welding)	U
HAMMER MILLS	H
HOISTS	
Heavy Duty	H
Medium Duty	M
Skip Hoist	M
LAUNDRY WASHERS	
Reversing	M
LAUNDRY TUMBLERS	M
LINE SHAFTS	
Driving Processing Equipment	M
Light	U
Other Line Shafts	U
LUMBER INDUSTRY	★
MACHINE TOOLS	
Bending Roll	M
Punch Press-Gear Driven	H
Notching Press-Belt Driven	★
Plate Planers	H
Tapping Machine	H
Other Machine Tools	
Main Drives	M
Auxiliary Drives	U
METAL MILLS	
Draw Bench Carriage and Main Drive	M
Pinch, Dryer and Scrubber Rolls, Reversing	★
Slitters	M
Table Conveyors	
Non-Reversing	
Group Drives	M
Individual Drives	H
Reversing	★
Wire Drawing and Flattening Machines	M
Wire Winding Machines	M
MILLS, ROTARY TYPE	
Ball	M*
Cement Kilns	M*
Dryers and Coolers	M*
Kilns	M
Pebble	M*
Rod, Plain and Wedge Bar	M*
Tumbling Barrels	H
MIXERS	
Concrete, Continuous	M
Concrete, Intermittent	M
Constant Density	U
Variable Density	M
OIL INDUSTRY	
Chillers	M
Oil Well Pumping	★
Paraffin Filter Presses	M
Rotary Kilns	M
PAPER MILLS	
Agitators (Mixers)	M
Barker-Auxiliaries-Hydraulic	M
Barker-Mechanical	M
Barking Drum	H
Beater and Pulper	M
Bleacher	U
Calenders	M
PAPER MILLS-Continued	
Calendars-Super	H
Converting Machine, Except Cutters, Platers	M
Conveyors	U
Couch	M
Cutters-Platers	H
Cylinders	M
Dryers	M
Felt Stretchers	M
Felt Whippers	H
Jordons	H
Log Haul	H
Presses	U
Pulp Machine Reel	M
Stock Chests	M
Suction Roll	U
Washers and Thickeners	M
Winders	U
PRINTING PRESSES	★
PULLERS	
Barge Haul	H
PUMPS	
Centrifugal	U
Proportioning	M
Reciprocating	
Single Acting, 3 or more cylinders	M
Double Acting, 2 or more cylinders	M
Single Acting, 1 or 2 cylinders	★
Double Acting, Single cylinder	★
Rotory-Gear Type	U
-Lobe, Vane	U
RUBBER AND PLASTIC INDUSTRIES	
Crackers	H*
Laboratory Equipment	M
Mixing Mills	H*
Refiners	M*
Rubber Calenders	M*
Rubber Mill (2 on line)	M*
Rubber Mill (3 on line)	U*
Sheeter	M*
Tire Building Machines	★
Tire and Tube Press Openers	★
Tubers and Strainers	M*
Warming Mills	M*
SAND MULLER	M
SEWAGE DISPOSAL EQUIPMENT	
Bar Screens	U
Chemical Feeders	U
Collectors	U
Dewatering Screens	M
Scum Breakers	M
Slow or Rapid Mixers	M
Thickeners	M
Vacuum Filters	M
SCREENS	
Air Washing	U
Rotory-Stone and Gravel	M
Traveling Water Intake	U
SLAB PUSHERS	M
STEERING GEAR	★
STOKERS	U
SUGAR INDUSTRY	
Cane Knives	M*
Crushers	M*
Mills	H*
TEXTILE INDUSTRY	
Batchers	M
Calenders	M
Cards	M
Dry Cans	M
Dryers	M
Dyeing Machinery	M
Knitting Machines	★
Looms	M
Mangles	M
Nappers	M
Range Drives	★
Slashers	M
Soapers	M
Spinners	M
Tenter Frames	M
Washers	M
Winders	M
WINDLASS	★

* Select Service Factor for 24 hours service only.

★ Refer to Application Engineering (1 800 626 2093).

** Determine Load Class from the table above. Determine Service Factor from the table on page B-3.

Speed, Horsepower, Torque and Overhung Loads

Part No.	Ratio	Gearing	Rating	Revolutions per Minute — Input Shaft**						
				1750	1150	850	690	400	300	100
3HSB1-LR10 3HSB1-SN10 3HSB1-SF10	1:1	Spiral	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower	2.19	1.47	1.10	0.90	0.53	0.40	0.14
			Thermal Horsepower	2.19	1.47	1.10	0.90	0.53	0.40	0.14
			Mechanical Output Torque (In.-Lbs.)	78.70	80.30	81.30	81.90	83.30	84.70	85.80
			Thermal Output Torque (In.-Lbs.)	78.70	80.30	81.30	81.90	83.30	84.70	85.80
			Maximum Input Overhung Load (Lbs.)	60	90	100	110	125	150	160
			Maximum Output Overhung Load (Lbs.)	150	175	210	230	300	400	400
3HB1-LR10 3HB1-SN10 3HB1-SF10	1:1	Straight	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower	2.25	1.50	1.13	0.93	.55	.42	.14
			Thermal Horsepower	2.25	1.50	1.13	0.93	.55	.42	.14
			Mechanical Output Torque (In.-Lbs.)	81	83	84	85	87	88	90
			Thermal OutputTorque (In.-Lbs.)	81	83	84	85	87	88	90
			Maximum Input Overhung Load (Lbs.)	88	110	131	137	169	189	190
			Maximum Output Overhung Load (Lbs.)	177	205	240	267	330	378	400
3HB1-LR15 3HB1-SN15 3HB1-SF15	1.5:1	Straight	Output Speed (RPM)	1166	766	566	460	266	200	66
			Mechanical Horsepower	1.57	1.03	.80	.65	.39	.30	.12
			Thermal Horsepower	1.57	1.03	.80	.65	.39	.30	.12
			Mechanical OutputTorque (In.-Lbs.)	84	85	88	89	92	95	113
			Thermal Output Torque (In.-Lbs.)	84	85	88	89	92	95	113
			Maximum Input Overhung Load (Lbs.)	98	118	137	144	175	190	190
			Maximum Output Overhung Load (Lbs.)	245	290	320	350	400	400	400
3HB1-LR20 3HB1-SN20 3HB1-SF20	2:1	Straight	Output Speed (RPM)	875	575	425	345	200	150	50
			Mechanical Horsepower	1.04	.70	.53	.43	.26	.20	.08
			Thermal Horsepower	1.04	.70	.53	.43	.26	.20	.08
			Mechanical OutputTorque (In.-Lbs.)	75	77	78	80	82	83	100
			Thermal Output Torque (In.-Lbs.)	75	77	78	80	82	83	100
			Maximum Input Overhung Load (Lbs.)	102	121	142	148	180	190	190
			Maximum Output Overhung Load (Lbs.)	300	350	382	400	400	400	400
6HSB1-LR10 6HSB1-SN10 6HSB1-SF10	1:1	Spiral	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower	20.30	13.7	10.4	8.52	5.08	3.85	1.33
			Thermal Horsepower	20.30	13.7	10.4	8.52	5.08	3.85	1.33
			Mechanical OutputTorque (In.-Lbs.)	731	750	771	778	800	808	838
			Thermal OutputTorque (In.-Lbs.)	731	750	771	778	800	808	838
			Maximum Input Overhung Load (Lbs.)	152	152	235	308	516	580	580
			Maximum Output Overhung Load (Lbs.)	500	508	508	508	508	508	508
6HB1-LR10 6HB1-SN10 6HB1-SF10	1:1	Straight	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower	21.8	14.3	10.6	8.58	4.98	3.73	1.24
			Thermal Horsepower	21.8	14.3	10.6	8.58	4.98	3.73	1.24
			Mechanical Output Torque (In.-Lbs.)	784	784	784	784	784	784	784
			Thermal OutputTorque (In.-Lbs.)	784	784	784	784	784	784	784
			Maximum Input Overhung Load (Lbs.)	549	559	559	559	559	559	559
			Maximum Output Overhung Load (Lbs.)	536	536	536	536	536	536	536
6HB1-LR15 6HB1-SN15 6HB1-SF15	1.4615:1	Straight	Output Speed (RPM)	1197	786	581	472	273	205	68
			Mechanical Horsepower	9.37	6.16	4.55	3.70	2.14	1.61	.54
			Thermal Horsepower	9.37	6.16	4.55	3.70	2.14	1.61	.54
			Mechanical OutputTorque (In.-Lbs.)	492	492	492	492	492	492	492
			Thermal Output Torque (In.-Lbs.)	492	492	492	492	492	492	492
			Maximum Input Overhung Load (Lbs.)	559	559	559	559	559	559	559
			Maximum Output Overhung Load (Lbs.)	536	536	536	536	536	536	536
6HB1-LR18 6HB1-SN18 6HB1-SF18	1.8:1	Straight	Output Speed (RPM)	972	638	472	383	222	166	55
			Mechanical Horsepower	6.38	4.91	3.10	2.52	1.46	1.09	.36
			Thermal Horsepower	6.38	4.91	3.10	2.52	1.46	1.09	.36
			Mechanical Output Torque (In.-Lbs.)	412	412	412	412	412	412	412
			Thermal OutputTorque (In.-Lbs.)	412	412	412	412	412	412	412
			Maximum Input Overhung Load (Lbs.)	559	559	559	559	559	559	559
			Maximum Output Overhung Load (Lbs.)	536	536	536	536	536	536	536
9HSB1-LR10 9HSB1-SN10 9HSB1-SF10	1:1	Sprial	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower	16	11	8.30	6.80	4.10	3.10	1.10
			Thermal Horsepower	16	11	8.30	6.80	4.10	3.10	1.10
			Mechanical Output Torque (In.-Lbs.)	580	600	615	620	645	650	693
			Thermal Output Torque (In.-Lbs.)	580	600	615	620	645	650	693
			Maximum Input Overhung Load (Lbs.)	114	182	211	243	319	384	600
			Maximum Output Overhung Load (Lbs.)	265	310	355	395	475	550	800
9HB1-LR10 9HB1-SN10 9HB1-SF10	1:1	Straight	Output Speed (RPM)	—	1150	850	690	400	300	100
			Mechanical Horsepower	—	17.00	13	10.60	6.30	5	1.65
			Thermal Horsepower	—	17.00	13	10.60	6.30	5	1.65
			Mechanical Output Torque (In.-Lbs.)	—	930	960	970	1000	1010	1040
			Thermal Output Torque (In.-Lbs.)	—	930	960	970	1000	1010	1040
			Maximum Input Overhung Load (Lbs.)	—	79	121	156	374	450	600
			Maximum Output Overhung Load (Lbs.)	—	260	305	345	425	500	775

**The input shaft is the shaft at a right angle to the cross shaft.

Speed, Horsepower, Torque and Overhung Loads

Part No.	Ratio	Gearing	Rating	Revolutions per Minute — InputShaft**						
				1750	1150	850	690	400	300	100
9HB1-LR15 9HB1-SN15 9HB1-SF15	1.5:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical OutputTorque (In.-Lbs.) Thermal OutputTorque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1166 9.20 9.20 500 500 366 320	766 6.20 6.20 510 510 426 380	566 4.70 4.70 520 520 473 425	460 3.90 3.90 530 530 508 470	266 2.30 2.30 550 550 600 610	200 1.80 1.80 560 560 600 655	66 .65 .65 615 615 600 800
9HB1-LR20 9HB1-SN20 9HB1-SF20	2:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	875 6.25 6.25 442 442 372 455	575 4.25 4.25 465 465 434 525	425 3.25 3.25 481 481 481 555	345 2.70 2.70 494 494 517 575	200 1.60 1.60 504 504 600 780	150 1.25 1.25 525 525 600 800	50 .50 .50 630 630 600 800
12HSB1-LR 10 12HSB1-SN10 12HSB1-SF10	1:1	Spiral	OutputSpeed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1750 46 46 1650 1650 62 100	1150 30.50 30.50 1670 1670 109 160	850 24 24 1790 1790 143 210	690 20.0 20.0 1830 1830 178 250	— — — — — — —	300 10 10 2100 2100 312 420	100 3.70 3.70 2330 2330 493 685
12HB1-LR10 12HB1-SN10 12HB1-SF10	1:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal OutputTorque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1750 52.6 32.2* 1891 1160* 721 748	1150 24.20 24.20 1320 1320 126 190	850 19 19 1410 1410 158 230	690 16.30 16.30 1780 1780 213 265	— — — — — — —	300 8.14 8.14 1700 1700 418 425	100 2.86 2.86 1800 1800 625 695
12HB1-LR15 12HB1-SN15 12HB1-SF15	1.5:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal OutputTorque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1166 15 15 810 810 351 300	766 10.60 10.60 870 870 446 340	566 8.20 8.20 910 910 524 400	460 7.10 7.10 970 970 558 445	— — — — — — —	200 3.50 3.50 1100 1100 744 645	66 1.40 1.40 1320 1320 900 965
12HB1-LR20 12HB1-SN20 12HB1-SF20	2:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	875 7.30 7.30 525 525 459 330	575 5.40 5.40 591 591 521 380	425 4.50 4.50 667 667 567 440	345 3.90 3.90 712 712 603 465	— — — — — — —	150 1.80 1.80 756 756 806 715	50 0.70 0.70 882 882 900 1080
12HB1-LR15-A 12HB1-SN15-A 12HB1-SF15-A	1:1.5 Speed-Up	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	— — — — — — —	— — — — — — —	1275 11.80 11.80 580 580 513 520	1035 9.80 9.80 600 600 559 679	— — — — — — —	450 4.90 4.90 685 685 750 770	150 1.80 1.80 775 775 900 900
15HSB1-LR10 15HSB1-SN10 15HSB1-SF10	1:1	Spiral	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1750 90 90 3240 3240 35 320	1150 63 63 3450 3450 202 370	850 48 48 3558 3558 243 410	690 36.50 36.50 3607 3607 308 475	400 23.50 23.50 3702 3702 429 590	300 18 18 3780 3780 486 655	100 6.50 6.50 4095 4095 843 1100
15HB1-LR10 15HB1-SN10 15HB1-SF10	1:1	Straight	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	— — — — — — —	— — — — — — —	850 44 44 3260 3260 103 385	690 36.50 36.50 3330 3330 234 450	400 21.50 21.50 3390 3390 514 565	300 16.40 16.40 3440 3440 600 630	100 5.80 5.80 3650 3650 1050 1075
15HSB1-LR15 15HSB1-SN15 15HSB1-SF15	1.5:1	Spiral	Output Speed (RPM) Mechanical Horsepower Thermal Horsepower Mechanical Output Torque (In.-Lbs.) Thermal Output Torque (In.-Lbs.) Maximum Input Overhung Load (Lbs.) Maximum Output Overhung Load (Lbs.)	1166 69 69 3720 3720 97 457	766 47 47 3860 3860 216 600	566 35.70 35.70 3970 3970 234 625	460 29.50 29.50 4040 4040 329 710	266 17.60 17.60 4160 4160 546 930	200 13.50 13.50 4250 4250 631 1020	66 4.80 4.80 4440 4440 1120 1500

**The input shaft is the shaft at a right angle to the cross shaft.

Speed, Horsepower, Torque and Overhung Loads

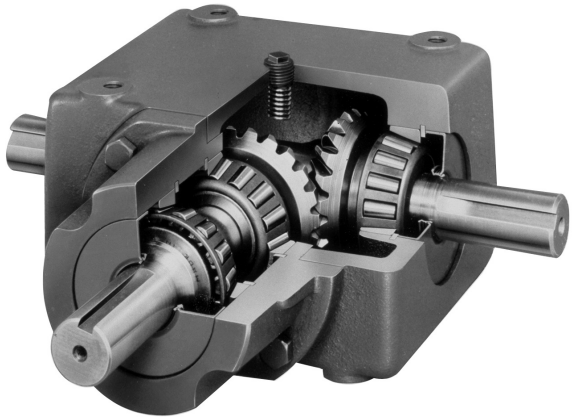
Part No.	Ratio	Gearing	Rating	Revolutions per Minute — InputShaft**						
				1750	1150	850	690	400	300	100
15HB1-LR15 15HB1-SN15 15HB1-SF15	1.5:1	Straight	Output Speed (RPM)	—	766	566	460	266	200	66
			Mechanical Horsepower	—	39	29	24	14.30	10.90	3.80
			Thermal Horsepower	—	39	29	24	14.30	10.90	3.80
			Mechanical Output Torque (In.-Lbs.)	—	3200	3220	3290	3380	3435	3590
			Thermal Output Torque (In.-Lbs.)	—	3200	3220	3290	3380	3435	3590
			Maximum Input Overhung Load (Lbs.)	—	99	309	309	565	794	1400
			Maximum Output Overhung Load (Lbs.)	—	570	600	600	910	995	1475
15HB1-LR20 15HB1-SN20 15HB1-SF20	2:1	Straight	Output Speed (RPM)	—	575	425	345	200	150	50
			Mechanical Horsepower	—	22	16.50	13.80	8.50	6.50	2.30
			Thermal Horsepower	—	22	16.50	13.80	8.50	6.50	2.30
			Mechanical Output Torque (In.-Lbs.)	—	2410	2446	2520	2680	2730	2898
			Thermal Output Torque (In.-Lbs.)	—	2410	2446	2520	2680	2730	2898
			Maximum Input Overhung Load (Lbs.)	—	330	506	602	925	1038	1400
			Maximum Output Overhung Load (Lbs.)	—	700	850	950	1170	1250	1500
15HB1-LR30 15HB1-SN30 15HB1-SF30	3:1	Straight	Output Speed (RPM)	583	383	283	230	133	100	33
			Mechanical Horsepower	15	9.90	7.50	6.50	3.80	2.90	1.00
			Thermal Horsepower	15	9.90	7.50	6.50	3.80	2.90	1.00
			Mechanical Output Torque (In.-Lbs.)	1621	1629	1669	1780	1800	1827	1891
			Thermal Output Torque (In.-Lbs.)	1621	1629	1669	1780	1800	1827	1891
			Maximum Input Overhung Load (Lbs.)	600	709	793	843	1035	1147	1400
			Maximum Output Overhung Load (Lbs.)	760	820	900	1200	1400	1475	1500
15HSB1-LR15- A 15HSB1-SN15- A 15HSB1-SF15- A	1:1.5 Speed-Up	Spiral	Output Speed (RPM)	—	1725	1275	1035	600	450	150
			Mechanical Horsepower Thermal	—	68	51	42	26	20	7.10
			Horsepower	—	68	51	42	26	20	7.10
			Mechanical Output Torque (In.-Lbs.)	—	2480	2520	2585	2730	2790	2980
			Thermal Output Torque (In.-Lbs.)	—	2480	2520	2585	2730	2790	2980
			Maximum Input Overhung Load (Lbs.)	—	152	176	247	396	396	608
			Maximum Output Overhung Load (Lbs.)	—	219	252	356	498	498	829
15HB1-LR15-A 15HB1-SN15-A 15HB1-SF15-A	1:1.5 Speed-Up	Straight	Output Speed (RPM)	—	—	—	1035	600	450	150
			Mechanical Horsepower	—	—	—	25	18	15	5.60
			Thermal Horsepower	—	—	—	25	18	15	5.60
			Mechanical Output Torque (In.-Lbs.)	—	—	—	1520	1890	2020	2350
			Thermal Output Torque (In.-Lbs.)	—	—	—	1520	1890	2020	2350
			Maximum Input Overhung Load (Lbs.)	—	—	—	290	612	700	1235
			Maximum Output Overhung Load (Lbs.)	—	—	—	710	831	889	1400
15HB1-LR20-A 15HB1-SN20-A 15HB1-SF20-A	1:2 Speed-Up	Straight	Output Speed (RPM)	—	—	—	1380	800	600	200
			Mechanical Horsepower	—	—	—	26	15.40	11.75	4.25
			Thermal Horsepower	—	—	—	26	15.40	11.75	4.25
			Mechanical Output Torque (In.-Lbs.)	—	—	—	1188	1210	1235	1340
			Thermal Output Torque (In.-Lbs.)	—	—	—	1188	1210	1235	1340
			Maximum Input Overhung Load (Lbs.)	—	—	—	383	792	996	1400
			Maximum Output Overhung Load (Lbs.)	—	—	—	603	819	987	1400
18HSB1-LR10 18HSB1-SN10 18HSB1-SF10	1:1	Spiral	Output Speed (RPM)	1750	1150	850	690	400	300	100
			Mechanical Horsepower Thermal	132	90	67	56	33	25	9.00
			Horsepower	132	90	67	56	33	25	9.00
			Mechanical Output Torque (In.-Lbs.)	4750	4930	4970	5115	5200	5250	5670
			Thermal Output Torque (In.-Lbs.)	4750	4930	4970	5115	5200	5250	5670
			Maximum Input Overhung Load (Lbs.)	140	308	478	566	934	1155	1750
			Maximum Output Overhung Load (Lbs.)	690	708	870	940	1160	1340	1080
18HB1-LR10 18HB1-SN10 18HB1-SF10	1:1	Straight	Output Speed (RPM)	—	—	—	690	400	300	100
			Mechanical Horsepower	—	—	—	56.20	33.80	25.80	9.00
			Thermal Horsepower	—	—	—	56.20	33.80	25.80	9.00
			Mechanical Output Torque (In.-Lbs.)	—	—	—	5130	5320	5420	5660
			Thermal Output Torque (In.-Lbs.)	—	—	—	5130	5320	5420	5660
			Maximum Input Overhung Load (Lbs.)	—	—	—	1040	1309	1474	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	940	1160	1340	2080
18HB1-LR12 18HB1-SN12 18HB1-SF12	1.2105:1	Straight	Output Speed (RPM)	—	—	702	570	330	248	83
			Mechanical Horsepower	—	—	48	40	24	19	6.70
			Thermal Horsepower	—	—	48	40	24	19	6.70
			Mechanical Output Torque (In.-Lbs.)	—	—	4271	4383	4527	4788	5067
			Thermal Output Torque (In.-Lbs.)	—	—	4271	4383	4527	4788	5067
			Maximum Input Overhung Load (Lbs.)	—	—	1062	1149	1425	1572	1750
			Maximum Output Overhung Load (Lbs.)	—	—	1125	1185	1515	1740	2200

**The Input Shaft is the Shaft at a Right Angle to the Cross Shaft.

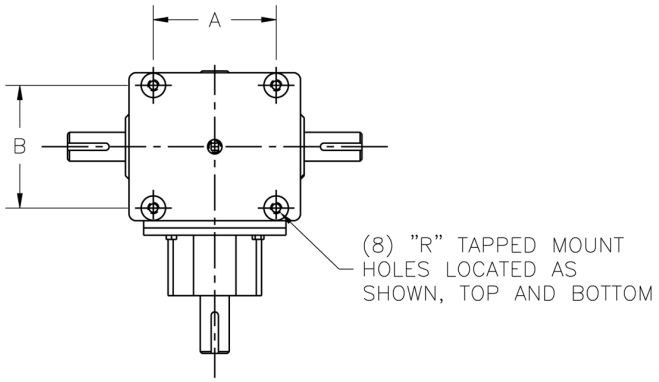
Speed, Horsepower, Torque and Overhung Loads

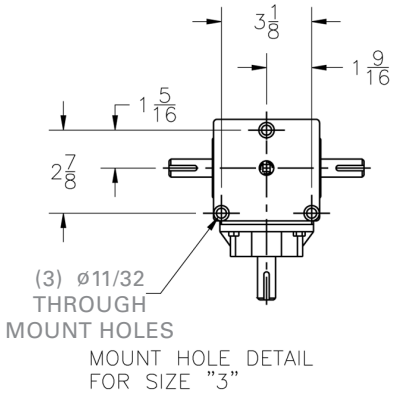
Part No.	Ratio	Gearing	Rating	Revolutions per Minute — InputShaft**						
				1750	1150	850	690	400	300	100
18HB1-LR13 18HB1-SN13 18HB1-SF13	1.3333:1	Straight	Output Speed (RPM)	—	—	637	517	300	225	75
			Mechanical Horsepower	—	—	45	37	22.10	16.60	6.10
			Thermal Horsepower	—	—	45	37	22.10	16.60	6.10
			Mechanical Output Torque (In.-Lbs.)	—	—	4350	4400	4630	4720	5000
			Thermal Output Torque (In.-Lbs.)	—	—	4350	4400	4630	4720	5000
			Maximum Input Overhung Load (Lbs.)	—	—	1098	1192	1471	1647	1750
			Maximum Output Overhung Load (Lbs.)	—	—	1175	1235	1640	1790	2200
18HSB1-LR15 18HSB1-SN15 18HSB1-SF15	1.5:1	Spiral	Output Speed (RPM)	1166	766	566	460	266	200	66
			Mechanical Horsepower	69	47	35.7	29.5	17.6	13.5	4.80
			Thermal Horsepower	69	47	35.7	29.5	17.6	13.5	4.80
			Mechanical Output Torque (In.-Lbs.)	3720	3830	3970	4040	4160	4250	4440
			Thermal Output Torque (In.-Lbs.)	3720	3830	3970	4040	4160	4250	4440
			Maximum Input Overhung Load (Lbs.)	75	300	475	625	975	1200	1750
			Maximum Output Overhung Load (Lbs.)	500	1100	1550	1750	2200	2200	2200
18HB1-LR15 18HB1-SN15 18HB1-SF15	1.5:1	Straight	Output Speed (RPM)	—	766	566	460	266	200	66
			Mechanical Horsepower	—	44	34	28	17	13	4.60
			Thermal Horsepower	—	44	34	28	17	13	4.60
			Mechanical Output Torque (In.-Lbs.)	—	3620	3780	3840	4010	4100	4350
			Thermal Output Torque (In.-Lbs.)	—	3620	3780	3840	4010	4100	4350
			Maximum Input Overhung Load (Lbs.)	—	1036	1162	1257	1530	1699	1750
			Maximum Output Overhung Load (Lbs.)	—	1280	1425	1525	1970	2125	2200
18HB1-LR17 18HB1-SN17 18HB1-SF17	1.7143:1	Straight	Output Speed (RPM)	—	671	496	402	233	175	58
			Mechanical Horsepower	—	33	26	21.6	13	10	3.4
			Thermal Horsepower	—	33	26	21.6	13	10	3.4
			Mechanical Output Torque (In.-Lbs.)	—	3100	3820	3327	3485	3580	3642
			Thermal Output Torque (In.-Lbs.)	—	3100	3820	3327	3485	3580	3642
			Maximum Input Overhung Load (Lbs.)	—	1076	1189	1280	1558	1750	1750
			Maximum Output Overhung Load (Lbs.)	—	1330	1475	1580	1915	2195	2200
18HB1-LR12-A 18HB1-SN12-A 18HB1-SF12-A	1:1.2105 Speed-Up	Straight	Output Speed (RPM)	—	—	—	835	484	363	121
			Mechanical Horsepower	—	—	—	46	28	22	8
			Thermal Horsepower	—	—	—	46	28	22	8
			Mechanical Output Torque (In.-Lbs.)	—	—	—	3500	3780	3860	4200
			Thermal Output Torque (In.-Lbs.)	—	—	—	3500	3780	3860	4200
			Maximum Input Overhung Load (Lbs.)	—	—	—	1023	1284	1430	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	1076	1400	1572	1750
18HB1-LR13-A 18HB1-SN13-A 18HB1-SF13-A	1:1.3333 Speed-Up	Straight	Output Speed (RPM)	—	—	—	920	533	400	133
			Mechanical Horsepower	—	—	—	48	22	22	7.8
			Thermal Horsepower	—	—	—	48	22	22	7.8
			Mechanical Output Torque (In.-Lbs.)	—	—	—	3290	3410	3460	3690
			Thermal Output Torque (In.-Lbs.)	—	—	—	3290	3410	3460	3690
			Maximum Input Overhung Load (Lbs.)	—	—	—	1020	1292	1456	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	1101	1445	1646	1750
18HSB1-LR15-A 18HSB1-SN15-A 18HSB1-SF15-A	1:1.5 Speed-Up	Spiral	Output Speed (RPM)	—	—	—	1035	600	450	150
			Mechanical Horsepower	—	—	—	42	20	20	6.90
			Thermal Horsepower	—	—	—	42	20	20	6.90
			Mechanical Output Torque (In.-Lbs.)	—	—	—	2560	2710	2800	2900
			Thermal Output Torque (In.-Lbs.)	—	—	—	2560	2710	2800	2900
			Maximum Input Overhung Load (Lbs.)	—	—	—	1069	1338	1484	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	1066	1387	1552	1750
18HB1-LR15-A 18HB1-SN15-A 18HB1-SF15-A	1:1.5 Speed-Up	Straight	Output Speed (RPM)	—	—	—	1035	600	450	150
			Mechanical Horsepower	—	—	—	42	20	20	6.90
			Thermal Horsepower	—	—	—	42	20	20	6.90
			Mechanical Output Torque (In.-Lbs.)	—	—	—	2560	2710	2800	2900
			Thermal Output Torque (In.-Lbs.)	—	—	—	2560	2710	2800	2900
			Maximum Input Overhung Load (Lbs.)	—	—	—	1069	1338	1484	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	1066	1387	1552	1750
18HB1-LR17-A 18HB1-SN17-A 18HB1-SF17-A	1:1.7143 Speed-Up	Straight	Output Speed (RPM)	—	—	—	1183	685	514	171
			Mechanical Horsepower	—	—	—	29.10	18.30	14	5.10
			Thermal Horsepower	—	—	—	29.10	18.30	14	5.10
			Mechanical Output Torque (In.-Lbs.)	—	—	—	1550	1680	1720	1880
			Thermal Output Torque (In.-Lbs.)	—	—	—	1550	1680	1720	1880
			Maximum Input Overhung Load (Lbs.)	—	—	—	1174	1446	1613	1750
			Maximum Output Overhung Load (Lbs.)	—	—	—	1268	1540	1750	1750

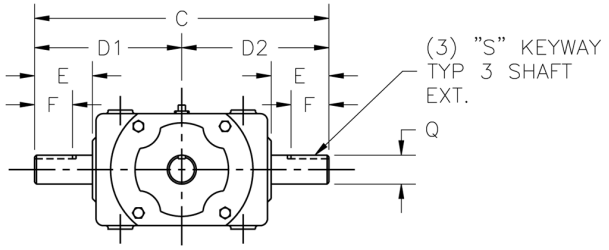
**The Input Shaft is the Shaft at a Right Angle to the Cross Shaft.

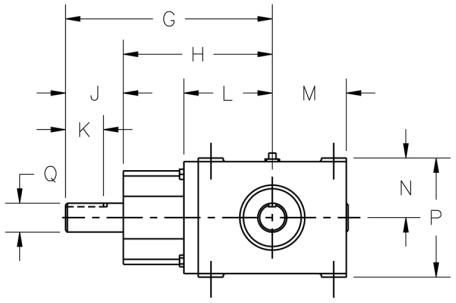


Cast Iron Housing Hardened Gears









Specifications

Size No.	Wt. Lbs.	Dimensions							
		A	B	C	D_1	D_2	E	F	G
3	10	▲	▲	7.500	3.750	3.750	1.500	1.156	4.563
6	23	4.375	2.750	9.094	4.547	4.547	1.625	0.875	6.125
9	28	4.250	4.250	10.188	5.094	5.094	2.000	1.156	7.156
12	48	4.500	4.500	12.250	6.125	6.125	2.500	1.906	8.438
15	105	6.500	6.500	15.813	7.906	7.906	3.000	2.313	10.875
18	125	6.500	6.500	16.094	8.047	8.047	3.094	2.250	11.500

Size No.	Dimensions								Tap Size	Tap Depth	Keyway S
	H	J	K	L	M	N	P	Q*	R		
3	3.063	1.500	1.156	2.281	-	1.594	3.188	0.625	-	-	3/16" x 3/32"
6	4.375	1.750	1.000	2.938	2.063	2.125	4.250	1.000	3/8- 16NC	0.560	1/4 x 1/8
9	5.125	2.031	1.531	2.875	2.536	2.063	4.125	1.000	3/8- 16NC	0.560	1/4 x 1/8
12	3.175	5.263	1.906	3.438	2.813	2.813	5.625	1.250	1/2- 13NC	0.813	1/4 x 1/8
15	7.813	3.063	2.313	4.594	3.844	4.094	8.188	1.375	1/2- 13NC	1.000	5/16 x 5/32
18	8.438	3.063	2.250	4.563	4.156	4.094	8.750	1.500	1/2- 13NC	0.750	3/8 x 3/16

▲ **See Mount Hole Detail Drawing for 3HSB1.**
Select Part No. from the table and Figures 1-6 on page B-10.

∗ **Shaft Tolerances are: +.000 to -.001".**

Note — If gear box is to be mounted with either shaft vertical, provision must be made to lubricate the top bearings. Contact Application Engineering (1 800 626 2093).

Note — Catalog ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads. If your application has combined loads or loads beyond the catalog ratings, contact Application Engineering (1-800-626-2093) and provide complete application information for review.

Assembly Positions and Part Numbers

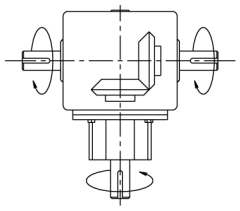


FIG. 1-TYPE LR

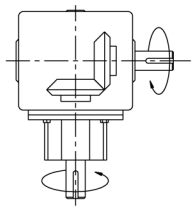


FIG. 3-TYPE SN

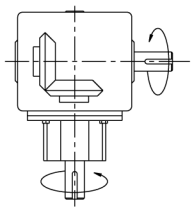


FIG. 5-TYPE SF

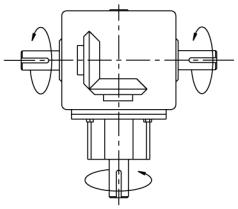


FIG. 2-TYPE LR

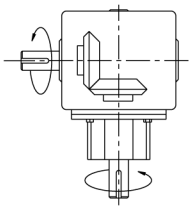


FIG. 4-TYPE SN

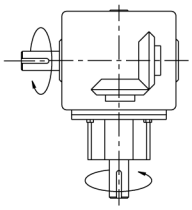


FIG. 6-TYPE SF

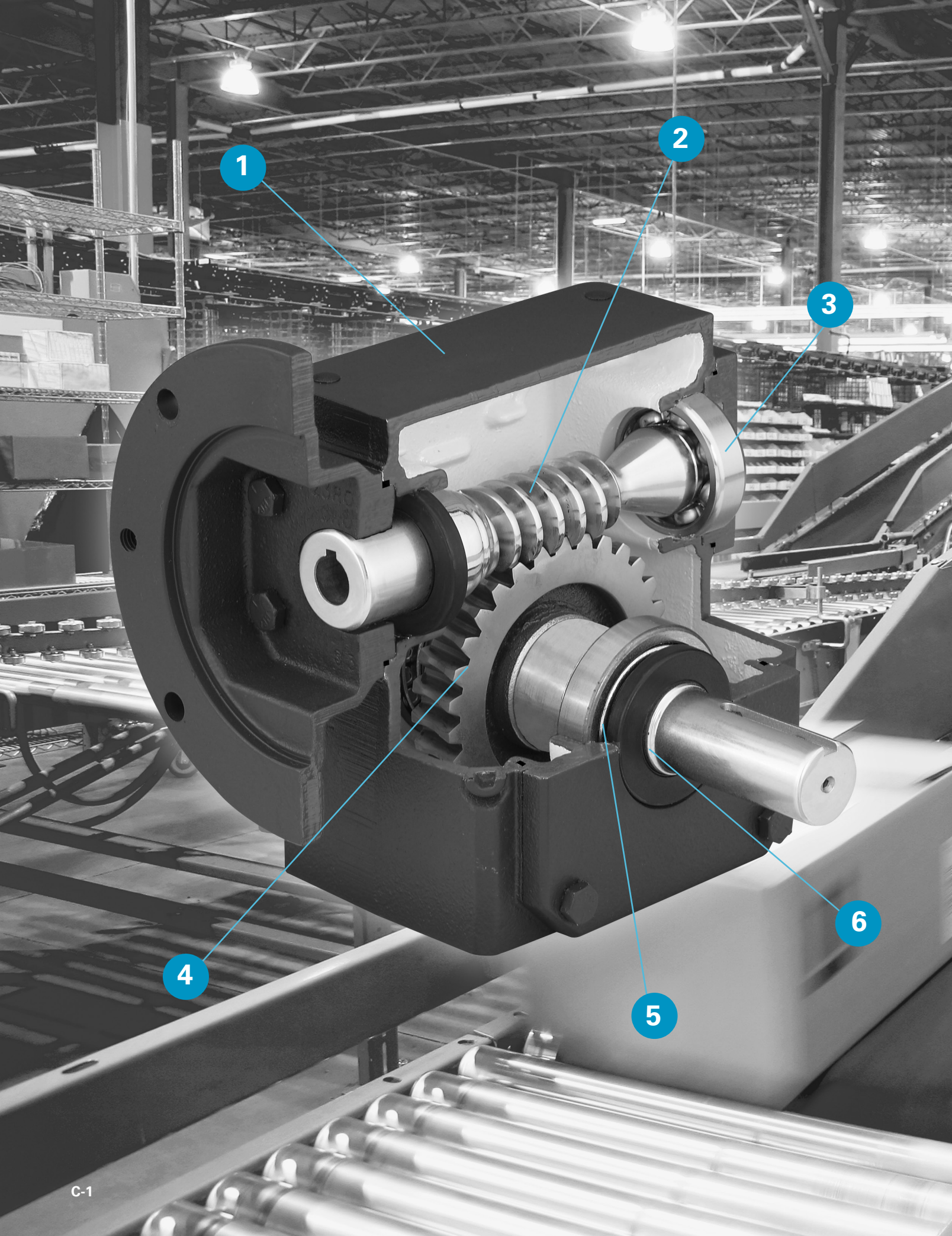
Ratios, Types and Part Numbers

Ratio	Fig.	Type	Part No.
Size No.3			
1:1 Sprial	1 and 2 3 and 4 5 and 6	LR SN SF	3HSB1-LR 10 3HSB1-SN10 3HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	3HB1-LR 10 3HB1-SN10 3HB1-SF10
1.5:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	3HB1-LR 15 3HB1-SN15 3HB1-SF15
2:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	3HB1-LR 20 3HB1-SN20 3HB1-SF20
Size No.6			
1:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	6HSB1-LR 10 6HSB1-SN10 6HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	6HB1-LR 10 6HB1-SN10 6HB1-SF10
1.4615:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	6HB1-LR 15 6HB1-SN15 6HB1-SF15
1.8:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	6HB1-LR 18 6HB1-SN18 6HB1-SF18
Size No.9			
1:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	9HSB1-LR 10 9HSB1-SN10 9HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	9HB1-LR 10 9HB1-SN10 9HB1-SF10
1.5:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	9HB1-LR 15 9HB1-SN15 9HB1-SF15
2:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	9HB1-LR 20 9HB1-SN20 9HB1-SF20

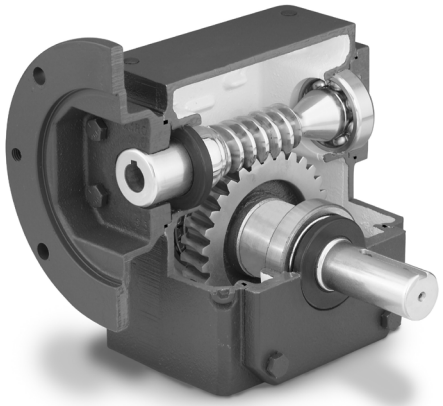
Ratio	Fig.	Type	Part No.
Size No.12			
1:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	12HSB1-LR 10 12HSB1-SN10 12HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	12HB1-LR 10 12HB1-SN10 12HB1-SF10
1.5:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	12HB1-LR 15 12HB1-SN15 12HB1-SF15
2:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	12HB1-LR 20 12HB1-SN20 12HB1-SF20
1:1.5 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	12HB1-LR 15-A 12HB1-SN15-A 12HB1-SF15-A
Size No.15			
1:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	15HSB1-LR 10 15HSB1-SN10 15HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 10 15HB1-SN10 15HB1-SF10
1.5:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	15HSB1-LR 15 15HSB1-SN15 15HSB1-SF15
1.5:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 15 15HB1-SN15 15HB1-SF15
2:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 20 15HB1-SN20 15HB1-SF20
3:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 30 15HB1-SN30 15HB1-SF30
1:1.5 Spiral (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	15HSB1-LR 15-A 15HSB1-SN15-A 15HSB1-SF15-A
1:1.5 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 15-A 15HB1-SN15-A 15HB1-SF15-A
1:2 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	15HB1-LR 20-A 15HB1-SN20-A 15HB1-SF20-A

Ratio	Fig.	Type	Part No.
Size No.18			
1:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	18HSB1-LR 10 18HSB1-SN10 18HSB1-SF10
1:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 10 18HB1-SN10 18HB1-SF10
1.2105:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 12 18HB1-SN12 18HB1-SF12
1.3333:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 13 18HB1-SN13 18HB1-SF13
1.5:1 Spiral	1 and 2 3 and 4 5 and 6	LR SN SF	18HSB1-LR 15 18HSB1-SN15 18HSB1-SF15
1.5:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 15 18HB1-SN15 18HB1-SF15
1.7131:1 Straight	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 17 18HB1-SN17 18HB1-SF17
1:1.2105 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 12-A 18HB1-SN12-A 18HB1-SF12-A
1:1.3333 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 13-A 18HB1-SN13-A 18HB1-SF13-A
1:1.5 Spiral (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	18HSB1-LR 15-A 18HSB1-SN15-A 18HSB1-SF15-A
1:1.5 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 15-A 18HB1-SN15-A 18HB1-SF15-A
1:1.7143 Straight (Speed-Up)	1 and 2 3 and 4 5 and 6	LR SN SF	18HB1-LR 17-A 18HB1-SN17-A 18HB1-SF17-A

Determine the size reducer and ratio needed from Engineering Data on pages B-5 to B-8. Then from the sketches above determine the Type needed for the desired shaft extension and rotation. Then from the table above, determine the Reducer Part Number. Example: For a Size 12, 2:1 Ratio Reducer with single output left and output to rotate CCW when input rotates CW (looking at the shaft ends) note from Fig. 4 that a Type SN is needed and from the table the Part Number is 12HB1-SN20.


1
2
3
4
5
6

Morse® RAIDER Plus®



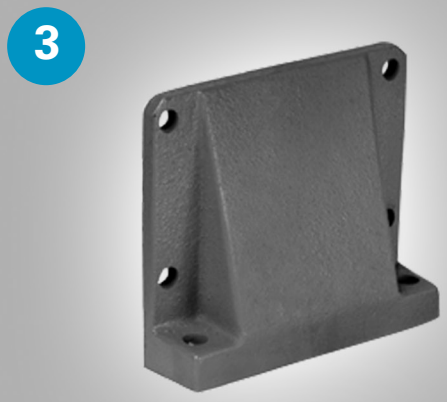
Design Features

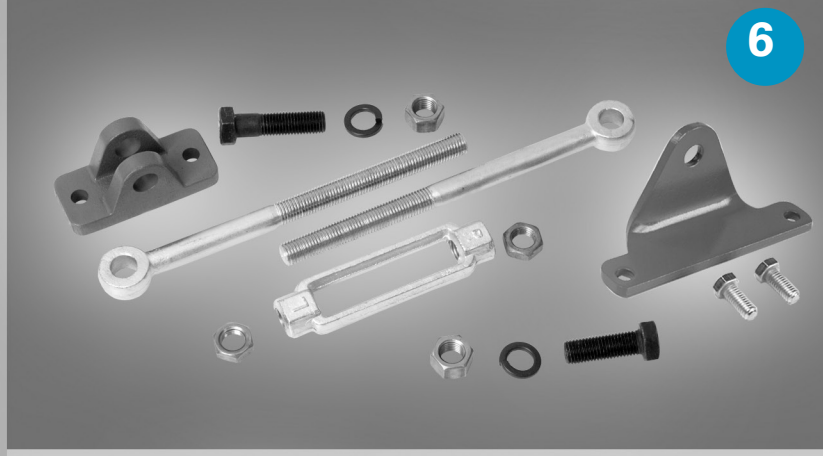
1. **Rugged Cast Iron Housings**
   - Raider® Plus speed reducers incorporate rugged cast iron single piece construction for all housings, motor adapters, covers and mounting bases, providing maximum strength and dependability.
2. **High Lead Angle Worm**
   - Case hardened, ground and polished
3. **Large, Single Row Ball Bearings On Input Shaft**
   - Absorb radial and thrust loads on higher input speeds for increased efficiency. Tapered roller bearings are used in 375, 450, 516 and 600 units.
4. **Forged Bronze Worm Gears on Input Shaft**
   - Provide greater tensile strength than cast bronze, are precision manufactured to AGMA specifications for long, trouble-free operation. Cast iron hubs are used in larger sizes for extra strength.
5. **Heavy-duty Tapered Roller Bearings on all Output Shafts**
   - Effectively handle inherent gear load and provide maximum overhung load capacity.
6. **Viton® Seals on Exclusive Sealing Surfaces***
   - Helps keep contaminants out and lubrication in. Viton seals on sizes 133-325, and double lip seals on sizes 375-600.
7. **All Units Factory Filled with Polyglycol Oil**

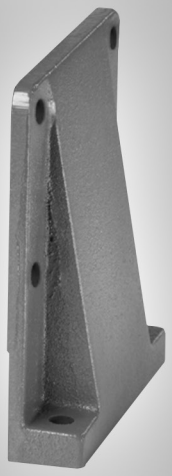
* VITON® is believed to be a trademark or trade name of The Chemours Company and is not controlled by Regal Beloit Corporation.

1

2

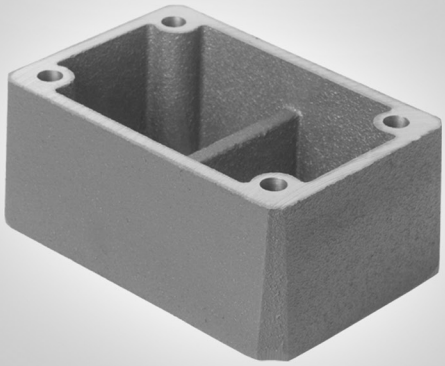

3


6


4

7

5

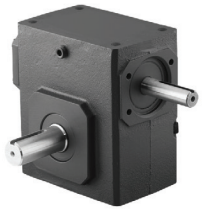
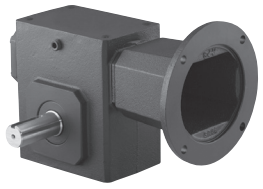
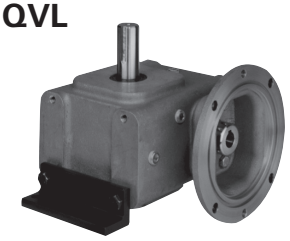
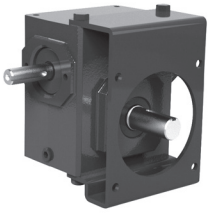
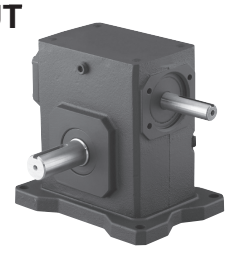
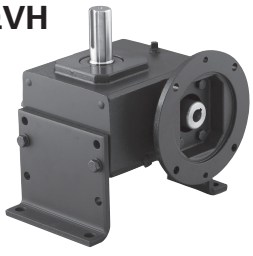
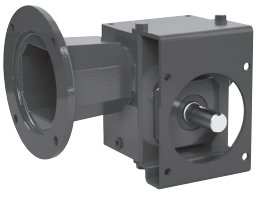
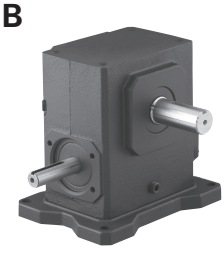
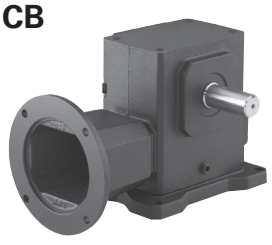
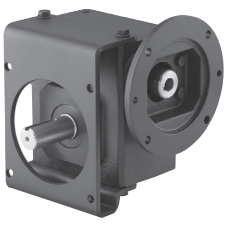
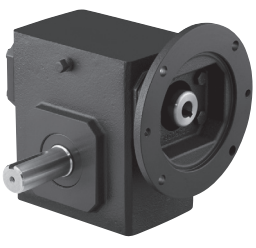
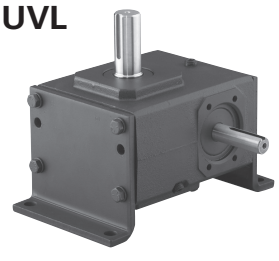
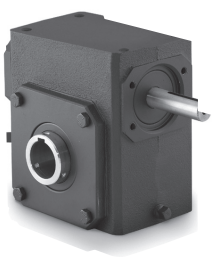
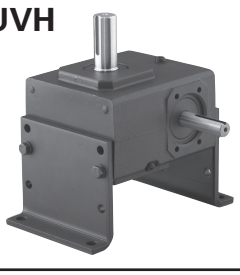
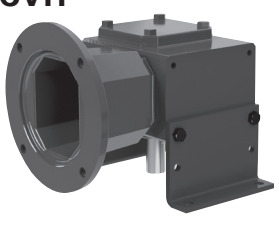
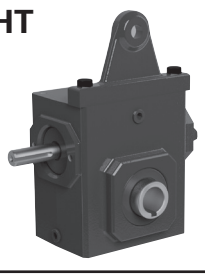
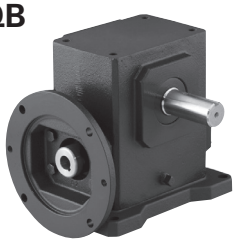
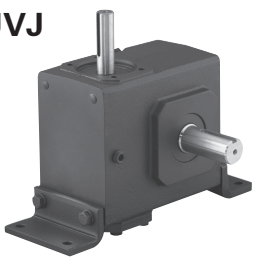

8

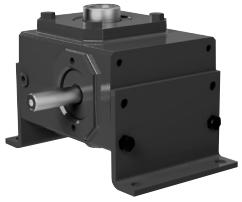
Accessories

Need a reducer in a hurry? It's never a problem with Raider® Plus worm gear speed reducers, because you need only four basic units to serve every conceivable application. Any of the Raider Plus component accessories can be added in just minutes to convert the basic unit to the desired style.That means absolute minimum inventory requirements - at absolute minimum costs!

Design Features

1. **Standard Horizontal Base Kit**
2. **Motor Adapter Kit**
3. **Vertical Low Base Kit**
4. **Vertical High Base Kit**
5. **Vertical "J" Base Kit**
6. **Torque Arm Kit (Brackets ordered separately)**
7. **Steel Flange Kit**
8. **Riser Block Kit**

U 	C 	QVL 	UF 
UT 	CT	QVH 	CF 
UB 	CB 	QVJ	QF 
Q 	UVL 	CVL	UH 
QT	UVH 	CVH 	UHT 
QB 	UVJ 	CVJ	UHF

QH	**UHMT**	**CHMB**	**QHVH**	**QRT**
QHT	**UHMB**	**UHVL** 	**QHVJ**	**CRT**
QHF	**QHMT**	**UHVH**	**CHVL**	
CH	**QHMB**	**UHVJ**	**CHVH**	
CHT	**CHMT**	**QHVL**	**CHVJ**	
CHF	**Components**			

How to Order Raider® Plus Reducers

The Morse® Worm Gear Speed Reducer can easily be sized and ordered by following these instructions.

Basic Unit and Components

This method of ordering is used when versatility and modularity are desired. It is especially convenient for distributors and customers that want to stock the various basic units and components, so that an almost unlimited number of configurations can be put together. When ordering by this method, the basic unit and components will not be assembled, but will be shipped in separate cartons.

Ordering Steps:

1. Find the desired style to be ordered on pages C-19 through C-62 in this catalog.
2. Go to the dimension table for the specific style desired and find the "Components" section. The basic unit and component part numbers are shaded for easy reference.
3. Complete the basic unit part number by following the footnote instructions.
4. Order the complete basic unit part number along with the indicated component part numbers that will make up the desired Raider Plus style.

Example: A QT Style, 145TC NEMA frame, 30:1 Ratio, 3.25" C.D., with left output shaft. A standard base kit is also required.

Steps:

1. Go to pages C-21 and C-22 where style QT will be found.
2. The table on page C-22 shows basic unit numbers and dimensions. The table shows components and dimensions for Style QT – with Base – Worm Top.
3. Find the unit size needed which is 325Q140, then complete the Basic Unit part number by adding shaft assembly and ratio symbol to unit size – 325Q140**L30**.
4. Basic unit part number and component part numbers required are:

Reducer:	**325Q140L30**
Base Kit:	**325S-BK**

Part Description Configuration

Center Distance only	Type of Input	C Face Size	O.P. Shaft Arrangement	Ratio	Bore Size (for Hollow ouput
		(if applicable)			sizes 133-325)
133	**Q**	**56**	**LR**	**30**	
	U = Universal, Shaft In		L = Left Output	5	010 = 5/8
1.33"=133	**Q = C Face Quilled**	**56C = 56**	R = Right Output	10	012 = 3/4
1.54"=154		143/145TC = 140	**LR = Left & Right Output**	15	014 = 7/8
1.75"=175		182/184TC = 180	H = Hollow Output	20	015 = 15/16
2.06"=206		213/215T = 210		25	100 = 1
2.37"=237				**30**	101 = 1 1/16
2.62"=262				40	102 = 1 1/8
3.00"=300				50	103 = 1 3/16
3.25"=325				60	104 = 1 1/4
3.75"=375					105 = 1 5/16
4.50"=450					107 = 1 7/16
5.16"=516					108 = 1 1/2
6.00"=600					110 = 1 5/8
					111 = 1 11/16
					112 = 1 3/4
					115 = 1 15/16
					200 = 2
					202 = 2 1/8
					203 = 2 3/16

It is recommended to use the above chart to arrive at Raider Plus reducer part description.
The above sample part description is 133Q56LR30. This description does not include feet or other available mounting accessories that are available for the Raider Plus product. These accessories are sold separately using the part descriptions for the appropriate product. Not all ratios are available in each configuration.

Raider Plus sizes 375 - 600 units ordered with hollow outputs have a stock bore for each C.D. Bushing kits are available to help reducers fit on shafts that are smaller than the stock bore.

Kit Descriptions

Bushing Kits

203 BU 200
- 200 = I.D.
- BU = Bushing Kit
- 203 = O.D.

NEMA Frame Adapter Kit

375 MAK 56
- 56 = NEMA size 56 C Face
- MAK = Motor Adapter Kit
- 375 = Fits 3.75" C.D. Reducer

Torque Arm Kit

133 H - TAK
- TAK = Torque Arm Kit
- H = Generally used with Hollow Output Reducers (not limited to)
- 133 = Fits 1.33" C.D. Reducer

Adjustable Torque Arm Kit

133-375 ATAK
- ATAK = Adjustable Torque Arm Kit
- 133-375 = Fits Units 1.33"-3.75" C.D.

Fan Kit

375 FAN
- FAN = Fan Kit
- 375 = Fits 3.75" C.D. Reducer

Standard Base Kit

206 S-BK
- S-BK = Standard Base Kit
- 206 = Fits 2.06" C.D. Reducer

Flange Kit

206 H-FK
- FK = Flange Kit
- H = Generally used with Hollow Output Reducers (not limited to)
- 206 = Fits 2.06" C.D. Reducer

Vertical Low Base Kit

262 VL-BK
- VL-BK = Vertical Low Base Kit
- 262 = Fits 2.62" C.D. Reducer

Vertical High Base Kit

262 VH-BK
- VH-BK = Vertical High Base Kit
- 262 = Fits 2.62" C.D. Reducer

Vertical "J" Base Kit

262 VJ-BK
- VJ-BK = Vertical "J" Base Kit
- 262 = Fits 2.62" C.D. Reducer

Selection Procedure of Raider® Plus Worm Gear Speed Reducers

1. **Determine Service Factor**
From service factor tables on pages C-11 and C-12 determine service factor for the application.

2. **Determine the Overall Drive Ratio**

$$\text{Overall Drive Ratio} = \frac{\text{rpm of driver}}{\text{rpm of driven}}$$

When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page C-13 through C-17, a chain, belt, or gear drive with further reduction for either the input or output side will be necessary.

3. **Determine Equivalent hp or Normal Torque**

A. Horsepower Method:

Equivalent hp = Actual Motor hp × Service Factor (Step # 1)

B. Torque Method:

Normal Torque = Actual Torque × Service Factor (Step # 1)

4. **Determine the Size of Speed Reducer Required**

A. Horsepower Method:

Refer to pages C-13 through C-17 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent hp calculated in Step No. 3 above.

B. Torque Method:

Refer to pages C-13 to C-17 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 rpm, ratings for 100 rpm must be used.

5. **Check the Thermal Rating**
The Thermal Rating is the maximum input horsepower or output torque that can be transmitted continuously without exceeding a 100° F temperature rise over ambient. The thermal rating should not be exceeded. Service Factors are not applied to Thermal Ratings.
It is not necessary to check thermal ratings when the reducer does not operate more than 1/2 hour at a time and is shut down for a minimum period equal to the running time.

A. Horsepower Method:

Check the actual motor hp against the thermal input hp ratings (see pages C-13 to C-17), and if the motor hp is greater, select either a unit with a fan and/or a larger speed reducer so that the thermal rating is greater than the actual hp.

B. Torque Method:

Check the actual torque against the thermal output ratings (see pages C-13 to C-17), and if the actual torque is greater, select a unit with a fan and/or a larger speed reducer so that the thermal rating is greater than the actual torque.

6. **Determine the Motor Horsepower**

Use the following equation when motor hp is not known:

$$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Thermal Input hp}}{\text{Thermal Output Torque}}$$

7. **Check the Overhung Load and Thrust Loads**
Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page C-10. Check this and any existing thrust loads against the load values shown on pages C-13 to C-17, and if the calculated load is greater than the values in the table, select a larger speed reducer.

Note: Refer combined overhung and thrust loads to Application Engineering (1 800 626 2093).

Example No. 1 - Horsepower Method

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 hp, 1750 rpm, 56 Frame, C-Face Motor. The left reducer output shaft will be directly coupled to the mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 rpm. The reducer also requires a horizontal mounting base with the worm on top.

1. **Determine the Service Factor**
From the table on page C-11, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

2. **Determine the Overall Drive Ratio**

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{58} = 30.17$$

Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

3. **Determine Equivalent Horsepower**

$$\text{Equivalent hp} = \text{Actual Motor hp} \times \text{S F} =$$

$$1.0 \times 1.25 = 1.25 \text{ hp}$$

4. **Determine the Size of Speed Reducer Required**
From page C-13 under "1750 rpm Driver -30:1 Ratio - 58.3rpm Output" and under "Input hp Mechanical" find the rating equal to or greater than the 1.25 equivalent hp calculated in Step No. 3. Note that a 237 reducer has mechanical rating of 1.65 hp. The correct part numbers required are:

Reducer: **237Q56L30**
Base Kit: **237S-BK**

5. **Check the Thermal Rating**
From the rating tables on page C-13, read to the right and note the Thermal hp is 1.65 hp, which is greater than the motor horsepower (1.0 hp), therefore, the unit is not thermally limited.

6. **Determine the Motor Horsepower**
The motor horsepower is already known to be 1.0 hp.

7. **Check Overhung Load and Thrust Loads**
The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is mated with a C-Face motor. Therefore, the reducer selected is the proper size.

Example No. 2 - Torque Method

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 rpm electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. The pitch diameter of the driver sprocket mounted on the reducer output shaft is 5.032 inches. The conveyor will operate 10 hours per day, and the head shaft speed is 140 rpm. The reducer will also require a horizontal mounting base with the worm on top. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

1. Determine the Service Factor

From the table on page C-11, note that the service factor for a belt conveyor (general purposen not uniformly fed) operating 3 - 10 hours per day is 1.25.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

3. Determine the Normal Torque

The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

Actual Torque at Reducer Output Shaft =

$$\frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1{,}390 \text{ In-lbs.}$$

Normal Torque =

Actual Reducer Output Torque × S F =

1,390 × 1.25 = 1738 in-lbs.

4. Determine the Size of Speed Reducer Required

From page C-13 under "1750 rpm Driver - 10 to 1 ratio - 175 rpm Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 3.00 inch center distance reducer has a mechanical rating of 2037 inch-pounds.

5. Check the Thermal Rating

From the rating table on page C-13, read to the right and note the thermal torque for a 3.00 inch C.D. reducer is 2037 inch- pounds, which is greater than the actual torque at the reducer output shaft (1,390 inch-pounds) calculated in step no. 3. Therefore, a 3.00 inch C.D. unit, which has a thermal rating of 2037 inch-pounds, can be used.

The correct part numbers required are:

Reducer: **300ULR10**
Base Kit: **300S-BK**

6. Determine the Motor Horsepower

$$\text{Motor Horsepower} = \frac{\text{Actual Torque X Thermal Input hp}}{\text{Thermal Output Torque}}$$

$$= \frac{1{,}390 \times 5.25}{2004}$$

$$= 3.64$$

Use a 5 horsepower motor.

7. Check Overhung and Thrust Loads

$$\text{OL (See below)} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}}$$

$$= \frac{2 \times 1390 \times 1.0}{5.032}$$

$$= 552.50 \text{ Pounds}$$

From rating table on page C-13, note the maximum overhung load for the output shaft of the 300ULR10 reducer is 2170 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

Verify if motor HP is less than or equal to mechanical input HP.

Overhung Loads

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages C-13 through C-17. Use the following formula to calculate the overhung loads:

$$OL = \frac{2TK}{D}$$

where
- OL = Overhung Load
- T = Actual Shaft Torque (inch-pounds)
- D = P.D. of Sprocket, Sheave , Pulley or Gear
- K = 1.0 for Chain Drive
- = 1.25 for Gear Drive
- = 1.25 for Gearbelt Drive
- = 1.50 for V-Belt Drive
- = 2.50 for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

Service Factors for

Enclosed Worm Gear Applications

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see table on next page for conversion.)

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)			
Pure Liquids	–	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids-Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	–
Lobe	1.00	1.25	1.50
Vane	–	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	–	1.00	1.25
Brew Kettles, Continuous Duty	–	1.00	1.25
Cookers, Continuous Duty	–	1.00	1.25
Mash Tubs, Continuous Duty	–	1.00	1.25
Scale Hopper, Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES	–	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	–	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	–	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly Loaded or Fed	–	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer To Application Engr.		
Boom Hoist	Refer To Application Engr.		
Trolley Drive	Refer To Application Engr.		
(Gantry Drive)			
(Traction Drive)	Refer To Application Engr.		
Mill Duty			
Main Hoist	Refer To Application Engr.		
Auxiliary	Refer To Application Engr.		
Bridge and			
Trolley Travel	Refer To Application Engr.		
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	Refer To Application Engr.		
Bridge and Trolley Travel	Refer To Application Engr.		
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	–	1.00	1.25
Escalators	Refer To Application Engr.		
Freight	Refer To Application Engr.		
Gravity Discharge	–	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75

Up to APPLICATION	3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
FANS			
Centrifugal	–	1.00	1.25
Cooling Towers	Refer To Application Engr.		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	–	1.25	1.50
Belt	1.00	1.25	1.50
Disc	–	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	–	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS	–	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers			
-Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls-Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls-Live-off Brg.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer To Application Engr.		
METAL MILLS			
Draw Bench Carriage and Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers(Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50

Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator(Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log(Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	–	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.00	1.25	1.50
Rotary			
- Gear Type	–	1.00	1.50
- Lobe	–	1.00	1.25
- Vane	–	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
RUBBER INDUSTRY (Cont'd.)			
Holding, Feed and Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	–	1.00	1.25
Chemical Feeders	–	1.00	1.25
SEWAGE DISPOSAL EQUIPMENT (Cont'd.)			
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	–	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	–	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

Anti-Friction Bearings Only.

Note: A Service Factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, see below)

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	–	–	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

Load and operating characteristics of both the driver and driven units must be considered thoroughly when selecting speed reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. Worm gear speed reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for Raider® Plus Single Reduction Worm Gear Speed Reducers

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
1750 rpm Driver - 5:1 Ratio-350 rpm Output						
133	1.25	209	1.25	209	700	827
154	1.94	323	1.94	323	860	794
175	2.60	436	2.60	436	1200	793
206	3.66	615	3.66	615	1000	735
237	5.32	898	5.32	898	1770	1451
262	6.69	1130	6.69	1130	1625	1420
300	9.09	1544	9.09	1544	2170	1729
325	11.93	2033	11.93	2033	2275	1605
1750 rpm Driver - 10:1 Ratio-175 rpm Output						
133	0.82	263	0.82	263	700	1070
154	1.28	402	1.28	402	860	1056
175	1.63	528	1.63	528	1200	976
206	2.46	805	2.46	805	1065	898
237	3.56	1172	3.56	1172	1770	1820
262	4.49	1475	4.49	1475	1625	1762
300	6.15	2037	6.15	2037	2170	2147
325	8.09	2700	8.09	2700	2275	2026
375	9.81	3286	8.48	2841	1678	2335
375W/ fan	9.81	3286	9.64	3228	1678	2335
450	14.78	4981	11.52	3882	1549	4626
450W/fan	14.78	4981	14.40	4853	1549	4626
516	19.86	6729	14.94	5060	2531	3889
516W/fan	19.86	6729	18.66	6325	2531	3889
600	28.74	9722	21.70	7342	4417	5398
600W/fan	28.74	9722	25.84	8740	4417	5398
1750 rpm Driver - 15:1 Ratio - 116.6 rpm Output						
133	0.64	292	0.64	292	700	1144
154	1.00	446	1.00	446	860	1144
175	1.22	571	1.22	571	1200	1144
206	1.89	897	1.89	897	1125	1099
237	2.77	1318	2.77	1318	1770	2091
262	3.61	1737	3.61	1737	1625	2069
300	4.84	2329	4.84	2329	2170	2549
325	6.13	2980	6.13	2980	2275	2490
375	7.35	3572	5.88	2858	1678	2655
375W/ fan	7.35	3572	7.35	3572	1678	2655
450	11.09	5436	8.66	4246	1549	5346
450W/fan	11.09	5436	10.82	4962	1549	5346
516	15.01	7421	10.95	5412	2531	4449
516W/fan	15.01	7421	13.67	6764	2531	4449
600	21.19	10516	14.82	7355	4417	6198
600W/fan	21.19	10516	18.08	8970	4417	6198
1750 rpm Driver - 20:1 Ratio - 87.5 rpm Output						
133	0.55	320	0.55	320	700	1144
154	0.92	518	0.92	518	860	1144
175	1.05	630	1.05	630	1200	1144
206	1.58	964	1.58	964	1175	1144
237	2.33	1421	2.33	1421	1770	2091
262	2.97	1836	2.97	1836	1625	2091
300	3.95	2454	3.95	2454	2170	2574
325	5.18	3267	5.18	3267	2275	2574
375	6.01	3807	5.11	3235	1678	2895
375W/ fan	6.01	3807	6.01	3807	1678	2895
450	8.66	5544	7.28	4658	1549	5906
450W/fan	8.66	5544	8.66	5544	1549	5906
516	11.68	7557	9.33	6035	2531	4929
516W/fan	11.68	7557	11.11	7185	2531	4929
600	16.51	10696	13.20	8549	4417	6758
600W/fan	16.51	10696	15.71	10178	4417	6758

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max. Thrust Load Lbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
1750 rpm Driver - 25:1 Ratio -70 rpm Output						
133	0.45	309	0.45	309	700	1144
154	0.75	503	0.75	506	860	1144
175	0.88	644	0.88	644	1200	1144
206	1.33	985	1.33	985	1210	1144
237	1.97	1451	1.97	1451	1770	2091
262	2.49	1869	2.49	1869	1625	2091
300	3.36	2527	3.36	2527	2170	2574
325	4.37	3360	4.37	3360	2275	2574
375	5.22	3878	4.46	3315	1678	3133
375W/ fan	5.22	3878	5.22	3878	1678	3133
450	7.45	5598	6.14	4589	1549	6305
450W/fan	7.45	5598	7.45	5598	1549	6305
516	10.05	7652	7.92	6013	2531	5252
516W/fan	10.05	7652	9.63	7337	2531	5252
600	14.16	10803	11.39	8697	4417	7281
600W/fan	14.16	10803	13.48	10293	4417	7281
1750 rpm Driver - 30:1 Ratio -58.3 rpm Output						
133	0.40	314	0.40	314	700	1144
154	0.63	478	0.63	478	860	1144
175	0.74	614	0.74	614	1200	1144
206	1.13	968	1.13	968	1255	1144
237	1.65	1423	1.65	1423	1770	2091
262	2.15	1883	2.15	1883	1625	2091
300	2.88	2519	2.88	2519	2170	2574
325	3.62	3226	3.62	3226	2275	2574
375	4.43	3949	3.81	3396	1678	3375
375W/ fan	4.43	3949	4.43	3949	1678	3375
450	6.23	5651	4.99	4521	1549	6706
450W/fan	6.23	5651	6.23	5651	1549	6706
516	8.43	7749	6.52	5992	2531	5569
516W/fan	8.43	7749	8.15	7490	2531	5569
600	11.80	10911	9.57	8846	4417	7798
600W/fan	11.80	10911	11.26	10408	4417	7798
1750 rpm Driver - 40:1 Ratio -43.7 rpm Output						
133	0.33	322	0.33	322	700	1144
154	0.56	520	0.56	520	860	1144
175	0.61	634	0.61	634	1200	1144
206	0.92	971	0.92	971	1315	1144
237	1.34	1433	1.34	1433	1770	2091
262	1.70	1854	1.70	1854	1625	2091
300	2.25	2477	2.25	2477	2170	2574
325	2.93	3303	2.93	3303	2275	2574
375	3.35	3818	2.84	3245	1678	3695
375W/ fan	3.35	3818	3.35	3818	1678	3695
450	4.96	5750	4.21	4888	1549	6820
450W/fan	4.96	5750	4.96	5750	1549	6820
516	6.39	7565	5.37	6354	2531	6209
516W/fan	6.39	7565	6.39	7565	2531	6209
600	9.05	10716	7.30	8641	4417	8518
600W/fan	9.05	10716	8.68	10287	4417	8518
1750 rpm Driver - 50:1 Ratio -35 rpm Output						
133	0.29	327	0.29	327	700	1144
154	0.46	494	0.46	494	860	1144
175	0.52	634	0.52	634	1200	1144
206	0.77	970	0.77	970	1385	1144
237	1.14	1432	1.14	1432	1770	2091
262	1.42	1843	1.42	1843	1625	2091
300	1.92	2490	1.92	2490	2170	2574

■ Basic unit size. See assembly drawings, pages C-19 - C-62, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.
Find ratings for input speeds not shown by straight line interpolation.
Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to Application Engineering.

Contact Application Engineering (1 800 626 2093).

Contact Application Engineering for the following:
1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for Raider® Plus Single Reduction Worm Gear Speed Reducers

Unit Size ■	Mechanical		Thermal		Maximum Overhung Load Lbs.	Max. Thrust Load Lbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
1750 rpm Driver - 50:1 Ratio -35 rpm Output						
325	2.46	3315	2.46	3315	2275	2574
375	2.82	3818	2.45	3321	1678	4015
375W/ fan	2.82	3818	2.82	3818	1678	4015
450	3.99	5589	3.35	4694	1549	6820
450W/fan	3.99	5589	3.99	5589	1549	6820
516	5.12	7280	4.14	5896	2531	6689
516W/fan	5.12	7280	5.12	7280	2531	6689
600	7.07	10228	5.84	8456	4417	9238
600W/fan	7.07	10228	6.80	9833	4417	9238
1750 rpm Driver - 60:1 Ratio -29.1 rpm Output						
133	0.25	313	0.25	313	700	1144
154	0.39	462	0.39	462	860	1144
175	0.45	623	0.45	623	1200	1144
206	0.67	940	0.67	940	1415	1144
237	0.97	1418	0.97	1418	1770	2091
262	1.22	1805	1.22	1805	1625	2091
300	1.64	2413	1.64	2413	2170	2574
325	2.11	3274	2.11	3274	2275	2574
375	2.39	3761	1.93	3045	1678	4255
375W/ fan	2.39	3761	2.39	3761	1678	4255
450	3.39	5474	2.71	4379	1549	6820
450W/fan	3.39	5474	3.39	5474	1549	6820
516	4.13	6825	3.35	5528	2531	6820
516W/fan	4.13	6825	4.13	6825	2531	6820
600	5.83	9743	4.92	8216	4417	9798
600W/fan	5.83	9743	5.78	9666	4417	9798
1170 rpm Driver - 5:1 Ratio- 234 rpm Output						
133	0.95	235	0.95	235	700	827
154	1.54	379	1.54	379	860	794
175	1.88	466	1.88	466	1200	793
206	2.88	717	2.88	717	1000	735
237	4.28	1071	4.28	1071	1770	1451
262	5.44	1363	5.44	1363	1625	1420
300	7.43	1876	7.43	1876	2170	1729
325	9.79	2483	9.79	2483	2275	1605
1170 rpm Driver - 10:1 Ratio-117 rpm Output						
133	0.63	293	0.63	293	700	1070
154	1.01	468	1.01	468	860	1056
175	1.24	592	1.24	592	1200	976
206	1.91	917	1.91	917	1065	898
237	2.81	1364	2.81	1364	1770	1820
262	3.58	1738	3.58	1738	1625	1762
300	4.99	2446	4.99	2446	2170	2147
325	6.60	3268	6.60	3268	2275	2026
375	8.12	4045	7.07	3519	1678	2575
375W/ fan	8.12	4045	8.12	4045	1678	2575
450	12.20	6115	9.76	4892	1549	5106
450W/fan	12.20	6115	11.84	5936	1549	5106
516	16.23	8186	12.50	6303	2531	4289
516W/fan	16.23	8186	15.58	7859	2531	4289
600	23.15	11675	19.91	10041	4417	6038
600W/fan	23.15	11675	22.22	11208	4417	6038
1170 rpm Driver - 15:1 Ratio - 78 rpm Output						
133	0.49	325	0.49	325	700	1144
154	0.80	519	0.80	519	860	1144
175	0.95	645	0.95	645	1200	1144
206	1.46	1017	1.46	1017	1125	1099
237	2.18	1526	2.18	1526	1770	2091
262	2.82	1994	2.82	1994	1625	2069
300	3.90	2768	3.90	2768	2170	2549
325	5.03	3618	5.03	3618	2275	2490

Unit Size ■	Mechanical		Thermal		Maximum Overhung Load Lbs.	Max. Thrust Load Lbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
1170 rpm Driver - 15:1 Ratio - 78 rpm Output						
375	6.16	4425	5.05	3629	1678	2975
375W/ fan	6.16	4425	6.16	4425	1678	2975
450	9.23	6693	7.38	5355	1549	5906
450W/fan	9.23	6693	9.14	6626	1549	5906
516	12.29	9020	9.34	6856	2531	4929
516W/fan	12.29	9020	11.30	8299	2531	4929
600	17.08	12579	13.15	9686	4417	6918
600W/fan	17.08	12579	15.20	11194	4417	6918
1170 rpm Driver - 20:1 Ratio - 58.5 rpm Output						
133	0.42	354	0.42	354	700	1144
154	0.73	600	0.73	600	860	1144
175	0.80	702	0.80	702	1200	1144
206	1.23	1090	1.23	1090	1175	1144
237	1.84	1640	1.84	1640	1770	2091
262	2.34	2123	2.34	2123	1625	2091
300	3.20	2923	3.20	2923	2170	2574
325	4.22	3917	4.22	3917	2275	2574
375	4.82	4499	4.23	3959	1678	3295
375W/ fan	4.82	4499	4.85	4499	1678	3295
450	7.27	6856	6.25	5896	1549	6546
450W/fan	7.27	6856	7.27	6856	1549	6546
516	9.69	9252	7.85	7494	2531	5489
516W/fan	9.69	9252	9.30	8883	2531	5489
600	13.47	12917	11.18	10721	4417	7638
600W/fan	13.47	12917	12.94	12401	4417	7638
1170 rpm Driver - 25:1 Ratio-46.8 rpm Output						
133	0.34	344	0.34	344	700	1144
154	0.60	580	0.60	580	860	1144
175	0.68	713	0.68	713	1200	1144
206	1.03	1104	1.03	1104	1210	1144
237	1.55	1669	1.55	1669	1770	2091
262	1.96	2146	1.96	2146	1625	2091
300	2.71	2993	2.71	2993	2170	2574
325	3.54	3996	3.54	3996	2275	2574
375	4.82	4499	4.23	3959	1678	3295
375W/ fan	4.82	4499	4.82	4499	1678	3295
450	7.27	6856	6.25	5896	1549	6546
450W/fan	7.27	6856	7.27	6856	1549	6546
516	9.69	9252	7.85	7494	2531	5489
516W/fan	9.69	9252	9.30	8883	2531	5489
600	13.47	12917	11.18	10721	4417	7638
600W/fan	13.47	12917	12.94	12401	4417	7638
1170 rpm Driver - 30:1 Ratio - 39 rpm Output						
133	0.31	348	0.31	348	700	1144
154	0.51	555	0.51	555	860	1144
175	0.58	692	0.58	692	1200	1144
206	0.88	1095	0.88	1095	1255	1144
237	1.31	1642	1.31	1642	1770	2091
262	1.69	2152	1.69	2152	1625	2091
300	2.34	2982	2.34	2982	2170	2574
325	2.99	3902	2.99	3902	2275	2574
375	3.53	4582	3.04	3940	1678	3775
375W/ fan	3.53	4582	3.53	4582	1678	3775
450	5.25	6937	4.31	5690	1549	6820
450W/fan	5.25	6937	5.25	6937	1549	6820
516	7.01	9412	5.61	7530	2531	6289
516W/fan	7.01	9412	6.52	8754	2531	6289
600	9.64	13066	8.20	11106	4417	8678
600W/fan	9.64	13066	8.97	12151	4417	8678

■ Basic unit size. See assembly drawings, pages C-19 - C-62, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.
Find ratings for input speeds not shown by straight line interpolation.
Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to Application Engineering (1 800 626 2093).

Contact Application Engineering (1 800 626 2093).

Contact Application Engineering for the following:
1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for Raider® Plus Single Reduction Worm Gear Speed Reducers

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
1170 rpm Driver - 40:1 Ratio - 29.3 rpm Output						
133	0.26	355	0.26	355	700	1144
154	0.46	601	0.46	601	860	1144
175	0.48	706	0.48	706	1200	1144
206	0.72	1097	0.72	1097	1315	1144
237	1.07	1650	1.07	1650	1770	2091
262	1.35	2139	1.35	2139	1625	2091
300	1.84	2944	1.84	2944	2170	2574
325	2.40	3950	2.40	3950	2275	2574
375	2.73	4516	2.37	3929	1678	4175
375W/ fan	2.73	4516	2.73	4516	1678	4175
450	4.10	6887	3.53	5923	1549	6820
450W/fan	4.10	6887	4.10	6887	1549	6820
516	5.41	9300	4.38	7533	2531	6820
516W/fan	5.41	9300	5.20	8929	2531	6820
600	7.53	13003	6.32	10922	4417	9558
600W/fan	7.53	13003	7.22	12484	4417	9558
1170 rpm Driver - 50:1 Ratio - 23.4 rpm Output						
133	0.22	359	0.22	359	700	1144
154	0.38	569	0.38	569	860	1144
175	0.40	701	0.40	701	1200	1144
206	0.61	1086	0.61	1086	1385	1144
237	0.91	1641	0.91	1641	1770	2091
262	1.14	2112	1.14	2112	1625	2091
300	1.57	2945	1.57	2945	2170	2574
325	2.02	3935	2.02	3935	2275	2574
375	2.22	4333	1.95	3814	1678	4495
375W/ fan	2.22	4333	2.22	4333	1678	4495
450	3.30	6610	2.84	5685	1549	6820
450W/fan	3.30	6610	3.30	6610	1549	6820
516	4.32	8966	3.58	7441	2531	6820
516W/fan	4.32	8966	4.32	8966	2531	6820
600	5.98	12488	5.03	10490	4417	10358
600W/fan	5.98	12488	5.86	12238	4417	10358
1170 rpm Driver - 60:1 Ratio - 19.5 rpm Output						
133	0.20	345	0.20	345	700	1144
154	0.32	532	0.32	532	860	1144
175	0.35	689	0.35	689	1200	1144
206	0.54	1061	0.54	1061	1415	1144
237	0.77	1604	0.77	1604	1770	2091
262	0.97	2060	0.97	2060	1625	2091
300	1.35	2854	1.35	2854	2170	2574
325	1.73	3869	1.73	3869	2275	2574
375	1.81	4094	1.52	3438	1678	4815
375W/ fan	1.81	4094	1.81	4094	1678	4815
450	2.70	6246	2.24	5184	1549	6820
450W/fan	2.70	6246	2.70	6246	1549	6820
516	3.57	8501	2.97	7056	2531	6820
516W/fan	3.57	8501	3.57	8501	2531	6820
600	4.95	11852	4.21	10080	4417	10998
600W/fan	4.95	11852	4.95	11852	4417	10998
870 rpm Driver - 5:1 Ratio- 174 rpm Output						
133	0.76	251	0.76	251	700	827
154	1.26	414	1.26	414	860	794
175	1.52	502	1.52	502	1200	793
206	2.35	779	2.35	779	1000	735
237	3.53	1179	3.53	1179	1770	1451
262	4.52	1510	4.52	1510	1625	1420
300	6.25	2108	6.25	2108	2170	1729
325	8.29	2812	8.29	2812	2275	1605
375	6.01	3807	5.11	3235	1678	2895

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
870 rpm Driver - 10:1 Ratio-87 rpm Output						
133	0.50	310	0.50	310	700	1070
154	0.83	509	0.83	509	860	1056
175	1.00	629	1.00	629	1200	976
206	1.54	984	1.54	984	1065	898
237	2.30	1480	2.30	1480	1770	1820
262	2.94	1900	2.94	1900	1625	1762
300	4.14	2703	4.14	2703	2170	2147
325	5.50	3626	5.50	3626	2275	2026
375	6.80	4596	5.56	3703	1678	2825
375W/ fan	6.80	4596	6.12	4040	1678	2825
450	10.39	7096	8.42	5773	1549	5606
450W/fan	10.39	7096	10.13	6932	1549	5606
516	13.99	9650	11.01	7628	2531	4689
516W/fan	13.99	9650	12.41	8408	2531	4689
600	20.21	13983	17.62	12217	4417	6538
600W/fan	20.21	13983	19.63	13616	4417	6538
870 rpm Driver - 15:1 Ratio - 58 rpm Output						
133	0.40	344	0.40	344	700	1144
154	0.66	563	0.66	563	860	1144
175	0.77	689	0.77	689	1200	1144
206	1.18	1088	1.18	1088	1125	1099
237	1.78	1652	1.78	1652	1770	2091
262	2.30	2149	2.30	2149	1625	2069
300	3.23	3041	3.23	3041	2170	2549
325	4.21	4023	4.21	4023	2275	2490
375	5.18	5034	4.30	4196	1678	3225
375W/ fan	5.18	5034	4.97	4793	1678	3225
450	7.91	7780	6.41	6329	1549	6456
450W/fan	7.91	7780	7.36	7154	1549	6456
516	10.65	10654	8.22	8243	2531	5429
516W/fan	10.65	10654	9.09	8945	2531	5429
600	15.02	15100	11.83	11938	4417	7568
600W/fan	15.02	15100	13.25	13285	4417	7568
870 rpm Driver - 20:1 Ratio - 43.5 rpm Output						
133	0.34	373	0.34	373	700	1144
154	0.61	649	0.61	649	860	1144
175	0.65	744	0.65	744	1200	1144
206	1.00	1165	1.00	1165	1175	1144
237	1.51	1772	1.51	1772	1770	2091
262	1.92	2296	1.92	2296	1625	2091
300	2.66	3215	2.66	3215	2170	2574
325	3.51	4323	3.51	4323	2275	2574
375	4.05	5077	3.60	4536	1678	3595
375W/ fan	4.05	5077	4.06	5082	1678	3595
450	6.17	7865	5.38	6870	1549	6717
450W/fan	6.17	7865	5.90	7453	1549	6717
516	8.33	10795	6.80	8817	2531	5989
516W/fan	8.33	10795	7.49	9573	2531	5989
600	11.84	15433	10.26	13480	4417	8338
600W/fan	11.84	15433	11.17	14498	4417	8338
870 rpm Driver - 25:1 Ratio-34.8 rpm Output						
133	0.28	364	0.28	364	700	1144
154	0.50	627	0.50	627	860	1144
175	0.55	753	0.55	753	1200	1144
206	0.84	1174	0.84	1174	1210	1144
237	1.28	1798	1.28	1798	1770	2091
262	1.61	2312	1.61	2312	1625	2091
300	2.26	3282	2.26	3282	2170	2574
325	2.95	4392	2.95	4392	2275	2574
375	6.01	3807	5.11	3235	1678	2895

■ Basic unit size. See assembly drawings, pages C-19 - C-62, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.
Find ratings for input speeds not shown by straight line interpolation.
Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to Application Engineering.

Contact Application Engineering (1 800 626 2093).

Contact Application Engineering for the following:
1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for Raider® Plus Single Reduction Worm Gear Speed Reducers

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
870 rpm Driver - 25:1 Ratio-34.8 rpm Output						
375	3.72	5127	3.29	4545	1678	3767
375W/ fan	3.72	5127	3.72	5127	1678	3767
450	5.65	7942	4.86	6828	1549	6717
450W/fan	5.65	7942	5.53	7735	1549	6717
516	7.60	10895	6.03	8586	2531	6321
516W/fan	7.60	10895	6.77	9479	2531	6321
600	10.75	15541	9.19	13396	4417	8741
600W/fan	10.75	15541	10.03	14394	4417	8741
870 rpm Driver - 30:1 Ratio - 29 rpm Output						
133	0.25	368	0.25	368	700	1144
154	0.43	602	0.43	602	860	1144
175	0.48	738	0.48	738	1200	1144
206	0.72	1169	0.72	1169	1255	1144
237	1.09	1775	1.09	1775	1770	2091
262	1.39	2312	1.39	2312	1625	2091
300	1.95	3269	1.95	3269	2170	2574
325	2.52	4329	2.52	4329	2275	2574
375	3.01	5205	2.63	4546	1678	4125
375W/ fan	3.01	5205	3.01	5205	1678	4125
450	4.54	8049	3.77	6710	1549	6820
450W/fan	4.54	8049	4.54	8049	1549	6820
516	6.12	11051	4.67	8364	2531	6621
516W/fan	6.12	11051	5.25	9322	2531	6621
600	8.58	15700	7.35	13453	4417	9528
600W/fan	8.58	15700	7.80	14195	4417	9528
870 rpm Driver - 40:1 Ratio - 21.8 rpm Output						
133	0.21	375	0.21	375	700	1144
154	0.39	651	0.39	651	860	1144
175	0.39	748	0.39	748	1200	1144
206	0.60	1172	0.60	1172	1315	1144
237	0.90	1782	0.90	1782	1770	2091
262	1.13	2311	1.13	2311	1625	2091
300	1.55	3234	1.55	3234	2170	2574
325	2.02	4353	2.02	4353	2275	2574
375	2.32	5077	2.03	4450	1678	4575
375W/ fan	2.32	5077	2.32	5077	1678	4575
450	3.51	7867	3.02	6766	1549	6820
450W/fan	3.51	7867	3.38	7512	1549	6820
516	4.70	10833	3.81	8774	2531	6820
516W/fan	4.70	10833	4.18	9472	2531	6820
600	6.67	15451	5.64	13068	4417	10508
600W/fan	6.67	15451	6.11	14032	4417	10508
870 rpm Driver - 50:1 Ratio - 17.4 rpm Output						
133	0.19	377	0.19	377	700	1144
154	0.32	615	0.32	615	860	1144
175	0.34	740	0.34	740	1200	1144
206	0.50	1154	0.50	1154	1385	1144
237	0.76	1767	0.76	1767	1770	2091
262	0.95	2274	0.95	2274	1625	2091
300	1.32	3227	1.32	3227	2170	2574
325	1.70	4321	1.70	4321	2275	2574
375	1.88	4834	1.65	4255	1678	4945
375W/ fan	1.88	4834	1.88	4834	1678	4945
450	2.83	7529	2.44	6476	1549	6820
450W/fan	2.83	7529	2.83	7529	1549	6820
516	3.75	10332	3.09	8497	2531	6820
516W/fan	3.75	10332	3.49	9475	2531	6820
600	5.26	14676	4.39	12223	4417	11358
600W/fan	5.26	14676	4.90	13544	4417	11358

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
870 rpm Driver - 60:1 Ratio - 14.5 rpm Output						
133	0.16	362	0.16	362	700	1144
154	0.28	574	0.28	574	860	1144
175	0.30	728	0.30	728	1200	1144
206	0.45	1133	0.45	1133	1415	1144
237	0.64	1714	0.64	1714	1770	2091
262	0.81	2213	0.81	2213	1625	2091
300	1.14	3126	1.14	3126	2170	2574
325	1.46	4236	1.46	4236	2275	2574
375	1.54	4547	1.30	3819	1678	5315
375W/ fan	1.54	4547	1.54	4547	1678	5315
450	2.33	7077	1.93	5873	1549	6820
450W/fan	2.33	7077	2.33	7077	1549	6820
516	3.08	9739	2.56	8084	2531	6820
516W/fan	3.08	9739	2.98	9359	2531	6820
600	4.38	13928	3.59	11381	4417	11929
600W/fan	4.38	13928	4.08	12832	4417	11929
100 rpm Driver - 5:1 Ratio- 20 rpm Output						
133	0.14	298	0.14	298	700	827
154	0.24	526	0.24	526	860	794
175	0.24	612	0.24	612	1200	793
206	0.39	980	0.39	980	1000	735
237	0.66	1540	0.66	1540	1770	1451
262	0.84	2010	0.84	2010	1625	1420
300	1.18	2925	1.18	2925	2170	1729
325	1.55	3995	1.55	3995	2275	1605
100 rpm Driver - 10:1 Ratio-10 rpm Output						
133	0.10	363	0.10	363	700	1070
154	0.18	639	0.18	639	860	1056
175	0.20	744	0.20	744	1200	976
206	0.30	1192	0.30	1192	1065	898
237	0.44	1857	0.44	1857	1770	1820
262	0.57	2431	0.57	2431	1625	1762
300	0.80	3573	0.80	3573	2170	2147
325	1.05	4853	1.05	4853	2275	2026
375	1.06	5508	1.06	5508	1678	5615
375W/ fan	1.06	5508	1.06	5508	1678	5615
450	1.73	9126	1.73	9126	1549	6820
450W/fan	1.73	9126	1.73	9126	1549	6820
516	2.16	11556	2.16	11556	2531	6820
516W/fan	2.16	11556	2.16	11556	2531	6820
600	3.77	19948	3.77	19948	4417	12487
600W/fan	3.77	19948	3.77	19948	4417	12487
100 rpm Driver - 15:1 Ratio - 6.7 rpm Output						
133	0.09	401	0.09	401	700	1144
154	0.16	706	0.16	706	860	1144
175	0.17	823	0.17	823	1200	1144
206	0.25	1309	0.25	1309	1125	1099
237	0.37	2056	0.37	2056	1770	2091
262	0.47	2637	0.47	2637	1625	2069
300	0.66	3949	0.66	3949	2170	2549
325	0.85	5413	0.85	5413	2275	2490
375	0.76	5508	0.76	5508	1678	6244
375W/ fan	0.76	5508	0.76	5508	1678	6244
450	1.23	9126	1.23	9126	1549	6820
450W/fan	1.23	9126	1.23	9126	1549	6820
516	1.53	11556	1.53	11556	2531	6820
516W/fan	1.53	11556	1.53	11556	2531	6820
600	2.79	21060	2.79	21060	4417	12487
600W/fan	2.79	21060	2.79	21060	4417	12487

■ Basic unit size. See assembly drawings, pages C-19 - C-62, to determine components needed and complete the part numbers following the directions on that page.

Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.
Find ratings for input speeds not shown by straight line interpolation.
Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to Application Engineering.

Contact Application Engineering (1 800 626 2093).

Contact Application Engineering for the following:
1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Input Horsepower, Output Torque, Overhung Load and Thrust Load for Raider® Plus Single Reduction Worm Gear Speed Reducers

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
100 rpm Driver - 20:1 Ratio - 5 rpm Output						
133	0.08	431	0.08	431	700	1144
154	0.16	807	0.16	807	860	1144
175	0.15	872	0.15	872	1200	1144
206	0.23	1397	0.23	1397	1175	1144
237	0.34	2193	0.34	2193	1770	2091
262	0.42	2849	0.42	2849	1625	2091
300	0.58	4189	0.58	4189	2170	2574
325	0.75	5695	0.75	5695	2275	2574
375	0.59	5508	0.59	5508	1678	6244
375W/ fan	0.59	5508	0.59	5508	1678	6244
450	0.98	9126	0.98	9126	1549	6820
450W/fan	0.98	9126	0.98	9126	1549	6820
516	1.21	11556	1.21	11556	2531	6820
516W/fan	1.21	11556	1.21	11556	2531	6820
600	2.25	21384	2.25	21384	4417	12487
600W/fan	2.25	21384	2.25	21384	4417	12487
100 rpm Driver - 25:1 Ratio-4 rpm Output						
133	0.07	423	0.07	423	700	1144
154	0.14	775	0.14	775	860	1144
175	0.14	874	0.14	874	1200	1144
206	0.20	1386	0.20	1386	1210	1144
237	0.30	2205	0.30	2205	1770	2091
262	0.37	2837	0.37	2837	1625	2091
300	0.52	4238	0.52	4238	2170	2574
325	0.66	5710	0.66	5710	2275	2574
375	0.50	5508	0.50	5508	1678	6244
375W/ fan	0.50	5508	0.50	5508	1678	6244
450	0.85	9126	0.85	9126	1549	6820
450W/fan	0.85	9126	0.85	9126	1549	6820
516	1.06	11723	1.06	11723	2531	6820
516W/fan	1.06	11723	1.06	11723	2531	6820
600	1.95	21763	1.95	21763	4417	12487
600W/fan	1.95	21763	1.95	21763	4417	12487
100 rpm Driver - 30:1 Ratio - 3.3 rpm Output						
133	0.07	429	0.07	429	700	1144
154	0.12	754	0.12	754	860	1144
175	0.13	880	0.13	880	1200	1144
206	0.18	1399	0.18	1399	1255	1144
237	0.27	2197	0.27	2197	1770	2091
262	0.34	2816	0.34	2816	1625	2091
300	0.47	4217	0.47	4217	2170	2574
325	0.59	5787	0.59	5787	2275	2574
375	0.45	5508	0.45	5508	1678	6244
375W/ fan	0.45	5508	0.45	5508	1678	6244
450	0.75	9126	0.75	9126	1549	6820
450W/fan	0.75	9126	0.75	9126	1549	6820
516	0.94	11880	0.94	11880	2531	6820
516W/fan	0.94	11880	0.94	11880	2531	6820
600	1.75	22140	1.75	22140	4417	12487
600W/fan	1.75	22140	1.75	22140	4417	12487

Unit Size ■	Mechanical		Thermal		Maximum Overhung Lbs.	Max Thrust LoadLbs.
	Input hp	Output Torque	Input hp	Output Torque	Output Shaft	Output Shaft
100 rpm Driver - 40:1 Ratio - 2.5 rpm Output						
133	0.07	432	0.07	432	700	1144
154	0.12	808	0.12	808	860	1144
175	0.11	874	0.11	874	1200	1144
206	0.17	1401	0.17	1401	1315	1144
237	0.25	2198	0.25	2198	1770	2091
262	0.30	2857	0.30	2857	1625	2091
300	0.41	4200	0.41	4200	2170	2574
325	0.51	5710	0.51	5710	2275	2574
375	0.38	5508	0.38	5508	1678	6244
375W/ fan	0.38	5508	0.38	5508	1678	6244
450	0.60	9126	0.60	9126	1549	6820
450W/fan	0.60	9126	0.60	9126	1549	6820
516	0.75	11556	0.75	11556	2531	6820
516W/fan	0.75	11556	0.75	11556	2531	6820
600	1.33	20520	1.33	20520	4417	12487
600W/fan	1.33	20520	1.33	20520	4417	12487
100 rpm Driver - 50:1 Ratio - 2 rpm Output						
133	0.06	431	0.06	431	700	1144
154	0.11	760	0.11	760	860	1144
175	0.10	857	0.10	857	1200	1144
206	0.15	1359	0.15	1359	1385	1144
237	0.22	2163	0.22	2163	1770	2091
262	0.27	2783	0.27	2783	1625	2091
300	0.37	4156	0.37	4156	2170	2574
325	0.46	5601	0.46	5601	2275	2574
375	0.32	5508	0.32	5508	1678	6244
375W/ fan	0.32	5508	0.32	5508	1678	6244
450	0.53	9126	0.53	9126	1549	6820
450W/fan	0.53	9126	0.53	9126	1549	6820
516	0.64	11556	0.64	11556	2531	6820
516W/fan	0.64	11556	0.64	11556	2531	6820
600	1.06	19440	1.06	19440	4417	12487
600W/fan	1.06	19440	1.06	19440	4417	12487
100 rpm Driver - 60:1 Ratio - 1.7 rpm Output						
133	0.06	415	0.06	415	700	1144
154	0.10	707	0.10	707	860	1144
175	0.10	842	0.10	842	1200	1144
206	0.15	1354	0.15	1354	1415	1144
237	0.20	2054	0.20	2054	1770	2091
262	0.25	2689	0.25	2689	1625	2091
300	0.34	4026	0.34	4026	2170	2574
325	0.41	5448	0.41	5448	2275	2574
375	0.28	5508	0.28	5508	1678	6224
375W/ fan	0.28	5508	0.28	5508	1678	6224
450	0.44	9126	0.44	9126	1549	6820
450W/fan	0.44	9126	0.44	9126	1549	6820
516	0.54	11556	0.54	11556	2531	6820
516W/fan	0.54	11556	0.54	11556	2531	6820
600	0.86	18360	0.86	18360	4417	12487
600W/fan	0.86	18360	0.86	18360	4417	12487

■ Basic unit size. See assembly drawings, pages C-19 - C-62, to determine components needed and complete the part numbers following the directions on that page.

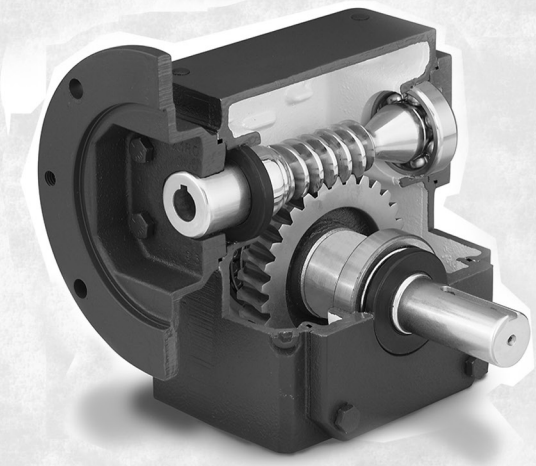
Above ratings are not applicable when reducer shafts are subjected to combined overhung and thrust loads.
Find ratings for input speeds not shown by straight line interpolation.
Maximum overhung loads are at center of keyseats and on one end of output shaft only. Overhung loads applied closer to the reducer housing are desirable, but overhung loads farther out on the shaft and overhung loads on both ends of output shaft should be referred to Application Engineering.

Contact Application Engineering (1 800 626 2093).

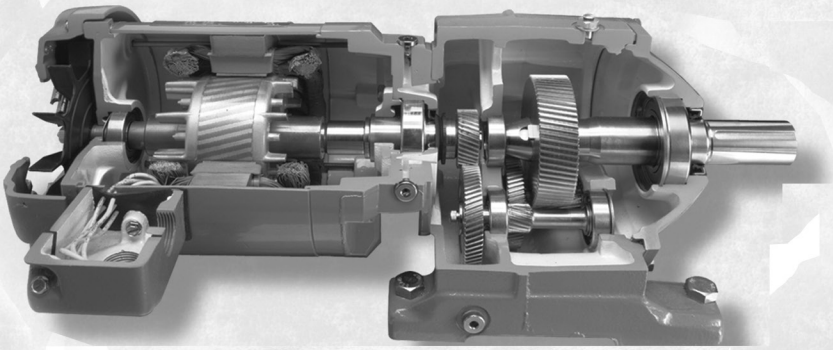
Contact the Application Engineering for the following:
1. High starting torques exceeding 300% of the reducer mechanical rating.
2. Frequent starting or repetitive shock applications.
3. Applications where high energy loads must be absorbed as when stalling.

Complete Gearing Solutions...

Regal Has the Industry's Broadest Line of Standard Gearmotors and Speed Reducers



Morse
Raider® Plus
Worm Gear Reducer



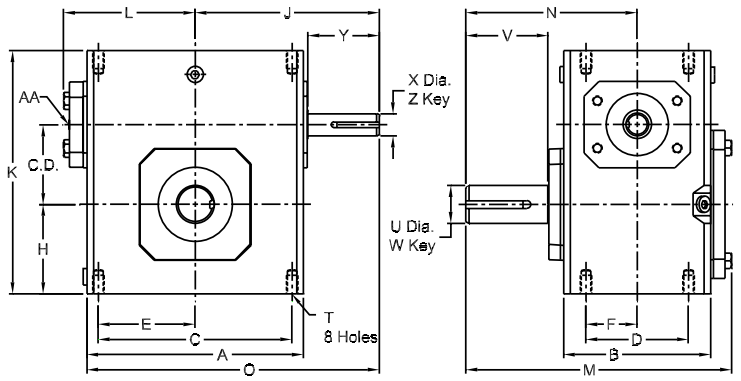
Browning
CbN In-line
Concentric Gearmotor

Morse
PoweRgear®
Worm Gear Reducer

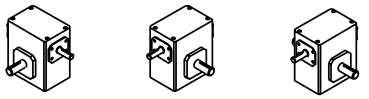
Browning
TORQTAPER *Plus*®
Shaft Mount Speed Reducer

Style U

Universal —Basic Unit



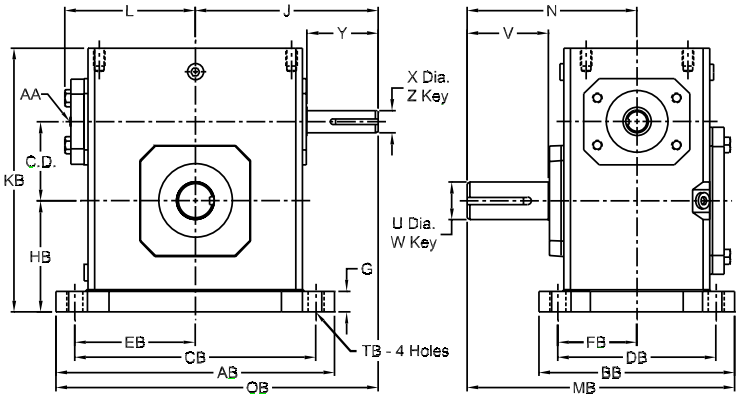
Assembly Drawing and Sample of Components



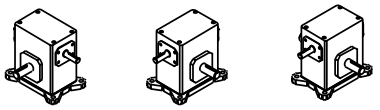
133UL10 133UR10 133ULR10

Style UT

Universal Worm Top



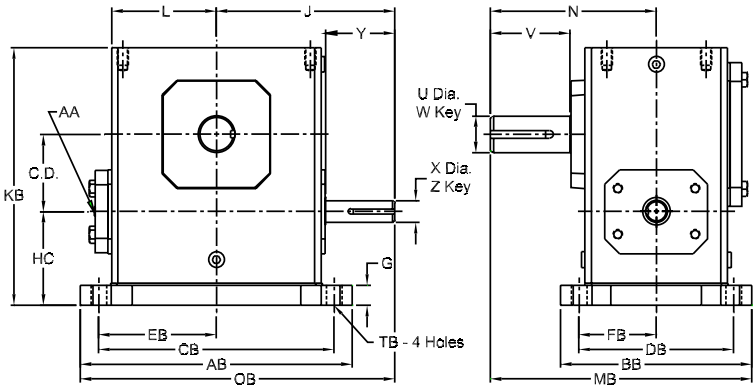
Assembly Drawing and Sample of Components



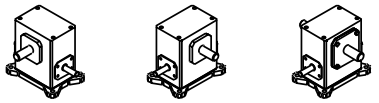
133UL10 133S-BK 133UR10 133S-BK 133ULR10 133S-BK

Style UB

Universal Worm Bottom



Assembly Drawing and Sample of Components



133UR10 133S-BK 133UL10 133S-BK 133ULR10 133S-BK

Dimensions (Inches) for Style "U"

CD	Basic Unit ★	A	B	C	D	E	F	H	J	K	L	M	N	O
1.33	133U	3.80	2.82	3.25	2.00	1.63	1.00	1.72	3.82	4.66	2.61	6.06	4.00	5.72
1.54	154U	4.88	3.44	4.19	2.75	2.09	1.38	1.91	4.35	5.38	3.14	6.72	4.31	6.79
1.75	175U	5.06	3.56	4.19	2.75	2.09	1.38	2.06	4.45	5.75	3.24	6.78	4.31	6.98
2.06	206U	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.82	6.38	3.61	7.28	4.68	7.72
2.37	237U	6.12	4.06	5.00	2.88	2.50	1.44	2.50	5.51	6.94	3.77	7.84	5.14	8.57
2.63	262U	7.12	4.84	6.38	3.38	3.19	1.69	2.94	6.07	8.00	4.34	8.74	5.63	9.63
3.00	300U	8.12	5.25	7.00	4.00	3.50	2.00	3.25	6.57	8.88	4.84	10.14	6.75	10.63
3.25	325U	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.76	9.38	5.02	10.70	7.06	11.01
3.75	375U	9.50	6.38	8.50	4.75	4.25	2.38	3.88	8.38	10.44	5.74	11.88	7.75	13.13
4.50	450U	10.88	7.38	9.56	5.81	4.78	2.91	4.50	9.59	11.94	6.42	13.16	8.44	15.09
5.16	516U	12.50	7.38	11.00	5.81	5.50	2.91	5.31	10.69	13.75	7.42	13.91	9.06	16.94
6.00	600U	14.50	8.13	12.75	6.38	6.38	3.19	6.50	11.75	16.50	8.25	15.31	10.00	19.00

CD	OUTPUT SHAFT						INPUT SHAFT				Stocked Ratios marked "x"									
	T	Deep	U	V	W Key		X	Y	Z Key		5	7.5	10	15	20	25	30	40	50	60
					Sq.	Lgth.			Sq.	Lgth.										
1.33	5/16 - 18	0.50	0.63	1.94	0.19	1.50	0.50	1.76	0.13	1.00	x	x	x	x	x	x	x	x	x	x
1.54	5/16 - 18	0.63	0.75	1.90	0.19	1.50	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x
1.75	5/16 - 18	0.63	0.88	1.84	0.19	1.38	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x
2.06	5/16 - 18	0.63	1.00	2.08	0.25	1.44	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x
2.37	3/8 - 16	0.69	1.13	2.44	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x
2.63	3/8 - 16	0.69	1.13	2.52	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x
3.00	7/16 - 14	0.88	1.25	3.36	0.25	1.75	0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x
3.25	7/16 - 14	0.88	1.38	3.42	0.31	2.63	0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x
3.75	1/2 - 13	1.00	1.63	3.50	0.38	2.81	1.00	2.91	0.25	1.75	-	-	x	x	x	x	x	x	x	x
4.50	5/8 - 11	1.00	1.63	3.38	0.38	2.50	1.13	3.48	0.25	2.50	-	-	x	x	x	x	x	x	x	x
5.16	5/8 - 11	1.00	2.00	4.16	0.50	2.81	1.25	3.75	0.25	2.56	-	-	x	x	x	x	x	x	x	x
6.00	5/8 - 11	1.00	2.25	4.56	0.50	3.50	1.50	3.75	0.38	2.94	x	-	x	x	x	x	x	x	x	x

Dimensions (Inches) for Style "UT" - With Base - Worm Top

Components ◆		AB	BB	CB	DB	EB	FB	G	HB	KB	MB	OB	TB
Basic Unit ★	Base Kit ▲												
133U	133S-BK	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	5.19	6.69	6.51	0.34
154U	154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	5.97	7.09	7.60	0.41
175U	175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	6.44	7.19	7.95	0.41
206U	206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	7.09	7.68	8.67	0.47
237U	237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	7.69	8.24	9.70	0.49
262U	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	8.75	8.88	10.70	0.53
300U	300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	9.63	10.50	11.57	0.53
325U	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	10.25	10.94	12.32	0.53
375U	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	11.38	12.06	14.38	0.59
450U	450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.63	13.06	13.13	16.53	0.66
516U	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	14.25	18.88	0.78
600U	600S-BK	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	17.75	16.00	21.25	0.91

Dimensions (Inches) for Style "UB"

Components ◆		HC
Basic Unit ★	Base Kit ▲	
133U	133S-BK	2.14
154U	154S-BK	2.52
175U	175S-BK	2.63
206U	206S-BK	2.75
237U	237S-BK	2.81
262U	262S-BK	3.19
300U	300S-BK	3.38
325U	325S-BK	3.50
375U	375S-BK	3.75
450U	450S-BK	4.06
516U	516S-BK	4.40
600U	600S-BK	5.25

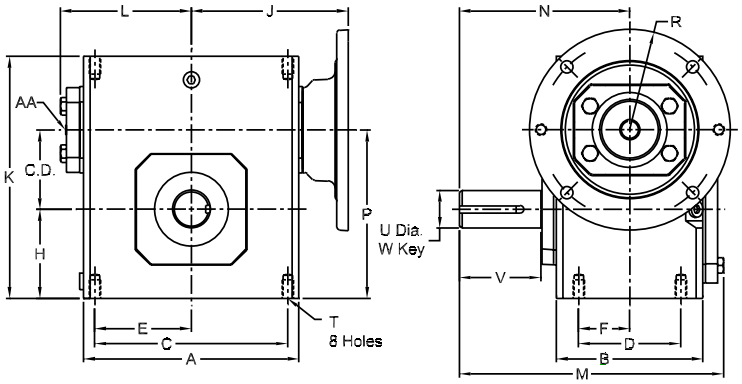
Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

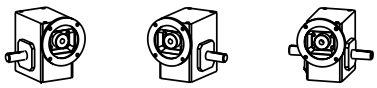
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.
♦ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65.
Consult factory for ratios not shown as standard.

Style Q

C-Face Quilled – Basic Unit



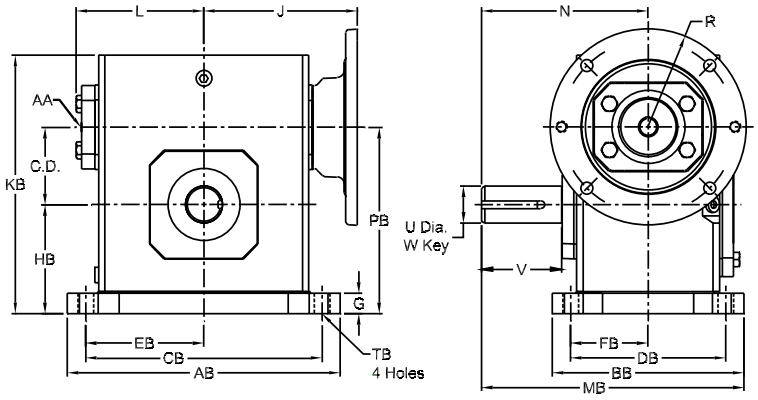
Assembly Drawing and Sample of Components



133Q56L10 133Q56R10 133Q56LR10

Style QT

Worm Top

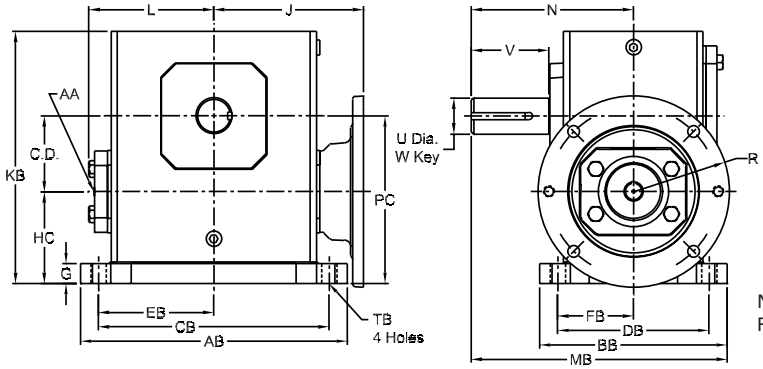


Assembly Drawing and Sample of Components

133Q56L10 133Q56R10 133Q56LR10
133S-BK 133S-BK 133S-BK

Style QB

Worm Bottom



Assembly Drawing and Sample of Components

133Q56R10 133Q56L10 133Q56LR10
133S-BK 133S-BK 133S-BK

Note: When mounting Style "QB", interference may occur; use a Riser Block or consult Application Engineering (1 800 626 2093).

Dimensions (Inches) for Style "Q"

C.D.	Basic Unit★	NEMA.Frame	A	B	C	D	E	F	H	J	K	L	M	N	P	R
1.33	133Q56	56C	3.80	2.82	3.25	2.00	1.63	1.00	1.72	3.46	4.66	2.61	6.06	4.00	3.05	3.25
1.54	154Q56	56C	4.88	3.44	4.19	2.75	2.09	1.38	1.91	3.99	5.38	3.14	6.72	4.31	3.45	3.25
1.54	154Q140	143/145TC	4.88	3.44	4.19	2.75	2.09	1.38	1.91	3.99	5.38	3.14	6.72	4.31	3.45	3.25
1.75	175Q56	56C	5.06	3.56	4.19	2.75	2.09	1.38	2.06	4.09	5.75	3.24	6.78	4.31	3.81	3.25
1.75	175Q140	143/145TC	5.06	3.56	4.19	2.75	2.09	1.38	2.06	4.09	5.75	3.24	6.78	4.31	3.81	3.25
2.06	206Q56	56C	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.46	6.38	3.61	7.07	4.68	4.34	3.25
2.06	206Q140	143/145TC	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.46	6.38	3.61	7.07	4.68	4.34	3.25
2.37	237Q56	56C	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	6.94	3.77	7.84	5.14	4.88	3.25
2.37	237Q140	143/145TC	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	6.94	3.77	7.84	5.14	4.88	3.25
2.62	262Q56	56C	7.12	4.84	6.38	3.38	3.19	1.69	2.94	5.19	8.00	4.34	8.74	5.63	5.57	3.25
2.62	262Q140	143/145TC	7.12	4.84	6.38	3.38	3.19	1.69	2.94	5.19	8.00	4.34	8.74	5.63	5.57	3.25
2.62	262Q180	182/184TC	7.12	4.84	6.38	3.38	3.19	1.69	2.94	5.62	8.00	4.34	8.74	5.63	5.57	4.50
3.00	300Q56	56C	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	8.88	4.84	10.14	6.75	6.25	3.25
3.00	300Q140	143/145TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	8.88	4.84	10.14	6.75	6.25	3.25
3.00	300Q180	182/184TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	6.15	8.88	4.84	10.14	6.75	6.25	4.50
3.25	325Q56	56C	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.14	9.38	5.02	10.70	7.06	6.75	3.25
3.25	325Q140	143/145TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.14	9.38	5.02	10.70	7.06	6.75	3.25
3.25	325Q180	182/184TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.34	9.38	5.02	10.70	7.06	6.75	4.50
3.75	375Q56	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	11.88	7.75	7.63	3.38
3.75	375Q140	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	11.88	7.75	7.63	3.38
3.75	375Q180	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	11.88	7.75	7.63	4.50
3.75	375Q210	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	11.88	7.75	7.63	4.50
4.50	450Q140	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	6.69	11.94	6.42	13.16	8.44	9.00	3.38
4.50	450Q180	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	13.16	8.44	9.00	4.50
4.50	450Q210	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	13.16	8.44	9.00	4.50
5.16	516Q180	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	13.91	9.06	10.47	4.50
5.16	516Q210	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	13.91	9.06	10.47	4.50
6.00	600Q180	182/184TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	15.31	10.00	12.50	4.50
6.00	600Q210	213/215TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	15.31	10.00	12.50	4.50

C.D.	N.E.M.A. Frame	T		INPUT		OUTPUT SHAFT				Stocked Ratios marked "x"								
						U	V	W Key										
		Size	Deep	Bore	Keyway			Sq.	Lgth.	5	10	15	20	25	30	40	50	60
1.33	56C	5/16-18	0.50	0.63	0.19	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x
1.54	56C	5/16-18	0.63	0.63	0.19	0.75	1.90	0.19	1.50	x	x	x	x	x	x	x	x	x
1.54	143/145TC	5/16-18	0.63	0.88	0.19	0.75	1.90	0.19	1.50	x	x	x	x	-	-	-	-	-
1.75	56C	5/16-18	0.63	0.63	0.19	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x
1.75	143/145TC	5/16-18	0.63	0.88	0.19	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x
2.06	56C	5/16-18	0.63	0.63	0.19	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x
2.06	143/145TC	5/16-18	0.63	0.88	0.19	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x
2.37	56C	3/8-16	0.69	0.63	0.19	1.13	2.44	0.25	1.75	-	-	x	x	x	x	x	x	x
2.37	143/145TC	3/8-16	0.69	0.88	0.19	1.13	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x
2.62	56C	3/8-16	0.69	0.63	0.19	1.13	2.52	0.25	1.75	-	-	-	x	x	x	x	x	x
2.62	143/145TC	3/8-16	0.69	0.88	0.19	1.13	2.52	0.25	1.75	x	x	x	x	x	x	x	x	x
2.62	182/184TC	3/8-16	0.69	1.13	0.25	1.13	2.52	0.25	1.75	x	x	x	x	-	-	-	-	-
3.00	56C	7/16-14	0.88	0.63	0.19	1.25	3.36	0.25	1.75	-	-	-	-	-	-	x	x	x
3.00	143/145TC	7/16-14	0.88	0.88	0.19	1.25	3.36	0.25	1.75	-	x	x	x	x	x	x	x	x
3.00	182/184TC	7/16-14	0.88	1.13	0.25	1.25	3.36	0.25	1.75	x	x	x	x	x	x	-	-	-
3.25	56C	7/16-14	0.88	0.63	0.19	1.38	3.42	0.31	2.63	-	-	-	-	-	-	x	x	x
3.25	143/145TC	7/16-14	0.88	0.88	0.19	1.38	3.42	0.31	2.63	-	x	x	x	x	x	x	x	x
3.25	182/184TC	7/16-14	0.88	1.13	0.25	1.38	3.42	0.31	2.63	x	x	x	x	x	x	-	-	-
3.75	56C	1/2-13	1.00	0.63	0.19	1.63	3.50	0.38	2.81	-	-	-	-	-	-	x	x	x
3.75	143/145TC	1/2-13	1.00	0.88	0.19	1.63	3.50	0.38	2.81	-	x	x	x	x	x	x	x	x
3.75	182/184TC	1/2-13	1.00	1.13	0.25	1.63	3.50	0.38	2.81	-	x	x	x	x	x	x	x	-
3.75	213/215TC	1/2-13	1.00	1.38	0.31	1.63	3.50	0.38	2.81	-	x	x	-	-	-	-	-	-
4.50	143/145TC	5/8-11	1.00	0.88	0.19	1.63	3.38	0.38	2.50	-	-	-	-	-	-	x	x	x
4.50	182/184TC	5/8-11	1.00	1.13	0.25	1.63	3.38	0.38	2.50	-	-	x	x	x	x	x	x	x
4.50	213/215TC	5/8-11	1.00	1.38	0.31	1.63	3.38	0.38	2.50	-	x	x	x	x	-	-	-	-
5.16	182/184TC	5/8-11	1.00	1.13	0.25	2.00	4.16	0.50	2.81	-	-	-	-	-	-	x	x	x
5.16	213/215TC	5/8-11	1.00	1.38	0.31	2.00	4.16	0.50	2.81	-	x	x	x	x	x	-	-	-
6.00	182/184TC	5/8-11	1.00	1.38	0.31	2.25	4.56	0.50	3.50	-	-	-	x	x	x	x	x	x
6.00	213/215TC	5/8-11	1.00	1.38	0.31	2.25	4.56	0.50	3.50	-	-	-	-	x	x	x	x	x

Dimensions (Inches) for Style "QT" - Worm Top

Components■		AB	BB	CB	DB	EB	FB	G	HB	KB	MB	PB	TB
Ref. No.	Standard Base Kit ▲												
133Q	133S-BK	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	5.19	6.69	3.58	0.34
154Q	154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	5.97	7.09	4.04	0.41
175Q	175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	6.44	7.19	4.50	0.41
206Q	206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	7.09	7.68	5.06	0.47
237Q	237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	7.69	8.24	5.63	0.49
262Q	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	8.75	8.88	6.32	0.53
300Q	300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	9.63	10.50	7.00	0.53
325Q	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	10.25	10.94	7.63	0.53
375Q	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	11.38	12.06	8.56	0.59
450Q	450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.63	13.06	13.13	10.19	0.66
516Q	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	14.25	11.60	0.78
600Q	600S-BK	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	17.75	16.00	13.75	0.91

Dimensions (Inches) for Style "QB"

Components		HC	PC
Ref. No.	Base Kits Standard		
133Q	133S-BK	2.14	3.47
154Q	154S-BK	2.52	4.06
175Q	175S-BK	2.63	4.38
206Q	206S-BK	2.75	4.81
237Q	237S-BK	2.81	5.19
262Q	262S-BK	3.19	5.82
300Q	300S-BK	3.38	6.38
325Q	325S-BK	3.50	6.75
375Q	375S-BK	3.75	7.50
450Q	450S-BK	4.06	8.63
516Q	516S-BK	4.40	9.56
600Q	600S-BK	5.25	11.25

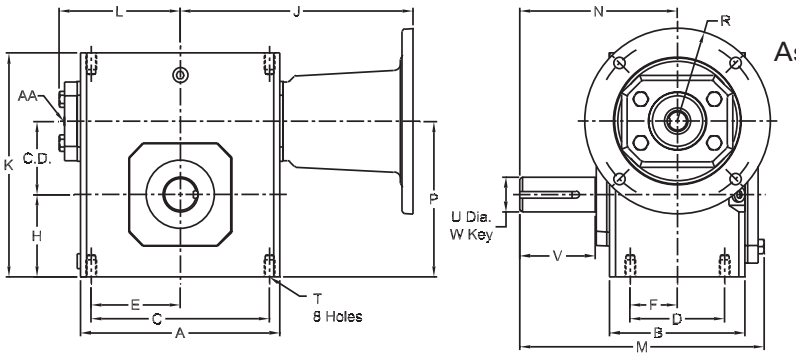
Fan Kit

Basic Unit★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375Q	375 FAN	3/8 - 24	3/4	7.6	2.8
450Q	450 FAN	3/8 - 24	3/4	8.36	2.8
516Q	516 FAN	3/8 - 24	3/4	9.18	2.8
600Q	600 FAN	3/8 - 24	3/4	10.70	4.2

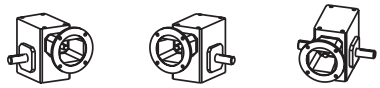
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56LR10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table to left.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65. Consult factory for ratios not shown as standard.

Style C

C-Face Coupled



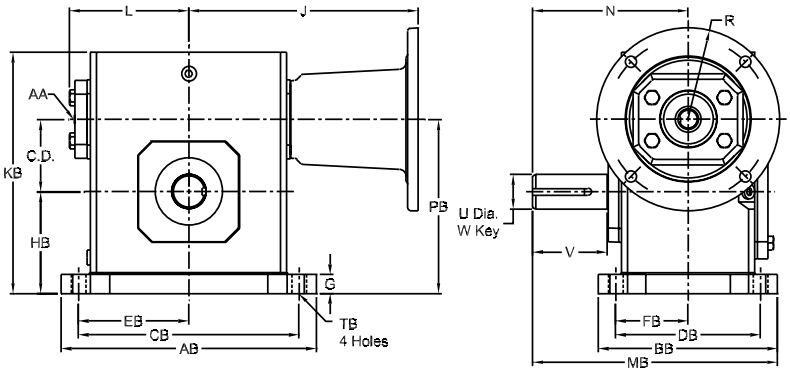
Assembly Drawing and Sample of Components



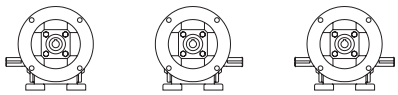
133UL10	133UR10	133ULR10
133MAK56	133MAK56	133MAK56

Style CT

C Face Coupled Worm Top



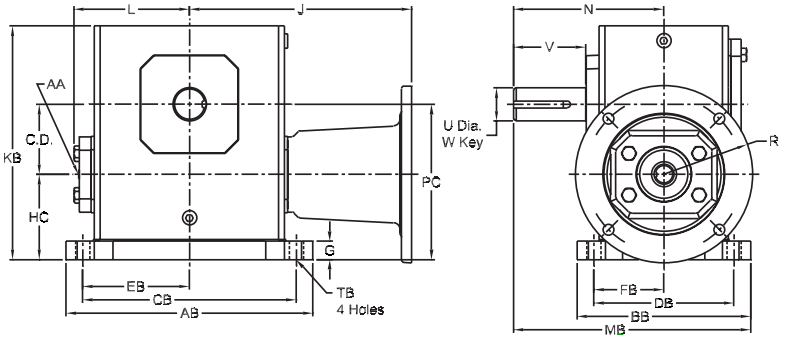
Assembly Drawing and Sample of Components



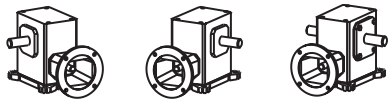
133UL10	133UR10	133ULR10
133MAK56	133MAK56	133MAK56
133S-BK	133S-BK	133S-BK

Style CB

C Face Coupled Worm Bottom



Assembly Drawing and Sample of Components



133UR10	133UL10	133ULR10
133MAK56	133MAK56	133MAK56
133S-BK	133S-BK	133S-BK

Note: When mounting Style "CB", interference may occur; use a Riser Block or consult Application Engineering (1 800 626 2093).

Dimensions (Inches) for Style "C"

CD	Component ◆		A	B	C	D	E	F	H	K	L	M	N	P	T	
	Basic Unit ★	Adapter Kit													Size	Deep
1.33	133U	See Adapter Kit Table Below	3.80	2.82	3.25	2.00	1.63	1.00	1.72	4.66	2.61	6.06	4.00	3.05	5/16 - 18	0.50
1.54	154U		4.88	3.44	4.19	2.75	2.09	1.38	1.91	5.38	3.14	6.72	4.31	3.45	5/16 - 18	0.63
1.75	175U		5.06	3.56	4.19	2.75	2.09	1.38	2.06	5.75	3.24	6.78	4.31	3.81	5/16 - 18	0.63
2.06	206U		5.80	3.81	5.00	2.88	2.50	1.44	2.28	6.38	3.61	7.28	4.68	4.34	5/16 - 18	0.63
2.37	237U		6.12	4.06	5.00	2.88	2.50	1.44	2.50	6.94	3.77	7.84	5.14	4.87	3/8 - 16	0.69
2.62	262U		7.12	4.84	6.38	3.38	3.19	1.69	2.94	8.00	4.34	8.74	5.63	5.56	3/8 - 16	0.69
3.00	300U		8.12	5.25	7.00	4.00	3.50	2.00	3.25	8.88	4.84	10.14	6.75	6.25	7/16 - 14	0.88
3.25	325U		8.50	5.75	7.50	4.00	3.75	2.00	3.50	9.38	5.02	10.70	7.06	6.75	7/16 - 14	0.88
3.75	375U		9.50	6.38	8.50	4.75	4.25	2.38	3.88	10.44	5.74	11.88	7.75	7.63	1/2 - 13	1.00
4.50	450U		10.88	7.38	9.56	5.81	4.78	2.91	4.50	11.94	6.42	13.16	8.44	9.00	5/8 - 11	1.00
5.16	516U		12.50	7.38	11.00	5.81	5.50	2.91	5.31	13.75	7.42	13.91	9.06	10.47	5/8 - 11	1.00
6.00	600U		14.50	8.13	12.75	6.38	6.38	3.19	6.50	16.50	8.25	15.31	10.00	12.50	5/8 - 11	1.00

CD	OUTPUT SHAFT				Stocked Ratios marked "x"											
	U	V	W Key													
			Sq.	Lgth.	5	7.5	10	15	20	25	30	40	50	60	60	60
1.33	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.54	0.75	1.90	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.75	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.13	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
2.62	1.13	2.52	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
3.00	1.25	3.36	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
3.25	1.38	3.42	0.31	2.63	x	x	x	x	x	x	x	x	x	x	x	x
3.75	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	x	-	-
4.50	1.63	3.38	0.38	2.50	-	-	x	x	x	x	x	x	x	x	-	-
5.16	2.00	4.16	0.50	2.81	-	-	x	x	x	x	x	x	x	x	-	-
6.00	2.25	4.56	0.50	3.50	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "CT" - With Base - Worm Top

Components ◆			AB	BB	CB	DB	EB	FB	G	HB	KB	MB	PB	TB
Base Unit ★	Adapter Kit.	Standard Base Kit ▲												
133U	See Adapter Kit Table Below	133S-BK	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	5.19	6.69	3.58	0.34
154U		154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	5.97	7.09	4.04	0.41
175U		175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	6.44	7.19	4.50	0.41
206U		206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	7.09	7.68	5.06	0.47
237U		237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	7.69	8.24	5.63	0.49
262U		262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	8.75	8.88	6.32	0.53
300U		300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	9.63	10.50	7.00	0.53
325U		325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	10.25	10.94	7.63	0.53
375U		375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	11.38	12.06	8.56	0.59
450U		450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.63	13.06	13.13	10.19	0.66
516U		516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	14.25	11.60	0.78
600U		600S-BK	19.00	12.00	16.50	9.50	8.52	4.75	1.25	7.75	17.75	16.00	13.75	0.91

Dimensions (Inches) for Style "CB"

Components ◆			HC	PC
Ref. No.	Adapter Kit	Standard Base Kit ▲		
133Q	See Adapter Kit Table Below	133S-BK	2.14	3.47
154Q		154S-BK	2.52	4.06
175Q		175S-BK	2.63	4.38
206Q		206S-BK	2.75	4.81
237Q		237S-BK	2.81	5.19
262Q		262S-BK	3.19	5.82
300Q		300S-BK	3.38	6.38
325Q		325S-BK	3.50	6.75
375Q		375S-BK	3.75	7.50
450Q		450S-BK	4.06	8.63
516Q		516S-BK	4.40	9.56
600Q		600S-BK	5.25	11.25

Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

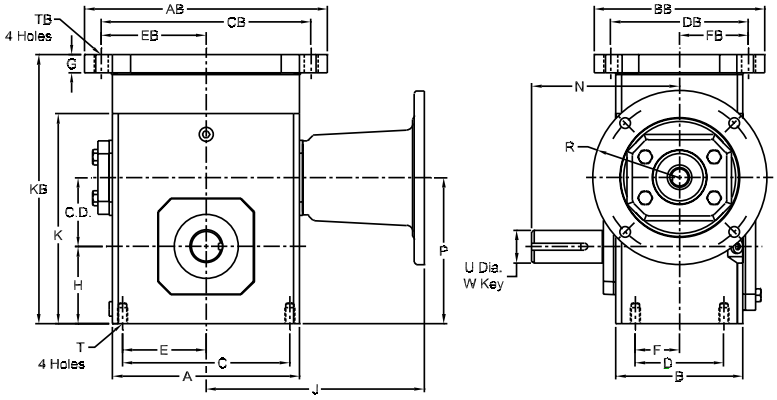
N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C Input: .625 Kw.: 3/16 x 3/32			143/145TC Input: .875 Kw.: 3/16 x 3/32			182/184TC Input: 1.125 KW.: 1/4 x 1/8			213/215TC Input: 1.375 Kw.: 5/16 x 5/32			254/256TC Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No .	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

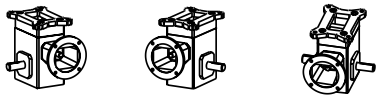
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.
♦ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65.
Consult factory for ratios not shown as standard.

Style CRT

C-Face Coupled - Riser Block
Worm Top



Assembly Drawing and Sample of Components



133UL10	133UR10	133ULR10
133R-BK	133R-BK	133R-BK
133MAK56	133MAK56	133MAK56
133S-BK	133S-BK	133S-BK

DIMENSIONS (INCHES) FOR STYLE "CRT" - C-FACE QUILLED- RISER BLOCK WORM TOP

C.D.	BASIC UNIT ★	Adapter Kit	N.E.M.A. FRAME	A	B	C	D	E	F	H	J	N	P	R
1.33	133U	133MAK56	56C	4.00	2.88	3.25	2.00	1.63	1.00	1.82	6.38	4.00	3.05	3.25
1.54	154U	154MAK56	56C	4.88	3.44	4.19	2.75	2.09	1.38	1.91	6.60	4.31	3.45	3.25
1.54	154U	154MAK140	143/145TC	4.88	3.44	4.19	2.75	2.09	1.38	1.91	6.60	4.31	3.45	3.25
1.75	175U	175MAK56	56C	5.06	3.56	4.19	2.75	2.09	1.38	2.06	6.70	4.31	3.81	3.25
1.75	175U	175MAK140	143/145TC	5.06	3.56	4.19	2.75	2.09	1.38	2.06	6.70	4.31	3.81	3.25
2.06	206U	206MAK56	56C	5.80	3.81	5.00	2.88	2.50	1.44	2.29	7.07	4.68	4.35	3.25
2.06	206U	206MAK140	143/145TC	5.80	3.81	5.00	2.88	2.50	1.44	2.29	7.07	4.68	4.35	3.25
2.37	237U	237MAK56	56C	6.12	4.06	5.00	2.88	2.50	1.44	2.50	7.76	5.14	4.88	3.25
2.37	237U	237MAK140	143/145TC	6.12	4.06	5.00	2.88	2.50	1.44	2.50	7.76	5.14	4.88	3.25
2.37	237U	237MAK180	182/184TC	6.12	4.06	5.00	2.88	2.50	1.44	2.50	8.76	5.14	4.88	4.50
2.62	262U	262MAK56	56C	7.12	4.84	6.38	3.38	3.19	1.69	2.93	8.32	5.63	5.56	3.25
2.62	262U	262MAK140	143/145TC	7.12	4.84	6.38	3.38	3.19	1.69	2.93	8.32	5.63	5.56	3.25
2.62	262U	262MAK180	182/184TC	7.12	4.84	6.38	3.38	3.19	1.69	2.93	9.32	5.63	5.56	4.50
3.00	300U	300MAK56	56C	8.12	5.25	7.00	4.00	3.50	2.00	3.25	8.82	6.75	6.25	3.25
3.00	300U	300MAK140	143/145TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	8.82	6.75	6.25	3.25
3.00	300U	300MAK180	182/184TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	9.82	6.75	6.25	4.50
3.25	325U	325MAK56	56C	8.50	5.75	7.50	4.00	3.75	2.00	3.50	9.01	7.06	6.75	3.25
3.25	325U	325MAK140	143/145TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	9.01	7.06	6.75	3.25
3.25	325U	325MAK180	182/184TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	10.01	7.06	6.75	4.50
3.75	375U	375MAK56	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	11.47	7.75	7.63	3.38
3.75	375U	375MAK140	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	11.47	7.75	7.63	3.38
3.75	375U	375MAK180	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	12.92	7.75	7.63	4.50
3.75	375U	375MAK210	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	12.92	7.75	7.63	4.50
4.50	450U	450MAK140	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	12.15	8.44	9.00	3.38
4.50	450U	450MAK180	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	13.60	8.44	9.00	4.50
4.50	450U	450MAK210	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	13.60	8.44	9.00	4.50
5.16	516U	516MAK180	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	14.40	9.06	10.47	4.50
5.16	516U	516MAK210	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	14.40	9.06	10.47	4.50

C.D.	N.E.M.A. FRAME	T		OUTPUT SHAFT			STOCK RATIOS MARKED "X"								
				U	W KEY										
		SIZE	DEEP		SQ.	LGTH.	5	10	15	20	25	30	40	50	60
1.33	56C	5/16-18	0.50	0.63	0.19	1.31	x	x	x	x	x	x	x	x	x
1.54	56C	5/16-18	0.63	0.75	0.19	1.50	x	x	x	x	x	x	x	x	x
1.54	143/145TC	5/16-18	0.63	0.75	0.19	1.50	x	x	x	-	-	-	-	-	-
1.75	56C	5/16-18	0.63	0.88	0.19	1.38	x	x	x	x	x	x	x	x	x
1.75	143/145TC	5/16-18	0.63	0.88	0.19	1.38	x	x	x	-	-	-	-	-	-
2.06	56C	3/8-16	0.63	1.00	0.25	1.44	x	x	x	x	x	x	x	x	x
2.06	143/145TC	3/8-16	0.63	1.00	0.25	1.44	x	x	x	x	x	x	x	x	x
2.37	56C	3/8-16	0.69	1.13	0.25	1.75	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3/8-16	0.69	1.13	0.25	1.75	x	x	x	x	x	x	x	x	x
2.37	182/184TC	3/8-16	0.69	1.13	0.25	1.75	x	x	-	-	-	-	-	-	-
2.62	56C	3/8-16	0.69	1.13	0.25	1.75	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3/8-16	0.69	1.13	0.25	1.75	-	x	x	x	x	x	x	x	x
2.62	182/184TC	3/8-16	0.69	1.13	0.25	1.75	x	x	-	-	-	-	-	-	-
3.00	56C	7/16-14	0.88	1.25	0.25	1.75	-	-	x	x	x	x	x	x	x
3.00	143/145TC	7/16-14	0.88	1.25	0.25	1.75	-	x	x	x	x	x	x	x	x
3.00	182/184TC	7/16-14	0.88	1.25	0.25	1.75	-	x	x	x	x	x	x	x	x
3.25	56C	7/16-14	0.88	1.38	0.38	2.25	-	x	x	x	x	x	x	x	x
3.25	143/145TC	7/16-14	0.88	1.38	0.38	2.25	-	x	x	x	x	x	x	x	x
3.25	182/184TC	7/16-14	0.88	1.38	0.38	2.25	-	x	x	x	x	x	x	x	x
3.75	56C	1/2-13	1.00	0.63	0.38	2.81	-	-	-	-	-	-	x	x	x
3.75	143/145TC	1/2-13	1.00	0.88	0.38	2.81	-	x	x	x	x	x	x	x	x
3.75	182/184TC	1/2-13	1.00	1.13	0.38	2.81	-	x	x	x	x	x	x	x	-
3.75	213/215TC	1/2-13	1.00	1.38	0.38	2.81	-	x	x	-	-	-	-	-	-
4.50	143/145TC	5/8-11	1.00	0.88	0.38	2.50	-	-	-	-	-	-	x	x	x
4.50	182/184TC	5/8-11	1.00	1.13	0.38	2.50	-	-	x	x	x	x	x	x	x
4.50	213/215TC	5/8-11	1.00	1.38	0.38	2.50	-	x	x	x	x	-	-	-	-
5.16	182/184TC	5/8-11	1.00	1.13	0.50	2.81	-	-	-	-	-	-	x	x	x
5.16	213/215TC	5/8-11	1.00	1.38	0.50	2.81	-	x	x	x	x	x	-	-	-

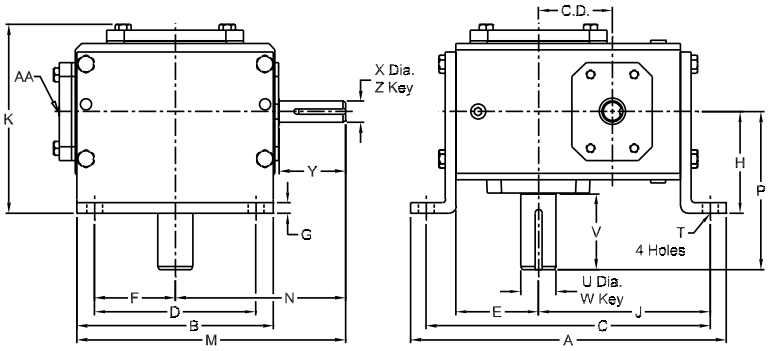
DIMENSIONS (INCHES) FOR STYLE "CRT" - C-FACE COUPLED- RISER BLOCK WORM TOP

COMPONENTS ♦			AB	BB	CB	DB	EB	FB	G	KB	TB
REF. NO.	RISER BLOCK KIT	STANDARD BASE KIT									
133U	133R-BK	133S-BK	5.38	4.19	4.38	3.31	2.19	1.66	0.47	7.02	0.38
154U	154R-BK	154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	7.97	0.41
175U	175R-BK	175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	8.44	0.41
206U	206R-BK	206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	9.10	0.47
237U	237R-BK	237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	9.69	0.49
262U	262R-BK	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	10.25	0.53
300U	300R-BK	300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	11.76	0.53
325U	325R-BK	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	12.39	0.53
375U	375R-BK	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	13.15	0.59
450U	450R-BK	450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	15.33	0.66
516U	516R-BK	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	16.88	0.78

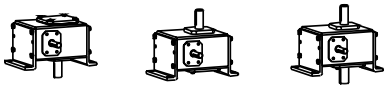
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56H10.
♦ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above. Consult factory for ratios not shown as standard.
Standard Base Kits shown on page C-65. Riser Block Kit shown on page C-67.

Style UVL

Vertical Low Base



Assembly Drawing and Sample of Components

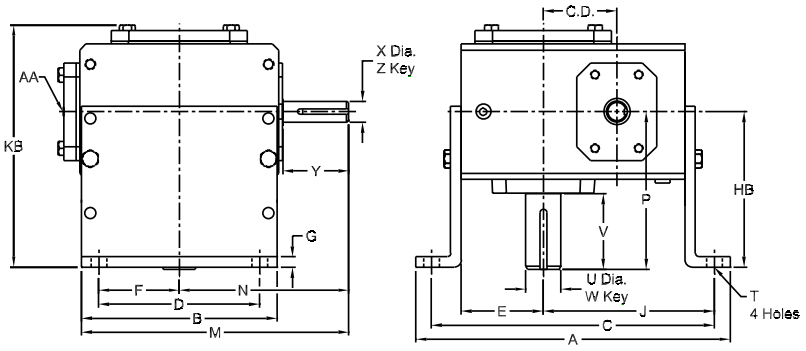


133UL10 133VL-BK | 133UR10 133VL-BK | 133ULR10 133VL-BK

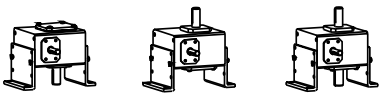
133UL10 133VL-BK | 133UR10 133VL-BK | 133ULR10 133VL-BK

Style UVH

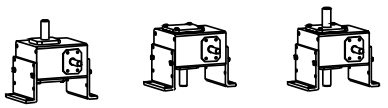
Vertical High Base



Assembly Drawing and Sample of Components



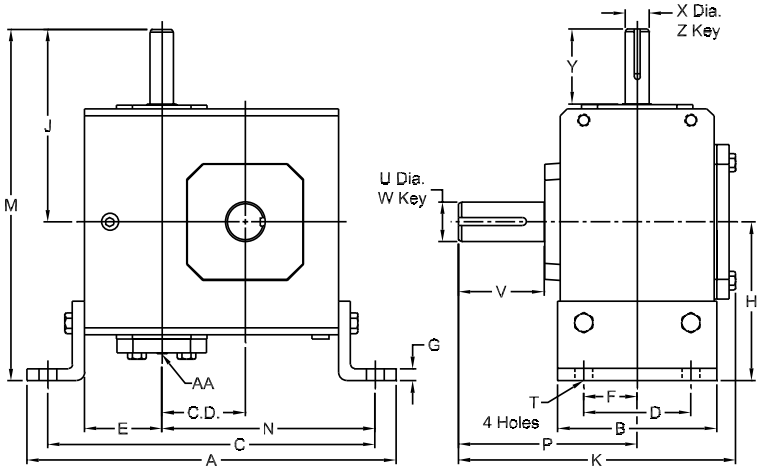
133UL10 133VH-BK | 133UR10 133VH-BK | 133ULR10 133VH-BK



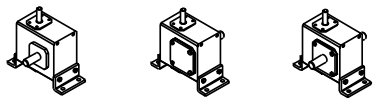
133UL10 133VH-BK | 133UR10 133VH-BK | 133ULR10 133VH-BK

Style UVJ

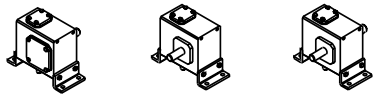
Vertical "J" Base



Assembly Drawing and Sample of Components



133UL10 133VJ-BK | 133UR10 133VJ-BK | 133ULR10 133VJ-BK



133UL10 133VJ-BK | 133UR10 133VJ-BK | 133ULR10 133VJ-BK

Note: If mounting a fan unit with input up, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "UVL" - With Vertical Low Base

CD	Component ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T
	Basic Unit ★	Base Kit														
1.33	133U	133VL-BK	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	3.86	4.69	5.76	3.82	4.00	0.38
1.54	154U	154VL-BK	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	4.28	5.41	6.76	4.35	4.31	0.44
1.75	175U	175VL-BK	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.50	5.47	6.76	4.45	4.31	0.44
2.06	206U	206VL-BK	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	5.09	5.73	7.76	4.82	4.68	0.50
2.37	237U	237VL-BK	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	5.44	6.08	8.38	5.51	5.14	0.50
2.63	263U	263VL-BK	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	6.12	6.74	9.38	6.07	5.63	0.56
3.00	300U	300VL-BK	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	6.75	7.33	10.38	6.57	6.75	0.56
3.25	325U	325VL-BK	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	7.13	8.33	10.88	6.76	7.06	0.56
3.75	375U	375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	8.31	9.58	13.13	8.38	7.75	0.59
4.50	450U	450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	8.94	9.78	15.09	9.59	8.44	0.69
5.16	516U	516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	11.25	16.93	10.69	9.06	0.78
6.00	600U	600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	12.63	19.13	11.75	10.00	0.91

CD	OUTPUT SHAFT				INPUT SHAFT				Stocked Ratios												
	U	V	W Key		X	Y	Z Key		5	7.5	10	15	20	25	30	40	50	60	80	100	
			SQ.	LGTH			SQ.	LGTH													
1.33	0.63	1.94	0.19	1.50	0.50	1.76	0.13	1.00	x	x		x	x	x	x	x	x	x	x	x	x
1.54	0.75	1.90	0.19	1.50	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x	x
1.75	0.88	1.84	0.19	1.38	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.00	2.08	0.25	1.44	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.13	2.44	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x	x
2.63	1.13	2.52	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x	x
3.00	1.25	3.36	0.25	1.75	0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x	x
3.25	1.38	3.42	0.31	2.63	0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x	x
3.75	1.63	3.50	0.38	2.81	1.00	2.91	0.25	1.75	-	-	x	x	x	x	x	x	x	x	-	-	
4.50	1.63	3.38	0.38	2.50	1.13	3.48	0.25	2.50	-	-	x	x	x	x	x	x	x	x	-	-	
5.16	2.00	4.16	0.50	2.81	1.25	3.75	0.25	2.56	-	-	x	x	x	x	x	x	x	x	-	-	
6.00	2.25	4.56	0.50	3.50	1.50	3.75	0.38	2.94	x	-	x	x	x	x	x	x	x	x	-	-	

Dimensions (Inches) for Style "UVH"

Component ◆		HB	KB
Basic Unit ★	Base Kit		
133U	133VH-BK	3.56	5.62
154U	154VH-BK	4.38	6.79
175U	175VH-BK	4.38	6.85
206U	206VH-BK	4.88	7.48
237U	237VH-BK	5.25	7.95
263U	263VH-BK	5.56	8.67
300U	300VH-BK	5.88	9.27
325U	325VH-BK	6.25	9.89
375U	375VH-BK	7.00	11.33
450U	450VH-BK	8.56	13.28
516U	516VH-BK	8.63	13.50
600U	600VH-BK	9.63	14.94

Fan Kit

Basic Unit ★	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
375U	375 FAN	3/8-24	3/4	2.8
450U	450 FAN	3/8-24	3/4	2.8
516U	516 FAN	3/8-24	3/4	2.8
600U	600 FAN	3/8-24	3/4	4.2

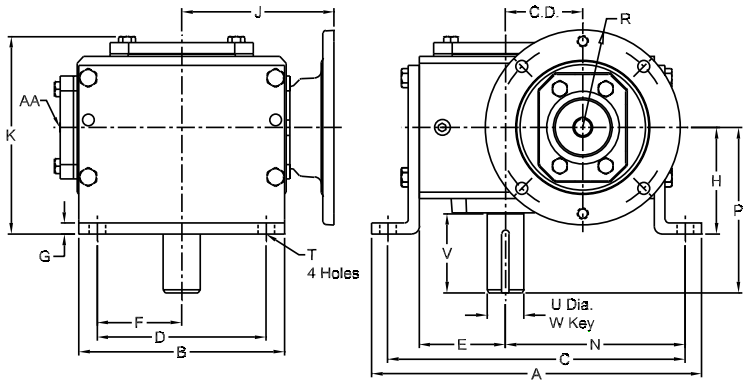
Dimensions (Inches) for Style "UVJ" - With Vertical "J" Base

Components ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T
Base Unit ★	Base Kit														
133U	133VJ-BK	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	3.82	6.06	6.76	3.93	4.00	0.38
154U	154VJ-BK	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	4.35	6.72	7.85	4.75	4.31	0.44
175U	175VJ-BK	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.45	6.78	7.95	4.75	4.31	0.44
206U	206VJ-BK	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.82	7.28	8.83	5.46	4.68	0.56
237U	237VJ-BK	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	5.51	7.84	9.57	6.01	5.14	0.69
262U	262VJ-BK	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	6.07	8.74	11.07	6.76	5.63	0.56
300U	300VJ-BK	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	6.57	10.14	12.19	7.50	6.75	0.56
325U	325VJ-BK	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.76	10.70	12.39	8.00	7.06	0.56
375U	375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	8.38	9.63	14.38	9.06	7.75	0.59
450U	450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	9.59	11.13	16.96	8.94	8.44	0.69
516U	516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	10.69	11.31	18.44	12.35	9.06	0.78

★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.
♦ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Consult factory for ratios not shown as standard.
133-325 Vertical High and Low Base Kits shown on page C-65.
133-325 Vertical J Base Kits shown on page C-66.
375-600 Vertical High and Low Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.

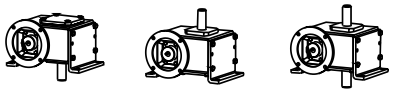
Style QVL

Vertical Low Base



Assembly Drawing and Sample of Components

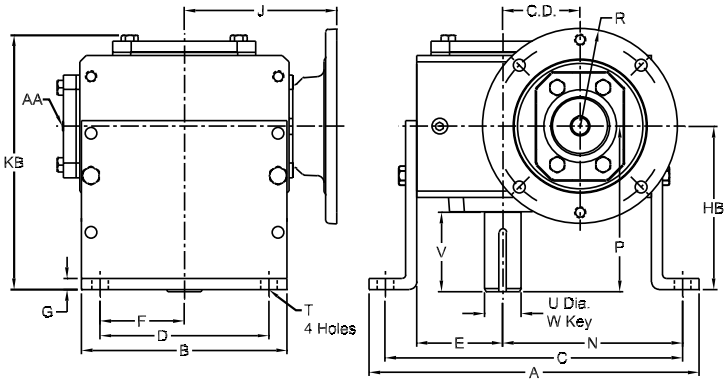
133Q56L10 133VL-BK | 133Q56R10 133VL-BK | 133Q56LR10 133VL-BK



133Q56L10 133VL-BK | 133Q56R10 133VL-BK | 133Q56LR10 133VL-BK

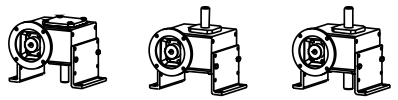
Style QVH

Vertical High Base



Assembly Drawing and Sample of Components

133Q56L10 133VH-BK | 133Q56R10 133VH-BK | 133Q56LR10 133VH-BK



133Q56L10 133VH-BK | 133Q56R10 133VH-BK | 133Q56LR10 133VH-BK

Dimensions (Inches) for Style "QVL" - With Vertical Low Base

CD	Component ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
	Basic Unit ★	Base Kit													
1.33	133Q56	133VL-BK	56C	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	3.46	4.69	3.86	4.00
1.54	154Q56	154VL-BK	56C	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	3.99	5.41	4.28	4.31
1.54	154Q140	154VL-BK	143/145TC	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	3.99	5.41	4.28	4.31
1.75	175Q56	175VL-BK	56C	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.09	5.47	4.50	4.31
1.75	175Q140	175VL-BK	143/145TC	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.09	5.47	4.50	4.31
2.06	206Q56	206VL-BK	56C	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	4.46	5.73	5.09	4.68
2.06	206Q140	206VL-BK	143/145TC	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	4.46	5.73	5.09	4.68
2.37	237Q56	237VL-BK	56C	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	4.63	6.08	5.44	5.14
2.37	237Q140	237VL-BK	143/145TC	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	4.63	6.08	5.44	5.14
2.62	262Q56	262VL-BK	56C	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.19	6.74	6.12	5.63
2.62	262Q140	262VL-BK	143/145TC	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.19	6.74	6.12	5.63
2.62	262Q180	262VL-BK	182/184TC	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.62	6.74	6.12	5.63
3.00	300Q56	300VL-BK	56C	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	5.95	7.33	6.75	6.75
3.00	300Q140	300VL-BK	143/145TC	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	5.95	7.33	6.75	6.75
3.00	300Q180	300VL-BK	182/184TC	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	6.15	7.33	6.75	6.75
3.25	325Q56	325VL-BK	56C	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.14	8.33	7.13	7.06
3.25	325Q140	325VL-BK	143/145TC	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.14	8.33	7.13	7.06
3.25	325Q180	325VL-BK	182/184TC	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.34	8.33	7.13	7.06
3.75	375Q56	375VL-BK	56C	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	6.01	9.58	8.31	7.75
3.75	375Q140	375VL-BK	143/145TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	6.01	9.58	8.31	7.75
3.75	375Q180	375VL-BK	182/184TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	7.29	9.58	8.31	7.75
3.75	375Q210	375VL-BK	213/215TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	7.29	9.58	8.31	7.75
4.50	450Q140	450VL-BK	143/145TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	6.69	9.78	8.94	8.44
4.50	450Q180	450VL-BK	182/184TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	7.97	9.78	8.94	8.44
4.50	450Q210	450VL-BK	213/215TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	7.97	9.78	8.94	8.44
5.16	516Q180	516VL-BK	182/184TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	11.25	10.56	9.06
5.16	516Q210	516VL-BK	213/215TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	11.25	10.56	9.06
6.00	600Q180	600VL-BK	182/184TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.63	12.19	10.00
6.00	600Q210	600VL-BK	213/215TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.63	12.19	10.00

CD	NEMA Frame	R	T	INPUT		OUTPUT SHAFT				Stocked Ratios												
						U	V	W Key		5	7.5	10	15	20	25	30	40	50	60	80	100	
				Bore	Keyway			Sq.	Lgth.													
1.33	56C	3.25	0.38	0.63	3/16 X 3/32	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x	
1.54	56C	3.25	0.44	0.63	3/16 X 3/32	0.75	1.90	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x	
1.54	143/145TC	3.25	0.44	0.88	3/16 X 3/32	0.75	1.90	0.19	1.50	x	x	x	x	x	-	-	-	-	-	-	-	
1.75	56C	3.25	0.44	0.63	3/16 X 3/32	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x	
1.75	143/145TC	3.25	0.44	0.88	3/16 X 3/32	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	-	-	
2.06	56C	3.25	0.50	0.63	3/16 X 3/32	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	x	x	
2.06	143/145TC	3.25	0.50	0.88	3/16 X 3/32	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	-	-	
2.37	56C	3.25	0.50	0.63	3/16 X 3/32	1.13	2.44	0.25	1.75	-	-	-	x	x	x	x	x	x	x	x	x	
2.37	143/145TC	3.25	0.50	0.88	3/16 X 3/32	1.13	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x	x	-	-	
2.62	56C	3.25	0.56	0.63	3/16 X 3/32	1.13	2.52	0.25	1.75	-	-	-	-	x	x	x	x	x	x	x	x	
2.62	143/145TC	3.25	0.56	0.88	3/16 X 3/32	1.13	2.52	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	-	
2.62	182/184TC	4.25	0.56	1.13	1/4 X 1/8	1.13	2.52	0.25	1.75	x	x	x	x	x	-	-	-	-	-	-	-	
3.00	56C	3.25	0.56	0.63	3/16 X 3/32	1.25	3.36	0.25	1.75	-	-	-	-	-	-	-	x	x	x	x	x	
3.00	143/145TC	3.25	0.56	0.88	3/16 X 3/32	1.25	3.36	0.25	1.75	-	-	x	x	x	x	x	x	x	x	x	x	
3.00	182/184TC	4.25	0.56	1.13	1/4 X 1/8	1.25	3.36	0.25	1.75	x	x	x	x	x	x	x	-	-	-	-	-	
3.25	56C	3.25	0.56	0.63	3/16 X 3/32	1.38	3.42	0.38	2.25	-	-	-	-	-	-	-	x	x	x	x	x	
3.25	143/145TC	3.25	0.56	0.88	3/16 X 3/32	1.38	3.42	0.38	2.25	-	-	x	x	x	x	x	x	x	x	x	x	
3.25	182/184TC	4.25	0.56	1.13	1/4 X 1/8	1.38	3.42	0.38	2.25	x	x	x	x	x	x	x	-	-	-	-	-	
3.75	56C	3.38	0.59	0.63	3/16 X 3/32	1.63	3.50	0.38	2.81	-	-	-	-	-	-	-	x	x	x	-	-	
3.75	143/145TC	3.38	0.59	0.88	3/16 X 3/32	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	x	-	-	
3.75	182/184TC	4.50	0.59	1.13	1/4 X 1/8	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	-	-	-	
3.75	213/215TC	4.50	0.59	1.38	5/16 X 5/32	1.63	3.50	0.38	2.81	-	-	x	x	-	-	-	-	-	-	-	-	
4.50	143/145TC	3.38	0.69	0.88	3/16 X 3/32	1.63	3.38	0.38	2.50	-	-	-	-	-	-	-	x	x	x	-	-	
4.50	182/184TC	4.50	0.69	1.13	1/4 X 1/8	1.63	3.38	0.38	2.50	-	-	-	x	x	x	x	x	x	x	-	-	
4.50	213/215TC	4.50	0.69	1.38	5/16 X 5/32	1.63	3.38	0.38	2.50	-	-	x	x	x	x	-	-	-	-	-	-	
5.16	182/184TC	4.50	0.78	1.13	1/4 X 1/8	2.00	4.16	0.50	2.81	-	-	-	-	-	-	x	x	x	-	-	-	
5.16	213/215TC	4.50	0.78	1.38	5/16 X 5/32	2.00	4.16	0.50	2.81	-	-	x	x	x	x	x	-	-	-	-	-	
6.00	182/184TC	4.50	0.91	1.13	1/4 X 1/8	2.25	4.56	0.50	3.50	-	-	-	-	x	x	x	x	x	x	-	-	
6.00	213/215TC	4.50	0.91	1.38	5/16 X 5/32	2.25	4.56	0.50	3.50	-	-	-	-	-	x	x	x	x	x	-	-	

Dimensions (Inches) for Style "QVH" - With Vertical High Base

C.D.	Component ◆		HB	KB	C.D.	Component ◆		HB	KB
	Basic Unit	NEMA Frame				Basic Unit	NEMA Frame		
1.33	133Q56	56C	3.56	5.62	3.25	325Q56	56C	6.25	9.89
1.54	154Q56	56C	4.38	6.79	3.25	325Q140	143/145TC	6.25	9.89
1.54	154Q140	143/145TC	4.38	6.79	3.25	325Q180	182/184TC	6.25	9.89
1.75	175Q56	56C	4.38	6.85	3.75	375Q56	56C	7.00	11.33
1.75	175Q140	143/145TC	4.38	6.85	3.75	375Q140	143/145TC	7.00	11.33
2.06	206Q56	56C	4.88	7.48	3.75	375Q180	182/184TC	7.00	11.33
2.06	206Q140	143/145TC	4.88	7.48	3.75	375Q210	213/215TC	7.00	11.33
2.37	237Q56	56C	5.25	7.95	4.50	450Q140	143/145TC	8.56	13.28
2.37	237Q140	143/145TC	5.25	7.95	4.50	450Q180	182/184TC	8.56	13.28
2.62	262Q56	56C	5.56	8.67	4.50	450Q210	213/215TC	8.56	13.28
2.62	262Q140	143/145TC	5.56	8.67	5.16	516Q180	182/184TC	8.63	13.50
2.62	262Q180	182/184TC	5.56	8.67	5.16	516Q210	213/215TC	8.63	13.50
3.00	300Q56	56C	5.88	9.27	6.00	600Q180	182/184TC	9.63	14.94
3.00	300Q140	143/145TC	5.88	9.27	6.00	600Q210	213/215TC	9.63	14.94
3.00	300Q180	182/184TC	5.88	9.27					

Fan Kit

Ref. No.	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
375Q	375 FAN	3/8-24	3/4	2.8
450Q	450 FAN	3/8-24	3/4	2.8
516Q	516 FAN	3/8-24	3/4	2.8
600Q	600 FAN	3/8-24	3/4	4.2

★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56H10.

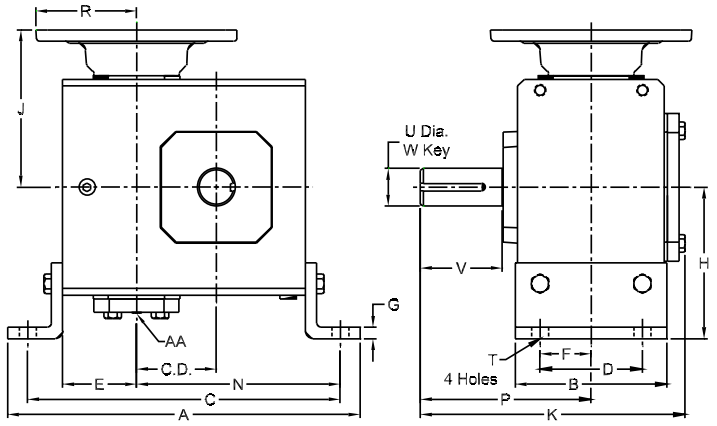
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table at the left.

Consult factory for ratios not shown as standard.

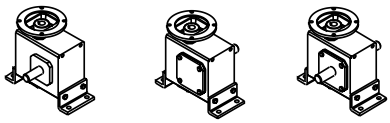
133-325 Vertical High and Low Base Kits shown on page C-65.
133-325 Vertical J Base Kits shown on page C-66.
375-600 Vertical High and Low Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.

Style QVJ

Vertical "J" Base



Assembly Drawing and Sample of Components



133Q56L10	133Q56R10	133Q56LR10
133VJ-BK	133VJ-BK	133VJ-BK

NOTE: If mounting a fan unit, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "QVJ" - With Vertical "J" Base

C.D.	Components◆ Part No. ★	Components◆ Base Kit	N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
1.33	**133Q56**	**133VJ-BK**	56C	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	3.46	6.06	3.93	4.00
1.54	**154Q56**	**154VJ-BK**	56C	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	3.99	6.72	4.30	4.31
1.54	**154Q140**	**154VJ-BK**	143/145TC	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	3.99	6.72	4.30	4.31
1.75	**175Q56**	**175VJ-BK**	56C	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.09	6.78	4.75	4.31
1.75	**175Q140**	**175VJ-BK**	143/145TC	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.09	6.78	4.75	4.31
2.06	**206Q56**	**206VJ-BK**	56C	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.46	7.28	5.46	4.68
2.06	**206Q140**	**206VJ-BK**	143/145TC	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.46	7.28	5.46	4.68
2.37	**237Q56**	**237VJ-BK**	56C	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	4.63	7.84	6.01	5.14
2.37	**237Q140**	**237VJ-BK**	143/145TC	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	4.63	7.84	6.01	5.14
2.62	**262Q56**	**262VJ-BK**	56C	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	5.19	8.74	6.76	5.63
2.62	**262Q140**	**262VJ-BK**	143/145TC	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	5.19	8.74	6.76	5.63
2.62	**262Q180**	**262VJ-BK**	182/184TC	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	5.62	8.74	6.76	5.63
3.00	**300Q56**	**300VJ-BK**	56C	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	5.95	10.14	7.50	6.75
3.00	**300Q140**	**300VJ-BK**	143/145TC	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	5.95	10.14	7.50	6.75
3.00	**300Q180**	**300VJ-BK**	182/184TC	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	6.15	10.14	7.50	6.75
3.25	**325Q56**	**325VJ-BK**	56C	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.14	10.70	8.00	7.06
3.25	**325Q140**	**325VJ-BK**	143/145TC	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.14	10.70	8.00	7.06
3.25	**325Q180**	**325VJ-BK**	182/184TC	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.34	10.70	8.00	7.06
3.75	**375Q56**	**375VJ-BK**	56C	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	6.01	9.63	9.06	7.75
3.75	**375Q140**	**375VJ-BK**	143/145TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	6.01	9.63	9.06	7.75
3.75	**375Q180**	**375VJ-BK**	182/184TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	7.29	9.63	9.06	7.75
3.75	**375Q210**	**375VJ-BK**	213/215TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	7.29	9.63	9.06	7.75
4.50	**450Q140**	**450VJ-BK**	143/145TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	6.69	11.13	10.50	8.44
4.50	**450Q180**	**450VJ-BK**	182/184TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	7.97	11.13	10.50	8.44
4.50	**450Q210**	**450VJ-BK**	213/215TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	7.97	11.13	10.50	8.44
5.16	**516Q180**	**516VJ-BK**	182/184TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.31	12.35	9.06
5.16	**516Q210**	**516VJ-BK**	213/215TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.31	12.35	9.06

C D	N.E.M.A. Frame	R	T	INPUT Bore	INPUT Keyway	OUTPUT SHAFT U	OUTPUT SHAFT V	OUTPUT SHAFT W K ey Sq.	OUTPUT SHAFT W K ey Lgth.	Stock Ratios marked x: 5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	3.25	0.38	0.63	0.19	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	3.25	0.44	0.63	0.19	0.75	1.90	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	3.25	0.44	0.88	0.19	0.75	1.90	0.19	1.50	x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	3.25	0.44	0.63	0.19	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	3.25	0.44	0.88	0.19	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	3.25	0.56	0.63	0.19	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	3.25	0.56	0.88	0.19	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	3.25	0.69	0.63	0.19	1.13	2.44	0.25	1.75	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3.25	0.69	0.88	0.19	1.13	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	3.25	0.56	0.63	0.19	1.13	2.52	0.25	1.75	-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3.25	0.56	0.88	0.19	1.13	2.52	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	4.25	0.56	1.13	0.25	1.13	2.52	0.25	1.75	x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	3.25	0.56	0.63	0.19	1.25	3.36	0.25	1.75	-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	3.25	0.56	0.88	0.19	1.25	3.36	0.25	1.75	-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	4.25	0.56	1.13	0.25	1.25	3.36	0.25	1.75	x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	3.25	0.56	0.63	0.19	1.38	3.42	0.38	2.25	-	-	-	-	-	-	-	x	x	x	x	x
3.25	143/145TC	3.25	0.56	0.88	0.19	1.38	3.42	0.38	2.25	-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	4.25	0.56	1.13	0.25	1.38	3.42	0.38	2.25	x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	3.38	0.59	0.63	0.19	1.63	3.50	0.38	2.81	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	3.38	0.59	0.88	0.19	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	4.50	0.59	1.13	0.25	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	4.50	0.59	1.38	0.31	1.63	3.50	0.38	2.81	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	3.38	0.69	0.88	0.19	1.63	3.38	0.38	2.50	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	4.50	0.69	1.13	0.25	1.63	3.38	0.38	2.50	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	4.50	0.69	1.38	0.31	1.63	3.38	0.38	2.50	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	4.50	0.78	1.13	0.25	2.00	4.16	0.50	2.81	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	4.50	0.78	1.38	0.31	2.00	4.16	0.50	2.81	-	-	x	x	x	x	x	-	-	-	-	-
6.00	182/184TC	4.50	0.91	1.13	0.31	2.25	4.56	0.50	3.50	-	-	-	-	x	x	x	x	x	x	-	-
6.00	213/215TC	4.50	0.91	1.38	0.31	2.25	4.56	0.50	3.50	-	-	-	-	-	x	x	x	x	x	-	-

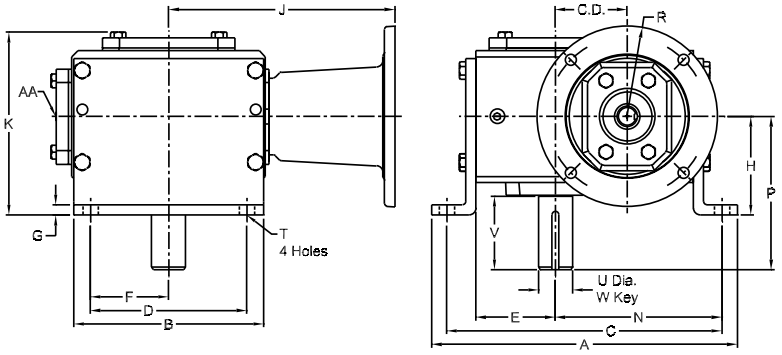
Fan Kit

Ref. No.	Fan Kit	AA Tap	AA Deep	Wt. Lbs.
375Q	375 FAN	3/8-24	3/4	2.8
450Q	450 FAN	3/8-24	3/4	2.8
516Q	516 FAN	3/8-24	3/4	2.8
600Q	600 FAN	3/8-24	3/4	4.2

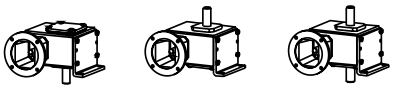
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table at the left.
Consult factory for ratios not shown as standard.
133-325 Vertical J Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.

Style CVL

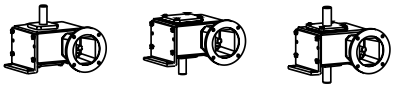
Vertical Low Base



Assembly Drawing and Sample of Components



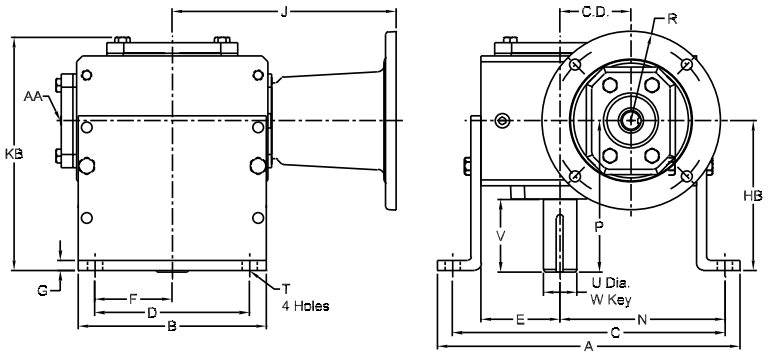
133UL10	133UR10	133ULR10
133VL-BK	133VL-BK	133VL-BK
133MAK56	133MAK56	133MAK56



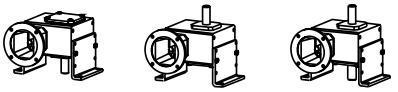
133UL10	133UR10	133ULR10
133VL-BK	133VL-BK	133VL-BK
133MAK56	133MAK56	133MAK56

Style CVH

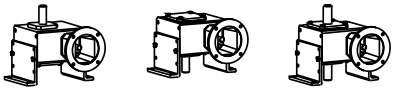
Vertical High Base



Assembly Drawing and Sample of Components



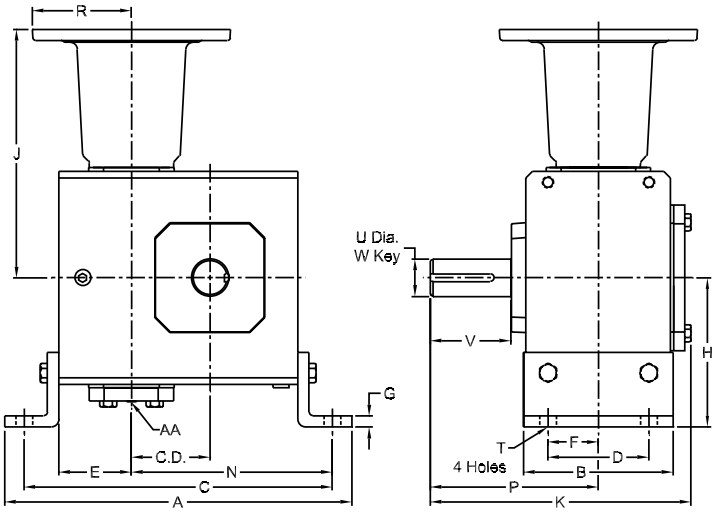
133UL10	133UR10	133ULR10
133VH-BK	133VH-BK	133VH-BK
133MAK56	133MAK56	133MAK56



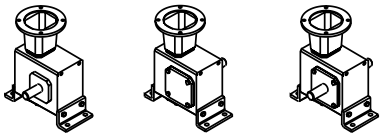
133UL10	133UR10	133ULR10
133VH-BK	133VH-BK	133VH-BK
133MAK56	133MAK56	133MAK56

Style CVJ

Vertical "J" Base



Assembly Drawing and Sample of Components



133UL10	133UR10	133ULR10
133VJ-BK	133VJ-BK	133VJ-BK
133MAK56	133MAK56	133MAK56

Note: If mounting a fan unit, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "CVL" - With Vertical Low Base

CD	Component ◆			A	B	C	D	E	F	G	H	K	N	P	T
	Basic Unit ★	Adapter Kit	Base Kit												
1.33	133U	See Adapter Kit Table Below	133VL-BK	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	4.69	3.82	4.00	0.38
1.54	154U		154VL-BK	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	5.41	4.35	4.31	0.44
1.75	175U		175VL-BK	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	5.47	4.45	4.31	0.44
2.06	206U		206VL-BK	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	5.73	4.82	4.68	0.50
2.37	237U		237VL-BK	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	6.08	5.51	5.14	0.50
2.62	262U		262VL-BK	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	6.74	6.07	5.63	0.56
3.00	300U		300VL-BK	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	7.33	6.57	6.75	0.56
3.25	325U		325VL-BK	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	8.33	6.76	7.06	0.56
3.75	375U		375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	9.58	8.38	7.75	0.59
4.50	450U		450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	9.78	9.59	8.44	0.69
5.16	516U		516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	11.25	10.69	9.06	0.78
6.00	600U		600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.63	11.75	10.00	0.91

CD	OUTPUT SHAFT				Stocked Ratios											
	U	V	W Key		5	7.5	10	15	20	25	30	40	50	60	80	100
			Sq.	Lgth.												
1.33	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.54	0.75	1.90	0.19	1.50	x	x	x	x	x	x	x	x	x	x	x	x
1.75	0.88	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.00	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.13	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
2.62	1.13	2.52	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
3.00	1.25	3.36	0.25	1.75	x	x	x	x	x	x	x	x	x	x	x	x
3.25	1.38	3.42	0.31	2.63	x	x	x	x	x	x	x	x	x	x	x	x
3.75	1.63	3.50	0.38	2.81	-	-	x	x	x	x	x	x	x	x	-	-
4.50	1.63	3.38	0.38	2.50	-	-	x	x	x	x	x	x	x	x	-	-
5.16	2.00	4.16	0.50	2.81	-	-	x	x	x	x	x	x	x	x	-	-
6.00	2.25	4.56	0.50	3.50	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "CVH"

Component ◆			HB	KB
Basic Unit ★	Adapter Kit	Base Kit		
133U	See Adapter Kit Table Below	133VH-BK	3.56	5.62
154U		154VH-BK	4.38	6.79
175U		175VH-BK	4.38	6.85
206U		206VH-BK	4.88	7.48
237U		237VH-BK	5.25	7.95
262U		262VH-BK	5.56	8.67
300U		300VH-BK	5.88	9.27
325U		325VH-BK	6.25	9.89
375U		375VH-BK	7.00	11.33
450U		450VH-BK	8.56	13.28
516U		516VH-BK	8.63	13.50
600U		600VH-BK	9.63	14.94

Fan Kit

Basic Unit ★	Fan Kit	AA		Wt. Lbs.
		Tap	Deep	
375U	375 FAN	3/8-24	3/4	2.8
450U	450 FAN	3/8-24	3/4	2.8
516U	516 FAN	3/8-24	3/4	2.8
600U	600 FAN	3/8-24	3/4	4.2

Dimensions (Inches) for Style "CVJ" - Vertical "J" Base

Components ◆			A	B	C	D	E	F	G	H	K	N	P	T
Base Unit ★	Adapter Kit	Base Kit												
133U	See Adapter Kit Table Below	133VJ-B K	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	6.06	3.93	4.00	0.38
154U		154VJ-BK	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	6.72	4.30	4.31	0.44
175U		175VJ-BK	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	6.78	4.75	4.31	0.44
206U		206VJ-BK	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	7.28	5.46	4.68	0.56
237U		237VJ-BK	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	7.84	6.01	5.14	0.69
262U		262VJ-BK	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	8.74	6.76	5.63	0.56
300U		300VJ-BK	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	10.14	7.50	6.75	0.56
325U		325VJ-BK	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	10.70	8.00	7.06	0.56
375U		375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	11.88	9.06	7.75	0.59
450U		450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	13.16	8.94	8.44	0.69
516U		516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	13.91	12.35	9.06	0.78

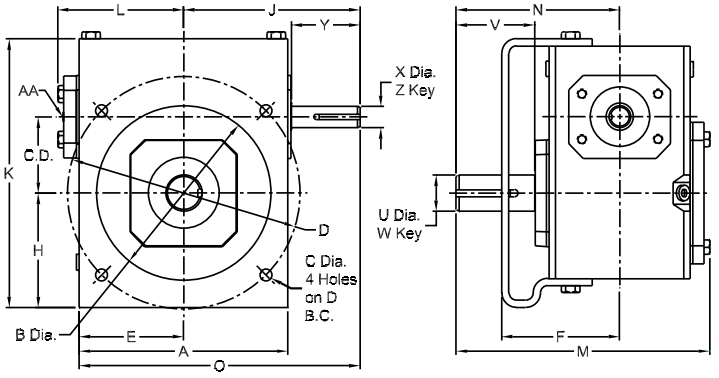
N.E.M.A. Frame Adapter Kits and Dimensions

C.D .	56C			143/145TC			182/184TC			213/215TC			254/256TC		
	Input: .625 Kw.: 3/16 x 3/32			Input: .875 Kw.: 3/16 x 3/32			Input: 1.125 KW.: 1/4 x 1/8			Input: 1.375 Kw.: 5/16 x 5/32			Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No .	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

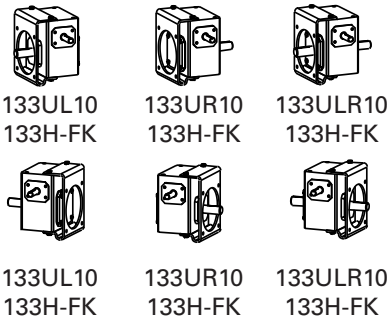
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Consult factory for ratios not shown as standard.
133-325 Vertical High and Low Base Kits shown on page C-65.
133-325 Vertical J Base Kits shown on page C-66.
375-600 Vertical High and Low Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.

Style UF

Flange Bracket



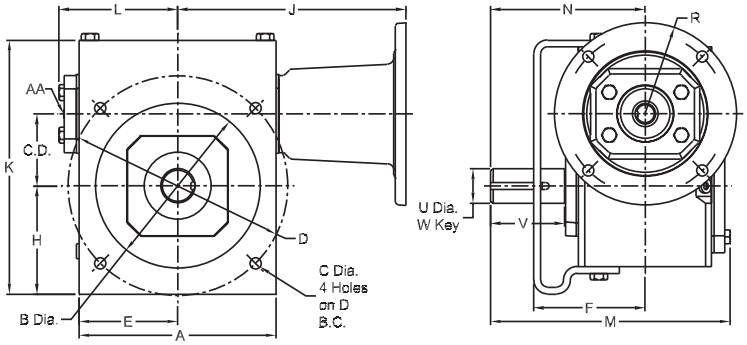
Assembly Drawing and Sample of Components



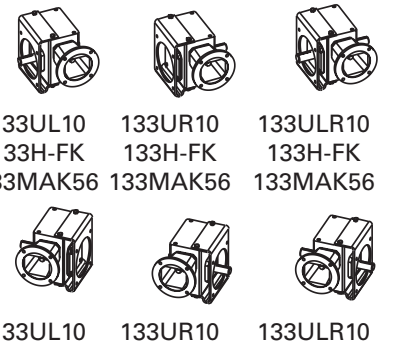
133UL10 133H-FK	133UR10 133H-FK	133ULR10 133H-FK
133UL10 133H-FK	133UR10 133H-FK	133ULR10 133H-FK

Style CF

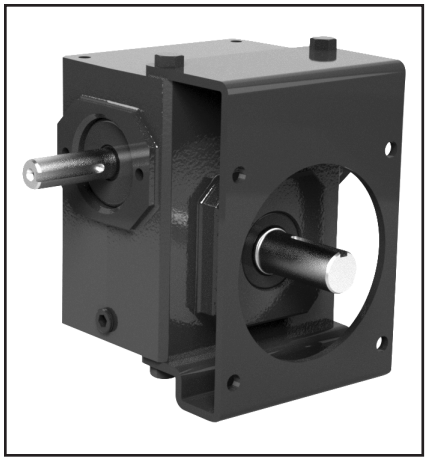
Flange Bracket

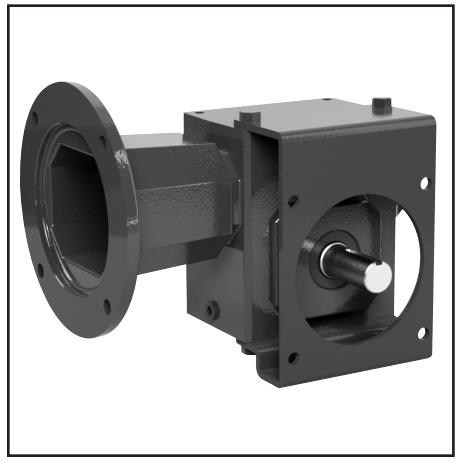


Assembly Drawing and Sample of Components



133UL10 133H-FK 133MAK56	133UR10 133H-FK 133MAK56	133ULR10 133H-FK 133MAK56
133UL10 133H-FK 133MAK56	133UR10 133H-FK 133MAK56	133ULR10 133H-FK 133MAK56





Dimensions (Inches) for Style "UF" - With Flange

C.D.	Components ◆		A	B	C	D	E	F	H	J	K	L	M	N	O
	Basic Unit ◆	Flange Kit													
1.33	133U	133H-FK	4.25	3.62	0.34	5.00	2.13	3.00	2.42	3.82	5.55	2.61	6.06	4.00	5.95
1.54	154U	154H-FK	4.75	3.63	0.34	5.00	2.38	3.56	2.54	4.35	6.20	3.14	6.72	4.31	7.07
1.75	175U	175H-FK	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.45	6.66	3.24	6.78	4.31	6.86
2.06	206U	206H-FK	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.82	7.47	3.61	7.28	4.68	7.70
2.37	237U	237H-FK	6.00	5.00	0.41	7.50	3.00	3.72	3.61	5.51	8.30	3.77	7.84	5.14	8.51
2.62	262U	262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	6.07	9.25	4.34	8.74	5.63	9.66
3.00	300U	300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	6.57	10.02	4.84	10.14	6.75	11.25
3.25	325U	325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.76	10.89	5.02	10.70	7.06	11.31
3.75	375U	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	8.38	11.85	5.74	11.88	7.75	13.13
4.50	450U	450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	9.59	13.10	6.42	13.16	8.44	15.09
5.16	516U	516H-FK	12.50	10.00	0.69	14.00	6.25	6.58	6.57	10.69	15.33	7.42	13.91	9.06	16.94
6.00	600U	600H-FK	14.50	12.00	0.69	15.56	7.25	7.22	7.85	11.75	18.22	8.25	15.31	10.00	19.00

C.D.	OUTPUT SHAFT				INPUT SHAFT				Stock Ratios marked "x "								
	U	V	WKey		X	Y	ZKey		5	10	15	20	25	30	40	50	60
			Sq.	Lgth.			Sq.	Lgth.									
1.33	0.63	1.94	0.19	1.50	0.50	1.76	0.13	1.00	x	x	x	x	x	x	x	x	x
1.54	0.75	1.90	0.19	1.50	0.63	1.76	0.19	0.94	x	x	x	x	x	x	x	x	x
1.75	0.88	1.84	0.19	1.38	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x
2.06	1.00	2.08	0.25	1.44	0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x
2.37	1.13	2.44	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x
2.62	1.13	2.52	0.25	1.75	0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x
3.00	1.25	3.36	0.25	1.75	0.88	2.38	0.19	1.31	x	x	x	x	x	x	x	x	x
3.25	1.38	3.42	0.31	2.63	0.88	2.38	0.19	1.63	-	x	x	x	x	x	x	x	x
3.75	1.63	3.50	0.38	2.81	1.00	2.91	0.25	1.75	-	x	x	x	x	x	x	x	x
4.50	1.63	3.38	0.38	2.50	1.13	3.48	0.25	2.50	-	x	x	x	x	x	x	x	x
5.16	2.00	4.16	0.50	2.81	1.25	3.75	0.25	2.56	-	x	x	x	x	x	x	x	x
6.00	2.25	4.56	0.50	3.50	1.50	3.75	0.38	2.94	x	x	x	x	x	x	x	x	x

Dimensions (Inches) for Style "CF"

Components ◆		
Basic Unit ★	Adapter Kit	Flange Kit
133U	See Adapter Kit Table Below	133H-FK
154U		154H-FK
175U		175H-FK
206U		206H-FK
237U		237H-FK
262U		262H-FK
300U		300H-FK
325U		325H-FK
375U		375H-FK
450U		450H-FK
516U		516H-FK
600U		600H-FK

Fan Kit

Basic Unit ★	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

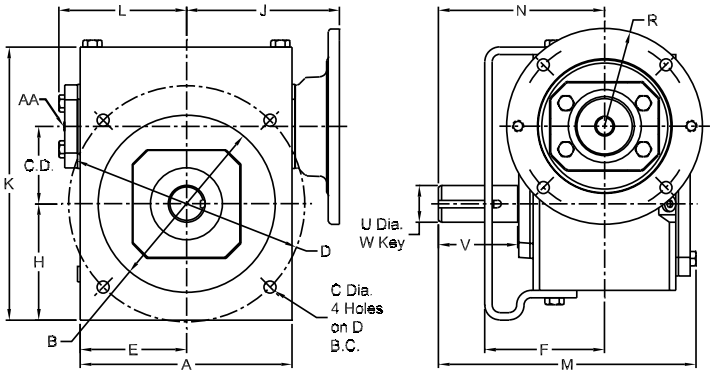
N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C Input: .625 Kw.: 3/16 x 3/32			143/145TC Input: .875 Kw.: 3/16 x 3/32			182/184TC Input: 1.125 KW.: 1/4 x 1/8			213/215TC Input: 1.375 Kw.: 5/16 x 5/32			254/256TC Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

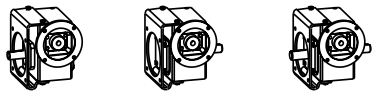
★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133ULR10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Consult factory for ratios not shown as standard.
Motor Adapter Kits Shown on page C-64.
Flange Kits shown on page C-65.

Style QF

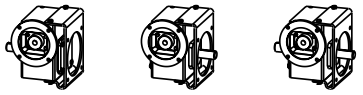
Flange Bracket



Assembly Drawing and Sample of Components



133Q56L10 133H-FK | 133Q56R10 133H-FK | 133Q56LR10 133H-FK



133Q56L10 133H-FK | 133Q56R10 133H-FK | 133Q56LR10 133H-FK

Dimensions (Inches) for Style "QF" - With Flange

C.D .	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M
	Part No. ★	Flange Kit												
1.33	133Q56	133H-FK	56C	4.25	3.62	0.34	5.00	2.13	3.00	2.42	3.46	5.55	2.61	6.06
1.54	154Q56	154H-FK	56C	4.75	3.63	0.34	5.00	2.38	3.56	2.54	3.99	6.20	3.14	6.72
1.54	154Q140	154H-FK	143/145TC	4.75	3.63	0.34	5.00	2.38	3.56	2.54	3.99	6.20	3.14	6.72
1.75	175Q56	175H-FK	56C	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.09	6.66	3.24	6.78
1.75	175Q140	175H-FK	143/145TC	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.09	6.66	3.24	6.78
2.06	206Q56	206H-FK	56C	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.46	7.47	3.61	7.07
2.06	206Q140	206H-FK	143/145TC	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.46	7.47	3.61	7.07
2.37	237Q56	237H-FK	56C	6.00	5.00	0.41	7.50	3.00	3.72	3.61	4.63	8.30	3.77	7.84
2.37	237Q140	237H-FK	143/145TC	6.00	5.00	0.41	7.50	3.00	3.72	3.61	4.63	8.30	3.77	7.84
2.62	262Q56	262H-FK	56C	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.19	9.25	4.34	8.74
2.62	262Q140	262H-FK	143/145TC	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.19	9.25	4.34	8.74
2.62	262Q180	262H-FK	182/184TC	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.62	9.25	4.34	8.74
3.00	300Q56	300H-FK	56C	8.50	7.00	0.41	9.00	4.25	4.50	4.14	5.95	10.02	4.84	10.14
3.00	300Q140	300H-FK	143/145TC	8.50	7.00	0.41	9.00	4.25	4.50	4.14	5.95	10.02	4.84	10.14
3.00	300Q180	300H-FK	182/184TC	8.50	7.00	0.41	9.00	4.25	4.50	4.14	6.15	10.02	4.84	10.14
3.25	325Q56	325H-FK	56C	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.14	10.89	5.02	10.70
3.25	325Q140	325H-FK	143/145TC	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.14	10.89	5.02	10.70
3.25	325Q180	325H-FK	182/184TC	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.34	10.89	5.02	10.70
3.75	375Q56	375H-FK	56C	9.54	8.00	0.56	11.50	4.77	5.46	5.04	6.01	11.85	5.74	11.88
3.75	375Q140	375H-FK	143/145TC	9.54	8.00	0.56	11.50	4.77	5.46	5.04	6.01	11.85	5.74	11.88
3.75	375Q180	375H-FK	182/184TC	9.54	8.00	0.56	11.50	4.77	5.46	5.04	7.29	11.85	5.74	11.88
3.75	375Q210	375H-FK	213/215TC	9.54	8.00	0.56	11.50	4.77	5.46	5.04	7.29	11.85	5.74	11.88
4.50	450Q140	450H-FK	143/145TC	10.88	9.00	0.56	11.50	5.44	6.88	5.34	6.69	13.10	6.42	13.16
4.50	450Q180	450H-FK	182/184TC	10.88	9.00	0.56	11.50	5.44	6.88	5.34	7.97	13.10	6.42	13.16
4.50	450Q210	450H-FK	213/215TC	10.88	9.00	0.56	14.00	5.44	6.88	5.34	7.97	13.10	6.42	13.16
5.16	516Q180	516H-FK	182/184TC	12.50	10.00	0.69	14.00	6.25	6.58	6.57	8.78	15.33	7.42	13.91
5.16	516Q210	516H-FK	213/215TC	12.50	10.00	0.69	14.00	6.25	6.58	6.57	8.78	15.33	7.42	13.91
6.00	600Q180	600H-FK	182/184TC	14.50	12.00	0.69	15.56	7.25	7.22	7.85	9.68	18.22	8.25	15.31
6.00	600Q210	600H-FK	213/215TC	14.50	12.00	0.69	15.56	7.25	7.22	7.85	9.68	18.22	8.25	15.31

C.D .	N.E.M.A. Frame	N	R	INPUT		OUTPUT SHAFT				Stock Ratios marked "x "								
						U	V	WKey										
				Bore	Keyway			Sq.	Lgth.	5	10	15	20	25	30	40	50	60
1.33	56C	4.00	3.25	0.63	3/16 X 3/32	0.63	1.94	0.19	1.50	x	x	x	x	x	x	x	x	x
1.54	56C	4.31	3.25	0.63	3/16 X 3/32	0.75	1.90	0.19	1.25	x	x	x	x	x	x	x	x	x
1.54	143/145TC	4.31	3.25	0.88	3/16 X 3/32	0.75	1.90	0.19	1.25	x	x	x	-	-	-	-	-	-
1.75	56C	4.31	3.25	0.63	3/16 X 3/32	0.63	1.84	0.19	1.38	x	x	x	x	x	x	x	x	x
1.75	143/145TC	4.31	3.25	0.88	3/16 X 3/32	0.88	1.84	0.19	1.38	x	x	x	-	-	-	-	-	-
2.06	56C	4.68	3.25	0.63	3/16 X 3/32	0.63	2.08	0.25	1.44	x	x	x	x	x	x	x	x	x
2.06	143/145TC	4.68	3.25	0.88	3/16 X 3/32	0.88	2.08	0.25	1.44	x	x	x	x	x	-	-	-	-
2.37	56C	5.14	3.25	0.63	3/16 X 3/32	0.63	2.44	0.25	1.75	x	x	x	x	x	x	x	x	x
2.37	143/145TC	5.14	3.25	0.88	3/16 X 3/32	0.88	2.44	0.25	1.75	x	x	x	x	x	x	x	-	-
2.62	56C	5.63	3.25	0.63	3/16 X 3/32	0.63	2.52	0.25	1.75	-	x	x	x	x	x	x	x	x
2.62	143/145TC	5.63	3.25	0.88	3/16 X 3/32	0.88	2.52	0.25	1.75	-	x	x	x	x	x	x	x	x
2.62	182/184TC	5.63	4.50	1.13	1/4 X 1/8	1.13	2.52	0.25	1.75	x	x	-	-	-	-	-	-	-
3.00	56C	6.75	3.25	0.63	3/16 X 3/32	1.25	3.36	0.25	2.25	-	-	x	x	x	x	x	x	x
3.00	143/145TC	6.75	3.25	0.88	3/16 X 3/32	1.25	3.36	0.25	2.25	-	x	x	x	x	x	x	x	x
3.00	182/184TC	6.75	4.50	1.13	1/4 X 1/8	1.25	3.36	0.25	2.25	-	x	x	x	x	x	x	x	x
3.25	56C	7.06	3.25	0.63	3/16 X 3/32	1.38	3.42	0.31	2.88	-	x	x	x	x	x	x	x	x
3.25	143/145TC	7.06	3.25	0.88	3/16 X 3/32	1.38	3.42	0.31	2.88	-	x	x	x	x	x	x	x	x
3.25	182/184TC	7.06	4.50	1.13	1/4 X 1/8	1.38	3.42	0.31	2.88	-	x	x	x	x	x	x	x	x
3.75	56C	7.75	3.38	0.63	3/16 X 3/32	1.63	3.50	0.38	2.81	-	-	-	-	-	-	x	x	x
3.75	143/145TC	7.75	3.38	0.88	3/16 X 3/32	1.63	3.50	0.38	2.81	-	x	x	x	x	x	x	x	x
3.75	182/184TC	7.75	4.50	1.13	1/4 X 1/8	1.63	3.50	0.38	2.81	-	x	x	x	x	x	x	x	-
3.75	213/215TC	7.75	4.50	1.38	5/16 X 5/32	1.63	3.50	0.38	2.81	-	x	x	-	-	-	-	-	-
4.50	143/145TC	8.44	3.38	0.88	3/16 X 3/32	1.63	3.38	0.38	2.50	-	-	-	-	-	-	x	x	x
4.50	182/184TC	8.44	4.50	1.13	1/4 X 1/8	1.63	3.38	0.38	2.50	-	-	x	x	x	x	x	x	x
4.50	213/215TC	8.44	4.50	1.38	5/16 X 5/32	1.63	3.38	0.38	2.50	-	x	x	x	x	-	-	-	-
5.16	182/184TC	9.06	4.50	1.13	1/4 X 1/8	2.00	4.16	0.50	2.81	-	-	-	-	-	-	x	x	x
5.16	213/215TC	9.06	4.50	1.38	5/16 X 5/32	2.00	4.16	0.50	2.81	-	x	x	x	x	x	-	-	-
6.00	182/184TC	10.00	4.50	1.13	5/16 X 5/32	2.25	4.56	0.50	3.50	-	-	-	x	x	x	x	x	x
6.00	213/215TC	10.00	4.50	1.38	5/16 X 5/32	2.25	4.56	0.50	3.50	-	-	-	-	x	x	x	x	x

Fan Kit

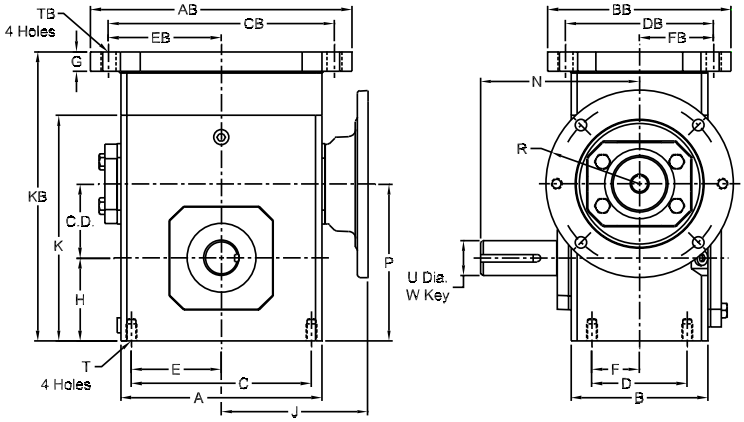
Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375Q	375 FAN	3/8-24	3/4	7.66	2.8
450Q	450 FAN	3/8-24	3/4	8.36	2.8
516Q	516 FAN	3/8-24	3/4	9.18	2.8
600Q	600 FAN	3/8-24	3/4	10.70	4.2

★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56H10.

◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table at the left.
Consult factory for ratios not shown as standard.
Flange Kits shown on page C-65.

Style QRT

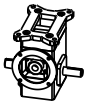
C-Face Quilled - Riser Block
Worm Top



Assembly Drawing and Sample of Components

133Q56L10
133R-BK
133S-BK

133Q56R10
133R-BK
133S-BK



133Q56LR10
133R-BK
133S-BK

DIMENSIONS (INCHES) FOR STYLE "QRT" - C-FACE QUILLED- RISER BLOCK WORM TOP

C.D.	BASIC UNIT ★	N.E.M.A. FRAME	A	B	C	D	E	F	H	J	N	P	R
1.33	**133Q56**	56C	4.00	2.88	3.25	2.00	1.63	1.00	1.82	3.94	4.00	3.05	3.25
1.54	**154Q56**	56C	4.88	3.44	4.19	2.75	2.09	1.38	1.91	3.99	4.31	3.45	3.25
1.54	**154Q140**	143/145TC	4.88	3.44	4.19	2.75	2.09	1.38	1.91	3.99	4.31	3.45	3.25
1.75	**175Q56**	56C	5.06	3.56	4.19	2.75	2.09	1.38	2.06	4.09	4.31	3.81	3.25
1.75	**175Q140**	143/145TC	5.06	3.56	4.19	2.75	2.09	1.38	2.06	4.09	4.31	3.81	3.25
2.06	**206Q56**	56C	5.80	3.81	5.00	2.88	2.50	1.44	2.29	4.46	4.68	4.35	3.25
2.06	**206Q140**	143/145TC	5.80	3.81	5.00	2.88	2.50	1.44	2.29	4.46	4.68	4.35	3.25
2.37	**237Q56**	56C	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	5.14	4.88	3.25
2.37	**237Q140**	143/145TC	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	5.14	4.88	3.25
2.62	**262Q56**	56C	7.12	4.84	6.38	3.38	3.19	1.69	2.93	5.19	5.63	5.56	3.25
2.62	**262Q140**	143/145TC	7.12	4.84	6.38	3.38	3.19	1.69	2.93	5.19	5.63	5.56	3.25
2.62	**262Q180**	182/184TC	7.12	4.84	6.38	3.38	3.19	1.69	2.93	5.62	5.63	5.56	4.50
3.00	**300Q56**	56C	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	6.75	6.25	3.25
3.00	**300Q140**	143/145TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	6.75	6.25	3.25
3.00	**300Q180**	182/184TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	6.15	6.75	6.25	4.50
3.25	**325Q56**	56C	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.14	7.06	6.75	3.25
3.25	**325Q140**	143/145TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.14	7.06	6.75	3.25
3.25	**325Q180**	182/184TC	8.50	5.75	7.50	4.00	3.75	2.00	3.50	6.34	7.06	6.75	4.50
3.75	**375Q56**	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	7.75	7.63	3.38
3.75	**375Q140**	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	7.75	7.63	3.38
3.75	**375Q180**	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	7.75	7.63	4.50
3.75	**375Q210**	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	7.75	7.63	4.50
4.50	**450Q140**	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	6.69	8.44	9.00	3.38
4.50	**450Q180**	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	8.44	9.00	4.50
4.50	**450Q210**	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	8.44	9.00	4.50
5.16	**516Q180**	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	9.06	10.47	4.50
5.16	**516Q210**	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	9.06	10.47	4.50

C.D.	N.E.M.A. FRAME	T		OUTPUT SHAFT			STOCK RATIOS MARKED "X"								
				U	W KEY										
		SIZE	DEEP		SQ.	LGTH.	5	10	15	20	25	30	40	50	60
1.33	56C	5/16-18	0.50	0.625	0.188	1.31	x	x	x	x	x	x	x	x	x
1.54	56C	5/16-18	0.63	0.750	0.188	1.50	x	x	x	x	x	x	x	x	x
1.54	143/145TC	5/16-18	0.63	0.750	0.188	1.50	x	x	x	-	-	-	-	-	-
1.75	56C	5/16-18	0.63	0.875	0.188	1.38	x	x	x	x	x	x	x	x	x
1.75	143/145TC	5/16-18	0.63	0.875	0.188	1.38	x	x	x	-	-	-	-	-	-
2.06	56C	3/8-16	0.63	1.000	0.250	1.44	x	x	x	x	x	x	x	x	x
2.06	143/145TC	3/8-16	0.63	1.000	0.250	1.44	x	x	x	x	x	x	x	x	x
2.37	56C	3/8-16	0.69	1.125	0.250	1.75	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3/8-16	0.69	1.125	0.250	1.75	x	x	x	x	x	x	x	x	x
2.62	56C	3/8-16	0.69	1.125	0.250	1.75	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3/8-16	0.69	1.125	0.250	1.75	-	x	x	x	x	x	x	x	x
2.62	182/184TC	3/8-16	0.69	1.125	0.250	1.75	x	x	-	-	-	-	-	-	-
3.00	56C	7/16-14	0.88	1.250	0.250	1.75	-	-	x	x	x	x	x	x	x
3.00	143/145TC	7/16-14	0.88	1.250	0.250	1.75	-	x	x	x	x	x	x	x	x
3.00	182/184TC	7/16-14	0.88	1.250	0.250	1.75	-	x	x	x	x	x	x	x	x
3.25	56C	7/16-14	0.88	1.375	0.375	2.25	-	x	x	x	x	x	x	x	x
3.25	143/145TC	7/16-14	0.88	1.375	0.375	2.25	-	x	x	x	x	x	x	x	x
3.25	182/184TC	7/16-14	0.88	1.375	0.375	2.25	-	x	x	x	x	x	x	x	x
3.75	56C	1/2-13	1.00	0.625	0.375	2.81	-	-	-	-	-	-	x	x	x
3.75	143/145TC	1/2-13	1.00	0.875	0.375	2.81	-	x	x	x	x	x	x	x	x
3.75	182/184TC	1/2-13	1.00	1.125	0.375	2.81	-	x	x	x	x	x	x	x	-
3.75	213/215TC	1/2-13	1.00	1.375	0.375	2.81	-	x	x	-	-	-	-	-	-
4.50	143/145TC	5/8-11	1.00	0.875	0.375	2.50	-	-	-	-	-	-	x	x	x
4.50	182/184TC	5/8-11	1.00	1.125	0.375	2.50	-	-	x	x	x	x	x	x	x
4.50	213/215TC	5/8-11	1.00	1.375	0.375	2.50	-	x	x	x	x	-	-	-	-
5.16	182/184TC	5/8-11	1.00	1.125	0.500	2.81	-	-	-	-	-	-	x	x	x
5.16	213/215TC	5/8-11	1.00	1.375	0.500	2.81	-	x	x	x	x	x	-	-	-

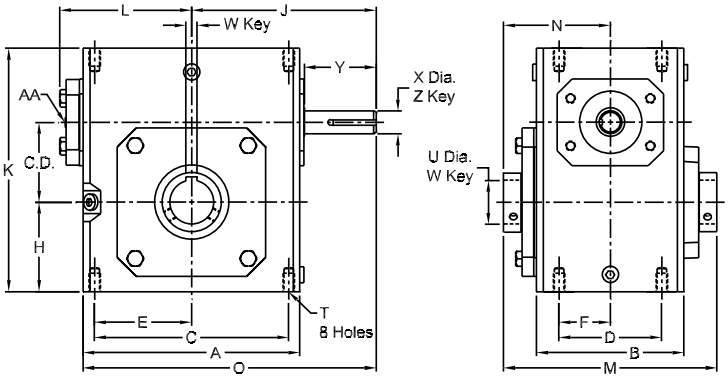
DIMENSIONS (INCHES) FOR STYLE "QT" - WORM TOP

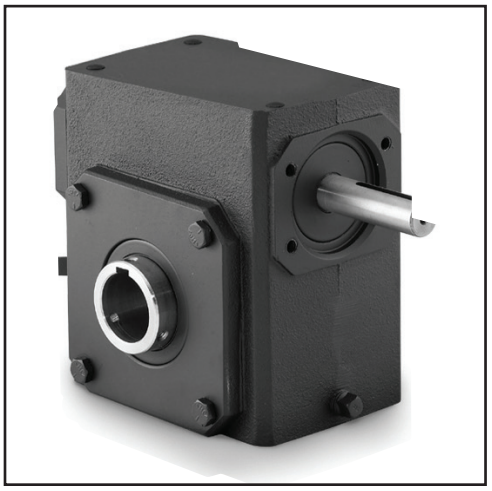
COMPONENTS ♦		AB	BB	CB	DB	EB	FB	G	KB	TB
REF. NO.	RISER BLOCK KIT									
133Q	**133R-BK**	5.38	4.19	4.38	3.31	2.19	1.66	0.47	7.02	0.38
154Q	**154R-BK**	6.50	5.56	5.25	4.31	2.63	2.16	0.59	7.97	0.41
175Q	**175R-BK**	6.99	5.75	5.75	4.50	2.88	2.25	0.69	8.44	0.41
206Q	**206R-BK**	7.69	6.00	6.38	4.69	3.19	2.34	0.72	9.10	0.47
237Q	**237R-BK**	8.37	6.19	7.06	4.88	3.53	2.44	0.75	9.69	0.49
262Q	**262R-BK**	9.25	6.50	8.00	5.25	4.00	2.63	0.75	10.25	0.53
300Q	**300R-BK**	10.00	7.50	8.44	5.88	4.22	2.94	0.75	11.76	0.53
325Q	**325R-BK**	11.12	7.75	9.50	6.13	4.75	3.06	0.81	12.39	0.53
375Q	**375R-BK**	12.00	8.63	10.38	7.00	5.19	3.50	0.94	13.15	0.59
450Q	**450R-BK**	13.88	9.31	12.13	7.63	6.06	3.81	1.13	15.33	0.66
516Q	**516R-BK**	16.38	10.38	14.13	8.38	7.06	4.19	1.13	16.88	0.78

★ To complete Part No. add shaft assembly (L, R, LR) and ratio symbol to size - for example 133Q56H10.
♦ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Consult factory for ratios not shown as standard.
Riser Block Kits available on page C-67.

Style UH

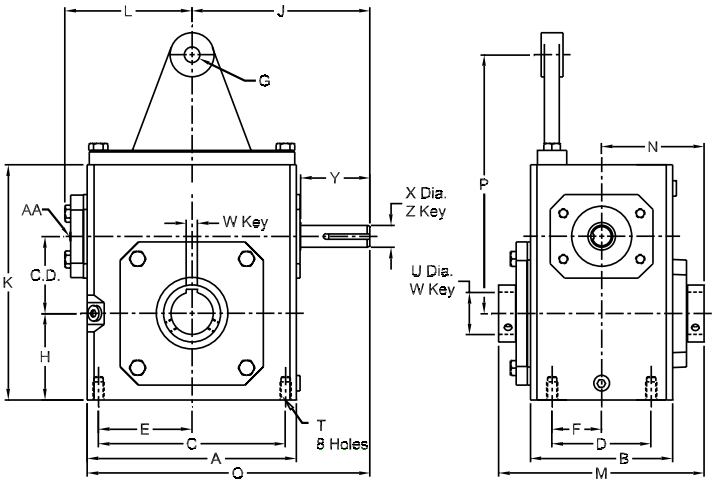
Hollow – Basic Unit





Style UHT

Torque Arm



Assembly Drawing and Sample of Components

133UH10
133H-TAK

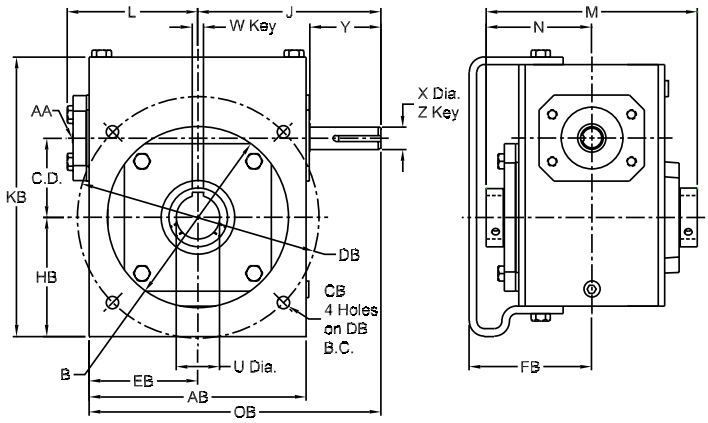
133UH10
133H-TAK

133UH10
133H-TAK

133UH10
133H-TAK

Style UHF

Flange Bracket



Assembly Drawing and Sample of Components

133UH10
133H-FK

Dimensions (Inches) for Style "UH"

C.D .	Basic Unit★	A	B	C	D	E	F	H	J	K	L	M	N	O
1.33	133UH	3.80	2.82	3.25	2.00	1.63	1.00	1.72	3.82	4.66	2.61	4.75	2.38	5.72
1.54	154UH	5.19	3.44	4.19	2.75	2.09	1.38	1.91	4.35	5.38	3.14	5.42	2.71	6.79
1.75	175UH	5.19	3.56	4.19	2.75	2.09	1.38	2.06	4.45	5.75	3.24	5.50	2.75	6.98
2.06	206UH	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.82	6.38	3.61	6.00	3.00	7.72
2.37	237UH	6.12	4.06	5.00	2.88	2.50	1.44	2.50	5.51	6.94	3.77	6.00	3.00	8.57
2.62	262UH	7.38	4.84	6.38	3.38	3.19	1.69	2.94	6.07	8.00	4.34	7.00	3.50	9.63
3.00	300UH	8.12	5.25	7.00	4.00	3.50	2.00	3.25	6.57	8.88	4.84	7.50	3.75	10.63
3.25	325UH	8.75	5.75	7.50	4.00	3.75	2.00	3.50	6.76	9.38	5.02	7.88	3.94	11.01
3.75	375UH	9.50	6.38	8.50	4.75	4.25	2.38	3.88	8.38	10.44	5.74	9.63	4.81	13.13
4.50	450UH	10.88	7.38	9.56	5.81	4.78	2.91	4.50	9.59	11.94	6.42	11.13	5.56	15.09
5.16	516UH	12.50	7.38	11.00	5.81	5.50	2.91	5.31	10.69	13.75	7.42	11.31	5.66	16.94
6.00	600UH	14.50	8.13	12.75	6.38	6.38	3.19	6.50	11.75	16.50	8.25	12.63	6.31	19.00

C.D .	T		OUTPUT BORE ✚		INPUT SHAFT				Stock Ratios marked "x "											
	Size	Deep	U	W Keyway	X	Y	ZKey Sq.	Lgth.	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	5/16-18	0.50	0.63	See Keyway Dimensions on page C-63.	0.50	1.76	0.13	1.00	x	x	x	x	x	x	x	x	x	x	x	x
1.54	5/16-18	0.63	0.63		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
1.75	5/16-18	0.63	1.00		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.06	5/16-18	0.63	1.50		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.37	3/8-16	0.69	1.50		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
2.62	3/8-16	0.69	1.94		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.00	7/16-14	0.88	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.25	7/16-14	0.88	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.75	1/2-13	1.00	2.44	5/8 x 3/16	1.00	2.91	0.25	1.75	-	-	x	x	x	x	x	x	x	x	-	-
4.50	5/8-11	1.00	2.94	3/4 x 1/4	1.13	3.48	0.25	2.50	-	-	x	x	x	x	x	x	x	x	-	-
5.16	5/8-11	1.00	3.44	7/8 x 1/4	1.25	3.75	0.25	2.56	-	-	x	x	x	x	x	x	x	x	-	-
6.00	5/8-11	1.00	3.94	1 x 1/4	1.50	3.75	0.38	2.94	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "UHT" - With Torque Arm

Components ◆		G	P
Basic Unit ★	Torque Arm Kit		
133U H	133H-TAK	0.53	4.19
154U H	154H-TAK	0.53	5.97
175U H	175H-TAK	0.53	6.19
206U H	206H-TAK	0.53	7.24
237U H	237H-TAK	0.53	7.69
262U H	262H-TAK	0.53	8.81
300U H	300H-TAK	0.53	10.63
325U H	325H-TAK	0.53	10.88
375U H	375H-TAK	0.53	9.56
450U H	450H-TAK	0.81	10.94
516U H	516H-TAK	0.81	12.45
600U H	600H-TAK	0.81	14.63

Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

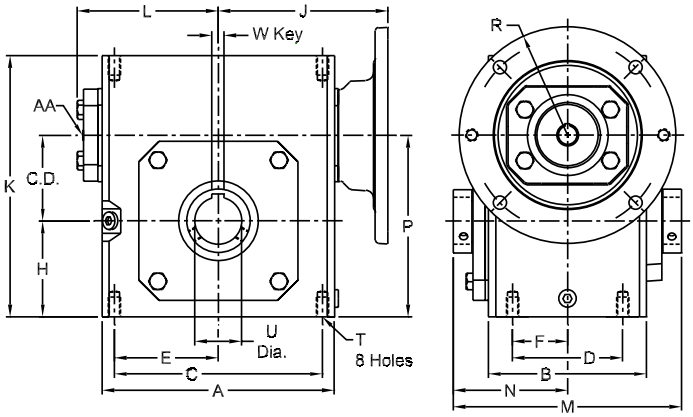
Dimensions (Inches) for Style "UHF" - With Flange

Components ◆		AB	BB	CB	DB	EB	FB	HB	J	KB	L	M	N	OB
Basic Unit ★	Torque Arm Kit													
133UH	133H-FK	4.25	3.62	0.34	5.00	2.13	3.00	2.42	3.82	5.55	2.61	4.75	2.38	5.95
154UH	154H-FK	4.75	3.63	0.34	5.00	2.38	3.56	2.54	4.69	6.20	2.75	5.42	3.22	7.07
175UH	175H-FK	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.45	6.66	3.24	5.50	2.75	6.86
206UH	206H-FK	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.82	7.47	3.61	6.00	3.00	7.70
237UH	237H-FK	6.00	5.00	0.41	7.50	3.00	3.72	3.61	5.51	8.30	3.77	6.00	3.00	8.51
262UH	262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	6.07	9.25	4.34	7.00	3.50	9.66
300UH	300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	7.00	10.02	4.50	7.50	4.19	11.25
325UH	325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	7.06	10.89	4.50	7.88	4.25	11.31
375UH	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	8.38	11.85	5.74	9.63	4.81	13.13
450UH	450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	9.59	13.10	6.42	11.13	5.56	15.09
516UH	516H-FK	12.50	10.00	0.69	14.00	6.25	6.58	6.57	10.69	15.33	7.42	11.31	5.66	16.94
600UH	600H-FK	14.50	12.00	0.69	15.56	7.25	7.22	7.85	11.75	18.22	8.25	12.63	6.31	19.00

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133UH10
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Torque Arm Kits shown on page C-64.
Flange Kits shown on page C-65.

Style QH

C-Face Quilled–Hollow

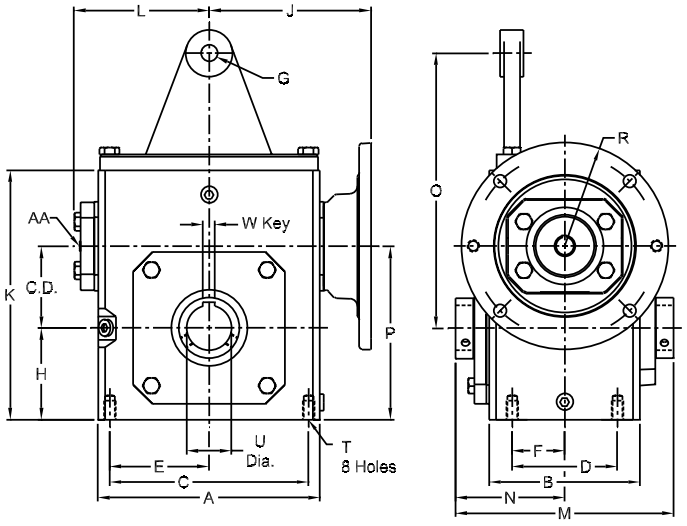


Assembly Drawing and Sample of Components

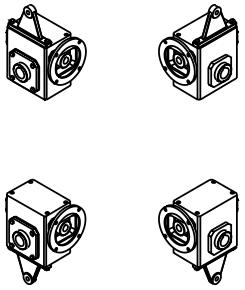
133Q56H10

Style QHT

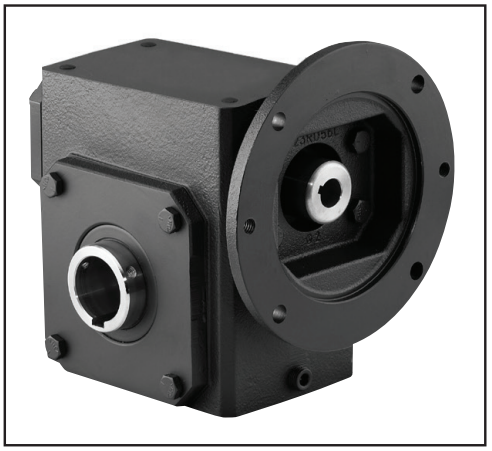
Torque Arm

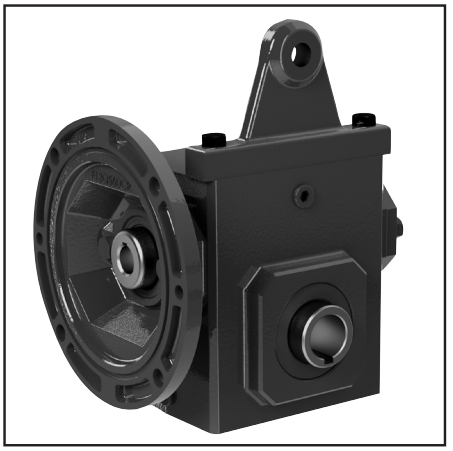


Assembly Drawing and Sample of Components



133Q56H10
133H-TAK





Dimensions (Inches) for Style "QH"

C.D .	Basic Unit ★	N.E.M.A. Frame	A	B	C	D	E	F	H	J	K	L	M	N	P	R
1.33	133Q56H	56C	3.80	2.82	3.25	2.00	1.63	1.00	1.72	3.46	4.66	2.61	4.75	2.38	3.05	3.25
1.54	154Q56H	56C	5.19	3.44	4.19	2.75	2.09	1.38	1.91	3.99	5.38	3.14	5.42	2.71	3.45	3.25
1.54	154Q140H	143/145TC	5.19	3.44	4.19	2.75	2.09	1.38	1.91	3.99	5.38	3.14	5.42	2.71	3.45	3.25
1.75	175Q56H	56C	5.19	3.56	4.19	2.75	2.09	1.38	2.06	4.09	5.75	3.24	5.50	2.75	3.81	3.25
1.75	175Q140H	143/145TC	5.19	3.56	4.19	2.75	2.09	1.38	2.06	4.09	5.75	3.24	5.50	2.75	3.81	3.25
2.06	206Q56H	56C	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.46	6.38	3.61	6.00	3.00	4.34	3.25
2.06	206Q140H	143/145TC	5.80	3.81	5.00	2.88	2.50	1.44	2.28	4.46	6.38	3.61	6.00	3.00	4.34	3.25
2.37	237Q56H	56C	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	6.94	3.77	6.00	3.00	4.88	3.25
2.37	237Q140H	143/145TC	6.12	4.06	5.00	2.88	2.50	1.44	2.50	4.63	6.94	3.77	6.00	3.00	4.88	3.25
2.62	262Q56H	56C	7.38	4.84	6.38	3.38	3.19	1.69	2.94	5.19	8.00	4.34	7.00	3.50	5.57	3.25
2.62	262Q140H	143/145TC	7.38	4.84	6.38	3.38	3.19	1.69	2.94	5.19	8.00	4.34	7.00	3.50	5.57	3.25
2.62	262Q180H	182/184TC	7.38	4.84	6.38	3.38	3.19	1.69	2.94	5.62	8.00	4.34	7.00	3.50	5.57	4.50
3.00	300Q56H	56C	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	8.88	4.84	7.50	3.75	6.25	3.25
3.00	300Q140H	143/145TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	5.95	8.88	4.84	7.50	3.75	6.25	3.25
3.00	300Q180H	182/184TC	8.12	5.25	7.00	4.00	3.50	2.00	3.25	6.15	8.88	4.84	7.50	3.75	6.25	4.50
3.25	325Q56H	56C	8.75	5.75	7.50	4.00	3.75	2.00	3.50	6.14	9.38	5.02	7.88	3.94	6.75	3.25
3.25	325Q140H	143/145TC	8.75	5.75	7.50	4.00	3.75	2.00	3.50	6.14	9.38	5.02	7.88	3.94	6.75	3.25
3.25	325Q180H	182/184TC	8.75	5.75	7.50	4.00	3.75	2.00	3.50	6.34	9.38	5.02	7.88	3.94	6.75	4.50
3.75	375Q56H	56C	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	9.63	4.81	7.63	3.38
3.75	375Q140H	143/145TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	6.01	10.44	5.74	9.63	4.81	7.63	3.38
3.75	375Q180H	182/184TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	9.63	4.81	7.63	4.50
3.75	375Q210H	213/215TC	9.50	6.38	8.50	4.75	4.25	2.38	3.88	7.29	10.44	5.74	9.63	4.81	7.63	4.50
4.50	450Q140H	143/145TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	6.69	11.94	6.42	11.13	5.56	9.00	3.38
4.50	450Q180H	182/184TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	11.13	5.56	9.00	4.50
4.50	450Q210H	213/215TC	10.88	7.38	9.56	5.81	4.78	2.91	4.50	7.97	11.94	6.42	11.13	5.56	9.00	4.50
5.16	516Q180H	182/184TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	11.31	5.66	10.47	4.50
5.16	516Q210H	213/215TC	12.50	7.38	11.00	5.81	5.50	2.91	5.31	8.78	13.75	7.42	11.31	5.66	10.47	4.50
6.00	600Q180H	182/184TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	12.63	6.31	12.50	4.50
6.00	600Q210H	213/215TC	14.50	8.13	12.75	6.38	6.38	3.19	6.50	9.68	16.50	8.25	12.63	6.31	12.50	4.50

C.D .	N.E.M.A. Frame	T		INPUT		OUTPUT BORE +		Stocked Ratios											
		Size	Deep	Bore	Keyway	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	5/16-18	0.50	0.63	0.19	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	5/16-18	0.63	0.63	0.19	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	5/16-18	0.63	0.88	0.19	0.63		x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	5/16-18	0.63	0.63	0.19	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	5/16-18	0.63	0.88	0.19	1.00		x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	5/16-18	0.63	0.63	0.19	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	5/16-18	0.63	0.88	0.19	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	3/8-16	0.69	0.63	0.19	1.50	See Keyway Dimensions on page C-63.	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3/8-16	0.69	0.88	0.19	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	3/8-16	0.69	0.63	0.19	1.94		-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3/8-16	0.69	0.88	0.19	1.94		x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	3/8-16	0.69	1.13	0.25	1.94		x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	7/16-14	0.88	0.63	0.19	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	7/16-14	0.88	0.88	0.19	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	7/16-14	0.88	1.13	0.25	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	7/16-14	0.88	0.63	0.19	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.25	143/145TC	7/16-14	0.88	0.88	0.19	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	7/16-14	0.88	1.13	0.25	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	1/2-13	1.00	0.63	0.19	2.44	5/8 x 3/16	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	1/2-13	1.00	0.88	0.19	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	1/2-13	1.00	1.13	0.25	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	1/2-13	1.00	1.38	0.31	2.44	5/8 x 3/16	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	5/8-11	1.00	0.88	0.19	2.94	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	5/8-11	1.00	1.13	0.25	2.94	3/4 x 1/4	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	5/8-11	1.00	1.38	0.31	2.94	3/4 x 1/4	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	5/8-11	1.00	1.13	0.25	3.44	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	5/8-11	1.00	1.38	0.31	3.44	7/8 x 1/4	-	-	x	x	x	x	x	-	-	-	-	-
6.00	182/184TC	5/8-11	1.00	1.13	0.25	3.94	1 x 1/4	-	-	-	-	x	x	x	x	x	x	-	-
6.00	213/215TC	5/8-11	1.00	1.38	0.31	3.94	1 x 1/4	-	-	-	-	-	x	x	x	x	x	-	-

Dimensions (Inches) for Style "QHT"

Components ◆		G	O
Basic Unit ★	Torque Arm Kit		
133U H	133H-TAK	0.53	4.19
154U H	154H-TAK	0.53	5.97
175U H	175H-TAK	0.53	6.19
206U H	206H-TAK	0.53	7.24
237U H	237H-TAK	0.53	7.69
262U H	262H-TAK	0.53	8.81
300U H	300H-TAK	0.53	10.63
325U H	325H-TAK	0.53	10.88
375U H	375H-TAK	0.53	9.56
450U H	450H-TAK	0.81	10.94
516U H	516H-TAK	0.81	12.45
600U H	600H-TAK	0.81	14.63

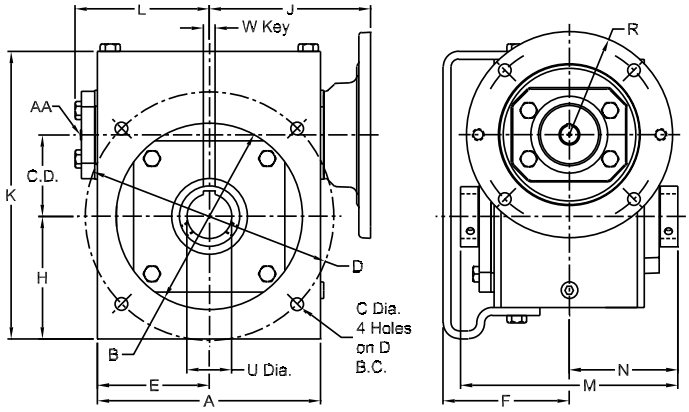
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133Q56H10
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Torque Arm Kits shown on page C-64.

Style QHF

Flange Bracket



Assembly Drawing and Sample of Components

133Q56H10
133H-FK

Dimensions (Inches) for Style "QHF" - With Flange

C.D.	Components ◆			A	B	C	D	E	F	H	J	K	L	M
	Basic Unit ★	NEMA. FrameA	Flange Kit											
1.33	133Q56H	56C	133H-FK	4.25	3.62	0.34	5.00	2.13	3.00	2.42	3.46	5.55	2.61	4.75
1.54	154Q56H	56C	154H-FK	4.75	3.63	0.34	5.00	2.38	3.56	2.54	4.52	6.20	2.75	6.44
1.54	154Q140H	143/145TC	154H-FK	4.75	3.63	0.34	5.00	2.38	3.56	2.54	4.52	6.20	2.75	6.44
1.75	175Q56H	56C	175H-FK	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.09	6.66	3.24	5.50
1.75	175Q140H	143/145TC	175H-FK	4.81	4.06	0.34	5.88	2.41	3.50	2.78	4.09	6.66	3.24	5.50
2.06	206Q56H	56C	206H-FK	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.46	7.47	3.61	6.00
2.06	206Q140H	143/145TC	206H-FK	5.75	4.50	0.41	6.50	2.88	3.75	3.18	4.46	7.47	3.61	6.00
2.37	237Q56H	56C	237H-FK	6.00	5.00	0.41	7.50	3.00	3.72	3.61	4.63	8.30	3.77	6.00
2.37	237Q140H	143/145TC	237H-FK	6.00	5.00	0.41	7.50	3.00	3.72	3.61	4.63	8.30	3.77	6.00
2.62	262Q56H	56C	262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.19	9.25	4.34	7.00
2.62	262Q140H	143/145TC	262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.19	9.25	4.34	7.00
2.62	262Q180H	182/184TC	262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	5.62	9.25	4.34	7.00
3.00	300Q56H	56C	300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	5.67	10.02	4.50	7.50
3.00	300Q140H	143/145TC	300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	5.67	10.02	4.50	7.50
3.00	300Q180H	182/184TC	300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	6.45	10.02	4.50	7.50
3.25	325Q56H	56C	325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.56	10.89	4.50	7.88
3.25	325Q140H	143/145TC	325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	6.56	10.89	4.50	7.88
3.25	325Q180H	182/184TC	325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	7.00	10.89	4.50	7.88
3.75	375Q56H	56C	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	6.01	11.85	4.93	9.63
3.75	375Q140H	143/145TC	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	6.01	11.85	4.93	9.63
3.75	375Q180H	182/184TC	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	7.29	11.85	4.93	9.63
3.75	375Q210H	213/215TC	375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	7.29	11.85	4.93	9.63
4.50	450Q140H	143/145TC	450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	6.69	13.10	6.42	11.13
4.50	450Q180H	182/184TC	450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	7.97	13.10	6.42	11.13
4.50	450Q210H	213/215TC	450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	7.97	13.10	6.42	11.13
5.16	516Q180H	182/184TC	516H-FK	12.50	10.00	0.69	14.00	6.25	6.58	6.57	8.78	15.33	7.42	11.31
5.16	516Q210H	213/215TC	516H-FK	12.50	10.00	0.69	14.00	6.25	6.58	6.57	8.78	15.33	7.42	11.31
6.00	600Q180H	182/184TC	600H-FK	14.50	12.00	0.69	15.56	7.25	7.22	7.85	9.68	18.22	8.25	12.63
6.00	600Q210H	213/215TC	600H-FK	14.50	12.00	0.69	15.56	7.25	7.22	7.85	9.68	18.22	8.25	12.63

C.D.	NEMA Frame	N	R	INPUT		OUTPUT BORE ✚		Stocked Ratios											
				Bore	Keyway	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	2.38	3.25	0.63	3/16 X 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	3.22	3.25	0.63	3/16 X 3/32	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	3.22	3.25	0.88	3/16 X 3/33	1.00		x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	2.75	3.25	0.63	3/16 X 3/32	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	2.75	3.25	0.88	3/16 X 3/32	1.00		x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	3.00	3.25	0.63	3/16 X 3/32	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	3.00	3.25	0.88	3/16 X 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	3.00	3.25	0.63	3/16 X 3/32	1.50	See Keyway Dimensions on page C-63.	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3.00	3.25	0.88	3/16 X 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	3.50	3.25	0.63	3/16 X 3/32	1.50		-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3.50	3.25	0.88	3/16 X 3/32	1.50		x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	4.50	4.50	1.13	1/4 X 1/8	1.50		x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	4.19	3.25	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	4.19	3.25	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	4.19	4.50	1.13	1/4 x 1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	4.25	3.25	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	x	x	x	x	x	x
3.25	143/145TC	4.25	3.25	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	4.25	4.50	1.13	1/4 x 1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	4.81	3.38	0.63	3/16 x 3/32	2.44	5/8 x 3/16	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	4.81	3.38	0.88	3/16 x 3/32	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	4.81	4.50	1.13	1/4 x 1/8	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	4.81	4.50	1.38	5/16 x 5/32	2.44	5/8 x 3/16	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	5.56	3.38	0.88	3/16 x 3/32	2.94	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	5.56	4.50	1.13	1/4 x 1/8	2.94	3/4 x 1/4	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	5.56	4.50	1.38	5/16 x 5/32	2.94	3/4 x 1/4	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	5.56	4.50	1.13	1/4 x 1/8	3.44	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	5.56	4.50	1.38	5/16 x 5/32	3.44	7/8 x 1/4	-	-	x	x	x	x	x	-	-	-	-	-
6.00	182/184TC	6.31	4.50	1.38	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	x	x	x	x	x	x	-	-
6.00	213/215TC	6.31	4.50	1.38	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	-	x	x	x	x	x	-	-

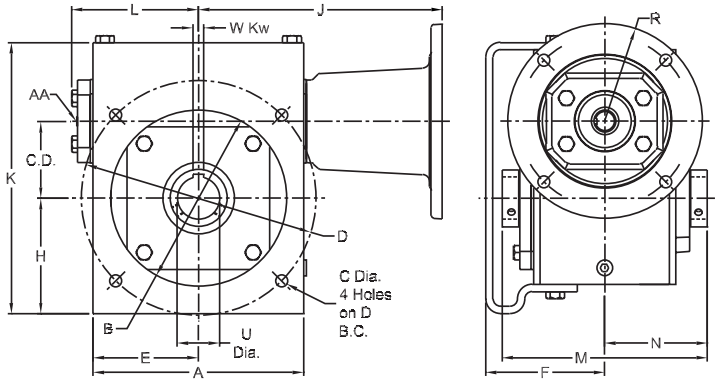
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table at the left. Flange Kits shown on page C-65.

Style CHF

Flange Bracket

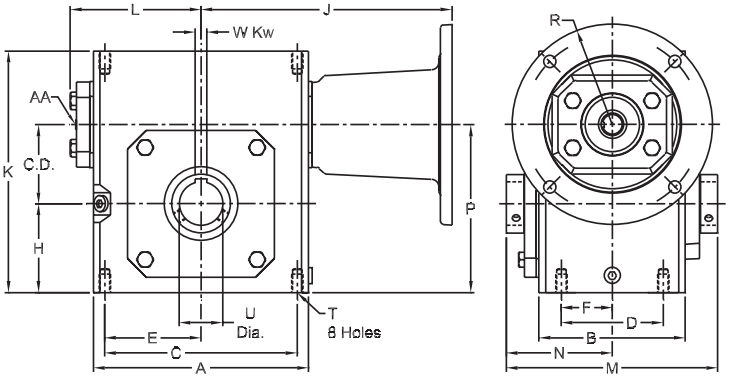


Assembly Drawing and Sample of Components

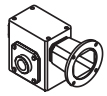
133UH10
133H-FK
133MAK56

Style CH

C-Face Coupled–Hollow



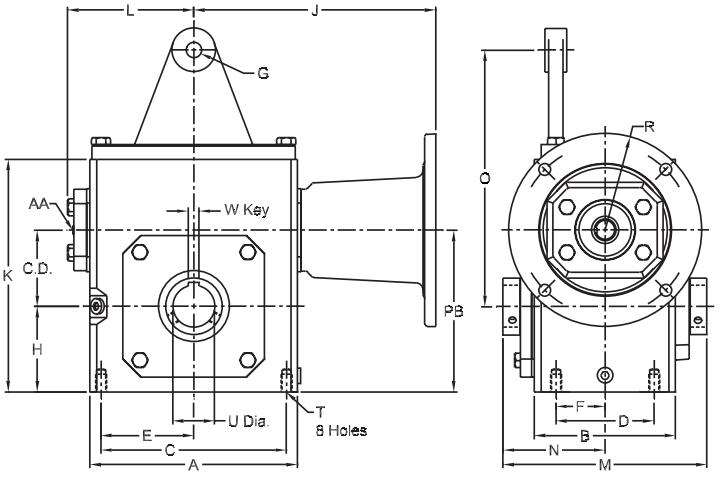
Sample of Components



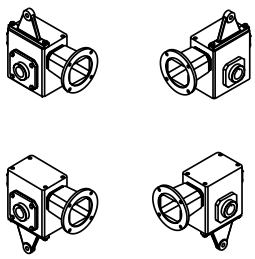
133UH10
133MAK56

Style CHT

Torque Arm



Assembly Drawing and Sample of Components



133UH10
133H-TAK
133MAK56

Dimensions (Inches) for Style "CH"

C.D.	Components ◆		A	B	C	D	E	F	H	K	L	M	N	P	T	
	Basic Unit. ★	Adapter Kit													Size	Deep
1.33	133UH	See Adapter Kit Table Below	3.80	2.82	3.25	2.00	1.63	1.00	1.72	4.66	2.61	4.75	2.38	3.05	5/16-18	0.50
1.54	154UH		5.19	3.44	4.19	2.75	2.09	1.38	1.91	5.38	3.14	5.42	2.71	3.45	5/16-18	0.63
1.75	175UH		5.19	3.56	4.19	2.75	2.09	1.38	2.06	5.75	3.24	5.50	2.75	3.81	5/16-18	0.63
2.06	206UH		5.80	3.81	5.00	2.88	2.50	1.44	2.28	6.38	3.61	6.00	3.00	4.34	5/16-18	0.63
2.37	237UH		6.12	4.06	5.00	2.88	2.50	1.44	2.50	6.94	3.77	6.00	3.00	4.87	3/8-16	0.69
2.62	262UH		7.38	4.84	6.38	3.38	3.19	1.69	2.94	8.00	4.34	7.00	3.50	5.56	3/8-16	0.69
3.00	300UH		8.12	5.25	7.00	4.00	3.50	2.00	3.25	8.88	4.84	7.50	3.75	6.25	7/16-14	0.88
3.25	325UH		8.75	5.75	7.50	4.00	3.75	2.00	3.50	9.38	5.02	7.88	3.94	6.75	7/16-14	0.88
3.75	375UH		9.50	6.38	8.50	4.75	4.25	2.38	3.88	10.44	5.74	9.63	4.81	7.63	1/2-13	1.00
4.50	450UH		10.88	7.38	9.56	5.81	4.78	2.91	4.50	11.94	6.42	11.13	5.56	9.00	5/8-11	1.00
5.16	516UH		12.50	7.38	11.00	5.81	5.50	2.91	5.31	13.75	7.42	11.31	5.66	10.47	5/8-11	1.00
6.00	600UH		14.50	8.13	12.75	6.38	6.38	3.19	6.50	16.50	8.25	12.63	6.31	12.50	5/8-11	1.00

C.D .	OUTPUT BORE ✚		Stock Ratios marked "x "											
	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	0.63	See Keyway Dimensions on page C-63.	x	x	x	x	x	x	x	x	x	x	x	x
1.54	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.75	1.00		x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.62	1.94		x	x	x	x	x	x	x	x	x	x	x	x
3.00	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.25	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.75	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
4.50	2.94	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
5.16	3.44	7/8 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
6.00	3.94	1 x 1/4	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "CHT"

Components ◆			G	O
Basic Unit ★	Adapter Kit	Torque Arm Kit		
133UH	See Adapter Kit Table Below	133H-TAK	0.53	4.19
154UH		154H-TAK	0.53	5.97
175UH		175H-TAK	0.53	6.19
206UH		206H-TAK	0.53	7.24
237UH		237H-TAK	0.53	7.69
262UH		262H-TAK	0.53	8.81
300UH		300H-TAK	0.53	10.63
325UH		325H-TAK	0.53	10.88
375UH		375H-TAK	0.53	9.56
450UH		450H-TAK	0.81	10.94
516UH		516H-TAK	0.81	12.45
600UH		600H-TAK	0.81	14.63

Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

Dimensions (Inches) for Style "CHF" - With Flange

Component ◆			A	B	C	D	E	F	H	K	L	M	N
Basic Unit ★	Adapter Kit	Torque Arm Kit											
133UH	See Adapter Kit Table Below	133H-FK	4.25	3.62	0.34	5.00	2.13	3.00	2.42	5.55	2.61	4.75	2.38
154UH		154H-FK	4.75	3.63	0.34	5.00	2.38	3.56	2.54	6.20	2.75	5.42	2.71
175UH		175H-FK	4.81	4.06	0.34	5.88	2.41	3.50	2.78	6.66	3.24	5.50	2.75
206UH		206H-FK	5.75	4.50	0.41	6.50	2.88	3.75	3.18	7.47	3.61	6.00	3.00
237UH		237H-FK	6.00	5.00	0.41	7.50	3.00	3.72	3.61	8.30	3.77	6.00	3.00
262UH		262H-FK	7.18	6.00	0.41	8.00	3.59	4.06	3.94	9.25	4.34	7.00	3.50
300UH		300H-FK	8.50	7.00	0.41	9.00	4.25	4.50	4.14	10.02	4.50	7.50	3.75
325UH		325H-FK	8.50	7.00	0.56	10.00	4.25	5.25	4.75	10.89	4.50	7.88	3.94
375UH		375H-FK	9.54	8.00	0.56	11.50	4.77	5.46	5.04	11.85	5.74	9.63	4.81
450UH		450H-FK	10.88	9.00	0.56	11.50	5.44	6.88	5.34	13.10	6.42	11.13	5.56
516UH		516H-FK	12.50	10.00	0.69	14.00	6.25	6.58	6.57	15.33	7.42	11.31	5.66
600UH		600H-FK	14.50	12.00	0.69	15.56	7.25	7.22	7.85	18.22	8.25	12.63	6.31

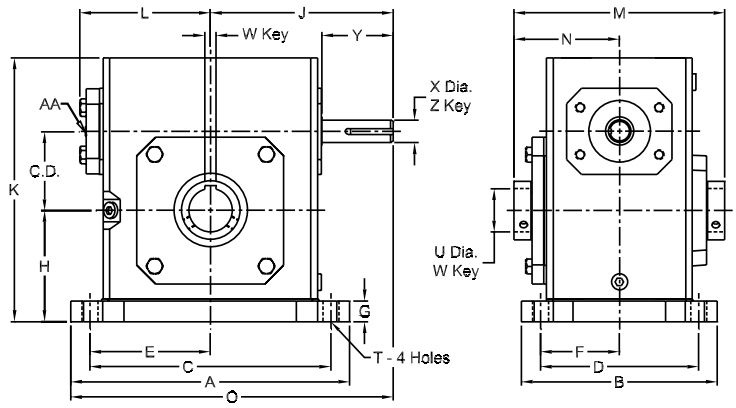
N.E.M.A. Frame Adapter Kits and Dimensions

C.D .	56C Input: .625 Kw.: 3/16 x 3/32			143/145TC Input: .875 Kw.: 3/16 x 3/32			182/184TC Input: 1.125 KW.: 1/4 x 1/8			213/215TC Input: 1.375 Kw.: 5/16 x 5/32			254/256TC Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No .	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

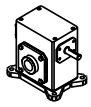
✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
Motor Adapter Kits Shown on page C-64.
Torque Arm Kits shown on page C-64.
Flange Kits shown on page C-65.

Style UHMT

Worm Top



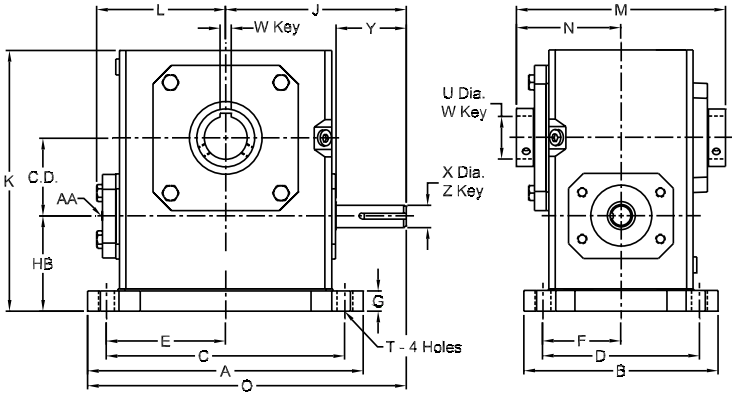
Sample of Components



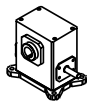
133UH10
133S-BK

Style UHMB

Worm Bottom



Sample of Components



133UH10
133S-BK

Dimensions (Inches) for Style "UHMT" - With Base - Worm Top

C.D.	Components ◆		A	B	C	D	E	F	G	H	J	K	L	M	N
	Basic Unit. ★	Base Kits Standard ▲													
1.33	133UH	133S-BK	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	3.82	5.19	2.61	4.75	2.38
1.54	154UH	154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	4.35	5.97	3.14	5.42	2.71
1.75	175UH	175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	4.45	6.44	3.24	5.50	2.75
2.06	206UH	206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	4.82	7.09	3.61	6.00	3.00
2.37	237UH	237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	5.51	7.69	3.77	6.00	3.00
2.62	262UH	262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	6.07	8.75	4.34	7.00	3.50
3.00	300UH	300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	6.57	9.63	4.84	7.50	3.75
3.25	325UH	325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	6.76	10.25	5.02	7.88	3.94
3.75	375UH	375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	8.38	11.38	5.74	9.63	4.81
4.50	450UH	450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.69	9.59	13.06	6.42	11.13	5.56
5.16	516UH	516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	10.69	14.88	7.42	11.31	5.66
6.00	600UH	600S-BK	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	11.75	17.75	8.25	12.63	6.31

C.D.	O	T		OUTPUT BORE ✚		INPUT SHAFT				Stock Ratios marked "x "											
						X	Y	Z Key													
		Size	Deep	U	W Keyway			Sq.	Lgth	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	6.51	5/16 - 18	0.50	0.63	See Keyway Dimensions on page C-63.	0.50	1.76	0.13	1.00	x	x	x	x	x	x	x	x	x	x	x	x
1.54	7.60	5/16 - 18	0.63	0.63		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
1.75	7.95	5/16 - 18	0.63	1.00		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.06	8.67	5/16 - 18	0.63	1.50		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.37	9.70	3/8 - 16	0.69	1.50		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
2.62	10.70	3/8 - 16	0.69	1.84		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.00	11.57	7/16 - 14	0.88	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.25	12.32	7/16 - 14	0.88	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.75	14.38	1/2 - 13	1.00	2.44	5/8 x 3/16	1.00	2.91	0.25	1.75	-	-	x	x	x	x	x	x	x	x	-	-
4.50	16.53	5/8 - 11	1.00	2.94	3/4 x 1/4	1.13	3.48	0.25	2.50	-	-	x	x	x	x	x	x	x	x	-	-
5.16	18.88	5/8 - 11	1.00	3.44	7/8 x 1/4	1.25	3.75	0.25	2.56	-	-	x	x	x	x	x	x	x	x	-	-
6.00	21.25	5/8 - 11	1.00	3.94	1 x 1/4	1.50	3.75	0.38	2.94	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "UHMB"

Components ◆		HB
Basic Unit. ★	Base Kits Standard ▲	
133UH	133S-BK	2.14
154UH	154S-BK	2.52
175UH	175S-BK	2.63
206UH	206S-BK	2.75
237UH	237S-BK	2.81
262UH	262S-BK	3.19
300UH	300S-BK	3.38
325UH	325S-BK	3.50
375UH	375S-BK	3.75
450UH	450S-BK	4.06
516UH	516S-BK	4.40
600UH	600S-BK	5.25

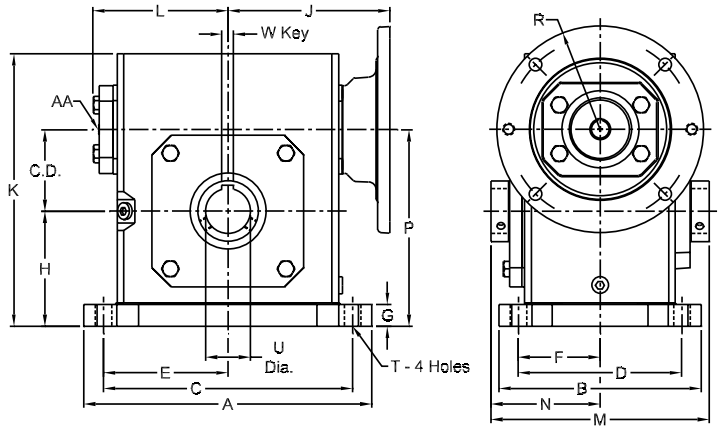
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

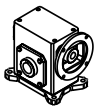
★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65.
✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.

Style QHMT

Worm Top



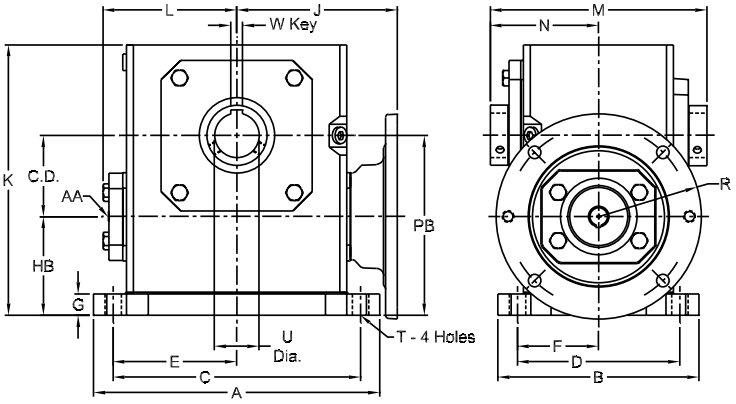
Sample of Components



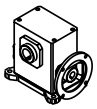
133Q56H10
133S-BK

Style QHMB

Worm Bottom

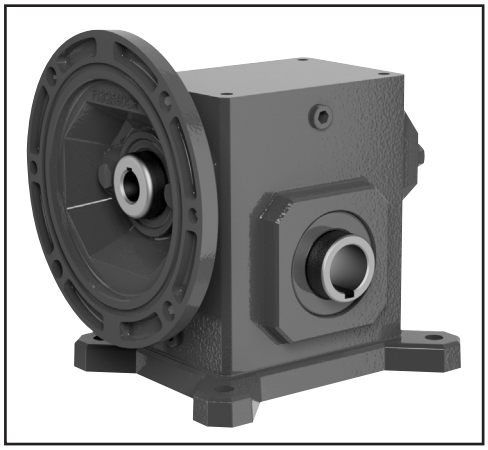


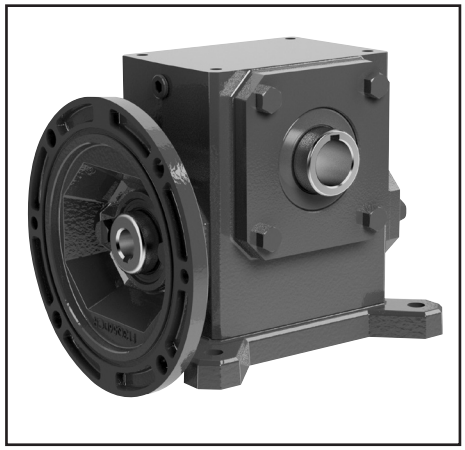
Sample of Components



133Q56H10
133S-BK

Note: When mounting Style "QHMB", interference may occur; use a Riser Block or consult Application Engineering (1 800 626 2093).





Dimensions (Inches) for Style "QHMT" With Base - Worm Top

C.D.	Components ◆		N.E.M.A Frame	A	B	C	D	E	F	G	H	J	K	L	M	N
	Basic Unit ★	Standard Base Kit ▲														
1.33	133Q56H	133S-BK	56C	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	3.46	5.19	2.61	4.75	2.38
1.54	154Q56H	154S-BK	56C	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	3.99	5.97	3.14	5.42	2.71
1.54	154Q140H	154S-BK	143/145TC	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	3.99	5.97	3.14	5.42	2.71
1.75	175Q56H	175S-BK	56C	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	4.09	6.44	3.24	5.50	2.75
1.75	175Q140H	175S-BK	143/145TC	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	4.09	6.44	3.24	5.50	2.75
2.06	206Q56H	206S-BK	56C	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	4.46	7.09	3.61	6.00	3.00
2.06	206Q140H	206S-BK	143/145TC	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	4.46	7.09	3.61	6.00	3.00
2.37	237Q56H	237S-BK	56C	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	4.63	7.69	3.77	6.00	3.00
2.37	237Q140H	237S-BK	143/145TC	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	4.63	7.69	3.77	6.00	3.00
2.62	262Q56H	262S-BK	56C	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	5.19	8.75	4.34	7.00	3.50
2.62	262Q140H	262S-BK	143/145TC	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	5.19	8.75	4.34	7.00	3.50
2.62	262Q180H	262S-BK	182/184TC	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	5.62	8.75	4.34	7.00	3.50
3.00	300Q56H	300S-BK	56C	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	5.95	9.63	4.84	7.50	3.75
3.00	300Q140H	300S-BK	143/145TC	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	5.95	9.63	4.84	7.50	3.75
3.00	300Q180H	300S-BK	182/184TC	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	6.15	9.63	4.84	7.50	3.75
3.25	325Q56H	325S-BK	56C	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	6.14	10.25	5.02	7.88	3.94
3.25	325Q140H	325S-BK	143/145TC	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	6.14	10.25	5.02	7.88	3.94
3.25	325Q180H	325S-BK	182/184TC	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	6.34	10.25	5.02	7.88	3.94
3.75	375Q56H	375S-BK	56C	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	6.01	11.38	5.74	9.63	4.81
3.75	375Q140H	375S-BK	143/145TC	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	6.01	11.38	5.74	9.63	4.81
3.75	375Q180H	375S-BK	182/184TC	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	7.29	11.38	5.74	9.63	4.81
3.75	375Q210H	375S-BK	213/215TC	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	7.29	11.38	5.74	9.63	4.81
4.50	450Q140H	450S-BK	143/145TC	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.69	6.69	13.06	6.42	11.13	5.56
4.50	450Q180H	450S-BK	182/184TC	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.69	7.97	13.06	6.42	11.13	5.56
4.50	450Q210H	450S-BK	213/215TC	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.69	7.97	13.06	6.42	11.13	5.56
5.16	516Q180H	516S-BK	182/184TC	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	8.78	14.88	7.42	11.31	5.66
5.16	516Q210H	516S-BK	213/215TC	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	8.78	14.88	7.42	11.31	5.66
6.00	600Q180H	600S-BK	182/184TC	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	9.68	17.75	8.25	12.63	6.31
6.00	600Q210H	600S-BK	213/215TC	19.00	12.00	16.50	9.50	8.25	4.75	1.25	7.75	9.68	17.75	8.25	12.63	6.31

C.D.	NEMA Frame	P	R	T	Input		Output Bore ✚		Stock Ratios marked "x "												
					Bore	Keyway	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	3.58	3.25	0.34	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	4.04	3.25	0.41	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	4.04	3.25	0.41	0.88	3/16 x 3/32	0.63		x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	4.50	3.25	0.41	0.63	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	4.50	3.25	0.41	0.88	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	5.06	3.25	0.47	0.63	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	5.06	3.25	0.47	0.88	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	5.63	3.25	0.49	0.63	3/16 x 3/32	1.50	See Keyway Dimensions on page C-63.	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	5.63	3.25	0.49	0.88	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	6.32	3.25	0.53	0.63	3/16 x 3/32	1.94		-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	6.32	3.25	0.53	0.88	3/16 x 3/32	1.94		x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	6.32	4.50	0.53	1.13	1/4 x 1/8	1.94		x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	7.00	3.25	0.53	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	7.00	3.25	0.53	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	7.00	4.50	0.53	1.13	1/4 x 1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	7.63	3.25	0.53	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.25	143/145TC	7.63	3.25	0.53	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	7.63	4.50	0.53	1.13	1/4 x 1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	8.56	3.38	0.59	0.63	3/16 x 3/32	2.44	5/8 x 3/16	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	8.56	3.38	0.59	0.88	3/16 x 3/32	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	8.56	4.50	0.59	1.13	1/4 x 1/8	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	8.56	4.50	0.59	1.38	5/16 x 5/32	2.44	5/8 x 3/16	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	10.19	3.38	0.66	0.88	3/16 x 3/32	2.94	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	10.19	4.50	0.66	1.13	1/4 x 1/8	2.94	3/4 x 1/4	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	10.19	4.50	0.66	1.38	5/16 x 5/32	2.94	3/4 x 1/4	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	11.60	4.50	0.78	1.13	1/4 x 1/8	3.44	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	11.60	4.50	0.78	1.38	5/16 x 5/32	3.44	7/8 x 1/4	-	-	x	x	x	x	x	-	-	-	-	-
6.00	182/184TC	13.75	4.50	0.91	1.13	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	x	x	x	x	x	x	-	-
6.00	213/215TC	13.75	4.50	0.91	1.38	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	-	x	x	x	x	x	-	-

Dimensions (Inches) for Style "QHMB"

Components ◆		HB	PB
Basic Unit ★	Base Kits Standard▲		
133QH	133S-BK	2.14	3.47
154QH	154S-BK	2.52	4.06
175QH	175S-BK	2.63	4.38
206QH	206S-BK	2.75	4.82
237QH	237S-BK	2.81	5.18
262QH	262S-BK	3.19	5.80
300QH	300S-BK	3.38	6.38
325QH	325S-BK	3.50	6.69
375QH	375S-BK	3.75	7.50
450QH	450S-BK	4.06	8.63
516QH	516S-BK	4.40	9.57
600QH	600S-BK	5.25	11.25

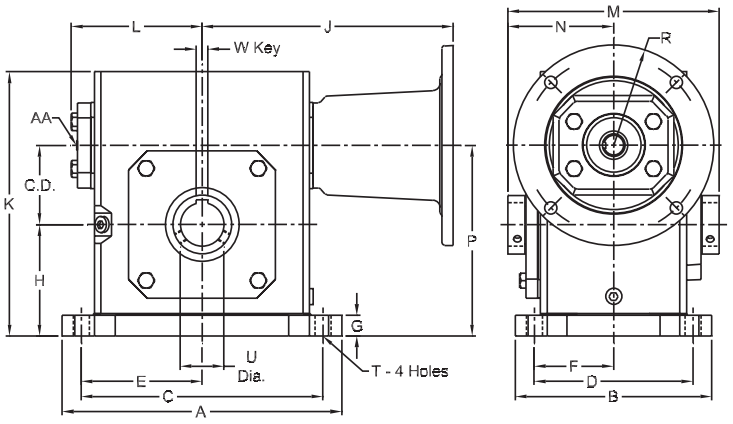
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

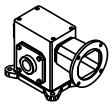
★ To complete Part No. add shaft assembly (L,R, LR) and ratio symbol to size - for example 133Q56LR10
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65. Consult factory for ratios not shown as standard.
✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.

Style CHMT

Worm Top



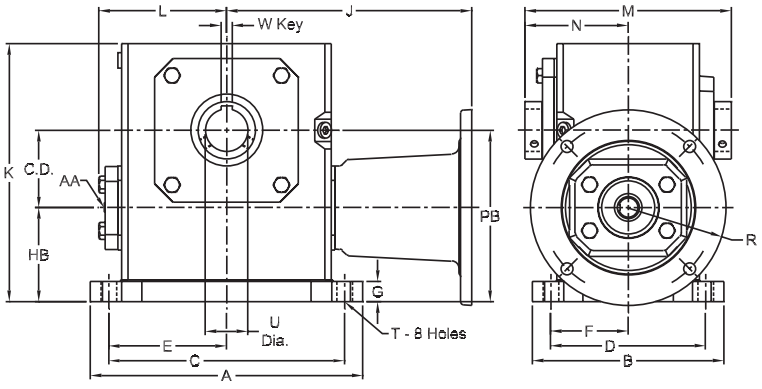
Sample of Components



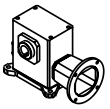
133UH10
133S-BK
133MAK56

Style CHMB

Worm Bottom

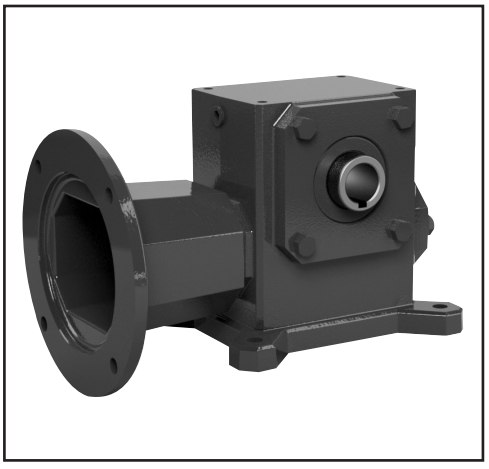


Sample of Components



133UH10
133S-BK
133MAK56

Note: When mounting Style "CHMB", interference may occur; use a Riser Block or consult Application Engineering (1 800 626 2093).



Dimensions (Inches) for Style "CHMT" - With Base - Worm Top

C.D.	Components ◆			A	B	C	D	E	F	G	H	K	L	M	N
	Basic Unit ★	Adapter	Base Kit Standard												
1.33	133UH	See Adapter Kit Table Below	133S-B K	5.37	5.38	4.37	3.31	2.19	1.66	0.53	2.25	5.19	2.61	4.75	2.38
1.54	154UH		154S-BK	6.50	5.56	5.25	4.31	2.63	2.16	0.59	2.50	5.97	3.14	5.42	2.71
1.75	175UH		175S-BK	6.99	5.75	5.75	4.50	2.88	2.25	0.69	2.75	6.44	3.24	5.50	2.75
2.06	206UH		206S-BK	7.69	6.00	6.38	4.69	3.19	2.34	0.72	3.00	7.09	3.61	6.00	3.00
2.37	237UH		237S-BK	8.37	6.19	7.06	4.88	3.53	2.44	0.75	3.25	7.69	3.77	6.00	3.00
2.62	262UH		262S-BK	9.25	6.50	8.00	5.25	4.00	2.63	0.75	3.69	8.75	4.34	7.00	3.50
3	300UH		300S-BK	10.00	7.50	8.44	5.88	4.22	2.94	0.75	4.00	9.63	4.84	7.50	3.75
3.25	325UH		325S-BK	11.12	7.75	9.50	6.13	4.75	3.06	0.81	4.38	10.25	5.02	7.88	3.94
3.75	375UH		375S-BK	12.00	8.63	10.38	7.00	5.19	3.50	0.94	4.81	11.38	5.74	9.63	4.81
4.5	450UH		450S-BK	13.88	9.31	12.13	7.63	6.06	3.81	1.13	5.69	13.06	6.42	11.13	5.56
5.16	516UH		516S-BK	16.38	10.38	14.13	8.38	7.06	4.19	1.13	6.44	14.88	7.42	11.31	5.66
6	600UH		600S-BK	19.00	12.00	16.50	9.50	8.52	4.75	1.25	7.75	17.75	8.25	12.63	6.31

CD	P	T	OUTPUT BORE ✚		Stocked Ratios											
			U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	3.58	0.34	0.63	See Keyway Dimensions on page C-63.	x	x	x	x	x	x	x	x	x	x	x	x
1.54	4.04	0.41	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.75	4.50	0.41	1.00		x	x	x	x	x	x	x	x	x	x	x	x
2.06	5.06	0.47	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.37	5.63	0.49	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.62	6.32	0.53	1.94		x	x	x	x	x	x	x	x	x	x	x	x
3.00	7.00	0.53	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.25	7.63	0.53	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.75	8.56	0.59	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
4.50	10.19	0.66	2.94	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
5.16	11.60	0.78	3.44	7/8 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
6.00	13.75	0.91	3.94	1 x 1/4	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "CHMB"

Components ◆			HB	PB
Basic Unit ★	Adapter Kit	Base Kit▲ Standard		
133UH	See Adapter Kit Table Below	133S-BK	2.14	3.47
154UH		154S-BK	2.52	4.06
175UH		175S-BK	2.63	4.38
206UH		206S-BK	2.75	4.81
237UH		237S-BK	2.81	5.19
262UH		262S-BK	3.19	5.82
300UH		300S-BK	3.38	6.38
325UH		325S-BK	3.50	6.75
375UH		375S-BK	3.75	7.50
450UH		450S-BK	4.06	8.63
516UH		516S-BK	4.40	9.56
600UH		600S-BK	5.25	11.25

Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375U	375 FAN	3/8-24	3/4	7.66	2.8
450U	450 FAN	3/8-24	3/4	8.36	2.8
516U	516 FAN	3/8-24	3/4	9.18	2.8
600U	600 FAN	3/8-24	3/4	10.70	4.2

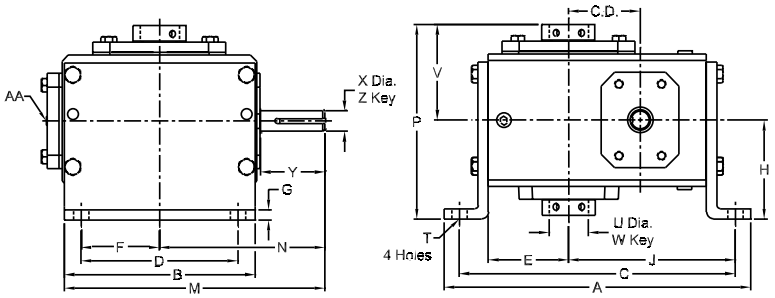
N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C Input: .625 Kw.: 3/16 x 3/32			143/145TC Input: .875 Kw.: 3/16 x 3/32			182/184TC Input: 1.125 KW.: 1/4 x 1/8			213/215TC Input: 1.375 Kw.: 5/16 x 5/32			254/256TC Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

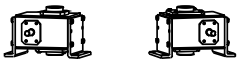
★ To complete Part No. ratio symbol to size - for example 133UH10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
▲ Standard Base Kit (S-BK) base kits are shown on page C-65.
✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
Motor Adapter Kits Shown on page C-64.

Style UHVL

Vertical Low Base



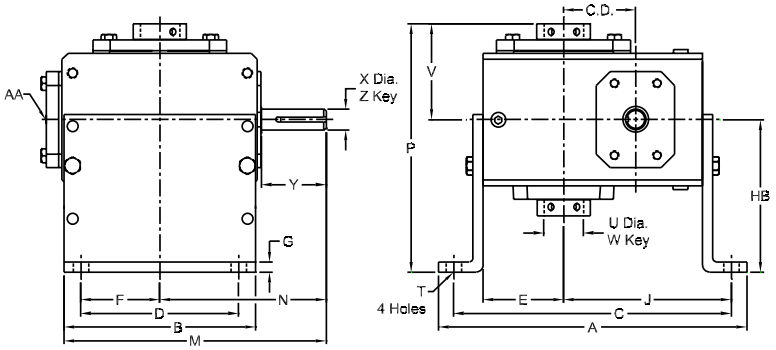
Assembly Drawing and Sample of Components



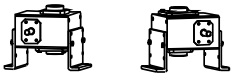
133UH10
133VL-BK

Style UHVH

Vertical High Base



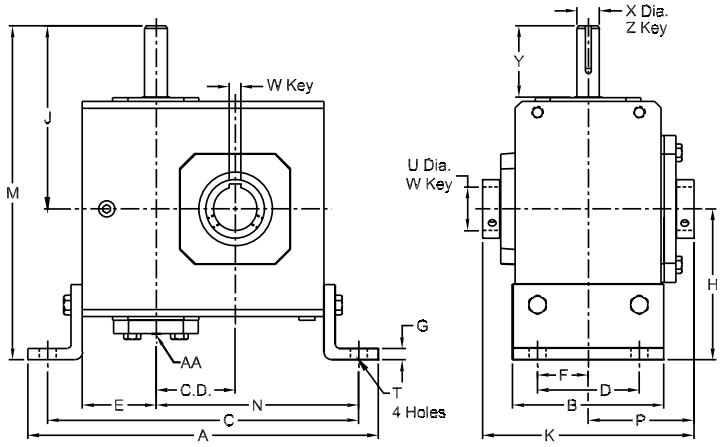
Assembly Drawing and Sample of Components



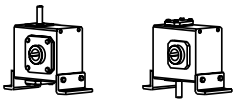
133UH10
133VH-BK

Style UHVJ

Vertical "J" Base



Assembly Drawing and Sample of Components



133UH10
133VJ-BK

Note: If mounting a fan unit, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "UHVL" - With Vertical Low Base

C.D.	Components ◆		A	B	C	D	E	F	G	H	J	M	N	P	T	V
	Basic Unit ★	Base Kit														
1.33	133UH	133VL-BK	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	3.86	5.76	3.82	4.75	0.38	2.38
1.54	154UH	154VL-BK	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	4.28	6.76	4.35	5.42	0.44	2.71
1.75	175UH	175VL-BK	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.50	6.76	4.45	5.50	0.44	2.75
2.06	206UH	206VL-BK	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	5.09	7.76	4.82	6.00	0.50	3.00
2.37	237UH	237VL-BK	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	5.44	8.38	5.51	6.00	0.50	3.00
2.62	262UH	262VL-BK	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	6.12	9.38	6.07	7.00	0.56	3.50
3.00	300UH	300VL-BK	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	6.75	10.38	6.57	7.50	0.56	3.75
3.25	325UH	325VL-BK	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	7.13	10.88	6.76	7.88	0.56	3.94
3.75	375UH	375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	8.31	13.13	8.38	9.63	0.59	4.81
4.50	450UH	450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	8.94	15.09	9.59	11.13	0.69	5.56
5.16	516UH	516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	16.93	10.69	11.31	0.78	5.66
6.00	600UH	600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	19.13	11.75	12.63	0.91	6.31

C.D.	OUTPUT BORE ✚		INPUT SHAFT				Stock Ratios marked "x "											
	U	W Keyway	X	Y	ZKey		5	7.5	10	15	20	25	30	40	50	60	80	100
					Sq.	Lgth.												
1.33	0.63	See Keyway Dimensions on page C-63.	0.50	1.76	0.13	1.00	x	x	x	x	x	x	x	x	x	x	x	x
1.54	0.63		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
1.75	1.00		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.50		0.63	1.76	0.19	1.38	x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.50		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
2.62	1.94		0.75	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.00	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.25	2.19		0.88	2.38	0.19	1.63	x	x	x	x	x	x	x	x	x	x	x	x
3.75	2.44	5/8 x 3/16	1.00	2.91	0.25	1.75	-	-	x	x	x	x	x	x	x	x	-	-
4.50	2.94	3/4 x 1/4	1.13	3.48	0.25	2.50	-	-	x	x	x	x	x	x	x	x	-	-
5.16	3.44	7/8 x 1/4	1.25	3.75	0.25	2.56	-	-	x	x	x	x	x	x	x	x	-	-
6.00	3.94	1 x 1/4	1.50	3.75	0.38	2.94	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "UHVH"

Components ◆		HB
Basic Unit ★	Base Kit	
133UH	133VH-BK	3.56
154UH	154VH-BK	4.38
175UH	175VH-BK	4.38
206UH	206VH-BK	4.88
237UH	237VH-BK	5.25
262UH	262VH-BK	5.56
300UH	300VH-BK	5.88
325UH	325VH-BK	6.25
375UH	375VH-BK	7.00
450UH	450VH-BK	8.56
516UH	516VH-BK	8.63
600UH	600VH-BK	9.63

Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

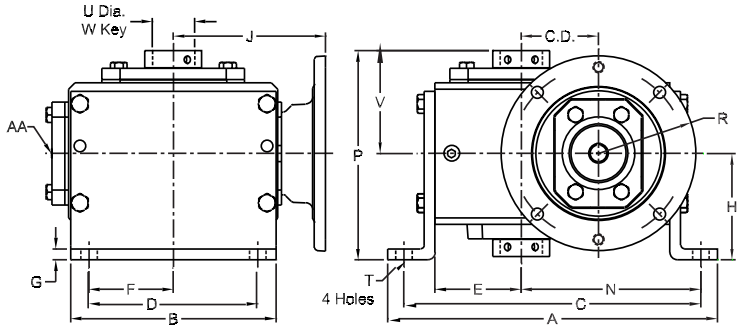
Dimensions (Inches) for Style "UHVJ" - With Vertical "J" Base

Components ◆		A	B	C	D	E	F	G	H	J	K	M	N	P	T
Base Unit ★	Base Kit														
133U	133VJ-BK	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	3.82	4.75	6.76	3.93	2.38	0.38
154U	154VJ-BK	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	4.35	5.42	7.85	4.30	2.71	0.44
175U	175VJ-BK	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.45	5.50	7.95	4.75	2.75	.44 slot
206U	206VJ-BK	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.82	6.00	8.83	5.46	3.00	.56 slot
237U	237VJ-BK	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	5.51	6.00	9.57	6.01	3.00	0.69
262U	262VJ-BK	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	6.07	7.00	11.07	6.76	3.50	0.56
300U	300VJ-BK	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	6.57	7.50	12.19	7.50	3.75	0.56
325U	325VJ-BK	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.76	7.88	12.39	8.00	3.94	0.56
375U	375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	8.38	9.63	14.38	9.06	4.81	0.59
450U	450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	9.59	11.13	16.96	10.50	5.56	0.69
516U	516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	10.69	11.31	18.44	12.35	5.66	0.78

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133UH10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
133-325 Vertical High and Low Base Kits shown on page C-65.
133-325 Vertical J Base Kits shown on page C-66.
375-600 Vertical High and Low Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.

Style QHVL

Vertical Low Base

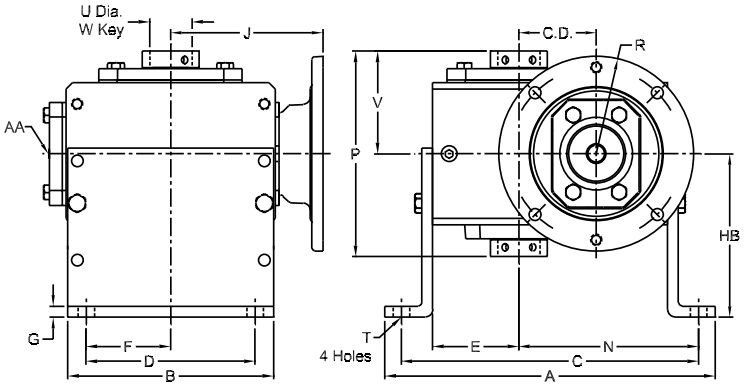


Assembly Drawing and Sample of Components

133Q56H10
133VL-BK

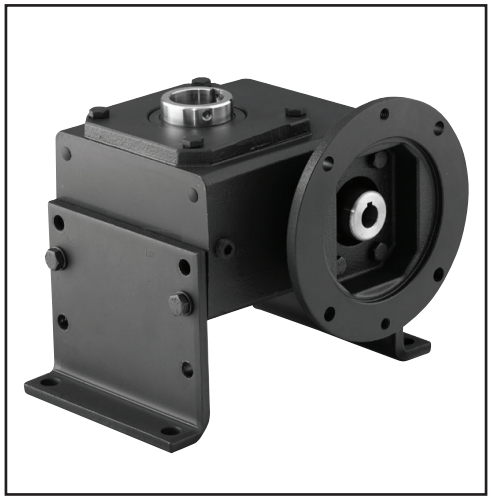
Style QHVH

Vertical High Base



Assembly Drawing and Sample of Components

133Q56H10
133VH-BK



Dimensions (Inches) for Style "QHVL" - With Vertical Low Base

C.D .	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	N	P	R
	Part No. ★	Base Kit													
1.33	133QH56	133VL-BK	56C	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	3.46	3.86	4.75	3.25
1.54	154QH56	154VL-BK	56C	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	3.99	4.28	5.42	3.25
1.54	154QH140	154VL-BK	143/145TC	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	3.99	4.28	5.42	3.25
1.75	175QH56	175VL-BK	56C	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.09	4.50	5.50	3.25
1.75	175QH140	175VL-BK	143/145TC	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.09	4.50	5.50	3.25
2.06	206QH56	206VL-BK	56C	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	4.46	5.09	6.00	3.25
2.06	206QH140	206VL-BK	143/145TC	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	4.46	5.09	6.00	3.25
2.37	237QH56	237VL-BK	56C	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	4.63	5.44	6.00	3.25
2.37	237QH140	237VL-BK	143/145TC	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	4.63	5.44	6.00	3.25
2.62	262QH56	262VL-BK	56C	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.19	6.12	7.00	3.25
2.62	262QH140	262VL-BK	143/145TC	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.19	6.12	7.00	3.25
2.62	262QH180	262VL-BK	182/184TC	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	5.62	6.12	7.00	4.25
3.00	300QH56	300VL-BK	56C	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	5.95	6.75	7.50	3.25
3.00	300QH140	300VL-BK	143/145TC	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	5.95	6.75	7.50	3.25
3.00	300QH180	300VL-BK	182/184TC	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	6.15	6.75	7.50	4.25
3.25	325QH56	325VL-BK	56C	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.14	7.13	7.88	3.25
3.25	325QH140	325VL-BK	143/145TC	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.14	7.13	7.88	3.25
3.25	325QH180	325VL-BK	182/184TC	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	6.34	7.13	7.88	4.25
3.75	375QH56	375VL-BK	56C	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	6.01	8.31	9.63	3.38
3.75	375QH140	375VL-BK	143/145TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	6.01	8.31	9.63	3.38
3.75	375QH180	375VL-BK	182/184TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	7.29	8.31	9.63	4.50
3.70	375QH210	375VL-BK	213/215TC	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	7.29	8.31	9.63	4.50
4.50	450QH140	450VL-BK	143/145TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	6.69	8.94	11.13	3.38
4.50	450QH180	450VL-BK	182/184TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	7.97	8.94	11.13	4.50
4.50	450QH210	450VL-BK	213/215TC	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	7.97	8.94	11.13	4.50
5.16	516QH180	516VL-BK	182/184TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	10.56	11.31	4.50
5.16	516QH210	516VL-BK	213/215TC	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	8.78	10.56	11.31	4.50
6.00	600QH180	600VL-BK	182/184TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.19	12.63	4.50
6.00	600QH210	600VL-BK	213/215TC	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	9.68	12.19	12.63	4.50

CD	NEMA Frame	T	V	INPUT		OUTPUT ✚		Stock Ratios marked "x "											
				Bore	Keyway	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	0.38	2.38	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	0.44	2.71	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	0.44	2.71	0.88	3/16 x 3/32	0.63		x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	0.44	2.75	0.63	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	0.44	2.75	0.88	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	0.50	3.00	0.63	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	0.50	3.00	0.88	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	0.50	3.00	0.63	3/16 x 3/32	1.50	See Keyway	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	0.50	3.00	0.88	3/16 x 3/32	1.50	Dimensions	x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	0.56	3.50	0.63	3/16 x 3/32	1.94	on page	-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	0.56	3.50	0.88	3/16 x 3/32	1.94	C-63.	x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	0.56	3.50	1.13	1/4X1/8	1.94		x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	0.56	3.75	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	0.56	3.75	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	0.56	3.75	1.13	1/4X1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	0.56	3.94	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.25	143/145TC	0.56	3.94	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	0.56	3.94	1.13	1/4X1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	0.59	4.81	0.63	3/16 x 3/32	2.44	5/8 x 3/16	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	0.59	4.81	0.88	3/16 x 3/32	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	0.59	4.81	1.13	1/4X1/8	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	0.59	4.81	1.38	5/16 x 5/32	2.44	5/8 x 3/16	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	0.69	5.56	0.88	3/16 x 3/32	2.94	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	0.69	5.56	1.13	1/4X1/8	2.94	3/4 x 1/4	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	0.69	5.56	1.38	5/16 x 5/32	2.94	3/4 x 1/4	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	0.78	5.66	1.13	1/4X1/8	3.44	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	0.78	5.66	1.38	5/16 x 5/32	3.44	7/8 x 1/4	-	-	x	x	x	x	x	-	-	-	-	-
6.00	182/184TC	0.91	6.31	1.13	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	x	x	x	x	x	x	-	-
6.00	213/215TC	0.91	6.31	1.38	5/16 x 5/32	3.94	1 x 1/4	-	-	-	-	-	x	x	x	x	x	-	-

Dimensions (Inches) for Style "QHVH" - With Vertical High Base

C.D .	Part No. ★	Base Kit	Frame	HB	C.D .	Part No. ★	Base Kit	Frame	HB
1.33	133Q56H	133VH-BK	56C	3.56	3.25	325Q56H	325VH-BK	56C	6.25
1.54	154Q56H	154VH-BK	56C	4.38	3.25	325Q140H	325VH-BK	143/145TC	6.25
1.54	154Q140H	154VH-BK	143/145TC	4.38	3.25	325Q180H	325VH-BK	182/184TC	6.25
1.75	175Q56H	175VH-BK	56C	4.38	3.75	375Q56H	375VH-BK	56C	7.00
1.75	175Q140H	175VH-BK	143/145TC	4.38	3.75	375Q140H	375VH-BK	143/145TC	7.00
2.06	206Q56H	206VH-BK	56C	4.88	3.75	375Q180H	375VH-BK	182/184TC	7.00
2.06	206Q140H	206VH-BK	143/145TC	4.88	3.70	375Q210H	375VH-BK	213/215TC	7.00
2.37	237Q56H	237VH-BK	56C	5.25	4.50	450Q140H	450VH-BK	143/145TC	8.56
2.37	237Q140H	237VH-BK	143/145TC	5.25	4.50	450Q180H	450VH-BK	182/184TC	8.56
2.62	262Q56H	262VH-BK	56C	5.56	4.50	450Q210H	450VH-BK	213/215TC	8.56
2.62	262Q140H	262VH-BK	143/145TC	5.56	5.16	516Q180H	516VH-BK	182/184TC	8.63
2.62	262Q180H	262VH-BK	182/184TC	5.56	5.16	516Q210H	516VH-BK	213/215TC	8.63
3.00	300Q56H	300VH-BK	56C	5.88	6.00	600Q180H	600VH-BK	182/184TC	9.63
3.00	300Q140H	300VH-BK	143/145TC	5.88	6.00	600Q210H	600VH-BK	213/215TC	9.63
3.00	300Q180H	300VH-BK	182/184TC	5.88					

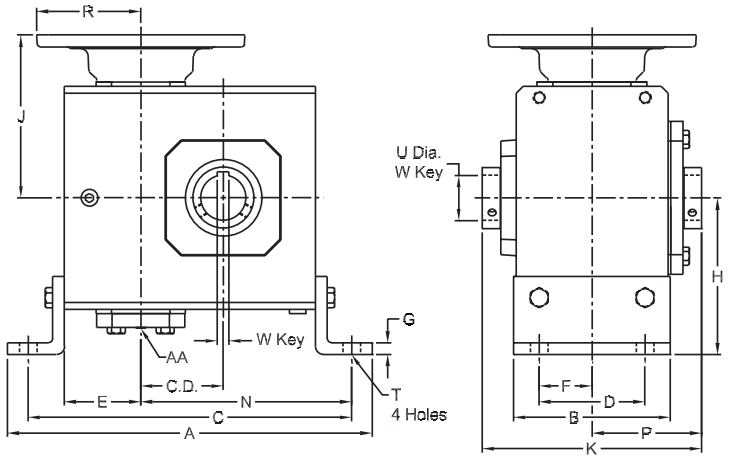
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

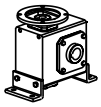
✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
133-325 Vertical High and Low Base Kits shown on page C-65.
375-606 Vertical High and Low Base Kits shown on page C-66.

Style QHVJ

Vertical "J" Base



Sample of Components



133Q56H10
133VJ-BK

Note: If mounting fan unit, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "QHVJ" - With Vertical "J" Base

C.D .	Components ◆		N.E.M.A. Frame	A	B	C	D	E	F	G	H	J	K	N	P
	Part No. ★	Flange Kit													
1.33	133Q56H	133VJ-BK	56C	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	3.46	4.75	3.93	2.38
1.54	154Q56H	154VJ-BK	56C	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	3.99	5.42	4.30	2.71
1.54	154Q140H	154VJ-BK	143/145TC	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	3.99	5.42	4.30	2.71
1.75	175Q56H	175VJ-BK	56C	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.09	5.50	4.75	2.75
1.75	175Q140H	175VJ-BK	143/145TC	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	4.09	5.50	4.75	2.75
2.06	206Q56H	206VJ-BK	56C	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.46	6.00	5.46	3.00
2.06	206Q140H	206VJ-BK	143/145TC	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	4.46	6.00	5.46	3.00
2.37	237Q56H	237VJ-BK	56C	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	4.63	6.00	6.01	3.00
2.37	237Q140H	237VJ-BK	143/145TC	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	4.63	6.00	6.01	3.00
2.62	262Q56H	262VJ-BK	56C	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	5.19	7.00	6.76	3.50
2.62	262Q140H	262VJ-BK	143/145TC	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	5.19	7.00	6.76	3.50
2.62	262Q180H	262VJ-BK	182/184TC	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	6.12	7.00	6.76	3.50
3.00	300Q56H	300VJ-BK	56C	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	5.95	7.50	7.50	3.75
3.00	300Q140H	300VJ-BK	143/145TC	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	5.95	7.50	7.50	3.75
3.00	300Q180H	300VJ-BK	182/184TC	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	6.15	7.50	7.50	3.75
3.25	325Q56H	325VJ-BK	56C	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.14	7.88	8.00	3.94
3.25	325Q140H	325VJ-BK	143/145TC	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.14	7.88	8.00	3.94
3.25	325Q180H	325VJ-BK	182/184TC	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	6.34	7.88	8.00	3.94
3.75	375Q56H	375VJ-BK	56C	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	6.01	9.63	9.06	4.81
3.75	375Q140H	375VJ-BK	143/145TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	6.01	9.63	9.06	4.81
3.75	375Q180H	375VJ-BK	182/184TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	7.29	9.63	9.06	4.81
3.75	375Q210H	375VJ-BK	213/215TC	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	7.29	9.63	9.06	4.81
4.50	450Q140H	450VJ-BK	143/145TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	6.69	11.13	10.50	5.56
4.50	450Q180H	450VJ-BK	182/184TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	7.97	11.13	10.50	5.56
4.50	450Q210H	450VJ-BK	213/215TC	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	7.97	11.13	10.50	5.56
5.16	516Q180H	516VJ-BK	182/184TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.31	12.35	5.56
5.16	516Q210H	516VJ-BK	213/215TC	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	8.78	11.31	12.35	5.56

CD	NEMA Frame	R	T	INPUT		OUTPUT BORE ✚		Stock Ratios marked "x "											
				Bore	Keyway	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	56C	3.25	0.38	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	56C	3.25	0.44	0.63	3/16 x 3/32	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.54	143/145TC	3.25	0.44	0.88	3/16 x 3/32	0.63		x	x	x	x	x	-	-	-	-	-	-	-
1.75	56C	3.25	0.44	0.63	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	x	x
1.75	143/145TC	3.25	0.44	0.88	3/16 x 3/32	1.00		x	x	x	x	x	x	x	x	x	x	-	-
2.06	56C	3.25	0.56	0.63	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.06	143/145TC	3.25	0.56	0.88	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.37	56C	3.25	0.69	0.63	3/16 x 3/32	1.50	See Keyway Dimensions on page C-63.	-	-	-	x	x	x	x	x	x	x	x	x
2.37	143/145TC	3.25	0.69	0.88	3/16 x 3/32	1.50		x	x	x	x	x	x	x	x	x	x	-	-
2.62	56C	3.25	0.56	0.63	3/16 x 3/32	1.94		-	-	-	-	x	x	x	x	x	x	x	x
2.62	143/145TC	3.25	0.56	0.88	3/16 x 3/32	1.94		x	x	x	x	x	x	x	x	x	x	x	-
2.62	182/184TC	4.50	0.56	1.13	1/4X1/8	1.94		x	x	x	x	x	-	-	-	-	-	-	-
3.00	56C	3.25	0.56	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.00	143/145TC	3.25	0.56	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.00	182/184TC	4.50	0.56	1.13	1/4X1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.25	56C	3.25	0.56	0.63	3/16 x 3/32	2.19		-	-	-	-	-	-	-	x	x	x	x	x
3.25	143/145TC	3.25	0.56	0.88	3/16 x 3/32	2.19		-	-	x	x	x	x	x	x	x	x	x	x
3.25	182/184TC	4.50	0.56	1.13	1/4X1/8	2.19		x	x	x	x	x	x	x	-	-	-	-	-
3.75	56C	3.38	0.59	0.63	3/16 x 3/32	2.44	5/8 x 3/16	-	-	-	-	-	-	-	x	x	x	-	-
3.75	143/145TC	3.38	0.59	0.88	3/16 x 3/32	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
3.75	182/184TC	4.50	0.59	1.13	1/4X1/8	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	-	-	-
3.75	213/215TC	4.50	0.59	1.38	5/16 x 5/32	2.44	5/8 x 3/16	-	-	x	x	-	-	-	-	-	-	-	-
4.50	143/145TC	3.38	0.69	0.88	3/16 x 3/32	2.94	3/4 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
4.50	182/184TC	4.50	0.69	1.13	1/4X1/8	2.94	3/4 x 1/4	-	-	-	x	x	x	x	x	x	x	-	-
4.50	213/215TC	4.50	0.69	1.38	5/16 x 5/32	2.94	3/4 x 1/4	-	-	x	x	x	x	-	-	-	-	-	-
5.16	182/184TC	4.50	0.78	1.13	1/4X1/8	3.44	7/8 x 1/4	-	-	-	-	-	-	-	x	x	x	-	-
5.16	213/215TC	4.50	0.78	1.38	5/16 x 5/32	3.44	7/8 x 1/4	-	-	x	x	x	x	x	-	-	-	-	-

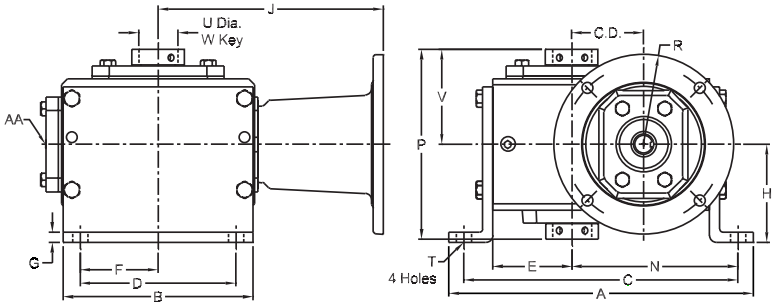
Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375QH	375 FAN	3/8-24	3/4	7.66	2.8
450QH	450 FAN	3/8-24	3/4	8.36	2.8
516QH	516 FAN	3/8-24	3/4	9.18	2.8
600QH	600 FAN	3/8-24	3/4	10.70	4.2

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133Q56H10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
133-325 Vertical J Base Kits shown on page C-65.
375-516 Vertical J Base Kits shown on page C-66.

Style CHVL

Vertical Low Base

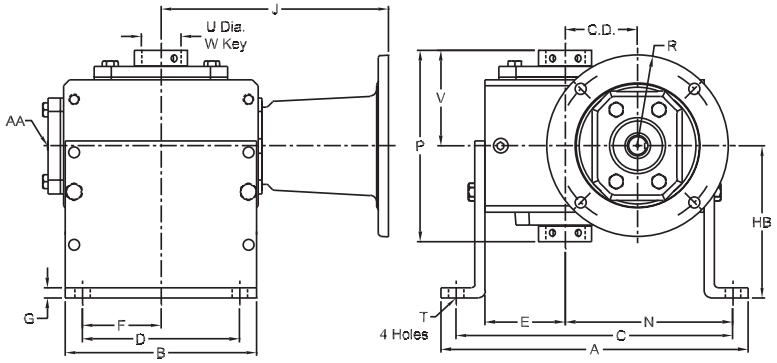


Assembly Drawing and Sample of Components

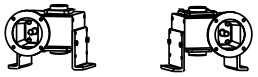
133UH10
133VL-BK
133MAK56

Style CHVH

Vertical High Base



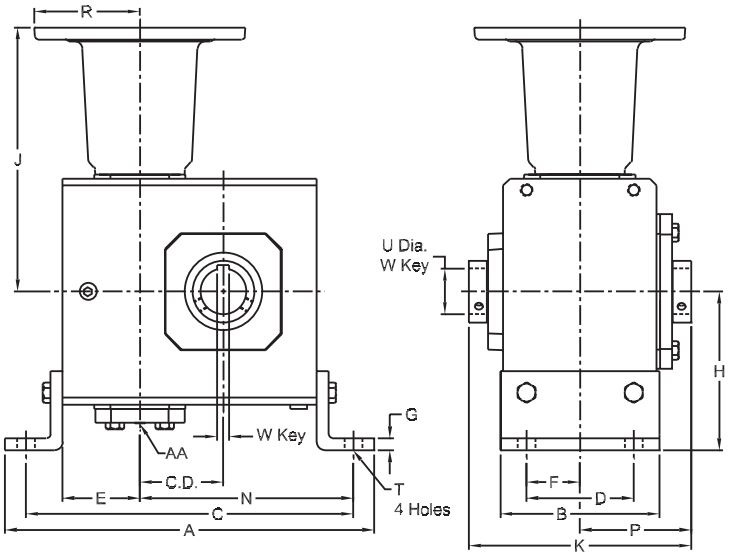
Assembly Drawing and Sample of Components



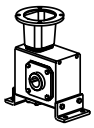
133UH10
133VH-BK
133MAK56

Style CHVJ

Vertical "J" Base



Sample of Components



133UH10
133VJ-BK
133MAK56

Note: If mounting fan unit, fan extends beyond "H" dimension.

Dimensions (Inches) for Style "CHVL" - Vertical Low Base

C.D.	Components ◆			A	B	C	D	E	F	G	H	N	P	T	V
	Basic Unit ★	Adapter Kit	Base Kit												
1.33	133UH	See Adapter Kit Table Below	133VL-B K	7.26	4.00	6.50	3.00	1.72	1.50	0.25	2.63	3.86	4.75	0.38	2.38
1.54	154UH		154VL-BK	7.88	5.00	7.00	4.00	1.91	2.00	0.25	3.00	4.28	5.42	0.44	2.71
1.75	175UH		175VL-BK	8.25	5.00	7.37	4.00	2.06	2.00	0.25	3.00	4.50	5.50	0.44	2.75
2.06	206UH		206VL-BK	9.38	6.00	8.38	4.88	2.28	2.44	0.38	3.13	5.09	6.00	0.50	3.00
2.37	237UH		237VL-BK	9.94	6.00	8.81	4.88	2.50	2.44	0.38	3.38	5.44	6.00	0.50	3.00
2.62	262UH		262VL-BK	11.24	7.00	10.12	5.75	2.94	2.88	0.38	3.63	6.12	7.00	0.56	3.50
3.00	300UH		300VL-BK	12.50	8.00	11.13	6.00	3.25	3.00	0.38	3.94	6.75	7.50	0.56	3.75
3.25	325UH		325VL-BK	13.00	8.50	11.88	6.13	3.50	3.06	0.38	4.69	7.13	7.88	0.56	3.94
3.75	375UH		375VL-BK	15.69	9.50	13.94	8.00	3.44	4.00	0.88	5.25	8.31	9.63	0.59	4.81
4.50	450UH		450VL-BK	16.94	10.88	14.94	9.56	4.63	4.78	0.88	5.06	8.94	11.13	0.69	5.56
5.16	516UH		516VL-BK	20.57	12.50	18.00	10.00	5.44	5.00	1.00	6.38	10.56	11.31	0.78	5.66
6.00	600UH		600VL-BK	23.25	14.75	20.88	11.75	6.63	5.88	1.13	7.31	12.19	12.63	0.91	6.31

C.D.	OUTPUT BORE ✚		Stock Ratios marked "x "										
	U	W Keyway	5	7.5	10	15	20	25	30	40	50	60	80	100
1.33	0.63	See Keyway Dimensions on page C-63.	x	x	x	x	x	x	x	x	x	x	x	x
1.54	0.63		x	x	x	x	x	x	x	x	x	x	x	x
1.75	1.00		x	x	x	x	x	x	x	x	x	x	x	x
2.06	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.37	1.50		x	x	x	x	x	x	x	x	x	x	x	x
2.62	1.94		x	x	x	x	x	x	x	x	x	x	x	x
3.00	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.25	2.19		x	x	x	x	x	x	x	x	x	x	x	x
3.75	2.44	5/8 x 3/16	-	-	x	x	x	x	x	x	x	x	-	-
4.50	2.94	3/4 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
5.16	3.44	7/8 x 1/4	-	-	x	x	x	x	x	x	x	x	-	-
6.00	3.94	1 x 1/4	x	-	x	x	x	x	x	x	x	x	-	-

Dimensions (Inches) for Style "CHVH"

C.D.	Components ◆			HB
	Basic Unit ★	Adapter Kit	Base Kit	
1.33	133UH	See Adapter Kit Table Below	133VH-BK	3.56
1.54	154UH		154VH-BK	4.38
1.75	175UH		175VH-BK	4.38
2.06	206UH		206VH-BK	4.88
2.37	237UH		237VH-BK	5.25
2.62	262UH		262VH-BK	5.56
3	300UH		300VH-BK	5.88
3.25	325UH		325VH-BK	6.25
3.75	375UH		375VH-BK	7.00
4.5	450UH		450VH-BK	8.56
5.16	516UH		516VH-BK	8.63
6	600UH		600VH-BK	9.63

Fan Kit

Ref. No.	Fan Kit	AA		L	Wt. Lbs.
		Tap	Deep		
375UH	375 FAN	3/8-24	3/4	7.66	2.8
450UH	450 FAN	3/8-24	3/4	8.36	2.8
516UH	516 FAN	3/8-24	3/4	9.18	2.8
600UH	600 FAN	3/8-24	3/4	10.70	4.2

Dimensions (Inches) for Style "CHVJ" - Vertical "J" Base

C.D.	Components ◆			A	B	C	D	E	F	G	H	K	N	P	T
	Basic Unit ★	Adapter Kit	Base Kit												
1.33	133UH	See Adapter Kit Table Below	133VJ-BK	7.42	2.75	6.42	2.00	1.61	1.00	0.25	2.94	4.75	3.93	2.38	0.38
1.54	154UH		154VJ-BK	8.14	3.50	7.08	2.75	1.93	1.38	0.25	3.50	5.42	4.30	2.71	0.44
1.75	175UH		175VJ-BK	8.51	3.50	7.63	2.50	1.94	1.25	0.25	3.50	5.50	4.75	2.75	0.44
2.06	206UH		206VJ-BK	9.76	4.00	8.63	2.63	2.04	1.31	0.38	4.01	6.00	5.46	3.00	0.56
2.37	237UH		237VJ-BK	10.31	4.00	9.19	2.88	2.06	1.44	0.38	4.06	6.00	6.01	3.00	0.69
2.62	262UH		262VJ-BK	11.62	5.00	10.38	3.38	2.43	1.69	0.38	5.00	7.00	6.76	3.50	0.56
3	300UH		300VJ-BK	12.64	6.00	11.38	3.88	2.63	1.94	0.38	5.62	7.50	7.50	3.75	0.56
3.25	325UH		325VJ-BK	13.14	6.00	11.88	3.88	2.63	1.94	0.38	5.63	7.88	8.00	3.94	0.56
3.75	375UH		375VJ-BK	15.06	6.25	13.31	4.75	2.94	2.38	0.88	6.00	9.63	9.06	4.81	0.59
4.5	450UH		450VJ-BK	16.94	7.38	14.94	5.81	3.06	2.91	0.88	7.38	11.13	10.50	5.56	0.69
5.16	516UH		516VJ-BK	19.38	7.38	17.50	5.81	3.40	2.91	1.00	7.75	11.31	12.35	5.66	0.78

N.E.M.A. Frame Adapter Kits and Dimensions

C.D.	56C Input: .625 Kw.: 3/16 x 3/32			143/145TC Input: .875 Kw.: 3/16 x 3/32			182/184TC Input: 1.125 KW.: 1/4 x 1/8			213/215TC Input: 1.375 Kw.: 5/16 x 5/32			254/256TC Input: 1.625 Kw.: 3/8 x 3/16		
	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R	Adapter Kit No.	J	R
1.33	133MAK56	6.07	3.25	133MAK140	6.07	3.25									
1.54	154MAK56	6.6	3.25	154MAK140	6.6	3.25									
1.75	175MAK56	6.7	3.25	175MAK140	6.7	3.25									
2.06	206MAK56	7.07	3.25	206MAK140	7.07	3.25									
2.37	237MAK56	7.76	3.25	237MAK140	7.76	3.25	237MAK180	8.76	4.5						
2.62	262MAK56	8.32	3.25	262MAK140	8.32	3.25	262MAK180	9.32	4.5						
3.00	300MAK56	8.82	3.25	300MAK140	8.82	3.25	300MAK180	9.82	4.5						
3.25	325MAK56	9.01	3.25	325MAK140	9.01	3.25	325MAK180	10.01	4.5	325MAK210	10.01	4.5			
3.75	375MAK56	11.47	3.38	375MAK140	11.47	3.38	375MAK180	12.92	4.5	375MAK210	12.92	4.5			
4.50				450MAK140	12.15	3.38	450MAK180	13.6	4.5	450MAK210	13.6	4.5			
5.16							516MAK180	14.4	4.5	516MAK210	14.4	4.5			
6.00							600MAK180	16.97	4.5	600MAK210	16.97	4.5	600MAK250	16.97	4.5

✚ Max bore dimension shown. For additional bore sizes, please refer to page C-63.
★ To complete Part No. add ratio symbol to size - for example 133UH10.
◆ Components needed to make assembled reducer must be ordered separately. If Fan Kit is required, see the table above.
133-325 Vertical High and Low Base Kits shown on page C-65.
133-325 Vertical J Base Kits shown on page C-66.
375-606 Vertical High and Low Base Kits shown on page C-66.
375-516 Vertical J Base Kits shown on page C-66.
Motor Adapter Kits Shown on page C-64.

Keyway Sizes For Hollow Output Reducers Sizes 133 - 325

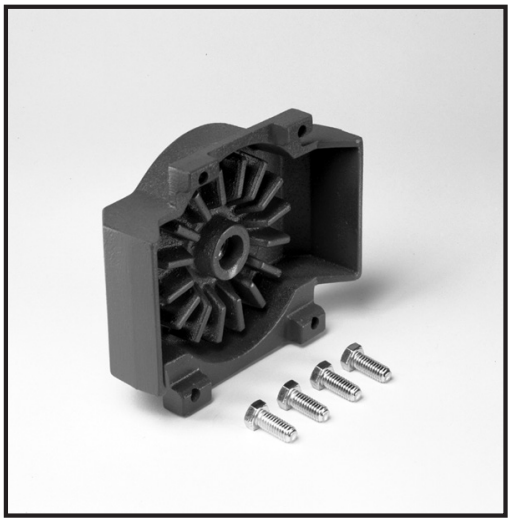
Bore Size	Key Width	133 KW Length: 4.75	154 KW Length: 5.42	175 KW Length: 5.50	206 KW Length: 6.00	237 KW Length: 6.00	262 KW Length: 7.00	300 KW Length: 7.50	325 KW Length: 7.875
0.500	0.125	1/8 X 1/8 X 1-1/2	1/8 X 1/8 X 1-1/2						
0.625	0.188	3/16 X 3/16 X 1-1/2	3/16 X 3/16 X 1-1/2	3/16 X 3/16 X 1-1/2					
0.688	0.188			3/16 X 3/16 X 2					
0.750	0.188		3/16 X 3/16 X 2	3/16 X 3/16 X 2					
0.875	0.188			3/16 X 3/16 X 2	3/16 X 3/16 X 2	3/16 X 3/16 X 2	3/16 X 3/16 X 2		
1.000	0.250			1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2		
1.063	0.250				1/4 X 1/4 X 2-1/2				
1.125	0.250				1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2
1.188	0.250				1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2
1.250	0.250				1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2	1/4 X 1/4 X 2-1/2
1.375	0.313				5/16 X 5/16 X 2-1/2	5/16 X 5/16 X 2-1/2		5/16 X 5/16 X 2-1/2	
1.438	0.375				3/8 X 5/16 X 3	3/8 X 5/16 X 3	3/8 X 5/16 X 3	3/8 X 3/8 X 3	3/8 X 3/8 X 3
1.500	0.375				3/8 X 5/16 X 3	3/8 X 5/16 X 3	3/8 X 5/16 X 3	3/8 X 3/8 X 3	3/8 X 3/8 X 3
1.625	0.375						3/8 X 3/8 X 3	3/8 X 3/8 X 3	3/8 X 3/8 X 3
1.688	0.375						3/8 X 3/8 X 3	3/8 X 3/8 X 3	3/8 X 3/8 X 3
1.750	0.375						3/8 X 3/8 X 3	3/8 X 3/8 X 3	3/8 X 3/8 X 3
1.875	0.500						1/2 X 1/2 X 3-3/8	1/2 X 1/2 X 3-3/8	1/2 X 1/2 X 3-3/8
1.938	0.500						1/2 X 1/2 X 3-3/8	1/2 X 1/2 X 3-3/8	1/2 X 1/2 X 3-3/8
2.000	0.500							1/2 X 1/2 X 3-3/8	1/2 X 1/2 X 3-3/8
2.125	0.500							1/2 X 3/8 X 3	1/2 X 3/8 X 3
2.188	0.500							1/2 X 3/8 X 3-3/8	1/2 X 3/8 X 3-3/8

Bushings for Raider® Hollow Shaft Reducers

Reducer C.D.	Shaft Dia.	Shaft Keyseat	Bushing Kit No.	Wt. Lbs.
3.75	1 3/8	5/16 x 5/32 x 3 1/2	207BU106	6.4
	1 7/16	3/8 x 3/16 x 3 1/2	207BU107	6.1
	1 1/2	3/8 x 3/16 x 3 1/2	207BU108	5.8
	1 5/8	3/8 x 3/16 x 3 1/2	207BU110	5.2
	1 11/16	3/8 x 3/16 x 3 1/2	207BU111	4.9
	1 3/4	3/8 x 3/16 x 3 1/2	207BU112	4.5
	1 7/8	1/2 x 1/4 x 3 1/2	207BU114	3.8
	1 15/16	1/2 x 1/4 x 3 1/2	207BU115	3.5
	2	1/2 x 1/4 x 3 1/2	207BU200	3.1
	2 1/8	1/2 x 1/4 x 3 1/2	207BU202	2.3
	2 3/16	1/2 x 1/4 x 3 1/2	207BU203	1.8
	2 1/4	1/2 x 1/4 x 3 1/2	207BU204	1.4
4.50	1 7/16	3/8 x 3/16 x 4	215BU107	11.7
	1 1/2	3/8 x 3/16 x 4	215BU108	11.4
	1 11/16	3/8 x 3/16 x 4	215BU111	10.3
	1 3/4	3/8 x 3/16 x 4	215BU112	9.9
	1 7/8	1/2 x 1/4 x 4	215BU114	9.1
	1 15/16	1/2 x 1/4 x 4	215BU115	8.7
	2	1/2 x 1/4 x 4	215BU200	8.3
	2 3/16	1/2 x 1/4 x 4	215BU203	6.9
	2 1/4	1/2 x 1/4 x 4	215BU204	6.4
	2 7/16	5/8 x 5/16 x 4	215BU207	4.8
	2 1/2	5/8 x 5/16 x 4	215BU208	4.3
	2 11/16	5/8 x 5/16 x 4	215BU211	2.5
5.16	1 15/16	1/2 x 1/4 x 4 1/2	307BU115	16.2
	2	1/2 x 1/4 x 4 1/2	307BU200	15.7
	2 3/16	1/2 x 1/4 x 4 1/2	307BU203	14.1
	2 1/4	1/2 x 1/4 x 4 1/2	307BU204	13.6
	2 7/16	5/8 x 5/16 x 4 1/2	307BU207	11.8
	2 1/2	5/8 x 5/16 x 4 1/2	307BU208	11.2
	2 11/16	5/8 x 5/16 x 4 1/2	307BU211	9.3
	2 7/8	3/4 x 3/8 x 4 1/2	307BU214	7.1
	2 15/16	3/4 x 3/8 x 4 1/2	307BU215	6.4
6.00	2 7/16	5/8 x 5/16 x 4 1/2	315BU207	19.2
	2 1/2	5/8 x 5/16 x 4 1/2	315BU208	18.6
	2 11/16	5/8 x 5/16 x 4 1/2	315BU211	16.6
	2 13/16	3/4 x 3/8 x 4 1/2	315BU213	15.2
	2 7/8	3/4 x 3/8 x 4 1/2	315BU214	14.5
	2 15/16	3/4 x 3/8 x 4 1/2	315BU215	13.8
	3	3/4 x 3/8 x 4 1/2	315BU300	13.1
	3 3/16	3/4 x 3/8 x 4 1/2	315BU303	10.7
	3 7/16	7/8 x 7/16 x 4 1/2	315BU307	7.4

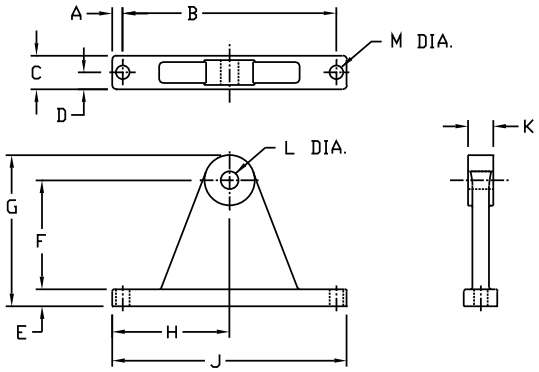
Fan Kit

Fan Kit	Wt. Lbs.
375 Fan Kit	2.8
450 Fan Kit	2.8
516 Fan Kit	2.8
600 Fan Kit	4.2



N.E.M.A. Frame Adapter Kit

Kit Part No.	Frame Size
133MAK56	56C
154MAK56	56C
154MAK140	143/145TC
175MAK56	56C
175MAK140	143/145TC
206MAK56	56C
206MAK140	143/145TC
237MAK56	56C
237MAK140	143/145TC
237MAK180	182/184TC
262MAK56	56C
262MAK140	143/145TC
262MAK180	182/184TC
300MAK56	56C
300MAK140	143/145TC
300MAK180	182/184TC
325MAK56	56C
325MAK140	143/145TC
325MAK180	182/184TC
325MAK210	213/215TC
375MAK56	56C
375MAK140	143/145TC
375MAK180	182/184TC
375MAK210	213/215TC
450MAK140	143/145TC
450MAK180	182/184TC
450MAK210	213/215TC
516MAK180	182/184TC
516MAK210	213/215TC
600MAK180	182/184TC
600MAK210	213/315TC
600MAK250	254/256TC



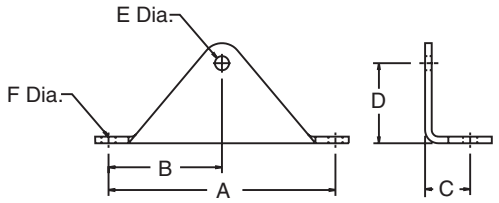
133-325 Torque Arm Kit

Dimensions (Inches) for Torque Arm Kit (133 - 325)

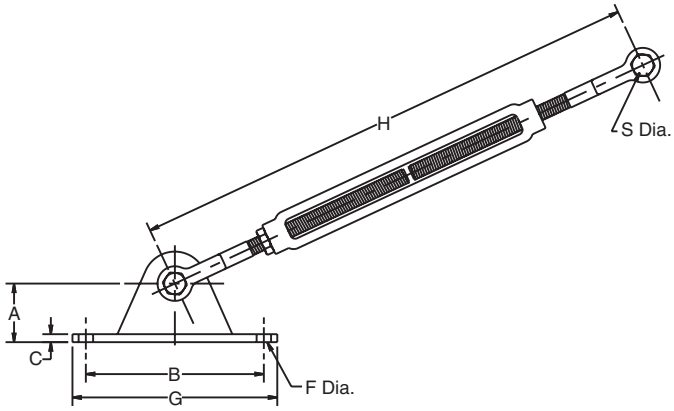
Part No.	A	B	C	D	E	F	G	H	J	K	L	M
133H-TAK	0.63	3.25	1.50	0.67	0.19	1.06	2.00	2.00	4.00	0.19	0.53	0.38
154H-TAK	0.50	4.19	0.75	0.38	0.68	1.82	3.25	2.59	5.19	0.75	0.53	0.343
175H-TAK	0.50	4.19	0.75	0.38	0.68	1.82	3.25	2.59	5.19	0.75	0.53	0.343
206H-TAK	0.38	5.00	0.75	0.38	0.44	2.71	3.90	2.88	5.76	0.94	0.53	0.406
237H-TAK	0.50	5.00	1.00	0.50	0.50	2.75	4.00	3.00	6.00	0.75	0.53	0.406
262H-TAK	0.50	6.37	1.00	0.50	0.50	3.25	4.50	3.68	7.37	0.94	0.53	0.406
300H-TAK	0.56	7.00	1.25	0.63	0.62	4.38	5.88	4.06	8.12	0.94	0.53	0.468
325H-TAK	0.62	7.50	1.25	0.63	0.62	4.38	5.88	4.38	8.75	0.94	0.53	0.468

Dimensions (Inches) for Torque Arm Kit (375 - 600)

Part No.	A	B	C	D	E	F
375H-TAK	8.50	4.25	1.68	3.00	0.53	0.531
450H-TAK	9.56	4.78	1.94	3.50	0.81	0.656
516H-TAK	11.00	5.50	1.75	4.00	0.81	0.687
600H-TAK	12.75	6.38	1.75	4.63	0.81	0.687



375-600 Torque Arm Kit

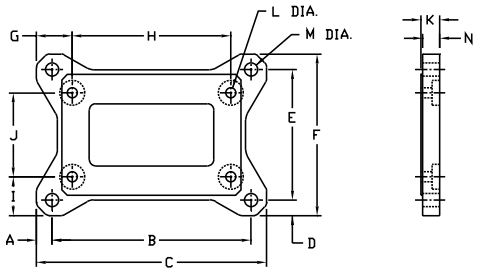


Dimensions (Inches) for Adjustable Torque Arm Kit

Part No.	B	C	F	G	H	S
133-375ATAK	2.50	0.18	0.375	3.50	19-25	0.53
450-600ATAK	3.00	0.18	0.438	4.25	27-33	0.81

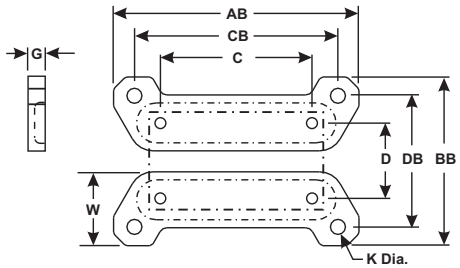
Dimensions (Inches) for Horizontal Standard Base Kit (133 - 325)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N
133S-BK	0.50	4.38	5.38	0.50	3.31	5.38	1.06	3.25	2.00	0.53	0.343	0.343	0.47
154S-BK	0.62	5.25	6.49	0.62	4.31	5.55	1.15	4.19	2.75	0.59	0.344	0.406	0.56
175S-BK	0.63	5.75	7.00	0.63	4.50	5.75	1.41	4.19	2.75	0.69	0.34	0.406	0.63
206S-BK	0.66	6.38	7.69	0.66	4.69	6.00	1.34	5.00	2.88	0.72	0.406	0.468	0.66
237S-BK	0.66	7.06	8.38	0.66	4.88	6.19	1.03	5.00	2.88	0.75	0.406	0.469	0.69
262S-BK	0.63	8.00	9.25	0.63	5.25	6.50	1.44	6.38	3.38	0.75	0.406	0.531	0.69
300S-BK	0.78	8.44	10.00	0.81	5.88	7.50	1.50	7.00	4.00	0.75	0.469	0.531	0.69
325S-BK	0.81	9.50	11.13	0.81	6.13	7.75	1.81	7.50	4.00	0.88	0.468	0.531	0.81



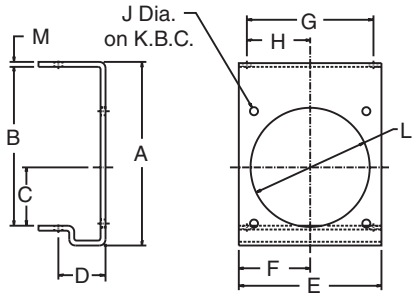
Dimensions (Inches) for Horizontal Standard Base Kit (375 - 600)

Part Number	AB	BB	C	CB	D	DB	G	K	W
375S-BK	12.00	8.63	8.50	10.38	4.75	7.00	0.94	0.594	2.88
450S-BK	13.88	9.33	9.56	12.12	5.81	7.63	1.12	0.656	2.88
516S-BK	16.38	10.37	11.00	14.13	5.81	8.37	1.12	0.781	3.47
600S-BK	19.00	12.00	12.75	16.50	6.38	9.50	1.25	0.906	4.00



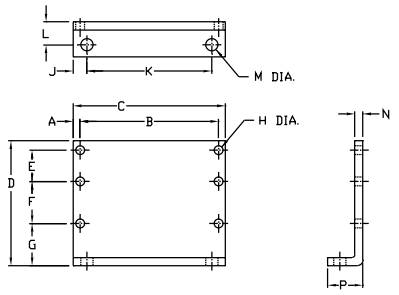
Dimensions (Inches) for Flange Kit

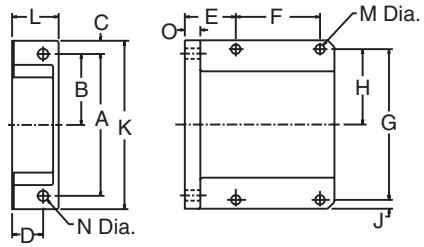
Part Number	A	B	C	D	E	F	G	H	J	K	L	M
133H-FK	5.55	4.66	1.72	2.00	4.25	2.13	3.25	1.63	0.340	5.00	3.62	0.19
154H-FK	6.19	5.38	1.91	2.19	4.75	2.38	4.19	2.10	0.344	5.00	3.63	0.19
175H-FK	6.66	5.75	2.06	2.12	4.81	2.41	4.19	2.10	0.340	5.88	4.06	0.19
206H-FK	7.47	6.38	2.28	2.31	5.75	2.88	5.00	2.50	0.410	6.50	4.50	0.19
237H-FK	8.30	6.94	2.50	2.28	6.00	3.00	5.00	2.50	0.410	7.50	5.00	0.25
262H-FK	9.25	8.00	2.94	2.37	7.18	3.59	6.38	3.19	0.410	8.00	6.00	0.25
300H-FK	10.02	8.88	3.25	2.50	8.50	4.25	7.00	3.50	0.410	9.00	7.00	0.25
325H-FK	10.89	9.38	3.50	3.25	8.50	4.25	7.50	3.75	0.563	10.00	7.00	0.25
375H-FK	11.85	10.44	3.88	3.08	9.54	4.77	8.50	4.25	0.563	11.50	8.00	0.25
450H-FK	13.10	11.94	4.50	3.96	10.88	5.44	9.56	4.78	0.563	11.50	9.00	0.31
516H-FK	15.33	13.75	5.31	3.67	12.50	6.25	11.00	5.50	0.687	14.00	10.00	0.31
600H-FK	18.22	16.50	6.50	4.03	14.50	7.25	12.75	6.38	0.687	15.56	12.00	0.38



Dimensions (Inches) for Vertical Low/High Base Kit (133 - 325)

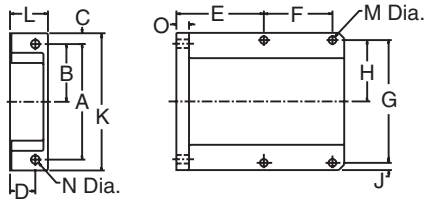
Part Number	A	B	C	D	F	G	H	J	K	L	M	N
133VL-BK & VH-BK	0.38	3.25	4.00	3.08	0.94	1.63	0.343	0.50	3.00	0.92	0.375	0.25
154VL-BK & VH-BK	0.41	4.19	5.00	3.52	1.38	1.63	0.343	0.50	4.00	0.81	0.438	0.25
175VL-BK & VH-BK	0.41	4.19	5.00	3.52	1.38	1.63	0.343	0.50	4.00	0.81	0.438	0.25
206VL-BK & VH-BK	0.50	5.00	6.00	3.89	1.75	1.69	0.438	0.46	4.88	1.00	0.560	0.38
237VL-BK & VH-BK	0.50	5.00	6.00	4.31	1.87	1.94	0.406	0.56	4.88	0.94	0.500	0.38
262VL-BK & VH-BK	0.31	6.38	7.00	4.84	1.94	1.94	0.406	0.63	5.75	1.06	0.562	0.38
300VL-BK & VH-BK	0.50	7.00	8.00	8.00	1.94	1.94	0.468	1.00	6.00	1.13	0.562	0.38
325VL-BK & VH-BK	0.75	7.50	9.00	4.95	1.56	2.69	0.468	1.44	6.13	1.25	0.562	0.38





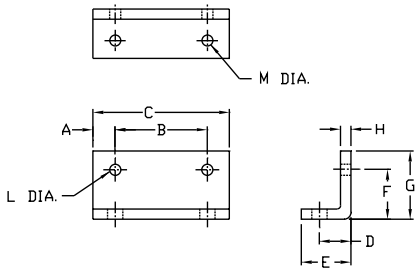
Dimensions (Inches) for Vertical Low Base Kit (375 - 600)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	O
375VL-BK	8.00	4.00	0.75	1.75	2.88	4.75	8.50	4.25	0.50	9.50	2.63	0.531	0.594	0.88
450VL-BK	9.56	4.78	0.66	1.50	2.16	5.81	9.56	4.78	0.66	10.88	2.50	0.687	0.687	0.88
516VL-BK	10.00	5.00	1.25	2.13	3.47	5.82	11.00	5.50	0.75	12.50	3.44	0.687	0.781	1.00
600VL-BK	11.75	5.88	1.50	2.19	3.94	6.38	12.75	6.38	1.00	14.75	3.38	0.687	0.906	1.13



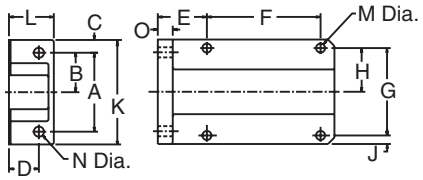
Dimensions (Inches) for Vertical High Base Kit (375 - 600)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	O
375VH-BK	8.00	4.00	0.75	1.75	4.63	4.75	8.50	4.25	0.50	9.50	2.63	0.531	0.594	0.88
450VH-BK	9.56	4.78	0.66	1.50	5.66	5.81	9.56	4.78	0.66	10.88	2.50	0.687	0.687	0.88
516VH-BK	10.00	5.00	1.25	2.13	5.72	5.82	11.00	5.50	0.75	12.50	3.44	0.687	0.781	1.00
600VH-BK	11.75	5.88	1.50	2.19	6.26	6.38	12.75	6.38	1.00	14.75	3.38	0.687	0.906	1.13



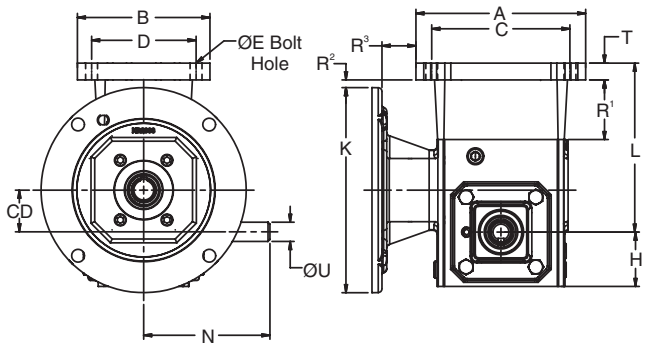
Dimensions (Inches) for Vertical "J" Base Kit (133 - 325)

Part Number	A	B	C	D	E	F	G	H	J	L	M
133VJ-BK	0.38	2.00	2.75	0.88	1.38	1.31	1.75	0.25	2.00	0.34	0.38
154VJ-BK	0.38	2.75	3.50	0.85	1.38	1.41	2.00	0.25	2.75	0.34	0.44
175VJ-BK	0.38	2.75	3.50	0.85	1.38	1.41	2.00	0.25	2.75	0.34	0.44
206VJ-BK	0.52	2.88	4.00	1.12	1.69	1.44	2.00	0.38	2.62	0.41	0.560
237VJ-BK	0.56	2.88	4.00	1.13	1.69	1.56	2.06	0.38	2.88	0.41	0.500
262VJ-BK	0.81	3.38	5.00	1.19	1.81	1.81	2.50	0.38	3.38	0.41	0.562
300VJ-BK	1.00	4.00	6.00	1.25	1.88	2.12	2.75	0.38	3.88	0.47	0.562
325VJ-BK	1.00	4.00	6.00	1.25	1.88	1.88	2.50	0.38	3.88	0.47	0.562



Dimensions (Inches) for Vertical "J" Base Kit (375- 600)

Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	O
375VJ-BK	4.75	2.38	0.75	1.44	1.75	8.50	4.75	2.38	0.75	6.25	2.31	0.531	0.594	0.88
450VJ-BK	5.81	2.91	0.79	1.50	2.60	9.56	5.81	2.91	0.79	7.38	2.50	0.687	0.687	0.88
516VJ-BK	5.81	2.91	0.79	1.88	2.25	11.00	5.82	2.91	0.78	7.38	2.81	0.687	0.781	1.00



Dimensions (Inches) for Base Kit/Riser Kit

Base Kit	Riser Block Kit	C.D.	C-Face	R¹	R²	R³	T	A	B	C	D	E	K	H	L	N	U
133S-BK	**133R-BK**	1.33	56/140	1.89	0.24	1.07	0.53	5.38	4.20	4.38	3.31	0.38	6.50	1.72	5.35	4.00	0.62
154S-BK	**154R-BK**	1.54	56/140	1.55	0.23	0.97	0.59	6.44	5.46	5.25	4.52	0.44	6.50	1.91	5.61	4.31	0.75
175S-BK	**175R-BK**	1.75	56/140	1.61	0.30	0.57	0.69	7.00	5.56	5.75	4.50	0.44	6.50	2.06	5.99	4.31	0.88
206S-BK	**206R-BK**	2.06	56/140	1.42	0.20	0.57	0.72	7.70	5.76	6.38	4.69	0.50	6.50	2.28	6.23	4.72	1.00
237S-BK	**237R-BK**	2.37	56/140	2.69	1.51	0.50	0.75	8.50	6.20	7.06	4.88	0.50	6.50	2.50	7.88	5.08	1.13
262S-BK	**262R-BK**	2.62	56/140 180	2.40	1.59 0.34	0.59 0.72	0.75	9.26	6.50	8.00	5.25	0.56	6.50 9.00	2.93	8.22	5.63	1.13
300S-BK	**300R-BK**	3.00	56/140 180	2.12	1.50 0.25	0.11 0.58	0.88	10.16	7.36	8.44	588	0.56	6.50 9.00	3.25	8.63	6.75	1.25
325S-BK	**325R-BK**	3.25	56/140 180	1.87	1.25 0	0.82 0.65	0.88	11.14	7.76	9.50	6.13	0.56	6.50 9.00	3.50	8.63	7.06	1.38
375S-BK	**375R-BK**	3.75	56/140 180	1.77	1.2 0.08	0.53	0.94	12.00	8.63	10.38	7.00	0.59	6.76 9.00	3.88	9.27	7.75	1.63
450S-BK	**450R-BK**	4.50	140 180/215	2.27	1.83 0.71	0.28	1.12	13.88	9.33	12.12	7.63	0.66	6.76 9.00	4.50	10.83	8.44	1.63
516S-BK	**516R-BK**	5.16	180/215	2.01	0.78	-	1.12	16.38	10.37	14.13	8.37	0.78	9.00	5.31	11.57	9.06	2.00

NET CONTENT
4/5 BU.
PRODUCE OF
U.S.A.

POWERGEAR®

W Series Worm Gear Speed Reducers

The RW and W models are the proven performers in worm gear speed reducers and are adapted for universal mounting in any of the three positions; B, T and V. We also offer these units as double reductions designated as DB and DV. These units have large housings, large bearings and large shafts resulting in heavy duty, high capacity units. The B, T and V types are single reduction units and are offered in ratios ranging from 5:1 to 60:1. The DB and DV types are double reduction units for use in either the horizontal or vertical position. Ratios in these DB and DV units range from 75:1 to 3600:1.

The RW models are especially designed and constructed for long, hard continuous running. In addition, the capacity for a given center distance has been raised by means of the unique case design and an external fan. Experience has shown that more capacity can be gained from a reducer if some of the excess heat is carried away from the housing. These fan-cooled units are called RW's. For extra heavy duty where conventional reducers would tend to run hot, you can look to RW's for performance.

- Heavy-duty shaft input/shaft output design.
- Rugged cast iron housings with integral mounting feet top and bottom.
- Integral housing fins and cooling fans improve thermal capacity.
- Tapered roller bearings used throughout.
- Single and double reduction combination units available with ratios through 3600:1.
- Center distance range: 1.00" through 10.00".

for PoweRgear® W Series - W and RW

1. Determine Service Factor
From service factor tables on pages D-5 and D-6 determine service factor for the application.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of driver}}{\text{rpm of driven}}$$

When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page D-11 through D-36, a chain, belt, or gear drive with further reduction for either the input or output side will be necessary.

3. Determine Equivalent Horsepower or Normal Torque

A. HP Method:

Equivalent hp = Actual Motor hp × Service Factor (Step # 1)

B. Torque Method:

Normal Torque = Actual Torque × Service Factor (Step # 1)

4. Determine the Size of Speed Reducer Required

A. HP Method:

Refer to pages D-11 through D-36 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent hp calculated in Step No. 3 above.

B. Torque Method:

Refer to pages D-11 through D-36 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 rpm, ratings for 100 rpm must be used.

5. Determine the Motor Horsepower

Use the following equation when motor hp is not known:

$$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Input hp}}{\text{Output Torque}}$$

6. Check the Overhung Load
Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page D-4. Check this and any existing thrust loads against the load values shown on pages D-11 through D-36, and if the calculated load is greater than the values in the table, select a larger speed reducer.

Note: Refer combined overhung and thrust loads to the Application Engineering (1 800 626 2093) Department.

Example No. 1 - Horsepower Method

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 hp, 1750 rpm motor, directly coupled to the reducer input shaft. The left reducer output shaft will be directly coupled to the mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 rpm. The reducer also requires a horizontal mounting base with the worm on top.

1. Determine the Service Factor
From the table on page D-5, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

2. Determine Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{58} = 30.17$$

Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

3. Determine Equivalent Horsepower

$$\text{Equivalent hp} = \text{Actual Motor hp} \times \text{S F} = 1.0 \times 1.25 = 1.25 \text{ hp}$$

4. Determine the Size of Speed Reducer Required
From page D-19 under "1750 rpm Driver -30:1 Ratio - 175 rpm Output" and under "Input hp Mechanical" find the rating equal to or greater than the 1.25 equivalent hp calculated in Step No. 3. Note that a 25 reducer has mechanical rating of 1.37 hp. The correct part numbers required are:

Reducer: **25RW-T, 30, 1-L, Position 1**

5. Determine the Motor Horsepower
The motor horsepower is already known to be 1.0 hp.

6. Check Overhung Load
The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is directly coupled with a motor. Therefore, the reducer selected is the proper size.

Example No. 2 - Torque Method

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 rpm electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. The pitch diameter of the driver sprocket mounted on the reducer output shaft is 5.032 inches. The conveyor will operate 10 hours per day, and the head shaft speed is 140 rpm. The reducer will also require a horizontal mounting base with the worm on top. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

1. Determine the Service Factor

From the table on page D-5, note that the service factor for a belt conveyor (general purpose) operating 3 - 10 hours per day is 1.25.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

3. Determine the Normal Torque

The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

Actual Torque at Reducer Output Shaft =

$$\frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1{,}390 \text{ In/lbs.}$$

Normal Torque =

Actual Reducer Output Torque × S F =

$$1{,}390 \times 1.25 = 1738 \text{ in/lbs.}$$

4. Determine Size of Speed Reducer Required

From page D-21 under "1750 rpm Driver - 10 to 1 ratio - 175 rpm Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 30 reducer has a mechanical rating of 1753 inch-pounds.

The correct part number required is:

Reducer: **30RW-T, 10, 1-L, Position 1**

5. Determine the Motor Horsepower

$$\text{Motor Horsepower} = \frac{\text{Actual Torque X Input hp}}{\text{Output Torque}}$$

$$= \frac{1{,}390 \times 5.25}{1743}$$

$$= 4.19$$

Use a 5 horsepower motor.

6. Check Overhung

$$\text{OL (See below)} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}}$$

$$= \frac{2 \times 1390 \times 1.0}{5.032}$$

$$= 552.50 \text{ Pounds}$$

From rating table on page D-21, note the maximum overhung load for the output shaft of the 30RW10:1 reducer is 1403 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

Overhung Loads

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages D-11 through D-36. Use the following formula to calculate the overhung loads:

$$OL = \frac{2TK}{D}$$

where

OL	=	Overhung Load	
T	=	Actual Shaft Torque (inch-pounds)	
D	=	P. D. of Sprocket, Sheave, Pulley or Gear	
K	=	1.0	for Chain Drive
	=	1.25	for Gear Drive
	=	1.25	for Gearbelt Drive
	=	1.50	for V-Belt Drive
	=	2.50	for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

Service Factors for Enclosed Worm Gear Applications

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see Conversion table on next page for conversion.)

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)			
Pure Liquids	–	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids-Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	–
Lobe	1.00	1.25	1.50
Vane	–	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	–	1.00	1.25
Brew Kettles, Continuous Duty	–	1.00	1.25
Cookers, Continuous Duty	–	1.00	1.25
Mash Tubs, Continuous Duty	–	1.00	1.25
Scale Hopper, Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES	–	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	–	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	–	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly Loaded or Fed	–	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engr.		
Boom Hoist	Refer to Application Engr.		
Trolley Drive	Refer to Application Engr.		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engr.		
Mill Duty			
Main Hoist	Refer to Application Engr.		
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	–	1.00	1.25
Escalators	Refer to Application Engr.		
Freight	Refer to Application Engr.		
Gravity Discharge	–	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
FANS			
Centrifugal	–	1.00	1.25
Cooling Towers	Refer to Application Engr.		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	–	1.25	1.50
Belt	1.00	1.25	1.50
Disc	–	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	–	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS	–	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers			
-Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls-Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls-Live-off Brg.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engr.		
METAL MILLS			
Draw Bench Carriage and Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers(Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50

Service Factors for Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator(Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log(Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	–	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.00	1.25	1.50
Rotary			
- Gear Type	–	1.00	1.50
- Lobe	–	1.00	1.25
- Vane	–	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
RUBBER INDUSTRY (Cont'd.)			
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	–	1.00	1.25
Chemical Feeders	–	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	–	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	–	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-Friction Bearings Only.

Note: A Service Factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, Consult Conversion Table below)

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	–	–	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

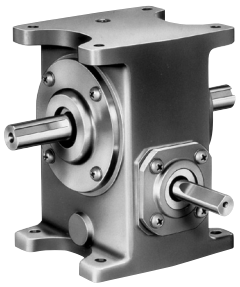
Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

Load and operating characteristics of both the driver and driven units must be considered throughly when selecting speed reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. Worm gear speed reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

W-B and W-T Shaft Arrangements

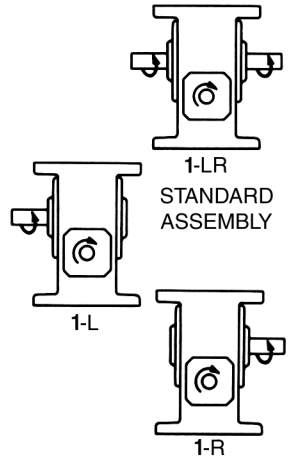
MODEL W TYPE B

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.

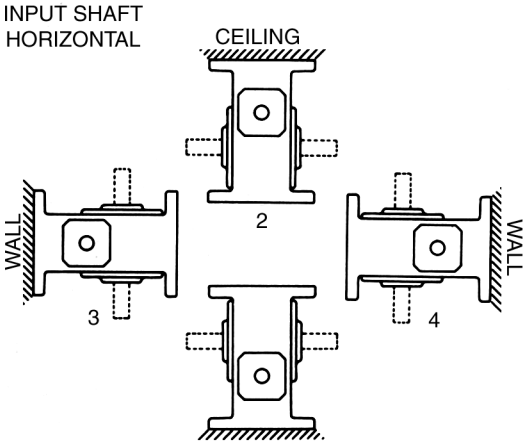


MODEL W TYPE T

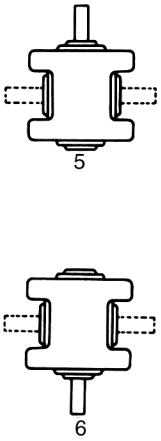
SHAFT ARRANGEMENTS



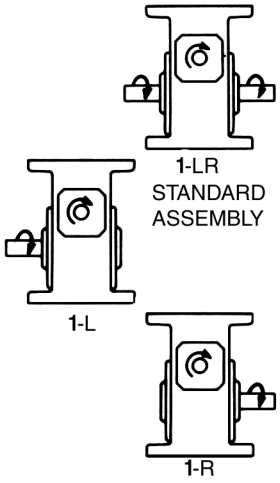
MOUNTING POSITIONS



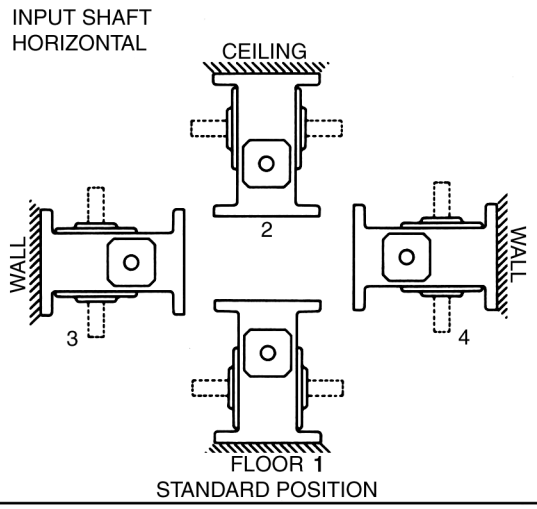
INPUT SHAFT VERTICAL



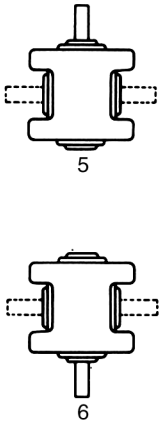
SHAFT ARRANGEMENTS



MOUNTING POSITIONS



INPUT SHAFT VERTICAL



To Order, Specify:
Example: 10W-T30, 1-LR, position5

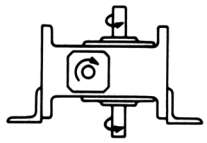
No extra charge for Standard Position shaft arrangements.

Series ..... as, W Series
Type ..... as, B, T, or V
Size..... as, 10, 13, or 18

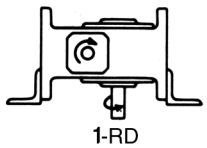
Ratio ..... as, 30:1
Shaft Arrangement ..... as, 1-LR
Mounting Position as, Input Shaft Vertical, Up, position 5

W-V Shaft Arrangements

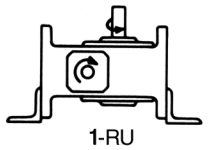
SHAFT ARRANGEMENTS



1-RUD
STANDARD ASSEMBLY



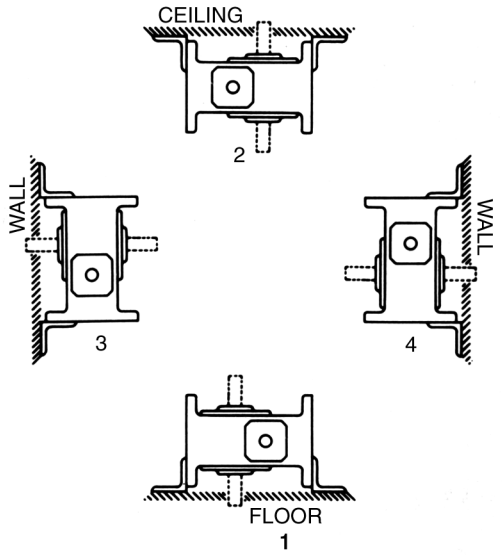
1-RD



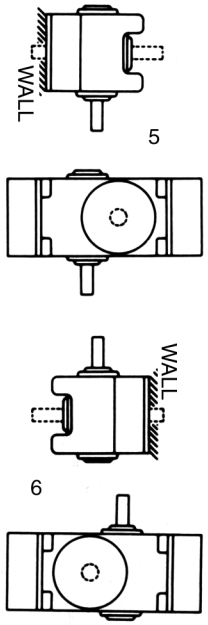
1-RU

MOUNTING POSITIONS

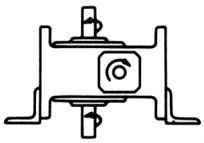
INPUT SHAFT HORIZONTAL



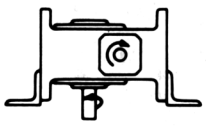
INPUT SHAFT VERTICAL



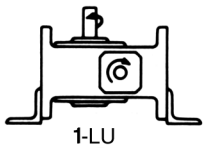
SHAFT ARRANGEMENTS



1-LUD



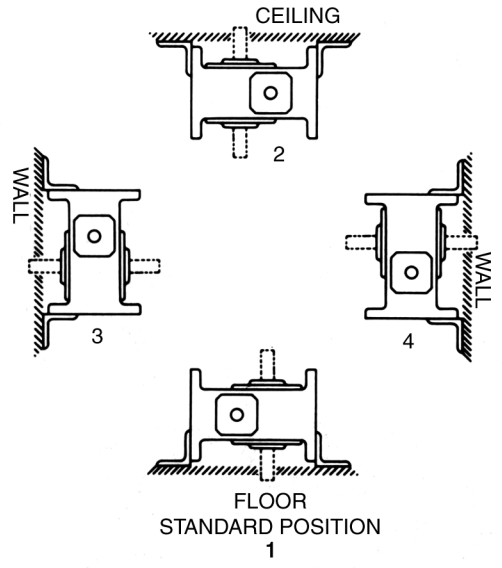
1-LD



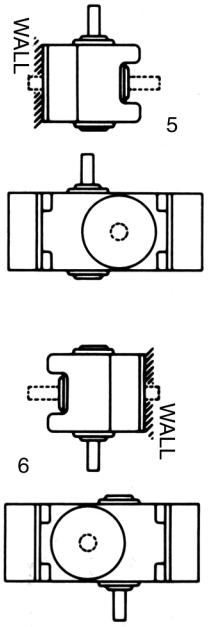
1-LU

MOUNTING POSITIONS

INPUT SHAFT HORIZONTAL



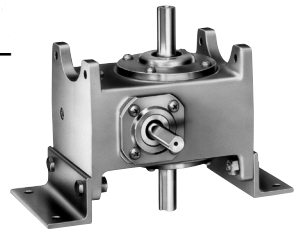
INPUT SHAFT VERTICAL



Angle brackets shown are for illustration purposes and are not included with the reducer

MODEL W TYPE V

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



To Order, Specify:
Example: 10W-T30, 1-LD, position5

No extra charge for Standard Position shaft arrangements.

Series.....as, W Series
Type ..... as, B, T, or V
Size..... as, 10, 13, or 18

Ratio..... as, 30:1
Shaft Arrangement .....as, 1-LD
Mounting Positionas, Input Shaft Vertical, Up, position 5

Lubrication

For enclosed worm gear units only. A worm gear unit is only as good as the oil which is used. During the first few days of operation, a worm gear unit will run hot. Unless the temperature exceeds 200 degrees F. there is no cause for alarm.

The oils shown below are typical. Any make of oil meeting American Gear Manufactureers Association (AGMA) standards #7C & #8C will be satisfactory. Consult Application Engineering (1 800 626 2093) if you have any questions.

Ambient Temp. 15° to 60°F	Ambient Temp. 50° to 125°F
AGMA #7C	AGMA #8C

The following are some general recommendations regarding relubrication. Your experience in your specific application is the best determination of relubrication intervals.

Maintenance Schedule:

1. Change initial oil fill after 2 weeks.
2. Change oil every 6 to 12 months depending on service conditions.

Additional Lubrication notes:

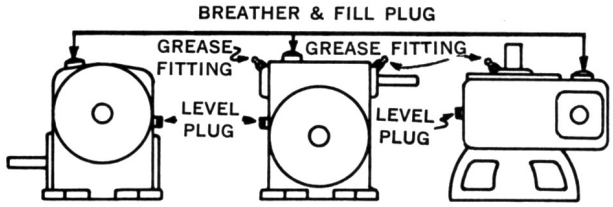
1. E.P. oils are not preferred. If an E.P. oil must be used, customer must determine that it is not corrosive to a bronze gear.
2. For ambient temperatures outside of these temperature ranges, contact Application Engineering.
3. Units running at slow speeds should carry extra high oil level contact Application Engineering.
4. For slow input speeds (less than 100 RPM) use AGMA #8C oil in ambient temperatures of 15 to 60 degrees F.

Grease Fittings:

1. Grease every 100 hours of running time with about 3/8” ball of grease meeting NLGI #2 standards.
2. Do not over-lubricate.

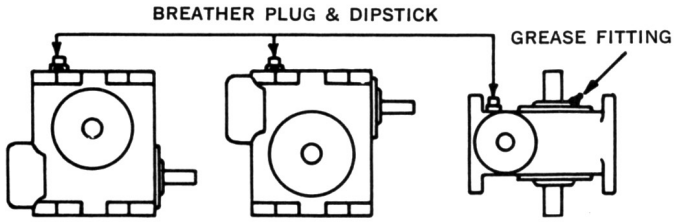
Lubrication

Lubricating Instructions - Reducers Other Than "RW"



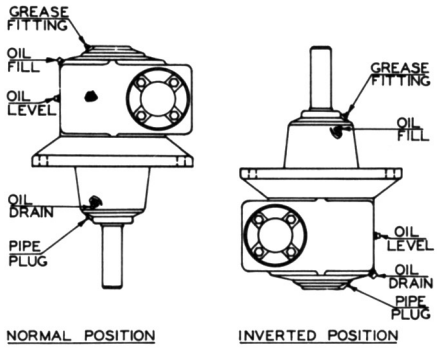
Many Morse® units are equipped with plug type oil holes. Remove level plug and fill unit with oil until oil runs out level hole. Breather and fill plug is at top of unit. Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time.

Lubricating Instructions - "RW" Reducers



RW units are equipped with a Breather-dipstick fill plug. This fill plug should always be located at top of unit. Fill unit with oil to appropriate oil level line as indicated on dipstick. Units equipped with special dipsticks: fill with oil so dipstick dips into oil 1/4". Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time. When mounting units in inverted position or on walls, be sure all bearings get proper lubrication. Miter boxes do not require breather plugs.

Lubrication fittings VX conveyor drives

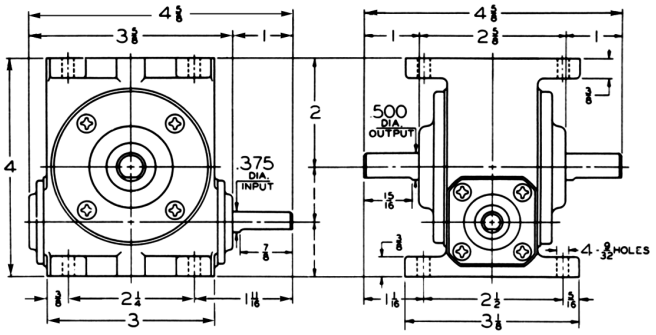


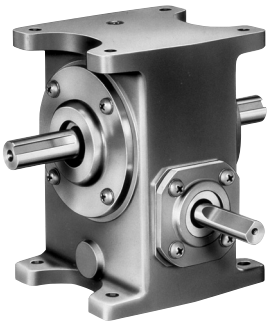
Oil Capacities Chart - U.S.A. Measure - Approximate Quantities, Fill To Oil Level

10WB ..... 1/4 Pt.	50RWT ..... 1 3/4 Gals.	50DV ..... 1 3/4 Gals.	13GCV ..... 1/2 Pt.	35SA,SF ..... 3 Qts.	40DSA,DSF ..... 4 1/4 Qts.
10WT ..... 1/4 Pt.	50WDB ..... 2 1/4 Gals.	60V ..... 2 1/2 Gals.	Low Base ..... 1/2 Pt.	35GSA,GSF ..... 3 Qts.	40GDSA,
10WV ..... 1/4 Pt.	50WDV ..... 2 Gals.	60DV ..... 2 3/4 Gals.	18GCT ..... 3/4 Pt.	40SA.SF ..... 3 1/2 Qts.	GDSF ..... 4 1/4 Qts.
13WB ..... 1/2 Pt.	60RWB ..... 2 3/4 Gals.	70V ..... 4 Gals.	18GCV ..... 1 Pt.	40GSA,GSF ..... 3 1/2 Qts.	40GCDB ..... 3 3/4 Qts.
13WT ..... 1/2 Pt.	60RWT ..... 3 Gals.	70DV ..... 4 1/2 Gals.	Low Base ..... 1 Pt.	50SA ,SF ..... 1 3/4 Gals.	50DSA,DSF ..... 2 1/4 Gals.
13WV ..... 1/2 Pt.	60RWV ..... 2 1/2 Gals.	30VX ..... Std. 3 Qts.	20GCT ..... 1 1/2 Pts.	50GSA,GSF ..... 1 3/4 Gals.	50GDSA,
18WB ..... 1 Pt.	60WDB ..... 3 3/4 Gals.	Inverted ..... 2 Qts.	20GCV ..... 1 Qt.	60SA, SF ..... 2 3/4 Gals.	GDSF ..... 2 1/4 Gals.
18WT ..... 3/4 Pt.	60WDV ..... 3 1/2 Gals.	30DVX ..... Std. 3 3/4 Qts.	Low Base ..... 1 Qt.	60GSA,GSF ..... 2 3/4 Gals.	50GCDB ..... 2 1/4 Gals.
18WV ..... 1 Pt.	70RWB ..... 5 3/4 Gals.	Inverted ..... 2 3/4 Qts.	25GCT ..... 1 1/4 Qts.	13GCDB ..... 3/4 Pt.	50GCDV ..... 1 3/4 Gals.
20WB ..... 1 3/4 Pts.	70RWT ..... 5 3/4 Gals.	35VX ..... Std. 4 1/4 Qts.	25GCV ..... 1 1/2Qts.	13GCDV ..... 3/4 Pt.	60DSA,DSF ..... 3 3/4 Gals.
20WT ..... 1 1/2 Pts.	70RWV ..... 4 1/2 Gals.	Inverted ..... 3 3/4 Qts.	Low Base ..... 1 1/2 Qts.	18DSA,DSF ..... 1 Pt.	60GDSA,
20WV ..... 1 1/2 Pts.	70WDB ..... 7 Gals.	35DVX ..... Std. 4 1/2 Qts.	30GCT ..... 2 Qts.	18 GDSA,	GDSF ..... 2 3/4 Gals.
20WDB ..... 2 Pts.	70WDV ..... 6 1/4 Gals.	Inverted ..... 4 Qts.	30GCV ..... 2 1/2 Qts.	GDSF ..... 1 Pt.	60GCDB ..... 3 3/4 Gals.
20WDV ..... 1 3/4 Pts.	80RWB ..... 7 1/2 Gals.	40VX ..... Std. 1 1/4 Gals.	Low Base ..... 2 1/2 Qts.	18GCDB ..... 1 Pt.	60GCDV ..... 2 3/4 Gals.
25RWB ..... 2 1/2 Pts.	80RWT ..... 7 1/2 Gals.	Inverted ..... 1 Gal.	35GCT ..... 3 Qts.	18GCDV ..... 1 Pt.	30GCDVX.. Std. 3 3/4 Qts.
25RWT ..... 2 1/2 Pts.	80WDB ..... 10 Gals.	40DVX ..... Std. 1 1/2 Gals.	35GCV ..... 3 3/4 Qts.	20DSA,DSF ..... 1 Qt.	Inverted ..... 2 3/4 Qts.
25RWV ..... 2 1/4 Pts.	80WDV ..... 9 Gals.	Inverted ..... 1 1/4 Gals.	Low Base ..... 3 3/4 Qts.	20GDSA,GDSF ..... 1 Qt.	35GCDVX.. Std. 4 1/2 Qts.
25WDB ..... 3 1/4 Pts.	100RWB ..... 15 1/2 Gals.	50VX ..... Std. 2 Gals.	40GCT ..... 3 1/2Qts.	20GCDB ..... 1 Qt.	Inverted ..... 4 Qts.
25WDV ..... 3 Pts.	100RWT ..... 11 1/2 Gals.	Inverted ..... 1 3/4 Gals.	40GCV ..... 3 1/2 Qts.	20GCDV ..... 1 Qt.	40GCDVX. Std. 1 1/2 Gals.
30RWB ..... 3 3/4 Pts.	100RWV ..... 10 Gals.	50DVX ..... Std. 2 1/4 Gals.	Low Base ..... 3 1/2 Qts.	25DSA,DSF ..... 3 1/4 Pts.	Inverted ..... 1 1/4 Gals.
30RWT ..... 3 3/4 Pts.	100WDB ..... 19 Gals.	Inverted ..... 2 Gals.	50GCT ..... 1 3/4 Gals.	25GDSA,	50GCDVX Std. 2 1/4 Gals.
30WDB ..... 2 1/2 Qts.	100WDV ..... 12 1/2 Gals.	60VX ..... Std. 3 3/4 Gals.	60GCT ..... 2 3/4 Gals.	GDSF ..... 3 1/4 Pts.	Inverted ..... 2 Gals.
30WDV ..... 2 1/4 Qts.	18V ..... 1 Pt.	Inverted ..... 2 3/4 Gals.	50GCV ..... 1 1/2 Gals.	25GCDB ..... 3 1/4 Pts.	60GCDVX Std. 4 1/4 Gals.
35RWB ..... 3 1/4 Qts.	20V ..... 1 1/2 Pts.	60DVX ..... Std. 4 1/4 Gals.	Low Base ..... 1 1/2 Gals.	25GCDV ..... 1 1/4 Qts.	Inverted ..... 3 1/4 Gals.
35RWT ..... 3 1/2 Qts.	20DV ..... 1 Qt.	Inverted ..... 3 1/4 Gals.	60GCV	30DSA,DSF ..... 2 1/2 Qts.	4M ..... 3/4 Pt.
35RWV ..... 2 1/2 Qts.	25V ..... 1 Qt.	70VX ..... Std. 6 Gals.	Low Base ..... 2 3/4 Gals.	30GDSA,	6M ..... 1 Qt.
35WDB ..... 3 3/4 Qts.	25DV ..... 1 1/4 Qts.	Inverted ..... 5 Gals.	18SA,SF ..... 3/4 Pts.	GDSF ..... 2 1/2 Qts.	8M ..... 2 Qts.
35WDV ..... 3 Qts.	30V ..... 1 3/4 Qts.	70DVX ..... Std. 7 Gals.	18GSA,GSF ..... 3/4 Pts.	30GCDB ..... 2 1/2 Qts.	12M ..... 1 1/2 Gals.
40RWB ..... 3 1/2 Qts.	30DV ..... 2 1/2 Qts.	Inverted ..... 5 1/2 Gals.	20SA,SF ..... 1 1/2 Pts.	30GCDV ..... 2 1/2 Qts.	
40RWT ..... 3 1/2 Qts.	35V ..... 2 1/4 Qts.	90VX ..... 11 Gals.	20GSA,GSF ..... 1 1/2 Pts.	35DSA,DSF ..... 2 3/4 Qts.	
40RWV ..... 3 Qts.	35DV ..... 2 3/4 Qts.	90DVX ..... 12 1/2 Gals.	25SA,SF ..... 1 1/4 Qts.	35GDSA,	
40WDB ..... 3 3/4 Qts.	40V ..... 3 1/2 Qts.	110VX ..... 20 Gals.	25GSA,GSF ..... 1 1/4 Qts.	GDSF ..... 2 3/4 Qts.	
40WDV ..... 3 1/4 Qts.	40DV ..... 4 1/4 Qts.	110DVX ..... 18 1/2 Gals.	30SA,SF ..... 2 Qts.	35GCDB ..... 3 3/4 Qts.	
50RWB ..... 1 3/4 Gals.	50V ..... 1 1/2 Gals.	13GCT ..... 1/2 Pt.	30GSA,GSF ..... 2 Qts.	35GCDV ..... 2 3/4 Qts.	

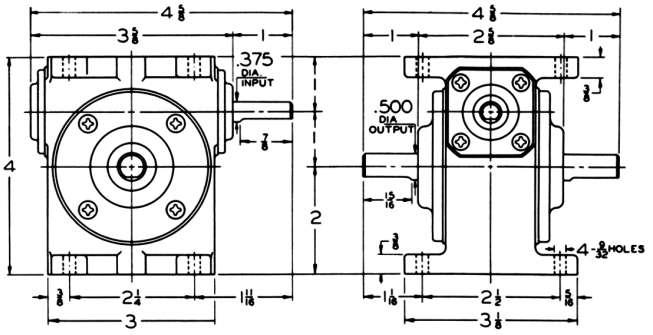
W-B, W-T and W-V Series

10W-B
Net wt. 3 lbs.
1.00" C.D.

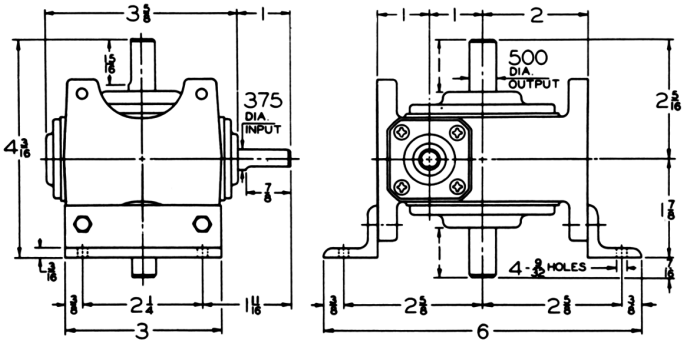


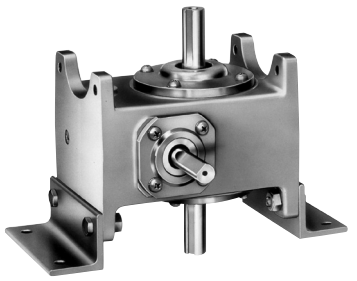


10W-T
Net wt. 3 lbs.
1.00" C.D.



10W-V
Net wt. 3 lbs.
1.00" C.D.





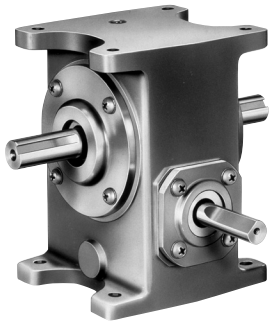
Angle brackets are not included with the reducer.

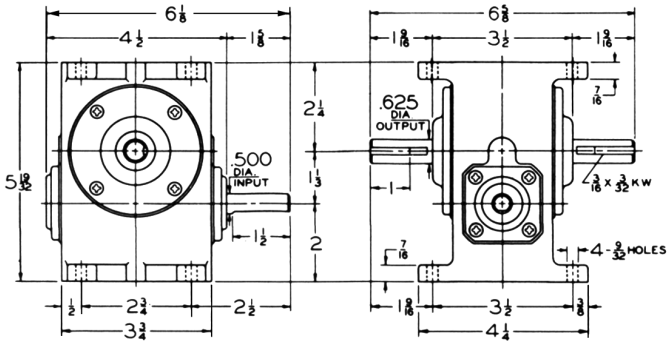
1.00 Service Factor* - Single Reduction Wormgear - Models 10W-B, 10W-T and 10W-V

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
10	.32	175.0	97	.23	115.0	106	.19	87.0	111	.13	58.0	115	.07	30.0	119	.03	10.0	120
15	.24	116.6	104	.18	76.6	113	.14	58.0	117	.10	38.7	122	.06	20.0	127	.02	6.6	125
20	.19	87.5	104	.14	57.5	113	.11	43.5	117	.08	29.0	121	.04	15.0	124	.02	5.0	125
25	.16	70.0	104	.12	46.0	112	.09	34.8	115	.07	23.2	118	.04	12.0	123	.01	4.0	119
30	.15	58.4	107	.11	38.4	116	.09	29.0	121	.06	19.3	125	.04	10.0	130	.01	3.3	133
40	.11	43.7	103	.09.	28.7	112	.07	21.8	116	.05	14.5	120	.03	7.5	124	.01	2.5	126
50	.09	35.0	99	.07	23.0	106	.06	17.4	109	.04	11.6	113	.02	6.0	113	.01	2.0	118
60	.08	29.2	92	.06	19.2	99	.05	14.5	102	.03	9.7	105	.02	5.0	104	.01	1.6	102

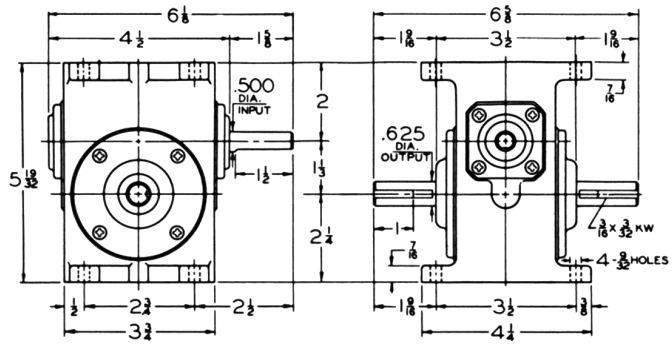
▲ Inch-pounds
Overhung load (O.H.L.) 165 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to pages D-7 and D-8 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-B, W-T and W-V Series

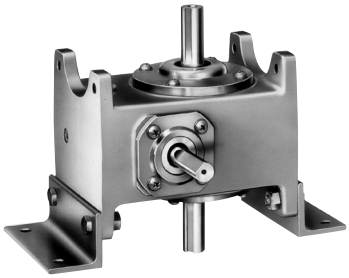


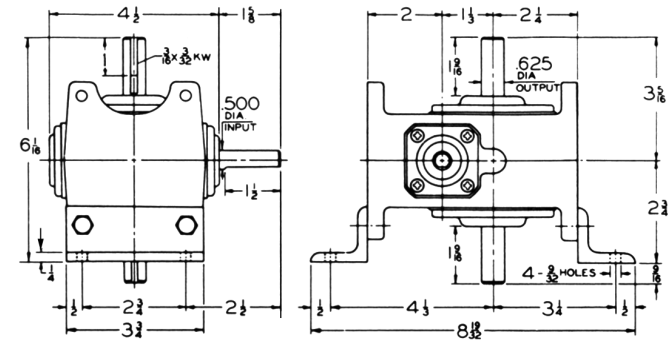


13W-B
Net wt. 6 lbs.
1.33" C.D.



13W-T
Net wt. 6 lbs.
1.33" C.D.





13W-V
Net wt. 6 lbs.
1.33" C.D.

Angle brackets are not included with the reducer.

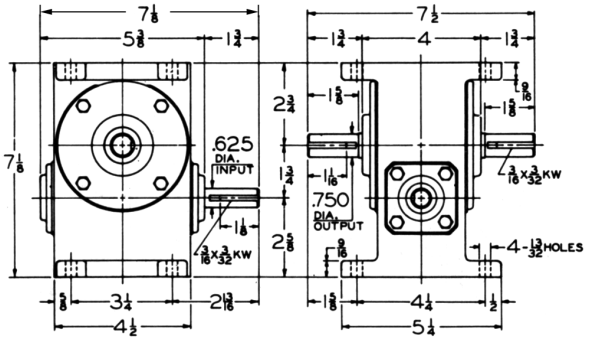
1.00 Service Factor* - Single Reduction Wormgear - Models 13W-B, 13W-T and 13 W-V

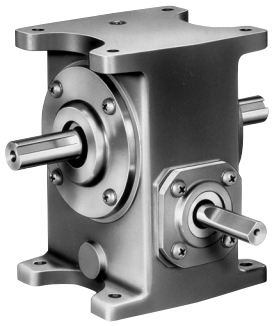
TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	1.01	350.0	165	.77	230.0	190	.63	174.0	202	.45	116.0	215	.25	60.0	228	.09	20.0	237
7.5	.79	233.3	189	.60	153.3	214	.49	116.0	227	.35	77.3	241	.20	40.0	253	.07	13.3	264
10	.65	175.0	203	.50	115.0	229	.40	87.0	242	.29	58.0	256	.16	30.0	270	.06	10.0	277
15	.49	116.6	217	.38	76.6	244	.31	58.0	258	.22	38.7	272	.13	20.0	285	.05	6.6	293
20	.39	87.5	220	.29	57.5	244	.24	43.5	257	.17	29.0	271	.10	15.0	281	.04	5.0	286
25	.32	70.0	219	.24	46.0	242	.20	34.8	254	.14	23.2	266	.08	12.0	276	.03	4.0	281
30	.29	58.4	223	.23	38.4	251	.19	29.0	264	.14	19.3	278	.08	10.0	294	.03	3.3	303
40	.23	43.7	219	.18	28.7	243	.15	21.8	256	.11	14.5	268	.06	7.5	278	.02	2.5	283
50	.19	35.0	209	.15	23.0	231	.12	17.4	241	.09	11.6	253	.05	6.0	265	.02	2.0	269
60	.16	29.2	196	.13	19.2	221	.11	14.5	230	.08	9.7	243	.05	5.0	252	.02	1.6	258

▲ Inch-pounds
Overhung load (O.H.L.) 232 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to pages D-7 and D-8 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

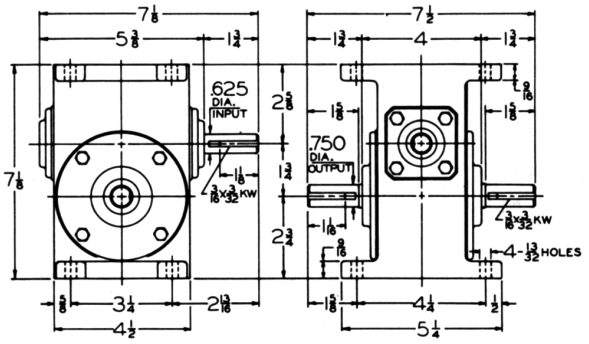
W-B, W-T and W-V Series

18W-B
Net wt. 9 lbs.
1.75" C.D.

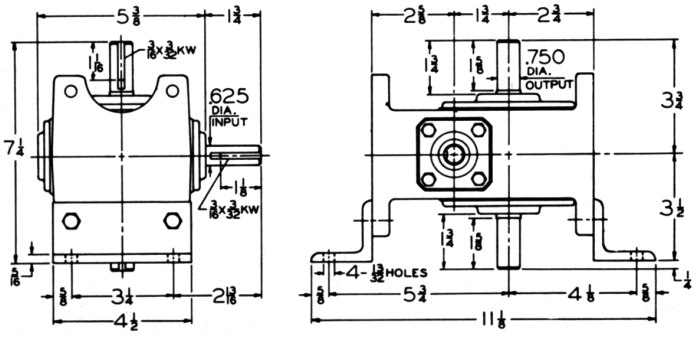


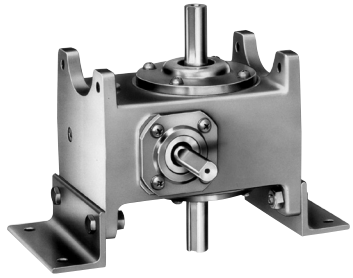


18W-T
Net wt. 9 lbs.
1.75" C.D.



18W-V
Net wt. 9 lbs.
1.75" C.D.





Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - Models 18W-B, 18W-T and 18W-V

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.17	350.0	359	1.73	230.0	430	1.44	174.0	468	1.06	116.0	509	.61	60.0	551	.22	20.0	580
7.5	1.71	233.3	415	1.35	153.3	490	1.12	116.0	530	.82	77.3	571	.47	40.0	614	.17	13.3	643
10	1.42	175.0	447	1.12	115.0	527	.93	87.0	567	.68	58.0	610	.39	30.0	654	.14	10.0	682
15	1.06	116.6	479	.54	76.6	561	.70	58.0	603	.52	38.7	648	.30	20.0	693	.11	6.6	727
20	.85	87.5	490	.67	57.5	570	.56	43.5	611	.41	29.0	654	.24	15.0	698	.09	5.0	722
25	.71	70.0	494	.56	46.0	570	.47	34.8	608	.35	23.2	649	.20	12.0	688	.08	4.0	715
30	.63	58.4	494	.51	38.4	578	.43	29.0	620	.32	19.3	667	.19	10.0	711	.07	3.3	745
40	.50	43.7	489	.41	28.7	567	.34	21.8	607	.26	14.5	648	.15	7.5	694	.06	2.5	715
50	.41	35.0	471	.33	23.0	543	.28	17.4	578	.21	11.6	616	.13	6.0	658	.05	2.0	679
60	.34	29.2	446	.28	19.2	512	.24	14.5	545	.18	9.7	578	.11	5.0	615	.04	1.6	630

▲ Inch-pounds
Overhung load (O.H.L.) for 18W-B, W-T is 325 pounds, for 18W-V is 274 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to pages D-7 and D-8 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

R-W and WD Series Specifications

The RW, PoweRgear® series reducer is a universal mounting, heavy duty, fan cooled, single reduction, speed reducer. This reducer may be mounted in any of the three positions, B, T, or V, by rearranging the various lubrication fittings as on page D-10. The reducer may be mounted in the vertical (V) position directly on the machine structure eliminating the angle feet. The angle feet may be made from standard angle iron rather than having them furnished by the factory. When the reducer is specifically ordered as a vertical model from the factory, double oil seals will be furnished for the down shaft.

The WD series, double reduction, reducer is made from the basic RW model. The fan is omitted as this unit runs at speeds that are too slow for effective fan cooling.

The 20W model is not fan cooled as tests have proven that the housing is sufficiently large to cool properly without a fan.

The housing is high grade alloy cast iron. The worm is case hardened and ground alloy steel of integral shaft design. The gear is cast gear bronze of special alloy with generated teeth, and is keyed to the output shaft. The output shaft is high quality, medium carbor steel, ground to close tolerances. The worm and output shaft are mounted on anti-friction bearings. All shaft extensions are equipped with lip type, synthetic element, oil seals.

Shaft arrangements marked standard will be furnished unless some other assembly is specified. The other assemblies shown will be furnished at no additional cost. Shaft diameter tolerance +.000" -.001".

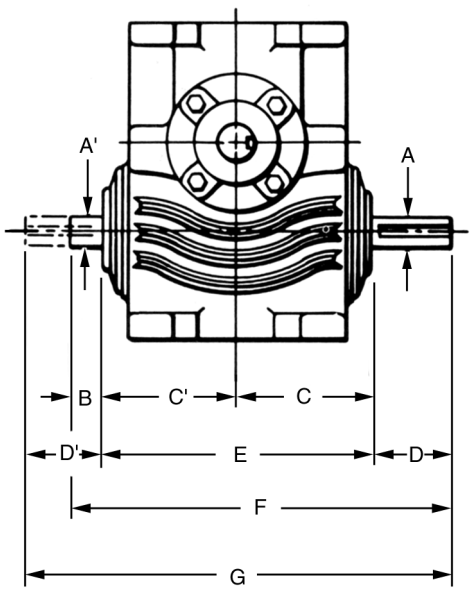
PoweRgear without fan and fan housing

The PoweRgear units when used with the fan can carry the full horsepower rating obtained by using the latest AGMA rating practices.

If the RW, PoweRgear unit is used without the fan, the unit may require some adjustment in rating because of thermal limitations. The "V" ratings may be used for RW units without a fan.

The accompanying drawing and chart show the physical dimensions of the RW PoweRgear units with fan and fan housing removed.

Dimensions



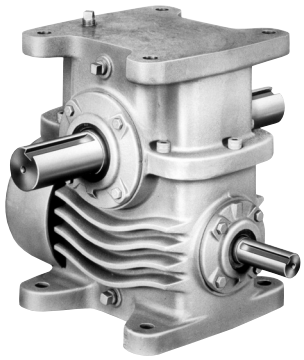
	25W	30W	35W	40W	50W	60W	70W
A A'	3/4	1	1	1 1/8	1 3/8	1 1/2	1 3/4
*B	1 5/16	1	1	1 3/8	1 7/16	1 5/8	1 7/8
C	4 1/16	4 3/8	4 7/8	5 7/16	6 13/16	8 3/16	9 9/16
C'	4 1/16	4 3/8	4 7/8	5 7/16	6 13/16	9 1/16	9 15/16
D & D'	2	2 5/8	2 3/4	12 15/16	3 9/16	3 7/8	4 1/2
E	8 1/8	8 3/4	9 3/4	10 7/8	13 5/8	17 1/4	19 1/2
F	11 1/16	12 3/8	13 1/2	15 3/16	18 5/8	22 3/4	25 7/8
G	12 1/8	14	15 1/4	16 3/4	20 3/4	25	28 1/2

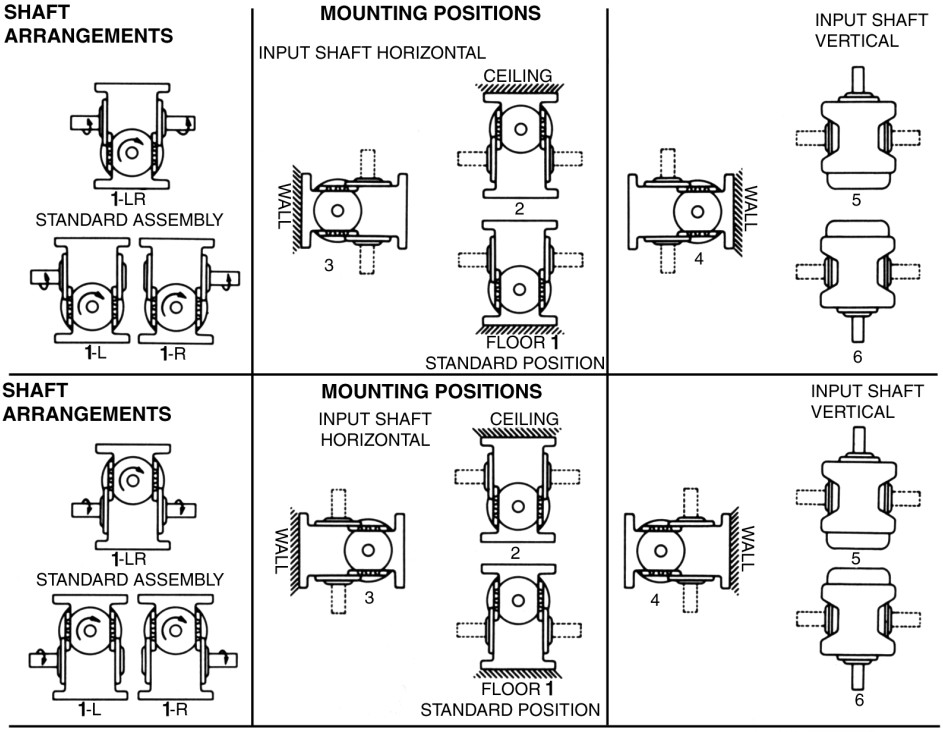
* Dimension B is stub shaft length when fan and fan housing are removed from a standard RW unit. When a unit is ordered from the factory without fan and fan housing this stub shaft is also eliminated. If stub shaft is wanted, order should so state. Units with dimension D' are special and require a longer delivery time with a price addition.

RW-B, RW-T and RW-V Shaft Arrangements

Model RW Type B and Type T

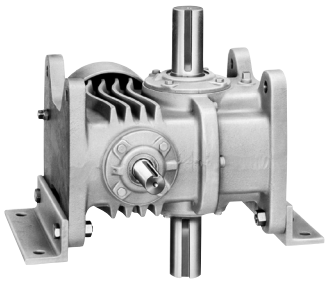
Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



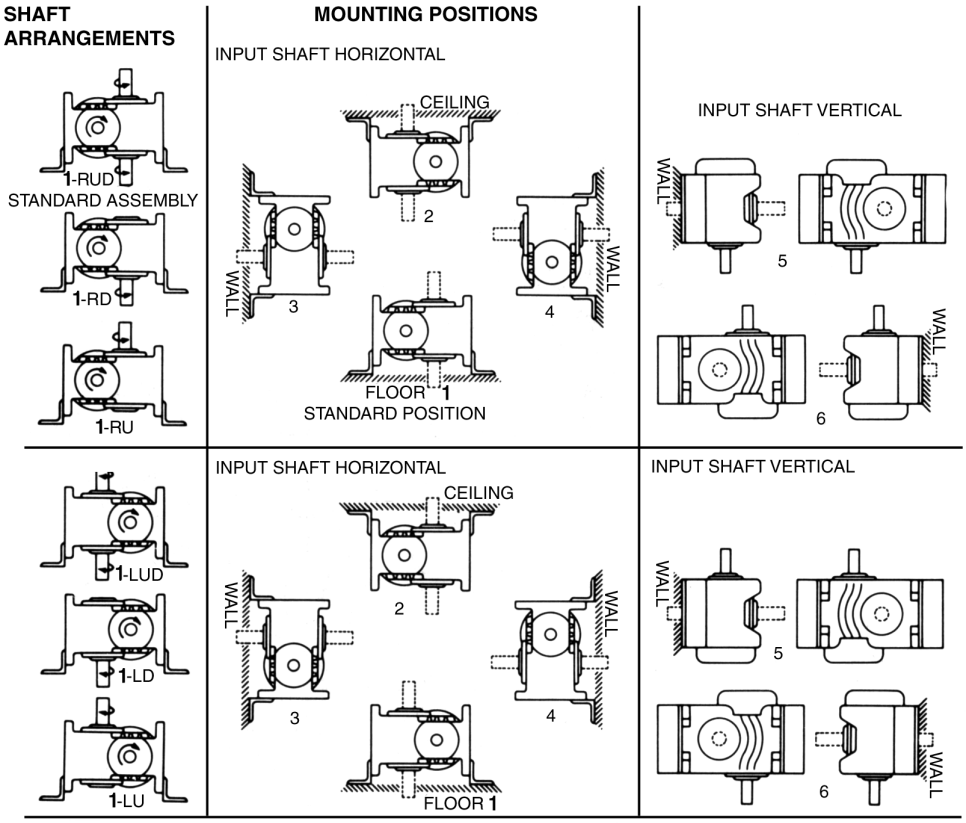


Model RW Type V

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Angle brackets are not included with the reducer.



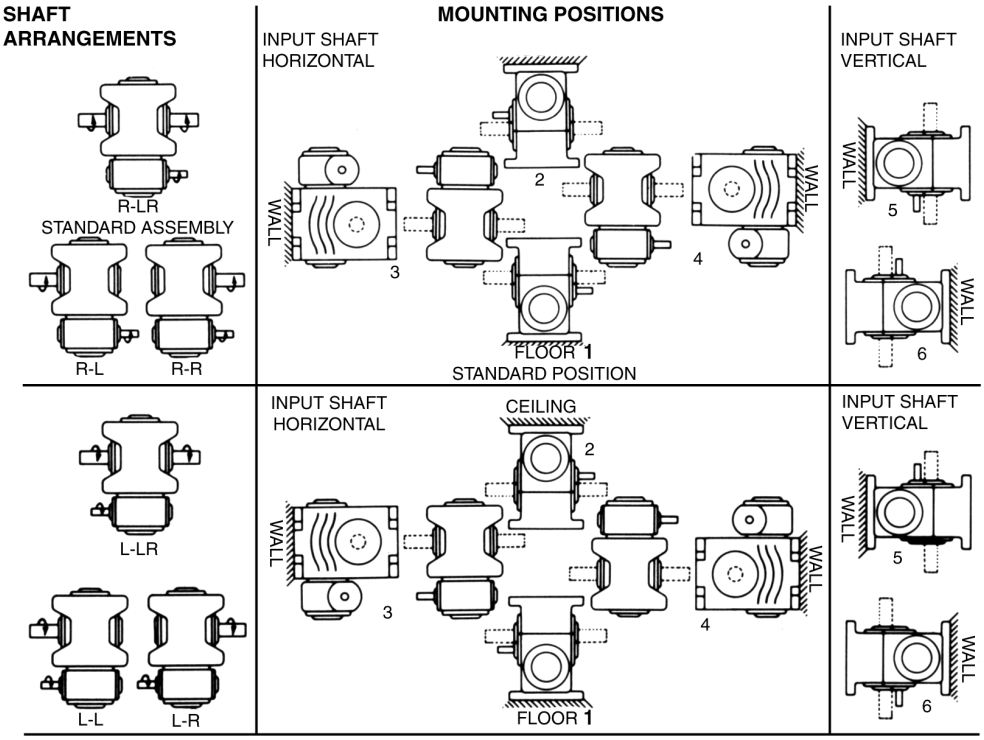
Shaft Tolerances
+ .000
-.001

No extra charge for Standard Position shaft arrangements.

To Order, Specify:
Example: 30RW-T30, 1-LR, position3

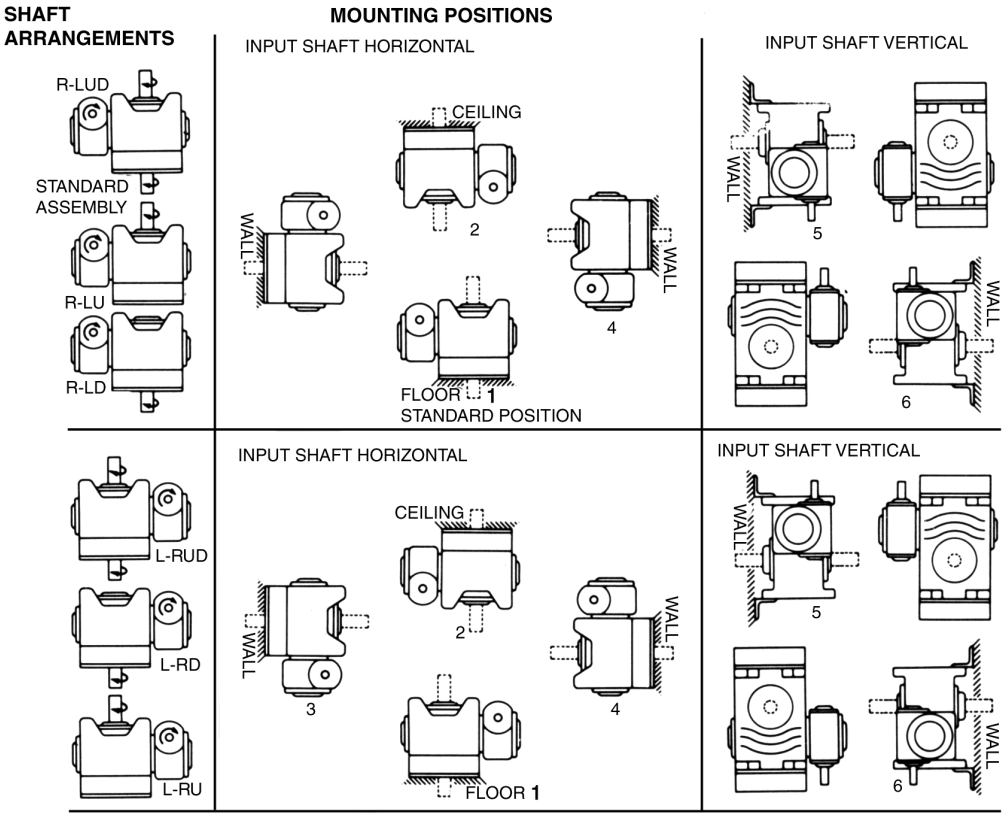
Series ..... as, Series RW
Type ..... as, RW-B, T, or V
Size ..... as, 30
Ratio ..... as, 40:1
Shaft Arrangement ..... as, 1-LR
Mounting Positions ..... as, Wall 3

W-DB and W-DV Shaft Arrangements



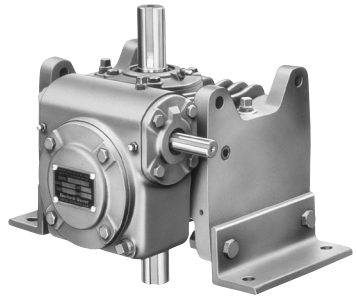
Model W Type DB

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Model W Type DV

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Angle brackets are not included with the reducer.

Shaft Tolerances
+ .000
-.001

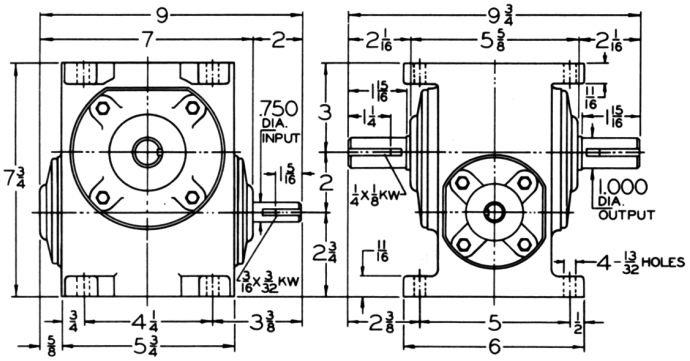
To Order, Specify:
Example: 30RW-T40, 1-LD, position3

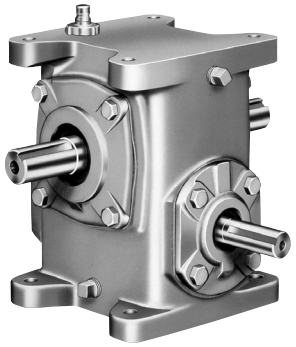
Series .....as, Series W
Type .....as, DB or DV
Size..... as, 40
Ratio..... as, 250:1
Shaft Arrangement ..... as, L-LR
Mounting Position ..... as, Floor 1

No extra charge for Standard Position shaft arrangements.

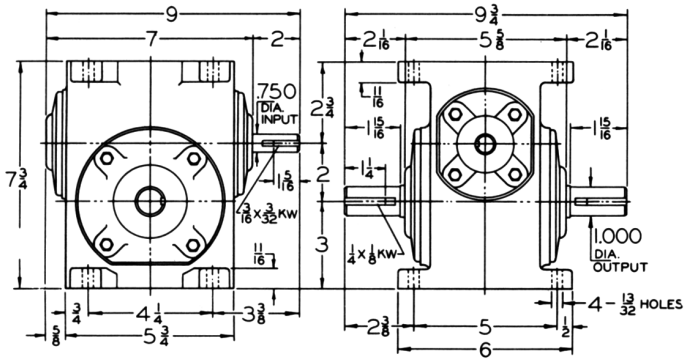
W-B, W-T and W-V Series

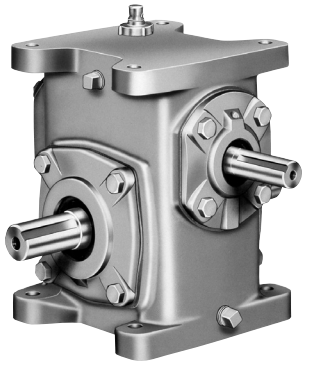
20W-B
Net wt. 33 lbs.
2.0" C.D.



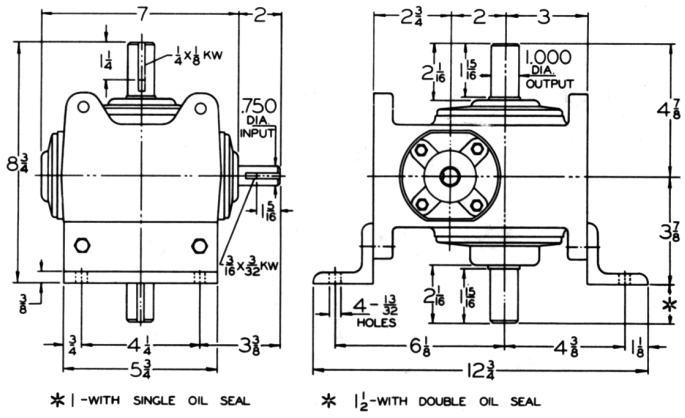


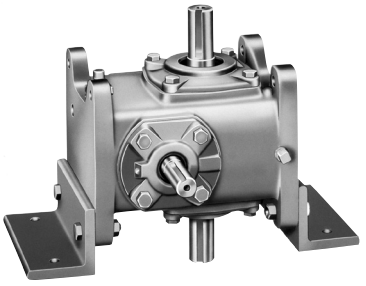
20W-T
Net wt. 33 lbs.
2.0" C.D.





20W-V
Net wt. 33 lbs.
2.0" C.D.





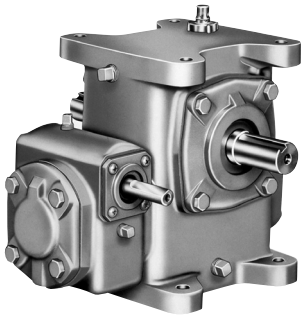
Angle brackets are not included with the reducer.

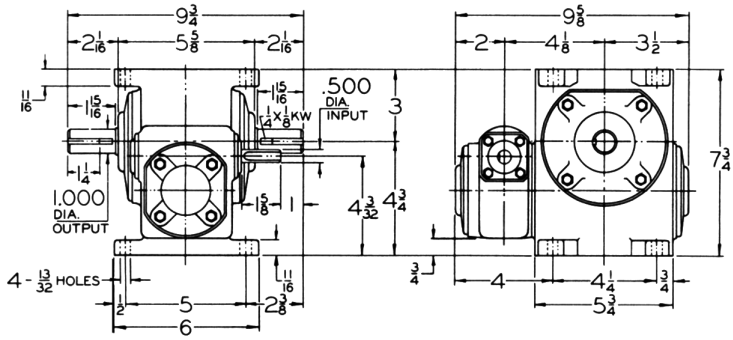
1.00 Service Factor* - Single Reduction Wormgear - Models 20W-B, 20W-T and 20W-V

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.92	350.0	487	2.35	230.0	588	1.96	174.0	643	1.45	116.0	702	.83	60.0	763	.30	20.0	808
7.5	2.31	233.3	568	1.84	153.3	676	1.52	116.0	732	1.12	77.3	793	.64	40.0	854	.23	13.3	896
10	1.92	175.0	616	1.52	115.0	728	1.26	87.0	785	.92	58.0	847	.53	30.0	910	.19	10.0	954
15	1.44	116.6	663	1.14	76.6	779	.94	58.0	837	.70	38.7	902	.40	20.0	964	.15	6.6	1011
20	1.13	87.5	673	.88	57.5	779	.73	43.5	831	.54	29.0	890	.31	15.0	944	.12	5.0	987
25	.94	70.0	677	.73	46.0	777	.61	34.8	827	.45	23.2	882	.26	12.0	936	.10	4.0	971
30	.84	58.4	685	.67	38.4	803	.57	29.0	862	.42	19.3	928	.25	10.0	992	.10	3.3	1037
40	.64	46.7	672	.52	28.7	776	.43	21.8	828	.32	14.5	883	.19	7.5	937	.07	2.5	979
50	.53	35.0	646	.42	23.0	742	.35	17.4	788	.27	11.6	839	.16	6.0	887	.06	2.0	921
60	.44	29.2	610	.35	19.2	699	.30	14.5	741	.22	9.7	789	.13	5.0	835	.05	1.6	869

▲ Inch-pounds
Overhung load (O.H.L.) for 20W-B, W-T is 325 pounds, for 20W-V is 274 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to pages D-7 and D-8 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

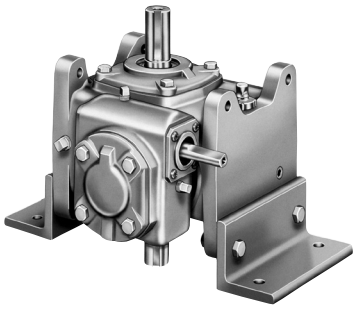
Series W-DB and W-DV



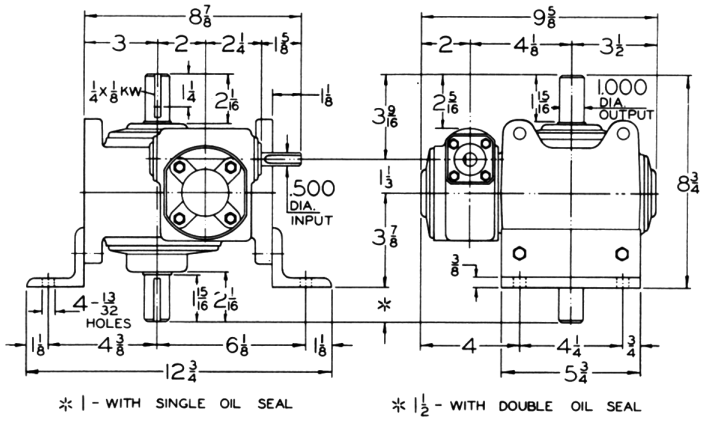


20W-DB
Net wt. 24 lbs.
2.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



20W-DV
Net wt. 24 lbs.
2.0" C.D.

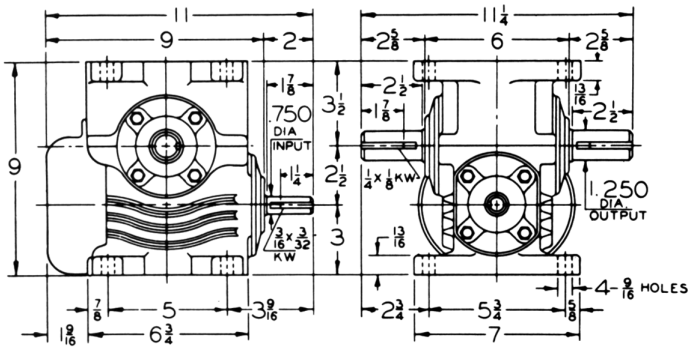
1.00 Service Factor* - Double Reduction Wormgear - Models 20W-DB and 20W-DV
1.33" Centers Primary - 2.0" Centers Secondary

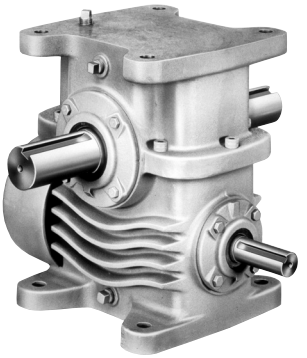
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Seconday Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	.50	23.33	956	.35	15.33	984	.28	11.60	997	.20	7.73	1010
100	5	20	.39	17.50	937	.27	11.50	962	.21	8.70	973	.15	5.80	985
125	5	25	.32	14.00	929	.23	9.20	952	.18	6.96	963	.13	4.64	975
150	10	15	.29	11.37	996	.20	7.67	1010	.16	5.80	1017	.11	3.87	1024
200	10	20	.22	8.75	973	.16	5.75	986	.12	4.35	991	.09	2.90	997
250	10	25	.18	7.00	963	.13	4.60	975	.10	3.48	980	.07	2.32	986
300	15	20	.16	5.83	985	.11	3.83	994	.09	2.90	997	.06	1.93	1001
400	20	20	.13	4.38	991	.09	2.88	998	.07	2.18	1000	.05	1.45	1003
500	25	20	.11	3.50	995	.08	2.30	1000	.06	1.74	1002	.04	1.16	1005
600	30	20	.10	2.92	997	.07	1.92	1002	.06	1.45	1003	.04	.97	1005
800	40	20	.08	2.19	1000	.06	1.44	1004	.05	1.09	1005	.03	.73	1006
1000	50	20	.07	1.75	1002	.05	1.15	1005	.04	.87	1006	.03	.58	1007
1200	60	20	.06	1.46	1003	.05	.96	1006	.04	.73	1006	.03	.48	1007
1500	25	60	.05	1.17	876	.04	.77	880	.03	.58	882	.02	.39	884
1800	30	60	.05	.97	878	.03	.64	882	.03	.48	883	.02	.32	885
2400	40	60	.04	.73	881	.03	.48	883	.02	.36	884	.02	.24	886
3000	50	60	.03	.58	882	.02	.38	884	.02	.29	885	.01	.19	886
3600	60	60	.03	.49	883	.02	.32	885	.02	.24	886	.01	.16	886

▲ Inch-pounds
Overhung load (O.H.L.) for 20W-DB is 702 pounds, for 20W-DV is 591 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

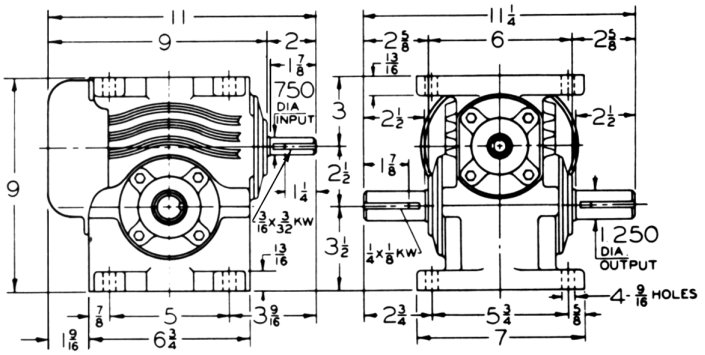
RW-B, RW-T and RW-V Series

25RW-B
Net wt. 48 lbs.
2.5" C.D.

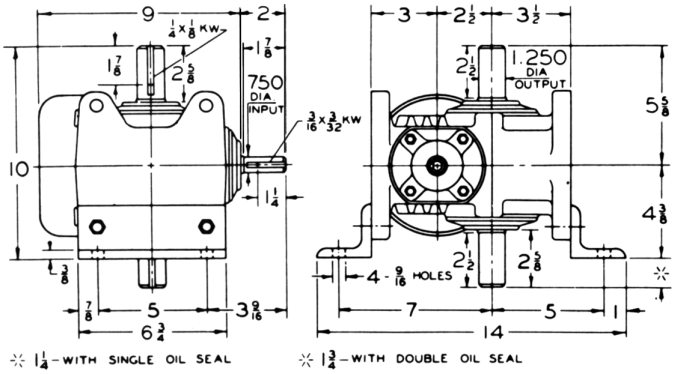


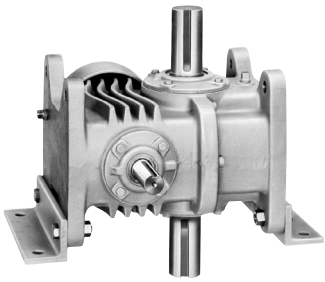


25RW-T
Net wt. 48 lbs.
2.5" C.D.



25RW-V
Net wt. 48 lbs.
2.5" C.D.





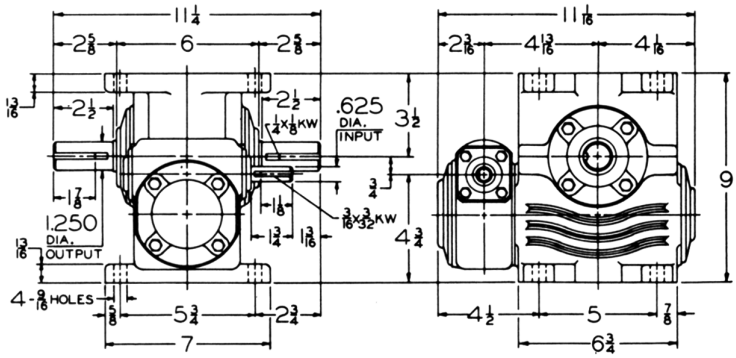
Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - 25RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	4.76	350.0	798	3.95	230.0	996	3.36	174.0	1112	2.54	116.0	1243	1.49	60.0	1379	.55	20.0	1479
7.5	3.82	233.3	946	3.12	153.3	1152	2.63	116.0	1277	1.97	77.3	1409	1.14	40.0	1545	.42	13.3	1644
10	3.18	175.0	1031	2.58	115.0	1253	2.17	87.0	1376	1.63	58.0	1510	.94	30.0	1648	.35	10.0	1751
15	2.37	116.6	1113	1.93	76.6	1344	1.63	58.0	1472	1.22	38.7	1610	.71	20.0	1750	.27	6.6	1855
20	1.88	87.5	1139	1.52	57.5	1364	1.28	43.5	1484	.96	29.0	1614	.56	15.0	1745	.21	5.0	1835
25	1.54	70.0	1140	1.24	46.0	1347	1.03	34.8	1454	.77	23.2	1569	.45	12.0	1683	.17	1.0	1765
30	1.37	58.4	1155	1.13	38.4	1390	.96	29.0	1518	.73	19.3	1659	.44	10.0	1797	.17	3.3	1897
40	1.07	43.7	1139	.88	28.7	1361	.75	21.8	1479	.58	14.5	1607	.34	7.5	1737	.14	2.5	1828
50	.86	35.0	1090	.70	23.0	1285	.59	17.4	1386	.45	11.6	1495	.27	6.0	1605	.11	2.0	1684
60	.70	29.2	1024	.57	19.2	1196	.48	14.5	1281	.36	9.7	1376	.22	5.0	1472	.09	1.6	1533

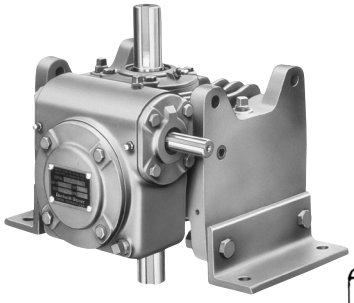
▲ Inch-pounds
Overhung load (O.H.L.) for 25RW-B, RW-T is 1211 pounds, for 25RW-V is 1030 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-DB and W-DV Series

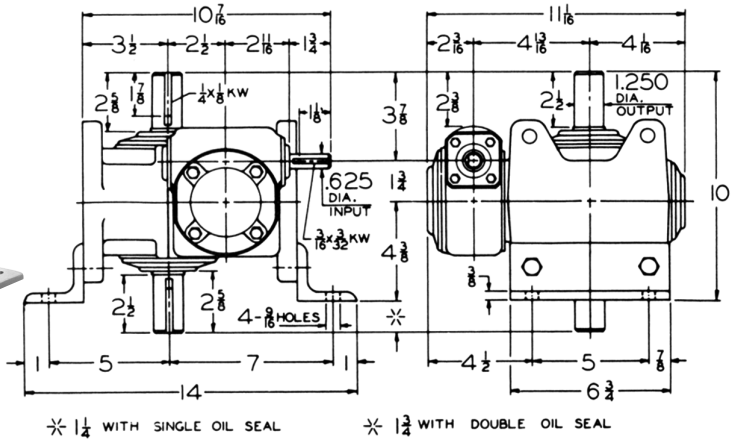


25W-DB
Net wt. 56 lbs.
2.5" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



25W-DV
Net wt. 56 lbs.
2.5" C.D.

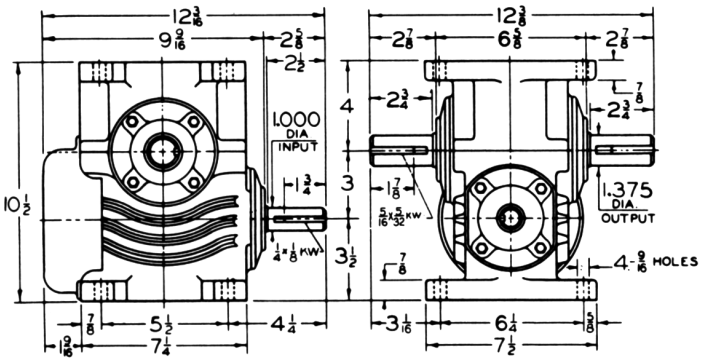
1.00 Service Factor* - Double Reduction Wormgear - Models 25W-DB & 25W-DV
1.75" Centers Primary - 2.5" Centers Secondary

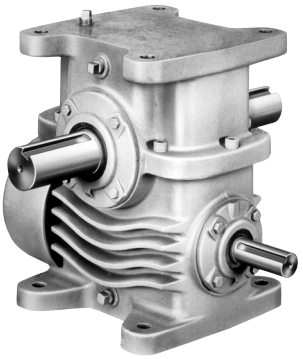
TORQUE and HORSEPOWER RATINGS														
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	.88	23.33	1728	.62	15.33	1790	.49	11.60	1819	.35	7.73	1849
100	5	20	.69	17.50	1725	.49	11.50	1783	.39	8.70	1810	.27	5.80	1838
125	5	25	.55	14.00	1667	.39	9.20	1718	.31	6.96	1741	.22	4.64	1766
150	10	15	.51	11.67	1818	.35	7.67	1849	.28	5.80	1864	.20	3.87	1879
200	10	20	.40	8.75	1809	.28	5.75	1838	.22	4.35	1852	.16	2.90	1866
250	10	25	.32	7.00	1741	.22	4.60	1766	.18	3.48	1778	.12	2.32	1791
300	15	20	.29	5.83	1837	.20	3.83	1857	.16	2.90	1866	.11	1.93	1875
400	20	20	.23	4.38	1852	.17	2.88	1866	.13	2.18	1873	.09	1.45	1880
500	25	20	.20	3.50	1860	.14	2.30	1872	.11	1.74	1877	.08	1.16	1883
600	30	20	.18	2.92	1866	.13	1.92	1875	.10	1.45	1880	.07	.97	1885
800	40	20	.15	2.19	1873	.11	1.44	1880	.08	1.09	1883	.06	.73	1887
1000	50	20	.13	1.75	1877	.09	1.15	1883	.07	.87	1886	.05	.58	1888
1200	60	20	.11	1.46	1880	.08	.96	1885	.07	.73	1887	.05	.48	1889
1500	25	60	.08	1.17	1552	.06	.77	1560	.05	.58	1564	.03	.39	1568
1800	30	60	.07	.97	1556	.05	.64	1562	.04	.48	1566	.03	.32	1569
2400	40	60	.06	.73	1561	.04	.48	1566	.04	.36	1568	.03	.24	1571
3000	50	60	.05	.58	1564	.04	.38	1568	.03	.29	1570	.02	.19	1572
3600	60	60	.05	.49	1566	.03	.32	1569	.03	.24	1571	.02	.16	1572

▲ Inch-pounds
Overhung load (O.H.L.) for 25W-DB is 1211 pounds, for 25W-DV is 1030 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

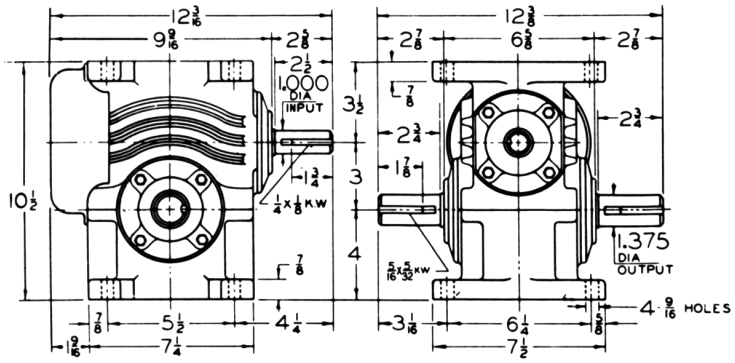
RW-B, RW-T and RW-V Series

30RW-B
Net wt. 65 lbs.
3.0" C.D.

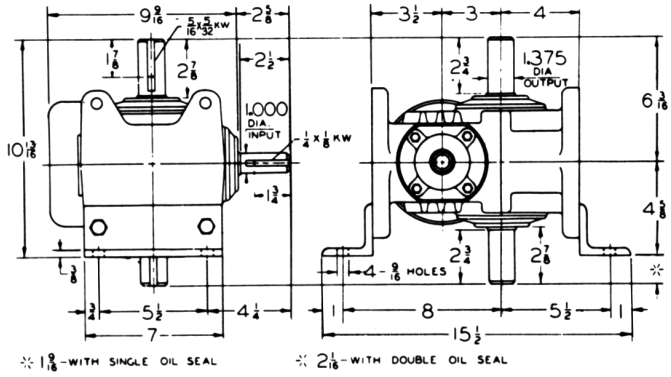


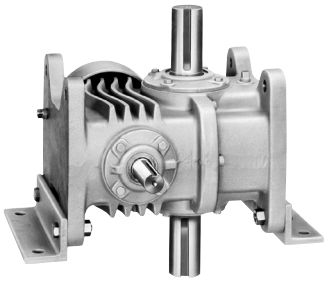


30RW-T
Net wt. 65 lbs.
3.0" C.D.



30RW-V
Net wt. 65 lbs.
3.0" C.D.





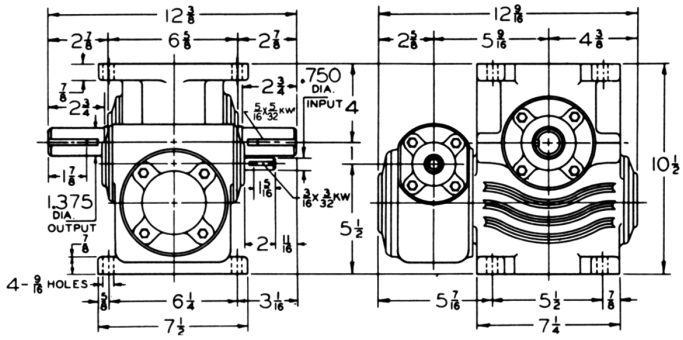
Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - 30RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	8.06	350.0	1357	6.82	230.0	1729	5.92	174.0	1968	4.58	116.0	2254	2.75	60.0	2557	1.03	20.0	2783
7.5	6.44	233.3	1603	5.52	153.3	2026	4.65	116.0	2279	3.56	77.3	251	2.11	40.0	2874	.79	13.3	3100
10	5.37	175.0	1753	4.50	115.0	2198	3.85	87.0	2461	2.94	58.0	2760	1.74	30..0	3069	.66	10.0	3298
15	4.01	116.6	1899	3.36	76.6	2366	2.88	58.0	2639	2.20	38.7	2947	1.31	20.0	3264	.50	6.6	3499
20	3.19	87.5	1956	2.65	57.5	2412	2.27	46.5	2671	1.73	29.0	2955	1.03	15.0	3254	.39	5.0	3476
25	2.64	70.0	1975	2.18	46.0	2404	1.85	34.8	2643	1.41	23.2	2907	.84	12.0	3175	.32	4.0	3373
30	2.31	58.4	1975	1.96	38.4	2451	1.69	29.0	2725	1.31	19.3	3033	.80	10.0	3349	.31	3.3	3584
40	1.81	43.7	1959	1.53	28.7	2406	1.33	21.8	2665	1.03	14.5	2946	.63	7.5	3240	.25	2.5	3454
50	1.46	35.0	1889	1.23	23.0	2298	1.06	17.4	2525	.82	11.6	2770	.50	6.0	3020	.20	2.0	3198
60	1.21	29.2	1791	1.02	19.2	2172	.88	14.5	2380	.69	9.7	2612	.42	5.0	2844	.17	1.6	3016

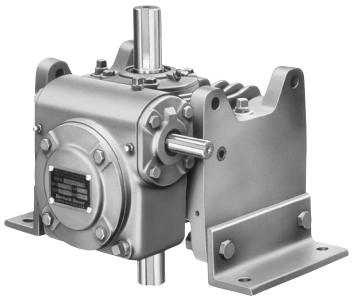
▲ Inch-pounds
Overhung load (O.H.L.) for 30RW-B, RW-T is 1403 pounds, for 30RW-V is 1211 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-DB and W-DV Series

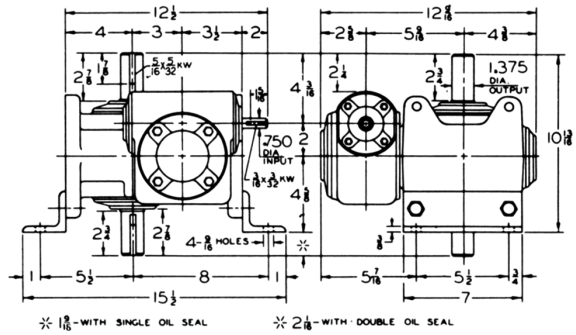


30W-DB
Net wt. 84 lbs.
3.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



30W-DV
Net wt. 84 lbs.
3.0" C.D.

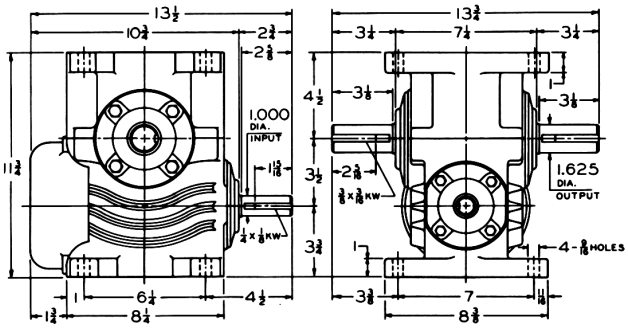
1.00 service factor* - Double Reduction Wormgear - Models 30W-DB & 30W-DV
2.0" Centers Primary - 3.0" Centers Secondary

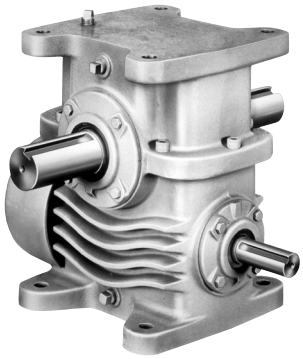
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	1.61	23.33	3208	1.15	15.33	3348	.91	11.60	3413	.64	7.73	3481
100	5	20	1.26	17.50	3207	.90	11.50	3337	.71	8.70	3399	.51	5.80	3462
125	5	25	1.02	14.00	3132	.73	9.20	3250		6.96	3305	.41	4.64	3362
150	10	15	.93	11.67	3412	.65	7.67	3483	.51	5.80	3516	.36	3.87	3550
200	10	20	.73	8.75	3398	.51	5.75	3464	.40	4.35	3494	.28	2.90	3526
250	10	25	.59	7.00	3304	.42	4.60	3363	.33	3.48	3391	.23	2.32	3420
300	15	20	.53	5.83	3462	.37	3.83	3506	.29	2.90	3526	.21	1.93	3548
400	20	20	.42	4.38	3494	.30	2.88	3527	2.3	2.18	3542	.16	1.45	3558
500	25	20	.35	3.50	3513	.25	2.30	3540	.20	1.74	3552	.14	1.16	3565
600	30	20	.32	2.92	3526	.23	1.92	3548	.18	1.45	3558	.13	.97	3569
800	40	20	.26	2.19	3542	.18	1.44	3559	.15	3.09	3566	.10	.73	3574
1000	50	20	.22	1.75	3552	.16	1.15	3565	.13	.87	3571	.09	.58	3578
1200	60	20	.20	1.46	3558	.14	.96	3569	.11	.73	3574	.08	.48	3580
1500	25	60	.16	1.17	3044	.11	.77	3065	.09	.58	3074	.06	.39	3084
1800	30	60	.14	.97	3054	.10	.64	3071	.08	.48	3079	.06	.32	3088
2400	40	60	.12	.73	3067	.08	.48	3080	.07	.36	3086	.05	.24	3092
3000	50	60	.10	.58	3074	.07	.38	3085	.06	.29	63089	.04	.19	3094
3600	60	60	.09	.49	3079	.06	.32	3088	.05	.24	3092	.04	.16	3096

▲ Inch-pounds
Overhung load (O.H.L.) for 30W-DV is 1211 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

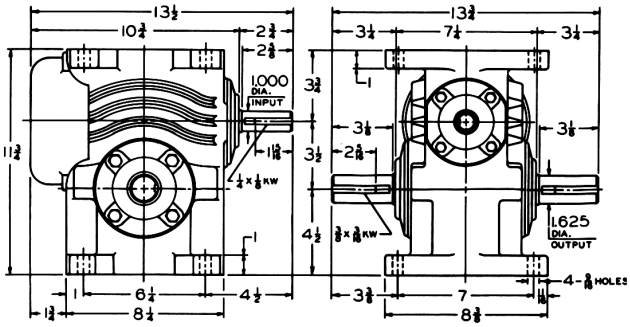
RW-B, RW-T and RW-V Series

35RW-B
Net wt. 85 lbs.
3.5" C.D.

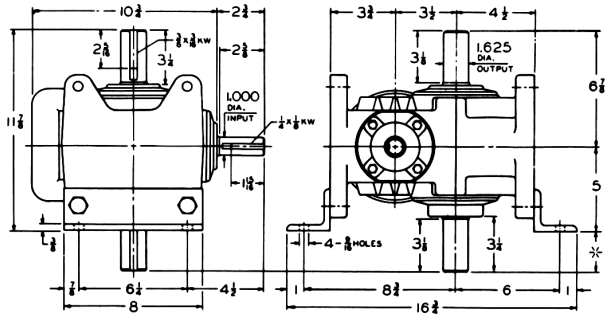




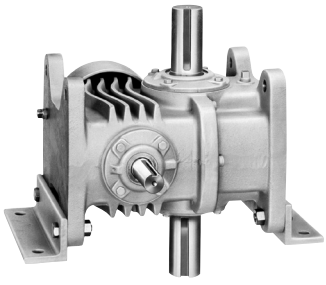
35RW-T
Net wt. 85 lbs.
3.5" C.D.



35RW-V
Net wt. 85 lbs.
3.5" C.D.



✲ 1 7/8 WITH SINGLE OIL SEAL ✲ 2 3/8 WITH DOUBLE OIL SEAL



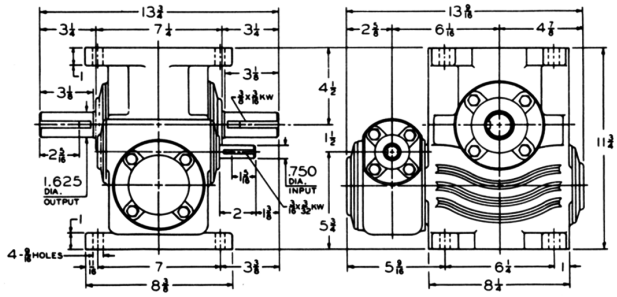
Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - 35RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	11.54	350.0	1951	9.70	230.0	2470	8.58	174.0	2861	6.82	116.0	3373	4.21	60.0	3927	1.61	20.0	4356
7.5	9.12	233.3	2279	7.74	153.3	2903	6.78	116.0	3328	5.33	7.3	3368	3.25	40.0	4424	1.24	13.3	4854
10	7.55	175.0	2474	6.43	115.0	3155	5.62	87.0	3601	4.40	58.0	4150	2.68	30.0	4726	1.03	10.0	5167
15	5.60	116.6	2663	4.80	76.6	3396	4.20	58.0	3864	3.30	38.7	4429	2.02	20.0	5027	.78	6.6	5476
20	4.44	87.5	2739	3.80	57.5	3469	3.31	43.5	3921	2.58	29.0	4448	1.58	15.0	5003	.61	5.0	5401
25	3.67	70.0	2773	3.11	46.0	3470	2.69	34.8	3884	2.08	23.2	4349	1.26	12.0	4830	.49	4.0	5185
30	3.22	58.4	2773	2.79	38.4	3516	2.46	29.0	3995	1.97	19.3	4570	1.24	10.0	5165	.50	3.3	5625
40	2.50	43.7	2738	2.16	28.7	3468	1.92	21.98	3914	1.53	14.5	4428	.96	7.5	4969	.39	2.5	5364
50	2.02	35.0	2657	1.74	23.0	3320	1.52	17.4	3707	1.21	11.6	4144	.75	6.0	4603	.30	2.0	4934
60	1.67	29.2	2522	1.44	19.2	3138	1.26	14.5	3497	1.00	9.7	3900	.63	5.0	4308	.26	1.6	4637

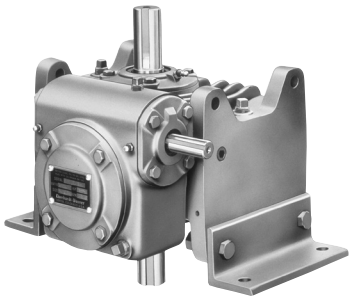
▲ Inch-pounds
Overhung load (O.H.L.) for 35RW-B, RW-T is 2066 pounds, for 35RW-V is 1804 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-DB and W-DV Series

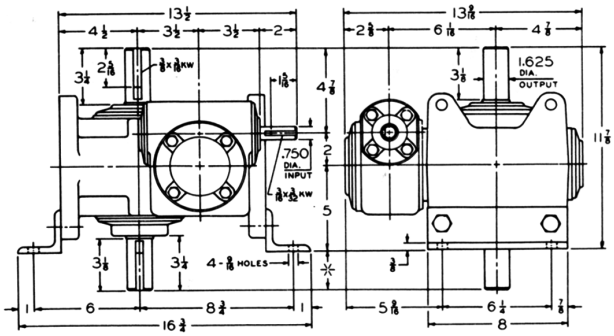


35W-DB
Net wt. 105 lbs.
3.5" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



✲ 1 7/8 WITH SINGLE OIL SEAL ✲ 2 3/8 WITH DOUBLE OIL SEAL

35W-DV
Net wt. 105 lbs.
3.5" C.D.

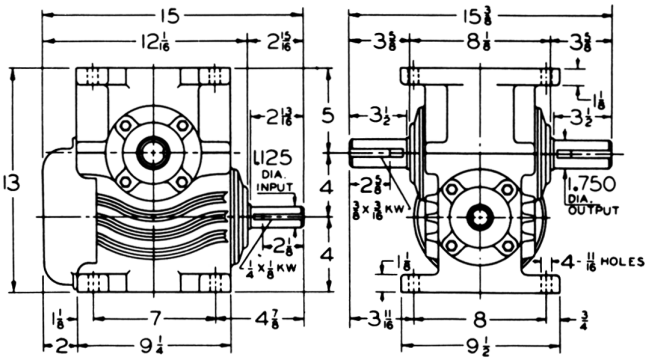
1.00 Service Factor* - Double Reduction Wormgear - Models 35W-DB and 35 W-DV
2.0" Centers Primary - 3.5" Centers Secondary

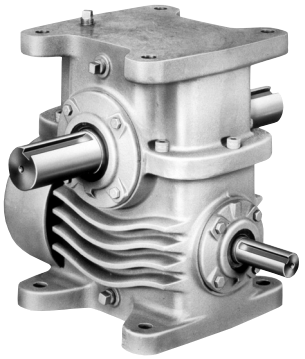
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	2.47	23.33	4919	1.77	15.33	5187	1.41	11.60	5313	1.00	7.73	5444
100	5	20	1.93	17.50	4903	1.39	11.50	5147	1.10	8.70	5262	.79	5.80	5382
125	5	25	1.54	14.00	4750	1.11	9.20	4963	.88	6.93	5063	.63	4.64	5167
150	10	15	1.44	11.67	5311	1.02	7.67	5446	.80	5.80	5509	.57	3.87	5575
200	10	20	1.13	8.75	5260	.79	5.75	5384	.63	4.35	5442	.44	2.90	5502
250	10	25	.90	7.00	5061	.63	4360	5169	.50	3.48	5219	.35	2.32	5272
300	15	20	.82	5.83	5381	.58	3.83	5463	.46	2.90	5502	.33	1.93	5542
400	20	20	.65	4.38	5441	.46	2.88	5503	.37	2.18	5532	.26	1.45	5562
500	25	20	.55	3.50	5477	.39	2.30	5527	.31	1.74	5550	.22	1.16	5574
600	30	20	.50	2.29	5501	.35	1.92	5543	.28	1.45	5562	.20	.97	5582
800	40	20	.40	2.19	5532	.29	1.44	5563	.23	1.09	557	.16	.73	5593
1000	50	20	.35	1.75	5550	.25	1.15	5575	.20	.87	5586	.14	.58	5599
1200	60	20	.31	1.46	5562	.22	.96	5583	.18	.73	5593	.13	.48	5603
1500	25	60	.24	1.17	4671	.17	.77	4709	.14	.58	4726	.10	.39	4744
1800	30	60	.21	.97	4690	.15	.64	4721	.12	.48	4735	.09	.32	4750
2400	40	60	.17	.73	4712	.13	.48	4735	.10	.36	4746	.07	.24	4757
3000	50	60	.15	.58	4726	.11	.38	4744	.09	.29	4753	.06	.19	4762
3600	60	60	.14	.49	4735	.10	.32	4750	.08	.24	4757	.06	.16	4765

▲ Inch-pounds
Overhung load (O.H.L.) for 35W-DB is 2066 pounds, for 35W-DV lis 1804 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

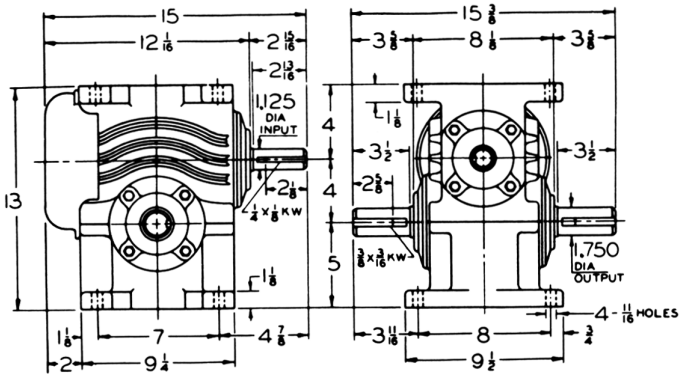
RW-B, RW-T and RW-V Series

40RW-B
Net wt. 119 lbs.
4.0" C.D.

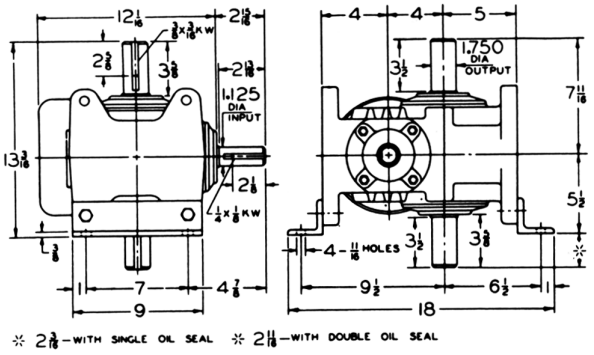


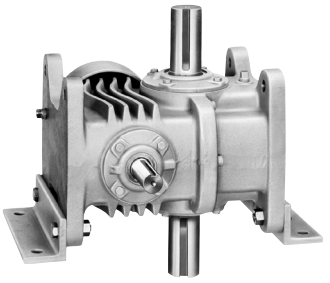


40RW-T
Net wt. 119 lbs.
4.0" C.D.



40RW-V
Net wt. 119 lbs.
4.0" C.D.





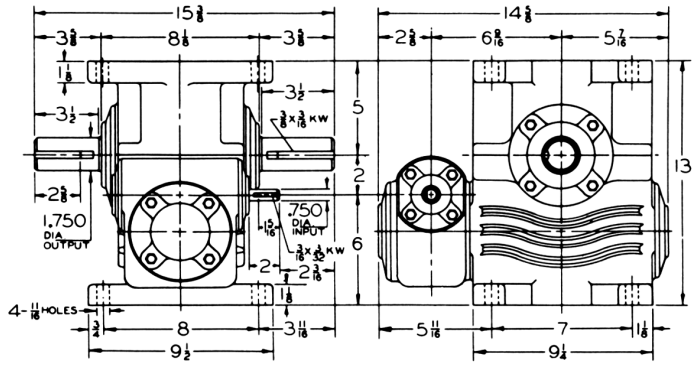
Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - 40 RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	15.15	350.0	2570	12.65	230.0	3233	11.27	174.0	3781	9.05	116.0	4498	5.65	60.0	5306	2.18	20.0	5925
10	10.03	175.0	3321	8.52	115.0	4229	7.46	87.0	4845	5.87	58.0	5608	3.58	30.0	6427	1.37	10.0	7041
15	7.44	116.6	3592	6.36	76.6	4580	5.57	58.0	5222	4.38	38.7	6014	2.68	20.0	6846	1.04	6.6	7483
20	5.89	87.5	3685	5.06	57.5	4702	4.43	43.5	5244	3.49	29.0	6127	2.15	15.0	6949	.84	5.0	7566
25	4.87	70.0	3712	4.14	46.0	4695	3.60	34.8	5299	2.81	23.2	6002	1.71	12.0	6722	.67	4.0	7262
30	4.22	58.4	3733	3.65	38.4	4760	3.23	29.0	5412	2.57	19.3	6213	1.61	10.0	7043	.64	3.3	7679
40	3.31	43.7	3710	2.88	28.7	4705	2.55	21.8	5340	2.04	14.5	6106	1.29	7.5	6916	.52	2.5	7515
50	2.63	35.0	3555	2.29	23.0	4493	2.02	17.4	5066	1.61	11.6	5724	1.01	6.0	6408	.41	2.0	6904
60	2.15	29.2	3372	1.86	19.2	4226	1.63	14.5	4724	1.30	9.7	5293	.81	5.0	5877	.33	1.6	6345

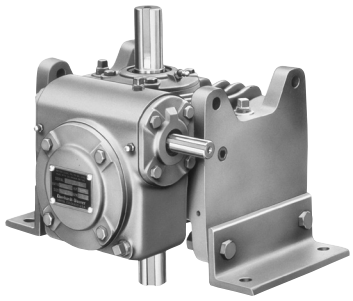
▲ Inch-pounds
Overhung load (O.H.L.) for 40RW-B, RW-T is 2736 pounds, for 40RW-V is 2423 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-DB and W-DV Series

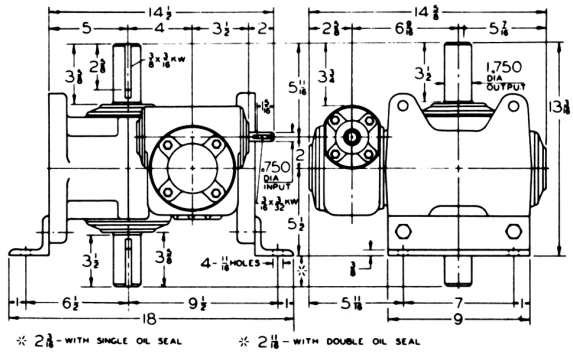


40W-DB
Net wt. 135 lbs.
4.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



40W-DV
Net wt. 135 lbs.
4.0" C.D.

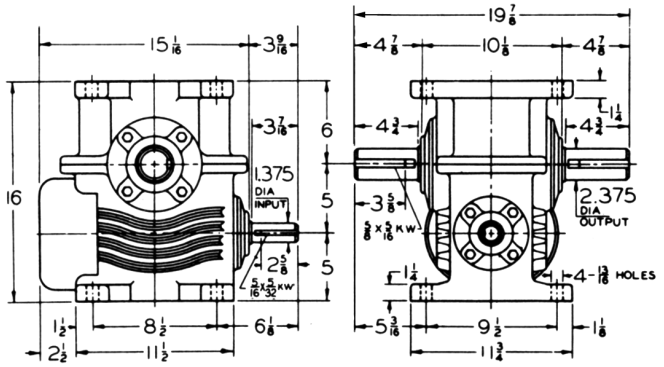
1.00 Service Factor* - Double Reduction Wormgear - Models 40W-DB and 40W-DV
2.0" Centers Primary - 4.0" Centers Secondary

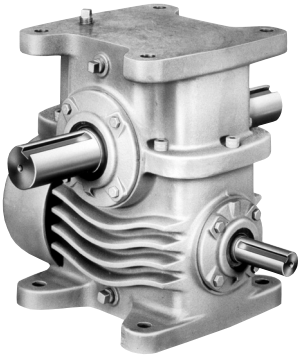
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	2.92	23.33	5972	2.35	15.33	7058	1.87	11.60	7247	1.33	7.73	7431
100	5	20	2.62	17.50	6804	1.89	11.50	7172	1.50	8.70	7345	1.07	5.80	7526
125	5	25	2.10	14.00	6597	1.50	9.20	6920	1.20	6.96	7071	.85	34.64	7229
150	10	15	1.91	11.67	7244	1.34	7.67	7434	1.06	5.80	7523	.75	3.87	7615
200	10	20	1.53	8.75	7342	1.08	5.75	7529	.86	4.35	4616	.61	2.90	7707
250	10	25	1.22	7.00	7069	.86	4.60	7232	.68	3.48	7308	.48	2.32	7388
300	15	20	1.12	5.83	7524	.79	3.83	7649	.63	2.90	7707	.44	1.93	7768
400	20	20	.89	4.38	7615	.63	2.88	7708	.50	2.18	7752	.35	1.45	7798
500	25	20	.75	3.50	7669	.53	2.30	7745	.42	1.74	7780	.30	1.16	7816
600	30	20	.68	2.92	7706	.48	1.92	7769	.38	1.45	7798	.27	.97	7828
800	40	20	.55	2.19	7752	.39	1.44	7799	.31	3.09	7821	.22	.73	7843
1000	50	20	.47	1.75	7797	.34	1.15	7817	.27	.87	7834	.19	.58	7853
1200	60	20	.42	1.46	7797	.30	.96	7829	.24	.73	7843	.17	.48	7859
1500	25	60	.30	1.17	6388	.22	.77	6441	.17	.58	6466	.12	.39	6491
1800	30	60	.27	.97	6414	.20	.64	6458	.16	.48	6478	.11	.32	6500
2400	40	60	.22	.73	6446	.16	.48	6479	.13	.36	6494	.09	.24	6510
3000	50	60	.19	.58	6465	.14	.38	6492	.11	.29	6504	.08	.19	6517
3600	60	60	.17	.49	6478	.13	.32	6500	.10	.24	6510	.07	.16	6521

▲ Inch-pounds
Overhung load (O.H.L.) for 40W-DB is 2736 pounds, for 40W-DV is 2423 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

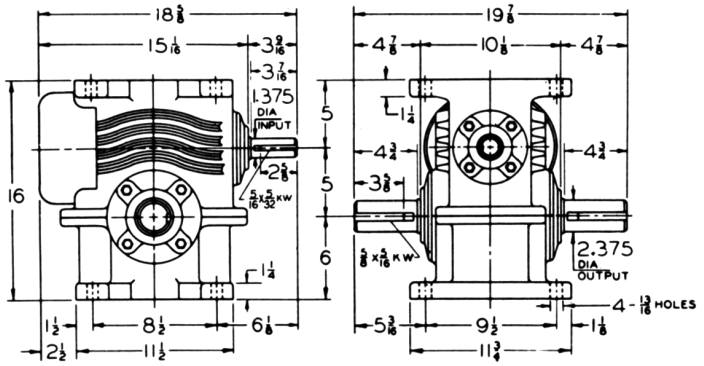
RW-B, RW-T and RW-V Series

50RW-B
Net wt. 232 lbs.
5.0" C.D.

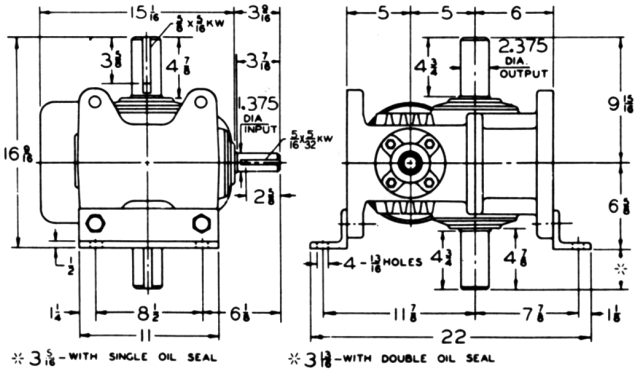


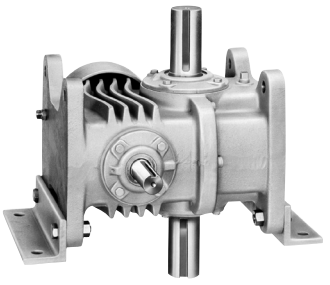


50RW-T
Net wt. 232 lbs.
5.0" C.D.



50RW-V
Net wt. 232 lbs.
5.0" C.D.





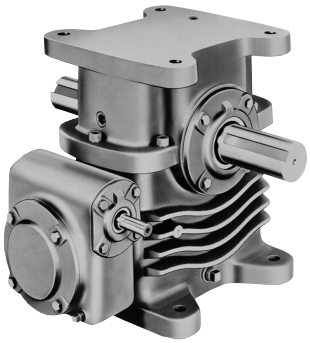
Angle brackets are not included with the reducer.

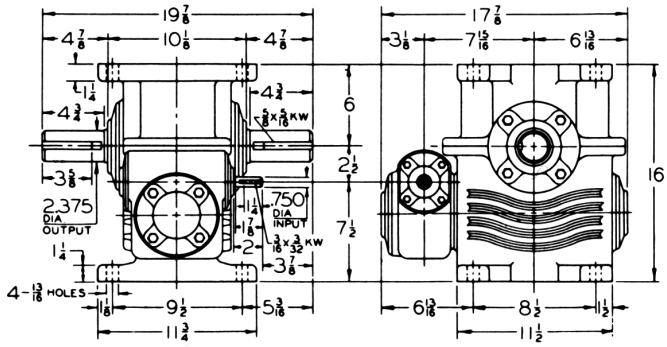
1.00 Service Factor* - Single Reduction Wormgear - 50RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	25.25	350.0	4300	20.79	230.0	5344	18.60	174.0	6274	15.47	116.0	7743	10.11	60.0	9570	4.02	20.0	11029
10	16.64	175.0	5542	13.84	115.0	6917	12.47	87.0	8155	10.13	58.0	9790	6.45	30.0	11670	2.53	10.0	13139
15	12.31	116.6	5991	10.34	76.6	7512	9.30	58.0	8813	7.56	38.7	10511	4.83	20.0	12448	1.91	6.6	13958
20	9.61	87.5	6113	8.18	57.5	7737	7.29	43.5	8964	5.87	29.0	10547	3.71	15.0	12286	1.47	5.0	13610
25	7.94	70.0	6162	6.80	46.0	7823	6.06	34.8	9040	4.88	23.2	10592	3.09	12.0	12273	1.23	4.0	13558
30	6.92	58.4	6224	5.92	38.4	7836	5.36	29.0	9154	4.41	19.3	10877	2.88	10.0	12810	1.18	3.3	14338
40	5.31	43.7	6125	4.60	28.7	7771	4.14	21.8	8781	3.38	14.5	10531	2.20	7.5	12222	.90	2.5	13507
50	4.27	35.0	5899	3.73	23.0	7498	3.36	17.4	8644	2.76	11.6	10111	1.81	6.0	11686	.75	2.0	12904
60	3.48	29.2	5577	3.06	19.2	7094	2.76	14.5	8140	2.26	9.7	9470	1.48	5.0	10854	.62	1.6	11974

▲ Inch-pounds
Overhung load (O.H.L.) for 50RW-B, RW-T is 4477 pounds, for 50RW-V is 4040 pounds one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

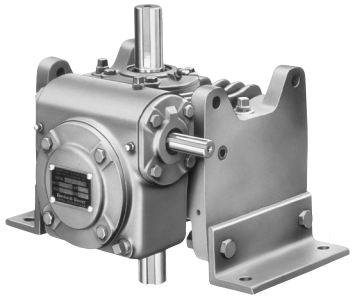
W-DB and W-DV Series



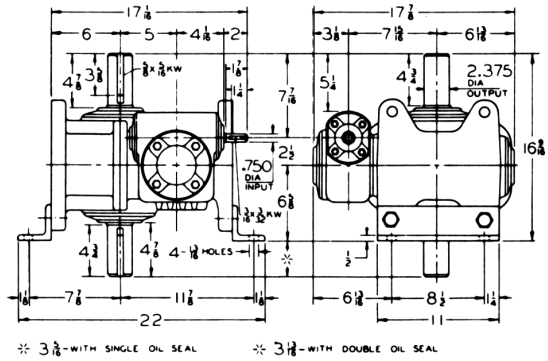


50W-DB
Net wt. 251 lbs.
5.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



50W-DV
Net wt. 251 lbs.
5.0" C.D.

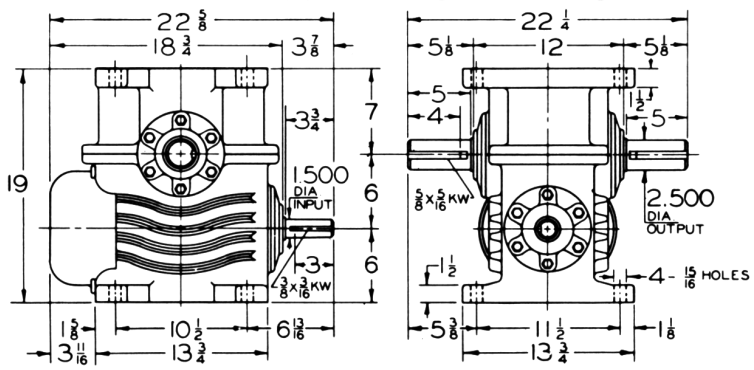
1.00 Service Factor* - Double Reduction Wormgear - Models 50W-DB and 50W-DV
2.5" Centers Primary - 5.0" Centers Secondary

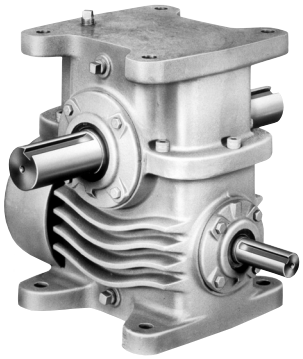
TORQUE and HORSEPOWER RATINGS														
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	4.76	23.33	9904	3.95	15.33	12051	3.36	11.60	13276	2.42	7.73	13832
100	5	20	4.47	17.50	11961	3.25	11.50	12751	2.60	8.70	13124	1.85	5.80	13511
125	5	25	3.73	14.00	11963	2.74	9.20	12730	2.17	6.96	13091	1.56	4.64	13468
150	10	15	3.18	11.67	12310	2.44	7.67	13839	1.93	5.80	14052	1.36	3.87	14273
200	10	20	2.64	8.75	13117	1.87	5.75	13518	1.48	4.35	13706	1.05	2.90	13901
250	10	25	2.21	7.00	13085	1.57	4.60	13474	1.24	3.48	13656	.88	2.32	13846
300	15	20	1.93	5.83	13507	1.36	3.83	13776	1.07	2.990	13901	.76	1.93	14032
400	20	20	1.55	4.38	13703	1.08	2.88	13905	.86	2.18	13999	.61	1.45	14098
500	25	20	1.29	3.50	13820	.91	2.30	13982	.72	1.74	14058	.51	1.16	14136
600	30	20	1.15	2.92	13899	.82	1.92	14034	.65	1.45	14097	.47	.97	14163
800	40	20	.94	2.19	13997	.67	1.44	14099	.53	1.09	14146	.38	.73	14195
1000	50	20	.80	1.75	14057	.57	1.15	14138	.45	.87	14176	.33	.58	14215
1200	60	20	.70	1.46	14066	.50	.96	14164	.40	.73	14195	.29	.48	14228
1500	25	60	.55	1.17	12105	.40	.77	12235	.32	.58	12296	.23	.39	12359
1800	30	60	.50	.97	12168	.36	.64	12277	.29	.48	12327	.21	.32	12380
2400	40	60	.41	.73	12247	.30	.48	12329	.24	.36	12367	.17	.24	12406
3000	50	60	.35	.58	12295	.25	.38	12360	.20	.29	12390	.15	.19	12422
3600	60	60	.31	.49	12326	.23	.32	12381	.18	.24	12406	.13	.16	12432

▲ Inch-pounds
Overhung load (O.H.L.) for 50W-DB is 4477 pounds, for 50W-DV is 4040 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

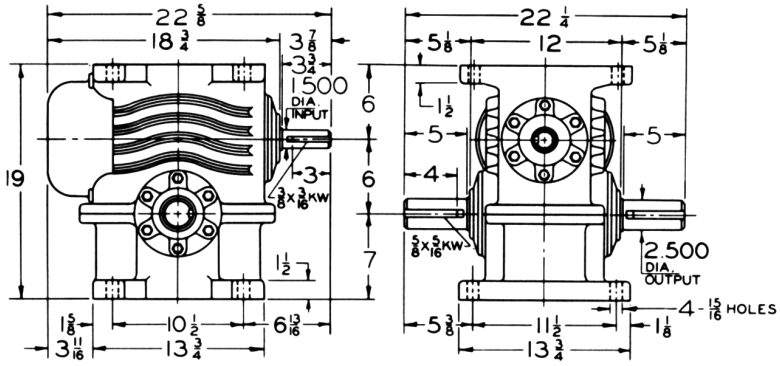
RW-B, RW-T and RW-V Series

60RW-B
Net wt. 375 lbs.
6.0" C.D.

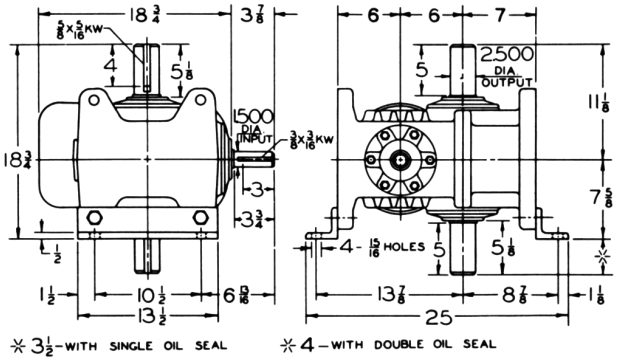


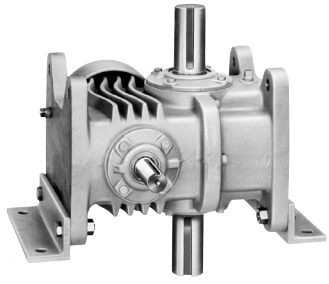


60RW-T
Net wt. 375 lbs.
6.0" C.D.



60RW-V
Net wt. 375 lbs.
6.0" C.D.





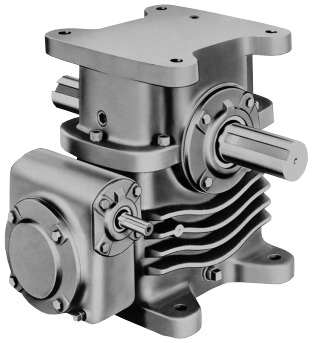
Angle brackets are not included with the reducer.

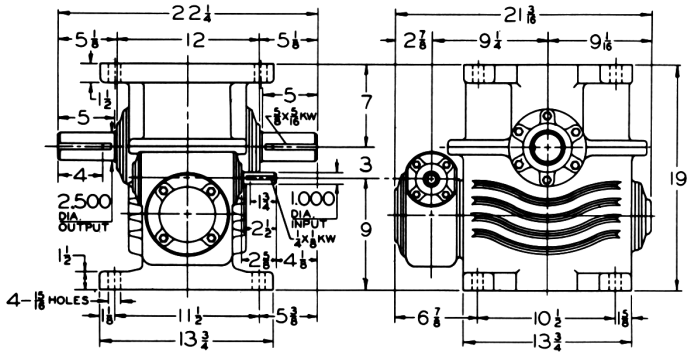
1.00 Service Factor* - Single Reduction Wormgear - 60RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	38.15	350.0	6527	31.40	230.0	8104	27.71	174.0	9384	23.55	116.0	11849	16.02	60.0	15260	6.57	20.0	18127
10	25.10	175.0	8408	20.75	115.0	10437	18.60	87.0	12245	15.56	58.0	15129	10.27	30.0	18747	4.14	10.0	21641
15	18.54	116.6	9084	15.39	76.6	11275	13.90	58.0	13288	11.61	38.7	16315	7.68	20.0	20026	3.12	6.6	23008
20	14.50	87.5	9283	12.12	57.5	11560	1099	43.5	13640	9.10	29.0	16535	5.96	15.0	19955	2.42	5.0	22655
25	11.72	70.0	9254	9.91	46.0	11625	8.93	34.8	13623	7.25	23.2	16204	4.69	12.0	19127	1.88	4.0	21394
30	10.37	58.4	9438	8.73	38.4	11728	7.97	29.0	13843	6.74	19.3	16909	4.55	10.0	20627	1.92	3.3	23631
40	7.96	43.7	9299	6.76	28.7	11581	6.20	21.8	13672	5.22	14.5	16531	3.52	7.5	19879	1.48	2.5	22507
50	6.23	35.0	8867	5.37	23.0	11173	4.89	17.4	13038	4.05	11.6	15499	2.69	6.0	18232	1.12	2.0	20366
60	5.12	29.2	8418	4.45	19.2	10603	4.06	14.5	12374	3.39	9.7	14717	2.27	5.0	17305	.96	1.6	19390

▲ Inch-pounds
Overhung load (O.H.L.) for 60RW-B, RW-T is 5313 pounds, for 60RW-V is 4846 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

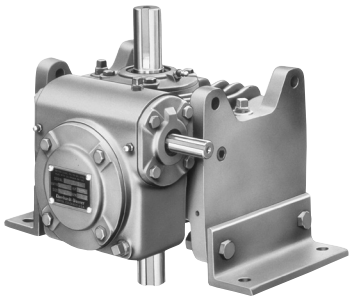
W-DB and W-DV Series



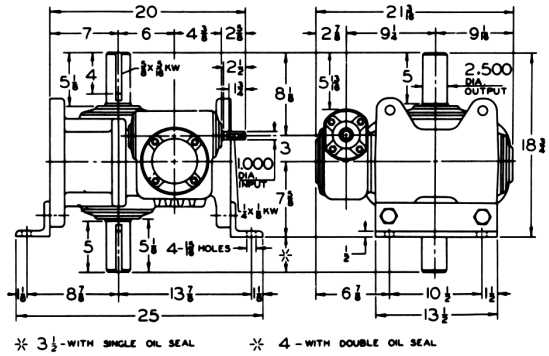


60W-DB
Net wt. 407 lbs.
6.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



60W-DV
Net wt. 407 lbs.
6.0" C.D.

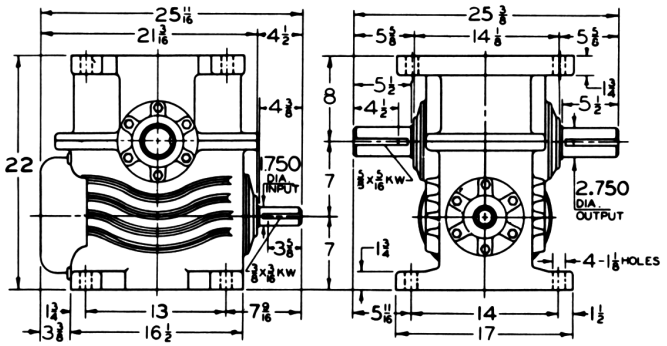
1.00 Service Factor* - Double Reduction Wormgear - Models 60W-DB and 60W-DV
3.0" Centers Primary - 6.0" Centers Secondary

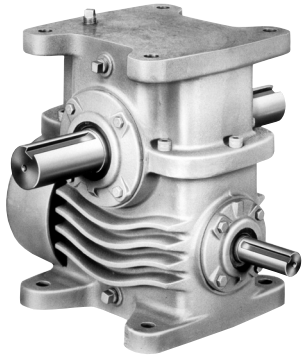
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	8.06	23.33	17032	6.79	15.33	21041	5.46	11.60	21878	3.92	7.73	22752
100	5	20	7.11	17.50	19334	5.26	11.50	20907	4.23	8.70	21668	3.04	5.80	22463
125	5	25	5.60	14.00	18581	4.11	9.20	19931	3.29	6.96	20567	2.36	4.64	21230
150	10	15	5.37	11.67	21159	3.95	7.67	22767	3.13	5.80	23192	2.22	3.87	23633
200	10	20	4.30	8.75	21655	3.06	5.57	22476	2.43	4.35	22862	1.72	2.90	23262
250	10	25	3.35	7.00	20556	2.38	4.60	21242	1.89	3.48	21563	1.34	2.32	21897
300	15	20	3.16	5.83	22453	2.23	3.83	23004	1.77	2.90	23262	1.25	1.93	23530
400	20	20	2.52	4.38	22855	1.78	2.88	23269	1.41	2.18	23463	1.01	1.45	23665
500	25	20	2.12	3.50	23096	1.49	2.30	23429	1.19	1.74	23584	.85	1.16	23745
600	30	20	1.89	2.92	23258	1.34	1.92	23535	1.07	1.45	23665	.76	.97	23799
800	40	20	1.53	2.19	23460	1.09	1.44	23668	.87	1.09	23765	.63	.73	23866
1000	50	20	1.30	1.75	23581	.93	1.15	23748	.75	.87	23826	.54	.58	23906
1200	60	20	1.16	1.46	23662	.83	.96	23801	.67	.73	23866	.49	.48	23933
1500	25	60	.86	1.17	19642	.61	.77	19887	.49	.58	20002	.36	.39	20121
1800	30	60	.77	.97	19761	.55	.64	19966	.45	.48	20062	.32	.32	20161
2400	40	60	.63	.73	19910	.46	.48	20064	.37	.36	20136	.27	.24	20211
3000	50	60	.54	.58	20000	.39	.38	20124	.32	.29	20181	.23	.19	20241
3600	60	60	.48	.49	20060	.35	.32	20163	.28	.24	20211	.21	.16	20261

▲ Inch-pounds
Overhung load (O.H.L.) for 60W-DB is 5313 pounds, for 60W-DV is 4846 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

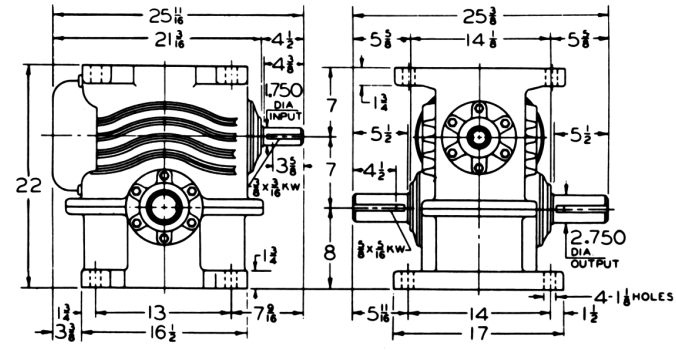
RW-B, RW-T and RW-V Series

70RW-B
Net wt. 523 lbs.
7.0" C.D.

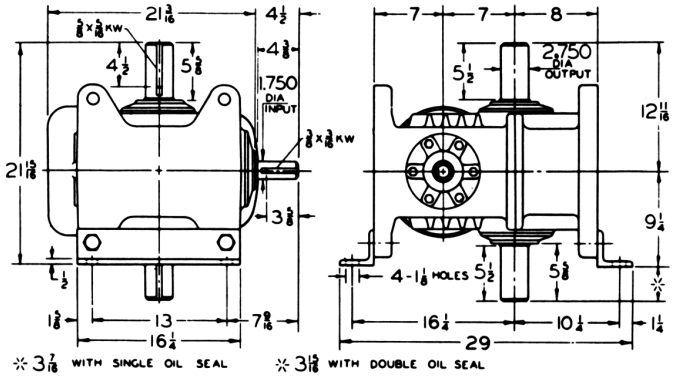


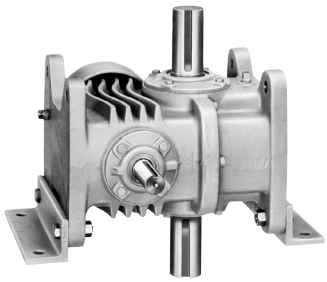


70RW-T
Net wt. 523 lbs.
7.0" C.D.



70RW-V
Net wt. 523 lbs.
7.0" C.D.





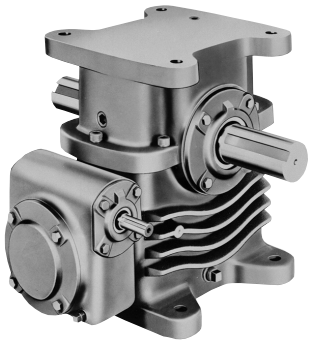
Angle brackets are not included with the reducer.

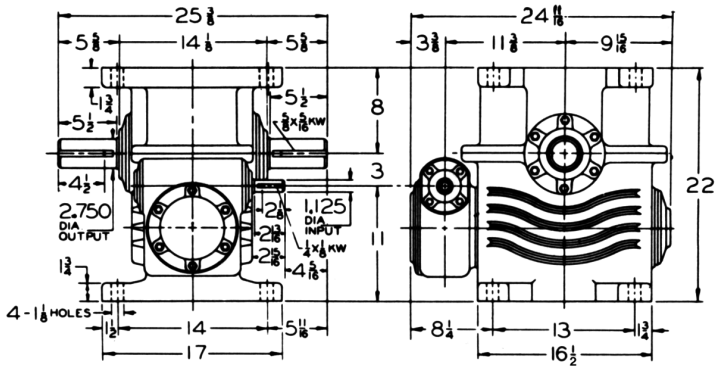
1.00 Service Factor* - Single Reduction Wormgear - 70RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	OutPut		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	53.32	350.0	9741	44.27	230.0	11463	38.91	174.0	13236	33.05	116.0	16702	23.28	60.0	22301	9.84	20.0	27293
10	35.46	175.0	11928	29.27	115.0	14805	25.89	87.0	17159	22.03	58.0	21573	15.01	30.0	27631	6.20	10.0	32651
15	26.15	116.6	12929	21.69	76.6	16027	19.29	58.0	18588	16.45	38.7	23335	11.21	20.0	29557	4.66	6.6	34735
20	20.42	87.5	13176	16.99	57.5	16369	15.27	43.5	19164	12.93	29.0	23743	8.71	15.0	29553	3.60	5.0	34208
25	16.73	70.0	13256	13.79	46.0	16462	12.66	34.8	19374	10.66	23.2	23800	7.14	12.0	29266	2.96	4.0	33662
30	14.57	58.4	13408	12.23	38.4	16649	11.01	29.0	19376	9.49	19.3	24240	6.60	10.0	30527	2.84	3.3	35653
40	11.14	43.7	13209	9.41	28.7	16407	8.57	21.8	19255	7.36	14.5	23769	5.09	7.5	29471	2.19	2.5	33985
50	8.86	35.0	12687	7.53	23.0	15764	6.91	17.4	18590	5.92	11.6	22752	4.10	6.0	27930	1.77	2.0	32014
60	7.14	29.2	11951	6.11	19.2	14893	5.63	14.5	17555	4.79	9.7	21296	3.28	5.0	25683	1.41	1.6	29312

▲ Inch-pounds
Overhung load (O.H.L.) for 70RW-B, RW-T is 6564 pounds, for 70RW-V is 6044 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

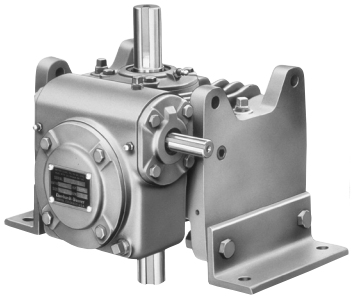
W-DB and W-DV Series



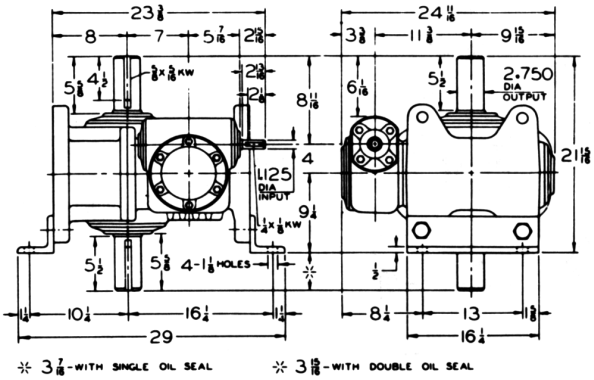


70W-DB
Net wt. 589 lbs.
7.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



70W-DV
Net wt. 589 lbs.
7.0" C.D.

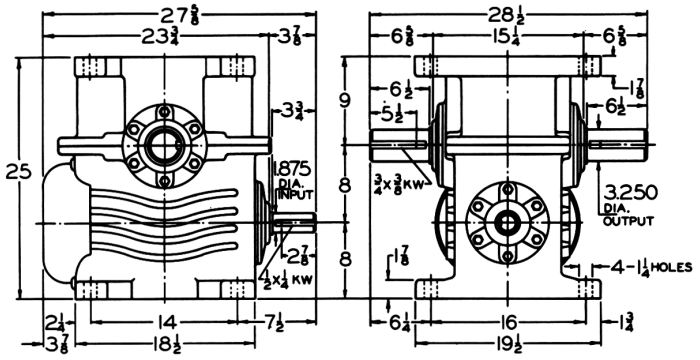
1.00 Service Factor* - Double Reduction Wormgear - Models 70W-DB and 70W-DV
4.0" Centers Primary - 7.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS														
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	13.17	23.33	28390	9.91	15.33	31304	8.03	11.60	32764	5.79	7.73	24288
100	5	20	10.25	17.50	28472	7.69	11.50	31155	6.22	8.70	32481	4.48	5.80	33866
125	5	25	8.42	14.00	28272	6.31	9.20	30795	5.09	696	32032	3.68	4.64	33324
150	10	15	8.13	11.67	32737	5.79	7.67	34314	4.60	5.80	35055	3.26	3.87	35826
200	10	20	6.29	8.75	32458	4.48	5.75	33890	3.56	4.35	34562	2.53	2.90	35262
250	10	25	5.15	7.00	32010	3.68	4.60	33346	2.93	3.48	33973	2.08	23.32	34625
300	15	20	4.61	5.83	33850	3.26	3.83	34811	2.58	2.90	35262	1.83	1.93	35730
400	20	20	3.69	4.38	34550	2.61	2.88	35274	2.03	2.18	35613	1.46	1.45	35964
500	25	20	3.10	3.50	34972	2.18	2.30	35552	1.72	1.74	35823	1.23	1.16	36105
600	30	20	2.73	2.92	35254	1.93	1.92	35738	1.53	1.45	35964	1.10	.97	36199
800	40	20	2.22	2.19	35607	1.58	1.44	359710	1.26	1.09	36140	.90	.73	36316
1000	50	20	1.87	1.75	35819	1.34	1.15	36110	1.06	.87	36246	.77	.58	36387
1200	60	20	1.64	1.46	35960	1.17	.96	36203	.93	.73	36316	.67	.48	36434
1500	25	60	1.23	1.17	29743	.88	.77	30172	.71	.58	30372	.51	.39	30580
1800	30	60	1.10	.97	29952	.79	.64	3039	.63	.48	30476	.46	.32	30650
2400	40	60	.90	.73	30212	.65	.48	30481	.52	.36	30606	.38	.24	30736
3000	50	60	.77	.58	30369	.56	.38	30584	.45	.29	30684	.33	.19	30789
3600	60	60	.68	.49	30473	.49	.32	30653	.39	.24	30736	.29	.16	30823

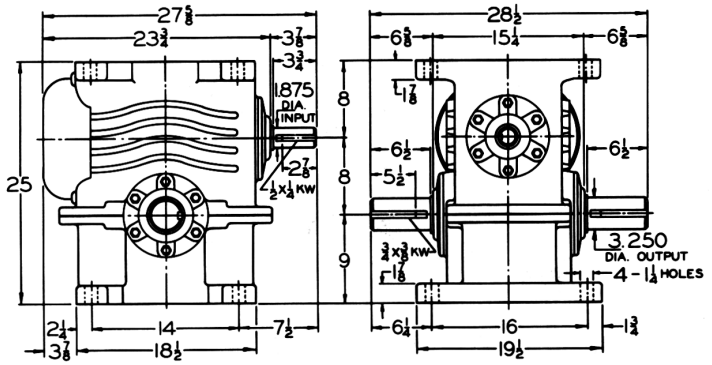
▲ Inch-pounds
Overhung load (O.H.L.) for 70W-DB is 6564 pounds, for 70W-DV is 6044 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

RW-B, RW-T and RW-V Series

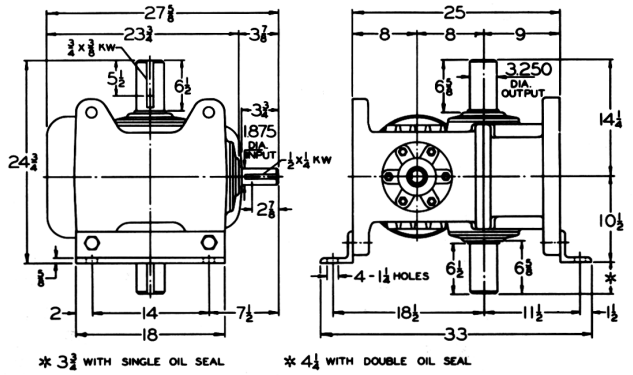
80RW-B
Net wt. 777 lbs.
8.0" C.D.

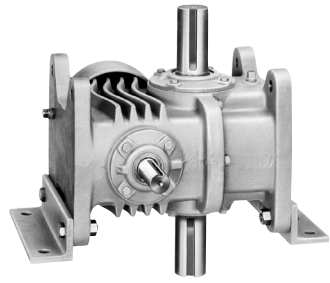


80RW-T
Net wt. 777 lbs.
8.0" C.D.



80RW-V
Net wt. 777 lbs.
8.0" C.D.





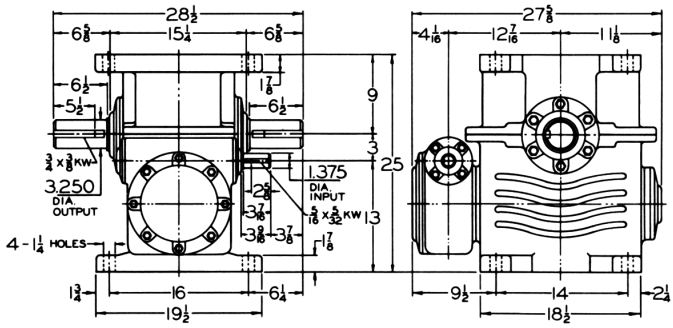
Angle brackets are not included with the reducer.

1.00 Service Factor* - Single Reduction Wormgear - 80RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	72.45	350.0	12446	61.05	230.0	15843	53.64	174.0	18300	44.81	116.0	22692	32.97	60.0	31691	14.54	20.0	40415
10	47.91	175.0	16132	39.95	115.0	20232	35.22	87.0	23369	30.03	58.0	29463	21.39	30.0	39462	9.21	10.0	48463
15	35.33	116.6	17443	29.52	76.6	21840	23.11	58.0	25219	22.41	38.7	31826	15.99	20.0	42281	6.94	6.6	51504
20	27.79	87.5	17952	23.21	57.5	22358	20.58	43.5	25827	17.78	29.0	32659	12.60	15.0	42713	5.46	5.0	51333
25	22.90	70.0	18141	19.14	46.0	22554	17.11	34.8	26165	14.77	23.2	32904	10.45	12.0	42637	4.54	4.0	50943
30	19.66	58.4	18137	16.61	38.4	22666	14.83	29.0	26142	12.93	19.3	33091	9.43	10.0	43628	4.25	3.3	52940
40	15.16	43.7	17971	12.84	28.7	22383	11.53	21.8	25817	10.13	14.5	32687	7.39	7.5	42578	3.35	2.5	51049
50	12.13	35.0	17347	10.32	23.1	21566	9.34	17.4	24984	8.23	11.6	31479	6.02	6.0	40703	2.75	2.0	48476
60	9.87	29.2	16431	8.43	19.2	20397	7.65	14.5	23602	6.77	9.7	29753	4.94	5.0	38046	2.26	1.6	45054

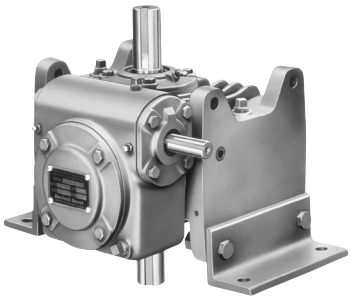
▲ Inch-pounds
Overhung load (O.H.L.) for 80RW-B, RW-T is 7809 pounds, for 80RW-V is 7241 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

W-DB and W-DV Series

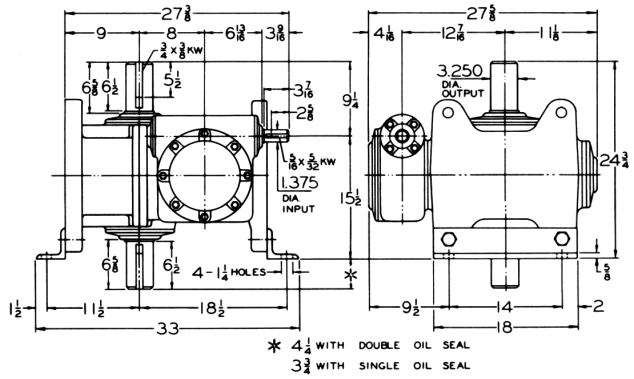


80W-DB
Net wt. 843 lbs.
8.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



80W-DV
Net wt. 843 lbs.
8.0" C.D.

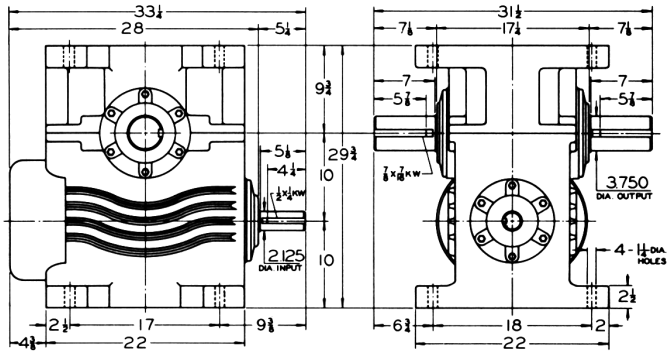
1.00 Service Factor* - Double Reduction Wormgear - Models 80W-DB and 80W-DV
5.0" Centers Primary - 8.0" Centers Secondary

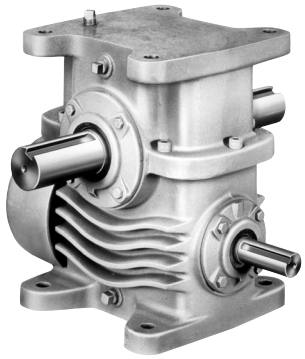
TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	18.52	23.33	40142	14.28	15.33	45374	11.71	11.60	47943	8.54	7.73	50732
100	5	20	14.60	17.50	40722	11.23	11.50	45637	9.20	8.70	48065	6.71	5.80	50669
125	5	25	12.12	14.00	40758	9.31	9.20	45411	7.64	6.96	47781	5.58	4.64	50259
150	10	15	11.85	11.67	47895	8.55	7.67	50780	6.82	5.80	52137	4.86	3.87	53551
200	10	20	9.31	8.75	48020	6.72	5.75	50715	5.37	4.35	51982	3.84	2.90	53301
250	10	25	7.73	37.00	47738	5.59	4.60	50302	4.47	3.48	51508	3.20	2.32	52762
300	15	20	6.89	5.83	50639	4.92	3.83	52451	3.91	2.90	53301	2.77	1.93	54184
400	20	20	5.52	4.38	51959	3.92	2.88	53324	3.10	2.18	53963	2.21	1.45	54626
500	25	20	4.66	3.50	52754	3.30	2.30	53849	2.61	1.74	54361	1.87	1.16	54892
600	30	20	4.12	2.92	53286	2.92	1.92	54199	2.33	1.45	54626	1.67	.97	55070
800	40	20	3.31	2.19	53951	2.35	1.44	54638	1.88	1.09	54959	1.35	.73	55292
1000	50	20	2.82	1.75	54352	2.01	1.15	54902	1.61	.87	55159	1.16	.58	55425
1200	60	20	2.48	1.46	54619	1.77	.96	55077	1.42	.73	55292	1.03	.48	55514
1500	25	60	1.96	1.17	46029	1.42	.77	46892	1.14	.58	47296	.83	.39	47715
1800	30	60	1.75	.97	46448	1.26	.64	47169	1.02	.48	47506	.74	.32	47855
2400	40	60	1.42	.73	46973	1.03	.48	47515	.84	.36	47768	.61	.24	48030
3000	50	60	1.23	.58	47289	.89	.38	47722	.72	.29	47925	.53	.19	48135
3600	60	60	1.09	.49	47499	.79	.32	47861	.64	.24	48030	.47	.16	48205

▲ Inch-pounds
Overhung load (O.H.L.) for 80W-DB, for 80W-DV is 7809 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

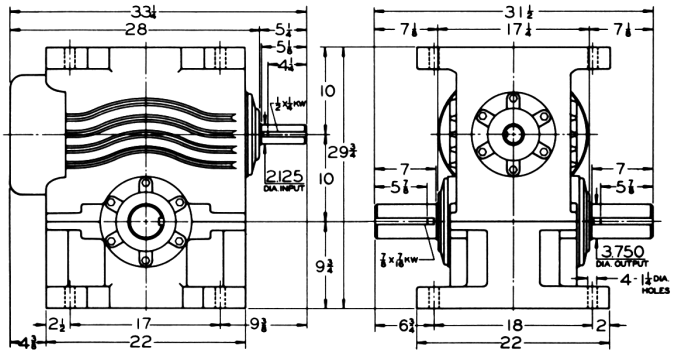
RW-B, RW-T and RW-V Series

100RW-B
Net wt. 1250 lbs.
10.0" C.D.

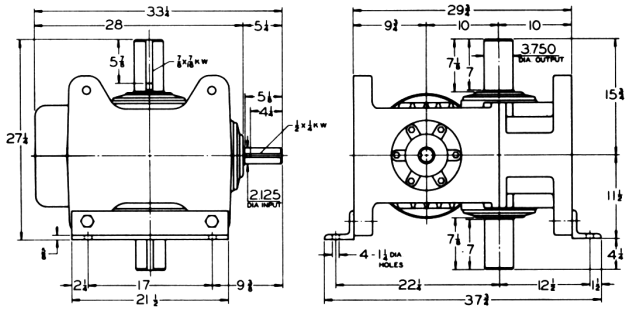


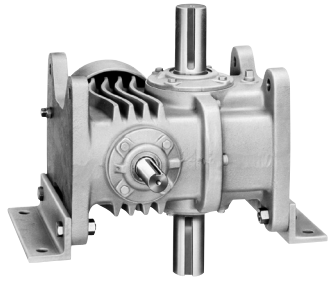


100RW-T
Net wt. 1250 lbs.
10.0" C.D.



100RW-V
Net wt. 1250 lbs.
10.0" C.D.





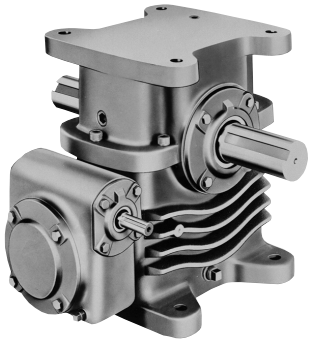
Angle brackets are not included with the reducer.

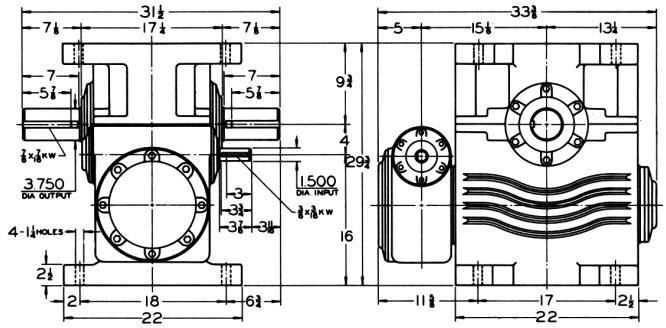
1.00 Service Factor* - Double Reduction Wormgear - 100RW PoweRgear® Universal Model

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
10	77.66	175.0	26292	66.11	115.0	33697	58.20	87.0	38918	48.63	58.0	48091	36.48	30.0	67984	16.64	10.0	88314
15	57.24	116.6	28448	48.72	76.6	36369	43.03	58.0	41984	36.18	38.7	51967	27.25	20.0	72983	12.50	6.6	94026
20	45.06	87.5	29338	38.23	57.5	37210	33.84	43.5	42996	28.77	29.0	53575	21.50	15.0	74152	9.82	5.0	93836
25	37.11	70.0	29673	31.48	46.0	37522	27.94	34.8	43371	23.93	23.2	54226	17.83	12.0	74337	8.16	4.0	93085
30	31.71	58.4	29599	27.23	38.4	37697	24.25	29.0	43532	20.73	19.3	54002	15.94	10.0	75533	7.60	3.3	96623
40	24.43	43.7	29385	20.99	28.7	37223	18.77	21.8	43018	16.27	14.5	53662	12.47	7.5	73976	5.97	2.5	93312
50	19.52	35.0	28397	16.81	23.0	35881	15.10	17.4	41471	13.20	11.6	51864	10.14	6.0	70916	4.89	2.0	88623
60	15.94	29.2	26981	13.77	19.2	34027	12.42	14.5	39243	10.95	9.7	49348	8.43	5.0	66960	4.10	1.6	83456

▲ Inch-pounds
Overhung load (O.H.L.) for 100RW-B, RW-T and RW-V is 11571 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-15 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

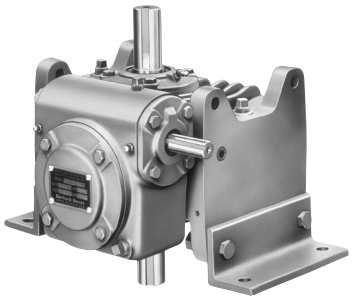
W-DB and W-DV Series



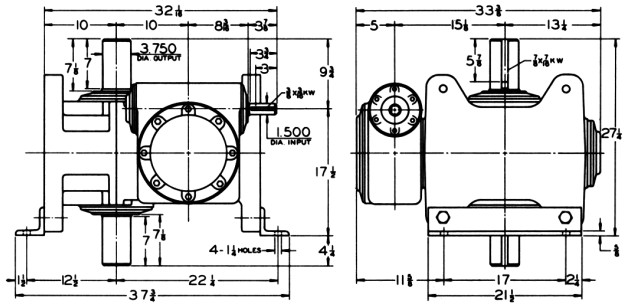


100W-DB
Net wt. 1450 lbs.
10.0" C.D.

The W-DB model should not be turned over and used with the primary in the top or "T" position. When the primary is at the top, it may not receive sufficient lubrication and will be destroyed.



Angle brackets are not included with the reducer.



100W-DV
Net wt. 1450 lbs.
10.0" C.D.

1.00 Service Factor* - Double Reduction Wormgear - Models 100W-DB and 100W-DV
6.0" Centers Primary-10.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS														
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	31.09	23.33	68469	24.70	15.33	80001	20.55	11.60	85804	15.26	7.73	92149
100	5	20	24.59	17.50	69809	19.45	11.50	80777	16.15	8.70	86162	11.99	5.80	92205
125	5	25	20.40	14.00	70100	16.13	9.20	80639	13.40	6.96	85806	9.96	4.64	91558
150	10	15	20.77	11.67	85699	15.29	7.67	92261	12.24	5.80	95416	8.77	3.87	98704
200	10	20	16.32	8.75	89058	12.01	4.75	92310	9.62	4.35	95256	6.91	2.91	98326
250	10	25	13.54	7.00	85708	9.98	4.60	91658	8.00	3.48	94460	5.76	2.32	97380
300	15	20	12.29	5.83	92135	8.82	3.83	96347	7.03	2.90	98326	5.03	1.93	100383
400	20	20	9.88	4.38	95203	7.06	2.88	98379	5.64	2.18	99868	3.99	1.45	101415
500	25	20	8.29	3.50	97053	5.90	2.30	99602	4.68	1.74	100796	3.33	1.16	102035
600	30	20	7.38	2.92	98291	5.26	1.92	100419	4.18	1.45	101415	3.00	.97	102450
800	40	20	5.96	2.19	99842	4.24	1.44	101442	3.38	1.09	102191	2.44	.73	102967
1000	50	20	5.01	1.75	100775	3.57	1.15	102057	2.85	.87	102656	2.05	.58	103278
1200	60	20	4.41	1.46	101397	3.16	.96	102467	2.53	.73	102967	1.83	.48	103485
1500	25	60	3.53	1.17	85843	2.57	.77	87930	2.07	.58	88907	1.50	.39	89922
1800	30	60	3.17	.97	86856	2.31	.64	88599	1.86	.48	89414	1.36	.32	90261
2400	40	60	2.60	.73	88126	1.89	.48	89436	1.53	.36	90049	1.12	.24	90684
3000	50	60	2.21	.58	88889	1.61	.38	89939	1.30	.29	90430	.95	.19	90938
3600	60	60	1.96	.49	89339	1.44	.32	90275	1.17	.24	90684	.85	.16	91108

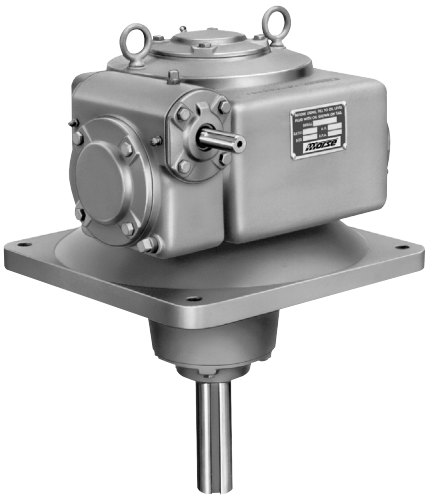
▲ Inch-pounds
Overhung load (O.H.L.) for 100W-DB and 100W-DV is 11571 pounds at one shaft diameter from housing.
* Refer to page D-6 for other service factors. Refer to page D-16 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

BEFORE USING, FILL TO OIL LEVEL
PLUG WITH OIL SHOWN ON TAG.
SERIAL
RATIO
H. P.
SIZE
R.P.M.
Morse
NET CONTENT
4/5 BU.
PRODUCE OF
U.S.A.

POWERGEAR®
V Series Worm Gear Speed Reducers

The VX models are heavy duty units especially designed for use in the conveyor industry. They are offered in ratios of 5:1 to 60:1. Double reduction units designated as DVX are also available in ratios ranging from 75:1 to 3600:1. These units are vertical drives with a dropped lower bearing which eliminates the usual outboard bearing used to carry the heavy sprocket loads encountered in trolley conveyor drives and caterpillar drives. While these units are primarily designed for the conveyor industry, one should not overlook their utility for use in mixers, blenders, paddles, etc.

The V models are designed for use similar to the VX models. However, these models do not have the extended lower bearing as do the VX models. The V line reducers can be used where space available for the unit is limited and in applications where the overhung load is not great enough to require a VX model.



- Vertical output shaft reducers designed for conveyor drives, agitators and mixers.
- Four basic configurations available:
  - V - Single reduction, flange mounted.
  - DV - Double reduction, flange mounted.
  - VX - Single reduction, drop-bearing design with extended output shaft.
  - DVX - Double reduction, drop-bearing design with extended output shaft.
- Center distance range: 1.75" through 11.00".

Reducer Selection Procedure for PoweRgear® V Series

1. **Determine Service Factor**
   From service factor tables on pages D-41 and D-42, determine service factor for the application.

2. **Determine the Overall Drive Ratio**

   $$\text{Overall Drive Ratio} = \frac{\text{rpm of driver}}{\text{rpm of driven}}$$

   When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page D-47 through D-58, a chain, belt, or gear drive with further reduction for either the input or output side, will be necessary.

3. **Determine Equivalent Horsepower or Normal Torque**

   A. HP Method:
   Equivalent hp = Actual Motor hp × Service Factor (Step # 1)

   B. Torque Method:
   Normal Torque = Actual Torque × Service Factor (Step # 1)

4. **Determine the Size of Speed Reducer Required**

   A. HP Method:

   Refer to pages D-47 through D-58 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent hp calculated in Step No. 3 above.

   B. Torque Method:

   Refer to pages D-47 through D-58 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 rpm, ratings for 100 rpm must be used.

5. **Determine the Motor Horsepower**

   Use the following equation when motor hp is not known:

   $$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Input hp}}{\text{Output Torque}}$$

6. **Check the Overhung Load**
   Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page D-40. Check this and any existing thrust loads against the load values shown on pages D-47 through D-58, and if the calculated load is greater than the values in the table, select a larger speed reducer.

   Note: Refer combined overhung and thrust loads to the Application Engineering Department.

Example No. 1 - Horsepower Method

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 hp, 1750 rpm motor, directly coupled to the reducer input speed. The reducer output shaft will be directly coupled to the mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 rpm. The reducer also requires a horizontal mounting base.

1. **Determine the Service Factor**
   From the table on page D-41, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

2. **Determine Overall Drive Ratio**
   $$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{58} = 30.17$$

   Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

3. **Determine Equivalent Horsepower**
   Equivalent hp = Actual Motor hp × S F =
   1.0 × 1.25 = 1.25 hp

4. **Determine the Size of Speed Reducer Required**
   From page D-49 under "1750 rpm Driver -30:1 Ratio - 175 rpm Output" and under "Input hp Mechanical" find the rating equal to or greater than the 1.25 equivalent hp calculated in Step No. 3. Note that a 25V reducer has mechanical rating of 1.37 hp. The correct part numbers required are:

   Reducer: **25V, 30, 1-RD, Position 1**

5. **Determine the Motor Horsepower**
   The motor horsepower is already known to be 1.0 hp.

6. **Check Overhung Load**
   The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is directly coupled with a motor. Therefore, the reducer selected is the proper size.

Example No. 2 - Torque Method

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 rpm electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. The pitch diameter of the driver sprocket mounted on the reducer output shaft is 5.032 inches. The conveyor will operate 10 hours per day, and the head shaft speed is 140 rpm. The reducer will also require a horizontal mounting base. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

1. Determine the Service Factor

From the table on page D-41, note that the service factor for a belt conveyor (general purpose) operating 3 - 10 hours per day is 1.25.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

3. Determine the Normal Torque

The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

Actual Torque at Reducer Output Shaft =

$$\frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1{,}390 \text{ In/lbs.}$$

Normal Torque =

Actual Reducer Output Torque × S F =

$$1{,}390 \times 1.25 = 1738 \text{ in/lbs.}$$

4. Determine Size of Speed Reducer Required

From page D-50 under "1750 rpm Driver - 10 to 1 ratio - 175 rpm Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 30 reducer has a mechanical rating of 1753 inch-pounds.

The correct part number required is:

Reducer: **30V 10, 1-RD, Position 1**

5. Determine the Motor Horsepower

$$\text{Motor Horsepower} = \frac{\text{Actual Torque X Input hp}}{\text{Output Torque}}$$

$$= \frac{1{,}390 \times 5.25}{1743}$$

$$= 4.19$$

Use a 5 horsepower motor.

6. Check Overhung

$$\text{OL (See below)} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}}$$

$$= \frac{2 \times 1390 \times 1.0}{5.032}$$

$$= 552.50 \text{ Pounds}$$

From rating table on page D-50, note the maximum overhung load for the output shaft of the 30V reducer is 1212 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

Overhung Loads

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages D-47 through D-58. Use the following formula to calculate the overhung loads:

$$OL = \frac{2TK}{D}$$

where

OL	=	Overhung Load	
T	=	Actual Shaft Torque (inch-pounds)	
D	=	P. D. of Sprocket, Sheave, Pulley or Gear	
K	=	1.0	for Chain Drive
	=	1.25	for Gear Drive
	=	1.25	for Gearbelt Drive
	=	1.50	for V-Belt Drive
	=	2.50	for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

Service Factors for Enclosed Worm Gear Applications

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see Conversion table on next page for conversion.)

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)			
Pure Liquids	–	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids-Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	–
Lobe	1.00	1.25	1.50
Vane	–	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	–	1.00	1.25
Brew Kettles, Continuous Duty	–	1.00	1.25
Cookers, Continuous Duty	–	1.00	1.25
Mash Tubs, Continuous Duty	–	1.00	1.25
Scale Hopper, Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES	–	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	–	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	–	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly Loaded or Fed	–	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engr.		
Boom Hoist	Refer to Application Engr.		
Trolley Drive	Refer to Application Engr.		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engr.		
Mill Duty			
Main Hoist	Refer to Application Engr.		
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	–	1.00	1.25
Escalators	Refer to Application Engr.		
Freight	Refer to Application Engr.		
Gravity Discharge	–	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
FANS			
Centrifugal	–	1.00	1.25
Cooling Towers	Refer to Application Engr.		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	–	1.25	1.50
Belt	1.00	1.25	1.50
Disc	–	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	–	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS	–	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers			
-Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls-Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls-Live-off Brg.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engr.		
METAL MILLS			
Draw Bench Carriage and Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers(Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50

Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator(Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log(Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	–	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.00	1.25	1.50
Rotary			
- Gear Type	–	1.00	1.50
- Lobe	–	1.00	1.25
- Vane	–	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
RUBBER INDUSTRY (Cont'd.)			
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	–	1.00	1.25
Chemical Feeders	–	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	–	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	–	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-Friction Bearings Only.

Note: A Service Factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, Consult Conversion Table below)

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	–	–	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

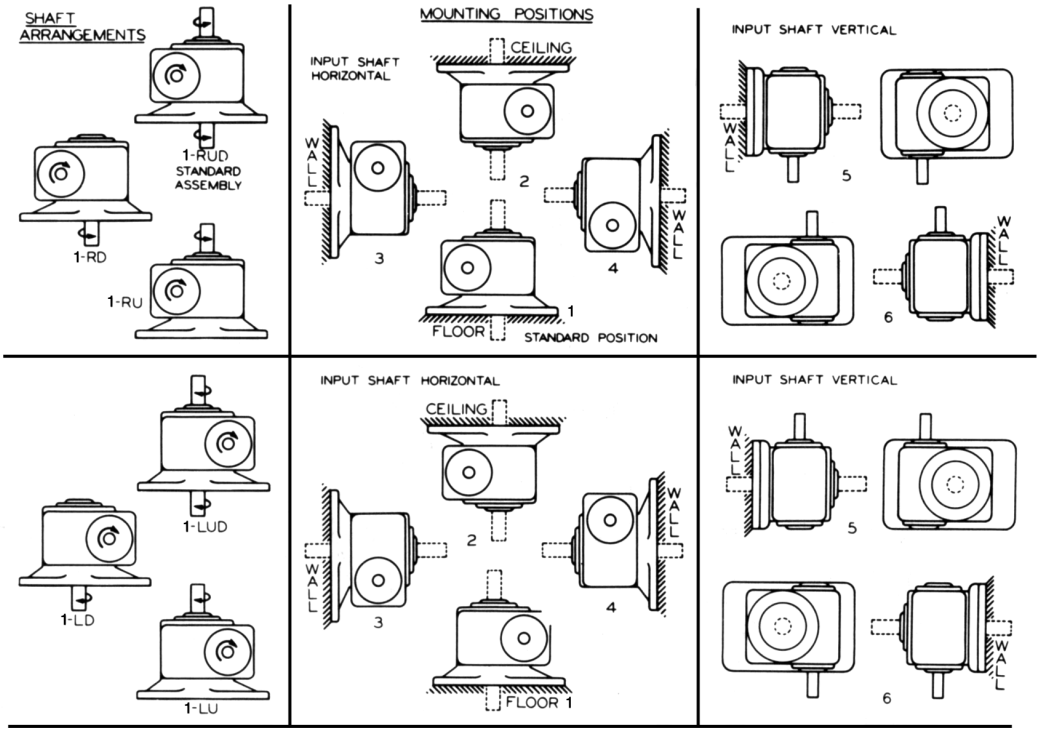
Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

Load and operating characteristics of both the driver and driven units must be considered thoroughly when selecting speed reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. Worm gear speed reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

V and VX Series Shaft Arrangements

Model V Low Base

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.

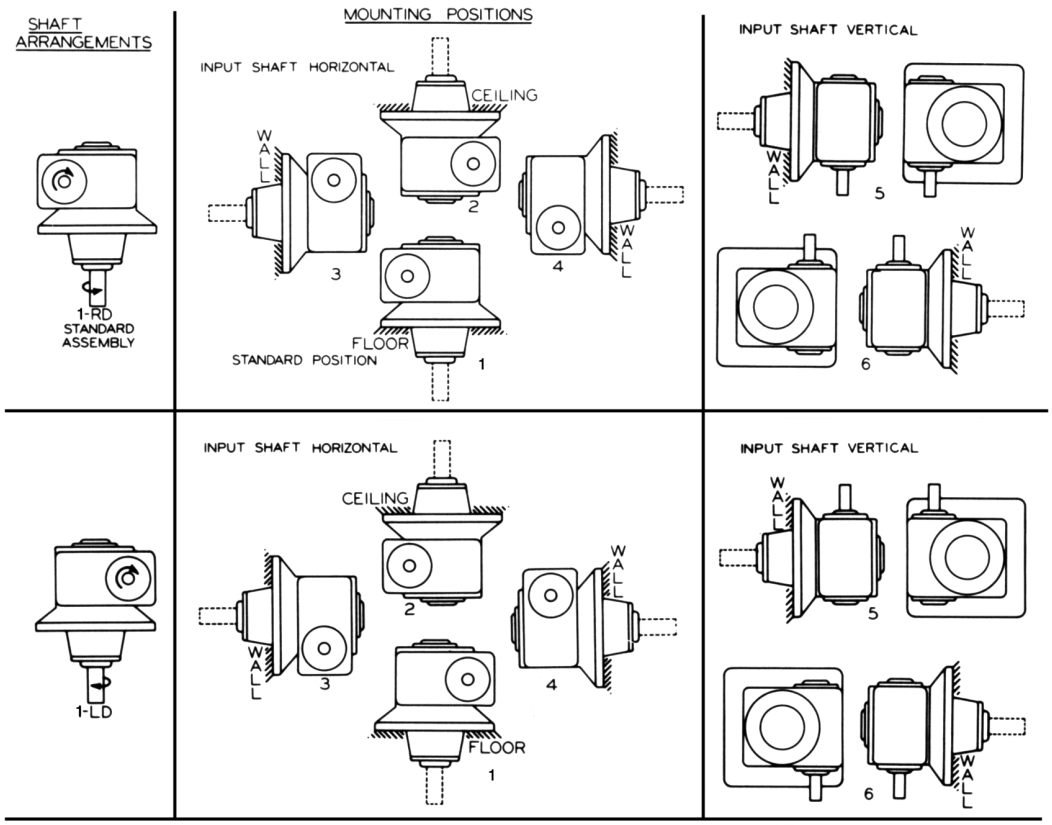


Model VX

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.

Angle brackets are not included with the reducer.

Shaft Tolerances
+ .000
-.001

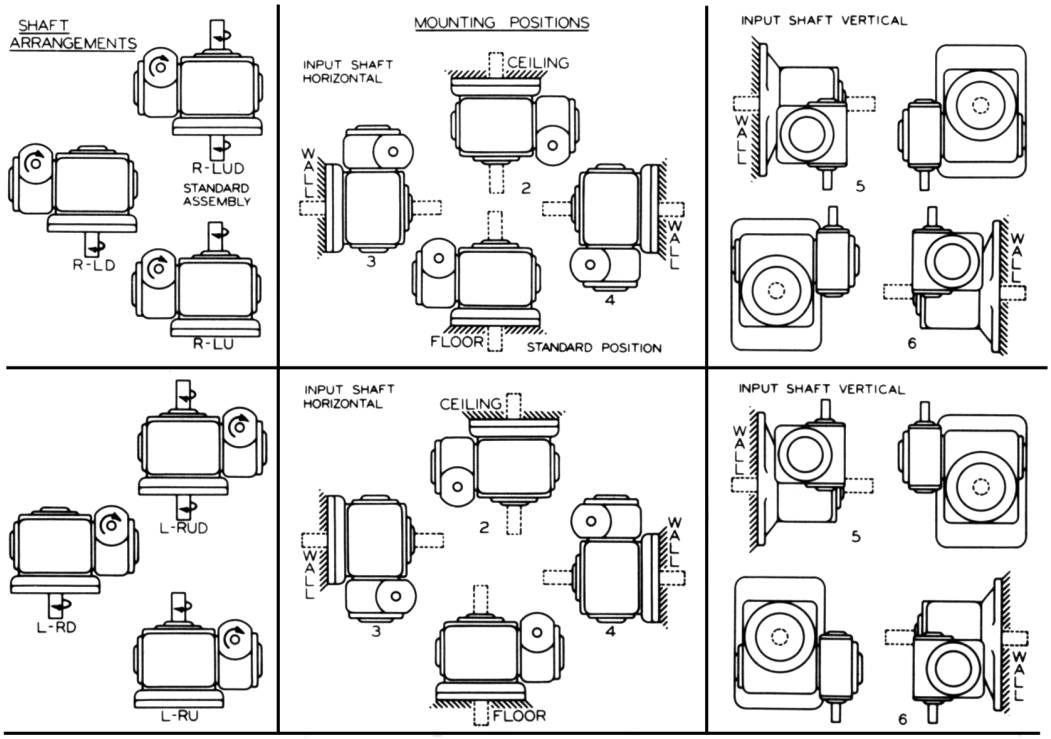


No extra charge for Standard Position shaft arrangements.

To Order, Specify:
Example: 50VX40-1-LD, position 2.

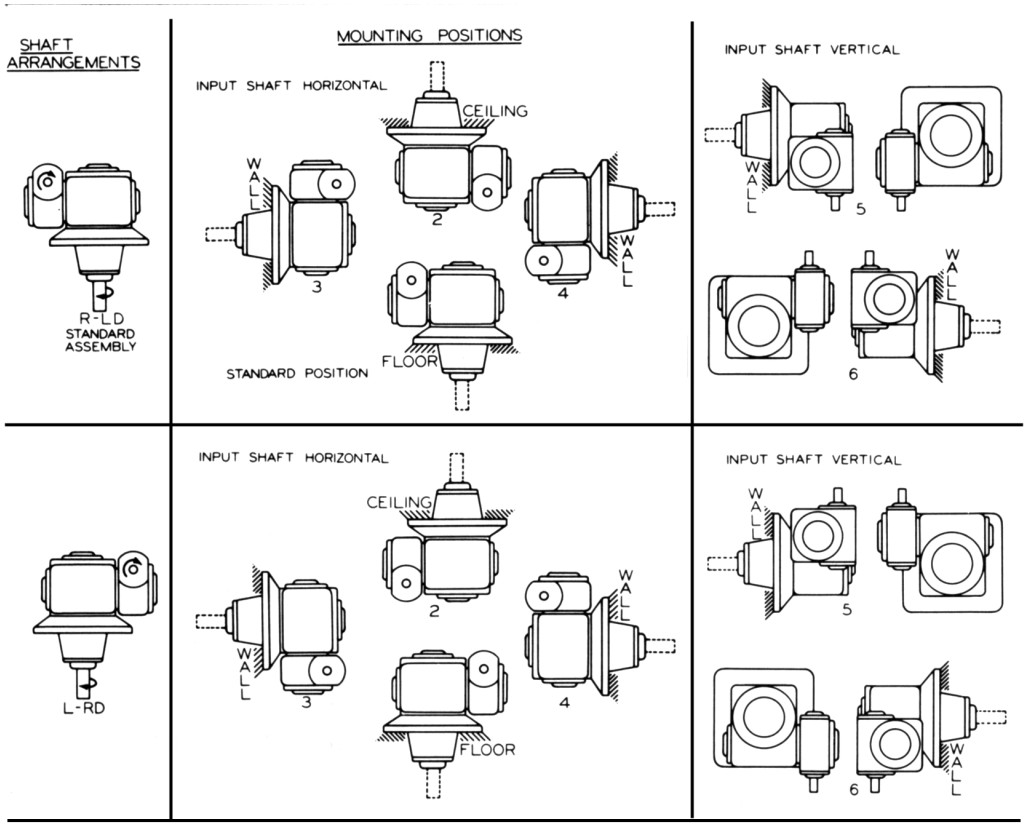
Series ..... as, V	Ratio ..... as, 40:1
Type ..... as, X	Shaft Arrangement ..... as, 1-LD
Size ..... as, 50	Mounting Positions ..... as, Ceiling 2

DV and DVX Series Shaft Arrangements



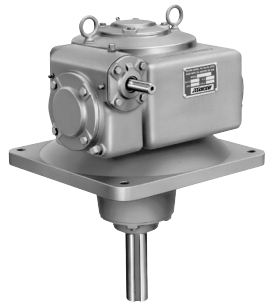
Model DV

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Model DVX

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Shaft Tolerances
+ .000
-.001

To Order, Specify:
Example: 40DV50-R-LUD, position 2.

Series ..... as, DV
Type ..... as, V
Size..... as, 40
Ratio..... as, 50:1
Shaft Arrangement ..... as, R-LUD
Mounting Position ..... as, Ceiling 2

No extra charge for Standard Position shaft arrangements.

Lubrication

For enclosed worm gear units only. A worm gear unit is only as good as the oil which is used. During the first few days of operation, a worm gear unit will run hot. Unless the temperature exceeds 200 degrees F. there is no cause for alarm.

The oils shown below are typical. Any make of oil meeting American Gear Manufactureers Association (AGMA) standards #7C & #8C will be satisfactory. Consult Application Engineering (1 800 626 2093) if you have any questions.

Ambient Temp. 15° to 60°F	Ambient Temp. 50° to 125°F
AGMA #7C	AGMA #8C

The following are some general recommendations regarding relubrication. Your experience in your specific application is the best determination of relubrication intervals.

Maintenance Schedule:

1. Change initial oil fill after 2 weeks.
2. Change oil every 6 to 12 months depending on service conditions.

Additional Lubrication notes:

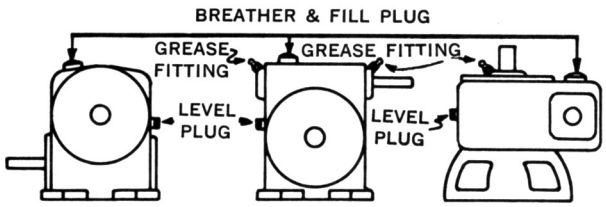
1. E.P. oils are not preferred. If an E.P. oil must be used, customer must determine that it is not corrosive to a bronze gear.
2. For ambient temperatures ouside of these temperature ranges, contact Application Engineering.
3. Units running at slow speeds should carry extra high oil level contact Application Engineering.
4. For slow input speeds (less than 100 RPM) use AGMA #8C oil in ambient temperatures of 15 to 60 degrees F.

Grease Fittings:

1. Grease every 100 hours of running time with about 3/8” ball of grease meeting NLGI #2 standards.
2. Do not over-lubricate.

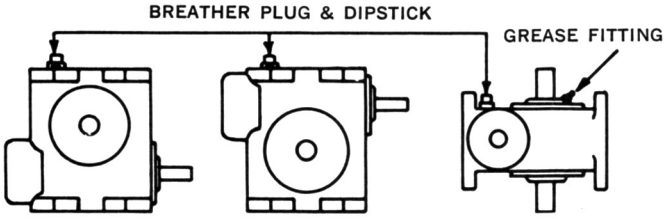
Lubrication

Lubricating Instructions - Reducers Other Than "RW"



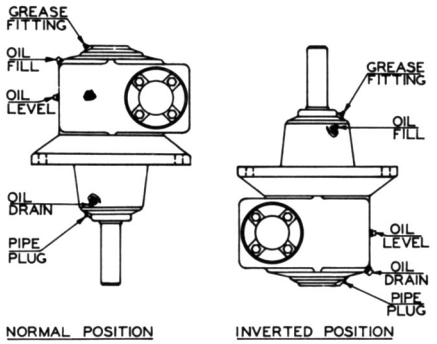
Many Morse® units are equipped with plug type oil holes. Remove level plug and fill unit with oil until oil runs out level hole. Breather and fill plug is at top of unit. Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time.

Lubricating Instructions - "RW" Reducers



RW units are equipped with a breather-dipstick fill plug. This fill plug should always be located at top of unit. Fill unit with oil to appropriate oil level line as indicated on dipstick. Units equipped with special dipsticks: fill with oil so dipstick dips into oil 1/4". Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time. When mounting units in inverted position or on walls, be sure all bearings get proper lubrication. Miter boxes do not require breather plugs.

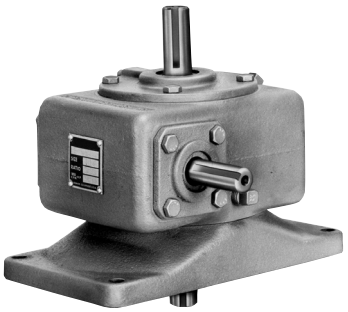
Lubrication fittings VX conveyor drives

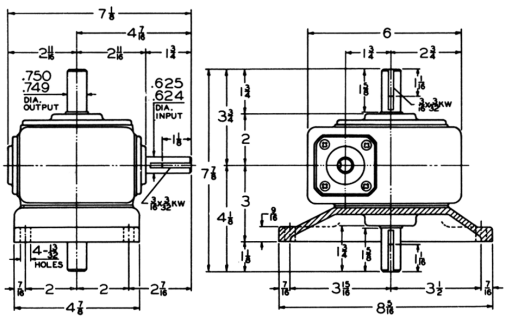


Oil Capacities Chart - U.S.A. Measure - Approximate Quantities, Fill To Oil Level

10WB ..... 1/4 Pt.	50RWB ..... 1 3/4 Gals.	50V ..... 1 1/2 Gals.	13GCT ..... 1/2 Pt.	35GSA,GSF ..... 3 Qts.	40GDSA,	
10WT ..... 1/4 Pt.	50RWT ..... 1 3/4 Gals.	50DV ..... 1 3/4 Gals.	13GCV ..... 1/2 Pt.	40SA.SF ..... 3 1/2 Qts.	GDSF ..... 4 1/4 Qts.	
10WV ..... 1/4 Pt.	50WDB ..... 2 1/4 Gals.	60V ..... 2 1/2 Gals.	Low Base ..... 1/2 Pt.	40GSA,GSF ..... 3 1/2 Qts.	40GCDB ..... 3 3/4 Qts.	
13WB ..... 1/2 Pt.	50WDV ..... 2 Gals.	60DV ..... 2 3/4 Gals.	18GCT ..... 3/4 Pt.	50SA ,SF ..... 1 3/4 Gals.	50DSA,DSF ..... 2 1/4 Gals.	
13WT ..... 1/2 Pt.	60RWB ..... 2 3/4 Gals.	70V ..... 4 Gals.	18GCV ..... 1 Pt.	50GSA,GSF ..... 1 3/4 Gals.	50GDSA,	
13WV ..... 1/2 Pt.	60RWT ..... 3 Gals.	70DV ..... 4 1/2 Gals.	Low Base ..... 1 Pt.	60SA, SF ..... 2 3/4 Gals.	GDSF ..... 2 1/4 Gals.	
18WB ..... 1 Pt.	60RWV ..... 2 1/2 Gals.	30VX ..... Std. 3 Qts.	20GCT ..... 1 1/2 Pts.	60GSA,GSF ..... 2 3/4 Gals.	50GCDB ..... 2 1/4 Gals.	
18WT ..... 3/4 Pt.	60WDB ..... 3 3/4 Gals.	Inverted ..... 2 Qts.	20GCV ..... 1 Qt.	13GCDB ..... 3/4 Pt.	50GCDV ..... 1 3/4 Gals.	
18WV ..... 1 Pt.	60WDV ..... 3 1/2 Gals.	30DVX ..... Std. 3 3/4 Qts.	Low Base ..... 1 Qt.	13GCDV ..... 3/4 Pt.	60DSA,DSF ..... 3 3/4 Gals.	
20WB ..... 1 3/4 Pts.	70RWB ..... 5 3/4 Gals.	Inverted ..... 2 3/4 Qts.	25GCT ..... 1 1/4 Qts.	18DSA,DSF ..... 1 Pt.	60GDSA,	
20WT ..... 1 1/2 Pts.	70RWT ..... 5 3/4 Gals.	35VX ..... Std. 4 1/4 Qts.	25GCV ..... 1 1/2Qts.	18 GDSA,	GDSF ..... 2 3/4 Gals.	
20WV ..... 1 1/2 Pts.	70RWV ..... 4 1/2 Gals.	Inverted ..... 3 3/4 Qts.	Low Base ..... 1 1/2 Qts.	GDSF ..... 1 Pt.	60GCDB ..... 3 3/4 Gals.	
20WDB ..... 2 Pts.	70WDB ..... 7 Gals.	35DVX ..... Std. 4 1/2 Qts.	30GCT ..... 2 Qts.	18GCDB ..... 1 Pt.	60GCDV ..... 2 3/4 Gals.	
20WDV ..... 1 3/4 Pts.	70WDV ..... 6 1/4 Gals.	Inverted ..... 4 Qts.	30GCV ..... 2 1/2 Qts.	18GCDV ..... 1 Pt.	30GCDVX.. Std. 3 3/4 Qts.	
25RWB ..... 2 1/2 Pts.	80RWB ..... 7 1/2 Gals.	40VX ..... Std. 1 1/4 Gals.	Low Base ..... 2 1/2 Qts.	20DSA,DSF ..... 1 Qt.	Inverted ..... 2 3/4 Qts.	
25RWT ..... 2 1/2 Pts.	80RWT ..... 7 1/2 Gals.	Inverted ..... 1 Gal.	35GCT ..... 3 Qts.	20GDSA,GDSF ..... 1 Qt.	35GCDVX.. Std. 4 1/2 Qts.	
25RWV ..... 2 1/4 Pts.	80WDB ..... 10 Gals.	40DVX ..... Std. 1 1/2 Gals.	35GCV ..... 3 3/4 Qts.	20GCDB ..... 1 Qt.	Inverted ..... 4 Qts.	
25WDB ..... 3 1/4 Pts.	80WDV ..... 9 Gals.	Inverted ..... 1 1/4 Gals.	Low Base ..... 3 3/4 Qts.	20GCDV ..... 1 Qt.	40GCDVX. Std. 1 1/2 Gals.	
25WDV ..... 3 Pts.	100RWB ..... 15 1/2 Gals.	50VX ..... Std. 2 Gals.	40GCT ..... 3 1/2Qts.	25DSA,DSF ..... 3 1/4 Pts.	Inverted ..... 1 1/4 Gals.	
30RWB ..... 3 3/4 Pts.	100RWT ..... 11 1/2 Gals.	Inverted ..... 1 3/4 Gals.	40GCV ..... 3 1/2 Qts.	25GDSA,	50GCDVX Std. 2 1/4 Gals.	
30RWT ..... 3 3/4 Pts.	100RWV ..... 10 Gals.	50DVX ..... Std. 2 1/4 Gals.	Low Base ..... 3 1/2 Qts.	GDSF ..... 3 1/4 Pts.	Inverted ..... 2 Gals.	
30WDB ..... 2 1/2 Qts.	100WDB ..... 19 Gals.	Inverted ..... 2 Gals.	50GCT ..... 1 3/4 Gals.	25GCDB ..... 3 1/4 Pts.	60GCDVX Std. 4 1/4 Gals.	
30WDV ..... 2 1/4 Qts.	100WDV ..... 12 1/2 Gals.	60VX ..... Std. 3 3/4 Gals.	60GCT ..... 2 3/4 Gals.	25GCDV ..... 1 1/4 Gals.	Inverted ..... 3 1/4 Gals.	
35RWB ..... 3 1/4 Qts.	18V ..... 1 Pt.	Inverted ..... 2 3/4 Gals.	50GCV ..... 1 1/2 Gals.	30DSA,DSF ..... 2 1/2 Qts.	4M ..... 3/4 Pt.	
35RWT ..... 3 1/2 Qts.	20V ..... 1 1/2 Pts.	60DVX ..... Std. 4 1/4 Gals.	Low Base ..... 1 1/2 Gals.	30GDSA,	6M ..... 1 Qt.	
35RWV ..... 2 1/2 Qts.	20DV ..... 1 Qt.	Inverted ..... 3 1/4 Gals.	60GCV	GDSF ..... 2 1/2 Qts.	8M ..... 2 Qts.	
35WDB ..... 3 3/4 Qts.	25V ..... 1 Qt.	70VX ..... Std. 6 Gals.	Low Base ..... 2 3/4 Gals.	30GCDB ..... 2 1/2 Qts.	12M ..... 1 1/2 Gals.	
35WDV ..... 3 Qts.	25DV ..... 1 1/4 Qts.	Inverted ..... 5 Gals.	18SA,SF ..... 3/4 Pts.	30GCDV ..... 2 1/2 Qts.		
40RWB ..... 3 1/2 Qts.	30V ..... 1 3/4 Qts.	70DVX ..... Std. 7 Gals.	18GSA,GSF ..... 3/4 Pts.	35DSA,DSF ..... 2 3/4 Qts.		
40RWT ..... 3 1/2 Qts.	30DV ..... 2 1/2 Qts.	Inverted ..... 5 1/2 Gals.	20SA,SF ..... 1 1/2 Pts.	35GDSA,		
40RWV ..... 3 Qts.	35V ..... 2 1/4 Qts.	90VX ..... 11 Gals.	20GSA,GSF ..... 1 1/2 Pts.	GDSF ..... 2 3/4 Qts.		
40WDB ..... 3 3/4 Qts.	35DV ..... 2 3/4 Qts.	90DVX ..... 12 1/2 Gals.	25SA,SF ..... 1 1/4 Pts.	35GCDB ..... 3 3/4 Qts.		
40WDV ..... 3 1/4 Qts.	40V ..... 3 1/2 Qts.	110VX ..... 20 Gals.	25GSA,GSF ..... 1 1/4 Pts.	35GCDV ..... 2 3/4 Qts.		
	40DV ..... 4 1/4 Qts.	110DVX ..... 18 1/2 Gals.	30SA,SF ..... 2 Qts.	40DSA,DSF ..... 4 1/4 Qts.		
			30GSA,GSF ..... 2 Qts.			
			35SA,SF ..... 3 Qts.			

Series V





18V
Net wt. 10 lbs.
1.75" C.D.

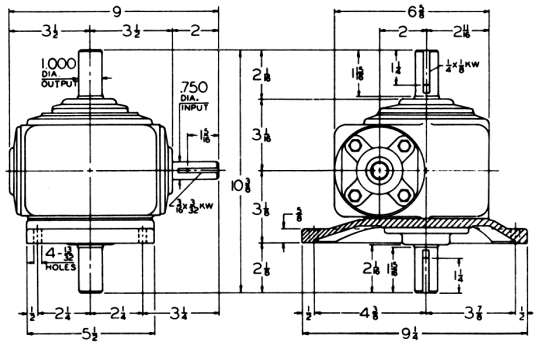
1.00 Service Factor* - Single Reduction Wormgear - Model 18V "Low Base"

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.17	350.0	359	1.73	230.0	430	1.44	17.40	468	1.06	116.0	509	.61	60.0	551	.22	20.0	580
7.5	1.71	233.3	415	1.35	153.3	490	1.12	116.0	530	.82	77.3	571	.47	40.0	614	.17	13.3	643
10	1.42	175.0	447	1.12	115.0	527	.93	87.0	567	.68	58.0	610	.39	30.0	654	.14	10.0	682
15	1.06	116.6	479	.84	76.6	561	.70	58.0	603	.52	38.7	648	.30	20.0	693	.11	6.6	727
20	.85	87.5	490	.67	57.5	570	.56	43.5	611	.41	29.0	654	.24	15.0	698	.09	5.0	722
25	.71	70.0	494	.56	46.0	570	.47	3.8	608	.35	23.2	649	.20	12.0	688	.08	4.0	715
30	.63	58.4	494	.51	38.4	578	.43	29.0	620	.32	19.3	667	.19	10.0	711	.07	3.3	745
40	.50	43.7	489	.41	28.7	567	.34	21.8	607	.26	14.5	648	.15	7.5	694	.06	2.5	715
50	.41	35.00	471	.33	23.0	543	.28	17.4	578	.21	11.6	616	.13	6.0	658	.05	2.0	679
60	.34	29.2	446	.28	19.2	512	.24	14.5	545	.18	9.7	578	.11	5.0	615	.04	1.6	630

▲ Inch-pounds.
Overhung load (O.H.L.) 274 pounds at one shaft diameter from housing.
* Refer to page D-42 for other service factors. Refer to page D-43 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

V and DV Series

20V
Net wt. 34 lbs.
2.0" C.D.

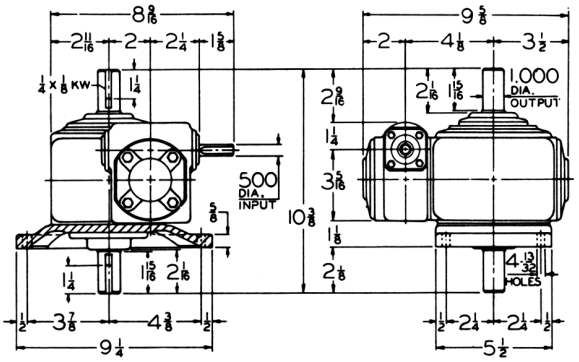


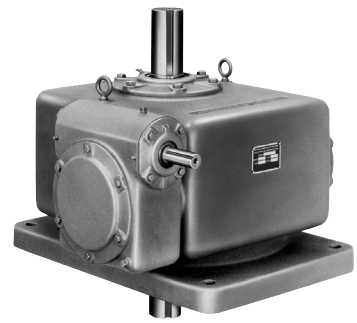
1.00 Service Factor* - Single Reduction Wormgear - Model 20V "Low Base"

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.92	350.0	487	2.35	230.0	588	1.96	174.0	643	1.45	116.0	702	.83	60.0	763	.30	20.0	808
7.5	2.31	233.3	568	1.84	153.3	676	1.52	116.0	732	1.12	77.3	793	.64	40.0	854	.23	13.3	896
10	1.92	175.0	616	1.52	115.0	728	1.26	87.0	785	.92	58.0	847	.53	30.0	910	.19	10.0	954
15	1.44	116.6	663	1.14	76.6	779	.94	58.0	837	.70	38.7	902	.40	20.0	964	.15	6.6	1011
20	1.13	87.5	673	.88	57.5	779	.73	43.5	830	.54	29.0	890	.31	15.0	944	.12	5.0	987
25	.94	70.0	677	.73	46.0	777	.61	34.8	827	.45	23.2	882	.26	12.0	936	.10	4.0	971
30	.84	58.4	685	.67	38.4	803	.57	29.0	862	.42	19.3	928	.25	10.0	992	.10	3.3	1037
40	.65	43.7	672	.52	28.7	776	.43	21.8	828	.32	14.5	883	.19	7.5	937	.07	2.5	979
50	.53	35.0	646	.42	23.0	742	.35	17.4	788	.27	11.6	839	.16	6.0	887	.06	2.0	921
60	.44	29.2	610	.35	19.2	699	.30	14.5	741	.22	9.7	789	.13	5.0	835	.05	1.6	869

▲ Inch-pounds Overhung load (O.H.L.) 670 pounds at one shaft diameter from housing. Note: Some sizes may require minimum order quantity.

20DV
Net wt. 39 lbs.
2.0" C.D.



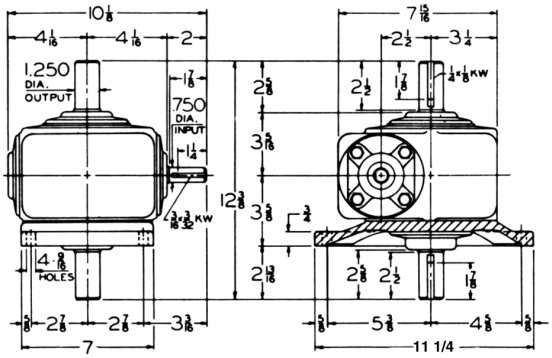


1.00 Service Factor* - Double Reduction Wormgear - Model 20DV "Low Base"
1.33" Centers Primary - 2.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	.50	23.33	956	.35	15.33	984	.28	11.60	997	.20	7.73	1010	
100	5	20	.39	17.50	937	.27	11.50	962	.21	8.70	973	.15	5.80	985	
125	5	25	.32	14.00	929	.23	9.20	952	.18	6.96	963	.13	4.64	975	
150	10	15	.29	11.67	996	.20	7.67	1010	.16	5.80	1017	.11	3.87	1024	
200	10	20	.22	8.75	973	.16	5.75	986	.12	4.35	991	.09	2.90	997	
250	10	25	.18	7.00	963	.13	4.60	975	.10	3.48	980	.07	2.32	986	
300	15	20	.16	5.83	985	.11	3.83	994	.09	2.90	997	.06	1.93	1001	
400	20	20	.13	4.38	991	.09	2.88	998	.07	2.18	1000	.05	1.45	1003	
500	25	20	.11	3.50	995	.08	2.30	1000	.06	1.74	1002	.04	1.16	1005	
600	30	20	.10	2.92	997	.07	1.92	1002	.06	1.45	1003	.04	.97	1005	
800	40	20	.08	2.19	1000	.06	1.44	1004	.05	1.09	1005	.03	.73	1006	
1000	50	20	.07	1.75	1002	.05	1.15	1005	.04	.87	1006	.03	.58	1007	
1200	60	20	.06	1.46	1003	.05	.96	1006	.04	.73	1006	.03	.48	1007	
1500	25	60	.05	1.17	876	.04	.77	880	.03	.58	882	.02	.39	884	
1800	30	60	.05	.97	878	.03	.64	882	.03	.48	883	.02	.32	885	
2400	40	60	.04	.73	881	.03	.48	883	.02	.36	884	.02	.24	886	
3000	50	60	.03	.58	882	.02	.38	884	.02	.29	885	.01	.19	886	
3600	60	60	.03	.49	883	.02	.32	885	.02	.24	886	.01	.16	886	

▲ Inch-pounds.
Overhung load (O.H.L.) 670 pounds at one shaft diameter from housing.
* Refer to page D-42 for other service factors. Refer to page D-43 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

V and DV Series

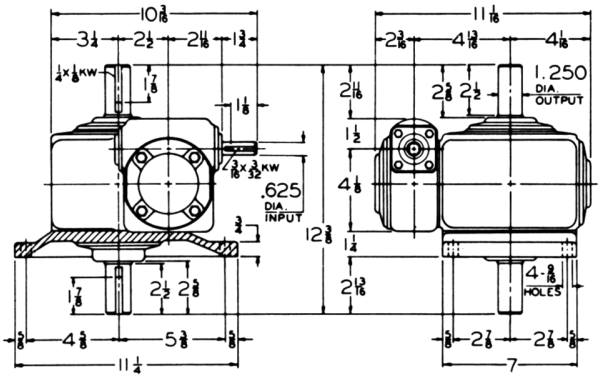


25V
Net wt. 52 lbs.
2.5" C.D.

1.00 Service Factor* - Single Reduction Wormgear - Model 25V "Low Base"

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	4.76	350.0	798	3.95	230.0	996	3.36	174.0	1112	2.54	116.0	1243	1.49	60.0	1379	.55	20.0	1479
7.5	3.82	233.3	946	3.12	153.3	1158	2.63	116.0	1277	1.97	77.3	1409	1.14	40.0	1545	.42	13.3	1644
10	3.18	175.0	1031	2.58	115.0	1253	2.17	87.0	1376	1.63	58.0	1510	.94	30.0	1648	.35	10.0	1751
15	2.37	116.6	1113	1.93	76.6	1344	1.63	58.0	1472	1.22	38.7	1610	.71	20.0	1750	.27	6.6	1855
20	1.88	87.5	1139	1.52	57.5	1364	1.28	43.5	1484	.96	29.0	1614	.56	15.0	1745	.21	5.0	1835
25	1.54	70.0	1140	1.24	46.0	1347	1.03	34.8	1454	.77	23.2	1569	.45	12.0	1683	.17	4.0	1765
30	1.37	58.4	1155	1.13	38.4	1390	.96	29.0	1518	.73	19.3	1659	.44	10.0	1797	.17	3.3	1897
40	1.07	43.7	1139	.85	28.7	1361	.75	21.8	1479	.58	14.5	1607	.34	7.5	1737	.14	2.5	1828
50	.86	35.0	1090	.70	23.0	1285	.59	17.4	1386	.45	11.6	1495	.27	6.0	1605	.11	2.0	1684
60	.70	29.2	1024	.57	19.2	1196	.48	14.5	1281	.36	9.7	1376	.22	5.0	1472	.09	1.6	1533

▲ Inch-pounds Overhung load (O.H.L.) 1030 pounds at one shaft diameter from housing. Note: Some sizes may require minimum order quantity.



25DV
Net wt. 67 lbs.
2.5" C.D.

1.00 Service Factor* - Double Reduction Wormgear - Model 25DV "Low Base"
1.75" Centers Primary - 2.5" Centers Secondary

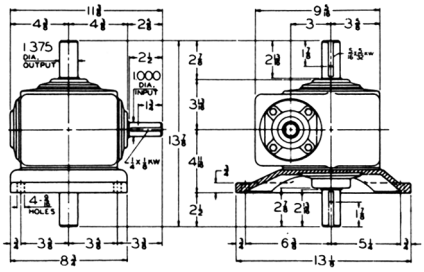
TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	.88	23.33	1728	.62	15.33	1790	.49	11.60	1819	.35	7.73	1849
100	5	20	.69	17.50	1725	.49	11.50	1783	.39	8.70	1810	.27	5.80	1838
125	5	25	.55	14.00	1667	.39	9.20	1718	.31	6.96	1741	.22	4.64	1766
150	10	15	.51	11.67	1818	.35	7.67	1849	.28	5.80	1864	.20	3.87	1879
200	10	20	.40	8.75	1809	.28	5.75	1838	.22	4.35	1852	.16	2.90	1866
250	10	25	.32	7.00	1741	.22	4.60	1766	.18	3.48	1778	.12	2.32	1791
300	15	20	.29	5.83	1837	.20	3.83	1857	.16	2.90	1866	.11	1.93	1875
400	20	20	.23	4.38	1852	.17	2.88	1866	.13	2.18	1873	.09	1.45	1880
500	25	20	.20	3.50	1860	.14	2.30	1872	.11	1.74	1877	.08	1.16	1883
600	30	20	.18	2.92	1866	.13	1.92	1875	.10	1.45	1880	.07	.97	1885
800	40	20	.15	2.19	1873	.11	1.44	1880	.08	1.09	1883	.06	.73	1887
1000	50	20	.13	1.75	1877	.09	1.15	1883	.07	.87	1886	.05	.58	1888
1200	60	20	.11	1.46	1880	.08	.96	1885	.07	.73	1887	.05	.48	1889
1500	25	60	.08	1.17	1552	.06	.77	1560	.05	.58	1564	.03	.39	1568
1800	30	60	.07	.97	1556	.05	.64	1562	.04	.48	1566	.03	.32	1569
2400	40	60	.06	.73	1561	.04	.48	1566	.04	.36	1568	.03	.24	1571
3000	50	60	.05	.58	1564	.04	.38	1568	.03	.29	1570	.02	.19	1572
3600	60	60	.05	.49	1566	.03	.32	1569	.03	.24	1571	.02	.16	1572

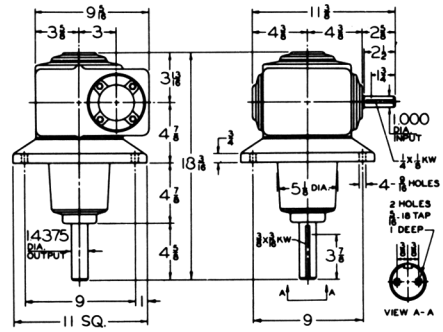
▲ Inch-pounds.
Overhung load (O.H.L.) 1030 pounds at one shaft diameter from housing.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

V, VX, DV and DVX Series

30V Net wt. 70 lbs.

3.0" C.D.





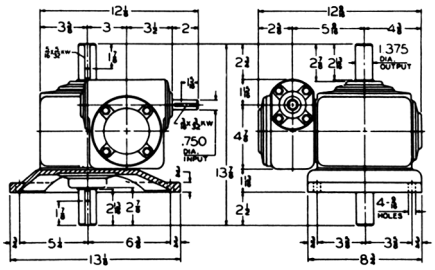
Net wt. 88 lbs. 30VX

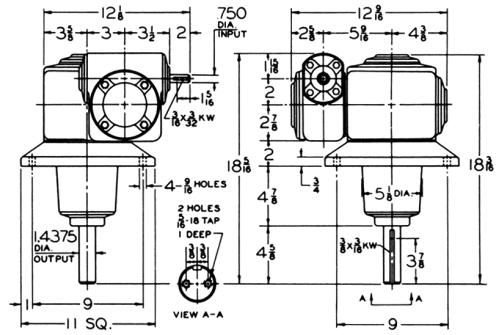
1.00 Service Factor* - Double Reduction Wormgear - Model 30DV "Low Base" and Model 30DVX

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	8.06	350.0	1357	6.82	230.0	1729	5.92	174.0	1968	4.58	116.0	2254	2.75	60.0	2557	1.03	20.0	2783
7.5	6.44	233.3	1603	5.42	153.3	2026	4.65	116.0	2279	3.56	77.3	2571	2.11	40.0	2874	.79	13.3	3100
10	5.37	175.0	1753	4.50	115.0	2198	3.85	87.0	2461	2.94	58.0	2760	1.74	30.0	3069	.66	10.0	3298
15	4.01	116.6	1899	3.36	76.6	2366	2.68	58.0	2639	2.20	38.7	2947	1.31	20.0	3264	.50	6.6	3499
20	3.19	87.5	1956	2.65	57.5	2412	2.27	43.5	2671	1.73	29.0	2955	1.03	15.0	3254	.39	5.0	3476
25	2.64	70.0	1975	2.18	64.0	2404	1.85	34.8	2643	1.41	23.2	2907	.84	12.0	3175	.32	4.0	3373
30	2.31	58.4	1975	1.96	38.4	2451	1.69	29.0	2725	1.31	19.3	3033	.81	10.0	3349	.31	3.3	3584
40	1.81	43.7	1959	1.53	28.7	2406	1.33	21.8	2665	1.03	14.5	2946	.63	7.5	3240	.25	2.5	3454
50	1.46	35.0	1889	1.23	23.0	2298	1.06	17.4	2525	.82	11.6	2770	.50	6.0	3020	.20	2.0	3198
60	1.21	29.2	1791	1.02	19.2	2172	.88	14.5	2380	.69	9.7	2612	.42	5.0	2844	.17	1.6	3016

30DV Net wt. 92 lbs.

3.0" C.D.





Net wt. 109lbs. 30DVX

1.00 Service Factor* - Double Reduction Wormgear - Model 30DV "Low Base" and Model 30DVX
2.0" Centers Primary - 3.0" Centers Secondary

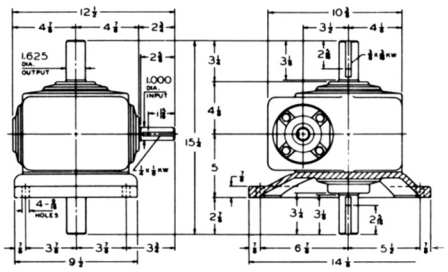
TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	OupPut		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	1.61	23.33	3208	1.15	15.33	3348	.91	11.60	3413	.64	7.73	3481	
100	5	20	1.26	17.50	3207	.90	11.50	3337	.71	8.70	3399	.51	5.80	3462	
125	5	25	1.02	14.00	3132	.73	9.20	3250	.58	6.96	3305	.41	4.64	3362	
150	10	15	.93	11.67	3412	.65	7.67	3483	.51	5.80	3516	.36	3.87	3550	
200	10	20	.73	8.75	3398	.51	5.75	3464	.40	4.35	3494	.28	2.90	3526	
250	10	25	.59	7.00	3304	.42	4.60	3363	.33	3.48	3391	.23	2.32	3420	
300	15	20	.53	5.83	3462	.37	3.83	3506	.29	2.90	3526	.21	1.93	3548	
400	20	20	.42	4.38	3494	.30	2.88	3527	.23	2.18	3542	.16	1.45	3558	
500	25	20	.35	3.50	3513	.25	2.30	3540	.20	1.74	3552	.14	1.16	3565	
600	30	20	.32	2.92	3526	.23	1.92	3548	.18	1.45	3558	.13	.97	3569	
800	40	20	.26	2.19	3542	.18	1.44	3559	.15	1.09	3566	.10	.73	3574	
1000	50	20	.22	1.75	3552	.16	1.15	3565	.13	.87	3571	.09	.58	3578	
1200	60	20	.20	1.46	3558	.14	.96	3569	.11	.73	3574	.08	.48	3580	
1500	25	60	.16	1.17	3044	.11	.77	3065	.09	.58	3074	.06	.39	3084	
1800	30	60	.14	.97	3054	.10	.64	3071	.08	.48	3079	.06	.32	3088	
2400	40	60	.12	.73	3067	.08	.48	3080	.07	.36	3086	.05	.24	3092	
3000	50	60	.10	.58	3074	.07	.38	3085	.06	.29	3089	.04	.19	3094	
3600	60	60	.09	.49	3079	.06	.32	3088	.05	.24	3092	0.4	.16	3096	

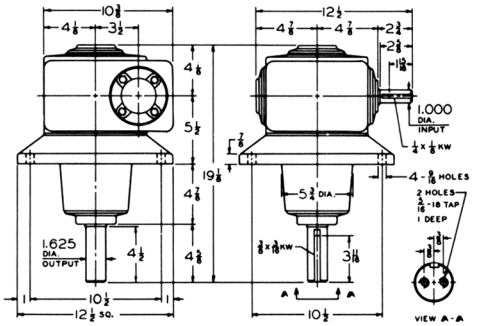
▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 1212 pounds at one shaft diameter from housing, and 605 pounds for DVX unit at the end of Output Shaft Extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.

V, VX, DV and DVX Series

35V Net wt. 92 lbs.

3.5" C.D.





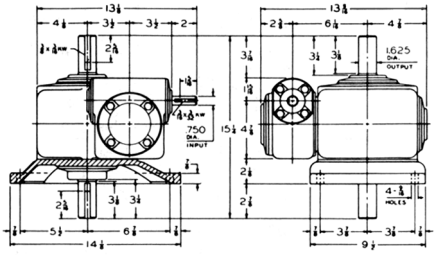
Net wt. 117 lbs. 35VX

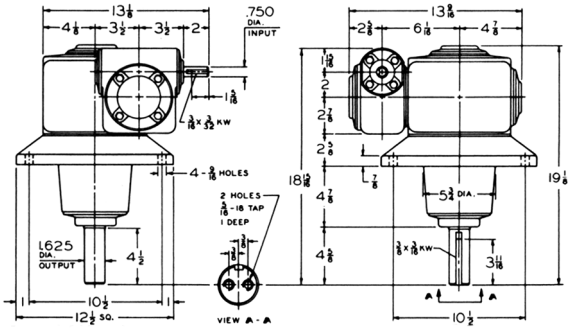
1.00 Service Factor* - Single Reduction Wormgear - Model 35V "Low Base" and Model 35VX

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	11.54	350.0	1951	9.70	230.0	2470	8.58	174.0	2861	6.82	116.0	3373	4.21	60.0	3927	1.61	20.0	4356
7.5	9.12	233.3	2279	7.74	153.3	2903	6.78	116.0	3328	5.33	77.3	3868	3.25	40.0	4424	1.24	13.3	4854
10	7.55	175.0	2474	6.43	115.0	3155	5.62	87.0	3601	4.40	58.0	4150	2.68	30.0	4726	1.03	10.0	5167
15	5.60	116.6	2663	4.80	76.6	3396	4.20	58.0	3864	3.30	38.7	4429	2.02	20.0	5027	.78	6.6	5476
20	4.44	87.5	2736	3.80	57.5	3469	3.31	43.5	3921	2.58	29.0	4448	1.58	15.0	5003	.61	5.0	5401
25	3.67	70.0	2773	3.11	46.0	3470	2.69	34.8	3884	2.08	23.2	4349	1.26	12.0	4830	.49	4.0	5185
30	3.22	58.4	2773	2.79	38.4	3516	2.46	29.0	3995	1.97	19.3	4570	1.24	10.0	5165	.50	3.3	5625
40	2.50	43.7	2738	2.18	28.7	3468	1.92	21.8	3914	1.53	14.5	4428	.96	7.5	4969	.39	2.5	5364
50	2.02	35.0	2657	1.74	23.0	3320	1.52	17.4	3707	1.21	11.6	4144	.75	6.0	4603	.30	2.0	4934
60	1.67	29.2	2522	1.44	19.2	3138	1.26	14.5	3497	1.00	9.7	3900	.63	5.0	4308	.26	1.6	4637

35DV Net wt. 111 lbs.

3.5" C.D.





Net wt. 136 lbs. 35DVX

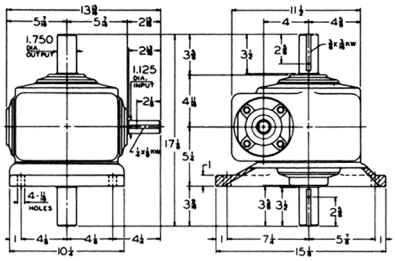
1.00 Service Factor* - Double Reduction Wormgear - Model 35DV "Low Base" and Model 35DVX
2.0" Centers Primary - 3.5" Centers Secondary

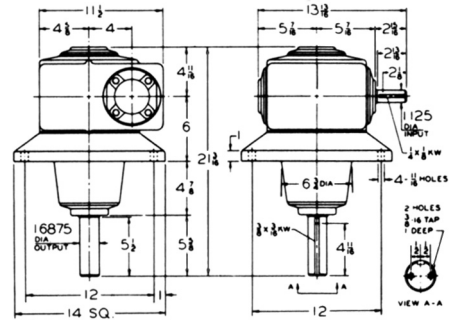
TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	2.47	23.33	4919	1.77	15.33	5187	1.41	11.60	5313	1.00	7.73	5444	
100	5	20	1.93	17.50	4903	1.39	11.50	5147	1.10	8.70	5262	.79	5.80	5382	
125	5	25	1.54	14.00	4750	1.11	9.20	4963	.88	6.96	5063	.63	4.64	5167	
150	10	15	1.44	11.67	5311	1.02	7369	5446	.80	5.80	5509	.57	3.87	5575	
200	10	20	1.13	8.75	5260	.79	5.75	5384	.63	4.35	5442	.44	2.90	5502	
250	10	25	.90	7.00	5061	.63	4.60	5169	.50	3.48	5219	.35	2.32	5272	
300	15	20	.82	5.83	5381	.58	3.83	5463	.46	2.90	5502	.33	1.93	5542	
400	20	20	.65	4.38	5441	.46	2.88	5503	.37	2.18	5532	.26	1.45	5562	
500	25	20	.55	3.50	5477	.39	2.30	5527	.31	1.74	5550	.22	1.16	5574	
600	30	20	.50	2.92	5501	.35	1.92	5543	.28	145	5562	.20	.97	5582	
800	40	20	.40	2.19	5532	.29	1.44	5563	.23	1.09	5577	.16	.73	5593	
1000	50	20	.35	1.75	5550	.25	1.15	5575	.20	.87	5586	.14	.58	5599	
1200	60	20	.31	1.46	5562	.22	.96	5583	.18	.73	5593	.13	.48	5603	
1500	25	60	.24	1.17	4671	.17	.77	4709	.14	.58	4726	.10	.39	4744	
1800	30	60	.21	.97	4690	.15	.64	4721	.12	.48	4735	.09	.32	4750	
2400	40	60	.17	.73	4712	.13	.48	4735	.10	.36	4746	.07	.24	4757	
3000	50	60	.15	.58	4726	.11	.38	4744	.09	.29	4753	.06	.19	5762	
3600	60	60	.14	.49	4735	.10	.32	4750	.08	.24	4757	.06	.16	4765	

▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 1804 pounds at one shaft diameter from housing, and 959 pounds for DVX unit at the end of Output Shaft Extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

V, VX, DV and DVX Series

40V Net wt. 121 lbs. — 4.0" C.D. — Net wt. 175 lbs. 40VX

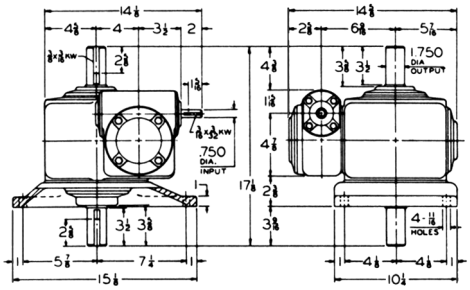


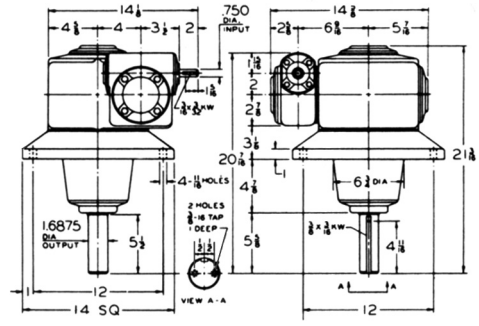


1.00 Service Factor* - Single Reduction Wormgear - Model 40V "Low Base" and Model 40VX

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	15.15	350.0	2570	12.65	230.0	3233	11.27	174.0	3781	9.05	116.0	4498	5.65	60.0	5303	2.18	20.0	5925
10	10.03	175.0	3321	8.52	115.0	4229	7.46	87.0	4845	5.87	58.0	5608	3.58	30.0	6427	1.37	10.0	7041
15	7.44	116.6	3592	6.36	76.6	4580	5.57	58.0	5222	4.38	38.7	6014	2.68	20.0	6846	1.04	6.6	7483
20	5.89	87.5	3685	5.06	57.5	4702	4.43	43.5	5344	3.49	29.0	6127	2.15	15.0	6949	.84	5.0	7566
25	4.84	70.0	3712	4.14	46.0	4695	3.60	34.8	5299	2.81	23.2	6002	1.71	12.0	6722	.67	4.0	7262
30	4.22	58.4	3733	3.65	38.4	4760	3.23	29.0	5412	2.57	19.3	6213	1.61	10.0	7043	.64	3.3	7679
40	3.31	43.7	3710	2.88	28.7	4705	2.55	21.8	5340	2.04	14.5	6106	1.29	7.5	6916	.52	2.5	7515
50	2.63	35.0	3555	2.29	23.0	4493	2.02	17.4	5066	1.61	11.6	5724	1.01	6.0	6408	.41	2.0	6904
60	2.15	29.2	3372	1.86	19.2	4226	1.63	14.5	4724	1.30	9.7	5293	.81	5.0	5877	.33	1.6	6345

40DV Net wt. 154 lbs. — 4.0" C.D. — Net wt. 196 lbs. 40DVX





1.00 Service Factor* - Double Reduction Wormgear - Model 40DV "Low Base" and Model 40DVX
2.0" Centers Primary - 4.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	2.92	23.33	5972	2.35	15.33	7058	1.87	11.60	7247	1.33	7.73	7431
100	5	20	2.62	17.50	6804	1.89	11.50	7172	1.50	8.70	7345	1.07	5.80	7526
125	5	25	2.10	14.00	6597	1.50	9.50	6920	1.20	6.96	7071	.85	4.64	7229
150	10	15	1.91	11.67	7244	1.34	7.67	7434	1.06	5.80	7523	.75	3.87	7615
200	10	20	1.53	8.75	7342	1.08	5.75	7529	.86	4.35	7616	.61	2.90	7707
250	10	25	1.22	7.00	7069	.86	4.60	7232	.68	3.48	7308	.48	2.32	7388
300	15	20	1.12	5.83	7524	.79	3.83	7649	.63	2.90	7707	.44	1.93	7768
400	20	20	.89	4.38	7615	.63	2.89	7708	.50	2.18	7752	.35	1.45	7798
500	25	20	.75	3.50	7669	.53	2.30	7745	.42	1.74	7780	.30	1.16	7816
600	30	20	.68	2.92	7706	.48	1.92	7769	.36	1.45	7798	.27	.97	7828
800	40	20	.55	2.19	7752	.39	1.44	7799	.31	1.09	7821	.22	.73	7843
1000	50	20	.47	1.75	7779	.34	1.15	7817	.27	.87	7834	.19	.58	7853
1200	60	20	.42	1.46	7797	.30	.96	7829	.24	.73	7843	.17	.48	7859
1500	25	60	.30	1.17	6388	.22	.77	6441	.17	.58	6466	.12	.39	6491
1800	30	60	.27	.97	6414	.20	.64	6458	.16	.48	6478	.11	.32	6500
2400	40	60	.22	.73	6446	.16	.48	6479	.13	.36	6494	.09	.24	6510
3000	50	60	.19	.58	6465	.14	.38	6492	.11	.29	6504	.08	.19	6517
3600	60	60	.17	.49	6478	.13	.32	6500	.10	.24	6510	.07	.16	6521

▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 2423 pounds at one shaft diameter from housing, and 1200 pounds for DVX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

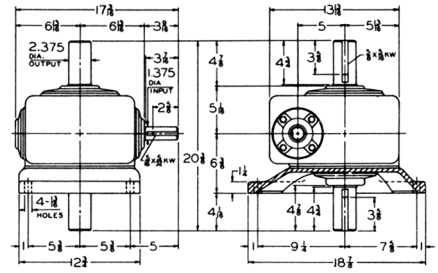
V, VX, DV and DVX Series

1.00 Service Factor* - Single Reduction Wormgear - Model 50V "Low Base" and Model 50VX

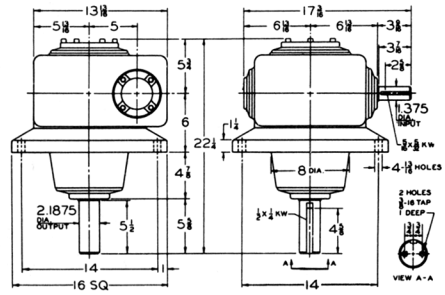
RATIO	TORQUE and HORSEPOWER RATINGS									
	AT 1750 RPM INPUT					AT 1150 RPM INPUT				
	Input HP	Output				Input HP	Output			
		R.P.M.	▲Torque	V O.H.L	VX O.H.L		R.P.M.	▲Torque	V O.H.L	VX O.H.L
5	25.25	350.0	4300	4040	1225	20.79	230.0	5344	4040	1386
10	16.64	175.0	5542	4040	1582	13.84	115.0	6917	4040	1796
15	12.31	116.6	5991	4040	1838	10.34	76.6	7512	4040	2104
20	9.61	87.5	6113	4040	2049	8.18	57.5	7737	4040	2329
25	7.94	70.0	6162	4040	2212	63.80	46.0	7823	4040	2515
30	6.92	58.4	6224	4040	2363	5.92	38.4	7836	4040	2524
40	5.31	43.7	6125	4040	2610	4.60	28.7	7771	4040	2524
50	4.27	35.0	5899	4040	2524	3.73	23.0	7498	4040	2524
60	3.48	29.2	5577	4040	2524	3.06	19.2	7094	4040	2524
	AT 870 RPM INPUT					AT 580 RPM INPUT				
5	18.60	174.0	6274	4040	1497	15.47	116.0	7743	4040	1695
10	12.47	87.0	8155	4040	1972	10.13	85.0	9790	4040	2237
15	9.30	58.0	8813	4040	2296	7.56	38.7	10511	4040	2524
20	7.29	43.5	8964	4040	2546	5.87	29.0	10547	4040	2524
25	6.06	34.8	9040	4040	2524	4.88	23.2	10592	4040	2524
30	5.36	29.0	9154	4040	2524	4.41	19.3	10877	4040	2524
40	4.14	21.8	8981	4040	2524	3.38	14.5	10531	4040	2524
50	3.36	17.4	8644	4040	2524	2.76	11.6	10111	4040	2524
60	2.76	14.5	8140	4040	2524	2.26	9.7	9470	4040	2524
	AT 300 RPM INPUT					AT 100 RPM INPUT				
5	10.11	60.0	9570	4040	2117	4.02	20.0	11029	4040	2524
10	6.45	30.0	11670	4040	2524	2.53	10.0	13139	4040	2524
15	4.83	20.0	12448	4040	2524	1.91	6.6	13958	4040	2524
20	3.71	15.0	12286	4040	2524	1.47	5.0	13610	4040	2524
25	3.09	12.0	12273	4040	2524	1.23	4.0	13558	4040	2524
30	2.88	10.0	12810	4040	2524	1.18	3.3	14338	4040	2524
40	2.20	7.5	12222	4040	2524	.90	2.5	13507	4040	2524
50	1.81	6.0	11686	4040	2524	.75	2.0	12904	4040	2524
60	1.48	5.0	10854	4040	2524	.62	1.6	11974	4040	2524

▲ Inch-pounds.
Overhung load (O.H.L.) for V unit is pounds at one shaft diameter from housing, and for VX unit at the end of Output Shaft Extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.

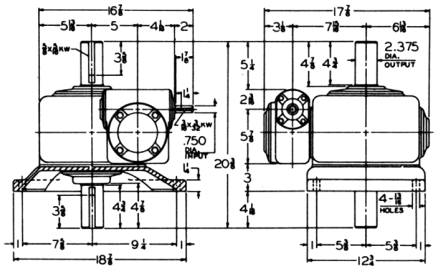
50V Net wt. 92 lbs. 5.0" C.D.



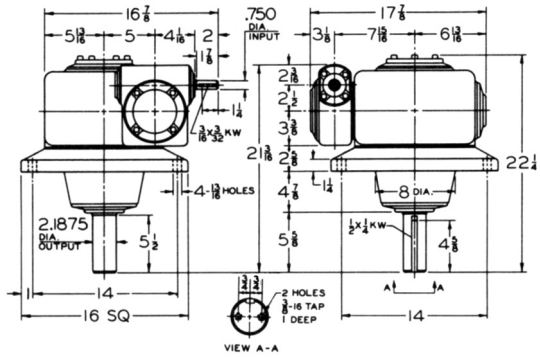
50VX Net wt. 270 lbs. 5.0" C.D.



50DV Net wt. 247 lbs. 5.0" C.D.



50DVX Net wt. 316 lbs. 5.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear - Model 50DV "Low Base" and Model 50DVX
2.5" Centers Primary - 5.0" Centers Secondary

RATIO	Primary Ratio	Secondary Ratio	TORQUE and HORSEPOWER RATINGS											
			AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	4.76	23.33	9904	3.95	15.33	12051	3.36	11.60	13276	2.42	7.73	13832
100	5	20	4.47	17.50	11961	3.25	11.50	12751	2.60	8.70	13124	1.85	5.80	13511
125	5	25	3.73	14.00	11963	2.71	9.0	12730	2.17	6.96	13091	1.56	4.64	13468
150	10	15	3.18	11.67	12310	2.44	7.67	13839	1.93	5.80	14052	1.36	3.87	14273
200	10	20	2.64	8.75	13117	1.87	5.75	13518	1.48	4.35	13706	1.05	2.90	13901
250	10	25	2.21	7.00	13085	1.57	4.60	13747	1.24	3.48	13656	.88	2.32	13846
300	15	20	1.93	5.83	13507	1.36	3.83	13776	1.07	2.90	13901	.76	1.93	14032
400	20	20	1.55	4.38	13703	1.08	2.88	13905	.86	2.18	13999	.61	1.45	14097
500	25	20	1.29	3.50	13820	.91	2.30	13982	.72	1.74	14058	.51	1.16	14136
600	30	20	1.15	2.92	13899	.82	1.92	14034	.65	1.45	14097	.47	.97	14163
800	40	20	.94	2.19	13997	.67	1.44	14099	.53	1.09	14146	.38	.73	14195
1000	50	20	.80	1.75	14057	.57	1.15	14138	.45	.87	14176	.33	.58	14205
1200	60	20	.80	1.46	14066	.50	.96	14164	.40	.73	14195	.29	.48	14228
1500	25	60	.55	1.17	12105	.40	.77	12235	.32	.58	12296	.23	.39	12359
1800	30	60	.50	.97	12168	.36	.64	12277	.29	.48	12327	.21	.32	12380
2400	40	60	.41	.73	12247	.30	.48	12329	.24	.36	12367	.17	.24	12406
3000	50	60	.35	.58	12295	.25	.38	12360	.20	.29	12390	.15	.19	12422
3600	60	60	.31	.49	12326	.23	.32	12381	.18	.24	12406	.13	.16	12432

▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 4040 pounds at one shaft diameter from housing, and 2524 pounds for DVX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

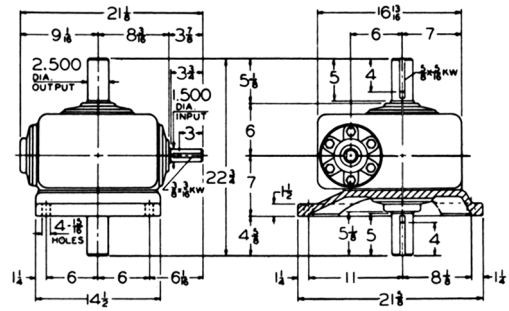
V, VX, DV and DVX Series

1.00 Service Factor* - Single Reduction Wormgear - Model 60V "Low Base" and Model 60VX

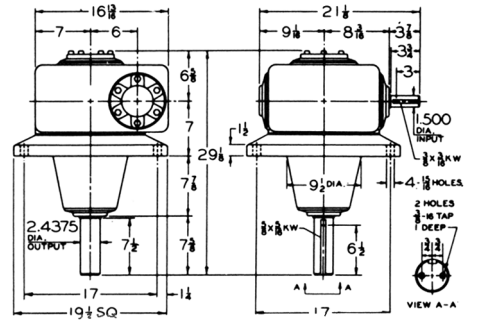
RATIO	Input HP	Output R.P.M.	Output ▲Torque	V O.H.L	VX O.H.L	Input HP	Output R.P.M.	Output ▲Torque	V O.H.L	VX O.H.L
	TORQUE and HORSEPOWER RATINGS									
	AT 1750 RPM INPUT					AT 1150 RPM INPUT				
5	38.15	350.0	6527	4846	1269	31.40	230.0	8104	4846	1435
10	25.10	175.0	8408	4846	1638	20.75	115.0	10437	4846	1857
15	18.54	116.6	9084	4846	1904	15.39	76.6	11275	4846	2178
20	14.50	87.5	9283	4846	2124	12.12	57.5	11560	4846	2245
25	11.72	70.0	9254	4846	2245	9.91	46.0	11625	4846	2245
30	10.37	58.4	9438	4846	2245	8.73	38.4	11728	4846	2245
40	7.96	43.7	9299	4846	2245	6.76	28.7	11581	4846	2245
50	6.23	35.0	8867	4846	2245	5.37	23.0	11173	4846	2245
60	5.12	29.2	8418	4846	2245	4.45	19.2	10603	4846	2245
	AT 870 RPM INPUT					AT 580 RPM INPUT				
5	27.71	174.0	9384	4846	1548	23.55	116.0	11849	4846	1751
10	18.60	87.0	12245	4846	2039	15.56	58.0	15129	4846	2245
15	13.60	58.0	13288	4846	2245	11.61	38.7	16315	4846	2245
20	10.99	43.5	13640	4846	2245	9.10	29.0	16535	4846	2245
25	8.93	34.8	13623	4846	2245	7.28	23.2	16204	4846	2245
30	7.97	29.0	13843	4846	2245	6.74	19.3	16909	4846	2245
40	6.20	21.8	13672	4846	2245	5.22	14.5	16531	4846	2245
50	4.89	17.4	13038	4846	2245	4.05	11.6	15499	4846	2245
60	4.06	14.5	12374	4846	2245	3.39	9.7	14717	4846	2245
	AT 300 RPM INPUT					AT 100 RPM INPUT				
5	16.02	60.0	15260	4846	2186	6.57	20.0	18127	4846	2245
10	10.27	30.0	18747	4846	2245	4.14	10.0	21641	4846	2245
15	7.68	20.0	20026	4846	2245	3.12	6.6	23008	4846	2245
20	5.96	15.0	19955	4846	2245	2.42	5.0	22655	4846	2245
25	4.69	12.0	19127	4846	2245	1.88	4.0	21394	4846	2245
30	4.55	10.0	20627	4846	2245	1.92	3.3	23631	4846	2245
40	3.52	7.5	19879	4846	2245	1.48	2.5	22507	4846	2245
50	2.69	6.0	18232	4846	2245	1.12	2.0	20366	4846	2245
60	2.27	5.0	17305	4846	2245	.96	1.6	19390	4846	2245

▲ Inch-pounds.
Overhung load (O.H.L.) for V unit is pounds at one shaft diameter from housing, and for VX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.

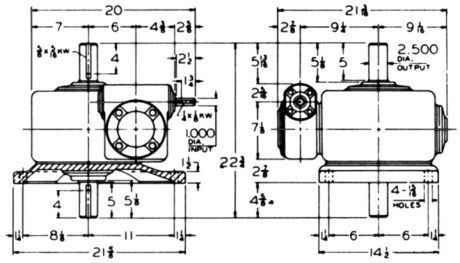
60V Net wt. 373 lbs. 6.0" C.D.



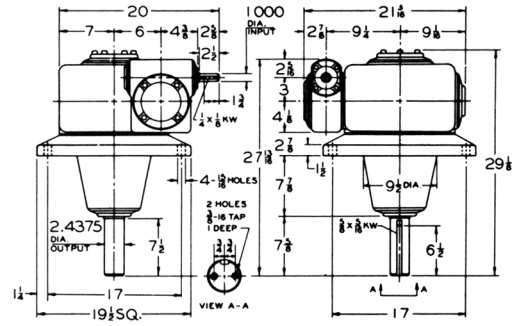
60VX Net wt. 468 lbs. 6.0" C.D.



60DV Net wt. 438 lbs. 6.0" C.D.



60DVX Net wt. 496 lbs. 6.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear - Model 60DV "Low Base" and Model 60DVX 3.0" Centers Primary - 6.0" Centers Secondary

RATIO	Primary Ratio	Secondary Ratio	Input HP	Output R.P.M.	Output ▲Torque	Input HP	Output R.P.M.	Output ▲Torque	Input HP	OutPut R.P.M.	OutPut ▲Torque	Input HP	Output R.P.M.	Output ▲Torque
			TORQUE and HORSEPOWER RATINGS											
			AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
75	5	15	8.06	23.33	17032	6.79	15.33	21041	5.46	11.60	21878	3.92	7.73	22752
100	5	20	7.11	17.50	19334	5.26	11.50	20907	4.23	8.70	21668	3.04	5.80	22463
125	5	25	5.60	14.00	18581	4.11	9.20	19931	3.29	6.96	20567	2.36	4.64	21230
150	10	15	5.37	11.67	21159	3.95	7.67	22767	3.13	5.80	23192	2.22	3.87	23633
200	10	20	4.30	8.75	21655	3.06	5.75	22476	2.43	4.35	22862	1.72	2.90	23262
250	10	25	3.35	7.00	20556	2.38	4.60	21242	1.89	3.48	21563	1.34	2.32	21897
300	15	20	3.16	5.83	22453	2.23	3.83	23004	1.77	2.90	23262	1.25	1.93	23530
400	20	20	2.52	4.38	22855	1.78	2.88	23269	1.41	2.18	23463	1.01	1.45	23665
500	25	20	2.12	3.50	23096	1.49	2.30	23429	1.19	1.74	23584	.85	1.16	23745
600	30	20	1.89	2.92	23258	1.34	1.92	23535	1.07	1.45	23665	.76	.97	23799
800	40	20	1.53	2.19	23460	1.09	1.44	23668	.87	1.09	23765	.63	.73	23866
1000	50	20	1.30	1.75	23581	.93	1.15	23748	.75	.87	23826	.54	.58	23906
1200	60	20	1.16	1.46	23662	.83	.96	23801	.67	.73	23866	.49	.48	23933
1500	25	60	.86	1.17	19642	.61	.77	19887	.49	.58	20002	.36	.39	20121
1800	30	60	.77	.97	19761	.55	.64	19966	.45	.48	20062	.32	.32	20161
2400	40	60	.63	.73	19910	.46	.48	20064	.37	.36	20136	.27	.24	20211
3000	50	60	.54	.58	20000	.39	.38	20124	.32	.29	20181	.23	.19	20241
3600	60	60	.48	.49	20060	.35	.32	20163	.28	.24	20211	.21	.16	20261

▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 4846 pounds at one shaft diameter from housing, and 2245 pounds for DVX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

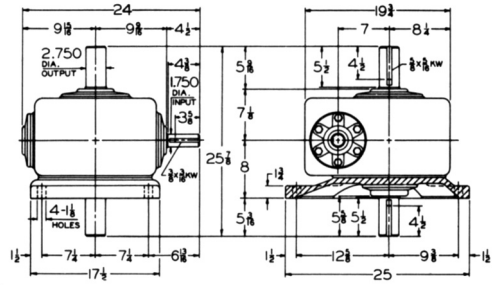
V, VX, DV and DVX Series

1.00 Service Factor* - Single Reduction Wormgear - Model 70V "Low Base" and Model 70VX

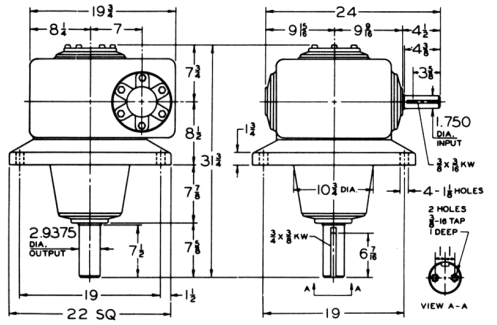
TORQUE and HORSEPOWER RATINGS										
RATIO	AT 1750 RPM INPUT					AT 1150 RPM INPUT				
	Input HP	Output				Input HP	Output			
		R.P.M.	▲Torque	V O.H.L	VX O.H.L		R.P.M.	▲Torque	V O.H.L	VX O.H.L
5	53.32	350.0	9141	6044	1645	44.27	230.0	11463	6044	1860
10	35.46	175.0	11928	6044	2127	29.27	115.0	14805	6044	2417
15	26.15	116.6	12929	6044	2461	21.69	76.6	16027	6044	2829
20	20.42	87.5	13176	6044	2757	16.99	57.5	16369	6044	3130
25	16.73	70.0	13256	6044	2974	13.97	46.0	16462	6044	3433
30	14.57	58.4	13408	6044	3178	12.23	38.4	16649	6044	3635
40	11.14	43.7	13209	6044	3510	9.41	38.7	16407	6044	3791
50	8.86	35.0	12687	6044	3810	7.53	23.0	15764	6044	3791
60	7.14	29.2	11951	6044	3791	6.11	19.5	14893	6044	3791
	AT 870 RPM INPUT					AT 580 RPM INPUT				
8	38.91	174.0	13236	6044	2008	33.05	116.0	16702	6044	2271
10	25.89	87.0	17159	6044	2654	22.03	58.0	21573	6044	3004
15	19.29	58.0	18588	6044	3086	16.45	38.7	23335	6044	3529
20	15.27	43.5	19164	6044	3422	12.93	29.0	23743	6044	3791
25	12.66	34.8	19374	6044	3725	10.66	23.2	23800	6044	3791
30	11.01	29.0	19376	6044	3791	9.49	19.3	24240	6044	3791
40	8.57	21.8	19255	6044	3791	7.36	14.5	23769	6044	3791
50	6.91	17.4	18590	6044	3791	5.92	11.6	22752	6044	3791
60	5.63	14.5	17555	6044	3791	4.79	9.7	21296	6044	3791
	AT 300 RPM INPUT					AT 100 RPM INPUT				
5	23.28	60.0	22301	6044	2836	9.84	20.0	2793	6044	3791
10	15.01	30.0	27631	6044	3768	6.20	10.0	32651	6044	3791
15	11.21	20.0	29557	6044	3791	4.66	6.6	34735	6044	3791
20	8.71	15.0	29553	6044	3791	3.60	5.0	34208	6044	3791
25	7.14	12.0	29266	6044	3791	2.96	4.0	33662	6044	3791
30	6.60	10.0	30527	6044	3791	2.84	3.3	35653	6044	3791
40	5.09	7.5	29471	6044	3791	2.19	2.5	33985	6044	3791
50	4.10	6.0	27930	6044	3791	1.77	2.0	32014	6044	3791
60	3.28	5.0	25683	6044	3791	1.41	1.6	29312	6044	3791

▲ Inch-pounds
Overhung load (O.H.L.) for V unit is pounds at one shaft diameter from housing, and for VX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.

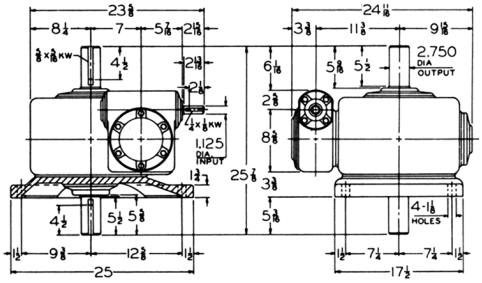
70V Net wt. 584 lbs. 7.0" C.D.



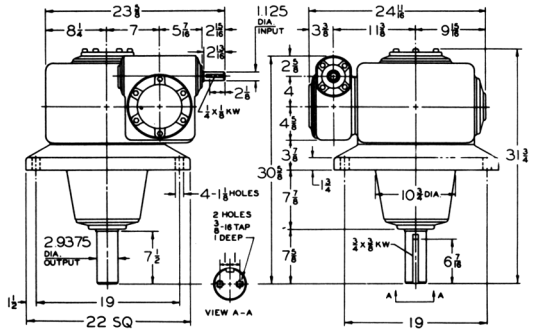
70VX Net wt. 659 lbs. 7.0" C.D.



70DV Net wt. 597 lbs. 7.0" C.D.



70DVX Net wt. 717 lbs. 7.0" C.D.



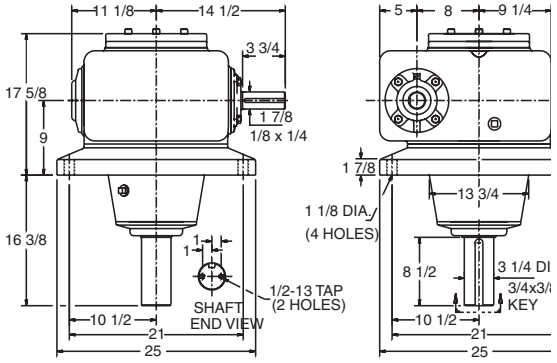
1.00 Service Factor* - Double Reduction Wormgear - Model 70DV "Low Base" and Model 70DVX 4.0" Centers Primary - 7.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	13.17	23.33	28390	9.91	15.33	31304	8.03	11.60	32764	5.79	7.73	34288
100	5	20	10.25	17.50	28472	7.69	11.50	31155	6.22	8.70	32481	4.48	5.80	33866
125	5	25	8.42	14.00	28272	6.31	9.20	30795	5.09	6.96	32032	3.68	4.64	33324
150	10	15	8.13	11.67	32737	5.79	7.67	34314	4.60	5.80	35055	3.26	3.87	35826
200	10	20	6.29	8.75	32458	4.48	5.75	33890	3.56	4.35	34562	2.53	2.90	35262
250	10	25	5.15	7.00	32010	3.68	4.60	33346	2.93	3.48	33973	2.08	2.32	34625
300	15	20	4.61	5.83	33850	3.56	3.83	34811	2.58	2.90	35262	1.83	1.93	35730
400	20	20	3.69	4.38	34550	2.61	2.88	35274	2.06	2.18	35613	1.46	1.45	35964
500	25	20	3.10	3.50	34972	2.18	2.30	35552	1.72	1.74	35823	1.23	1.16	36105
600	30	20	2.73	2.92	35254	1.93	1.92	35738	1.53	1.45	35964	1.10	.97	36199
800	40	20	2.22	2.19	35607	1.58	1.44	35970	1.26	1.09	36140	.90	.73	36316
1000	50	20	1.87	1.75	35819	1.34	1.15	36110	1.06	.87	36246	.77	.58	36387
1200	60	20	1.64	1.46	35960	1.17	.96	36203	.93	.73	36316	.67	.48	36434
1500	25	60	1.23	1.17	29743	.88	.77	30172	.71	.58	30372	.51	.39	30580
1800	30	60	1.10	.97	29952	.79	.64	30309	.63	.48	30476	.46	.32	30650
2400	40	60	.90	.73	30212	.65	.48	30481	.52	.36	30606	.38	.24	30736
3000	50	60	.77	.58	30369	.56	.38	30584	.45	.29	30684	.33	.19	30789
3600	60	60	.68	.49	30473	.49	.32	30653	.39	.24	30736	.29	.16	30823

▲ Inch-pounds.
Overhung load (O.H.L.) for DV unit is 6044 pounds at one shaft diameter from housing, and 3791 pounds for DVX unit at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

VX and DVX Series

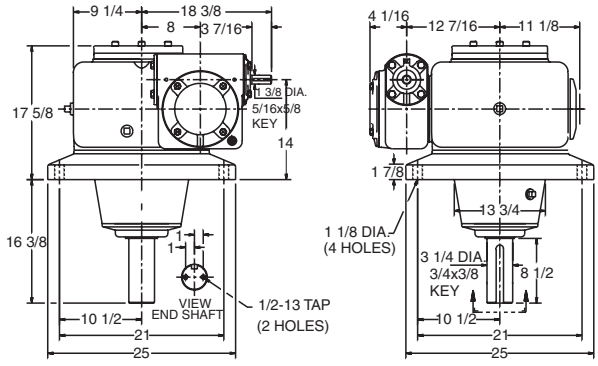
80VX
Net wt. 895 lbs.
8.0" C.D.



1.00 Service Factor* - Single Reduction Wormgear - Model 80VX

TORQUE and HORSEPOWER RATINGS																							
RATIO	AT 1750 RPM INPUT				AT 1150 RPM INPUT				AT 870 RPM INPUT				AT 580 RPM INPUT				AT 300 RPM INPUT				AT 100 RPM INPUT			
	Input HP	OUTPUT			Input HP	OUTPUT			Input HP	OUTPUT			Input HP	OUTPUT			Input HP	OUTPUT			Input HP	OUTPUT		
		R.P.M.	Torque	OHL		R.P.M.	Torque	OHL		R.P.M.	Torque	OHL		R.P.M.	Torque	OHL		R.P.M.	Torque	OHL		R.P.M.	Torque	OHL
5	72.45	350.0	12446	4320	61.05	230.0	15843	4320	53.64	174.0	18300	4320	44.81	116.0	22692	4320	32.97	60.0	31691	4320	14.54	20.0	40415	4320
10	47.91	175.0	16132	4320	39.95	115.0	20232	4320	35.22	87.0	23369	4320	30.03	58.0	29463	4320	21.39	30.0	39462	4320	9.21	10.0	48463	4320
15	35.33	116.6	17443	4320	29.52	76.6	21840	4320	26.11	58.0	25219	4320	22.41	38.7	31826	4320	15.99	20.0	42281	4320	6.94	6.6	51504	4320
20	27.79	87.5	17952	4320	23.21	57.5	22358	4320	20.58	43.5	25827	4320	17.78	29.0	32659	4320	12.6	15.0	42713	4320	5.46	5.0	51333	4320
25	22.90	70.0	18141	4320	19.14	46.0	22554	4320	17.11	34.8	26135	4320	14.77	23.2	32904	4320	10.45	12.0	42637	4320	4.54	4.0	50943	4320
30	19.66	58.4	18137	4320	16.61	38.4	22666	4320	14.83	29.0	26142	4320	12.93	19.3	33091	4320	9.43	10.0	43628	4320	4.25	3.3	52940	4320
40	15.16	43.7	17971	4320	12.84	28.7	22383	4320	11.53	21.8	25817	4320	10.13	14.5	32687	4320	7.39	7.5	42578	4320	3.35	2.5	51049	4320
50	12.13	35.0	17347	4320	10.32	23.0	21566	4320	9.34	17.4	24984	4320	8.23	11.6	31479	4320	6.02	6.0	40703	4320	2.75	2.0	48476	4320
60	9.87	29.2	16431	4320	8.43	19.2	20397	4320	7.65	14.5	23602	4320	6.77	9.7	29753	4320	4.94	5.0	38046	4320	2.26	1.6	45054	4320

80DVX
Net wt. 985 lbs.
8.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear - Model 80DVX

RATIO	Primary Ratio	Secondary Ratio	TORQUE and HORSEPOWER RATINGS											
			AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	OUTPUT		Input HP	OUTPUT		Input HP	OUTPUT		Input HP	OUTPUT	
				RPM	▲Torque		RPM	▲Torque		RPM	▲Torque		RPM	▲Torque
75	5	15	18.52	23.33	40142	14.28	15.33	45374	11.71	11.60	47943	8.54	7.73	50732
100	5	20	14.6	17.50	10722	11.23	11.50	45637	9.20	8.70	48065	6.71	5.80	50669
125	5	25	12.12	14.00	40758	9.31	9.20	45411	7.64	6.96	47781	5.58	4.64	50259
150	10	15	11.85	11.67	47895	8.55	7.67	50780	6.82	5.80	52137	4.86	3.87	53551
200	10	20	9.31	8.75	48020	6.72	5.75	50715	5.37	4.35	51982	3.84	2.90	53301
250	10	25	7.73	7.00	47738	5.59	4.60	50302	4.47	3.48	51508	3.20	2.32	52762
300	15	20	6.89	5.83	50639	4.92	3.83	52451	3.91	2.90	53301	2.77	1.93	54184
400	20	20	5.52	4.38	51959	3.92	2.88	53324	3.10	2.18	53963	2.21	1.45	54626
500	25	20	4.66	3.50	52754	3.30	2.30	53849	2.61	1.74	54361	1.87	1.16	54892
600	30	20	4.12	2.92	53286	2.92	1.92	54199	2.33	1.45	54626	1.67	0.97	55070
800	40	20	3.31	2.19	53951	2.35	1.44	54638	1.88	1.09	54959	1.35	0.73	55292
1000	50	20	2.82	1.75	54352	2.01	1.15	54902	1.61	0.87	55159	1.16	0.58	55425
1200	60	20	2.48	1.46	54619	1.77	0.96	55077	1.42	0.73	55292	1.03	0.48	55514
1500	25	60	1.96	1.17	46029	1.42	0.77	46892	1.14	0.58	47296	0.83	0.39	47715
1800	30	60	1.75	0.97	46448	1.26	0.64	47169	1.02	0.48	47506	0.74	0.32	47855
2400	40	60	1.42	0.73	46973	1.03	0.48	47515	0.84	0.36	47768	0.61	0.24	48030
3000	50	60	1.23	0.58	47289	0.89	0.38	47722	0.72	0.29	47925	0.53	0.19	48135
3600	60	60	1.09	0.49	47499	0.79	0.32	47861	0.64	0.24	48030	0.47	0.16	48205

▲ Inch-pounds.
Overhung load (O.H.L.) for DVX unit is 4320 pounds at the end of output shaft extension.

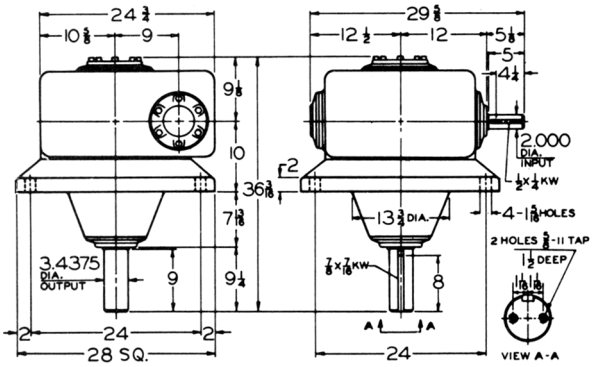
* Refer to page D-42 for other service factors. Refer to page D-43 and D-44 for shaft arrangements.

Note: Some sizes may require minimum order quantity.

Worm Gear Reducers

VX and DVX Series

90VX
Net wt. 1130 lbs.
9.0" C.D.

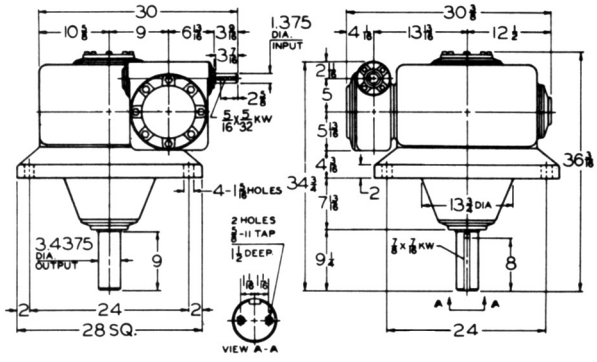


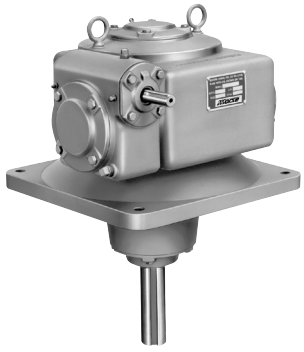
1.00 Service Factor* - Single Reduction Wormgear - Model 90VX

TORQUE and HORSEPOWER RATINGS																					
RATIO	AT 1750 RPM INPUT				AT 1150 RPM INPUT				AT 870 RPM INPUT				AT 580 RPM INPUT				AT 300 RPM INPUT				AT 100 RPM INPUT			
	Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L
5	93.03	350.0	16016	2136	79.30	230.0	20639	2414	69.67	174.0	23835	2605	58.04	116.0	29508	2944	43.32	60.0	41822	3672	19.69	20.0	54949	4850
10	61.84	175.0	20904	2762	51.98	115.0	26456	3132	45.78	87.0	30557	3436	38.70	58.0	38198	3893	28.24	30.0	52503	4850	12.45	10.0	66018	4850
15	45.61	116.6	22648	3211	38.36	76.6	28555	3672	33.90	58.0	32981	4003	28.89	38.7	41355	4577	21.08	20.0	56323	4850	9.36	6.6	70182	4850
20	35.80	87.5	23305	3581	30.02	57.5	29196	4065	26.60	43.5	33717	4441	22.88	29.0	42552	4850	16.48	15.0	56719	4850	7.24	5.0	69332	4850
25	29.40	70.0	23536	3860	24.64	46.0	29376	4453	21.89	34.8	33918	4828	18.93	23.2	42896	4850	13.55	12.0	56421	4850	5.94	4.0	68195	4850
30	25.30	58.4	23556	4128	21.50	38.4	29648	4726	19.17	29.0	34244	4850	16.60	19.3	43936	4850	12.35	10.0	58255	4850	5.70	3.3	72161	4850
40	19.43	43.7	23361	4563	16.51	28.7	29232	4850	14.79	21.8	33757	4850	12.94	14.5	42626	4850	9.57	7.5	56599	4850	4.40	2.5	68945	4850
50	15.46	35.0	22540	4850	13.17	23.0	28112	4850	11.84	17.4	32457	4850	10.43	11.6	41058	4850	7.71	6.0	53851	4850	3.55	2.0	64934	4850
60	12.72	29.2	21400	480	10.92	19.2	26724	4850	9.86	14.5	30058	4850	8.75	9.7	39016	4850	6.57	5.0	51424	4850	3.09	1.6	62264	4850

▲ Inch-pounds.
† O.H.L in pounds at the end of Output Shaft Extension. * Refer to page D-42 for other service factors. Refer to page D-43 for shaft arrangements.

90DVX
Net wt. 1255 lbs.
9.0" C.D.





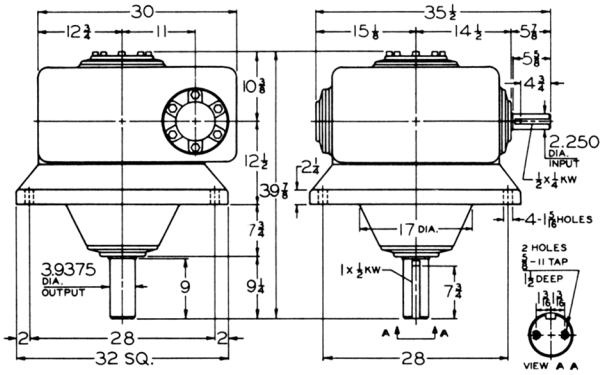
1.00 Service Factor* - Double Reduction Wormgear - Model 90DVX - 5.0" Centers Primary

TORQUE and HORSEPOWER RATINGS													
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	24.32	23.33	53180	18.99	15.33	60965	15.65	11.60	64781	11.52	7.73	69007
100	5	20	19.04	17.50	53790	14.77	11.50	60941	12.15	8.70	64450	8.90	5.80	68271
125	5	25	15.66	14.00	53671	12.13	9.50	60366	9.97	6.96	63660	7.30	4.64	67210
150	10	15	15.84	11.67	64709	11.51	7.67	69081	9.21	5.80	71139	6.58	3.87	73284
200	10	20	12.30	8.75	64384	8.91	5.75	68337	7.12	4.35	70197	5.09	2.90	72134
250	10	25	10.09	7.00	63599	7.31	4.60	67271	5.85	3.48	68998	4.19	2.32	70797
300	15	20	9.14	5.83	68226	6.54	3.83	70886	5.19	2.90	72134	3.70	1.93	73431
400	20	20	7.33	4.38	70164	5.20	2.88	72168	4.13	2.18	73107	2.94	1.45	74082
500	25	20	6.19	3.50	71331	4.39	2.30	72939	3.48	1.74	73691	2.48	1.16	74472
600	30	20	5.46	2.92	72112	3.87	1.92	73454	3.09	1.45	74082	2.21	.97	74733
800	40	20	4.70	2.19	73090	3.13	1.44	74098	2.49	1.09	74570	1.79	.73	75059
1000	50	20	3.75	1.75	73678	2.68	1.15	74486	2.15	.87	74864	1.55	.58	75255
1200	60	20	3.30	1.46	74070	2.36	.96	74744	1.89	.73	75059	4.37	.48	75386
1500	25	60	2.70	1.17	63974	1.96	.77	65349	1.57	.58	65992	1.15	.39	66660
1800	30	60	2.41	.97	64642	1.75	.64	65789	1.41	.48	66326	1.03	.32	66883
2400	40	60	1.97	.73	65478	1.43	.48	66341	1.16	.36	66744	.85	.24	67162
3000	50	60	1.70	.58	65981	1.24	.38	66672	1.01	.29	66995	.74	.19	67329
3600	60	60	1.51	.49	66316	1.10	.32	66893	.89	.24	67162	.66	.16	67441

▲ Inch-pounds.
Overhung load (O.H.L.) for DVX unit is 4850 pounds at the end of output shaft extension.
* Refer to page D-42 for other service factors. Refer to page D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

VX and DVX Series

110VX
Net wt. 1900 lbs.
11.0" C.D.



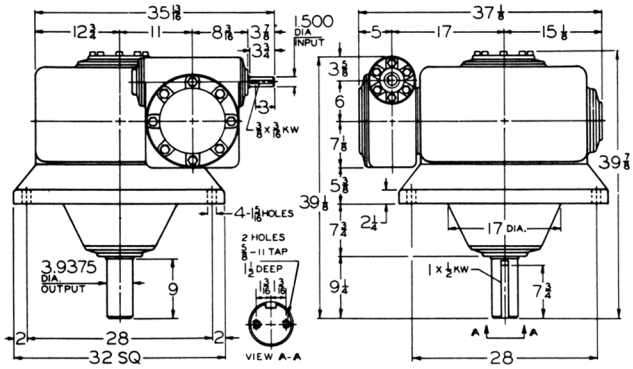
1.00 Service Factor* - Single Reduction Wormgear - Model 110VX

TORQUE and HORSEPOWER RATINGS																							
RATIO	AT 1750 RPM INPUT				AT 1150 RPM INPUT				AT 870 RPM INPUT				AT 580 RPM INPUT				AT 300 RPM INPUT				AT 100 RPM INPUT			
	Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output			Input HP	Output		
		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L		R.P.M.	▲Torque	†O.H.L
10	95.13	175.0	32216	4450	81.86	115.0	41809	5054	72.52	87.0	48559	5555	60.40	58.0	59856	6304	45.98	30.0	85832	7913	21.88	10.0	116029	8500
15	70.03	116.60	34832	5153	60.34	76.6	45095	5900	53.52	58.0	5226	6442	44.80	38.7	64419	7372	34.37	20.0	92190	8500	16.50	6.6	123414	8500
20	5.25	87.5	36005	5733	47.56	57.5	46401	6513	42.13	43.5	53588	7123	35.58	29.0	66349	8158	27.24	15.0	94037	8500	13.00	5.0	123584	8500
25	45.45	70.0	36600	6175	38.77	46.0	46583	7130	34.37	34.8	53795	7740	29.19	23.2	66763	8500	22.09	12.0	93189	8500	10.27	4.0	118829	8500
30	38.77	58.4	36197	6598	33.71	38.4	46793	7558	30.13	29.0	54167	8276	25.59	19.3	66756	8500	20.12	10.0	95401	8500	10.07	3.3	126937	8500
40	29.94	43.7	36058	7283	26.10	28.7	46413	8347	23.35	21.8	53568	8500	20.05	14.5	66267	8500	15.81	7.5	93880	8500	7.94	2.5	122913	8500
50	23.80	35.0	35051	7897	20.59	23.0	44559	8500	18.46	17.4	51459	8500	16.00	11.6	63941	8500	12.47	6.0	89005	8500	6.10	2.0	113171	8500
60	19.58	29.2	33104	8414	17.13	19.2	42412	8500	15.44	14.5	48970	8500	13.43	9.7	60595	8500	10.73	5.0	85247	8500	5.44	1.6	109783	8500

▲ Inch-pounds.

† O.H.L in pounds at the end of Output Shaft Extension. * Refer to page D-42 for other service factors. Refer to page D-43 for shaft arrangements.

110DVX
Net wt. 2100 lbs.
11.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear - Model 110DVX
6.0" Centers Primary - 11.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	38.15	23.33	84103	31.40	15.33	101920	26.61	11.60	111128	20.02	7.73	120658
100	5	20	30.86	17.50	87696	24.95	11.50	103773	20.99	8.70	112015	15.78	5.80	121006
125	5	25	25.19	14.00	87512	20.08	9.50	101737	16.77	6.96	108849	12.52	4.64	116632
150	10	15	25.10	11.67	103641	20.06	7.67	120830	16.16	5.80	125564	11.66	3.87	130709
200	10	20	21.21	8.75	111865	15.81	5.75	121167	12.73	4.35	125686	9.21	2.90	130400
250	10	25	1695	7.00	108720	12.54	4.60	116769	10.07	3.48	120622	7.26	2.32	124638
300	15	20	16.17	5.83	120898	11.71	3.83	127362	9.36	2.90	130400	6.73	1.93	133562
400	20	20	13.08	4.38	125605	9.40	2.88	130482	7.49	2.18	132770	5.37	1.45	135149
500	25	20	11.02	3.50	128446	7.88	2.30	132361	6.28	1.74	134196	4.47	1.16	136103
600	30	20	9.83	2.92	130347	7.05	1.92	133617	5.62	1.45	135149	4.04	.97	136740
800	40	20	7.95	2.19	132729	5.70	1.44	135190	4.54	1.09	136341	3.28	.73	137536
1000	50	20	6.23	1.75	124514	4.79	1.15	136136	3.83	.87	137058	2.77	.58	138014
1200	60	20	5.12	1.46	116738	4.25	.96	136766	3.41	.73	137536	2.47	.48	138333
1500	25	60	4.72	1.17	113770	3.45	.77	116980	2.79	.58	118484	2.03	.39	120046
1800	30	60	4.25	.97	115329	3.12	.64	118009	2.51	.48	119264	1.85	.32	120568
2400	40	60	3.50	.73	117282	2.55	.48	119298	2.07	.36	120241	1.53	.24	121220
3000	50	60	2.98	.58	118457	2.18	.38	120073	1.77	.29	120828	1.30	.19	12612
3600	60	60	2.65	.49	119241	1.95	.32	120589	1.59	.24	121220	1.16	.16	121873

▲ Inch-pounds.
Overhung load (O.H.L.) for DVX unit is 8500 pounds at the end of Output Shaft Extension.
* Refer to page D-42 for other service factors. Refer to page D-44 for shaft arrangements.
Note: Some sizes may require minimum order quantity.

NET CONTENT
4/5 BU.
PRODUCE OF
U.S.A.

POWERGEAR®
G Series Worm Gear Speed Reducers

The GC models are C-face reducers. The GCT style has a horizontal shaft. The GCV style has a vertical output shaft. The GCBD is double reduction "B" style unit and the GCDV is a double reduction "V" style unit. The C-face reducers are offered in eight sizes for use with motors from 1/6 hp through 15 hp. The design permits attaching standard NEMA® "C" flange, end mounted, motors of any brand.*

- NEMA "C" input reducers available in a variety of models:
- GCT - Foot mounted with double shaft output.
- GSA - Hollow output, shaft mounted.
- GSF - Hollow output, flange mounted.
- GCV - Vertical shaft output, flange mounted.
- Center distance range: 1.33" through 6.00".

* NEMA is believed to be the trademark and/or trade name of National Electrical Manufacturers Association and is not owned or controlled by Regal Beloit Corporation.

Reducer Selection Procedure for PoweRgear® G Series

1. Determine Service Factor
From service factor tables on pages D-64 and D-65, determine service factor for the application.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of driver}}{\text{rpm of driven}}$$

When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page D-73 through D-110, a chain, belt, or gear drive with further reduction for either the input or output side will be necessary.

3. Determine Equivalent Horsepower or Normal Torque

A. HP Method:

Equivalent hp = Actual Motor hp × Service Factor (Step # 1)

B. Torque Method:

Normal Torque = Actual Torque × Service Factor (Step # 1)

4. Determine the Size of Speed Reducer Required

A. HP Method:

Refer to pages D-73 through D-110 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent hp calculated in Step No. 3 above.

B. Torque Method:

Refer to pages D-73 through D-110 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 rpm, ratings for 100 rpm must be used.

5. Determine the Motor Horsepower

Use the following equation when motor hp is not known:

$$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Input hp}}{\text{Output Torque}}$$

6. Check the Overhung Load
Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page D-62. Check this and any existing thrust loads against the load values shown on pages D-73 through D-110, and if the calculated load is greater than the values in the table, select a larger speed reducer.

Note: Refer combined overhung and thrust loads to the Application Engineering (1 800 626 2093) Department.

Example No. 1 - Horsepower Method

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 hp, 1750 rpm motor, directly coupled to the reducer input speed. The reducer output shaft will be directly coupled to the mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 rpm. The reducer also requires a horizontal mounting base.

1. Determine the Service Factor
From the table on page D-64, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

2. Determine Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{58} = 30.17$$

Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

3. Determine Equivalent Horsepower

$$\text{Equivalent hp} = \text{Actual Motor hp} \times \text{S F} = 1.0 \times 1.25 = 1.25 \text{ hp}$$

4. Determine the Size of Speed Reducer Required
From page D-83 under "1750 rpm Driver -30:1 Ratio - 175 rpm Output" and under "Input hp Mechanical" find the rating equal to or greater than the 1.25 equivalent hp calculated in Step No. 3. Note that a 25 reducer has mechanical rating of 1.37 hp. The correct part numbers required are:

Reducer: **25GCT30-L, Position 1**

5. Determine the Motor Horsepower
The motor horsepower is already known to be 1.0 hp.

6. Check Overhung Load
The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is directly coupled with a motor. Therefore, the reducer selected is the proper size.

Example No. 2 - Torque Method

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 rpm electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. The pitch diameter of the driver sprocket mounted on the reducer output shaft is 5.032 inches. The conveyor will operate 10 hours per day, and the head shaft speed is 140 rpm. The reducer will also require a horizontal mounting base. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

1. Determine the Service Factor
From the table on page D-64, note that the service factor for a belt conveyor (general purpose) operating 3 - 10 hours per day is 1.25.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

3. Determine the Normal Torque
The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

$$\text{Actual Torque at Reducer Output Shaft} = \frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1{,}390 \text{ In/lbs.}$$

$$\text{Normal Torque} = \text{Actual Reducer Output Torque} \times \text{S F} = 1{,}390 \times 1.25 = 1738 \text{ in/lbs.}$$

4. Determine Size of Speed Reducer Required
From page D-87 under "1750 rpm Driver - 10 to 1 ratio - 175 rpm Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 3.0 inch center distance reducer has a mechanical rating of 1975 inch-pounds.

The correct part number required is:

Reducer: **30GCT 10-LR, Position 1**

5. Determine the Motor Horsepower

$$\text{Motor Horsepower} = \frac{\text{Actual Torque X Input hp}}{\text{Output Torque}} = \frac{1{,}390 \times 5.25}{1743} = 4.19$$

Use a 5 horsepower motor.

6. Check Overhung

$$\text{OL (See below)} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}} = \frac{2 \times 1390 \times 1.0}{5.032} = 552.50 \text{ Pounds}$$

From rating table on page D-87, note the maximum overhung load for the output shaft of the 30GCT reducer is 1403 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

Overhung Loads

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages D-73 through D-110. Use the following formula to calculate the overhung loads:

$$OL = \frac{2TK}{D}$$

where
- OL = Overhung Load
- T = Actual Shaft Torque (inch-pounds)
- D = P. D. of Sprocket, Sheave, Pulley or Gear
- K = 1.0 for Chain Drive
- = 1.25 for Gear Drive
- = 1.25 for Gearbelt Drive
- = 1.50 for V-Belt Drive
- = 2.50 for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

Selection Tables

Motor Selection Table

Rating tables on the following pages for all "GC" type worm gearmotor reducers indicate the maximum C-Flange motor frame size which may be accommodated. Available from stock are gearmotor reducers having flange details and input shaft bore diameters and coupling capable of accepting a wide selection of other NEMA C-Flange motor frame sizes.

In the motor selection table below are listed these NEMA motor frame sizes which may be accommodated with specific "GC" reducer models. Reducer models are indicated by center distance (C.D.) dimension and ratio. For double reduction gearmotor reducers, use center distance and ratio of the primary reduction only. When the motor is not being supplied with the reducer as a complete unit, the NEMA frame size of the selected motor must be specified.

Center Distance

Ratio	1.33"	1.75"	2.0"		2.5"		3"			3.5"		
	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 7/8"	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 7/8"	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 7/8"	Flange Din. = 8 1/2" Shaft Diam. = 1 1/8"	Flange Din. = 4 1/2" Shaft Diam. = 5/8"	Flange Din. = 4 1/2" Shaft Diam. = 7/8"	Flange Din. = 8 1/2 Shaft Diam. = 1 1/8"
5	56C	56C	56C	143TC/145TC	56C	143TC/145TC	N/A	N/A	182TC/184TC	N/A	N/A	182TC/184TC
71/2	56C	56C	56C	143TC/145TC	56C	143TC/145TC	N/A	N/A	182TC/184TC	N/A	N/A	182TC/184TC
10	56C	56C	56C	143TC/145TC	56C	143TC/145TC	N/A	N/A	182TC/184TC	N/A	N/A	182TC/184TC
15	56C	56C	56C	143TC/1 45TC	56C	143TC/145TC	56C	143TC/145TC	182TC/184TC	N/A	N/A	182TC/184TC
20	56C	56C	56C	143TC/145TC	56C	143TC/145TC	56C	143TC/145TC	182TC/184TC	N/A	N/A	182TC/184TC
25	56C	56C	56C	N/A	56C	143TC/145TC	56C	143TC/145TC	182TC/184TC	N/A	N/A	182TC/184TC
30	56C	56C	56C	N/A	56C	143TC/145TC	56C	143TC/145TC	182TC/184TC	56C	143TC/145TC	182TC/184TC
40	48YC	56C	56C	N/A	56C	143TC/145TC	56C	143TC/145TC	182TC/184TC	56C	143TC/145TC	182TC/184TC
50	48YC	56C	56C	N/A	56C	N/A	56C	143TC/145TC	N/A	56C	143TC/145TC	182TC/184TC
60	48YC	56C	56C	N/A	56C	N/A	56C	143TC/145TC	N/A	56C	143TC/145TC	182TC/184TC

Ratio	4.0"			5.0"			6.0"			
	Flange Din.=4 1/2" Shaft Diam. = 7/8"	Flange Din.=81/2" Shaft Diam. = 1 1/8"	Flange Din.=8 1/2" Shaft Diam. = 1 3/8"	Flange Din.=8 1/2" Shaft Diam. = 1 1/8"	Flange Din.=8 1/2" Shaft Diam. = 1 3/8"	Flange Din.=8 1/2" Shaft Diam. = 1 5/8"	Flange Din.= 8 1/2" Shaft Diam. = 1 1/8"	Flange Din.=8 1/2" Shaft Diam. = 1 3/8"	Flange Din.=8 1/2" Shaft Diam. = 1 5/8"	Flange Din.=8 1/2" Shaft Diam. = 1 7/8"
5	*	*	213TC/215TC	*	*	254TC/256TC	*	*	*	284TC/286TC
71/2	*	182TC/184TC	213TC/215TC	*	213TC/215TC	254TC/256TC	*	*	254TC/250TC	284TC/286TC
10	*	182TC/184TC	213TC/215TC	*	213TC/215TC	254TC/256TC	*	*	254TC/250TC	284TC/286TC
15	*	182TC/184TC	213TC/215TC	*	213TC/215TC	*	*	213TC/215TC	*	*
20	*	182TC/184TC	*	*	213TC/215TC	*	*	213TC/215TC	*	*
25	*	182TC/184TC	*	182TC/184TC	213TC/215TC	*	*	213TC/215TC	*	*
30	*	182TC/184TC	*	182TC/184TC	*	*	*	213TC/215TC	*	*
40	143TC/145TC	182TC/184TC	*	182TC/184TC	*	*	182TC/184TC	213TC/215TC	*	*
50	143TC/145TC	*	*	182TC/184TC	*	*	182TC/184TC	*	*	*
60	143TC/145TC	*	*	182TC/184TC	*	*	182TC/184TC	*	*	*

* Contact Application Engineering at 1800 626-2093

Service Factors for Enclosed Worm Gear Applications

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see conversion table on next page for conversion.)

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)			
Pure Liquids	–	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids-Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	–
Lobe	1.00	1.25	1.50
Vane	–	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	–	1.00	1.25
Brew Kettles, Continuous Duty	–	1.00	1.25
Cookers, Continuous Duty	–	1.00	1.25
Mash Tubs, Continuous Duty	–	1.00	1.25
Scale Hopper, Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES	–	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	–	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	–	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly Loaded or Fed	–	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engr.		
Boom Hoist	Refer to Application Engr.		
Trolley Drive	Refer to Application Engr.		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engr.		
Mill Duty			
Main Hoist	Refer to Application Engr.		
Auxiliary	Refer to Application Engr.		
Bridge and			
Trolley Travel	Refer to Application Engr.		
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	–	1.00	1.25
Escalators	Refer to Application Engr.		
Freight	Refer to Application Engr.		
Gravity Discharge	–	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
FANS			
Centrifugal	–	1.00	1.25
Cooling Towers	Refer to Application Engr.		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	–	1.25	1.50
Belt	1.00	1.25	1.50
Disc	–	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	–	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS	–	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers			
-Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls-Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls-Live-off Brg.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engr.		
METAL MILLS			
Draw Bench Carriage and Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers(Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50

Service Factors for Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	–	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.00	1.25	1.50
Rotary			
- Gear Type	–	1.00	1.50
- Lobe	–	1.00	1.25
- Vane	–	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75
RUBBER INDUSTRY (Cont'd.)			
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	–	1.00	1.25
Chemical Feeders	–	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	–	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	–	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-Friction Bearings Only.

Note: A Service Factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, Consult Conversion Table below)

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	–	–	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

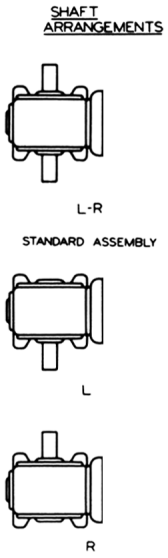
Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

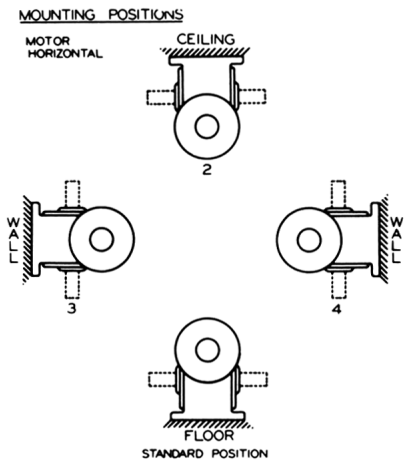
Load and operating characteristics of both the driver and driven units must be considered throughly when selecting speed reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. Worm gear speed reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

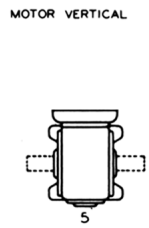
Contact Application Engineering at 1800 626-2093

GCT and GCV Series Shaft Arrangements

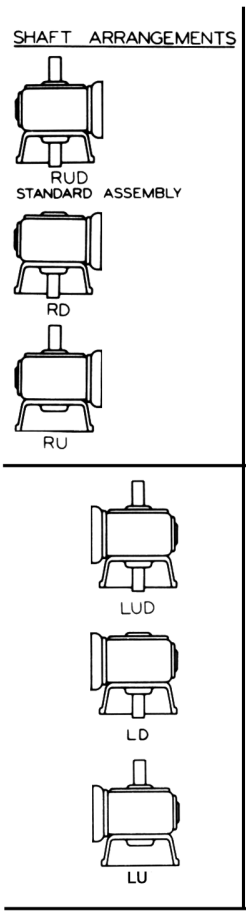
Model GC Type T

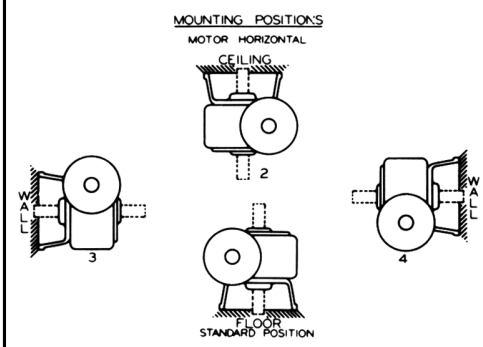


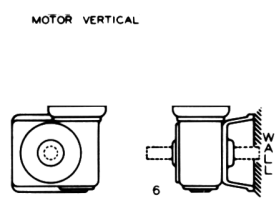


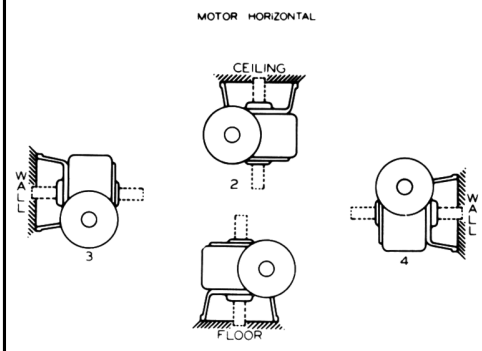


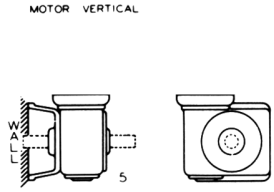
Model GC Type V











Shaft Tolerances
+ .000
-.001

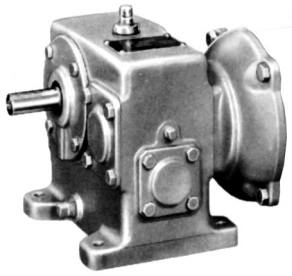
No extra charge for Standard Position shaft arrangements.
Low profile base available.

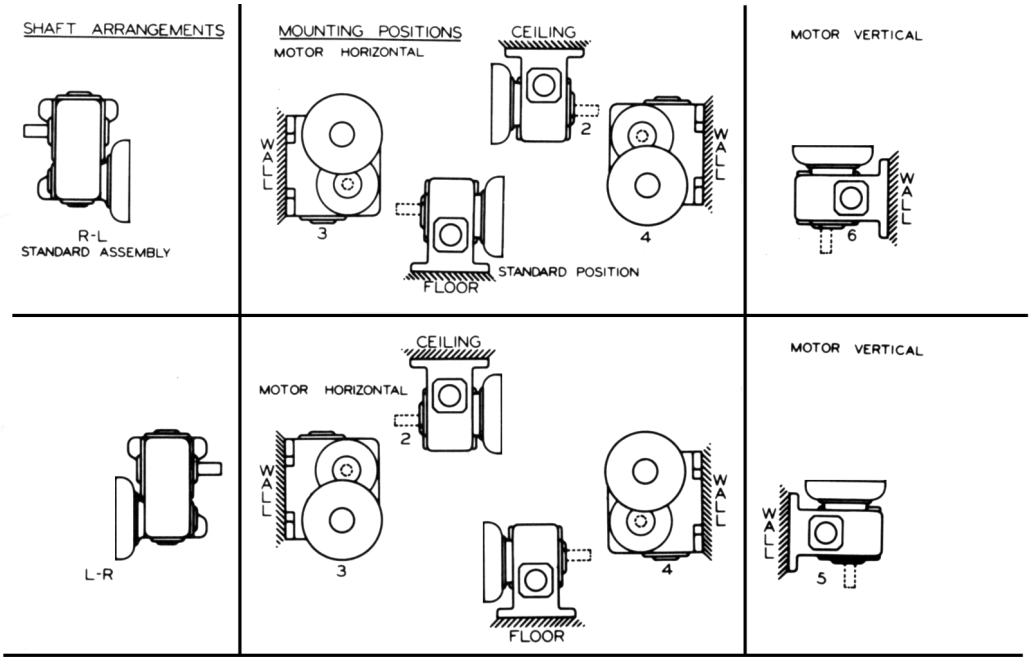
To Order, Specify:
Example: 18GCT10-L, position 3.

Series ..... as, GC
Type ..... as, T
Size ..... as, 18
Ratio ..... as, 10:1
Shaft Arrangement ..... as, L
Mounting Positions ..... as, Wall 3

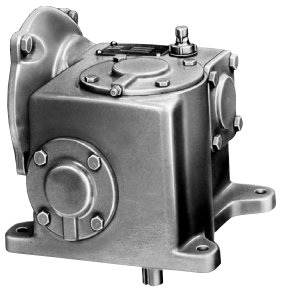
GCDB and GCDV Series Shaft Arrangements

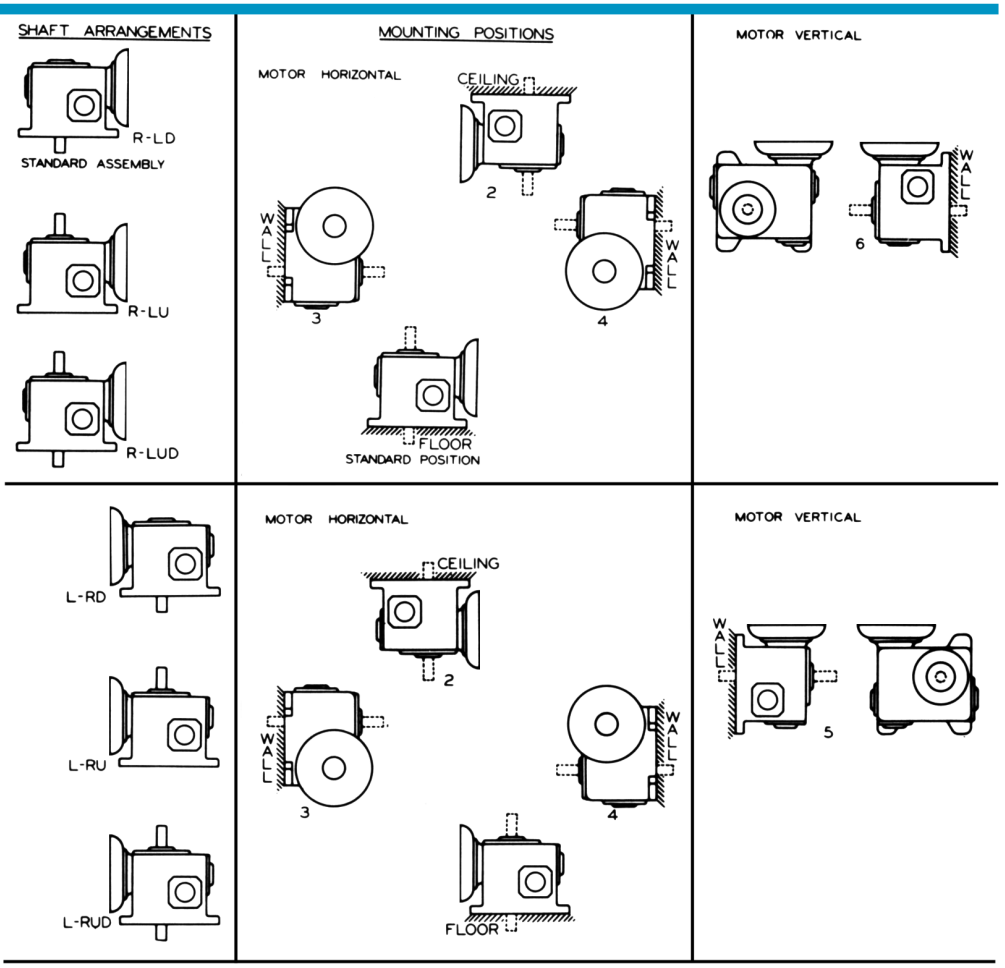
Model GC Type DB Sizes 13-18





Model GC Type DV Sizes 13-18





Shaft Tolerances
+ .000
-.001

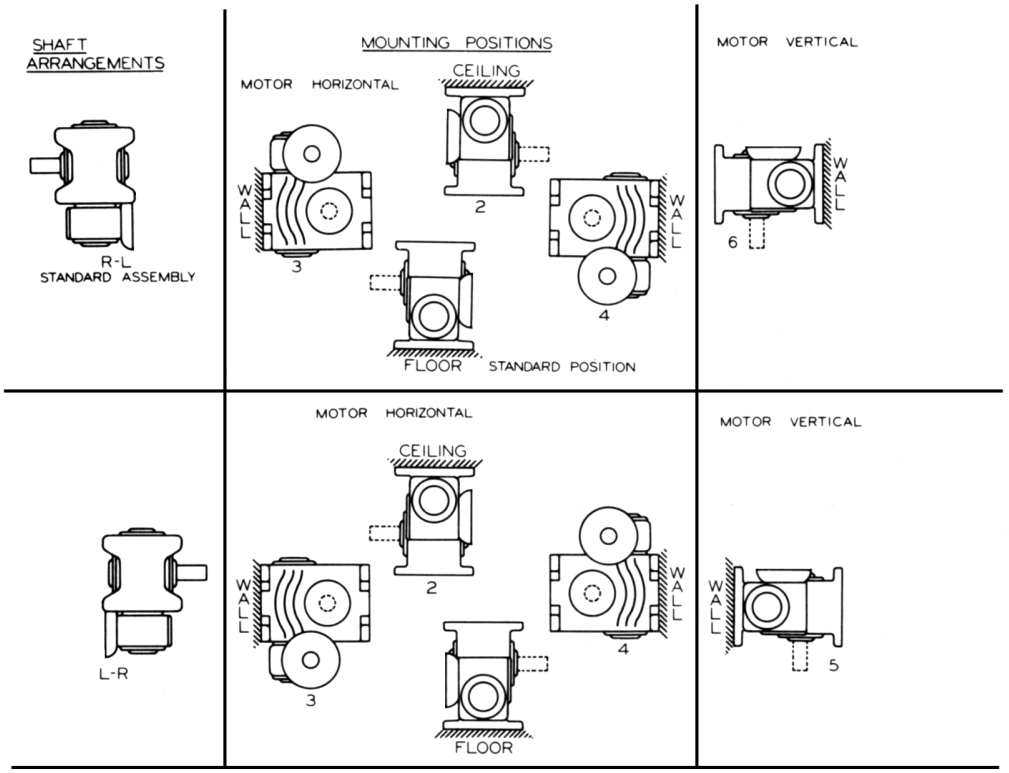
No extra charge for Standard Position shaft arrangements.
Low profile base available.

To Order, Specify:

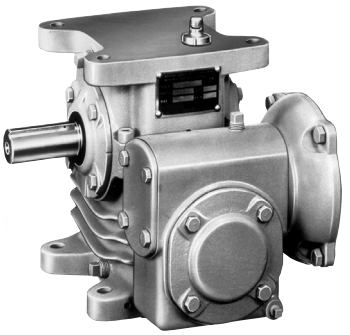
Example: 13GCDB75 R-L, position 6.

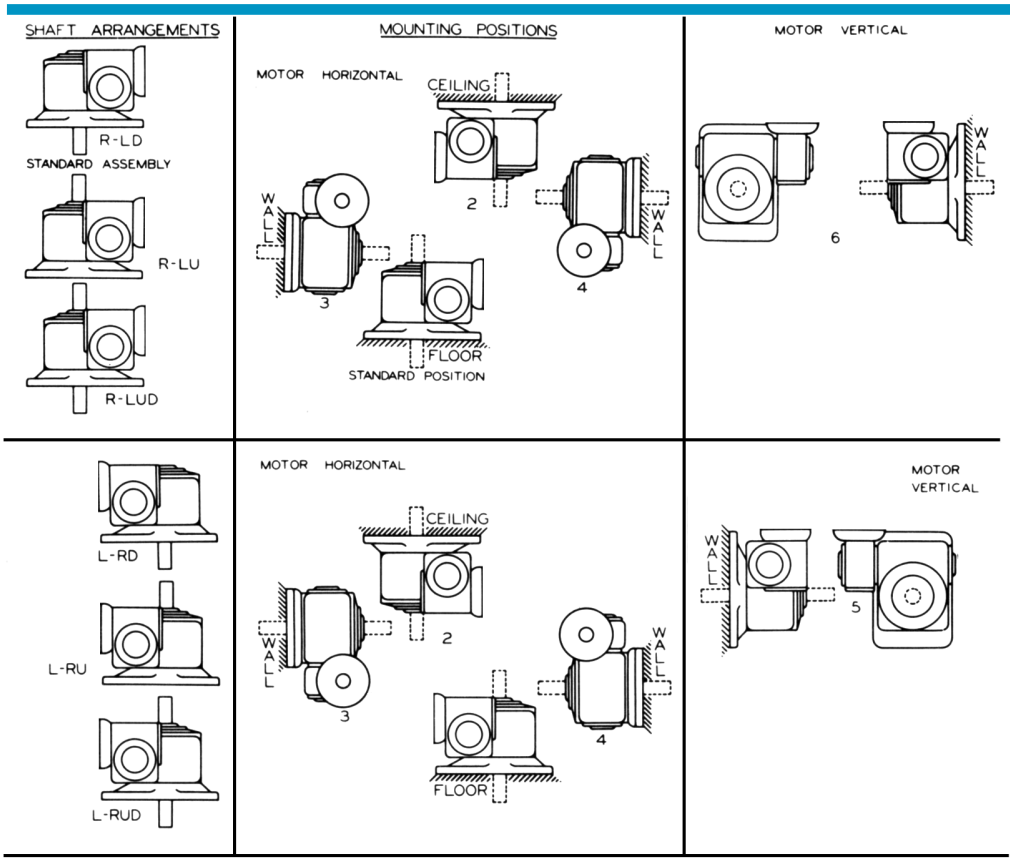
Series .....as, GC
Type .....as, DB
Size.....as, 13
Motor Vertical Down .....
Ratio..... as, 75:1
Shaft Arrangement .....as, R-L
Mounting Positions ..... as, Wall 6

GCDB, and GCDV Series Shaft Arrangements

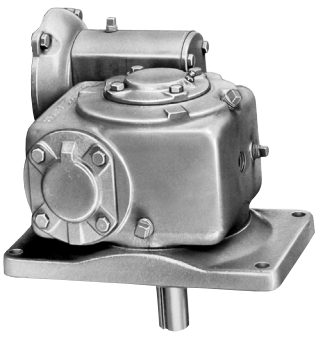


Model GC Type DB Sizes 20-60





Model GC Type DV Sizes 20-60



Shaft Tolerances
+ .000
-.001

To Order, Specify:
Example: 30GCDV100 L-RUD, position 5.

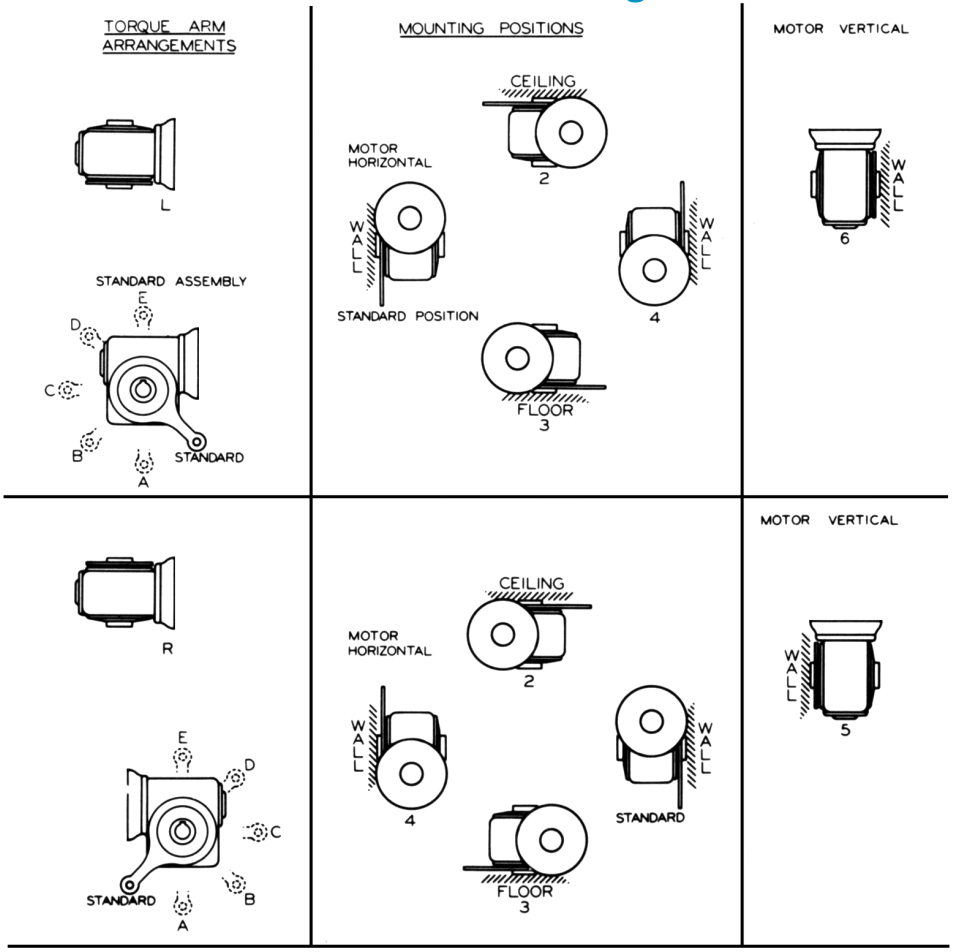
Series.....as, GC	Ratio.....as, 100:1
Type.....as, DV	Shaft Arrangement.....as, L-RUD
Size.....as, 30	Mounting Positions.....as, Wall 5

Motor vertical down not recommended, and should be avoided.

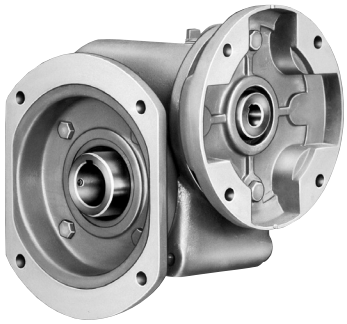
No extra charge for Standard Position shaft arrangements.
Low profile base available.

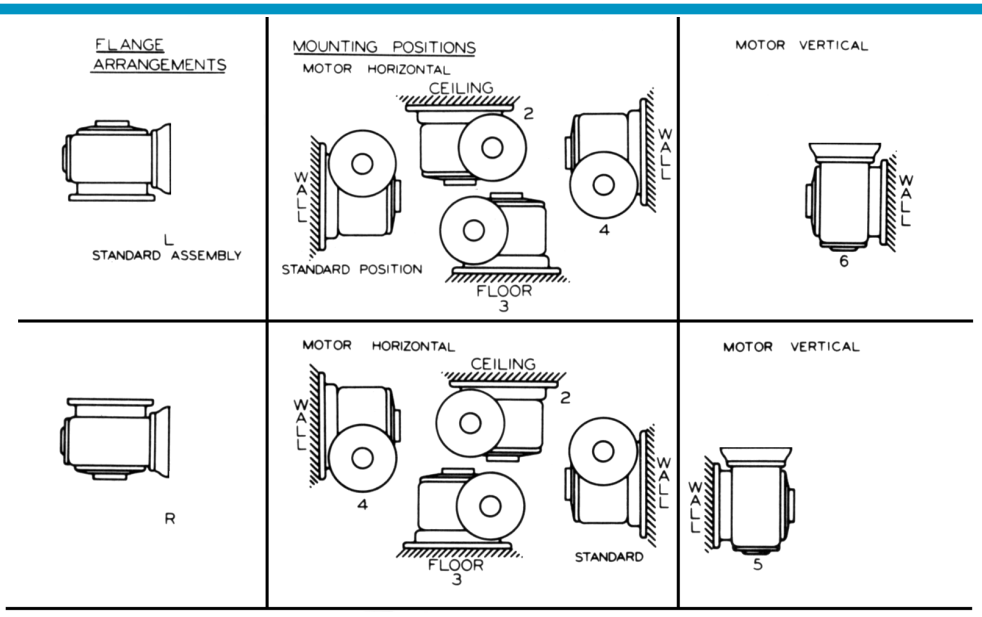
GCDB and GCDV Series Shaft Arrangements

Model G Type SA



Model G Type SF





Shaft Tolerances
+ .000
-.001

To Order, Specify:

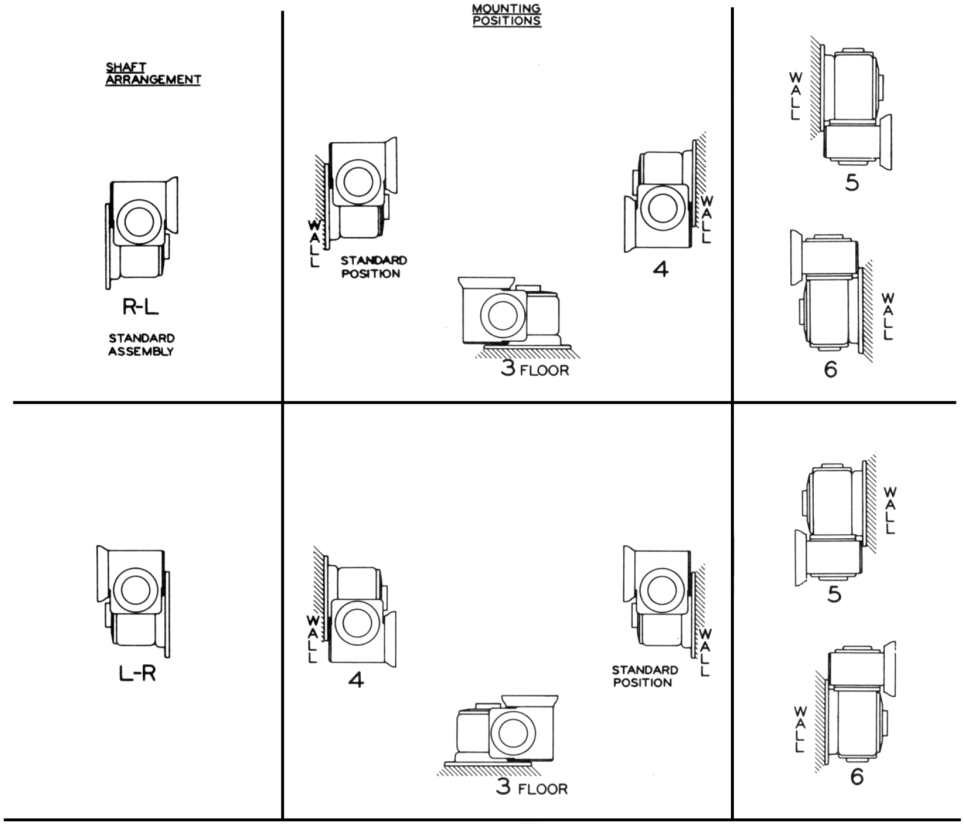
Example: 20GSF40-L, position 3.

Series.....as, GS	Arrangement..... as, L
Type .....as, F	Quill Bore.....as, 1.1875
Size.....as, 20	Mounting Positions ..... as, Floor 3
Ratio.....as, 40:1	

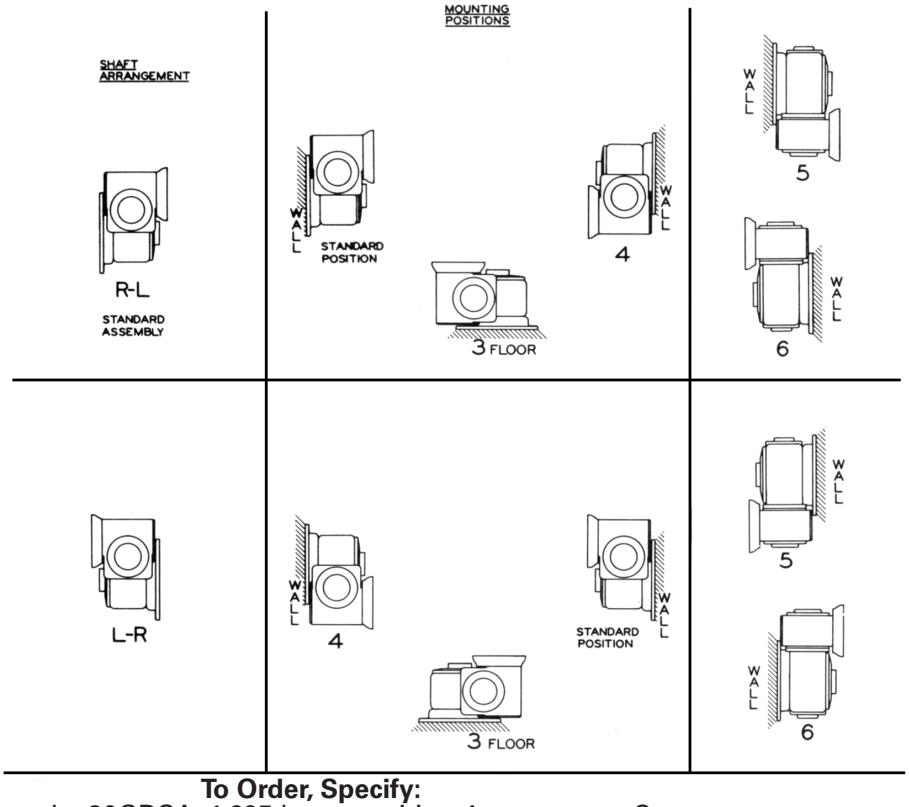
No extra charge for Standard Position shaft arrangements.

Motor vertical down not recommended, and should be avoided.

GDSA, and GDSF Arrangements



Model GD Type SF



Model GD Type SA

Shaft Tolerances
+ .000
-.001

To Order, Specify:

Example: 30GDSA, 1.625 bore, position 4, torque armC.

Series.....as, GDSA
Size.....as, 50
Ratio.....as, 250:1
Torque arm arrangement.....as, L-LD
Mounting Positions.....as, Floor 3

Motor vertical down not recommended, and should be avoided.

No extra charge for Standard Position shaft arrangements.

Lubrication

For enclosed worm gear units only. A worm gear unit is only as good as the oil which is used. During the first few days of operation, a worm gear unit will run hot. Unless the temperature exceeds 200 degrees F. there is no cause for alarm.

The oils shown below are typical. Any make of oil meeting American Gear Manufactureers Association (AGMA) standards #7C & #8C will be satisfactory. Consult Application Engineering (1 800 626 2093) if you have any questions.

Ambient Temp. 15° to 60°F	Ambient Temp. 50° to 125°F
AGMA #7C	AGMA #8C

The following are some general recommendations regarding relubrication. Your experience in your specific application is the best determination of relubrication intervals.

Maintenance Schedule:

1. Change initial oil fill after 2 weeks.
2. Change oil every 6 to 12 months depending on service conditions.

Additional Lubrication notes:

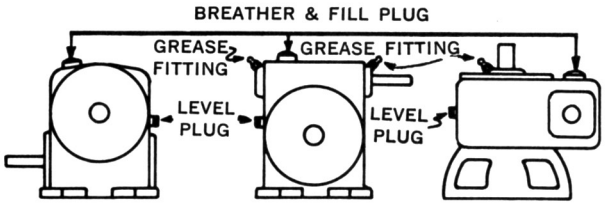
1. E.P. oils are not preferred. If an E.P. oil must be used, customer must determine that it is not corrosive to a bronze gear.
2. For ambient temperatures ouside of these temperature ranges, contact Application Engineering.
3. Units running at slow speeds should carry extra high oil level contact Application Engineering.
4. For slow input speeds (less than 100 RPM) use AGMA #8C oil in ambient temperatures of 15 to 60 degrees F.

Grease Fittings:

1. Grease every 100 hours of running time with about 3/8” ball of grease meeting NLGI #2 standards.
2. Do not over-lubricate.

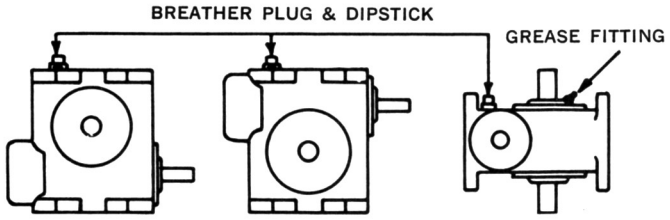
Lubrication

Lubricating Instructions - Reducers Other Than "RW"



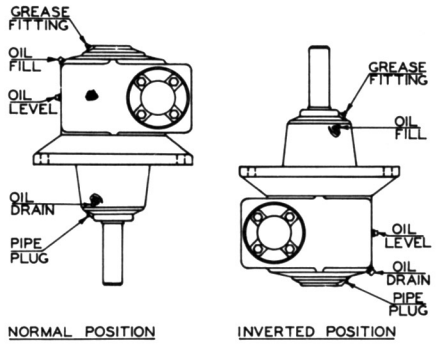
Many Morse® units are equipped with plug type oil holes. Remove level plug and fill unit with oil until oil runs out level hole. Breather and fill plug is at top of unit. Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time.

Lubricating Instructions - "RW" Reducers



RW units are equipped with a breather-dipstick fill plug. This fill plug should always be located at top of unit. Fill unit with oil to appropriate oil level line as indicated on dipstick. Units equipped with special dipsticks: fill with oil so dipstick dips into oil 1/4". Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time. When mounting units in inverted position or on walls, be sure all bearings get proper lubrication. Miter boxes do not require breather plugs.

Lubrication fittings VX conveyor drives



Oil Capacities Chart - U.S.A. Measure - Approximate Quantities, Fill To Oil Level

10WB ..... 1/4 Pt.
10WT ..... 1/4 Pt.
10WV ..... 1/4 Pt.
13WB ..... 1/2 Pt.
13WT ..... 1/2 Pt.
13WV ..... 1/2 Pt.
18WB ..... 1 Pt.
18WT ..... 3/4 Pt.
18WV ..... 1 Pt.
20WB ..... 1 3/4 Pts.
20WT ..... 1 1/2 Pts.
20WV ..... 1 1/2 Pts.
20WDB ..... 2 Pts.
20WDV ..... 1 3/4 Pts.
25RWB ..... 2 1/2 Pts.
25RWT ..... 2 1/2 Pts.
25RWV ..... 2 1/4 Pts.
25WDB ..... 3 1/4 Pts.
25WDV ..... 3 Pts.
30RWB ..... 3 3/4 Pts.
30RWT ..... 3 3/4 Pts.
30WDB ..... 2 1/2 Qts.
30WDV ..... 2 1/4 Qts.
35RWB ..... 3 1/4 Qts.
35RWT ..... 3 1/2 Qts.
35RWV ..... 2 1/2 Qts.
35WDB ..... 3 3/4 Qts.
35WDV ..... 3 Qts.
40RWB ..... 3 1/2 Qts.
40RWT ..... 3 1/2 Qts.
40RWV ..... 3 Qts.
40WDB ..... 3 3/4 Qts.
40WDV ..... 3 1/4 Qts.

50RWB ..... 1 3/4 Gals.
50RWT ..... 1 3/4 Gals.
50WDB ..... 2 1/4 Gals.
50WDV ..... 2 Gals.
60RWB ..... 2 3/4 Gals.
60RWT ..... 3 Gals.
60RWV ..... 2 1/2 Gals.
60WDB ..... 3 3/4 Gals.
60WDV ..... 3 1/2 Gals.
70RWB ..... 5 3/4 Gals.
70RWT ..... 5 3/4 Gals.
70RWV ..... 4 1/2 Gals.
70WDB ..... 7 Gals.
70WDV ..... 6 1/4 Gals.
80RWB ..... 7 1/2 Gals.
80RWT ..... 7 1/2 Gals.
80WDB ..... 10 Gals.
80WDV ..... 9 Gals.
100RWB ..... 15 1/2 Gals.
100RWT ..... 11 1/2 Gals.
100RWV ..... 10 Gals.
100WDB ..... 19 Gals.
100WDV ..... 12 1/2 Gals.
18V ..... 1 Pt.
20V ..... 1 1/2 Pts.
20DV ..... 1 Qt.
25V ..... 1 Qt.
25DV ..... 1 1/4 Qts.
30V ..... 1 3/4 Qts.
30DV ..... 2 1/2 Qts.
35V ..... 2 1/4 Qts.
35DV ..... 2 3/4 Qts.
40V ..... 3 1/2 Qts.
40DV ..... 4 1/4 Qts.

50V ..... 1 1/2 Gals.
50DV ..... 1 3/4 Gals.
60V ..... 2 1/2 Gals.
60DV ..... 2 3/4 Gals.
70V ..... 4 Gals.
70DV ..... 4 1/2 Gals.
30VX ..... Std. 3 Qts.
Inverted ..... 2 Qts.
30DVX ..... Std. 3 3/4 Qts.
Inverted ..... 2 3/4 Qts.
35VX ..... Std. 4 1/4 Qts.
Inverted ..... 3 3/4 Qts.
35DVX ..... Std. 4 1/2 Qts.
Inverted ..... 4 Qts.
40VX ..... Std. 1 1/4 Gals.
Inverted ..... 1 Gal.
40DVX ..... Std. 1 1/2 Gals.
Inverted ..... 1 1/4 Gals.
50VX ..... Std. 2 Gals.
Inverted ..... 1 3/4 Gals.
50DVX ..... Std. 2 1/4 Gals.
Inverted ..... 2 Gals.
60VX ..... Std. 3 3/4 Gals.
Inverted ..... 2 3/4 Gals.
60DVX ..... Std. 4 1/4 Gals.
Inverted ..... 3 1/4 Gals.
70VX ..... Std. 6 Gals.
Inverted ..... 5 Gals.
70DVX ..... Std. 7 Gals.
Inverted ..... 5 1/2 Gals.
90VX ..... 11 Gals.
90DVX ..... 12 1/2 Gals.
110VX ..... 20 Gals.
110DVX ..... 18 1/2 Gals.

13GCT ..... 1/2 Pt.
13GCV ..... 1/2 Pt.
Low Base ..... 1/2 Pt.
18GCT ..... 3/4 Pt.
18GCV ..... 1 Pt.
Low Base ..... 1 Pt.
20GCT ..... 1 1/2 Pts.
20GCV ..... 1 Qt.
Low Base ..... 1 Qt.
25GCT ..... 1 1/4 Qts.
25GCV ..... 1 1/2 Qts.
Low Base ..... 1 1/2 Qts.
30GCT ..... 2 Qts.
30GCV ..... 2 1/2 Qts.
Low Base ..... 2 1/2 Qts.
35GCT ..... 3 Qts.
35GCV ..... 3 3/4 Qts.
Low Base ..... 3 3/4 Qts.
40GCT ..... 3 1/2 Qts.
40GCV ..... 3 1/2 Qts.
Low Base ..... 3 1/2 Qts.
50GCT ..... 1 3/4 Gals.
60GCT ..... 2 3/4 Gals.
50GCV ..... 1 1/2 Gals.
Low Base ..... 1 1/2 Gals.
60GCV .....
Low Base ..... 2 3/4 Gals.
18SA,SF ..... 3/4 Pts.
18GSA,GSF ..... 3/4 Pts.
20SA,SF ..... 1 1/2 Pts.
20GSA,GSF ..... 1 1/2 Pts.
25SA,SF ..... 1 1/4 Qts.
25GSA,GSF ..... 1 1/4 Qts.
30SA,SF ..... 2 Qts.
30GSA,GSF ..... 2 Qts.
35SA,SF ..... 3 Qts.

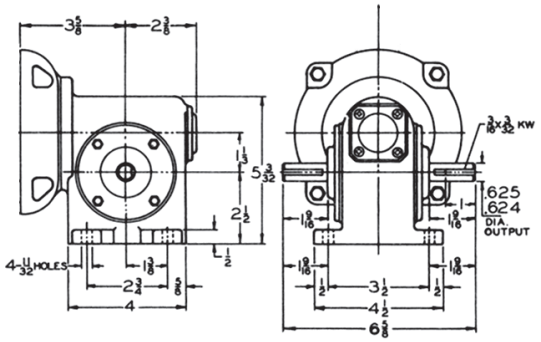
35GSA,GSF ..... 3 Qts.
40SA.SF ..... 3 1/2 Qts.
40GSA,GSF ..... 3 1/2 Qts.
50SA ,SF ..... 1 3/4 Gals.
50GSA,GSF ..... 1 3/4 Gals.
60SA, SF ..... 2 3/4 Gals.
60GSA,GSF ..... 2 3/4 Gals.
13GCDB ..... 3/4 Pt.
13GCDV ..... 3/4 Pt.
18DSA,DSF ..... 1 Pt.
18 GDSA,
GDSF ..... 1 Pt.
18GCDB ..... 1 Pt.
18GCDV ..... 1 Pt.
20DSA,DSF ..... 1 Qt.
20GDSA,GDSF ..... 1 Qt.
20GCDB ..... 1 Qt.
20GCDV ..... 1 Qt.
25DSA,DSF ..... 3 1/4 Pts.
25GDSA,
GDSF ..... 3 1/4 Pts.
25GCDB ..... 3 1/4 Pts.
25GCDV ..... 1 1/4 Qts.
30DSA,DSF ..... 2 1/2 Qts.
30GDSA,
GDSF ..... 2 1/2 Qts.
30GCDB ..... 2 1/2 Qts.
30GCDV ..... 2 1/2 Qts.
35DSA,DSF ..... 2 3/4 Qts.
35GDSA,
GDSF ..... 2 3/4 Qts.
35GCDB ..... 3 3/4 Qts.
35GCDV ..... 2 3/4 Qts.
40DSA,DSF ..... 4 1/4 Qts.

40GDSA,
GDSF ..... 4 1/4 Qts.
40GCDB ..... 3 3/4 Qts.
50DSA,DSF ..... 2 1/4 Gals.
50GDSA,
GDSF ..... 2 1/4 Gals.
50GCDB ..... 2 1/4 Gals.
50GCDV ..... 1 3/4 Gals.
60DSA,DSF ..... 3 3/4 Gals.
60GDSA,
GDSF ..... 2 3/4 Gals.
60GCDB ..... 3 3/4 Gals.
60GCDV ..... 2 3/4 Gals.
30GCDVX.. Std. 3 3/4 Qts.
Inverted ..... 2 3/4 Qts.
35GCDVX.. Std. 4 1/2 Qts.
Inverted ..... 4 Qts.
40GCDVX. Std. 1 1/2 Gals.
Inverted ..... 1 1/4 Gals.
50GCDVX Std. 2 1/4 Gals.
Inverted ..... 2 Gals.
60GCDVX Std. 4 1/4 Gals.
Inverted ..... 3 1/4 Gals.
4M ..... 3/4 Pt.
6M ..... 1 Qt.
8M ..... 2 Qts.
12M ..... 1 1/2 Gals.

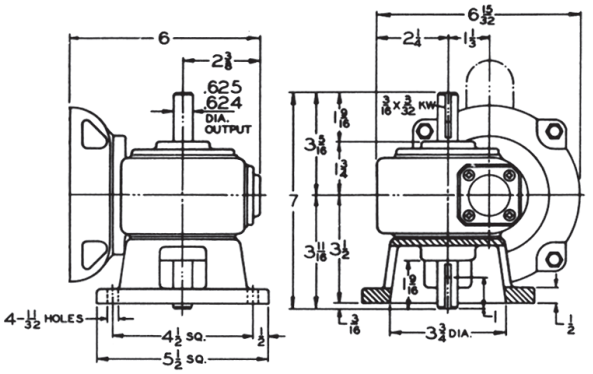
GCT and GCV Series

for N.E.M.A. "C" flange motors

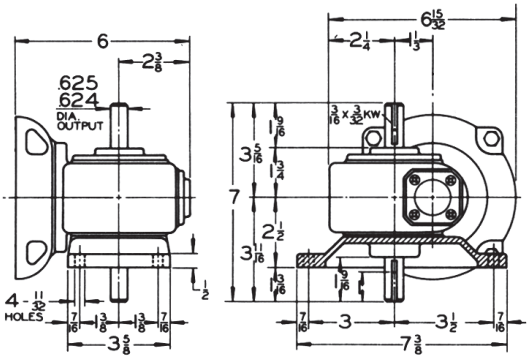
13GCT Net wt. 8 lbs.



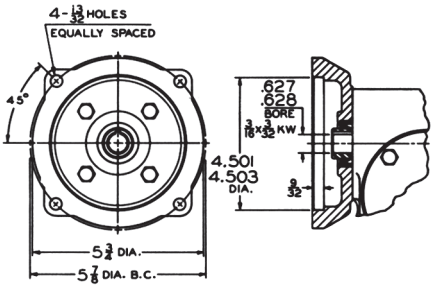
1.33" C.D.



13GCV Net wt. 8 lbs.



1.33" C.D.



1.00 service factor*

Ratio	At1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	1.01	350.0	165	0.77	230.0	190	56C
7 1/2	0.79	233.0	189	0.60	153.3	214	56C
10	0.65	175.0	203	0.50	115.0	229	56C
15	0.49	116.6	217	0.38	76.6	244	56C
20	0.39	87.5	220	0.29	57.5	244	56C
25	0.32	70.0	219	0.24	46.0	242	56C
30	0.29	58.4	223	0.23	38.4	251	56C
40	0.23	43.7	219	0.18	28.7	243	56C
50	0.19	35.0	209	0.15	23.0	231	56C
60	0.16	29.2	198	0.13	19.2	221	56C

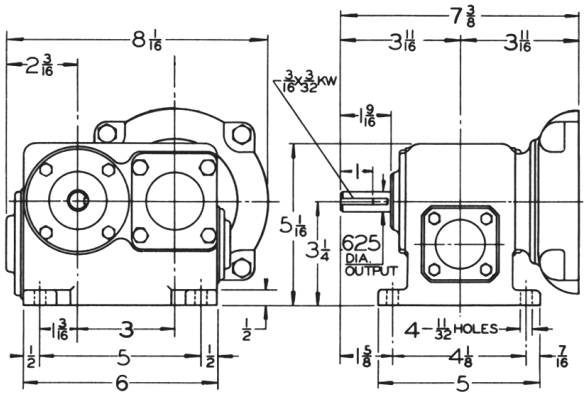
Overhung load (O.H.L.) for 13GCT is 232 pounds, for 13GCV is 191 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

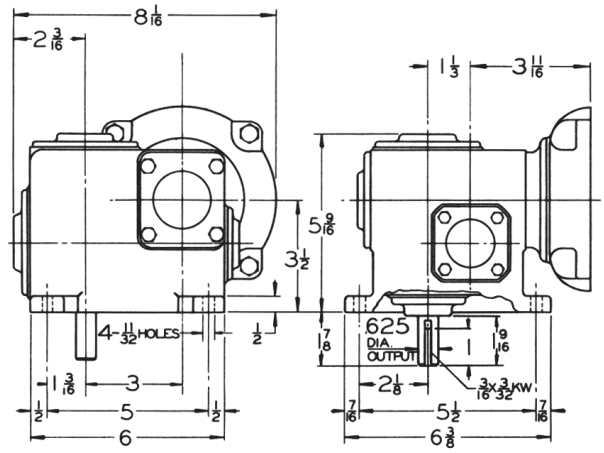
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB and GCDV Series

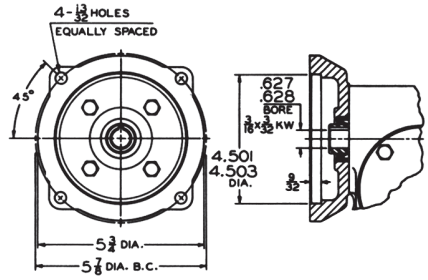
for N.E.M.A. "C" flange motors



13GCDB
Net wt. 10 lbs.
1.33" C.D.



13GCDV
Net wt. 11 lbs.
1.33" C.D.



1.00 Service Factor* - Double Reduction Wormgear
1.33" Centers Primary - 1.33" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.16	23.33	284	0.11	15.33	291	56C
100	5	20	0.12	17.50	282	0.09	11.50	287	56C
125	5	25	0.10	14.00	277	0.07	9.20	282	56C
150	10	15	0.09	11.67	293	0.06	7.67	296	56C
200	10	20	0.07	8.75	290	0.05	5.75	293	56C
250	10	25	0.06	7.00	285	0.04	4.60	287	56C
300	15	20	0.05	5.83	292	0.04	3.83	294	56C
400	20	20	0.04	4.38	294	0.03	2.88	295	56C
500	25	20	0.03	3.50	295	0.02	2.30	296	56C
600	30	20	0.03	2.92	295	0.02	1.92	296	56C
800	40	20	0.03	2.19	296	0.02	1.44	297	56C
1000	50	20	0.02	1.75	296	0.02	1.15	297	56C
1200	60	20	0.02	1.46	297	0.02	0.96	297	56C
1500	25	60	0.02	1.17	264	0.01	0.77	265	56C
1800	30	60	0.02	0.97	264	0.01	0.64	265	56C
2400	40	60	0.01	0.73	265	0.01	0.48	266	56C
3000	50	60	0.01	0.58	265	0.01	0.38	266	56C
3600	60	60	0.01	0.49	266	0.01	0.32	266	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 13GCDB is 232 pounds, for 13GCDV is 191 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-67 for shaft arrangements.

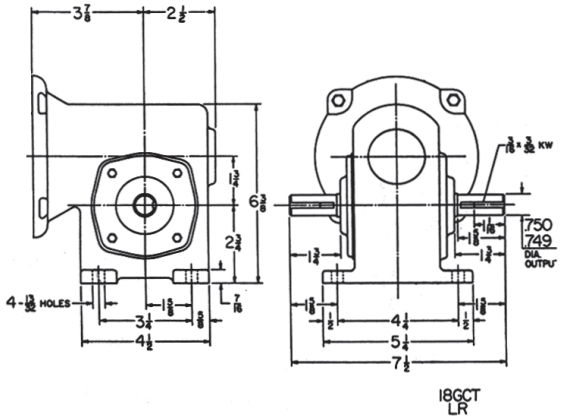
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

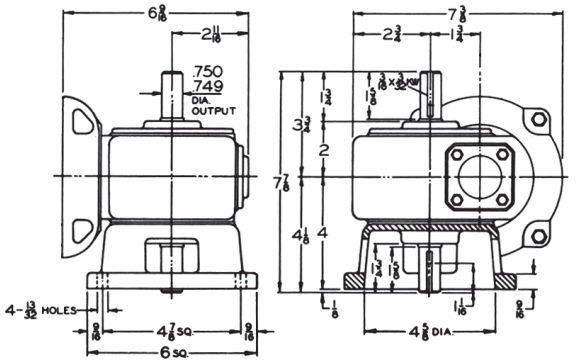
Worm Gear Reducers

GCT and GCV Series

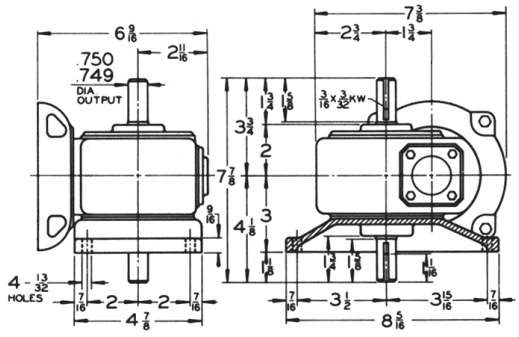
for N.E.M.A. "C" flange motors

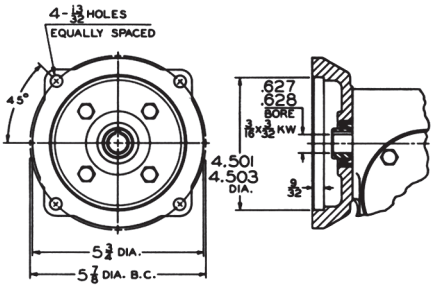
18GCT Net wt. 11 lbs. — 1.75" C.D. — Net wt. 12 lbs. 18GCV





18GCV LOW BASE Net wt. 12 lbs. — 1.75" C.D.





1.00 service factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	2.17	350.0	359	1.73	230.0	430	56C
7 1/2	1.71	233.0	415	1.35	153.3	490	56C
10	1.42	175.0	447	1.12	115.0	527	56C
15	1.06	116.6	479	0.54	76.6	561	56C
20	0.85	87.5	490	0.67	57.5	570	56C
25	0.71	70.0	494	0.56	46.0	570	56C
30	0.63	58.4	494	0.51	38.4	578	56C
40	0.50	43.7	489	0.41	28.7	567	56C
50	0.41	35.0	471	0.33	23.0	543	56C
60	0.34	29.2	446	0.28	19.2	512	56C

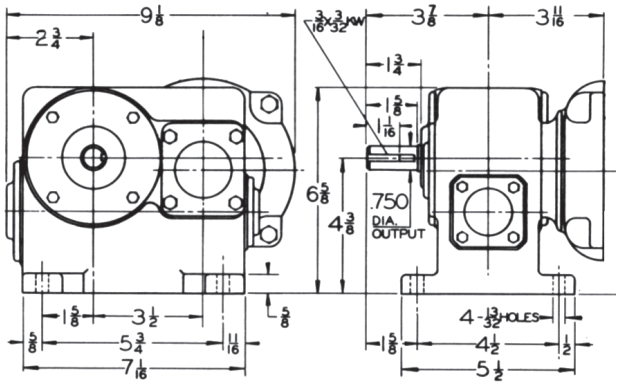
Overhung load (O.H.L.) for 18GCT is 325 pounds, for 18GCV is 274 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

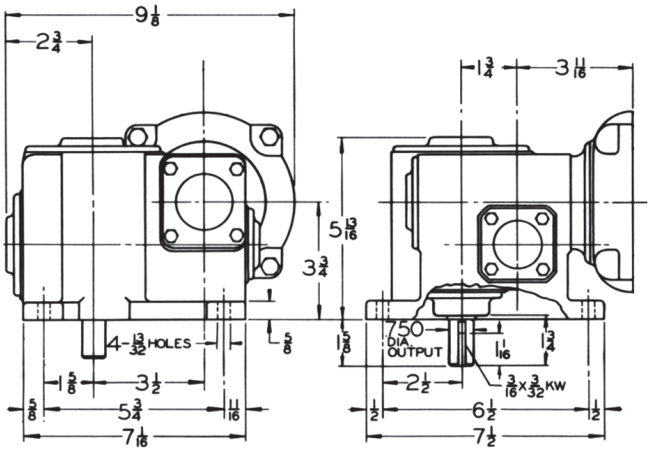
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

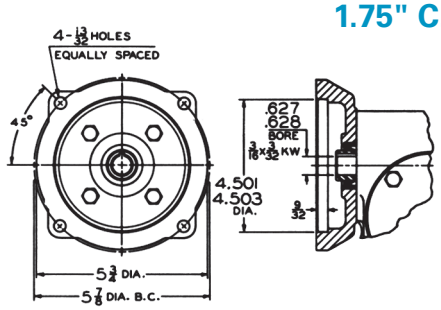
GCDB and GCDV Series

for N.E.M.A. "C" flange motors



18GCDB
Net wt. 14 lbs.
1.75" C.D.





18GCDV
Net wt. 16 lbs.
1.75" C.D.

1.00 Service Factor* - Double Reduction Wormgear
1.33" Centers Primary - 1.75" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.37	23.33	687	0.26	15.33	706	56C
100	5	20	0.30	17.50	691	0.21	11.50	710	56C
125	5	25	0.25	14.00	684	0.18	9.20	702	56C
150	10	15	0.21	11.67	915	0.15	7.67	725	56C
200	10	20	0.17	8.75	918	0.12	5.75	728	56C
250	10	25	0.15	7.00	710	0.10	4.60	719	56C
300	15	20	0.13	5.83	728	0.09	3.83	734	56C
400	20	20	0.10	4.38	732	0.07	2.88	737	56C
500	25	20	0.09	3.50	735	0.06	2.30	739	56C
600	30	20	0.08	2.92	737	0.06	1.92	740	56C
800	40	20	0.07	2.19	739	0.05	1.44	742	56C
1000	50	20	0.06	1.75	741	0.04	1.15	742	56C
1200	60	20	0.05	1.46	741	0.04	0.96	743	56C
1500	25	60	0.04	1.17	645	0.03	0.77	648	56C
1800	30	60	0.04	0.97	647	0.03	0.64	649	56C
2400	40	60	0.03	0.73	648	0.02	0.48	650	56C
3000	50	60	0.03	0.58	650	0.02	0.38	651	56C
3600	60	60	0.02	0.49	650	0.02	0.32	652	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 18GCT is 324 pounds, for 18GCDV is 280 pounds at one shaft diameter from housing.

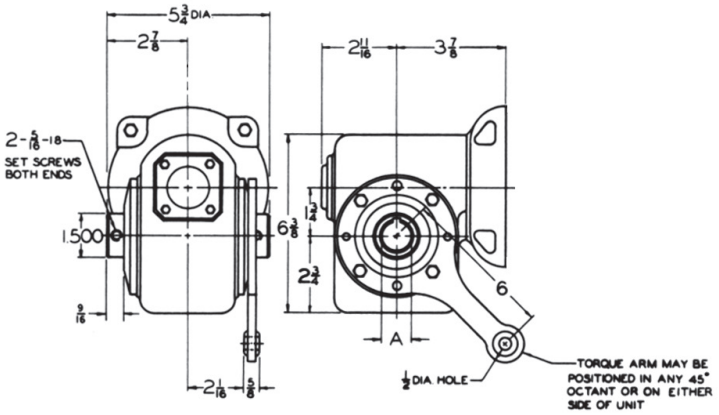
* Refer to page D-65 for other service factors. Refer to pages D-67 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

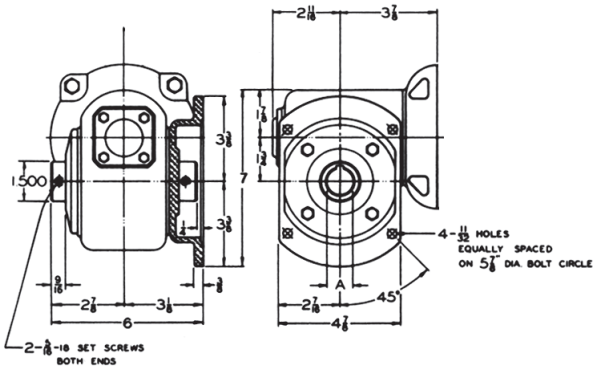
18GSA
Net wt. 14 lbs.
1.75" C.D.



A (BORE)	KEYWAY
.750 .751	3/16 x 3/32
.875 .876	3/16 x 3/32
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

18GSF
Net wt. 14 lbs.
1.75" C.D.



1.00 Service Factor*

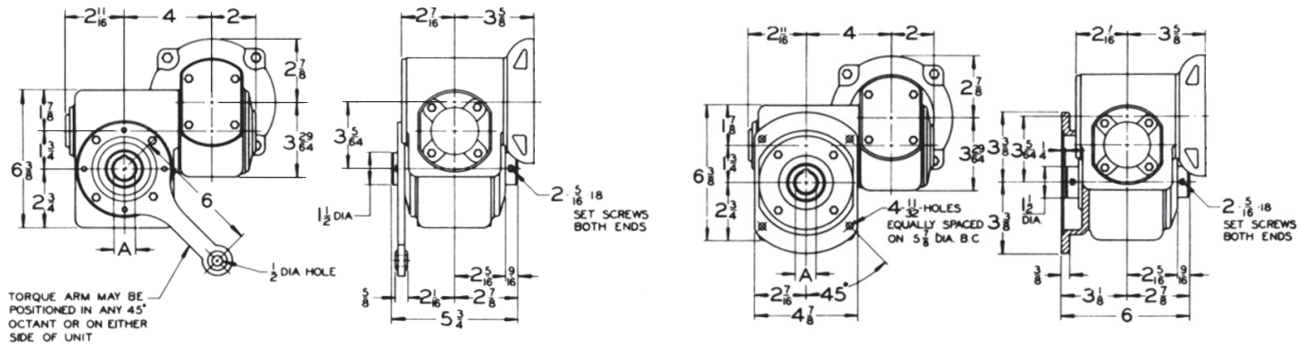
Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	2.17	350.0	359	1.73	230.0	430	56C
7 1/2	1.71	233.0	415	1.35	153.3	490	56C
10	1.42	175.0	447	1.12	115.0	527	56C
15	1.06	116.6	479	0.54	76.6	561	56C
20	0.85	87.5	490	0.67	57.5	570	56C
25	0.71	70.0	494	0.56	46.0	570	56C
30	0.63	58.4	494	0.51	38.4	578	56C
40	0.50	43.7	489	0.41	28.7	567	56C
50	0.41	35.0	471	0.33	23.0	543	56C
60	0.34	29.2	446	0.28	19.2	512	56C

* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

18GDSA Net wt. 19 lbs. — 1.75" C.D. — Net wt. 12 lbs. 18GDSF



A (BORE)	KEYWAY
.750 .751	3/16 x 3/32
.875 .876	3/16 x 3/32
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8

1.00 Service Factor* - Double Reduction Wormgear
1.33" Centers Primary - 1.75" Centers Secondary

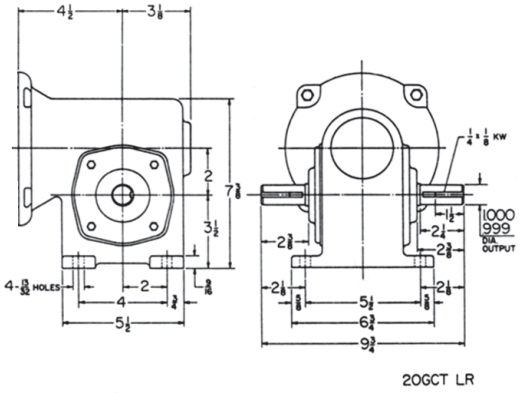
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.37	23.33	687	0.26	15.33	706	56C
100	5	20	0.30	17.50	691	0.21	11.50	710	56C
125	5	25	0.25	14.00	684	0.18	9.20	702	56C
150	10	15	0.21	11.67	915	0.15	7.67	725	56C
200	10	20	0.17	8.75	918	0.12	5.75	728	56C
250	10	25	0.15	7.00	710	0.10	4.60	719	56C
300	15	20	0.13	5.83	728	0.09	3.83	734	56C
400	20	20	0.10	4.38	732	0.07	2.88	737	56C
500	25	20	0.09	3.50	735	0.06	2.30	739	56C
600	30	20	0.08	2.92	737	0.06	1.92	740	56C
800	40	20	0.07	2.19	739	0.05	1.44	742	56C
1000	50	20	0.06	1.75	741	0.04	1.15	742	56C
1200	60	20	0.05	1.46	741	0.04	0.96	743	56C
1500	25	60	0.04	1.17	645	0.03	0.77	648	56C
1800	30	60	0.04	0.97	647	0.03	0.64	649	56C
2400	40	60	0.03	0.73	648	0.02	0.48	650	56C
3000	50	60	0.03	0.58	650	0.02	0.38	651	56C
3600	60	60	0.02	0.49	650	0.02	0.32	652	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

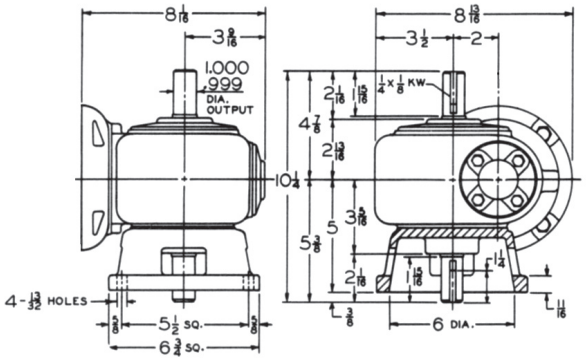
GCT and GCV Series

for N.E.M.A. "C" flange motors

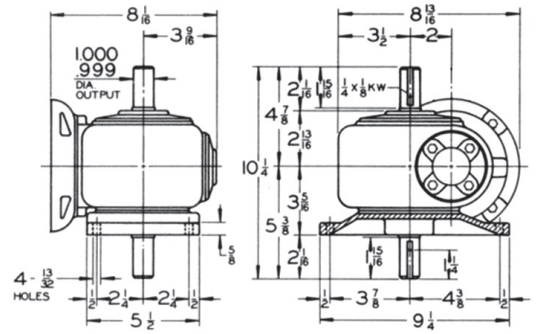
20GCT Net wt. 21 lbs. 2.0" C.D. Net wt. 22 lbs. 20GCV

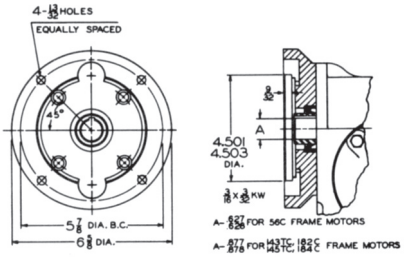


20GCT LR



20GCV LOW BASE Net wt. 22 lbs. 2.0" C.D.





56C Motor Frame
A-.627-.628 Dia. Bore
143TC-145TC Motor Frame
.877-.878 Dia. Bore
3/16 x 3/32 KW

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	2.92	350.0	487	2.35	230.0	588	145TC
7 1/2	2.31	233.0	568	1.84	153.3	676	145TC
10	1.92	175.0	616	1.52	115.0	728	145TC
15	1.44	116.6	663	1.14	76.6	779	145TC
20	1.13	87.5	673	0.88	57.5	779	145TC
25	0.94	70.0	677	0.73	46.0	777	145TC
30	0.84	58.4	685	0.67	38.4	803	56C
40	0.65	43.7	672	0.52	28.7	776	56C
50	0.53	35.0	646	0.42	23.0	742	56C
60	0.44	29.2	610	0.35	19.2	699	56C

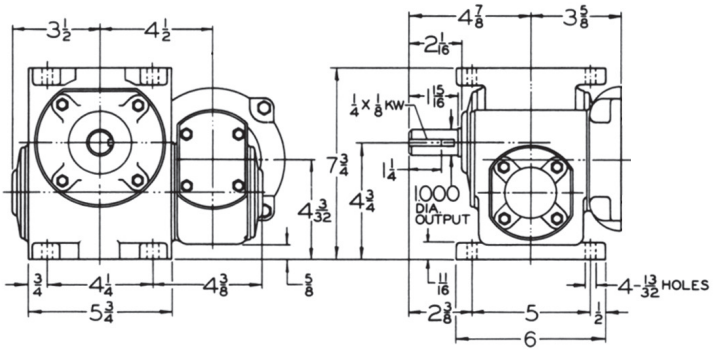
Overhung load (O.H.L.) for 20GCT is 702 pounds, for 20GCDV is 591 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

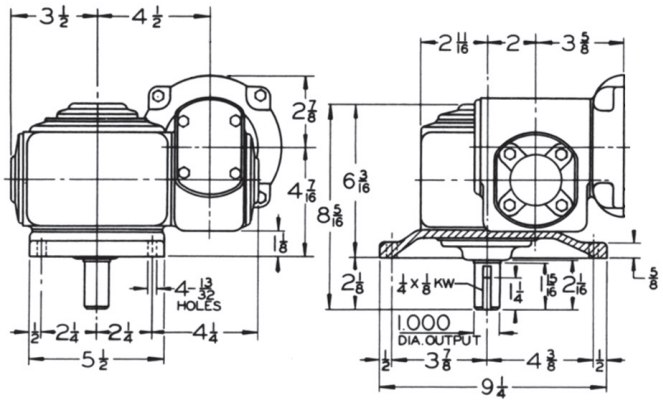
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB and GCDV Series

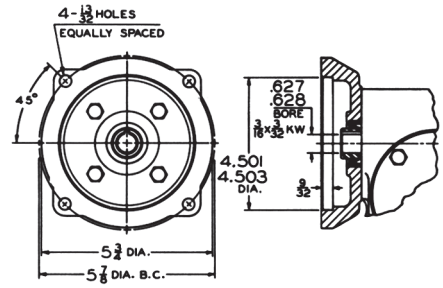
for N.E.M.A. "C" flange motors



20GCDB
Net wt. 25 lbs.
2.0" C.D.



20GCDV
Net wt. 40 lbs.
2.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear
1.33" Centers Primary - 2.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.50	23.33	956	0.35	15.33	984	56C
100	5	20	0.39	17.50	937	0.27	11.50	962	56C
125	5	25	0.32	14.00	929	0.23	9.20	952	56C
150	10	15	0.29	11.67	996	0.20	7.67	1010	56C
200	10	20	0.22	8.75	973	0.16	5.75	986	56C
250	10	25	0.18	7.00	963	0.13	4.60	975	56C
300	15	20	0.16	5.83	985	0.11	3.83	994	56C
400	20	20	0.13	4.38	991	0.09	2.88	998	56C
500	25	20	0.11	3.50	995	0.08	2.30	1000	56C
600	30	20	0.10	2.92	997	0.07	1.92	1002	56C
800	40	20	0.08	2.19	1000	0.06	1.44	1004	56C
1000	50	20	0.07	1.75	1002	0.05	1.15	1005	56C
1200	60	20	0.06	1.46	1003	0.05	0.96	1006	56C
1500	25	60	0.05	1.17	876	0.04	0.77	880	56C
1800	30	60	0.05	0.97	878	0.03	0.64	882	56C
2400	40	60	0.04	0.73	881	0.03	0.48	883	56C
3000	50	60	0.03	0.58	882	0.02	0.38	884	56C
3600	60	60	0.03	0.49	883	0.02	0.32	885	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 18GCT is 702 pounds, for 20GCDV is 670 pounds at one shaft diameter from housing.

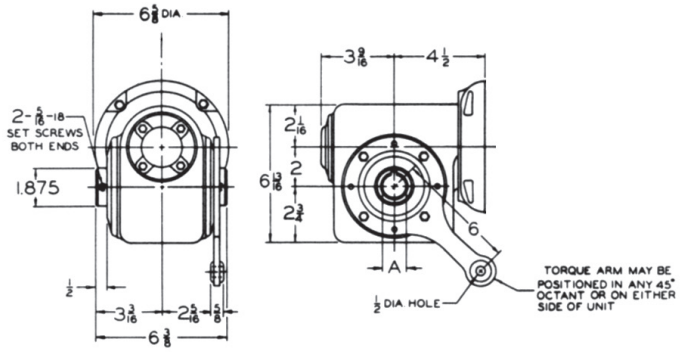
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

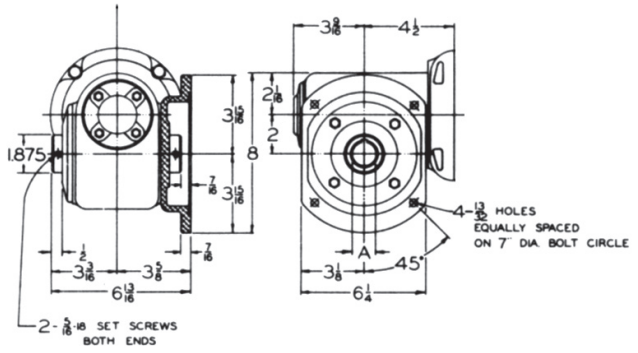
20GSA
Net wt. 27 lbs.
2.0" C.D.



A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

20GSF
Net wt. 27 lbs.
2.0" C.D.



1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	2.92	350.0	487	2.35	230.0	588	145TC
7 1/2	2.31	233.0	568	1.84	153.3	676	145TC
10	1.92	175.0	616	1.52	115.0	728	145TC
15	1.44	116.6	663	1.14	76.6	779	145TC
20	1.13	87.5	673	0.88	57.5	779	145TC
25	0.94	70.0	677	0.73	46.0	777	145TC
30	0.84	58.4	685	0.67	38.4	803	56C
40	0.65	43.7	672	0.52	28.7	776	56C
50	0.53	35.0	646	0.42	23.0	742	56C
60	0.44	29.2	610	0.35	19.2	699	56C

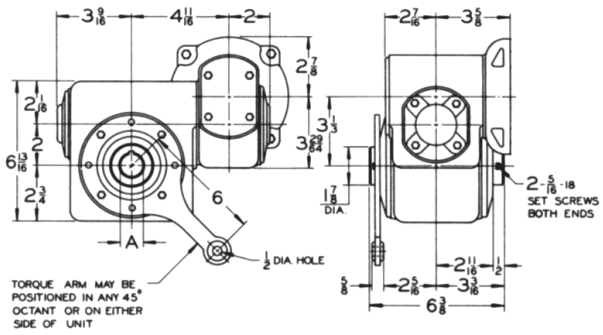
* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.

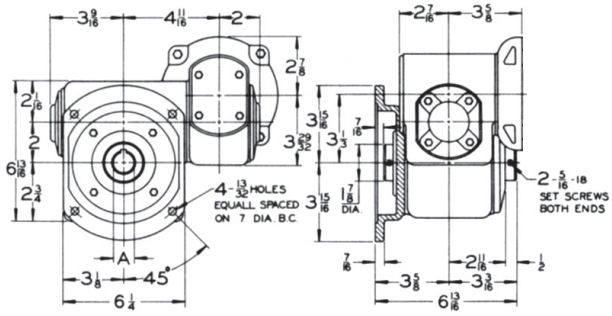
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

20GDSA Net wt. 32 lbs. 2.0" C.D. Net wt. 32 lbs. 20GDSF





1.00 Service Factor* - Double Reduction Wormgear
1.33" Centers Primary - 2.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.50	23.33	956	0.35	15.33	984	56C
100	5	20	0.39	17.50	937	0.27	11.50	962	56C
125	5	25	0.32	14.00	929	0.23	9.20	952	56C
150	10	15	0.29	11.67	996	0.20	7.67	1010	56C
200	10	20	0.22	8.75	973	0.16	5.75	986	56C
250	10	25	0.18	7.00	963	0.13	4.60	975	56C
300	15	20	0.16	5.83	985	0.11	3.83	994	56C
400	20	20	0.13	4.38	991	0.09	2.88	998	56C
500	25	20	0.11	3.50	995	0.08	2.30	1000	56C
600	30	20	0.10	2.92	997	0.07	1.92	1002	56C
800	40	20	0.08	2.19	1000	0.06	1.44	1004	56C
1000	50	20	0.07	1.75	1002	0.05	1.15	1005	56C
1200	60	20	0.06	1.46	1003	0.05	0.96	1006	56C
1500	25	60	0.05	1.17	876	0.04	0.77	880	56C
1800	30	60	0.05	0.97	878	0.03	0.64	882	56C
2400	40	60	0.04	0.73	881	0.03	0.48	883	56C
3000	50	60	0.03	0.58	882	0.02	0.38	884	56C
3600	60	60	0.03	0.49	883	0.02	0.32	885	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.

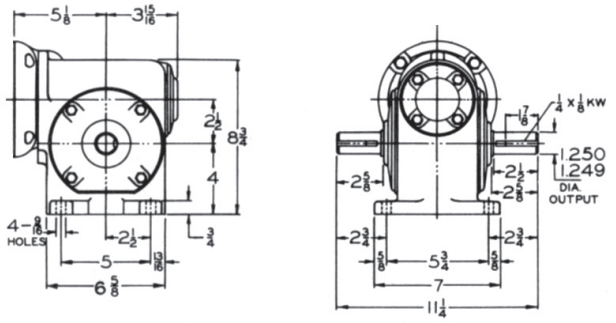
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.

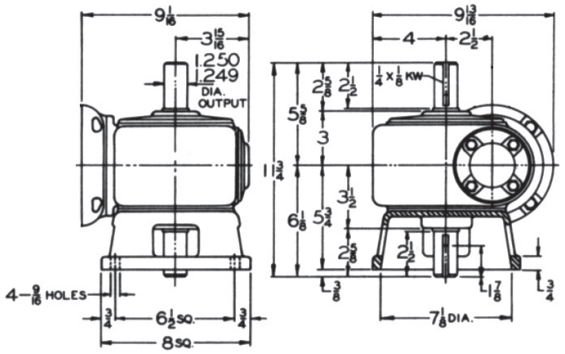
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCT and GCV Series

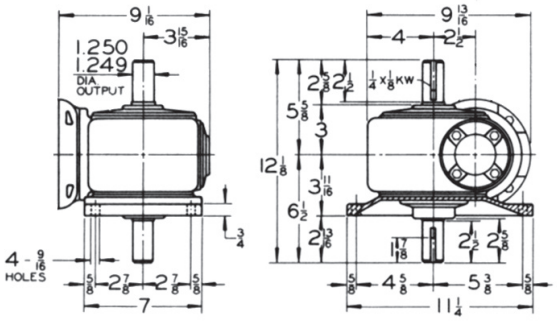
for N.E.M.A. "C" flange motors

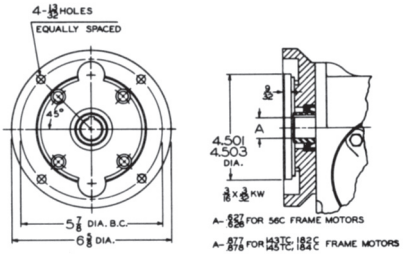
25GCT Net wt. 29 lbs. 2.5" C.D. Net wt. 30 lbs. 25GCV





25GCV LOW BASE Net wt. 30 lbs. 2.5" C.D.





1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	4.76	350.0	798	3.95	230.0	996	145TC
7 1/2	3.82	233.0	946	3.12	153.3	1152	145TC
10	3.18	175.0	1031	2.58	115.0	1253	145TC
15	2.37	116.6	1113	1.93	76.6	1344	145TC
20	1.88	87.5	1139	1.52	57.5	1364	145TC
25	1.54	70.0	1140	1.24	46.0	1347	145TC
30	1.37	58.4	1155	1.13	38.4	1390	145TC
40	1.07	43.7	1139	0.88	28.7	1361	145TC
50	0.86	35.0	1090	0.70	23.0	1285	56C
60	0.70	29.2	1024	0.57	19.2	1196	56C

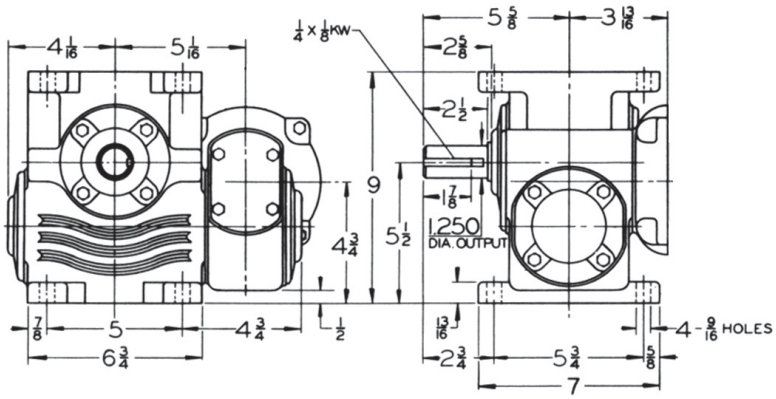
Overhung load (O.H.L.) for 25GSA is 1211 pounds, for 25GSF is 1030 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

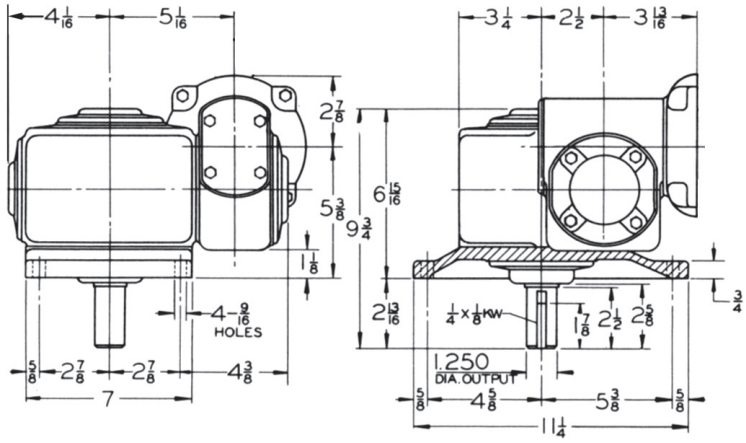
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB and GCDV Series

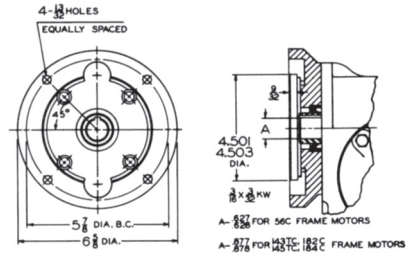
for N.E.M.A. "C" flange motors



25GCDB
Net wt. 57 lbs.
2.5" C.D.



25GCDV
Net wt. 68 lbs.
2.5" C.D.



1.00 Service Factor* - Double Reduction Wormgear
1.75" Centers Primary - 2.5" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.16	23.33	284	0.11	15.33	291	56C
100	5	20	0.12	17.50	282	0.09	11.50	287	56C
125	5	25	0.10	14.00	277	0.07	9.20	282	56C
150	10	15	0.09	11.67	293	0.06	7.67	296	56C
200	10	20	0.07	8.75	290	0.05	5.75	293	56C
250	10	25	0.06	7.00	285	0.04	4.60	287	56C
300	15	20	0.05	5.83	292	0.04	3.83	294	56C
400	20	20	0.04	4.38	294	0.03	2.88	295	56C
500	25	20	0.03	3.50	295	0.02	2.30	296	56C
600	30	20	0.03	2.92	295	0.02	1.92	296	56C
800	40	20	0.03	2.19	296	0.02	1.44	297	56C
1000	50	20	0.02	1.75	296	0.02	1.15	297	56C
1200	60	20	0.02	1.46	297	0.02	0.96	297	56C
1500	25	60	0.02	1.17	264	0.01	0.77	265	56C
1800	30	60	0.02	0.97	264	0.01	0.64	265	56C
2400	40	60	0.01	0.73	265	0.01	0.48	266	56C
3000	50	60	0.01	0.58	265	0.01	0.38	266	56C
3600	60	60	0.01	0.49	266	0.01	0.32	266	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 25GCDB is 1211 pounds, for 25GCDV is 1030 pounds at one shaft diameter from housing.

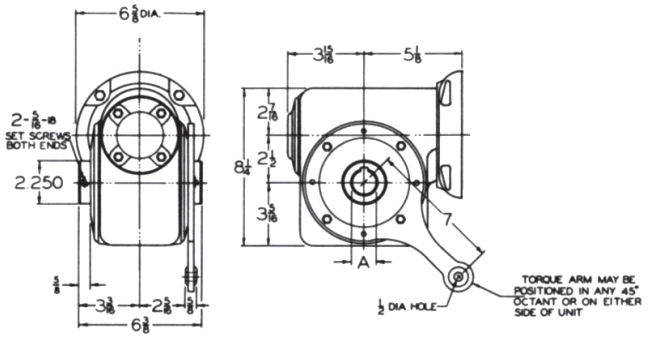
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

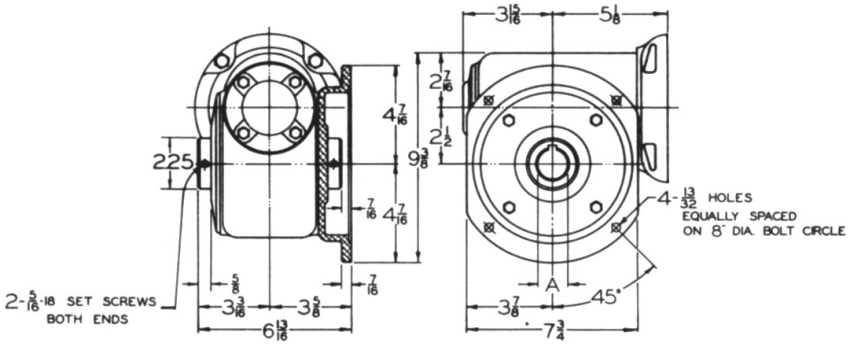
25GSA
Net wt. 33 lbs.
2.5" C.D.



A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8
1.3125 1.3135	5/16 x 5/32
1.4375 1.4385	3/8 x 3/16

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

25GSF
Net wt. 33 lbs.
2.5" C.D.



1.00 Service Factor*

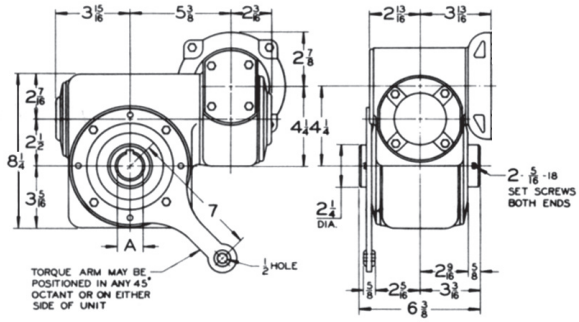
Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	4.76	350.0	798	3.95	230.0	996	145TC
7 1/2	3.82	233.0	946	3.12	153.3	1152	145TC
10	3.18	175.0	1031	2.58	115.0	1253	145TC
15	2.37	116.6	1113	1.93	76.6	1344	145TC
20	1.88	87.5	1139	1.52	57.5	1364	145TC
25	1.54	70.0	1140	1.24	46.0	1347	145TC
30	1.37	58.4	1155	1.13	38.4	1390	145TC
40	1.07	43.7	1139	0.88	28.7	1361	145TC
50	0.86	35.0	1090	0.70	23.0	1285	56C
60	0.70	29.2	1024	0.57	19.2	1196	56C

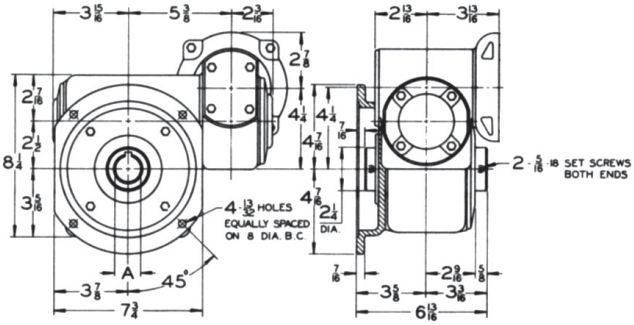
* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

25GDSA Net wt. 48 lbs. 2.5" C.D. Net wt. 48 lbs. 25GDSF





A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8
1.3125 1.3135	5/16 x 5/32
1.4375 1.4385	3/8 x 3/16

1.00 Service Factor* - Double Reduction Wormgear
1.75" Centers Primary - 2.5" Centers Secondary

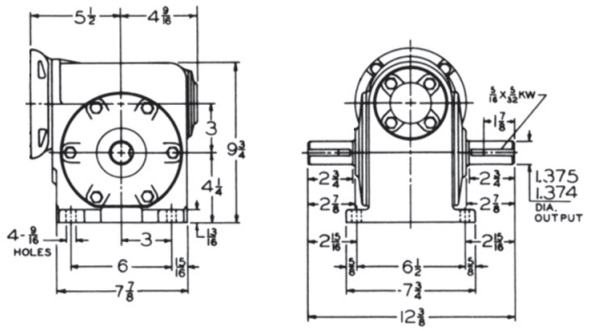
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input				At 1150 rpm Input		NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	0.88	23.33	1728	0.62	15.33	1790	56C
100	5	20	0.69	17.50	1725	0.49	11.50	1783	56C
125	5	25	0.55	14.00	1667	0.39	9.20	1718	56C
150	10	15	0.51	11.67	1818	0.35	7.67	1849	56C
200	10	20	0.40	8.75	1809	0.28	5.75	1838	56C
250	10	25	0.32	7.00	1741	0.22	4.60	1766	56C
300	15	20	0.29	5.83	1837	0.20	3.83	1857	56C
400	20	20	0.23	4.38	1852	0.17	2.88	1866	56C
500	25	20	0.20	3.50	1860	0.14	2.30	1872	56C
600	30	20	0.18	2.92	1866	0.13	1.92	1875	56C
800	40	20	0.15	2.19	1873	0.11	1.44	1880	56C
1000	50	20	0.13	1.75	1877	0.09	1.15	1883	56C
1200	60	20	0.11	1.46	1880	0.08	0.96	1885	56C
1500	25	60	0.08	1.17	1552	0.06	0.77	1560	56C
1800	30	60	0.07	0.97	1556	0.05	0.64	1562	56C
2400	40	60	0.06	0.73	1561	0.04	0.48	1566	56C
3000	50	60	0.05	0.58	1564	0.04	0.38	1568	56C
3600	60	60	0.05	0.49	1566	0.03	0.32	1569	56C

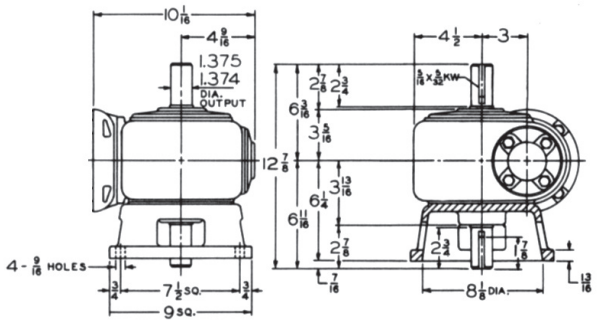
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

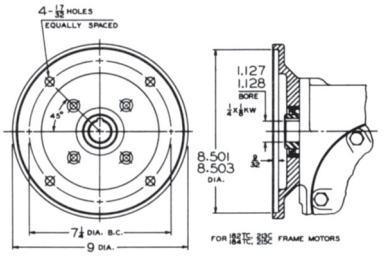
GCT and GCV Series

for N.E.M.A. "C" flange motors

30GCT Net wt. 68 lbs. 3.0" C.D. Net wt. 75 lbs. 30GCV

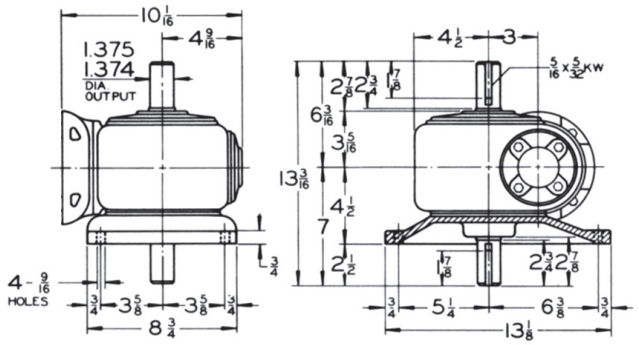


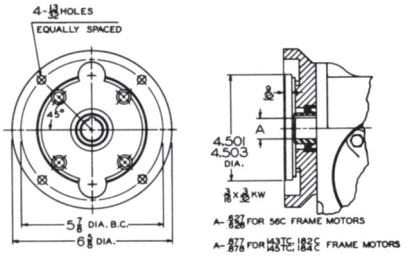




182TC & 184TC MOTOR FRAME

30GCV LOW BASE Net wt. 75 lbs. 3.0" C.D.





56C Motor Frame
A-.627 - .628 Dia. Bore

143TC-145TC Motor Frame
.877-.878 Dia. Bore

3/16 x 3/32 KW

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	8.06	350.0	1357	6.82	230.0	1729	184TC
7 1/2	6.44	233.0	1603	5.52	153.3	2026	184TC
10	5.37	175.0	1753	4.50	115.0	2198	184TC
15	4.01	116.6	1899	3.36	76.6	2366	184TC
20	3.19	87.5	1956	2.65	57.5	2412	184TC
25	2.64	70.0	1975	2.18	46.0	2404	145TC
30	2.31	58.4	1975	1.96	38.4	2451	145TC
40	1.81	43.7	1959	1.53	28.7	2406	145TC
50	1.46	35.0	1889	1.23	23.0	2298	145TC
60	1.21	29.2	1791	1.02	19.2	2172	145TC

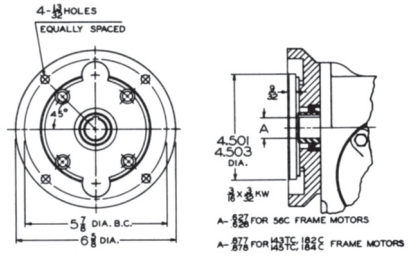
Overhung load (O.H.L.) for 30GCT is 1403 pounds, for 30GCV is 1212 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB and GCDV Series

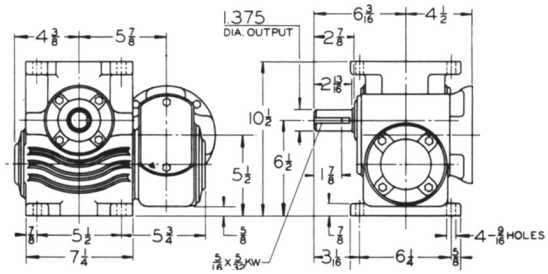
for N.E.M.A. "C" flange motors



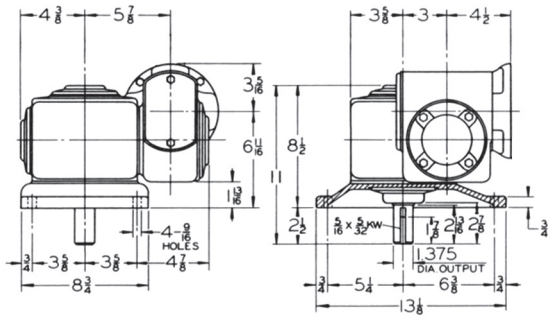
56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

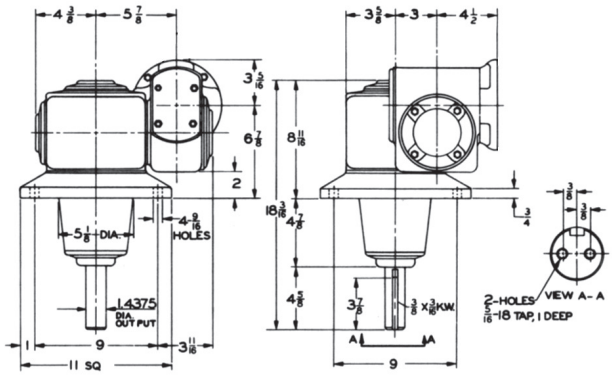
3/16 x 3/32 KW



30GCDB
Net wt. 86 lbs.
3.0" C.D.



30GCDV
Net wt. 94 lbs.
3.0" C.D.



30GCDVX
Net wt. 112 lbs.
3.0" C.D.

1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 3.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	1.61	23.33	3208	1.15	15.33	3348	145TC
100	5	20	1.26	17.50	3207	0.90	11.50	3337	145TC
125	5	25	1.02	14.00	3132	0.73	9.20	3250	145TC
150	10	15	0.93	11.67	3412	0.65	7.67	3483	56C
200	10	20	0.73	8.75	3398	0.51	5.75	3464	56C
250	10	25	0.59	7.00	3304	0.42	4.60	3363	56C
300	15	20	0.53	5.83	3462	0.37	3.83	3506	56C
400	20	20	0.42	4.38	3494	0.30	2.88	3527	56C
500	25	20	0.35	3.50	3513	0.25	2.30	3540	56C
600	30	20	0.32	2.92	3526	0.23	1.92	3548	56C
800	40	20	0.26	2.19	3542	0.18	1.44	3559	56C
1000	50	20	0.22	1.75	3552	0.16	1.15	3565	56C
1200	60	20	0.20	1.46	3558	0.14	0.96	3569	56C
1500	25	60	0.16	1.17	3044	0.11	0.77	3065	56C
1800	30	60	0.14	0.97	3054	0.10	0.64	3071	56C
2400	40	60	0.12	0.73	3067	0.08	0.48	3080	56C
3000	50	60	0.10	0.58	3074	0.07	0.38	3085	56C
3600	60	60	0.09	0.49	3079	0.06	0.32	3088	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 30GCDB is 1403 pounds, for 30GCDV is 1212 pounds at one shaft diameter from housing.

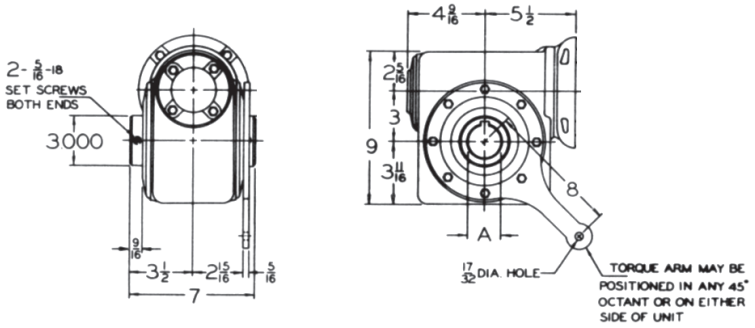
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

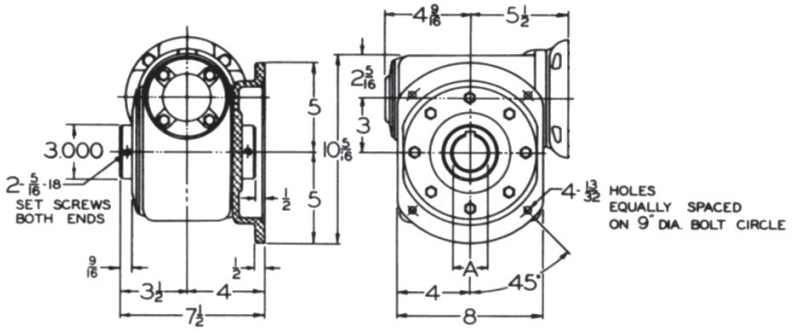
30GSA
Net wt. 50 lbs.
3.0" C.D.



A (BORE)	KEYWAY
2.000-2.001	1/2 x 1/4
1.9375-1.9385	1/2 x 1/4
1.875-1.876	1/2 x 1/4
1.750-7.751	3/8 x 3/16
1.6875-1.6885	3/8 x 3/16
1.625-1.626	3/8 x 3/16
1.500-1.501	3/8 x 3/16
1.4375-1.4385	3/8 x 3/16

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

30GSF
Net wt. 50 lbs.
3.0" C.D.



1.00 Service Factor*

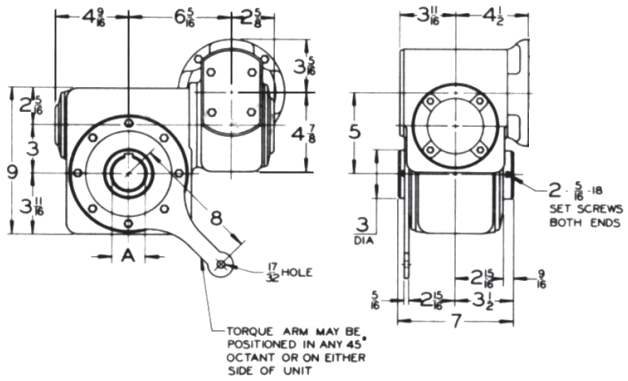
Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	8.06	350.0	1357	6.82	230.0	1729	184TC
7 1/2	6.44	233.0	1603	5.52	153.3	2026	184TC
10	5.37	175.0	1753	4.50	115.0	2198	184TC
15	4.01	116.6	1899	3.36	76.6	2366	184TC
20	3.19	87.5	1956	2.65	57.5	2412	184TC
25	2.64	70.0	1975	2.18	46.0	2404	145TC
30	2.31	58.4	1975	1.96	38.4	2451	145TC
40	1.81	43.7	1959	1.53	28.7	2406	145TC
50	1.46	35.0	1889	1.23	23.0	2298	145TC
60	1.21	29.2	1791	1.02	19.2	2172	145TC

* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

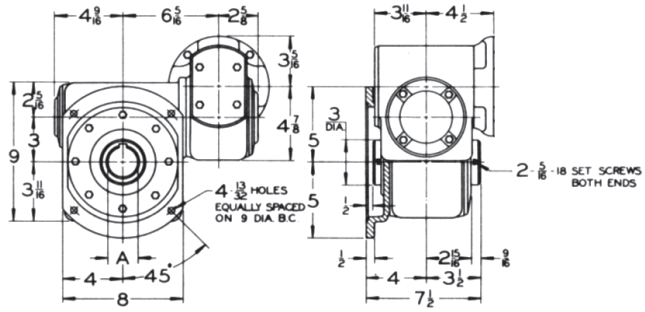
for N.E.M.A. "C" flange motors

30GDSA
Net wt. 72 lbs.
3.0" C.D.



A (BORE)	KEYWAY
1.4375 1.4385	3/8 x 3/16
1.500 1.501	3/8 x 3/16
1.625 1.626	3/8 x 3/16
1.6875 1.6885	3/8 x 3/16
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4

30GDSF
Net wt. 72 lbs.
3.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 3.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output		Input hp	Output		
				rpm	Torque In.-Lbs.		rpm	Torque In.-Lbs.	
75	5	15	1.61	23.33	3208	1.15	15.33	3348	145TC
100	5	20	1.26	17.50	3207	0.90	11.50	3337	145TC
125	5	25	1.02	14.00	3132	0.73	9.20	3250	145TC
150	10	15	0.93	11.67	3412	0.65	7.67	3483	56C
200	10	20	0.73	8.75	3398	0.51	5.75	3464	56C
250	10	25	0.59	7.00	3304	0.42	4.60	3363	56C
300	15	20	0.53	5.83	3462	0.37	3.83	3506	56C
400	20	20	0.42	4.38	3494	0.30	2.88	3527	56C
500	25	20	0.35	3.50	3513	0.25	2.30	3540	56C
600	30	20	0.32	2.92	3526	0.23	1.92	3548	56C
800	40	20	0.26	2.19	3542	0.18	1.44	3559	56C
1000	50	20	0.22	1.75	3552	0.16	1.15	3565	56C
1200	60	20	0.20	1.46	3558	0.14	0.96	3569	56C
1500	25	60	0.16	1.17	3044	0.11	0.77	3065	56C
1800	30	60	0.14	0.97	3054	0.10	0.64	3071	56C
2400	40	60	0.12	0.73	3067	0.08	0.48	3080	56C
3000	50	60	0.10	0.58	3074	0.07	0.38	3085	56C
3600	60	60	0.09	0.49	3079	0.06	0.32	3088	56C

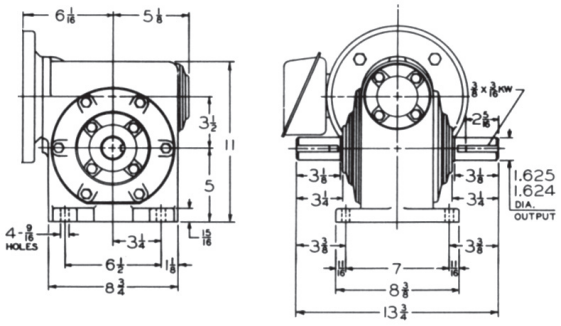
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

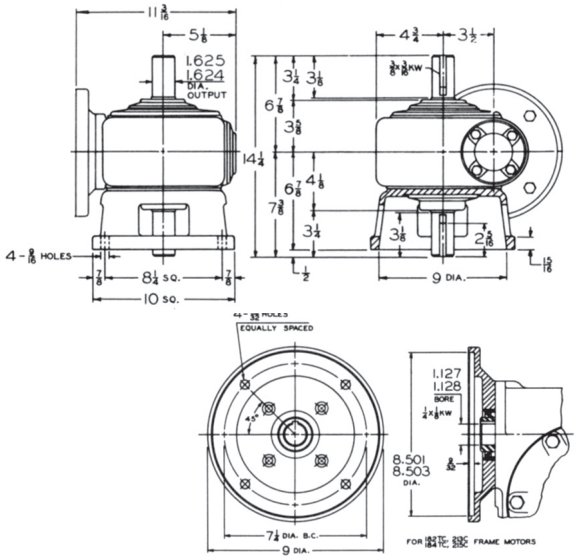
Worm Gear Reducers

GCT and GCV Series

for N.E.M.A. "C" flange motors

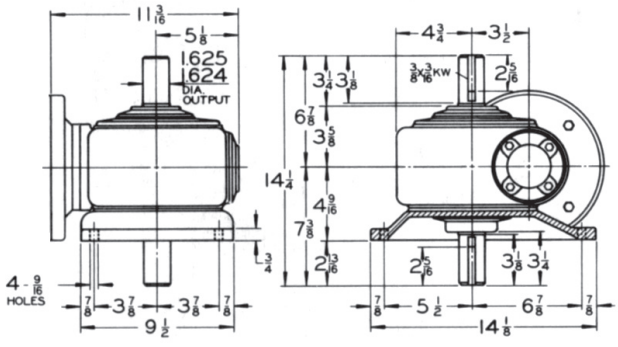
35GCT Net wt. 93 lbs. 3.5" C.D. Net wt. 102 lbs. 35GCV

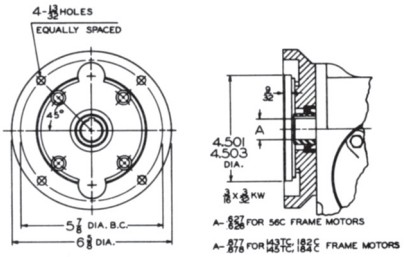




182TC & 184TC MOTOR FRAME

35GCV LOW BASE Net wt. 102 lbs. 3.5" C.D.





56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

3/16 x 3/32 KW

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	11.54	350.0	1951	9.70	230.0	2470	184TC
7 1/2	9.12	233.0	2279	7.74	153.3	2903	184TC
10	7.55	175.0	2474	6.43	115.0	3155	184TC
15	5.60	116.6	2663	4.80	76.6	3396	184TC
20	4.44	87.5	2739	3.80	57.5	3469	184TC
25	3.67	70.0	2773	3.11	46.0	3470	184TC
30	3.22	58.4	2773	2.79	38.4	3516	184TC
40	2.50	43.7	2738	2.16	28.7	3468	145TC
50	2.02	35.0	2657	1.74	23.0	3320	145TC
60	1.67	29.2	2522	1.44	19.2	3138	145TC

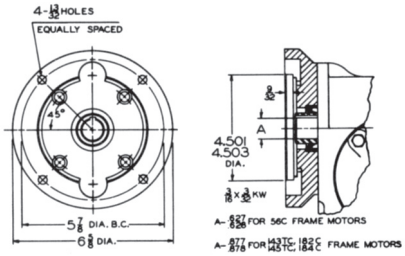
Overhung load (O.H.L.) for 35GCT is 2066 pounds, for 35GCV is 1804 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB, GCDV and GCDVX Series

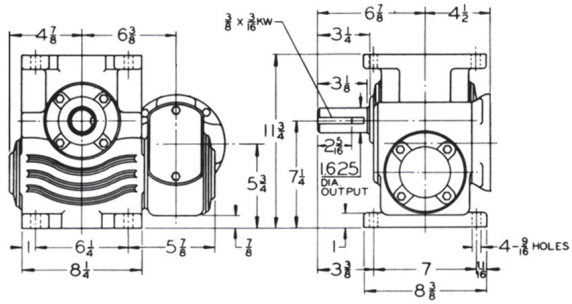
for N.E.M.A. "C" flange motors



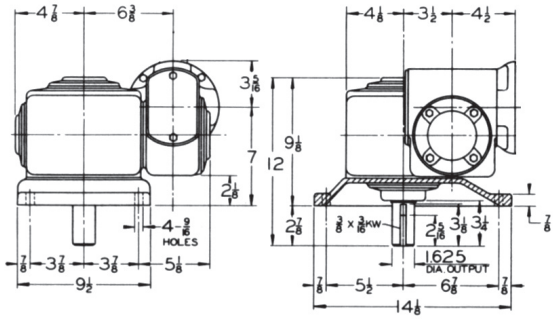
56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

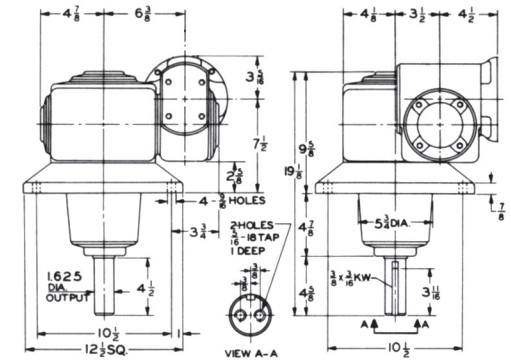
3/16 x 3/32 KW



35GCDB
Net wt. 107 lbs.
3.5" C.D.



35GCDV
Net wt. 113 lbs.
3.5" C.D.



35GCDVX
Net wt. 138 lbs.
3.5" C.D.

1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 3.5" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	2.47	23.33	4919	1.77	15.33	5187	145TC
100	5	20	1.93	17.50	4903	1.39	11.50	5147	145TC
125	5	25	1.54	14.00	4750	1.11	9.20	4963	145TC
150	10	15	1.44	11.67	5311	1.02	7.67	5446	145TC
200	10	20	1.13	8.75	5260	0.79	5.75	5384	145TC
250	10	25	0.90	7.00	5061	0.63	4.60	5169	56C
300	15	20	0.82	5.83	5381	0.58	3.83	5463	56C
400	20	20	0.65	4.38	5441	0.46	2.88	5503	56C
500	25	20	0.55	3.50	5477	0.39	2.30	5527	56C
600	30	20	0.50	2.92	5501	0.35	1.92	5543	56C
800	40	20	0.40	2.19	5532	0.29	1.44	5563	56C
1000	50	20	0.35	1.75	5550	0.25	1.15	5575	56C
1200	60	20	0.31	1.46	5562	0.22	0.96	5583	56C
1500	25	60	0.24	1.17	4671	0.17	0.77	4709	56C
1800	30	60	0.21	0.97	4691	0.15	0.64	4721	56C
2400	40	60	0.17	0.73	4712	0.13	0.48	4735	56C
3000	50	60	0.15	0.58	4726	0.11	0.38	4744	56C
3600	60	60	0.14	0.49	4735	0.10	0.32	4750	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 35GCDB is 2066 pounds, for 35GCDV is 1612 pounds at one shaft diameter from housing.

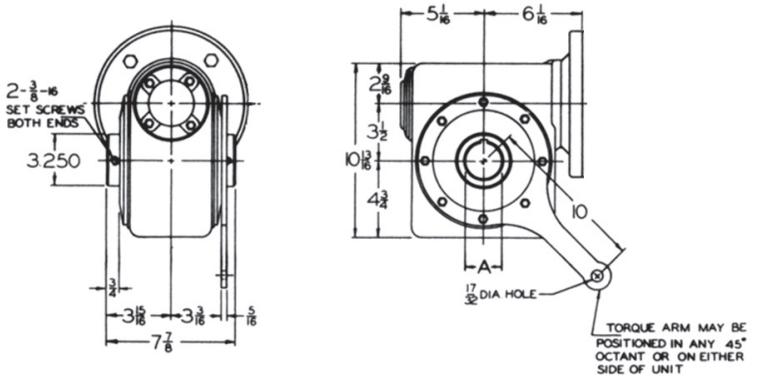
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

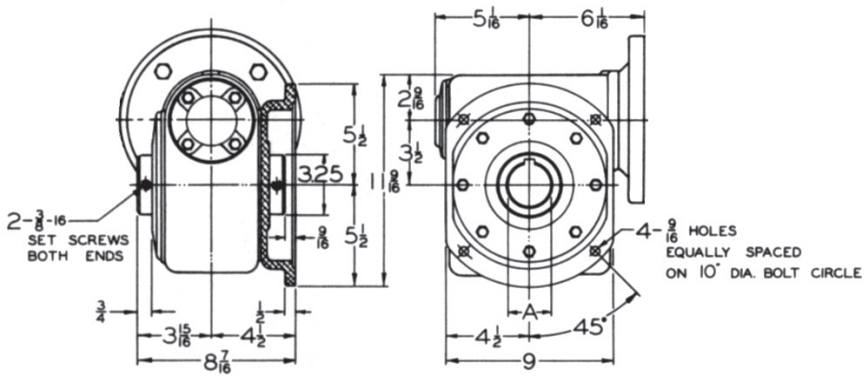
35GSA
Net wt. 65 lbs.
3.5" C.D.



A (BORE)	KEYWAY
2.1875-2.1885	1/2 x 1/4
2.000-2.001	1/2 x 1/4
1.9375-1.9385	1/2 x 1/4
1.875-1.876	1/2 x 1/4
1.750-17.51	3/8 x 3/16

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

35GSF
Net wt. 65 lbs.
3.5" C.D.



1.00 Service Factor*

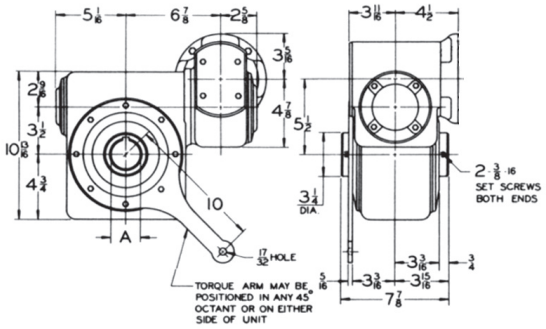
Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
5	11.54	350.0	1951	9.70	230.0	2470	184TC
7 1/2	9.12	233.0	2279	7.74	153.3	2903	184TC
10	7.55	175.0	2474	6.43	115.0	3155	184TC
15	5.60	116.6	2663	4.80	76.6	3396	184TC
20	4.44	87.5	2739	3.80	57.5	3469	184TC
25	3.67	70.0	2773	3.11	46.0	3470	184TC
30	3.22	58.4	2773	2.79	38.4	3516	184TC
40	2.50	43.7	2738	2.16	28.7	3468	145TC
50	2.02	35.0	2657	1.74	23.0	3320	145TC
60	1.67	29.2	2522	1.44	19.2	3138	145TC

* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

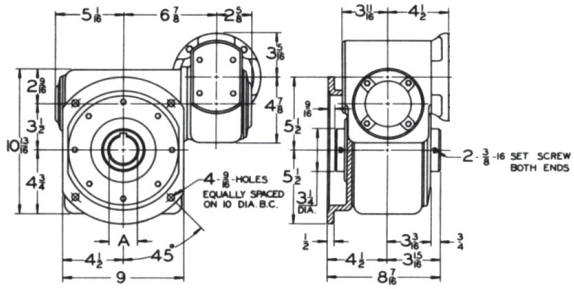
GDSA and GDSF Series

for N.E.M.A. "C" flange motors

35GDSA Net wt. 84 lbs. — 3.5" C.D. — Net wt. 84 lbs. 35GDSF



A (BORE)	KEYWAY
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4
2.1875 2.1865	1/2 x 1/4



1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 3.5" Centers Secondary

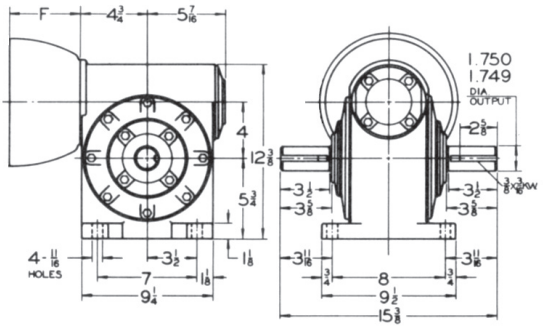
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	2.47	23.33	4919	1.77	15.33	5187	145TC
100	5	20	1.93	17.50	4903	1.39	11.50	5147	145TC
125	5	25	1.54	14.00	4750	1.11	9.20	4963	145TC
150	10	15	1.44	11.67	5311	1.02	7.67	5446	145TC
200	10	20	1.13	8.75	5260	0.79	5.75	5384	145TC
250	10	25	0.90	7.00	5061	0.63	4.60	5169	56C
300	15	20	0.82	5.83	5381	0.58	3.83	5463	56C
400	20	20	0.65	4.38	5441	0.46	2.88	5503	56C
500	25	20	0.55	3.50	5477	0.39	2.30	5527	56C
600	30	20	0.50	2.92	5501	0.35	1.92	5543	56C
800	40	20	0.40	2.19	5532	0.29	1.44	5563	56C
1000	50	20	0.35	1.75	5550	0.25	1.15	5575	56C
1200	60	20	0.31	1.46	5562	0.22	0.96	5583	56C
1500	25	60	0.24	1.17	4671	0.17	0.77	4709	56C
1800	30	60	0.21	0.97	4691	0.15	0.64	4721	56C
2400	40	60	0.17	0.73	4712	0.13	0.48	4735	56C
3000	50	60	0.15	0.58	4726	0.11	0.38	4744	56C
3600	60	60	0.14	0.49	4735	0.10	0.32	4750	56C

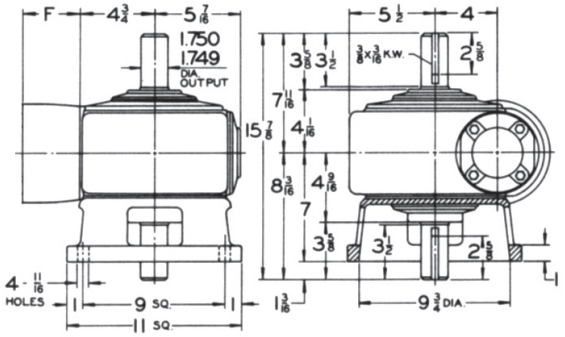
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCT and GCV Series

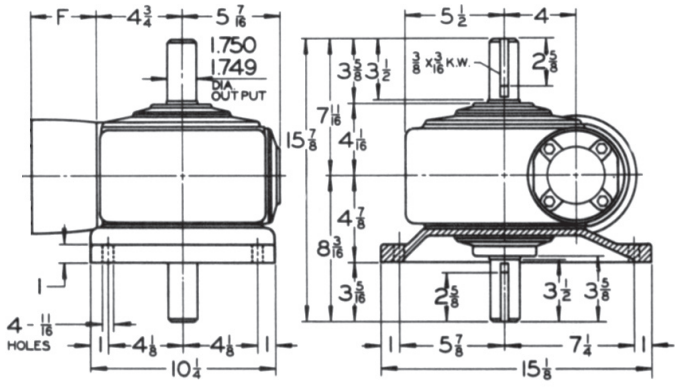
for N.E.M.A. "C" flange motors

40GCT Net wt. 118 lbs. 4.0" C.D. Net wt. 130 lbs. 40GCV





40GCV LOW BASE Net wt. 130 lbs. 4.0" C.D.



Motor mounting coupling for GCT and GCV single reducion units with 4", 5", & 6" center distances is included in the flanged reducer package.

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	15.15	350.0	2570	12.65	230.0	3233	215TC	5 1/2
10	10.03	175.0	3321	8.52	115.0	4229	215TC	5 1/2
15	7.44	116.6	3592	6.36	76.6	4580	215TC	5 1/2
20	5.89	87.5	3685	5.06	57.5	4702	184TC	5 1/2
25	4.87	70.0	3712	4.14	46.0	4695	184TC	5 1/2
30	4.22	58.4	3733	3.65	38.4	4760	184TC	5 1/2
40	3.31	43.7	3710	2.88	28.7	4705	184TC	3 5/8
50	2.63	35.0	3555	2.29	23.0	4493	145TC	3 5/8
60	2.15	29.2	3372	1.86	19.2	4226	145TC	3 5/8

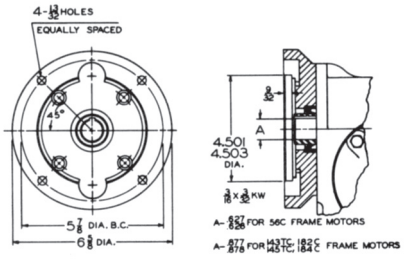
Overhung load (O.H.L.) for 40GCT is 2736 pounds, for 40GCV is 2423 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB, GCDV and GCDVX Series

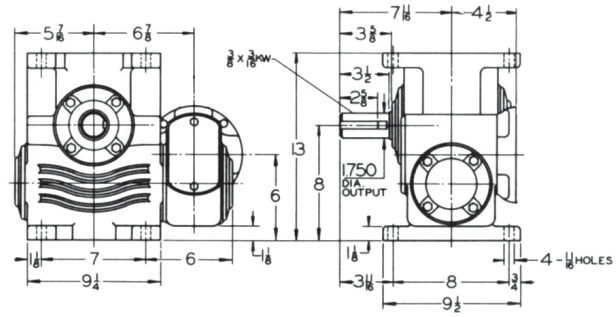
for N.E.M.A. "C" flange motors



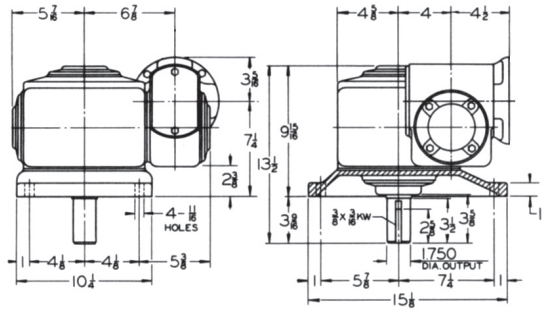
56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

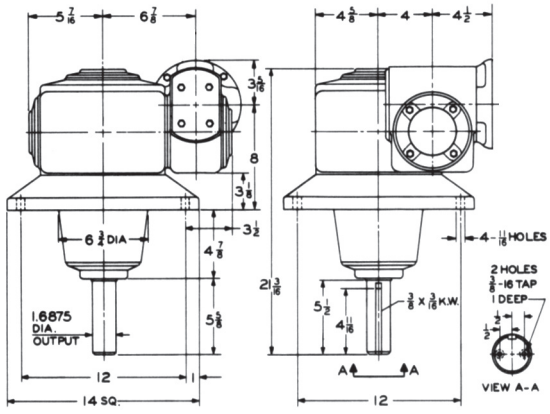
3/16 x 3/32 KW



40GCDB
Net wt. 137 lbs.
4.0" C.D.



40GCDV
Net wt. 156 lbs.
4.0" C.D.



40GCDVX
Net wt. 198 lbs.
4.0" C.D.

1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 4.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	2.92	23.33	5972	2.35	15.33	7058	145TC
100	5	20	2.62	17.50	6804	1.89	11.50	7172	145TC
125	5	25	2.10	14.00	6597	1.50	9.20	6920	145TC
150	10	15	1.91	11.67	7244	1.34	7.67	7434	145TC
200	10	20	1.53	8.75	7342	1.08	5.75	7529	145TC
250	10	25	1.22	7.00	7069	0.86	4.60	7232	145TC
300	15	20	1.12	5.83	7524	0.79	3.83	7649	145TC
400	20	20	0.89	4.38	7615	0.63	2.88	7708	56C
500	25	20	0.75	3.50	7669	0.53	2.30	7745	56C
600	30	20	0.68	2.92	7706	0.48	1.92	7769	56C
800	40	20	0.55	2.19	7752	0.39	1.44	7799	56C
1000	50	20	0.47	1.75	7797	0.34	1.15	7817	56C
1200	60	20	0.42	1.46	7797	0.30	0.96	7829	56C
1500	25	60	0.30	1.17	6388	0.22	0.77	6441	56C
1800	30	60	0.27	0.97	6414	0.20	0.64	6458	56C
2400	40	60	0.22	0.73	6446	0.16	0.48	6479	56C
3000	50	60	0.19	0.58	6465	0.14	0.38	6492	56C
3600	60	60	0.17	0.49	6478	0.13	0.32	6500	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 40GCDB is 2736 pounds, for 40GCDV is 2423 pounds, and 40GCDVX is 2174 pounds at one shaft diameter from housing.

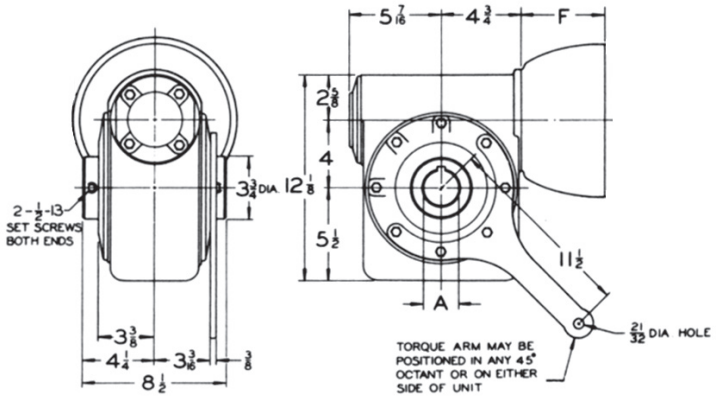
* Refer to page D-65 for other service factors. Refer to pages D-67 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

40GSA
Net wt. 104 lbs.
4.0" C.D.

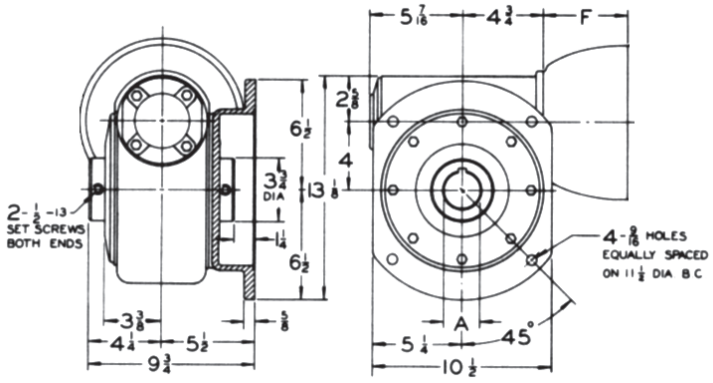


A (BORE)	KEYWAY
2.000-2.001	1/2 x 1/4
2.1875-2.1885	1/2 x 1/4
2.250-2.252	1/2 x 1/4
2.4375-2.4395	5/8 x 5/16
2.500-2.502	5/8 x 5/16

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Motor mounting coupling for GSA single reduction units with 4", 5", & 6" center distance is included in the flanged reducer package

40GSF
Net wt. 127 lbs.
4.0" C.D.



1.00 Service Factor*

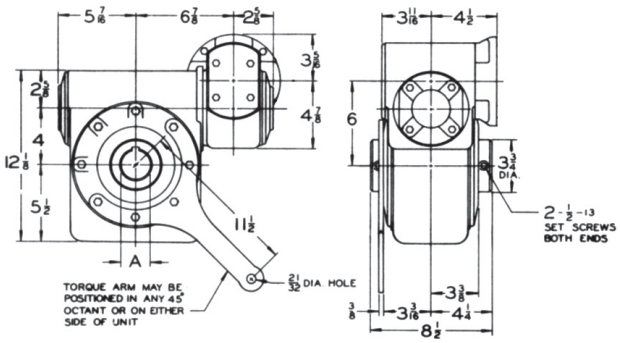
Ratio	At 1750 rpm Input			At1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	15.15	350.0	2570	12.65	230.0	3233	215TC	5 1/2
10	10.03	175.0	3321	8.52	115.0	4229	215TC	5 1/2
15	7.44	116.6	3592	6.36	76.6	4580	215TC	5 1/2
20	5.89	87.5	3685	5.06	57.5	4702	184TC	5 1/2
25	4.87	70.0	3712	4.14	46.0	4695	184TC	5 1/2
30	4.22	58.4	3733	3.65	38.4	4760	184TC	5 1/2
40	3.31	43.7	3710	2.88	28.7	4705	184TC	3 5/8
50	2.63	35.0	3555	2.29	23.0	4493	145TC	3 5/8
60	2.15	29.2	3372	1.86	19.2	4226	145TC	3 5/8

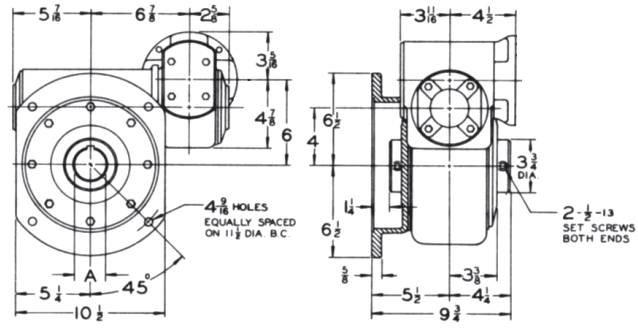
* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

40GDSA Net wt. 137 lbs. 4.0" C.D. Net wt. 160 lbs. 40GDSF





A (BORE)	KEYWAY
2.000-2.001	1/2 x 1/4
2.1875-2.1885	1/2 x 1/4
2.250-2.252	1/2 x 1/4
2.4375-2.4395	5/8 x 5/16
2.500-2.502	5/8 x 5/16

1.00 Service Factor* - Double Reduction Wormgear
2.0" Centers Primary - 4.0" Centers Secondary

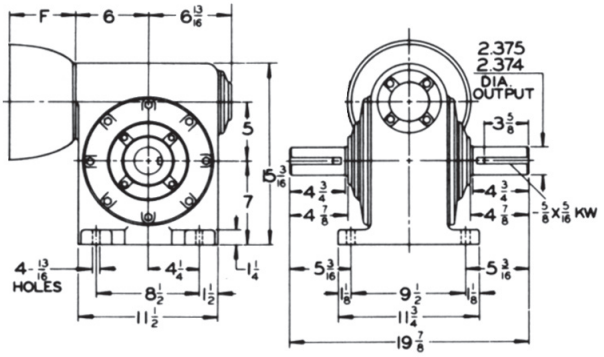
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	2.92	23.33	5972	2.35	15.33	7058	145TC
100	5	20	2.62	17.50	6804	1.89	11.50	7172	145TC
125	5	25	2.10	14.00	6597	1.50	9.20	6920	145TC
150	10	15	1.91	11.67	7244	1.34	7.67	7434	145TC
200	10	20	1.53	8.75	7342	1.08	5.75	7529	145TC
250	10	25	1.22	7.00	7069	0.86	4.60	7232	145TC
300	15	20	1.12	5.83	7524	0.79	3.83	7649	145TC
400	20	20	0.89	4.38	7615	0.63	2.88	7708	56C
500	25	20	0.75	3.50	7669	0.53	2.30	7745	56C
600	30	20	0.68	2.92	7706	0.48	1.92	7769	56C
800	40	20	0.55	2.19	7752	0.39	1.44	7799	56C
1000	50	20	0.47	1.75	7797	0.34	1.15	7817	56C
1200	60	20	0.42	1.46	7797	0.30	0.96	7829	56C
1500	25	60	0.30	1.17	6388	0.22	0.77	6441	56C
1800	30	60	0.27	0.97	6414	0.20	0.64	6458	56C
2400	40	60	0.22	0.73	6446	0.16	0.48	6479	56C
3000	50	60	0.19	0.58	6465	0.14	0.38	6492	56C
3600	60	60	0.17	0.49	6478	0.13	0.32	6500	56C

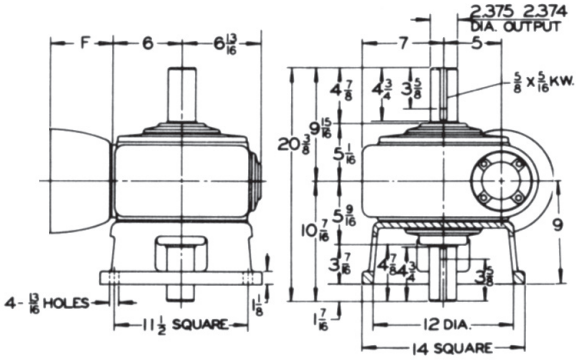
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCT and GCV Series

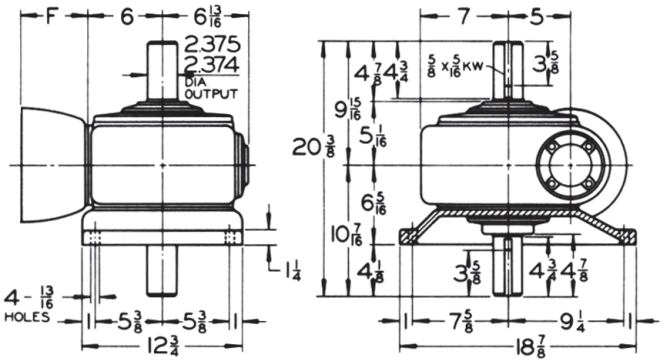
for N.E.M.A. "C" flange motors

50GCT Net wt. 208 lbs. 5.0" C.D. Net wt. 251 lbs. 50GCV





50GCV LOW BASE Net wt. 251 lbs. 5.0" C.D.



Motor mounting coupling for GCT and GCV single reduction units with 4", 5", & 6" center distances is included in the flanged reducer package.

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	25.25	350.0	4300	20.79	230.0	5344	256TC	5 1/2
10	16.64	175.0	5542	13.84	115.0	6917	256TC	5 1/2
15	12.31	116.6	5991	10.34	76.6	7512	215TC	5 1/2
20	9.61	87.5	6113	8.18	57.5	7737	215TC	5 1/2
25	7.94	70.0	6162	6.80	46.0	7823	215TC	5 1/2
30	6.92	58.4	6224	5.92	38.4	7836	184TC	5 1/2
40	5.31	43.7	6125	4.60	28.7	7771	184TC	5 1/2
50	4.27	35.0	5899	3.73	23.0	7498	184TC	5 1/2
60	3.48	29.2	5577	3.06	19.2	7094	184TC	5 1/2

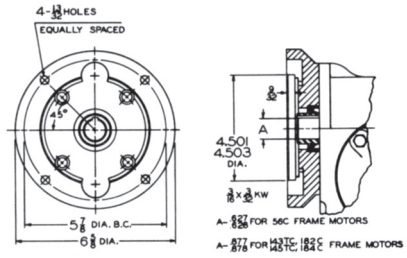
Overhung load (O.H.L.) for 50GCT is 4477 pounds, for 50GCV is 4040 pounds at one shaft diameter from housing.

* Refer to page D-63 for other service factors. Refer to pages D-66 for shaft arrangements.

† Maximum size given - see page D-65 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB, GCDV and GCDVX Series

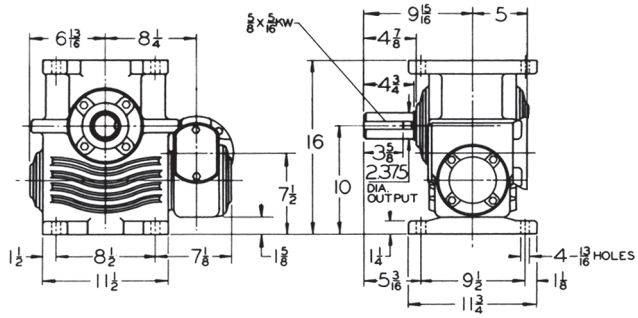
for N.E.M.A. "C" flange motors



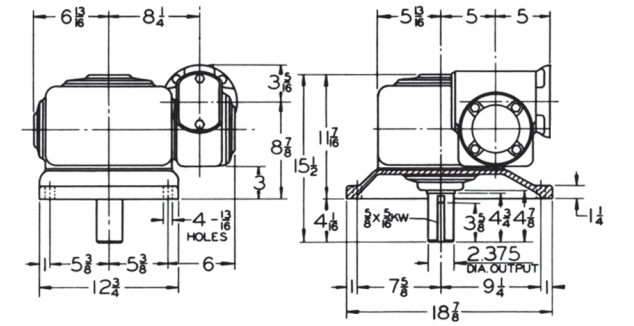
56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

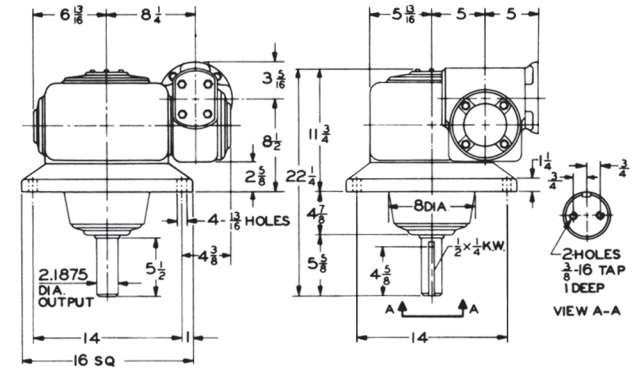
3/16 x 3/32 KW



50GCDB
Net wt. 254 lbs.
5.0" C.D.



50GCDV
Net wt. 261 lbs.
5.0" C.D.



50GCDVX
Net wt. 319 lbs.
5.0" C.D.

1.00 Service Factor* - Double Reduction Wormgear
2.5" Centers Primary - 5.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	4.76	23.33	9904	3.95	15.33	12051	145TC
100	5	20	4.47	17.50	11961	3.25	11.50	12751	145TC
125	5	25	3.73	14.00	11963	2.74	9.20	12730	145TC
150	10	15	3.18	11.67	12310	2.44	7.67	13839	145TC
200	10	20	2.64	8.75	13117	1.87	5.75	13518	145TC
250	10	25	2.21	7.00	13085	1.57	4.60	13474	145TC
300	15	20	1.93	5.83	13507	1.36	3.83	13776	145TC
400	20	20	1.55	4.38	13703	1.08	2.88	13905	145TC
500	25	20	1.29	3.50	13820	0.91	2.30	13982	145TC
600	30	20	1.15	2.92	13899	0.82	1.92	14034	145TC
800	40	20	0.94	2.19	13997	0.67	1.44	14099	56C
1000	50	20	0.80	1.75	14057	0.57	1.15	14138	56C
1200	60	20	0.70	1.46	14066	0.50	0.96	14164	56C
1500	25	60	0.55	1.17	12105	0.40	0.77	12235	56C
1800	30	60	0.50	0.97	12168	0.36	0.64	12277	56C
2400	40	60	0.41	0.73	12247	0.30	0.48	12329	56C
3000	50	60	0.35	0.58	12295	0.25	0.38	12360	56C
3600	60	60	0.31	0.49	12326	0.23	0.32	12381	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 50GCDB is 4477 pounds, for 50GCDV is 4040pounds, and 50GCDVX is 4941 pounds at one shaft diameter from housing.

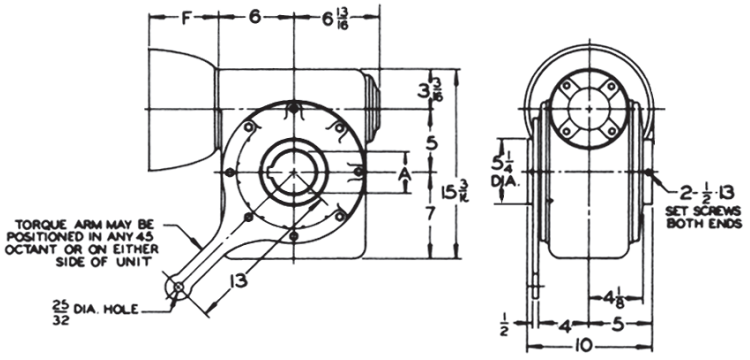
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

50GSA
Net wt. 195 lbs.
5.0" C.D.

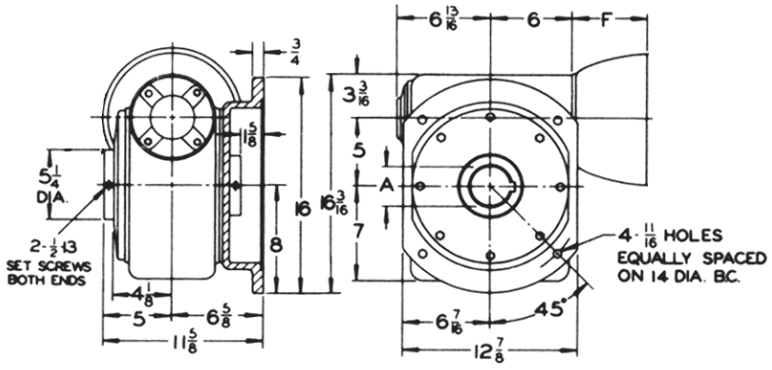


A (BORE)	KEYWAY
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16
2.6875 2.6895	5/8 x 5/16
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Motor mounting coupling for GSA single reduction units with 4", 5", & 6" center distance is included in the flanged reducer package

50GSF
Net wt. 236 lbs.
5.0" C.D.



1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	25.25	350.0	4300	20.79	230.0	5344	256TC	5 1/2
10	16.64	175.0	5542	13.84	115.0	6917	256TC	5 1/2
15	12.31	116.6	5991	10.34	76.6	7512	215TC	5 1/2
20	9.61	87.5	6113	8.18	57.5	7737	215TC	5 1/2
25	7.94	70.0	6162	6.80	46.0	7823	215TC	5 1/2
30	6.92	58.4	6224	5.92	38.4	7836	184TC	5 1/2
40	5.31	43.7	6125	4.60	28.7	7771	184TC	5 1/2
50	4.27	35.0	5899	3.73	23.0	7498	184TC	5 1/2
60	3.48	29.2	5577	3.06	19.2	7094	184TC	5 1/2

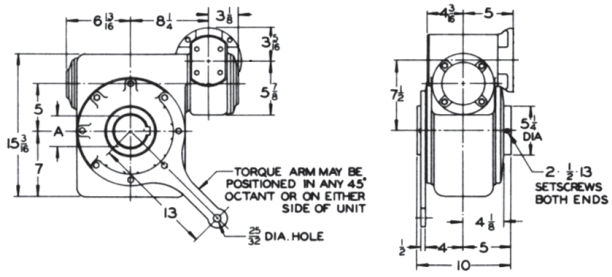
* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.

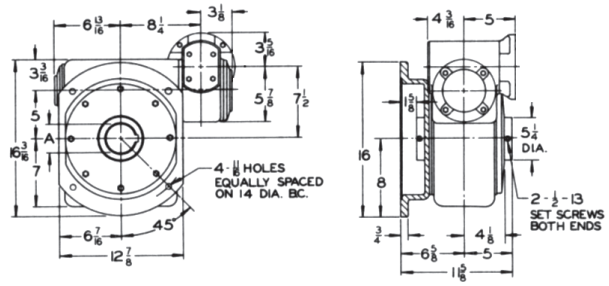
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

50GDSA Net wt. 229 lbs. 5.0" C.D. Net wt. 270 lbs. 50GDSF





A (BORE)	KEYWAY
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16
2.6875 2.6895	5/8 x 5/16
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16

1.00 Service Factor* - Double Reduction Wormgear
2.5" Centers Primary - 5.0" Centers Secondary

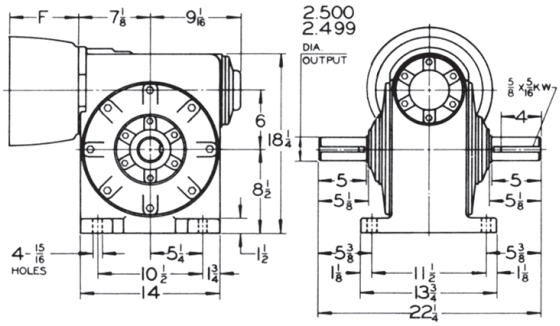
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	4.76	23.33	9904	3.95	15.33	12051	145TC
100	5	20	4.47	17.50	11961	3.25	11.50	12751	145TC
125	5	25	3.73	14.00	11963	2.74	9.20	12730	145TC
150	10	15	3.18	11.67	12310	2.44	7.67	13839	145TC
200	10	20	2.64	8.75	13117	1.87	5.75	13518	145TC
250	10	25	2.21	7.00	13085	1.57	4.60	13474	145TC
300	15	20	1.93	5.83	13507	1.36	3.83	13776	145TC
400	20	20	1.55	4.38	13703	1.08	2.88	13905	145TC
500	25	20	1.29	3.50	13820	0.91	2.30	13982	145TC
600	30	20	1.15	2.92	13899	0.82	1.92	14034	145TC
800	40	20	0.94	2.19	13997	0.67	1.44	14099	56C
1000	50	20	0.80	1.75	14057	0.57	1.15	14138	56C
1200	60	20	0.70	1.46	14066	0.50	0.96	14164	56C
1500	25	60	0.55	1.17	12105	0.40	0.77	12235	56C
1800	30	60	0.50	0.97	12168	0.36	0.64	12277	56C
2400	40	60	0.41	0.73	12247	0.30	0.48	12329	56C
3000	50	60	0.35	0.58	12295	0.25	0.38	12360	56C
3600	60	60	0.31	0.49	12326	0.23	0.32	12381	56C

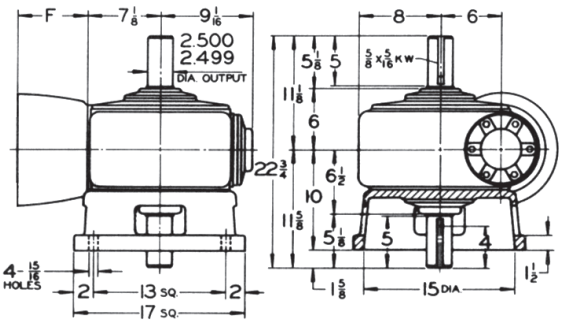
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCT and GCV Series

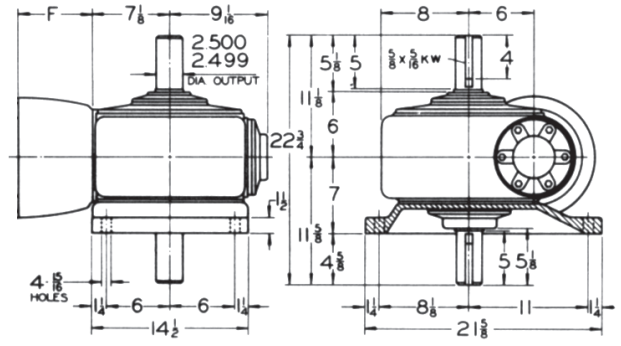
for N.E.M.A. "C" flange motors

60GCT Net wt. 346 lbs. 6.0" C.D. Net wt. 418 lbs. 60GCV





60GCV Low Base Net wt. 438 lbs. 6.0" C.D.



Motor mounting coupling for GCT and GCV single reduction units with 4", 5", and 6" center distances is included in the flanged reducer package.

1.00 Service Factor*

Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	38.15	350.0	6527	31.40	230.0	8104	286TC	6 3/4
10	25.10	175.0	8408	20.75	115.0	10437	286TC	5 7/8
15	18.54	116.6	9084	15.39	76.6	11275	256TC	5 7/8
20	14.50	87.5	9283	12.12	57.5	11560	215TC	5 7/8
25	11.72	70.0	9254	9.91	46.0	11625	215TC	5 7/8
30	10.37	58.4	9438	8.73	38.4	11728	215TC	5 7/8
40	7.96	43.7	9299	6.76	28.7	11581	215TC	5 7/8
50	6.23	35.0	8867	5.37	23.0	11173	184TC	5 7/8
60	5.12	29.2	8418	4.45	19.2	10603	184TC	5 7/8

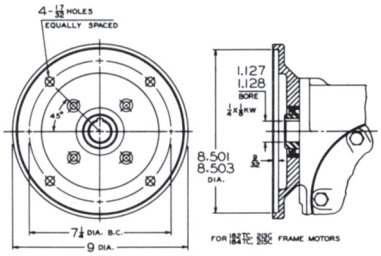
Overhung load (O.H.L.) for 60GCT is 5313 pounds, for 60GCV is 4846 pounds at one shaft diameter from housing.

* Refer to page D-65 for other service factors. Refer to pages D-66 for shaft arrangements.

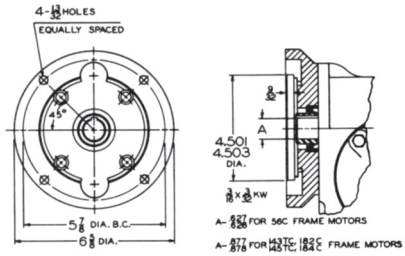
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDB, GCDV and GCDVX Series

for N.E.M.A. "C" flange motors



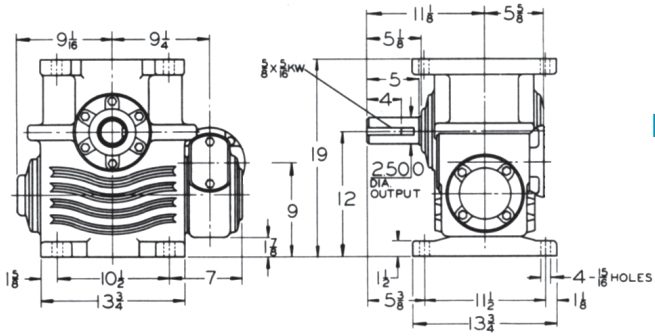
182TC & 184TC MOTOR FRAME



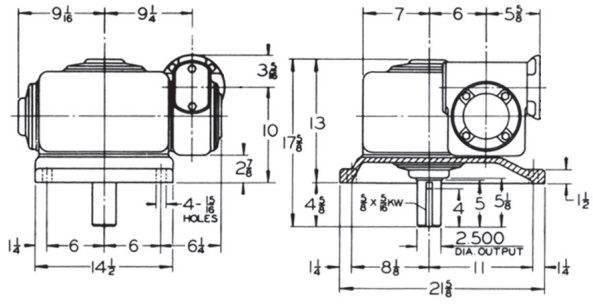
56C MOTOR FRAME
A-.627 - .628 DIA. BORE

143TC-145TC MOTOR FRAME
.877-.878 DIA. BORE

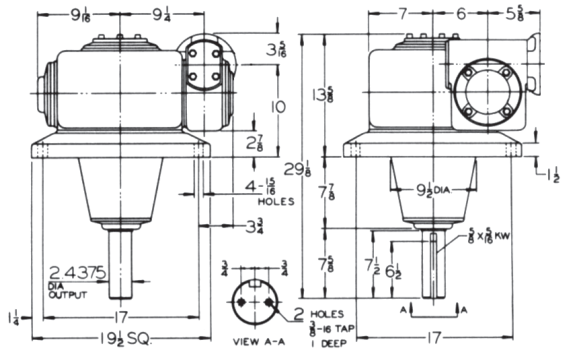
3/16 x 3/32 KW



60GCDB
Net wt. 412 lbs.
6.0" C.D.



60GCDV
Net wt. 443 lbs.
6.0" C.D.



60GCDVX
Net wt. 501 lbs.
6.0" C.D.

1.00 Service Factor* - Double Reduction Wormgear
3.0" Centers Primary - 6.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	8.06	23.33	17032	6.79	15.33	21041	184TC
100	5	20	7.11	17.50	19334	5.26	11.50	20907	184TC
125	5	25	5.60	14.00	18581	4.11	9.20	19931	184TC
150	10	15	5.37	11.67	21159	3.95	7.67	22767	184TC
200	10	20	4.30	8.75	21655	3.06	5.75	22476	184TC
250	10	25	3.35	7.00	20556	2.38	4.60	21242	184TC
300	15	20	3.16	5.83	22453	2.23	3.83	23004	184TC
400	20	20	2.52	4.38	22855	1.78	2.88	23269	145TC
500	25	20	2.12	3.50	23096	1.49	2.30	23429	145TC
600	30	20	1.89	2.92	23258	1.34	1.92	23535	145TC
800	40	20	1.53	2.19	23460	1.09	1.44	23668	145TC
1000	50	20	1.30	1.75	23581	0.93	1.15	23748	145TC
1200	60	20	1.16	1.46	23662	0.83	0.96	23801	145TC
1500	25	60	0.86	1.17	19642	0.61	0.77	19887	56C
1800	30	60	0.77	0.97	19761	0.55	0.64	19966	56C
2400	40	60	0.63	0.73	19910	0.46	0.48	20064	56C
3000	50	60	0.54	0.58	2000	0.40	0.38	20124	56C
3600	60	60	0.48	0.49	20060	0.35	0.32	20163	56C

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 60GCDB is 5313 pounds, for 60GCDV is 4846pounds, and 60GCDVX is 4681 pounds at one shaft diameter from housing.

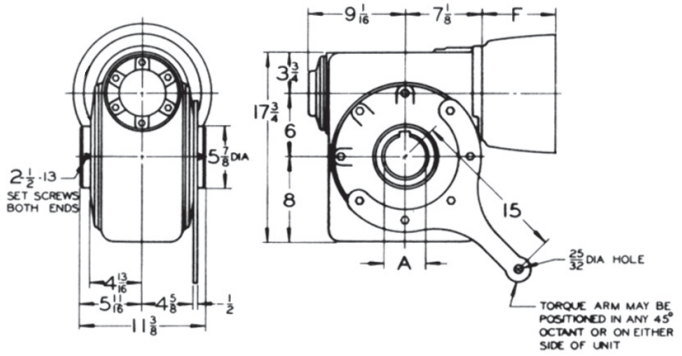
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GSA and GSF Series

for N.E.M.A. "C" flange motors

60GSA
Net wt. 320 lbs.
6.0" C.D.

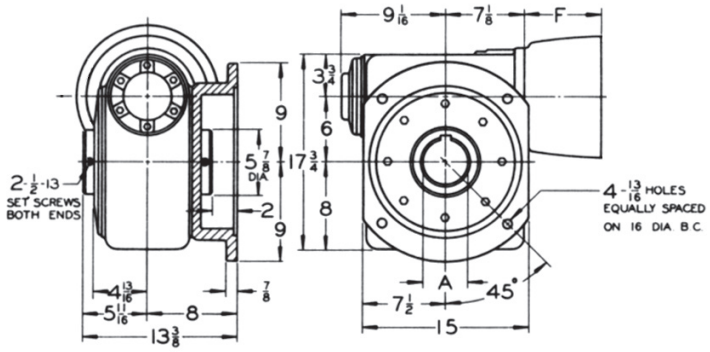


A (BORE)	KEYWAY
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16
3.9375 3.9395	1 x 1/2

Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Motor mounting coupling for GSA single reduction units with 4", 5", & 6" center distance is included in the flanged reducer package

60GSF
Net wt. 396 lbs.
6.0" C.D.



1.00 Service Factor*

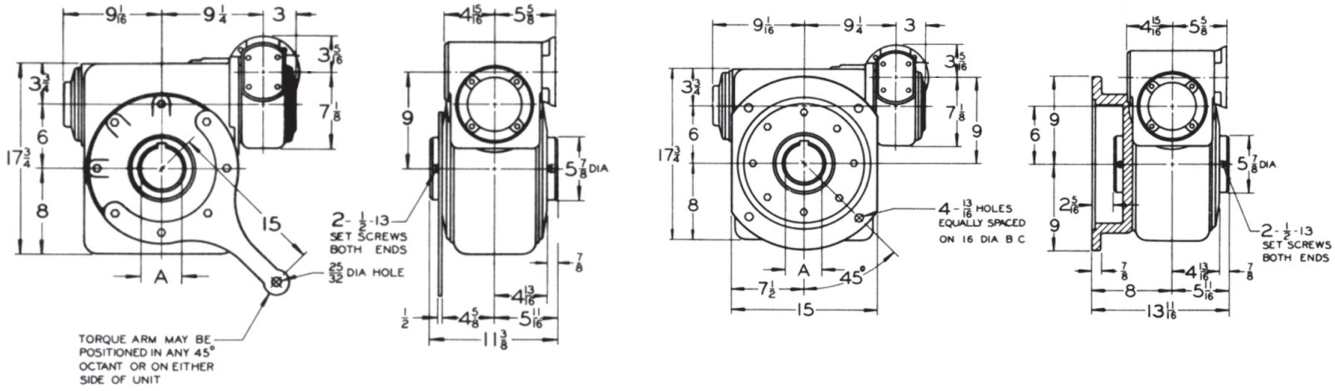
Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame No.	F
	Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
5	38.15	350.0	6527	31.40	230.0	8104	286TC	6 3/4
10	25.10	175.0	8408	20.75	115.0	10437	286TC	5 7/8
15	18.54	116.6	9084	15.39	76.6	11275	256TC	5 7/8
20	14.50	87.5	9283	12.12	57.5	11560	215TC	5 7/8
25	11.72	70.0	9254	9.91	46.0	11625	215TC	5 7/8
30	10.37	58.4	9438	8.73	38.4	11728	215TC	5 7/8
40	7.96	43.7	9299	6.76	28.7	11581	215TC	5 7/8
50	6.23	35.0	8867	5.37	23.0	11173	184TC	5 7/8
60	5.12	29.2	8418	4.45	19.2	10603	184TC	5 7/8

* Refer to page D-65 for other service factors. Refer to pages D-69 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GDSA and GDSF Series

for N.E.M.A. "C" flange motors

60GDSA Net wt. 385 lbs. 6.0" C.D. Net wt. 461 lbs. 60GDSF



A (BORE)	KEYWAY
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16
3.9375 3.9395	1 x 1/2

1.00 Service Factor* - Double Reduction Wormgear
3.0" Centers Primary - 6.0" Centers Secondary

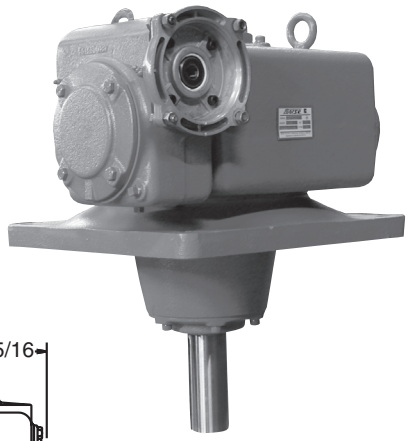
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.	
75	5	15	8.06	23.33	17032	6.79	15.33	21041	184TC
100	5	20	7.11	17.50	19334	5.26	11.50	20907	184TC
125	5	25	5.60	14.00	18581	4.11	9.20	19931	184TC
150	10	15	5.37	11.67	21159	3.95	7.67	22767	184TC
200	10	20	4.30	8.75	21655	3.06	5.75	22476	184TC
250	10	25	3.35	7.00	20556	2.38	4.60	21242	184TC
300	15	20	3.16	5.83	22453	2.23	3.83	23004	184TC
400	20	20	2.52	4.38	22855	1.78	2.88	23269	145TC
500	25	20	2.12	3.50	23096	1.49	2.30	23429	145TC
600	30	20	1.89	2.92	23258	1.34	1.92	23535	145TC
800	40	20	1.53	2.19	23460	1.09	1.44	23668	145TC
1000	50	20	1.30	1.75	23581	0.93	1.15	23748	145TC
1200	60	20	1.16	1.46	23662	0.83	0.96	23801	145TC
1500	25	60	0.86	1.17	19642	0.61	0.77	19887	56C
1800	30	60	0.77	0.97	19761	0.55	0.64	19966	56C
2400	40	60	0.63	0.73	19910	0.46	0.48	20064	56C
3000	50	60	0.54	0.58	20000	0.40	0.38	20124	56C
3600	60	60	0.48	0.49	20060	0.35	0.32	20163	56C

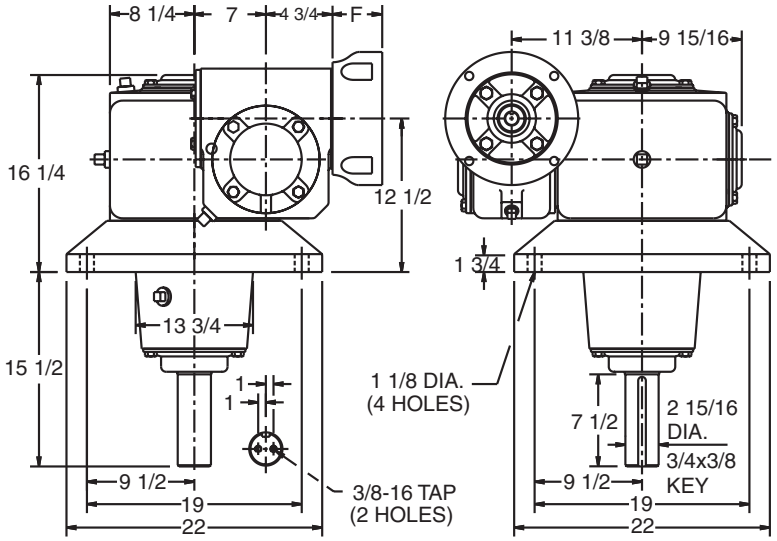
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
* Refer to page D-65 for other service factors. Refer to pages D-70 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDVX Series

for N.E.M.A. "C" flange motors

70GCDVX
Net wt. 727 lbs.
7.0" C.D.





1.00 Service Factor* - Double Reduction Wormgear
4.0" Centers Primary - 7.0" Centers Secondary

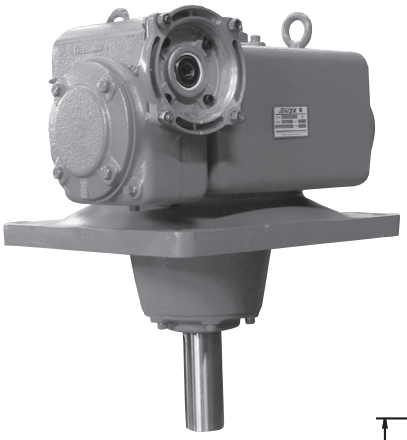
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number	F
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
75	5	15	13.17	23.33	28390	9.91	15.33	31304	215TC	5 1/2
100	5	20	10.25	17.50	28472	7.69	11.50	31155	215TC	5 1/2
125	5	25	8.42	14.00	28272	6.31	9.20	30795	215TC	5 1/2
150	10	15	8.13	11.67	32737	5.79	7.67	34314	215TC	5 1/2
200	10	20	6.29	8.75	32548	4.48	5.75	33890	184TC	3 5/8
250	10	25	5.15	7.00	32010	3.68	4.60	33346	184TC	3 5/8
300	15	20	4.61	5.83	33850	3.56	3.83	34811	184TC	3 5/8
400	20	20	3.69	4.38	34550	2.61	2.88	35274	184TC	3 5/8
500	25	20	3.1	3.50	34972	2.18	2.30	35552	184TC	3 5/8
600	30	20	2.73	2.92	35254	1.93	1.92	35738	145TC	3 5/8
800	40	20	2.22	2.19	35607	1.58	1.44	35970	145TC	3 5/8
1000	50	20	1.87	1.75	35819	1.34	1.15	36110	145TC	3 5/8
1200	60	20	1.64	1.46	35960	1.17	0.96	36203	145TC	3 5/8
1500	25	60	1.23	1.17	29743	0.88	0.77	30172	145TC	3 5/8
1800	30	60	1.10	0.97	29952	0.79	0.64	30309	145TC	3 5/8
2400	40	60	0.9	0.73	30212	0.65	0.48	30481	56C	3 5/8
3000	50	60	0.77	0.58	30369	0.56	0.38	30584	56C	3 5/8
3600	60	60	0.68	0.49	30473	0.49	0.32	30653	56C	3 5/8

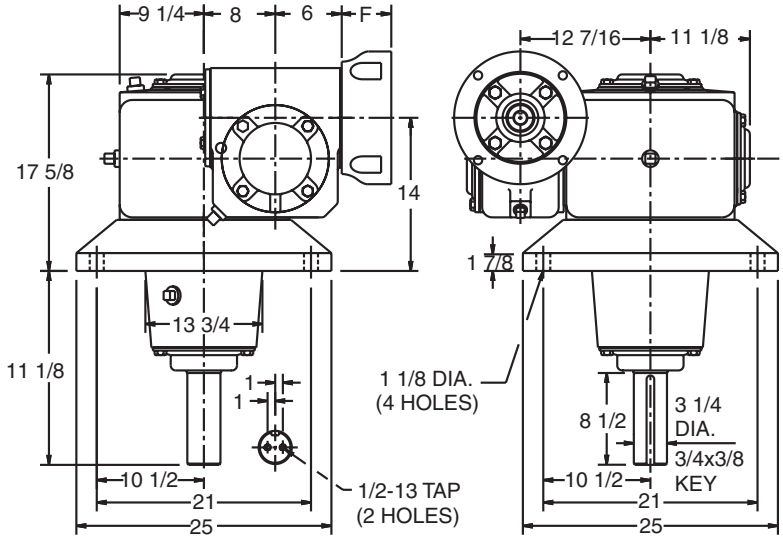
NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 70GCDVX is 3791 pounds at the end of the Output Shaft Extension.
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDVX Series

for N.E.M.A. "C" flange motors

80GCDVX
Net wt. 995 lbs.
8.0" C.D.





1.00 Service Factor* - Double Reduction Wormgear
5.0" Centers Primary - 8.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number	F
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
75	5	15	18.52	23.33	40142	14.28	15.33	45374	254TC	5 1/2
100	5	20	14.6	17.50	10722	11.23	11.50	45637	215TC	5 1/2
125	5	25	12.12	14.00	40758	9.31	9.20	45411	215TC	5 1/2
150	10	15	11.85	11.67	47895	8.55	7.67	50780	215TC	5 1/2
200	10	20	9.31	8.75	48020	6 5/7	5.75	50715	213TC	5 1/2
250	10	25	7.73	7.00	47738	5 3/5	4.60	50302	213TC	5 1/2
300	15	20	6.89	5.83	50639	4.92	3.83	52451	184TC	5 1/2
400	20	20	5.52	4.38	51959	3.92	2.88	53324	184TC	5 1/2
500	25	20	4.66	3.50	52754	3.3	2.30	53849	182TC	5 1/2
600	30	20	4.12	2.92	53286	2.92	1.92	54199	182TC	5 1/2
800	40	20	3.31	2.19	53951	2.35	1.44	54638	182TC	5 1/2
1000	50	20	2.82	1.75	54352	2.01	1.15	54902	145TC	3 3/8
1200	60	20	2.48	1.46	54619	1.77	0.96	55077	145TC	3 3/8
1500	25	60	1.96	1.17	46029	1 3/7	0.77	46892	145TC	3 3/8
1800	30	60	1.75	0.97	46448	1 1/4	0.64	47169	145TC	3 3/8
2400	40	60	1.42	0.73	46973	1.03	0.48	47515	143TC	3 3/8
3000	50	60	1.23	0.58	47289	0.89	0.38	47722	143TC	3 3/8
3600	60	60	1.09	0.49	47499	0.79	0.32	47861	143TC	3 3/8

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 80GCDVX is 4320 pounds at the end of the Output Shaft Extension.

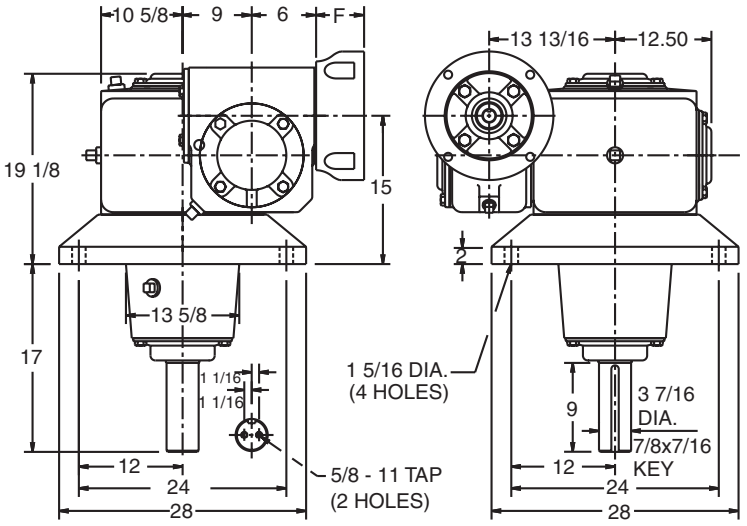
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDVX Series

for N.E.M.A. "C" flange motors

90GCDVX
Net wt. 1265 lbs.
9.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear
5.0" Centers Primary - 9.0" Centers Secondary

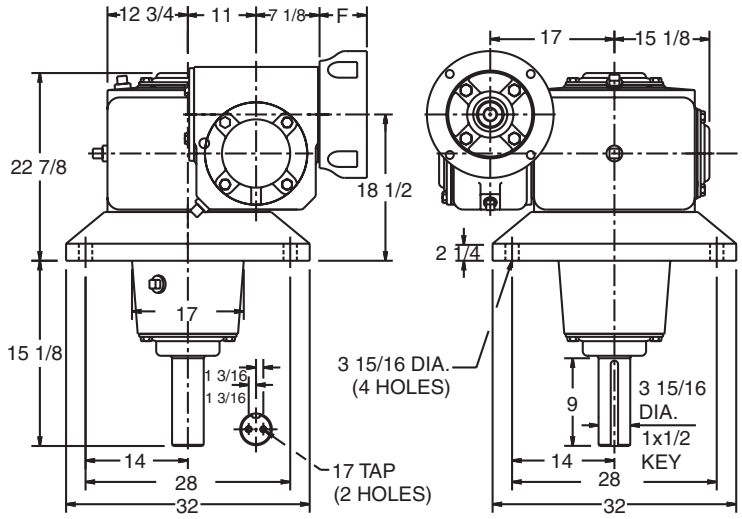
Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA® † Motor Frame Number	F
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
75	5	15	24.32	23.33	53180	18.99	15.33	60965	256TC	5 1/2
100	5	20	19.04	17.50	53790	14.77	11.50	60941	256TC	5 1/2
125	5	25	15.66	14.00	53671	12.13	9.20	60366	256TC	5 1/2
150	10	15	15.84	11.67	64709	11.51	7.67	69081	356TC	5 1/2
200	10	20	12.30	8.75	64384	8.91	5.75	68337	215TC	5 1/2
250	10	25	10.09	7.00	63599	7.31	4.60	67271	215TC	5 1/2
300	15	20	9.14	5.83	68226	6 1/2	3.83	70886	215TC	5 1/2
400	20	20	7.33	4.38	70164	5.2	2.88	72168	184TC	5 1/2
500	25	20	6.19	3.50	71331	4.39	2.30	72939	184TC	5 1/2
600	30	20	5.46	2.92	72113	3.87	1.92	73454	184TC	5 1/2
800	40	20	4.40	2.19	73090	3.13	1.44	74098	184TC	5 1/2
1000	50	20	3.75	1.75	73678	2.68	1.15	74486	184TC	5 1/2
1200	60	20	3.30	1.46	74070	2.36	0.96	74744	184TC	5 1/2
1500	25	60	2.70	1.17	63974	1.96	0.77	65349	145TC	3 3/8
1800	30	60	2.41	0.97	64642	1.75	0.64	65789	145TC	3 3/8
2400	40	60	1.97	0.73	65478	1.43	0.48	66341	145TC	3 3/8
3000	50	60	1.70	0.58	65981	1.24	0.38	66672	145TC	3 3/8
3600	60	60	1.51	0.49	66316	1.10	0.32	66893	145TC	3 3/8

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 90GCDVX is 4850 pounds at the end of the output shaft extension.
* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.
† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

GCDVX Series

for N.E.M.A. "C" flange motors

110GCDVX
Net wt. 2120 lbs.
11.0" C.D.



1.00 Service Factor* - Double Reduction Wormgear
6.0" Centers Primary - 11.0" Centers Secondary

Ratio	Primary Ratio	Secondary Ratio	At 1750 rpm Input			At 1150 rpm Input			NEMA®† Motor Frame Number	F
			Input hp	Output rpm	Output Torque In.-Lbs.	Input hp	Output rpm	Output Torque In.-Lbs.		
75	5	15	38.15	23.33	84103	31.4	15.33	101920	286TC	6 3/4
100	5	20	30.86	17.50	87696	24.95	11.50	103773	286TC	6 3/4
125	5	25	25.19	14.00	87512	20.08	9.20	101737	286TC	6 3/4
150	10	15	25.1	11.67	103641	20.06	7.67	120830	286TC	6 3/4
200	10	20	21.21	8.75	111865	15.81	5.75	121167	256TC	5 7/8
250	10	25	16.95	7.00	108720	12.54	4.60	116769	256TC	5 7/8
300	15	20	16.17	5.83	120898	11.71	3.83	127362	256TC	5 7/8
400	20	20	13.08	4.38	125605	9.4	2.88	130482	215TC	5 7/8
500	25	20	11.02	3.50	128446	7.88	2.30	132361	215TC	5 7/8
600	30	20	9.83	2.92	130347	7	1.92	133617	215TC	5 7/8
800	40	20	7.95	2.19	132729	5 5/7	1.44	135190	215TC	5 7/8
1000	50	20	6.23	1.75	124514	4.79	1.15	136136	184TC	5 7/8
1200	60	20	5.12	1.46	116738	4.25	0.96	136766	184TC	5 7/8
1500	25	60	4.72	1.17	113770	3.45	0.77	116980	184TC	5 7/8
1800	30	60	4.25	0.97	115329	3.12	0.64	118009	184TC	5 7/8
2400	40	60	3.5	0.73	117282	2.55	0.48	119298	184TC	5 7/8
3000	50	60	2.98	0.58	118457	2.18	0.38	120073	145TC	4
3600	60	60	2.65	0.49	119241	1.95	0.32	120589	145TC	4

NOTICE: Regardless of the motor size used, exceeding the output torque rating may result in damage to the gearbox.
Overhung load (O.H.L.) for 110GCDVX is 8500 pounds at the end of the output shaft extension.

* Refer to page D-65 for other service factors. Refer to pages D-68 for shaft arrangements.

† Maximum size given - see page D-63 for available motor sizes. Specify the actual NEMA motor frame number that will be used.

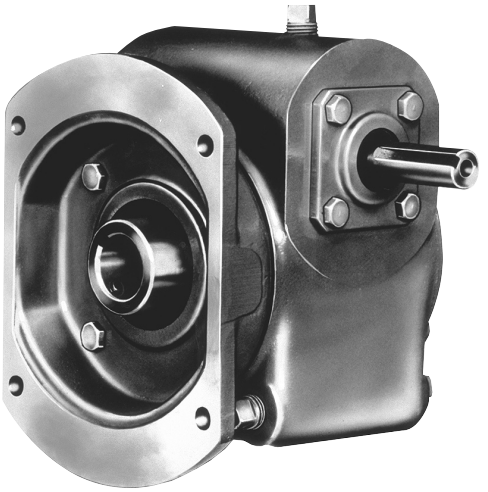
NET CONTENT
4/5 BU.

Morse®

POWERGEAR®

S Series Worm Gear Speed Reducers

The SA and SF models are single reduction worm gear units with hollow output shafts and are customarily mounted directly on the driven shaft. The SA units have a torque-arm for support, whereas the SF units have a mounting flange for more rigid support on long driven shafts. Both of these units are available with "C" Flange motor mounts for attaching NEMA "C" Flange, end-mounted motors and are called the GSA and GSF models.



- Shaft input/hollow output reducers available in four configurations:
  - SA - Shaft mounted with torque arm.
  - SF - Flange mounted.
  - DSA - Double reduction shaft mounted with torque arm.
  - DSF - Double reduction flange mounted.
- Center distance range: 1.75" through 6.00".
- Output bores from 3/4" through 3 15/16".

Reducer Selection Procedure for PoweRgear® S Series

1. Determine Service Factor
From service factor tables on pages D-115 and D-116 determine service factor for the application.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of driver}}{\text{rpm of driven}}$$

When over-all drive ratio is not one of the stock speed reducer ratios shown in tables on page D-121 through D-128, a chain, belt, or gear drive with further reduction for either the input or output side will be necessary.

3. Determine Equivalent Horsepower or Normal Torque

A. HP Method:

Equivalent hp = Actual Motor hp × Service Factor (Step # 1)

B. Torque Method:

Normal Torque = Actual Torque × Service Factor (Step # 1)

4. Determine the Size of Speed Reducer Required

A. HP Method:

Refer to pages D-121 through D-128 and select a speed reducer having a mechanical input horsepower equal to or slightly greater than the equivalent hp calculated in Step No. 3 above.

B. Torque Method:

Refer to pages D-121 through D-128 and select a speed reducer having a mechanical output torque rating equal to or slightly greater than the normal torque calculated in Step No. 3 above. If the required input and output speeds are not listed in these tables, the ratings can be determined by straight line interpolation. When the input speed is less than 100 rpm, ratings for 100 rpm must be used.

5. Determine the Motor Horsepower

Use the following equation when motor hp is not known:

$$\text{Motor Horsepower} = \frac{\text{Actual Torque} \times \text{Input hp}}{\text{Output Torque}}$$

6. Check the Overhung Load
Calculate the overhung load for drives to be mounted directly on the reducer shafts by following instructions on page D-114. Check this and any existing thrust loads against the load values shown on pages D-121 through D-128, and if the calculated load is greater than the values in the table, select a larger speed reducer.

Note: Refer combined overhung and thrust loads to the Application Engineering (1 800 626 2093) Department.

Example No. 1 - Horsepower Method

Select a worm gear speed reducer for a dough mixer in a bakery. The speed reducer will be driven by a 1.0 hp, 1750 rpm motor, directly coupled to the reducer input speed. The hollow reducer output quill will be directly mounted onto the 1.25" mixer shaft. The mixer will operate 8 - 10 hours daily and the shaft speed is 58 rpm. The reducer also requires a torque arm.

1. Determine the Service Factor
From the table on page D-115, note that the service factor for a dough mixer (Food Industry) operating 3 - 10 hours per day is 1.25.

2. Determine Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{58} = 30.17$$

Since there is not an auxiliary input or output drive required, the reducer ratio needed is 30:1.

3. Determine Equivalent Horsepower

$$\text{Equivalent hp} = \text{Actual Motor hp} \times \text{S F} = 1.0 \times 1.25 = 1.25 \text{ hp}$$

4. Determine the Size of Speed Reducer Required
From page D-123 under "1750 rpm Driver -30:1 Ratio - 175 rpm Output" and under "Input hp Mechanical" find the rating equal to or greater than the 1.25 equivalent hp calculated in Step No. 3. Note that a 25 reducer has mechanical rating of 1.37 hp. The correct part numbers required are:

Reducer: **25SA, 30, L, 1.25 Bore**

5. Determine the Motor Horsepower
The motor horsepower is already known to be 1.0 hp.

6. Check Overhung Load
The unit will be coupling connected on the output shaft. Overhung load does not need to be calculated. There is not any thrust on the output shaft. There is neither thrust nor overhung load on the input shaft because it is directly coupled with a motor. Therefore, the reducer selected is the proper size.

Example No. 2 - Torque Method

Select a worm gear speed reducer for a belt conveyor (general purpose), not uniformly fed. The speed reducer will be driven by a 1750 rpm electric motor directly connected by a coupling, with a 1.23:1 ratio chain drive from the reducer to the head shaft of the conveyor. A 5.032 pitch diameter drive sprocket and reducer are mounted on a 2" jack shaft. The conveyor will operate 10 hours per day, and the head shaft speed is 140 rpm. The reducer will also require a torque arm withe the worm on top. Conveyor calculations indicate that 1710 inch pounds of torque is needed at the conveyor head shaft.

1. Determine the Service Factor
From the table on page D-115, note that the service factor for a belt conveyor (general purpose) operating 3 - 10 hours per day is 1.25.

2. Determine the Overall Drive Ratio

$$\text{Overall Drive Ratio} = \frac{\text{rpm of Driver}}{\text{rpm of Driven}} = \frac{1750}{140} = 12.5 : 1$$

$$\text{Speed Reducer Ratio} = \frac{\text{Overall Drive Ratio}}{\text{Chain Drive Ratio}} = \frac{12.5}{1.23} = 10.16 : 1$$

3. Determine the Normal Torque
The normal torque required for reducer selection is the actual torque required at the reducer output shaft. Therefore, we must convert the 1710 inch pounds of actual torque at the conveyor head shaft to the actual required torque at the reducer output shaft, and then multiply by the service factor.

Actual Torque at Reducer Output Shaft =

$$\frac{\text{Actual Torque At Conveyor Head Shaft}}{\text{Chain Drive Ratio}} = \frac{1710}{1.23} = 1{,}390 \text{ In/lbs.}$$

Normal Torque =

Actual Reducer Output Torque × S F =

1,390 × 1.25 = 1738 in/lbs.

4. Determine Size of Speed Reducer Required
From page D-124 under "1750 rpm Driver - 10 to 1 ratio - 175 rpm Driven" and under "Mechanical Output Torque" find the rating equal to or greater than the 1738 inch-pounds normal torque calculated in step no. 3. Note that a 3.5 inch center distance reducer has a mechanical rating of 2474 inch-pounds.

The correct part number required is:

Reducer:
30SA 10-L, 2.00 Bore, Position 1, Torque Arm A

5. Determine the Motor Horsepower

$$\text{Motor Horsepower} = \frac{\text{Actual Torque x Input hp}}{\text{Output Torque}}$$

$$= \frac{1{,}390 \times 5.25}{1743}$$

$$= 4.19$$

Use a 5 horsepower motor.

6. Check Overhung

$$\text{OL (See below)} = \frac{2 \times T \times K}{\text{P.D. of Sprocket}}$$

$$= \frac{2 \times 1390 \times 1.0}{5.032}$$

$$= 552.50 \text{ Pounds}$$

From rating table on page D-125, note the maximum overhung load for the output shaft of the 35SA reducer is 2066 lbs., which is greater than the calculated load on shaft of 553 lbs. There is no thrust on the output shaft. There is neither thrust or overhung load on the input shaft because it is direct couple connected. The reducer selection size is ample.

Overhung Loads

When a speed reducer is driven by any belt, chain or gear drive, or when the speed reducer drives a driven unit through a belt, chain or gear drive, overhung loads must not exceed those shown on pages D-121 through D-128. Use the following formula to calculate the overhung loads:

$$OL = \frac{2TK}{D}$$

where
- OL = Overhung Load
- T = Actual Shaft Torque (inch-pounds)
- D = P. D. of Sprocket, Sheave, Pulley or Gear
- K = 1.0 for Chain Drive
- = 1.25 for Gear Drive
- = 1.25 for Gearbelt Drive
- = 1.50 for V-Belt Drive
- = 2.50 for Flat Belt Drive

No overhung loads are encountered when the speed reducer is coupling connected to the driver and/or driven machine. However, care should be taken in aligning the shafts to avoid pre-loading bearings in misalignment.

Service Factors for Enclosed Worm Gear Applications

(Service factors shown apply only if electric or hydraulic motors are used. For single or multi-cylinder engines, see conversion table on next page for conversion.)

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)			
Pure Liquids	–	1.00	1.25
Liquids and Solids	1.00	1.25	1.50
Liquids-Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	–
Lob	1.00	1.25	1.50
Vane	–	1.00	1.25
BREWING AND DISTILLING			
Bottling Machinery	–	1.00	1.25
Brew Kettles, Continuous Duty	–	1.00	1.25
Cookers, Continuous Duty	–	1.00	1.25
Mash Tubs, Continuous Duty	–	1.00	1.25
Scale Hopper, Frequent Starts	1.00	1.25	1.50
CAN FILLING MACHINES	–	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	–	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	–	1.00	1.25
Lob	1.00	1.25	1.50
Reciprocating, Multi-Cylinder	1.00	1.25	1.50
Reciprocating, Single-Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly Loaded or Fed	–	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engr.		
Boom Hoist	Refer to Application Engr.		
Trolley Drive	Refer to Application Engr.		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engr.		
Mill Duty			
Main Hoist	Refer to Application Engr.		
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	Refer to Application Engr.		
Bridge and Trolley Travel	Refer to Application Engr.		
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	–	1.00	1.25
Escalators	Refer to Application Engr.		
Freight	Refer to Application Engr.		
Gravity Discharge	–	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
FANS			
Centrifugal	–	1.00	1.25
Cooling Towers	Refer to Application Engr.		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	–	1.25	1.50
Belt	1.00	1.25	1.50
Disc	–	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	–	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS AND EXCITERS	–	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers			
-Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls-Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoists	1.50	1.50	1.50
Rolls-Live-off Brg.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engr.		
METAL MILLS			
Draw Bench Carriage and Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers(Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50

Service Factors for Enclosed Worm Gear Applications

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
MILLS, ROTARY TYPE			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50
PAPER MILLS			
Agitator(Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barking Drums	1.75	1.75	1.75
Barkers - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log(Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses- Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps- Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickener			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
PLASTICS INDUSTRY - PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	–	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or More Cylinders	1.00	1.25	1.50
Double Acting, 2 or More Cylinders	1.00	1.25	1.50
Rotary			
- Gear Type	–	1.00	1.50
- Lobe	–	1.00	1.25
- Vane	–	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Roll: 1 Corrugated Roll	1.75	1.75	1.75

APPLICATION	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
RUBBER INDUSTRY (Cont'd.)			
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	–	1.00	1.25
Chemical Feeders	–	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow Or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickener	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	–	1.00	1.25
Rotary - Stone Or Gravel	1.00	1.25	1.50
Traveling Water Intake	–	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-Friction Bearings Only.

Note: A Service Factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Service Factors for Electric and Hydraulic Motors

(For Service Factors For Single Or Multi-Cylinder Engines, Consult Conversion Table below)

Duration of Service (Hours Per Day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	–	–	1.0	1.25
Less Than 3 Hours	1.0	1.0	1.25	1.50
3 - 10 Hours	1.0	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

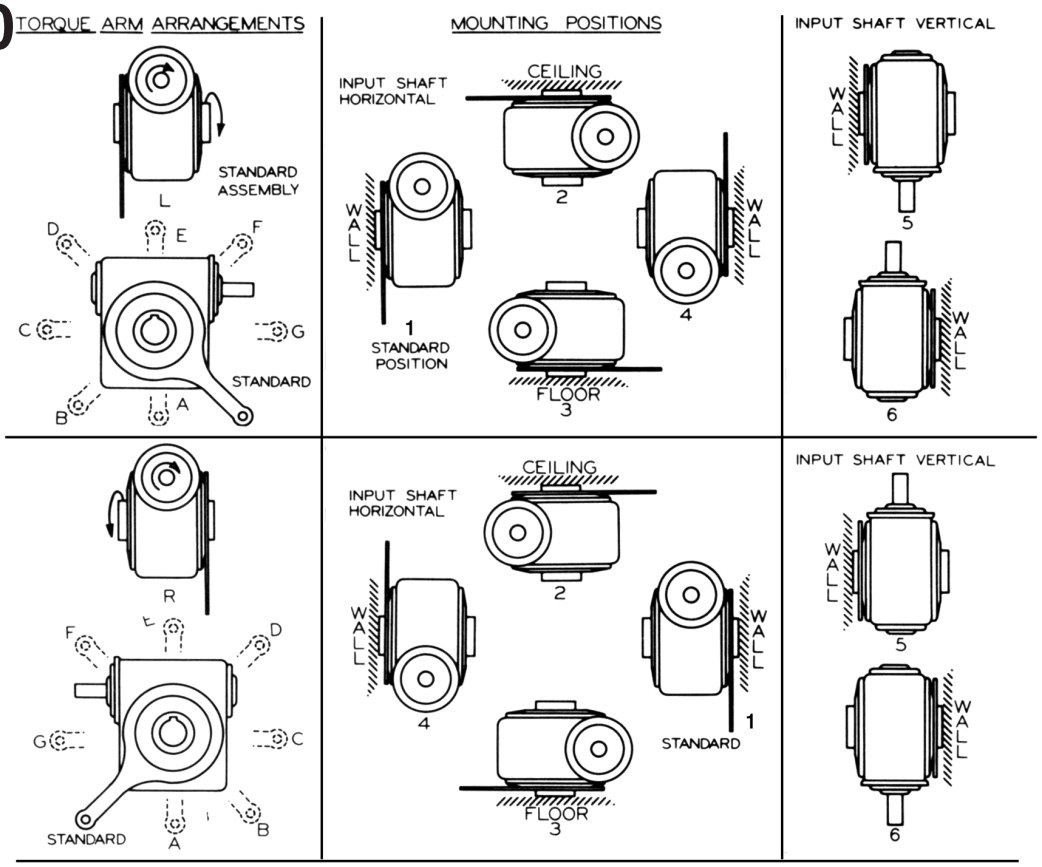
Conversion Table for Single or Multi-Cylinder Engines to find Equivalent Single or Multi-Cylinder Service Factors

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

Load and operating characteristics of both the driver and driven units must be considered throughly when selecting speed reducers. It is essential that all speed reducers be selected for maximum load conditions to be encountered. Worm gear speed reducers will safely transmit momentary starting loads as great as 300% of the mechanical input ratings.

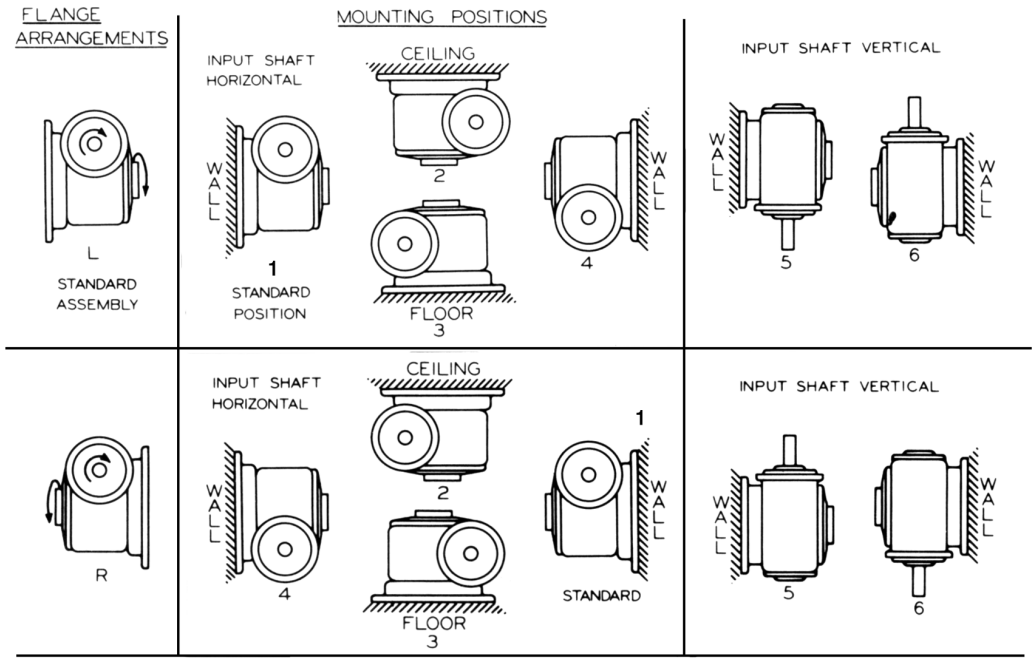
Contact Application Engineering at 1800 626-2093

SA, SF, DSA and DSF Series



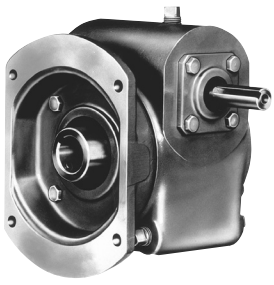
Model S Type A

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Model S Type F

Arrows indicate relative rotation. Input Shaft may be rotated in either direction.



Shaft Tolerances
+ .000
-.001

To Order, Specify:

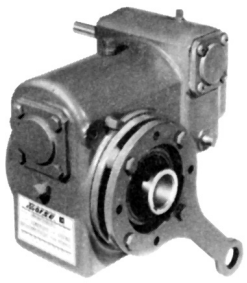
Example: 30SA25-R, 1.625 bore, position3, torque armC.

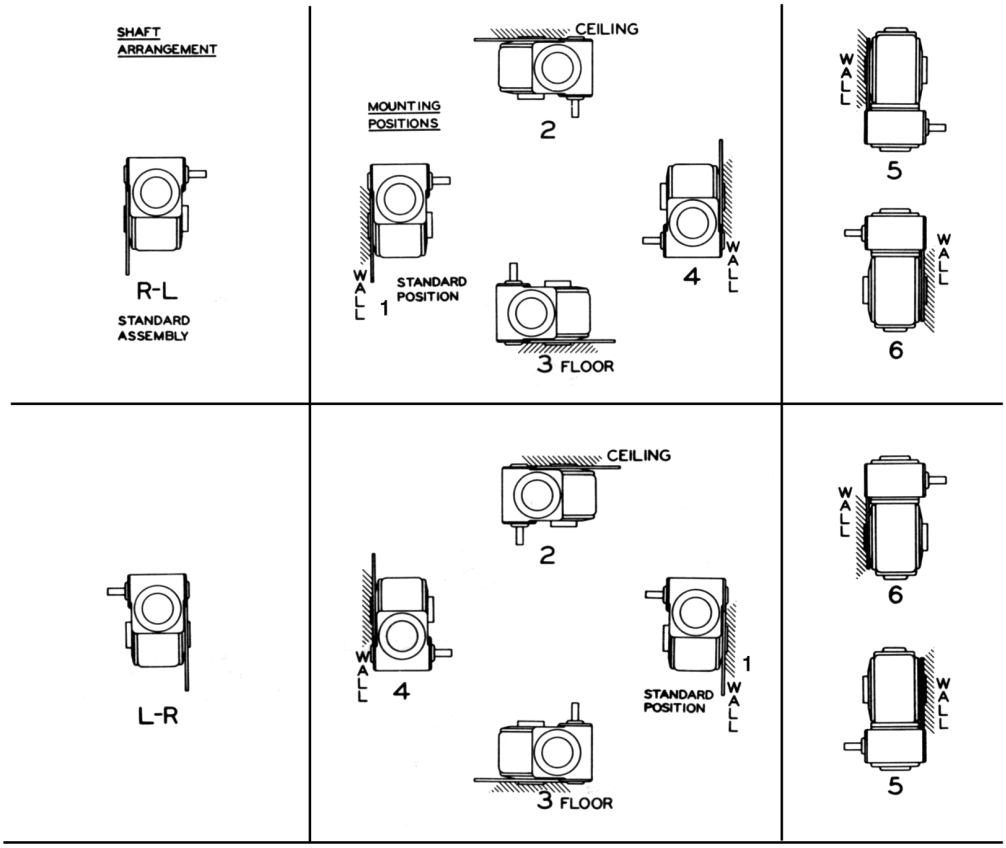
Series..... as, SA
Size..... as 30
Ratio..... as, 25:1
Torque arm arrangement..... as, C
Mounting position ..... as, Floor 3
Assembly..... as, R

No extra charge for Standard Position shaft arrangements.

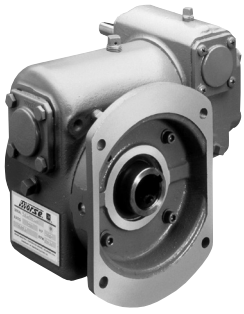
DSA and DSF Series Torque Arm and Flange Arrangements

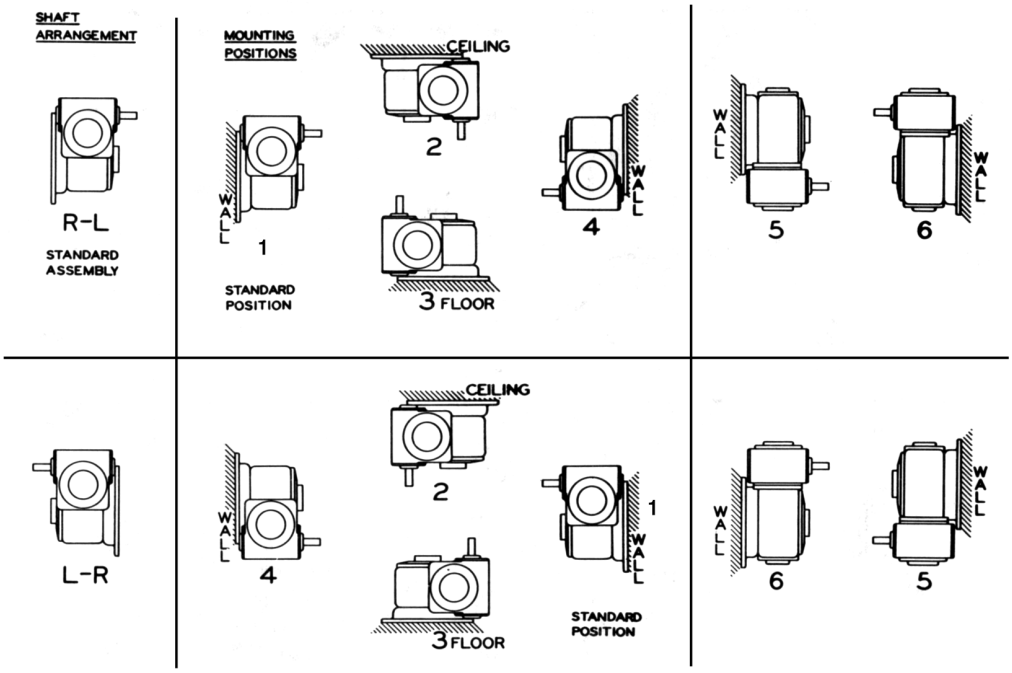
MODEL DS TYPE A





MODEL DS TYPE F





To Order, Specify:
Example: 30DSF100L-R, 1.750 bore, position 3

No extra charge for Standard Position shaft arrangements.

Series	as, DSF
Type	as, 30
Ratio	as, 100:1
Assembly	as, L-R
Mounting position	as, Floor 3
Quill bore size	as, 1.750

Lubrication

For enclosed worm gear units only. A worm gear unit is only as good as the oil which is used. During the first few days of operation, a worm gear unit will run hot. Unless the temperature exceeds 200 degrees F. there is no cause for alarm.

The oils shown below are typical. Any make of oil meeting American Gear Manufactureers Association (AGMA) standards #7C & #8C will be satisfactory. Consult Application Engineering (1 800 626 2093) if you have any questions.

Ambient Temp. 15° to 60°F	Ambient Temp. 50° to 125°F
AGMA #7C	AGMA #8C

The following are some general recommendations regarding relubrication. Your experience in your specific application is the best determination of relubrication intervals.

Maintenance Schedule:

1. Change initial oil fill after 2 weeks.
2. Change oil every 6 to 12 months depending on service conditions.

Additional Lubrication notes:

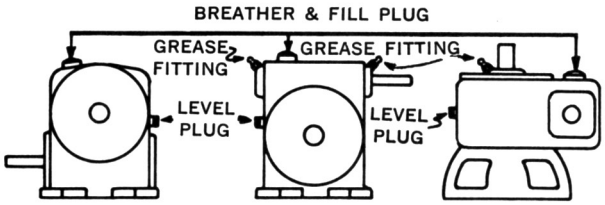
1. E.P. oils are not preferred. If an E.P. oil must be used, customer must determine that it is not corrosive to a bronze gear.
2. For ambient temperatures ouside of these temperature ranges, contact Application Engineering.
3. Units running at slow speeds should carry extra high oil level contact Application Engineering.
4. For slow input speeds (less than 100 RPM) use AGMA #8C oil in ambient temperatures of 15 to 60 degrees F.

Grease Fittings:

1. Grease every 100 hours of running time with about 3/8” ball of grease meeting NLGI #2 standards.
2. Do not over-lubricate.

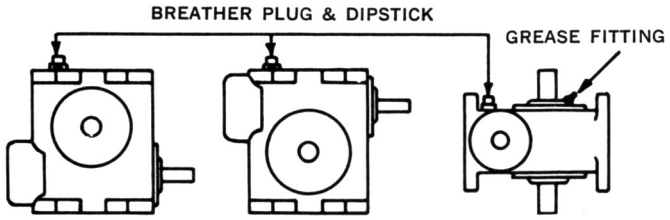
Lubrication

Lubricating Instructions - Reducers Other Than "RW"



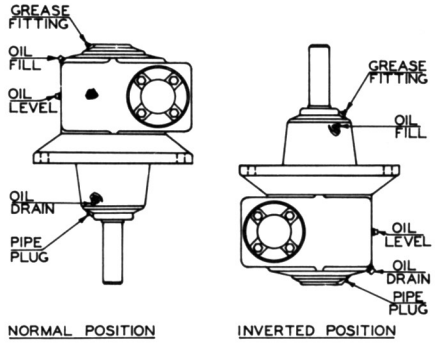
Many Morse® units are equipped with plug type oil holes. Remove level plug and fill unit with oil until oil runs out level hole. Breather and fill plug is at top of unit. Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time.

Lubricating Instructions - "RW" Reducers



RW units are equipped with a breather-dipstick fill plug. This fill plug should always be located at top of unit. Fill unit with oil to appropriate oil level line as indicated on dipstick. Units equipped with special dipsticks: fill with oil so dipstick dips into oil 1/4". Grease fittings are used to lubricate bearings above oil level. Grease every 100 hours running time. When mounting units in inverted position or on walls, be sure all bearings get proper lubrication. Miter boxes do not require breather plugs.

Lubrication fittings VX conveyor drives



Oil Capacities Chart - U.S.A. Measure - Approximate Quantities, Fill To Oil Level

10WB ..... 1/4 Pt.
10WT ..... 1/4 Pt.
10WV ..... 1/4 Pt.
13WB ..... 1/2 Pt.
13WT ..... 1/2 Pt.
13WV ..... 1/2 Pt.
18WB ..... 1 Pt.
18WT ..... 3/4 Pt.
18WV ..... 1 Pt.
20WB ..... 1 3/4 Pts.
20WT ..... 1 1/2 Pts.
20WV ..... 1 1/2 Pts.
20WDB ..... 2 Pts.
20WDV ..... 1 3/4 Pts.
25RWB ..... 2 1/2 Pts.
25RWT ..... 2 1/2 Pts.
25RWV ..... 2 1/4 Pts.
25WDB ..... 3 1/4 Pts.
25WDV ..... 3 Pts.
30RWB ..... 3 3/4 Pts.
30RWT ..... 3 3/4 Pts.
30WDB ..... 2 1/2 Qts.
30WDV ..... 2 1/4 Qts.
35RWB ..... 3 1/4 Qts.
35RWT ..... 3 1/2 Qts.
35RWV ..... 2 1/2 Qts.
35WDB ..... 3 3/4 Qts.
35WDV ..... 3 Qts.
40RWB ..... 3 1/2 Qts.
40RWT ..... 3 1/2 Qts.
40RWV ..... 3 Qts.
40WDB ..... 3 3/4 Qts.
40WDV ..... 3 1/4 Qts.

50RWB ..... 1 3/4 Gals.
50RWT ..... 1 3/4 Gals.
50WDB ..... 2 1/4 Gals.
50WDV ..... 2 Gals.
60RWB ..... 2 3/4 Gals.
60RWT ..... 3 Gals.
60RWV ..... 2 1/2 Gals.
60WDB ..... 3 3/4 Gals.
60WDV ..... 3 1/2 Gals.
70RWB ..... 5 3/4 Gals.
70RWT ..... 5 3/4 Gals.
70RWV ..... 4 1/2 Gals.
70WDB ..... 7 Gals.
70WDV ..... 6 1/4 Gals.
80RWB ..... 7 1/2 Gals.
80RWT ..... 7 1/2 Gals.
80WDB ..... 10 Gals.
80WDV ..... 9 Gals.
100RWB ..... 15 1/2 Gals.
100RWT ..... 11 1/2 Gals.
100RWV ..... 10 Gals.
100WDB ..... 19 Gals.
100WDV ..... 12 1/2 Gals.
18V ..... 1 Pt.
20V ..... 1 1/2 Pts.
20DV ..... 1 Qt.
25V ..... 1 Qt.
25DV ..... 1 1/4 Qts.
30V ..... 1 3/4 Qts.
30DV ..... 2 1/2 Qts.
35V ..... 2 1/4 Qts.
35DV ..... 2 3/4 Qts.
40V ..... 3 1/2 Qts.
40DV ..... 4 1/4 Qts.

50V ..... 1 1/2 Gals.
50DV ..... 1 3/4 Gals.
60V ..... 2 1/2 Gals.
60DV ..... 2 3/4 Gals.
70V ..... 4 Gals.
70DV ..... 4 1/2 Gals.
30VX ..... Std. 3 Qts.
Inverted ..... 2 Qts.
30DVX ..... Std. 3 3/4 Qts.
Inverted ..... 2 3/4 Qts.
35VX ..... Std. 4 1/4 Qts.
Inverted ..... 3 3/4 Qts.
35DVX ..... Std. 4 1/2 Qts.
Inverted ..... 4 Qts.
40VX ..... Std. 1 1/4 Gals.
Inverted ..... 1 Gal.
40DVX ..... Std. 1 1/2 Gals.
Inverted ..... 1 1/4 Gals.
50VX ..... Std. 2 Gals.
Inverted ..... 1 3/4 Gals.
50DVX ..... Std. 2 1/4 Gals.
Inverted ..... 2 Gals.
60VX ..... Std. 3 3/4 Gals.
Inverted ..... 2 3/4 Gals.
60DVX ..... Std. 4 1/4 Gals.
Inverted ..... 3 1/4 Gals.
70VX ..... Std. 6 Gals.
Inverted ..... 5 Gals.
70DVX ..... Std. 7 Gals.
Inverted ..... 5 1/2 Gals.
90VX ..... 11 Gals.
90DVX ..... 12 1/2 Gals.
110VX ..... 20 Gals.
110DVX ..... 18 1/2 Gals.

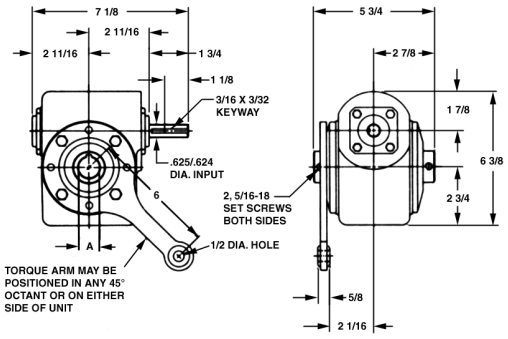
13GCT ..... 1/2 Pt.
13GCV ..... 1/2 Pt.
Low Base ..... 1/2 Pt.
18GCT ..... 3/4 Pt.
18GCV ..... 1 Pt.
Low Base ..... 1 Pt.
20GCT ..... 1 1/2 Pts.
20GCV ..... 1 Qt.
Low Base ..... 1 Qt.
25GCT ..... 1 1/4 Qts.
25GCV ..... 1 1/2 Qts.
Low Base ..... 1 1/2 Qts.
30GCT ..... 2 Qts.
30GCV ..... 2 1/2 Qts.
Low Base ..... 2 1/2 Qts.
35GCT ..... 3 Qts.
35GCV ..... 3 3/4 Qts.
Low Base ..... 3 3/4 Qts.
40GCT ..... 3 1/2 Qts.
40GCV ..... 3 1/2 Qts.
Low Base ..... 3 1/2 Qts.
50GCT ..... 1 3/4 Gals.
60GCT ..... 2 3/4 Gals.
50GCV ..... 1 1/2 Gals.
Low Base ..... 1 1/2 Gals.
60GCV .....
Low Base ..... 2 3/4 Gals.
18SA,SF ..... 3/4 Pts.
18GSA,GSF ..... 3/4 Pts.
20SA,SF ..... 1 1/2 Pts.
20GSA,GSF ..... 1 1/2 Pts.
25SA,SF ..... 1 1/4 Pts.
25GSA,GSF ..... 1 1/4 Pts.
30SA,SF ..... 2 Qts.
30GSA,GSF ..... 2 Qts.
35SA,SF ..... 3 Qts.

35GSA,GSF ..... 3 Qts.
40SA.SF ..... 3 1/2 Qts.
40GSA,GSF ..... 3 1/2 Qts.
50SA ,SF ..... 1 3/4 Gals.
50GSA,GSF ..... 1 3/4 Gals.
60SA, SF ..... 2 3/4 Gals.
60GSA,GSF ..... 2 3/4 Gals.
13GCDB ..... 3/4 Pt.
13GCDV ..... 3/4 Pt.
18DSA,DSF ..... 1 Pt.
18 GDSA,
GDSF ..... 1 Pt.
18GCDB ..... 1 Pt.
18GCDV ..... 1 Pt.
20DSA,DSF ..... 1 Qt.
20GDSA,GDSF ..... 1 Qt.
20GCDB ..... 1 Qt.
20GCDV ..... 1 Qt.
25DSA,DSF ..... 3 1/4 Pts.
25GDSA,
GDSF ..... 3 1/4 Pts.
25GCDB ..... 3 1/4 Pts.
25GCDV ..... 1 1/4 Qts.
30DSA,DSF ..... 2 1/2 Qts.
30GDSA,
GDSF ..... 2 1/2 Qts.
30GCDB ..... 2 1/2 Qts.
30GCDV ..... 2 1/2 Qts.
35DSA,DSF ..... 2 3/4 Qts.
35GDSA,
GDSF ..... 2 3/4 Qts.
35GCDB ..... 3 3/4 Qts.
35GCDV ..... 2 3/4 Qts.
40DSA,DSF ..... 4 1/4 Qts.

40GDSA,
GDSF ..... 4 1/4 Qts.
40GCDB ..... 3 3/4 Qts.
50DSA,DSF ..... 2 1/4 Gals.
50GDSA,
GDSF ..... 2 1/4 Gals.
50GCDB ..... 2 1/4 Gals.
50GCDV ..... 1 3/4 Gals.
60DSA,DSF ..... 3 3/4 Gals.
60GDSA,
GDSF ..... 2 3/4 Gals.
60GCDB ..... 3 3/4 Gals.
60GCDV ..... 2 3/4 Gals.
30GCDVX.. Std. 3 3/4 Qts.
Inverted ..... 2 3/4 Qts.
35GCDVX.. Std. 4 1/2 Qts.
Inverted ..... 4 Qts.
40GCDVX. Std. 1 1/2 Gals.
Inverted ..... 1 1/4 Gals.
50GCDVX Std. 2 1/4 Gals.
Inverted ..... 2 Gals.
60GCDVX Std. 4 1/4 Gals.
Inverted ..... 3 1/4 Gals.
4M ..... 3/4 Pt.
6M ..... 1 Qt.
8M ..... 2 Qts.
12M ..... 1 1/2 Gals.

SA, SF, DSA and DSF Series

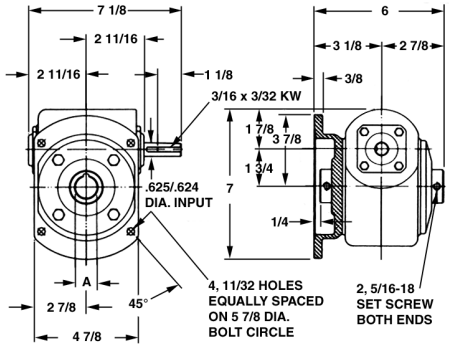
18SA Net wt. 13 lbs.



1.75" C.D.

A (BORE)		KEYWAY
.750	.751	3/16 x 3/32
.875	.876	3/16 x 3/32
.9375	.9385	1/4 x 1/8
1.000	1.001	1/4 x 1/8

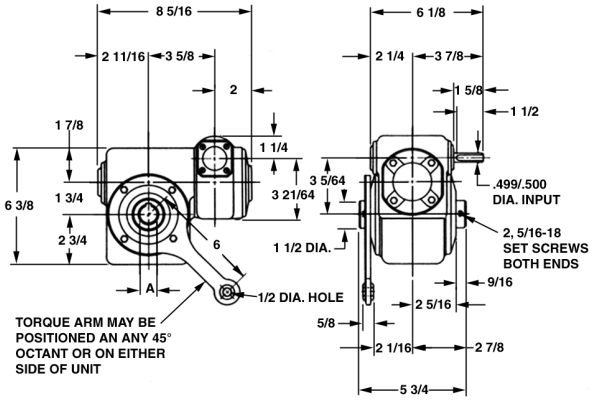
Net wt. 13 lbs. 18SF



1.00 Service Factor* - Single Reduction Wormgear - Models 18SA and 18SF

TORQUE and HORSEPOWER RATINGS																		
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.17	350.0	359	1.73	230.0	430	1.44	174.0	468	1.06	116.0	509	.61	60.0	551	.22	20.0	580
7.5	1.71	233.3	415	1.35	153.3	490	1.12	116.0	530	.82	77.3	571	.47	40.0	614	.17	13.3	643
10	1.42	175.0	447	1.12	115.0	527	.93	87.0	567	.68	58.0	610	.39	30.0	654	.14	10.0	682
15	1.06	116.6	479	.84	76.6	531	.70	58.0	603	.52	38.7	648	.30	20.0	693	.11	6.6	727
20	.85	87.5	490	.67	57.5	570	.56	43.5	611	.41	29.0	654	.24	15.0	698	.09	5.0	722
25	.71	70.0	494	.56	46.0	570	.47	34.8	608	.35	23.2	649	.20	12.0	688	.08	4.0	715
30	.63	58.4	494	.51	38.4	578	.43	29.0	620	.32	19.3	667	.19	10.0	711	.07	3.3	745
40	.50	43.7	489	.41	28.7	567	.34	21.8	607	.26	14.5	648	.15	7.5	694	.06	2.5	715
50	.41	35.0	471	.33	23.0	543	.28	17.4	578	.21	11.6	616	.13	6.0	658	.05	2.0	679
60	.34	29.2	446	.28	19.2	512	.24	14.5	545	.18	9.7	578	.11	5.0	615	.04	1.6	630

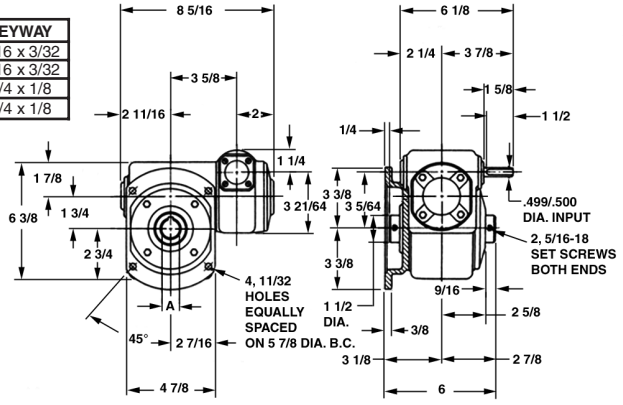
18DSA Net wt. 18 lbs.



1.75" C.D.

A (BORE)		KEYWAY
.750	.751	3/16 x 3/32
.875	.876	3/16 x 3/32
.9375	.9385	1/4 x 1/8
1.000	1.001	1/4 x 1/8

Net wt. 18 lbs. 18DSF



1.00 Service Factor* - Double Reduction Wormgear - Models 18DSA and 18DSF
1.33" Centers Primary - 1.75" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	.37	23.33	687	.26	15.33	706	.21	11.60	716	.15	7.73	725	
100	5	20	.30	17.50	691	.21	11.50	710	.17	8.70	719	.12	5.80	728	
125	5	25	.25	14.00	684	.18	9.20	702	.14	6.96	710	.10	4.64	719	
150	10	15	.21	11.67	715	.15	7.67	725	12	5.80	730	.08	3.87	735	
200	10	20	.17	8.75	718	.12	5.75	728	.10	4.35	732	.07	2.90	737	
250	10	25	.15	7.00	710	.10	4.60	719	.08	3.48	723	.06	2.32	727	
300	15	20	.13	5.83	728	.09	3.83	734	.07	2.90	737	.05	1.93	740	
400	20	20	.10	4.38	732	.07	2.88	737	.06	2.18	739	.04	1.45	742	
500	25	20	.09	3.50	735	.06	2.30	739	.05	1.74	741	.03	1.16	742	
600	30	20	.08	2.92	737	.06	1.92	740	.05	1.45	742	.03	.97	743	
800	40	20	.07	2.19	739	.05	1.44	742	.04	1.09	743	.03	.73	744	
1000	50	20	.06	1.75	741	.04	1.15	742	.03	.87	743	.02	.58	744	
1200	60	20	.05	1.46	741	.04	.96	743	.03	.73	744	.02	.48	745	
1500	25	60	.04	1.17	645	.03	.77	648	.02	.58	650	.02	.39	651	
1800	30	60	.04	.97	647	.03	.64	649	.02	.48	650	.02	.32	652	
2400	40	60	.03	.73	648	.02	.48	650	.02	.36	651	.01	.24	652	
3000	50	60	.03	.58	650	.02	.38	651	.02	.29	652	.01	.19	653	
3600	60	60	.02	.49	650	.02	.32	652	.02	.24	652	.01	.16	653	

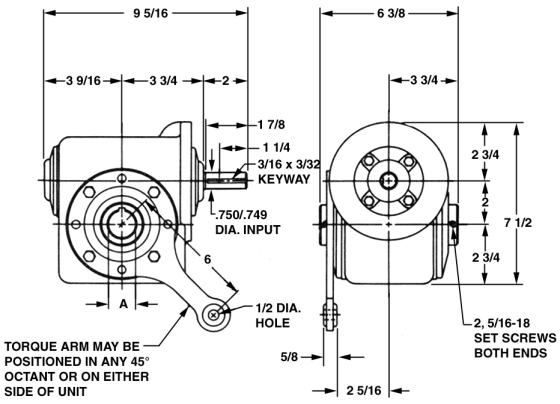
▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

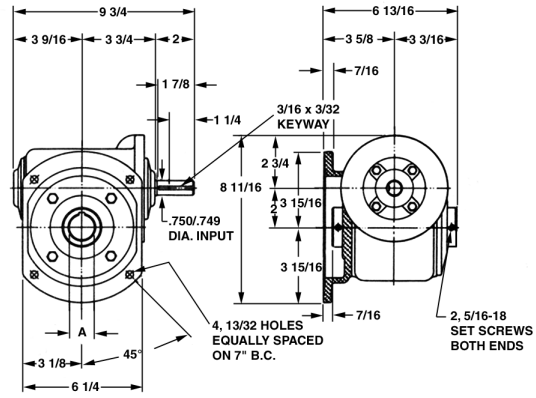
20SA Net wt. 21 lbs.



2.0" C.D.

A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8

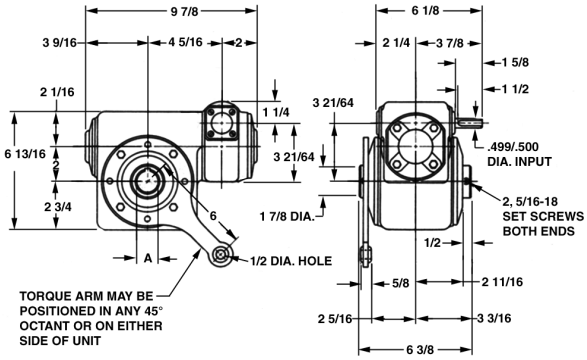
Net wt. 21 lbs. 20SF



1.00 Service Factor* - Single Reduction Wormgear - Models 20SA and 20SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	2.92	350.0	487	2.35	23.0	588	1.96	174.0	643	1.45	116.0	702	.83	60.0	763	.30	20.0	808
7.5	2.31	233.3	568	1.84	153.3	676	1.52	116.0	732	1.12	77.3	793	.64	40.0	854	.23	13.3	896
10	1.92	175.0	616	1.52	115.0	728	1.26	87.0	785	.92	58.0	847	.53	30.0	910	.19	10.0	954
15	1.44	116.6	663	1.14	76.6	779	.94	58.0	837	.70	38.7	902	.40	20.0	964	.15	6.6	1011
20	1.13	87.5	673	.88	57.5	779	.73	43.5	830	.54	29.0	890	.31	15.0	944	.12	5.0	987
25	.94	70.0	677	.73	46.0	777	.61	34.8	827	.45	23.2	882	.26	12.0	936	.10	4.0	971
30	.84	58.4	685	.67	38.4	803	.57	29.0	862	.42	19.3	928	.25	10.0	992	.10	3.3	1037
40	.65	43.7	672	.52	28.7	776	.43	21.8	828	.32	14.5	883	.19	7.5	937	.07	2.5	979
50	.53	35.0	646	.42	23.0	742	.35	17.4	788	.27	11.6	839	.16	6.0	887	.06	2.0	921
60	.44	29.2	610	.35	19.2	699	.30	14.5	741	.22	9.7	789	.13	5.0	835	.05	1.6	869

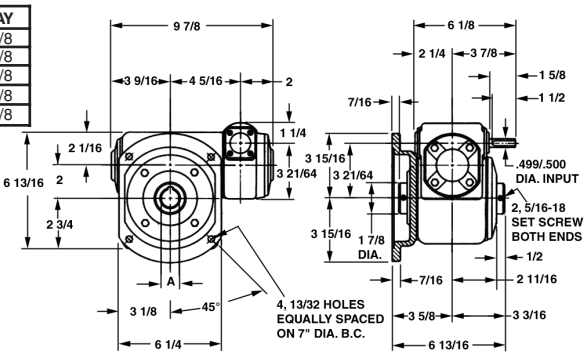
20DSA Net wt. 26 lbs.



2.0" C.D.

A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8

Net wt. 26 lbs. 20DSF



1.00 Service Factor* - Double Reduction Wormgear - Models 20DSA and 20DSF
1.33" Centers Primary - 2.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	.50	23.33	956	.35	15.33	984	.28	11.60	997	.20	7.73	1010	
100	5	20	.39	17.50	937	.27	11.50	962	.21	8.70	973	.15	5.80	985	
125	5	25	.32	14.00	929	.23	9.20	952	.18	6.96	963	.13	4.64	975	
150	10	15	.29	11.67	996	.20	7.67	1010	.16	5.80	1017	.11	3.87	1024	
200	10	20	.22	8.75	973	.16	5.75	986	.12	4.35	991	.09	2.90	997	
250	10	25	.18	7.00	963	.13	4.60	975	.10	3.48	980	.07	2.32	986	
300	15	20	.16	5.83	985	.11	3.83	994	.09	2.90	997	.06	1.93	1001	
400	20	20	.13	4.38	991	.09	2.88	998	.07	2.18	1000	.05	1.45	1003	
500	25	20	.11	3.50	995	.08	2.30	1000	.06	1.74	1002	.04	1.16	1005	
600	30	20	.10	2.92	997	.07	1.92	1002	.06	1.45	1003	.04	.97	1005	
800	40	20	.08	2.19	1000	.06	1.44	1004	.05	1.09	1005	.03	.73	1006	
1000	50	20	.07	1.75	1002	.05	1.15	1005	.04	.87	1006	.03	.58	1007	
1200	60	20	.06	1.46	1003	.05	.96	1006	.04	.73	1006	.03	.48	1007	
1500	25	60	.05	1.17	876	.04	.77	880	.03	.58	882	.02	.39	884	
1800	30	60	.05	.97	878	.03	.64	882	.03	.48	883	.02	.32	885	
2400	40	60	.04	.73	881	.03	.48	883	.02	.36	884	.02	.24	886	
3000	50	60	.03	.58	882	.02	.38	884	.02	.29	885	.01	.19	886	
3600	60	60	.03	.49	883	.02	.32	885	.02	.24	886	.01	.16	886	

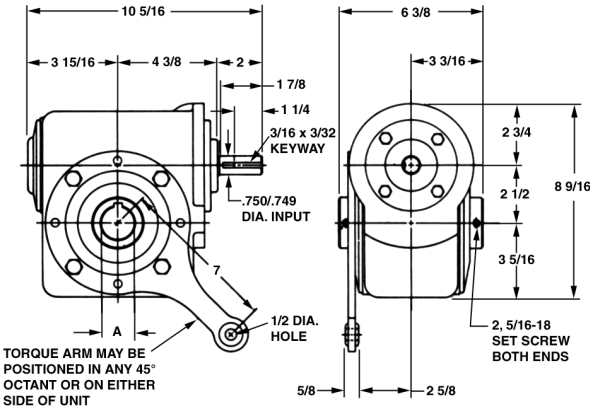
▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

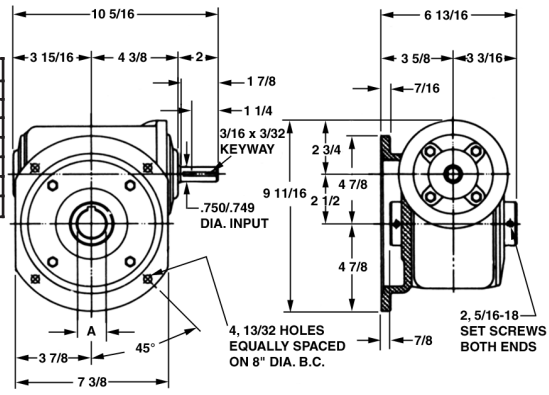
25SA Net wt. 30 lbs.



2.5" C.D.

A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8
1.3125 1.3135	5/16 x 5/32
1.4375 1.4385	3/8 x 3/16

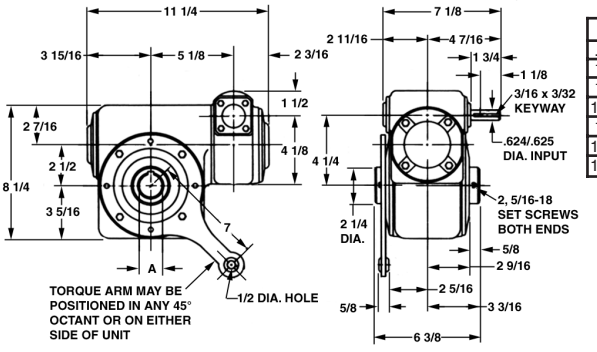
Net wt. 30 lbs. 25SF



1.00 Service Factor* - Single Reduction Wormgear - Models 25SA and 25SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	4.76	350.0	798	3.95	230.0	996	3.36	174.0	1112	2.54	116.0	1243	1.49	60.0	1379	.55	20.0	1479
7.5	3.82	233.3	946	3.12	153.3	1158	2.63	116.0	1277	1.97	77.3	1409	1.14	40.0	1545	.42	13.3	1644
10	3.18	175.0	1031	2.58	115.0	1253	2.17	87.0	1376	1.63	58.0	1510	.94	30.0	1648	.35	10.0	1751
15	2.37	116.6	1113	1.93	76.6	1344	1.63	58.0	1472	1.22	38.7	1610	.71	20.0	1750	.27	6.6	1855
20	1.88	87.5	1139	1.52	57.5	1364	1.28	43.5	1484	.96	29.0	1614	.56	15.0	1745	.21	5.0	1835
25	1.54	70.0	1140	1.24	46.0	1347	1.03	34.8	1454	.77	23.2	1569	.45	12.0	1683	.17	4.0	1765
30	1.37	58.4	1155	1.13	38.4	1390	.96	29.0	1518	.73	19.3	1659	.44	10.0	1797	.17	3.3	1897
40	1.07	43.7	1139	.88	28.7	1361	.75	21.8	1479	.58	14.5	1607	.34	7.5	1737	.14	2.5	1828
50	.86	35.0	1090	.70	23.0	1285	.59	17.4	1386	.45	11.6	1495	.27	6.0	1605	.11	2.0	1684
60	.70	29.2	1024	.57	19.2	1196	.48	14.5	1281	.36	9.7	1376	.22	5.0	1472	.09	1.6	1533

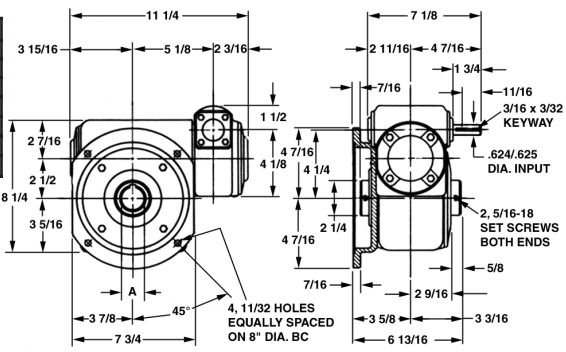
25DSA Net wt. 45 lbs.



2.5" C.D.

A (BORE)	KEYWAY
.9375 .9385	1/4 x 1/8
1.000 1.001	1/4 x 1/8
1.125 1.126	1/4 x 1/8
1.1875 1.1885	1/4 x 1/8
1.250 1.251	1/4 x 1/8
1.3125 1.3135	5/16 x 5/32
1.4375 1.4385	3/8 x 3/16

Net wt. 45 lbs. 25DSF



1.00 service factor* - Double Reduction Wormgear - Models 25DSA and 25DSF
1.75" Centers Primary - 2.5" Centers Secondary

TORQUE and HORSEPOWER RATINGS												
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	.88	23.33	1728	.62	15.33	1790	.49	11.60	1819	.35	7.73	1849
100	5	20	.69	17.50	1725	.49	11.50	1783	.39	8.70	1810	.27	5.80	1838
125	5	25	.55	14.00	1667	.39	9.20	1718	.31	6.96	1741	.22	4.64	1766
150	10	15	.51	1.67	1818	.35	7.67	1849	.28	5.80	1864	.20	3.87	1879
200	10	20	.40	8.75	1809	.28	5.75	1838	.22	4.35	1852	.16	2.90	1866
250	10	25	.32	7.00	1741	.22	4.60	1766	.18	3.48	1778	.12	2.32	1791
300	15	20	.29	5.83	1837	.20	3.83	1857	.16	2.90	1866	.11	1.93	1875
400	20	20	.23	4.38	1852	.17	2.88	1866	.13	2.18	1873	.09	1.45	1880
500	25	20	.20	3.50	1860	.14	2.30	1872	.11	1.74	1877	.08	1.16	1883
600	30	20	.18	2.92	1866	.13	1.92	1875	.10	1.45	1880	.07	.97	1885
800	40	20	.15	2.199	1873	.11	1.44	1880	.08	1.09	1883	.06	.73	1887
1000	50	20	.13	1.75	1877	.09	1.15	1883	.07	.87	1886	.05	.58	1888
1200	60	20	.11	1.46	1880	.08	.96	1885	.07	.73	1887	.05	.48	1889
1500	25	60	.08	1.17	1552	.06	.77	1560	.05	.58	1564	.03	.39	1568
1800	30	60	.07	.97	1556	.05	3.64	1562	.04	.48	1566	.03	.32	1569
2400	40	60	.06	.73	1561	.04	.48	1566	.04	.36	1568	.03	.24	1571
3000	50	60	.05	.58	1564	.04	.38	1568	.03	.29	1570	.02	.19	1572
3600	60	60	.05	.49	1566	.03	.32	1569	.03	.24	1571	.02	.16	1572

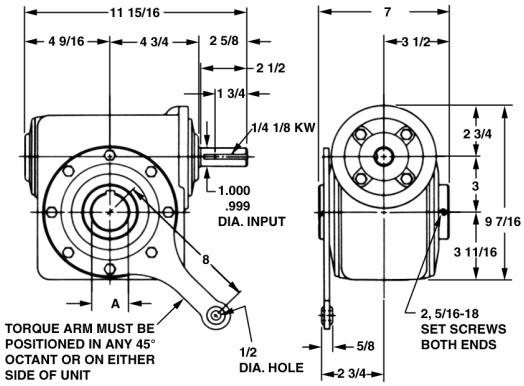
▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

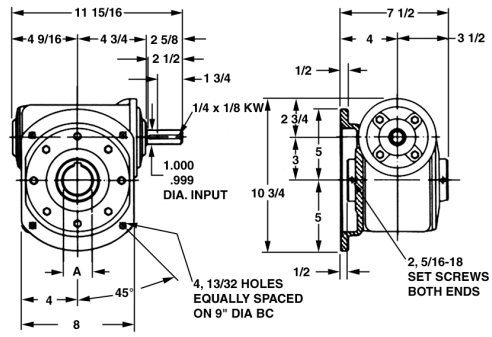
30SA Net wt. 44 lbs.



3.0" C.D.

A (BORE)	KEYWAY
1.4375 1.4385	3/8 x 3/16
1.500 1.501	3/8 x 3/16
1.625 1.626	3/8 x 3/16
1.6875 1.6885	3/8 x 3/16
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4

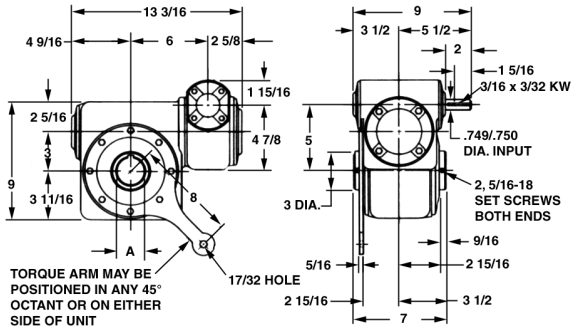
Net wt. 44 lbs. 30SF



1.00 Service Factor* - Single Reduction Wormgear Models 30SA and 30SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	8.06	350.0	1357	6.82	230.0	1729	5.92	174.0	1968	4.58	116.0	2254	2.75	60.0	2557	1.03	20.0	2783
7.5	6.44	233.3	1603	5.42	153.3	2026	4.65	116.0	2279	3.56	77.3	2571	2.11	40.0	2874	.79	13.3	3100
10	5.37	175.0	1753	4.50	115.0	2198	3.85	87.0	2461	2.94	58.0	2760	1.74	30.0	3069	.66	10.0	3298
15	4.01	116.6	1899	3.36	76.6	2366	2.88	58.0	2639	2.20	38.7	2947	1.31	20.0	3264	.50	6.6	3499
20	3.19	87.5	1956	2.65	57.5	2412	2.27	43.5	2671	1.73	29.0	2955	1.03	15.0	3254	.39	5.0	3476
25	2.64	70.0	1975	2.18	46.0	2404	1.85	34.8	2643	1.41	23.2	2907	.84	12.0	3175	.32	4.0	3373
30	2.31	58.4	1975	1.96	38.4	2451	1.69	29.0	2725	1.31	19.3	3033	.80	10.0	3349	.31	3.3	3584
40	1.81	43.7	1959	1.53	28.7	2406	1.33	21.8	2665	1.03	14.5	2946	.63	7.5	3240	.25	2.5	3454
50	1.46	35.0	1889	1.23	23.0	2298	1.06	17.4	2525	.82	11.6	2770	.50	6.0	3020	.20	2.0	3198
60	1.21	29.2	1791	1.02	19.2	2172	.88	14.5	2380	.69	9.7	2612	.42	5.0	2844	.17	1.6	3016

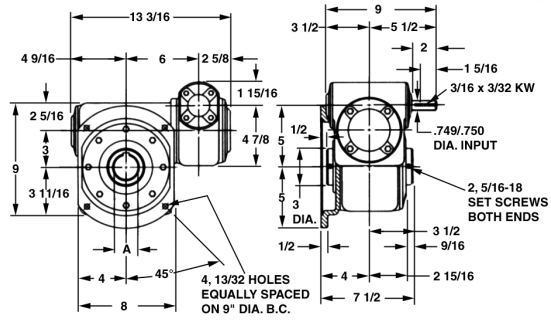
30DSA Net wt. 66 lbs.



3.0" C.D.

A (BORE)	KEYWAY
1.4375 1.4385	3/8 x 3/16
1.500 1.501	3/8 x 3/16
1.625 1.626	3/8 x 3/16
1.6875 1.6885	3/8 x 3/16
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4

Net wt. 66 lbs. 30DSF



1.00 Service Factor* - Double Reduction Worm Gear - Models 30DSA and 30DSF
2.0" Centers Primary - 3.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	1.61	23.33	3208	1.15	15.33	3348	.91	11.60	3413	.64	7.73	3481	
100	5	20	1.26	17.50	3207	.90	11.50	3337	.71	8.70	3399	.51	5.80	3462	
125	5	25	1.02	14.00	3132	.73	9.20	3250	.58	6.96	3305	.41	4.64	3362	
150	10	15	.93	11.67	3412	.65	7.67	3483	.51	5.80	3516	.36	3.87	3550	
200	10	20	.73	8.75	3398	.51	5.75	3464	.40	4.35	3494	.28	2.90	3526	
250	10	25	.59	7.00	3304	.42	4.60	3363	.33	3.48	3391	.23	2.32	3420	
300	15	20	.53	5.83	3462	.37	3.83	3506	.29	2.90	3526	.21	1.93	3548	
400	20	20	.42	4.38	3494	.30	2.88	3527	.23	2.18	3542	.16	1.45	3558	
500	25	20	.35	3.50	3513	.25	2.30	3540	.20	1.74	3552	.14	1.16	3565	
600	30	20	.32	2.92	3526	.23	1.92	3548	.18	1.45	3558	.13	.97	3569	
800	40	20	.26	2.19	3542	.18	1.44	3559	.15	1.09	3566	.10	.73	3574	
1000	50	20	.22	1.75	3552	.16	1.15	3565	.13	.87	3571	.09	.58	3578	
1200	60	20	.20	1.46	3558	.14	.96	3569	.11	.73	3574	.08	.48	3580	
1500	25	60	.16	1.17	3044	.11	.77	3065	.09	.58	3074	.06	.39	3084	
1800	30	60	.14	.97	3054	.10	.64	3074	.08	.48	3079	.06	.32	3088	
2400	40	60	.12	.73	3067	.08	.48	3080	.07	.36	3086	.05	.24	3092	
3000	50	60	.10	.58	3074	.07	.38	3085	.06	.29	3089	.04	.19	3094	
3600	60	60	.09	.49	3079	.06	.32	3088	.05	.24	3092	.04	.16	3096	

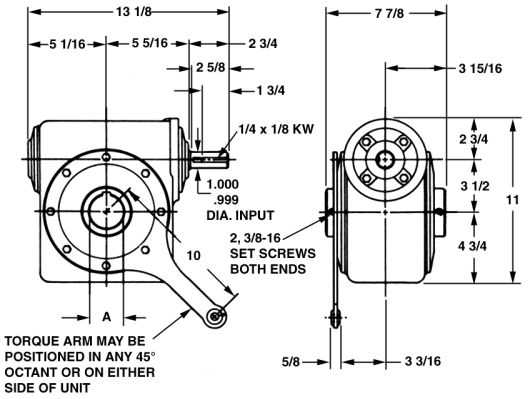
▲Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

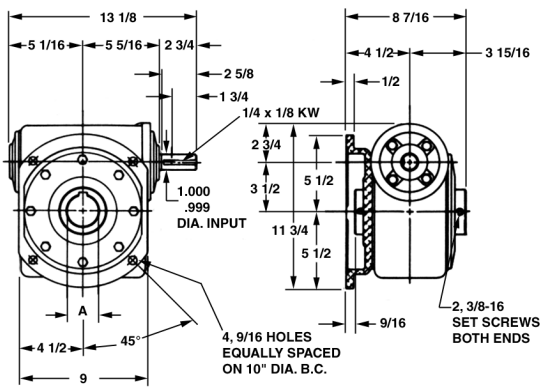
35SA Net wt. 57 lbs.



3.5" C.D.

A (BORE)	KEYWAY
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4
2.1875 2.1865	1/2 x 1/4

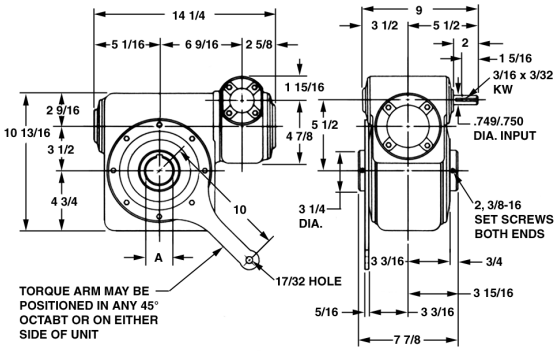
Net wt. 57 lbs. 35SF



1.00 Service Factor*- Single Reduction Wormgear - Models 35SA and 35SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	11.54	350.0	1951	9.70	230.0	2470	8.58	174.0	2861	6.82	116.0	3373	4.21	60.0	3927	1.61	20.0	4356
7.5	9.12	233.3	2279	7.74	153.3	2903	6.78	116.0	3328	5.33	77.3	3868	3.25	40.0	4424	1.24	13.3	4854
10	7.55	175.0	2474	6.43	115.0	3155	5.62	87.0	3601	4.40	58.0	4150	2.68	30.0	4726	1.03	10.0	5167
15	5.60	116.6	2663	4.80	76.6	3396	4.20	58.0	3864	3.30	38.7	4429	2.02	20.0	5027	.78	6.6	5476
20	4.44	87.5	2739	3.80	57.5	3469	3.31	43.5	3921	2.58	29.0	4448	1.58	15.0	5003	.61	5.0	5401
25	3.67	70.0	2773	3.11	46.0	3470	2.69	34.8	3884	2.08	23.2	4349	1.26	12.0	4830	.49	4.0	5185
30	3.22	58.4	2773	2.79	38.4	3516	2.46	29.0	3995	1.97	19.3	4570	.24	10.0	5165	.50	3.3	5625
40	2.50	43.7	2738	2.18	28.7	3468	1.92	21.8	3914	1.53	14.5	4428	.96	7.5	4969	.39	2.5	5364
50	2.02	35.0	2657	1.74	23.0	3320	1.52	17.4	3707	1.21	11.6	4144	.75	6.0	4603	.30	2.0	4934
60	1.67	29.2	2522	1.44	19.2	3138	1.26	14.5	3497	1.00	9.7	3900	.63	5.0	4308	.26	1.6	4637

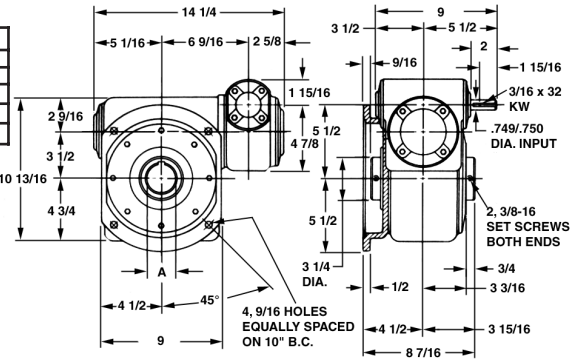
35DSA Net wt. 76 lbs.



3.5" C.D.

A (BORE)	KEYWAY
1.750 1.751	3/8 x 3/16
1.875 1.876	1/2 x 1/4
1.9375 1.9385	1/2 x 1/4
2.000 2.001	1/2 x 1/4
2.1875 2.1865	1/2 x 1/4

Net wt. 76 lbs. 35DSF



1.00 Service Factor* - Double Reduction Wormgear - models 35DSA and 35DSF
2.0" Centers Primary - 3.5" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	2.47	23.33	4919	1.77	15.33	5187	1.41	11.60	5313	1.00	7.73	5444
100	5	20	1.93	17.50	4903	1.39	11.50	5147	1.10	8.70	5262	.79	5.80	5382
125	5	25	1.54	14.00	4750	1.11	9.20	4963	.88	6.96	5063	.63	4.64	5167
150	10	15	1.44	11.67	5311	1.02	7.67	5446	.80	5.80	5509	.57	3.87	5575
200	10	20	1.13	8.75	5260	.79	5.75	5384	.3	4.35	5442	.44	2.90	5502
250	10	25	.90	7.00	5061	.63	4.60	5169	.50	3.48	5219	.35	2.32	5272
300	15	20	.82	5.83	5381	.58	3.83	5463	.46	2.90	5502	.33	1.93	5542
400	20	20	.65	4.38	5441	.46	2.88	5503	.37	2.18	5532	.26	1.45	5562
500	25	20	.55	3.50	5477	.39	2.30	5527	.31	1.74	5550	.22	1.16	5574
600	30	20	.50	2.92	5501	.35	1.92	5543	.28	1.45	5562	.20	.97	5582
800	40	20	.40	2.19	5532	.29	1.44	5563	.23	1.09	5577	.16	.73	5593
1000	50	20	.35	1.75	5550	.25	1.15	5575	.20	.87	5586	.14	.58	5599
1200	60	20	.31	1.46	5562	.22	.96	5583	.18	.73	5593	.13	.48	5603
1500	25	60	.24	1.17	4671	.17	.77	4709	.14	.58	4726	.10	.39	4744
1800	30	60	.21	.97	4690	.15	.64	4721	.12	.48	4735	.09	.32	4750
2400	40	60	.17	.73	4712	.13	.48	4735	.10	.36	4746	.07	.24	4757
3000	50	60	.15	.58	4726	.11	.38	4744	.09	.29	4753	.06	.19	4762
3600	60	60	.14	.49	4735	.10	.32	4750	.08	.24	4757	.06	.16	4765

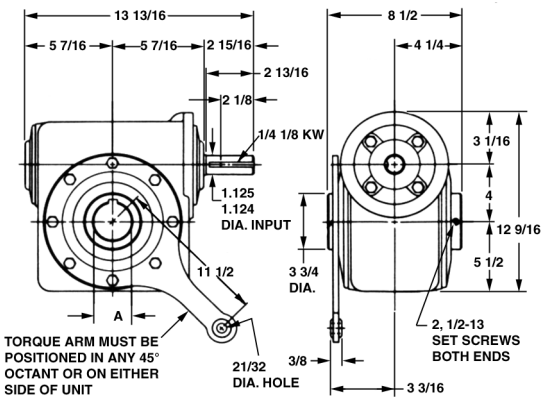
▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

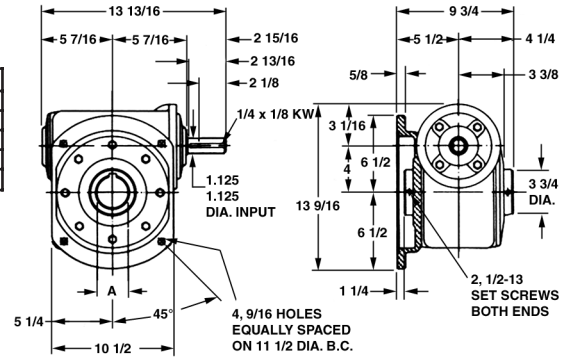
40SA Net wt. 95 lbs.



4.0" C.D.

A (BORE)	KEYWAY
2.000 2.001	1/2 x 1/4
2.1875 2.1885	1/2 x 1/4
2.250 2.252	1/2 x 1/4
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16

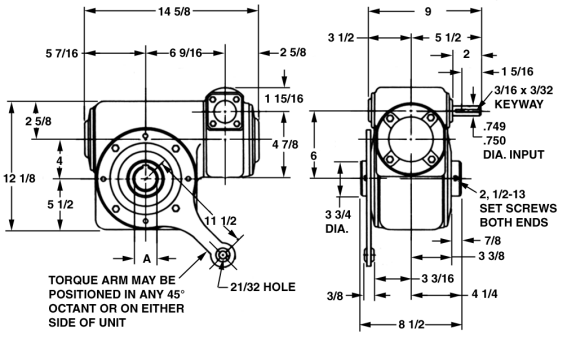
Net wt. 118 lbs. 40SF



1.00 Service Factor* - Single Reduction Wormgear - Models 40SA and 40SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	15.15	350.0	2570	12.65	230.0	3233	11.27	174.0	3781	9.05	116.0	4498	5.65	60.0	6306	2.18	20.0	5925
10	10.03	175.0	3321	8.52	115.0	4229	7.46	87.0	4845	5.87	58.0	5608	3.58	30.0	6427	1.37	10.0	7041
15	7.44	116.6	3592	6.36	76.6	4580	5.57	58.0	5222	4.38	38.7	6014	2.68	20.0	6846	1.04	6.6	7483
20	5.89	87.45	3685	5.06	57.5	4702	4.43	43.5	5344	3.49	29.0	6127	2.15	15.0	6949	.84	5.0	7566
25	4.84	70.0	3712	4.14	46.0	4695	3.60	34.8	5299	2.81	23.2	6002	1.71	12.0	6722	.67	4.0	7262
30	4.22	58.4	3733	3.65	38.4	4760	3.23	29.0	5412	2.57	19.3	6213	1.61	10.0	7043	.64	3.3	7679
40	3.31	43.7	3710	2.88	29.7	4705	2.55	21.8	5340	2.04	14.5	6106	1.29	7.5	6916	.52	2.5	7515
50	2.63	35.0	3555	2.29	23.0	4493	2.02	17.4	5066	1.61	11.6	5724	1.01	6.0	6408	.41	2.0	6904
60	2.15	29.2	3372	1.86	19.2	4226	1.63	14.5	4724	1.30	9.7	5293	.81	5.0	5877	.33	1.6	6345

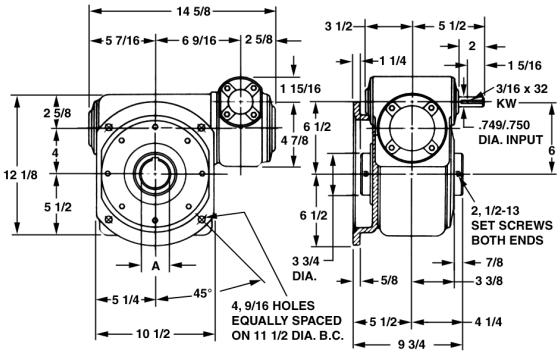
40DSA Net wt. 128 lbs.



4.0" C.D.

A (BORE)	KEYWAY
2.000 2.001	1/2 x 1/4
2.1875 2.1885	1/2 x 1/4
2.250 2.252	1/2 x 1/4
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16

Net wt. 151lbs. 40DSF



1.00 Service Factor* - Double Reduction Wormgear - Models 40DSA and 40DSF
2.0" Centers Primary - 4.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	2.92	23.33	59972	2.35	15.33	7058	1.87	11.60	7247	1.33	7.73	7431
100	5	20	2.62	17.50	6804	1.89	11.50	7172	1.50	8.70	7345	1.07	5.80	7526
125	5	25	2.10	14.00	6497	1.50	9.20	6920	1.20	6.96	7071	.85	4.64	7229
150	10	15	1.91	11.67	7244	1.34	7.67	74.4	1.06	5.80	7523	.75	3.87	7615
200	10	20	1.53	8.75	7342	1.08	5.75	7529	.86	4.35	7616	.61	2.90	7707
250	10	25	1.22	7.00	7069	.86	4.60	7232	.68	3.48	7308	.48	2.32	7388
300	15	20	1.12	5.83	7524	.79	3.83	7649	.63	2.90	7707	.44	1.93	7769
400	20	20	.89	4.38	7615	.63	2.88	7708	.50	2.18	7752	.35	1.45	7798
500	25	20	.75	3.50	7669	.53	2.30	7745	.42	1.74	7780	.30	1.16	7816
600	30	20	.68	2.92	7706	.48	1.92	7769	.38	1.45	7798	.27	.97	7828
800	40	20	.55	2.19	7752	.39	1.44	7799	.31	1.09	7821	.22	.73	7843
1000	50	20	.47	1.75	7779	.34	1.15	7817	.27	.87	7834	.19	.58	7853
1200	60	20	.42	1.46	7797	.30	.96	7829	.24	.73	7843	.17	.48	7859
1500	25	60	.30	1.17	6388	.22	.77	6441	.17	.58	6466	.12	.39	6491
1800	30	60	.27	.97	6414	.20	.64	6458	.16	.48	6478	.11	.32	6500
2400	40	60	.22	.73	6446	.16	.48	6479	.13	.36	6494	.09	.24	6510
3000	50	60	.19	.58	6465	.14	.38	6492	.11	.29	6504	.08	.19	6517
3600	60	60	.17	.49	6478	.13	.32	6500	.10	.24	6510	.07	.16	6521

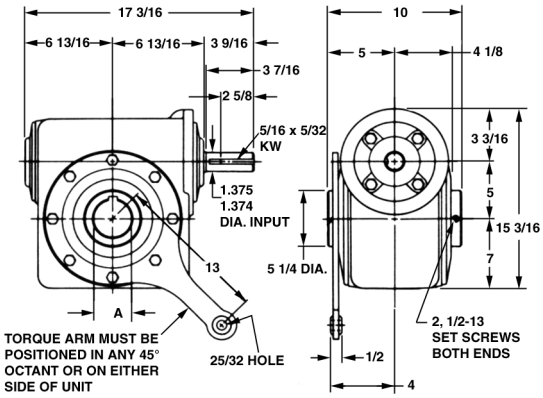
▲Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

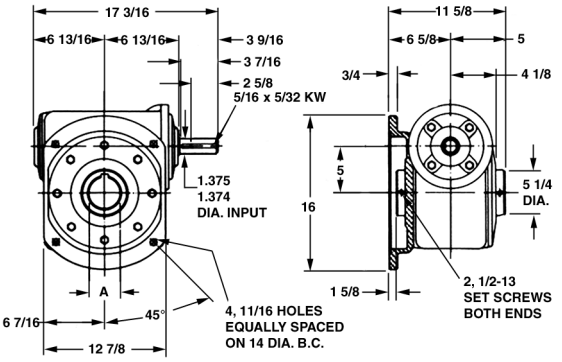
50SA Net wt. 186 lbs.



5.0" C.D.

A (BORE)	KEYWAY
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16
2.6875 2.6895	5/8 x 5/16
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16

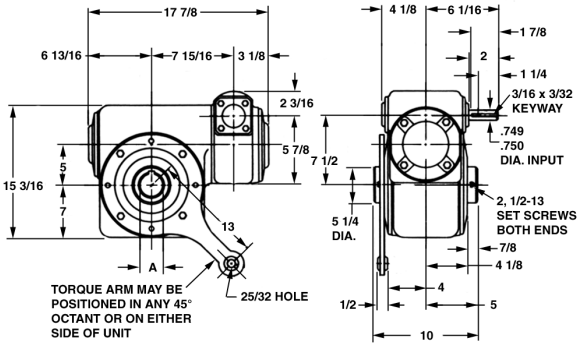
Net wt. 227 lbs. 50SF



1.00 Service Factor* - Single Reduction Wormgear - Models 50SA and 50SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	25.25	350.0	4300	20.79	230.0	5344	18.60	174.0	6274	15.47	116.0	7743	10.11	60.0	9570	4.02	20.0	11029
10	16.64	175.0	5542	13.84	115.0	6917	12.47	87.0	8155	10.13	58.0	9790	6.45	30.0	11670	2.53	10.0	13139
15	12.31	116.6	5991	10.4	76.6	7512	9.30	58.0	8813	7.56	38.7	10511	4.83	20.0	12448	1.91	6.6	13958
20	9.61	87.5	6113	8.18	57.5	7737	7.29	43.5	8964	5.87	29.0	10547	3.71	15.0	12286	1.47	5.0	13610
25	7.94	70.0	6162	6.80	46.0	7823	6.06	34.8	9040	4.88	23.2	10592	3.09	12.0	12273	1.23	4.0	13558
30	6.92	58.4	6224	5.92	38.4	7836	5.36	29.0	9154	4.41	19.3	10877	2.88	10.0	12810	1.18	3.3	14338
40	5.31	43.7	6125	4.60	28.7	7771	4.14	21.8	8981	3.38	14.5	10531	2.20	7.5	12222	.90	2.5	13507
50	4.57	35.0	5899	3.73	23.0	7498	3.36	17.4	8644	2.76	11.6	10111	1.81	6.0	11686	.75	2.0	12904
60	3.48	29.2	5577	3.06	19.2	7094	2.76	14.5	8140	2.26	9.7	9470	1.48	5.0	10854	.62	1.6	11974

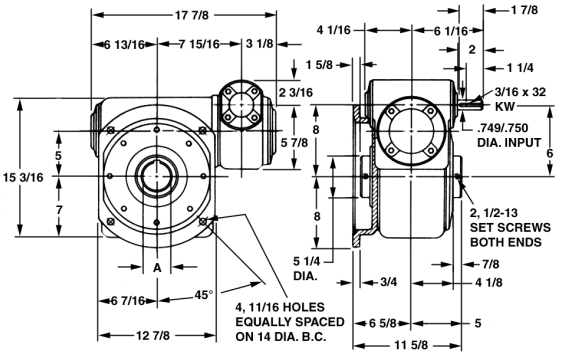
50DSA Net wt. 220 lbs.



5.0" C.D.

A (BORE)	KEYWAY
2.4375 2.4395	5/8 x 5/16
2.500 2.502	5/8 x 5/16
2.6875 2.6895	5/8 x 5/16
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16

Net wt. 261 lbs. 50DSF



1.00 Service Factor* - Double Reduction Wormgear - Models 50DSA and 50DSF
2.5" Centers Primary - 5.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT		
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
75	5	15	4.76	23.33	9904	3.95	15.33	12051	3.36	11.60	13276	2.42	7.73	13832
100	5	20	4.47	17.50	11961	3.25	11.50	12751	2.60	8.70	13124	1.85	5.80	13511
125	5	25	3.73	14.00	11963	2.71	9.20	12730	2.17	6.96	13091	1.56	4.64	13468
150	10	15	3.18	11.67	12310	2.44	7.67	13839	1.93	5.80	14052	1.36	3.87	14273
200	10	20	2.64	8.75	13117	1.87	5.75	13518	1.48	4.35	13706	1.05	2.90	13901
250	10	25	2.21	7.00	13085	1.57	4.60	13474	1.24	3.48	13656	.88	2.32	13846
300	15	20	1.93	5.83	13507	1.36	3.83	13776	1.07	2.90	13901	.76	1.93	14032
400	20	20	1.55	4.38	13703	1.08	2.88	13905	.86	2.18	13999	.61	1.45	14097
500	25	20	1.29	3.50	13820	.91	2.30	13982	.72	1.74	14058	.51	1.16	14136
600	30	20	1.15	2.92	13899	.82	1.92	14034	.65	1.45	14097	.47	.97	14163
800	40	20	.94	2.19	13997	.67	1.44	14099	.53	1.09	14146	.38	.73	14195
1000	50	20	.80	1.75	14057	.57	1.15	14138	.45	.87	14176	.33	.58	14215
1200	60	20	.70	1.46	14066	.50	.96	14164	.400	.73	14195	.29	.48	14228
1500	25	60	.55	1.17	12105	.40	.77	12235	.32	.58	12296	.23	.39	12359
1800	30	60	.50	.97	12168	.36	.64	12277	.29	.48	12327	.21	.32	12380
2400	40	60	.41	.73	12247	.30	.48	12329	.24	.36	12367	.17	.24	12406
3000	50	60	.35	.58	12295	.25	.38	12360	.20	.29	12390	.15	.19	12422
3600	60	60	.31	.49	12326	.23	.32	12381	.18	.24	12406	.13	.16	12432

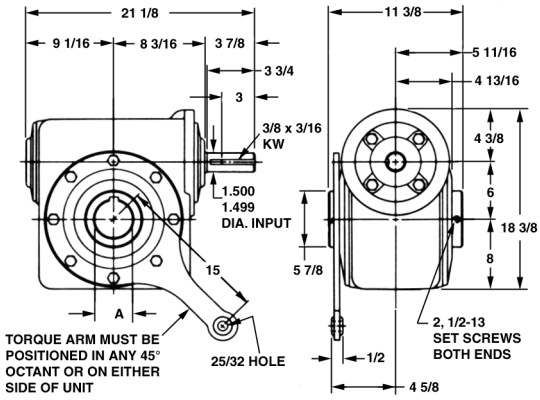
▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

SA, SF, DSA and DSF Series

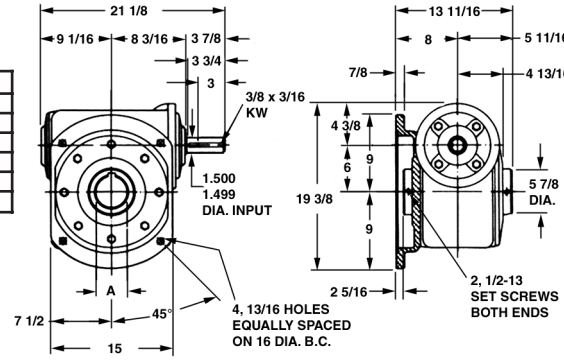
60SA Net wt. 310 lbs.



6.0" C.D.

A (BORE)	KEYWAY
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16
3.9375 3.9395	1 x 1/2

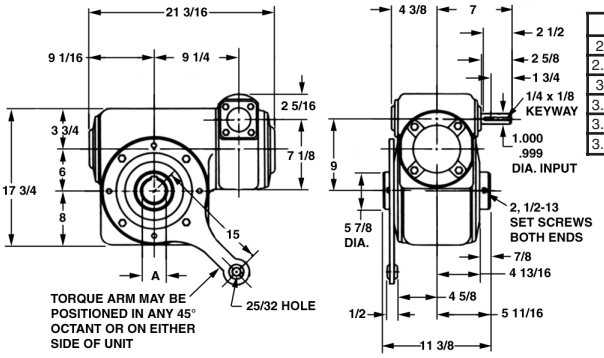
Net wt. 378 lbs. 60SF



1.00 Service Factor* - Single Reduction Wormgear - Models 60SA and 60SF

TORQUE and HORSEPOWER RATINGS																	
RATIO	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			AT 300 RPM INPUT			AT 100 RPM INPUT		
	Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output	
		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque
5	38.15	350.0	6527	31.40	230.0	8104	27.71	174.0	9384	23.55	116.0	11849	16.02	60.0	15260	6.57	20.0	18127
10	25.10	175.0	8408	50.75	115.0	10437	18.60	87.0	12245	15.56	58.0	15129	10.27	30.0	18747	4.14	10.0	21641
15	18.54	116.6	9084	15.39	76.6	11275	13.90	58.0	13288	11.61	38.7	16315	7.68	20.0	20026	3.12	6.6	23008
20	14.50	87.5	9283	12.12	57.5	11560	10.99	43.5	13640	9.10	5.87	16535	5.96	15.0	19955	2.42	5.0	22655
25	11.72	70.0	9254	9.91	46.0	11625	8.93	34.8	13623	7.28	4.88	16204	4.69	12.0	19127	1.88	40	21394
30	10.37	58.4	9438	8.73	38.4	11728	7.97	29.0	13843	6.74	4.41	16909	4.55	10.0	20627	1.92	3.3	23631
40	7.96	43.7	9299	6.76	28.7	11581	6.20	21.8	13672	5.22	14.5	16531	3.52	7.5	19879	1.48	2.5	22507
50	6.23	35.0	8867	5.37	23.0	11173	4.89	17.4	13038	4.05	11.6	15499	2.69	6.0	18232	1.12	2.0	20366
60	5.12	29.2	8418	4.45	19.2	10603	4.06	14.5	12374	3.39	9.7	14717	2.27	5.0	17305	.96	1.6	19390

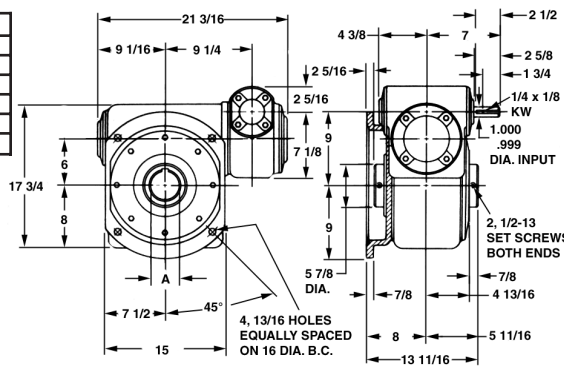
60DSA Net wt. 375 lbs.



6.0" C.D.

A (BORE)	KEYWAY
2.750 2.752	5/8 x 5/16
2.9375 2.9395	3/4 x 3/8
3.000 3.002	3/4 x 3/8
3.1875 3.1895	3/4 x 3/8
3.4375 3.4395	7/8 x 7/16
3.9375 3.9395	1 x 1/2

Net wt. 448lbs. 60DSF



1.00 Service Factor* - Double Reduction Wormgear - Models 60DSA and 60 DSF
3.0" Centers Primary - 6.0" Centers Secondary

TORQUE and HORSEPOWER RATINGS															
RATIO	Primary Ratio	Secondary Ratio	AT 1750 RPM INPUT			AT 1150 RPM INPUT			AT 870 RPM INPUT			AT 580 RPM INPUT			
			Input HP	Output		Input HP	Output		Input HP	Output		Input HP	Output		
				R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque		R.P.M.	▲Torque	
75	5	15	8.06	23.33	17032	6.79	15.33	21041	5.46	11.60	21878	3.92	7.73	22752	
100	5	20	7.11	17.50	19334	5.26	11.50	20907	4.23	8.70	21668	3.04	5.80	22463	
125	5	25	5.60	14.00	18581	4.11	9.20	19931	3.29	6.96	20567	2.36	4.64	21230	
150	10	15	5.37	11.67	21159	3.95	7.67	22767	3.13	5.80	23192	2.22	3.87	23633	
200	10	20	4.30	8.75	21655	3.06	5.75	22476	2.43	4.35	22862	1.72	2.90	23262	
250	10	25	3.35	7.00	20556	2.38	4.60	21242	1.89	3.48	21563	1.34	2.32	21897	
300	15	20	3.16	5.83	22453	2.23	3.83	23004	1.77	2.90	23262	1.25	1.93	23530	
400	20	20	2.52	4.38	22855	1.78	2.88	23269	1.41	2.18	23463	1.01	1.45	23665	
500	25	20	2.12	3.50	23096	1.49	2.30	23429	1.19	1.74	23584	.85	1.16	23745	
600	30	20	1.89	2.92	23258	1.34	1.92	23535	1.07	1.45	23665	.76	.97	23799	
800	40	20	1.53	2.19	23460	1.09	1.44	23668	.87	1.09	23765	.63	.73	23866	
1000	50	20	1.30	1.75	23581	.93	1.15	23748	.75	.87	23826	.54	.58	23906	
1200	60	20	1.16	1.46	23662	.83	.96	23801	.67	.73	23866	.49	.48	23933	
1500	25	60	.86	1.17	19642	.61	.77	19887	.49	.58	20002	.36	.39	20121	
1800	30	60	.77	.97	19761	.55	.64	19966	.45	.48	20062	.32	.32	20161	
2400	40	60	.63	.73	19910	.46	.48	20064	.37	.36	20136	.27	.24	20211	
3000	50	60	.54	.58	20000	.39	.38	20124	.32	.29	20191	.23	.19	20241	
3600	60	60	.48	.49	20060	.35	.32	20163	.28	.24	20211	.21	.16	20261	

▲ Inch-pounds

* Refer to page D-116 for other service factors. Refer to pages D-117 and D-118 for torque arm and flange arrangements. Shaft mounted units will be furnished with torque arm or mounting flange on the side shown unless otherwise specified on order.

Consult Application Engineering (1 800 626 2093) for OHL and thrust load values.

Browning®

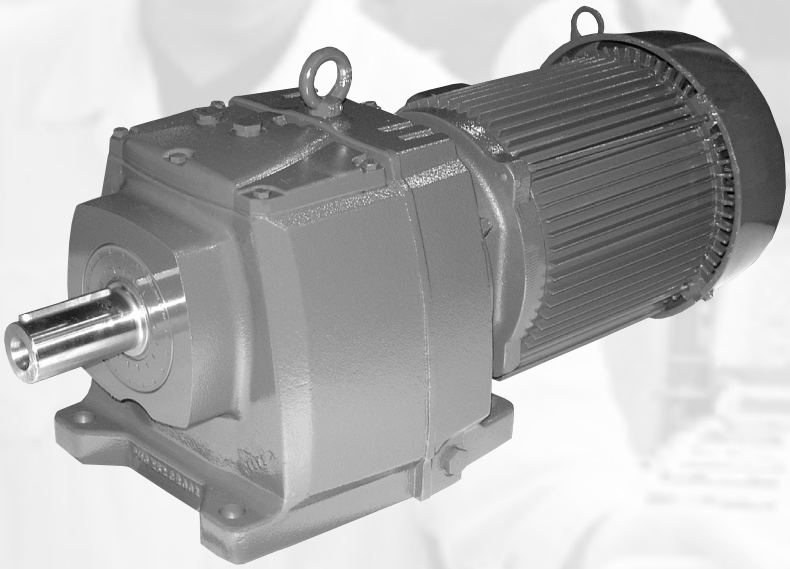
CbN Helical In-line Gearmotors and Speed Reducers

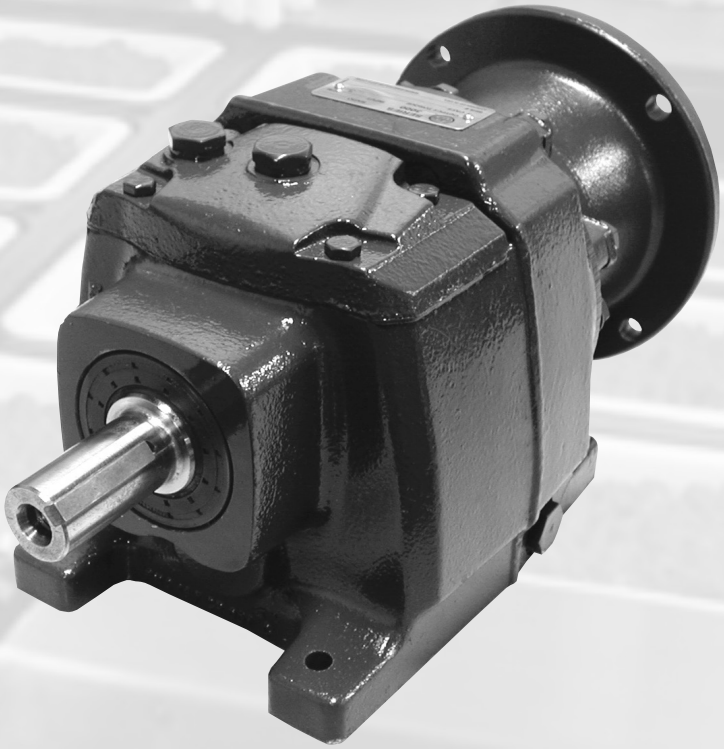
Industries

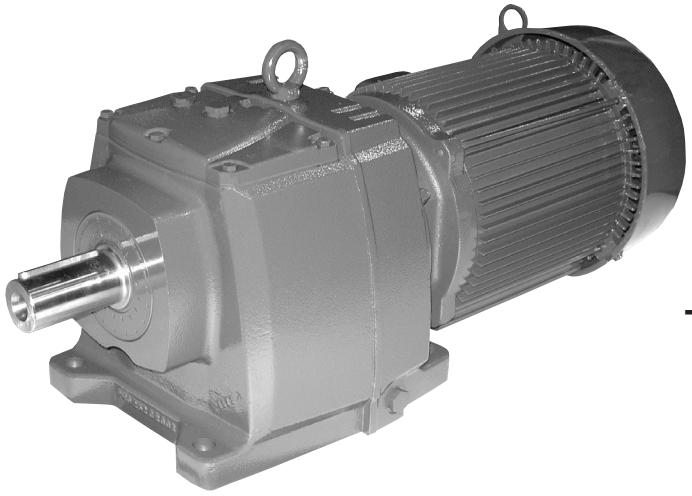
- ❑ Food Processing
- ❑ Warehousing
- ❑ Parcel and Package Sortation
- ❑ Water/Wastewater Treatment

Applications

- ❑ Positive Displacement Pumps
- ❑ Unit Handling Conveyors
- ❑ Oven Conveyors
- ❑ Low Speed Fans
- ❑ Industrial Door Openers



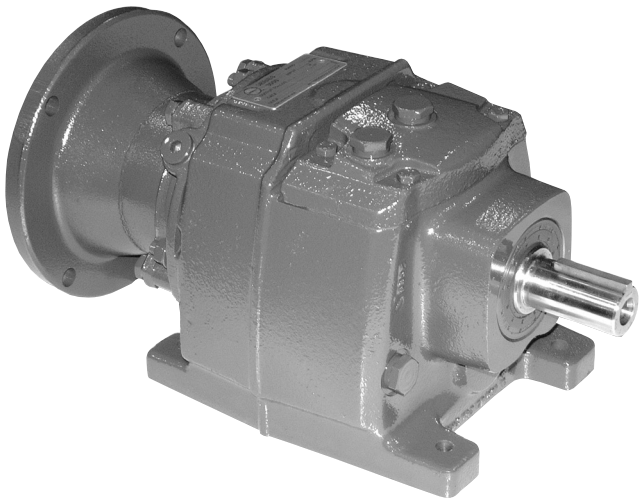




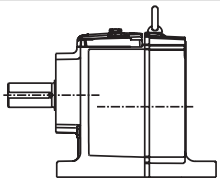
TEFC Three and Single Phase

Gearmotor Section ..... Page E-3 - E-110

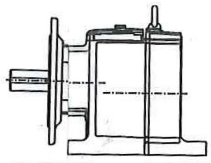
C-Face Reducer



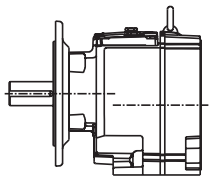
Reducer Section..... Page E-111 - E-223



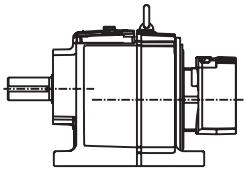
Foot Mount
1, 2, 3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



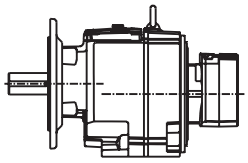
Footed with Flange
1, 2, 3 stages
Frames 1 – 5
Max. 27,000 in. lbs.



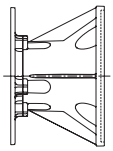
Flange and Face Mount
1, 2, 3 stages
Frames 0 – 8
Max. 134,000 in. lbs.



Foot Mount
4, 5, 6 stages
Frames 2 – 8
Max. 134,000 in. lbs.

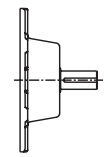


Flange Mount
4, 5, 6 stages
Frames 2 – 8
Max. 134,000 in. lbs.

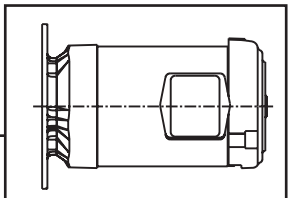


NEMA C-Face
56C to 365 TC
Frames 0 – 8

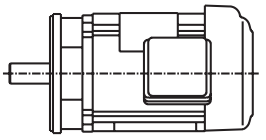
Backstop Option **



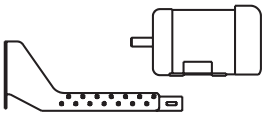
Input Shaft
Frames 0 – 8



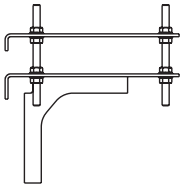
Gearmotors
1/3 - 50 HP



C-Face Motors
Frames 56 C - 365 TC



Scoop Mount
Frames 2 - 8*
56 to 326T



Top Mount
Frames 2 - 8*
56 to 326T

* Refer to page E-120 for availability of this option for single and combined stage product.
**Excluding Frame 0 all stages and Frame 2-3 : 4,5 and 6 stage

Selection Information

General

CbN 3000 helical gearmotors and speed reducers incorporate the latest in design and manufacturing technologies to deliver an energy efficient, helical, gear train combined with either a constant or variable speed motor. This latest generation of CbN inline gearing is 98 percent efficient per gear stage and boasts total efficiency improvements over previous designs by delivering up to 40 percent more total speed reduction without added gear stages.

Gearmotors

Three phase CbN gearmotors intended for use in non-hazardous environments are offered as standard with PE premium efficiency motors starting at 1/3 HP at short lead-times. These same PE motors include full inverter duty construction features including winding thermostats and special winding designs complying with NEMA® MG1 Part 31.* These motors meet or exceed the requirements in the US and Canada for energy efficiency to deliver the lowest operating cost, lowest temperature rise on sine wave power, and wide constant torque speed ranges on VFD power sources with a 3 year warranty for the End User. Regal offers several motor enclosure options under the PE umbrella including CorroGard® cast iron exterior construction for the most hostile industrial environments. TEFC enclosed single phase and three phase gearmotors through 10 HP can be supplied with motor mounted failsafe brakes, as required. Regal also offers gearmotors in single phase TEFC designs to 5HP, and dual label explosionproof 3 phase gearmotors from .33 to 5 HP. Explosionproof gearmotors ≥ 1 HP are also premium efficiency.

Housing

One-piece housings replace the classical two-piece designs to improve alignment and overhung load integrity in the most demanding applications. Extremely compact envelopes provide low profiles and the footprint to directly interchange with older CbN products for simple aftermarket replacements. All housings are cast, with frames made with high strength cast iron (frame 0 is aluminum). Motor interfaces are generally shorter than previous CbN designs.

Performance

These CbN designs deliver up to 35 percent more capacity than previous CbN products in equivalent frames. For replacements, this means longer life. For new applications, this means cost savings through possible downsizing. Each CbN unit is factory filled with synthetic hydrocarbon lubricant, ready to operate in a wide band of ambient temperatures with minimal in-service maintenance.

Flexibility

Improvements in CbN designs begin with the expansion of flange mounting options available. All PE three phase non-explosionproof motors are designed and delivered for use on inverters and deliver up to 10:1 constant torque speed ranges at full gearmotor output torque. C-Face inputs utilize a compact quill design with a non-metallic liner and metal key to eliminate fretting corrosion making motor removal easy, and a compact envelop with shorter overall length. Each housing can be oriented in different mounting positions by a minor adjustment in oil level and relocation of the breather and drain plug locations.

Reliability

Gear housings 1 to 5 are fitted with normally closed breathers, excluding outside contaminants and preserving low internal operating pressures. Gear housing 6 to 8 are fitted with a combination breather and dipstick. The dipstick makes periodic preventative maintenance of oil volumes quick and accurate. All oil seals operate on plunge ground shaft journals to deliver low temperatures and extended seal life. By standardizing on Inverter Duty construction for all PE CbN gearmotors, one motor can be stocked per HP for easy, on-site replacement of a motor whether that gearmotor is used on a VFD or on line power up through 575V.

* NEMA is believed to be the trademark and/or trade name of National Electrical Manufacturers Association and is not owned or controlled by Regal Beloit Corporation.

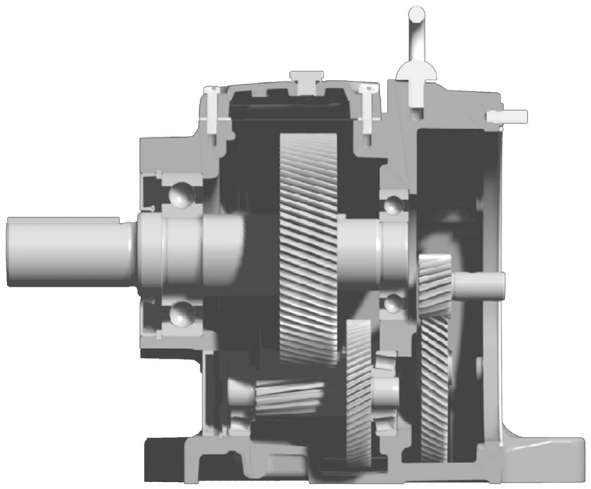
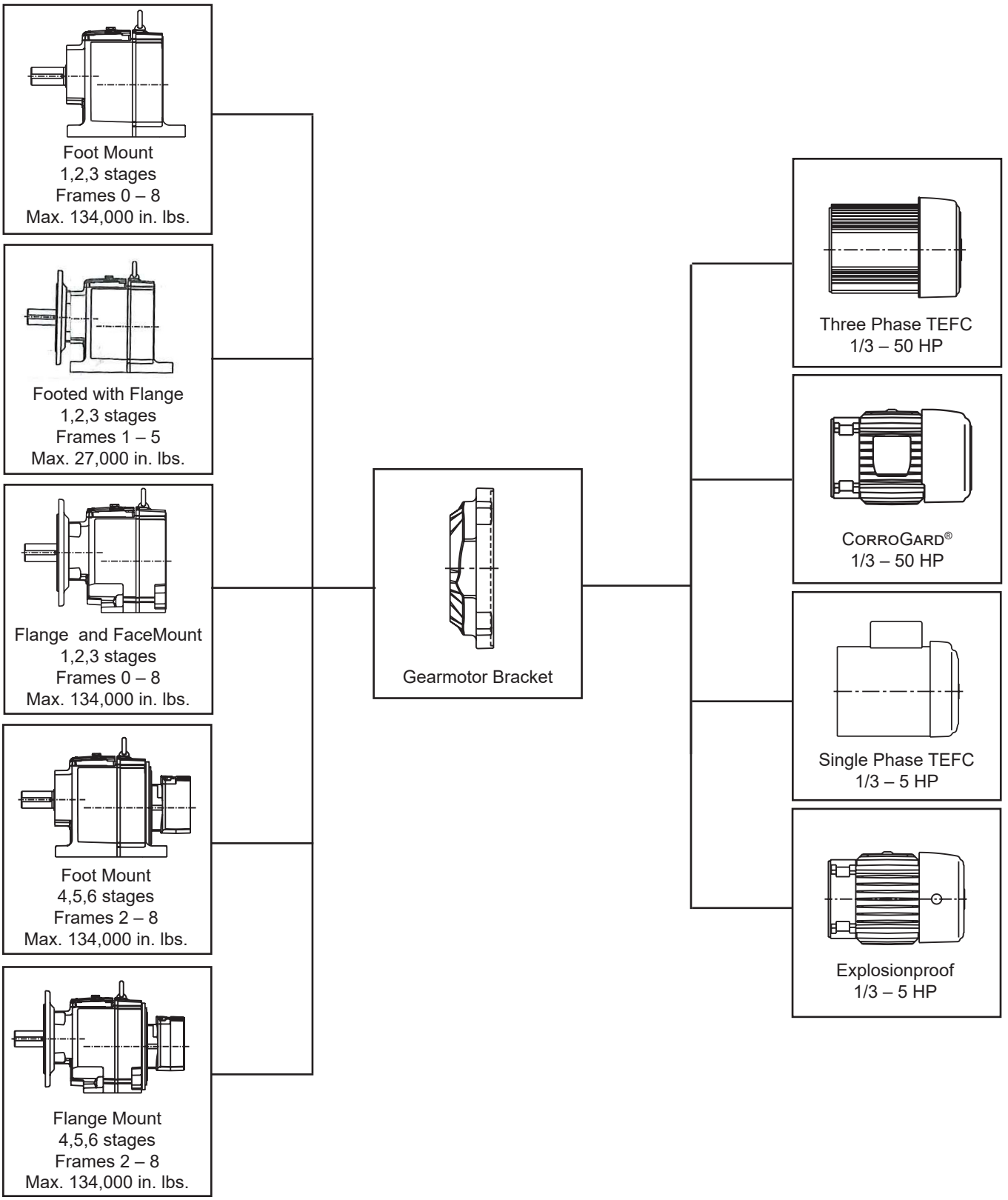


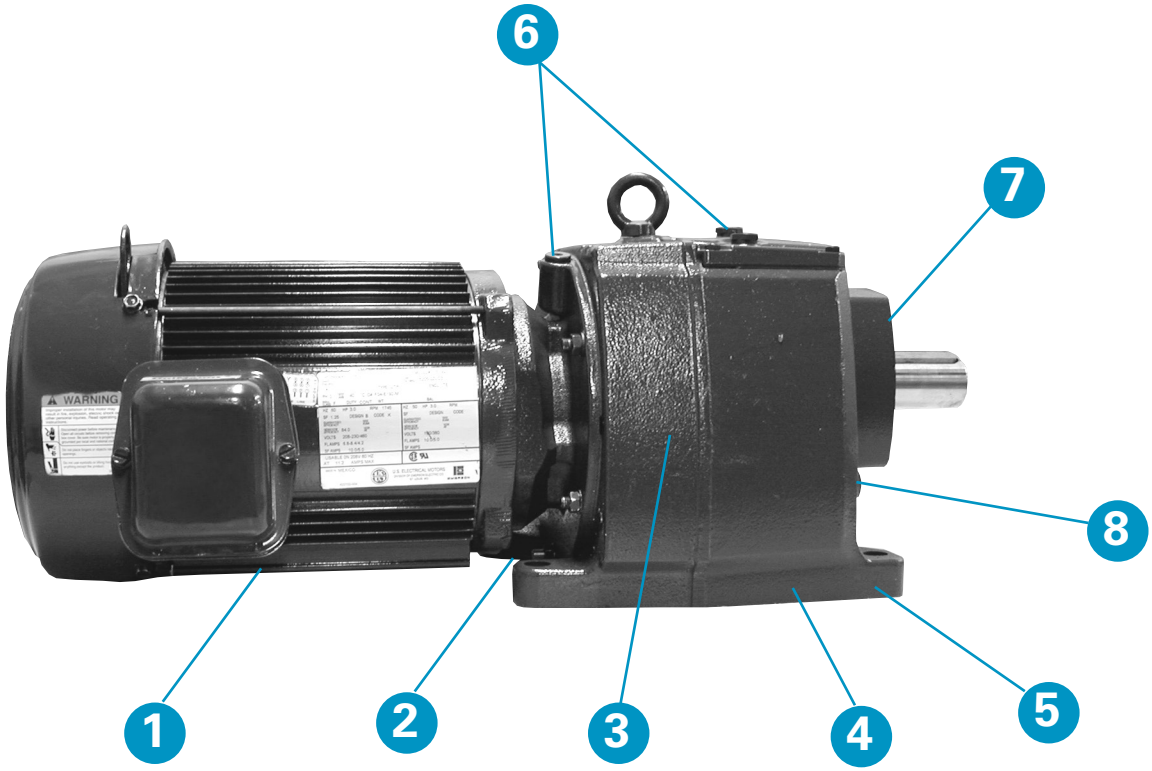
Table of Contents

Section	Page
Mounting Versatility and Size Range	E-6
Design Features	E-7
Motor Options	E-8
Gearmotor Selection	E-9 - E-10
Catalog Nomenclature	E-11 - E-15
Mounting Positions	E-13
Motor Types and Availability	E-14
Lubrication	E-222 - E-223
Modifications, Options and Accessories	E-15 - E-18
AGMA Application Classifications	E-19 - E-21
Gearmotor Selection Tables	E-22 - E-65
Dimension Prints (inch)	
Three Phase Footed	E-66 - E-84
Three Phase Flange Mounted	E-85 - E-105
Three Phase Footed with Flange	E-105 - E-106
Alternative Motor Types and Dimensions	E-107 - E-109
Brake Dimensional Supplement	E-109
Gearmotor Weights	E-110
Dimension Print Supplements	
Face Mounted	E-213 - E-214
Metric Output Shafts	E-215 - E-220
Motor Performance Data	Section H

Mounting Versatility and Size Range



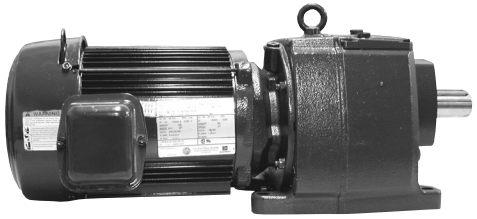
Type CbN In-line Helical Series 3000 PE Gearmotors Features...



Design Features

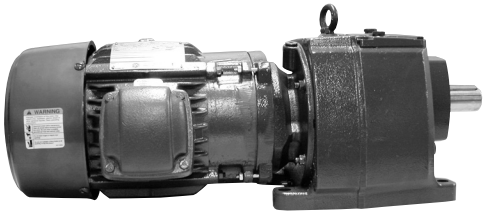
1. Premium Efficiency/Inverter Duty Motor Design Standard
   - Any non-XP 3 phase gearmotor
   - XP 3 phase gearmotors ≥ 1HP are Premium Efficiency
2. Innovative, self-locking, taper shaft connection (motor to gear) allows on-site replacement without removing oil, primary pinion, or disconnecting the load.
3. Gearbox is delivered filled with synthetic oil, ready to use in mounting position ordered.
4. Corrosion resistant, cast iron housings are one piece and ribbed for extra strength. (Size 0 housings are cast aluminum housings.)
5. Gears are made of 8620, heat treated, nickel chromium, molybdenum steel. Helical gearing is skived, superfinished, or ground after being case hardened to 58-62 Rc.
6. Multiple breather locations. Breathers are normally-closed to exclude external contaminants
   - Frame 6 to 8 use open breathers incorporating a dipstick
7. Double lip seals are installed on plunge ground shafts.
8. Magnetic drain plug is supplied as standard.

Motor Options



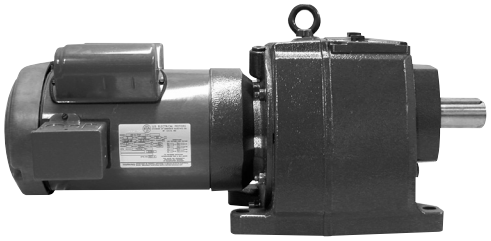
TEFC – Three Phase

- Premium Efficiency/Inverter Duty PE Gearmotors standard
  - o 60 Hz from .33 to 50 HP
  - o Constant torque 60-6Hz to 7.5 HP, 90-6Hz on all HPs
  - o Three year motor warranty
  - o Meet or exceed NEMA premium efficiency on line power
- Premium Efficiency 50 Hz option to meet EU IE3 specs through 7.5 HP
- High Efficiency (lower cost) option in frac. HP sizes
- Failsafe brake option available through 10 HP in IP23 enclosure



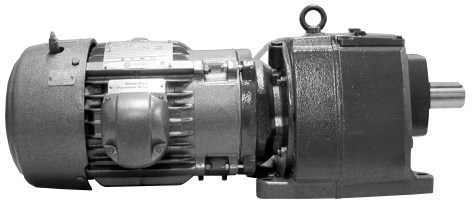
CorroGard® – Three Phase

- Designed for wet, outdoors or corrosive conditions of waste treatment, mining, lumber, and chemical processing industries
- Premium Efficiency/Inverter Duty PE Gearmotors standard
  - o 60 Hz from .33 to 50 HP
  - o Constant torque 60-6Hz to 7.5 HP, 90-6Hz on all HPs
  - o Three year motor warranty
  - o Meet or exceed NEMA premium efficiency on line power
- All cast iron construction (note: 56/140T frames are rolled steel)
- High Efficiency (lower cost) option in frac. HP sizes
- Design B, Class F, 1.25 SF through 5HP and 1.15 SF in larger HPs



TEFC – Single Phase

- For agricultural, material handling, textile and pumping applications
- 1.25 service factor up to 1.5 HP
  - o (1.0 service factor @ 2 HP)
  - o (1.15 service factor, 3 and 5 HP)
- Capacitor start/Induction Run (capacitor run above 2 HP)
- Class B insulation, continuous duty, reversible



Explosionproof

- Designed for most petrochemical, grain, mining and chemical applications
- Class I, group D and Class II, groups F & G, T3B
- Premium Efficiency is standard ≥ 1 HP
- Cast iron construction
- Class F insulation, Class B rise and winding thermostats standard
- 40°C ambient, NEMA B design, continuous duty

Gearmotor Selection

Selection Information

1. Input HP
   - Based on application data.

2. Speed / ratio
   - Obtain either desired output speed (rpm) or gearbox ratio based on application.

3. Mechanical service factors - gears
   - There are three standard classifications for gearmotor applications:

     Class I - Uniform loading, 3-10 hours per day, service factor 1.0 (minimum).

     Class II - Uniform loading over 10 hours per day or moderate shock loading up to 10 hours per day; service factor 1.4 (minimum).

     Class III - Moderate shock loading over 10 hours per day or heavy shock loading up to 10 hours per day; service factor 2.0 (minimum).

   - The tables on pages E-19 through E-21 are based on past operating experience within the industries listed and information gathered by AGMA. If the user has data reflecting greater severity than normal industry usage, then the AGMA class should be increased.

   - Choose the AGMA class for your given application based on this criteria. If your application cannot be found, use the following table to determine the service factor.

Duty Cycle	Hours Operation	Uniform Load **U**	Moderate Shock Load **M**	Heavy Shock Load **V**
Continuous	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Frequent Starts/Stops*	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

*Greater than 10 per hour.

Size Selection

Step 1 -Locate gearmotor selection tables (pages E-22 - E-65) based on input HP.

Step 2 -Choose the appropriate nominal speed required.

Step 3 -Select the correct gearmotor based on AGMA class or service factor determined in selection information.

Step 4 - Verify overhung load ratings where required (see below).

Overhung Load

When a sprocket, sheave, pulley, or pinion is mounted on the output shaft of a gearmotor, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

Where:
OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
V-Belt	1.50
Timing Belts	1.25

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Gearmotor Selection

Example

A horizontal, foot mounted gearmotor is required to operate a uniformly loaded, assembly conveyor at 44 rpm, 24 hours per day. An 8" diameter sprocket is mounted at the end of the shaft and drives the conveyor with a chain. The load is 3 HP and the customer requests a 230/460 volt, Premium Efficiency TEFC motor end.

Step 1...

The AGMA service classification table on page E-19 indicates that this is a Class II application.

Step 2...

The CbN gearmotor table on page E-42 indicates that a gear frame 3363 will do the job.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
44	I,II	1.4	4099	2305	40	3363	182T	T,S,C,X

Step 3...

To check overhung load for the example:

$$r = \frac{\text{Sprocket Diameter}}{2} = \frac{8}{2} = 4$$

K = 1.0 (chain drive)

LLF = 1.2 (sprocket on end of shaft)

HP = 3

Torque formula:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

$$OHL = \frac{63025 \times 3 \times 1.0 \times 1.2}{44 \times 4} = 1289 \text{ lbs.}$$

The overhung load capacity of 2305 lbs. listed is greater than the calculated overhung load value of 1289 lbs.

Step 4...

Confirm that no modification is required.

Step 5...

Catalog designation (see "Ordering" page E-11):

CbN • 3363 • S • B3 • 40 • PT24 • 182T • 3

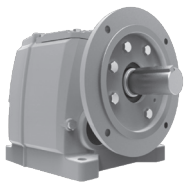
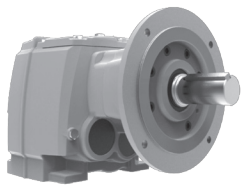
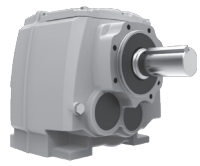
Catalog Nomenclature

CbN • 3252 • S • B3 • 40 • PT5 • 145T • 1.5

See Table Below Prior to Ordering

See Page E-14 Prior to Ordering

Series	Gear Frame	Number of Reductions	Mounting Configuration For Gear (Housing and Shaft Extension)	Mounting Plane	Nom. Gear Ratio	Motor Design	Motor Frame	Motor HP
3 = 3000	0 1 2 3 4 5 6 7 8	1 = 1 stage 2 = 2 stages 3 = 3 stages 4 = 4 stages 5 = 5 stages 6 = 6 stages	Refer to the illustrations below of the basic mounting options based on gear frame and stages of reduction. For Flanged gear mounting, refer to details for options that are available based on frame size, flange dimensions, and thrust loads for the application on page E-12.	See Page E-13	Determine from selection pages	Select motor based on enclosure, power supply, and the poles required	56 143T 145T 145TY 182T 184T 213T 215T 254T 256T 284T 286T 324T 326T	1/3 1/2 3/4 1 1 1/2 2 3 5 7 1/2 10 15 20 25 30 40 50

Gear Output	Foot Mounted	Foot Mount w/ Flange	Flange Mount (footless)		Face Mount (footless)
			Std. Thrust	High Thrust	
Configuration Code (inches)	**S**[1]	See Page E-12	See Page E-12	See Page E-12	**B14**
Frame(s) Available	All	See Page E-12	All	See Page E-12	30 - 35

[1] Inch output shaft. For output with metric shaft, insert "M" following last alpha character (i.e. metric footmount, S becomes SM).

Flange - No Feet

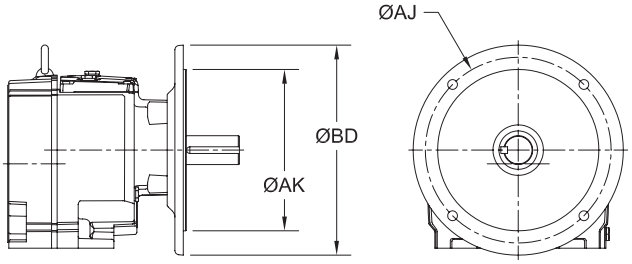
		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	30	56C	BD1	BS	BD2	BD3							
		31			BD2	BS								
		32				BD2	BS							
		33					BD2	BS						
		34						BD2	BS					
		35							BD2	BS				
	Multiple	30	56C	BD1	BS	BD2	BD3							
		31		BD3	BD2	BD1	BS							
		32				BD2	BD1	BS						
		33					BD2	BD1	BS					
		34						BD2	BD1	BS				
		35							BD2	BD1	BS			
		36										BD1	BS	
		37										BD1	BS	
		38											BD1	BS
High Thrust	Multiple	33						BR						
		34							BR					
		35								BR				

Footed - with Flange

		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	31			SBD2	SBS								
		32				SBD2	SBS							
		33					SBD2	SBS						
		34						SBD2	SBS					
		35							SBD2	SBS				
	Multiple	30A		SBD1	SBS									
		31		SBD3	SBD2	SBD1								
		32					SBD1	SBS						
		33						SBD1	SBS					
		34							SBD1	SBS				
		35								SBD1	SBS			
		36										SBD1	SBS	
		37										SBD1	SBS	
		38											SBD1	SBS

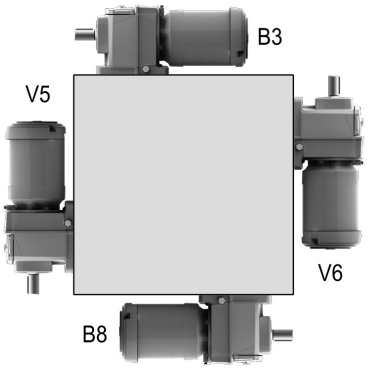
Shaded fields indicate factory lead-time applies

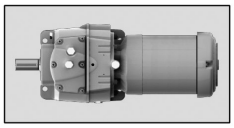
Note: For metric output shaft on any output nomenclature above, add "M" before any numeric designator. (i.e. metric shaft with BD1 flange = BDM1)

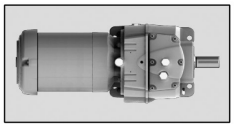


Mounting Positions

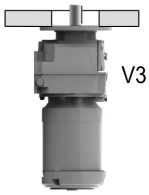
Foot Mounted (with/without flange) Any Reduction

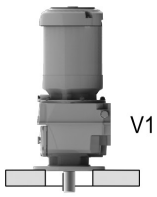


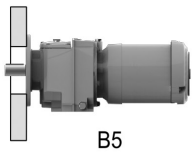




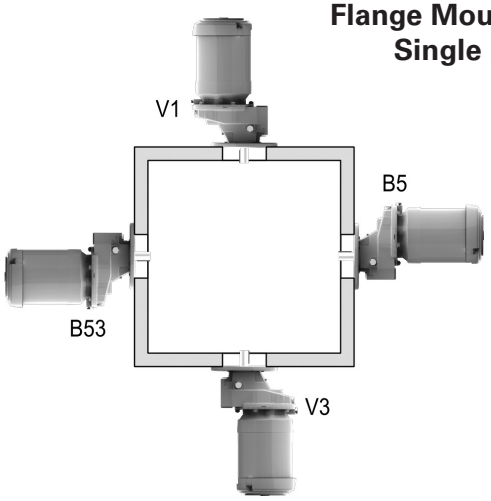
Flange Mounted (footless) Multiple Reductions

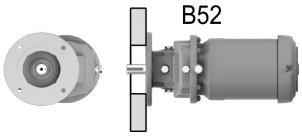


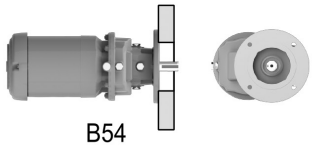




Flange Mounted (footless) Single Reduction







Standard Motor Input Types

Example: Premium Efficiency, TEFC, 3 phase 60 Hz, 575V, with Fail-safe Brake

P T 5 B

1 Efficiency

- **"blank"** Normal
- **H** High
- **P** Premium

2 Enclosure, pole

- **T** TEFC, 4 pole
- **C** CorroGard® motor, 4 pole
- **X** Explosionproof, 4 pole

3 Phase, Hz, Voltage

- **S12** 1 Phase, 60, 115/230V
- **S2** 1 Phase, 60, 230V
- **24** 3 Phase, 60, 230/460V*
- **53** 3 Phase, 50, 380V
- **54** 3 Phase, 50, 400/415V
- **5** 3 Phase, 60, 575V

4 Accessories

- **"blank"** No Brake
- **B** Fail-safe Brake

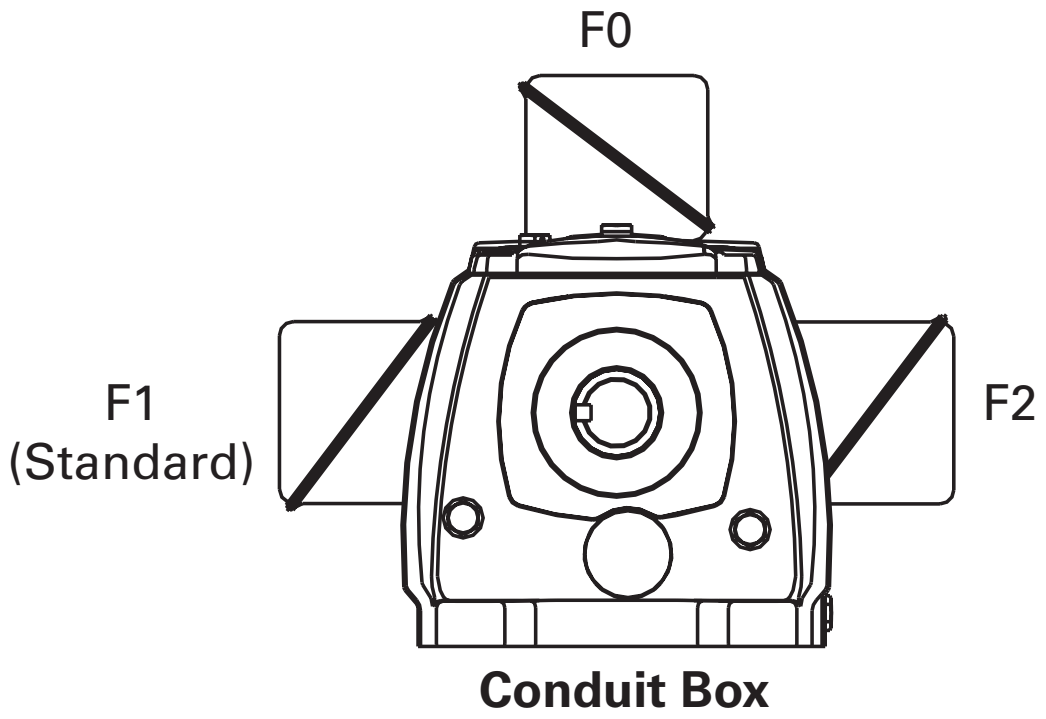
Base Design	Input Code	Motor HP															
		0.33	0.50	0.75	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50
S Single Phase TEFC	TS12	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS12B	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS2	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
	TS2B	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
T 3 Phase TEFC	HT24*	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT24B	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT5B	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT24 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PT24B ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	PT5 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PT5B ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	HT53 ●	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT53 ●♦	-	-	-	Y	Y	Y	Y	RO	RO	-	-	-	-	-	-	-
	HT54 ●	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT54 ●♦	-	-	-	Y	Y	Y	Y	RO	RO	-	-	-	-	-	-	-
C 3 Phase CorroGard®	HC24*	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HC5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PC24 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PC5 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
X 3 Phase Explosionproof	X24	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	X5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PX24	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-
	PX5	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-

Y Available From Stock
- Not Available
***** Input Codes HC24 and HT24 are rated 60 Hz 208-230/460V
RO Refer To Company For Availability

▲ Motor Is NEMA Premium Efficiency and NEMA MG-1 Part 31 Inverter Duty (PE GEARMOTOR with 3 year motor warranty)
● Motor Bears CE certification of sale into EU. Designed for X-Line starting
♦ Motor Efficiency Meets EU Requirements Jan. 2017

Conduit Box Location

When ordering a conventional CbN gearmotor, specify the desired conduit box location when viewing unit output shaft in B3 or B5 position. If no option is specified, the "F1" location will be supplied.



Modifications, Options and Accessories

Inverter Duty Gearmotors

All standard three phase 60 Hz non-explosionproof Regal® Series 3000 PE CbN gearmotors utilize motors that are not only Premium Efficiency but are designed and nameplated for Inverter duty. Our commitment is to deliver the highest quality motor for the broadest spectrum of applications in one design. Below is a table showing the constant torque performance of these gearmotors:

Motor Type	Motor Input Codes	C/T Freq. Range	Motor HP @ Max. Hz of Range	
			1/3 to 7 1/2 HP	10 HP - Up
T and C	PT24, PT24B, PT5, PT5B PC24, PC5	5:1 60-12 Hz	-	Yes
		10:1 60-6 Hz	Yes	-
		15:1 90-6 Hz	Yes	Yes

These inverter duty motors incorporate superior design features including but not limited to

- Three-year motor warranty
- Precision balanced rotors (to 1/2 NEMA Std.) for smooth operation above 60 Hz
- Winding thermostats (one per phase) with leads brought out to main conduit box
- Brake motor design available

Motor Modifications

M1 Brakes

Design

These motor mounted brakes have a direct acting, spring set, electromagnetically released disc design. When power to the brake is interrupted, the brake will immediately set and hold. When power is restored to the brake then the brake will be released automatically. Manual release lever is standard.

Brake Enclosures

IP23 – suitable for indoors with relatively dry, clean and non-hazardous applications

Non-Hazardous Motor Types	Motor Frame Size(s)	
	56-180T	210T
S	IP23	N/A
T	IP23	IP23

Motor Modifications Continued

Operating Voltage

Brakemotors for fixed frequency operation will be arranged for operating with motor power as standard. If another lower voltage like 115 VAC is to be used for the brake on a 3 phase motor, state this voltage at order entry

Brakes for inverter controlled brakemotors require a separate fixed frequency AC power source for the brake, but interlocked with starting of the motor. The standard brake design for inverter duty gearmotors will be arranged for single phase 115/230 VAC.

Mounting

Brakes for CbN gearmotors are suitable for the mounting ordered for the gearmotor. The standard brake will have a manual release included.

Ordering

Refer to page E-14. Motor Input Types with a "B" suffix denote a brake mounted at the factory to the end. Define the voltage that will be powering the brake to release it.

M2 Premium Efficiency Motors

NEMA premium efficiency motor designs are standard for all non-explosionproof 60 Hz "T" and "C" enclosed designs starting at 1/3 HP. Explosionproof motors (type "X") ≥ 1HP are NEMA premium efficiency as well. These designs meet or exceed government standards required in the USA for 2016 and new standard effective in June 2017 for Canada.

For 50 Hz 380V and 415V destinations, three phase motor designs 1 to 7.5 HP are available TODAY to meet the IE3 premium efficiency requirements effective January 2017 in Europe.

Regal does offer an alternative High Efficiency motor option for its Fractional HP three phase gearmotors in all motor enclosures.

M4 Canopy Cap/Drip Cover

This cover provides optional protection from dripping liquids when a gearmotor is ordered for either V1 or V5 mounting. These can be selected for most motor "T" or "S" designs up to 10 HP excluding units supplied with brakes.

M5 Frequency – 50 Hz

Motors for operation from 50 Hz power supplies are available using HT53 or PT53 if 380V. Other power options include HT54 or PT54 if 415V. All motors are designed for X-Line starting. Gearmotor selection and rating tables reflect performance from 60 Hz power. To select a gearmotor for 50Hz at the motor HP shown, use the following "conversion" rules:

- Reduce published "Output RPM" by (60 Hz value x 5/6) to get 50 Hz Output rpm
- Reduce published "gear service factor" by (60 Hz value x 5/6) to get 50 Hz gear service factor
- Ensure the final selection yields a suitable gear service factor for the application intended

Modifications, Options and Accessories

Motor Modifications Continued

M6 Voltage (3 phase only)
Standard voltages are listed in the table below. 200 VAC will be handled by 208-230/460V motors up to 10 HP. Refer all other voltages to the Pricing Group to confirm availability.

Frequency	3 Phase Voltages Thru 30 HP
60 Hz	200, 230, 460, 575
50 Hz	380, 400/415

M7 Motor Insulation
Regal® 3 phase motors are built with a premium Class F insulation system for "T", "C" types. All "S" and "X" type motors use a Class B insulation.

M8 Space Heaters
Space heaters are recommended for gearmotors installed in very damp locations to prevent condensation from forming on the motor windings when the motor is not operating. Leads will be brought out to the standard motor conduit box. Space heater voltages (115, 230, and 460V) must be specified when an order is entered. This is available on motors > ¾ hp.

M9 Thermal Protection – Thermostats

Three N/C winding thermostats (one per phase) are standard and pre-wired to the main motor conduit box for the following input codes:
- Motor Type "T" – PT24, PT24B, PT5, PT5B
- Motor Type "C" – PC24, PC5
- Motor Type "X" – all types

Thermostats are standard in inverter duty motor designs as well as explosionproof dual label motors type "X".

Motor Options

Certification or Approvals For Gearmotors

Hertz	Phase	Motor Voltage	Approvals [1] Standard
60 Hz	1	115/230V	UL, CSA
	3	230/460	UL, CSA
		575	UL, CSA
50 Hz	3	380	CE
		415	CE

[1] Corresponding logo(s) will be displayed on motor nameplate

Gear Modifications

G11 CorroGard™ Treatment
CorroGard™ gearmotors should be ordered when operation is near corrosive chemicals or adverse environmental conditions. For gearmotors, the unit construction should start with the specification of the CORROGARD motor input code including "C". Refer to E-14 for the one that applies to your application. Other special features of the gearmotor construction include:

- Normally closed breather design
- CorroGard™ Exterior Paint treatment (entire unit)
  Select one option of two available
  - o Grey Option (default type)
    - ■ 316 stainless steel paint (2 step)
    - ■ Light grey semigloss finish
    - ■ USDA and FDA approved
  - o White Option
    - ■ Two step epoxy paint system
    - ■ White gloss finish
    - ■ USDA and FDA approved

G12a Foodgrade Synthetic Lubricant
When this modification is specified, the CbN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (refer to page E-222).

G15 Export Boxing
Export boxing can be provided for "under-deck" transport. When the quantity of CbN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

Modifications, Options and Accessories

Gear Modifications Continued

G16 Extra or Special Nameplate

Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

Accessories

The following accessories can be ordered along with gearmotors and will be supplied loose for mounting by others.

Description	Gear Frames	Part #
NPT Adapter (1/4" NPFT)	31 to 35	0436216
NPT Adapter (3/4" NPFT)	36 to 38	0436218
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Agitators			
Paper Mills	M	II	II
Pure Liquids	U	I	II
Liquids & Solids	M	II	II
Liquids - Variable Density	M	II	II
Apron Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Apron Feeders	M	II	II
Assembly Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Ball Mills	V	III	III
Barking			
Drums	V	-	III
Hydraulic Auxiliaries	V	-	III
Mechanical	V	-	III
Barscreens (Sewage)	U	I	II
Batchers (Textile)	M	II	II
Beaters and Pulpers (Paper)	U	-	II
Belt Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Belt Feeders	M	II	II
Bending Rolls (Machine)	M	II	II
Bleachers (Paper)	M	-	II
Blowers			
Centrifugal	U	I	II
Lobe	M	II	II
Vane	U	I	II
Bottling Machinery	U	I	II
Brewing and Distilling			
Bottling Machinery	U	I	II
Brew Kettles, Cont. Duty	U	-	II
Can Filling Machines	U	I	II
Cookers - Cont. Duty	U	-	II
Mash Tubs - Cont. Duty	U	-	II
Scale Hoppers - Frequent Starts	M	II	II
Brick Press (Clay Working)	V	III	III
Briquette Machines (Clay Working)	V	III	III
Bucket			
Conveyors, Uniform	U	I	II
Conveyors, Heavy Duty	M	II	II
Elevators Cont.	U	I	II
Elevators Uniform	U	I	II
Elevators, Heavy Duty	M	II	II
Calenders			
Paper	U	-	II
Super (Paper)	U	-	II
Rubber	M	II	II
Textile	M	II	II
Cane Knives	M	II	II
Can Filling Machines	U	I	II
Card Machines (Textile)	M	II	II
Car Dumpers	V	III	-
Car Pullers	M	II	-
Cement Kilns	Refer to Application Engr.		
Centrifugal			
Blowers, Compressors, Discharge Elevators or Pumps	U	I	II
Chain Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Chemical Feeders (Sewage)	U	I	II
Clarifiers	U	I	II
Classifiers	M	II	II
Clay Working Industry			
Brick Press	V	III	III
Briquette Machine	V	III	III
Clay Working Machinery	M	II	II
Pug Mill	M	II	II
Collectors (Sewage)	U	I	II
Compressors			
Centrifugal	U	I	II
Lobe	M	II	II
Reciprocating,			
Multi - Cylinder	M	II	II
Single - Cylinder	V	III	III
Concrete Mixers			
Continuous	M	II	II
Intermittent	U	I	-
Converting Machines (Paper)	M	-	II
Conveyors - Uniformly Loaded or Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	U	I	II
Conveyors - Heavy Duty Not Uniformly Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	M	II	II
Live Roll (Package)	U	I	II
Reciprocating, shaker	V	III	III
Cookers (Brewing & Distilling) (Food)	U	I	II
Cooling Tower Fans			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engr.		
Couch (Paper)	M	-	II
Cranes and Hoists			
Main Hoists			
Heavy Duty	V	III	III
Medium Duty	M	II	II
Reversing	V	II	II
Skip Hoists	M	II	II
Trolley Drive	M	II	II
Bridge Drive	M	II	II
Crushers			
Ore or Stone	V	III	III
Cutters (Paper)	V	-	III
Cylinders (Paper)	M	-	II
Dewatering Screens (Sewage)	M	II	II
Disc Feeders	U	I	II
Distilling	(See Brewing)		
Double Acting Pumps			
2 or more Cylinders	M	II	II
Single Cylinder	Refer to Application Engr.		
Dough Mixer (Food)	M	II	II
Draw Bench (Metal Mills)			
Carriage & Main Drive	V	III	III
Dredges			
Cable Reels	M	II	-
Conveyors	M	II	II
Cutter Head Drives	V	III	III
Jig Drives	V	III	III
Maneuvering Winches	M	II	-
Pumps	M	II	II
Screen Drives	V	III	III
Stackers	M	II	II
Utility Winches	M	II	-

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Dryers (Paper)	U	-	II
Dryers and Coolers (Mills, Rotary)	M	II	II
Dyeing Machinery (Textile)	M	II	II
Elevators			
Bucket - Uniform Load	U	I	II
Bucket - Heavy Duty	M	II	II
Bucket - Continuous	U	I	II
Centrifugal Discharge	U	I	II
Escalators	U	I	II
Freight	M	II	II
Gravity Discharge	U	I	II
Man Lifts, Passenger	Refer to Application Engr.		
Escalators	U	I	II
Fans			
Centrifugal	M	II	II
Cooling Towers			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engr		
Induced Draft	M	II	
Large (Mine, etc.)	M	II	II
Large Industrial	M	II	II
Light (Small Diameter)	U	I	II
Feeders			
Apron, belt	M	II	II
Disc	U	I	II
Reciprocating	V	III	
Screw	M	II	II
Felt			
Stretchers (Paper)	U	-	II
Whippers (Paper)	U	-	II
Flight			
Conveyors, Uniform	U	I	II
Conveyors, Heavy	M	II	II
Food Industry			
Beet Slicers	M	II	II
Bottling, Can Filling Mach.	U	I	II
Cereal Cookers	U	I	II
Dough Mixers	M	II	
Meat Grinders	M	II	
Forming Machines (Metal Mills)	V	III	III
Generators (Not welding)	U	I	II
Gravity Discharge Elevators	U	I	II
Grit Collectors (Sewage)	U	I	II
Hammer Mills	V	III	III
Induced Draft Fans	M	II	II
Jordans (Paper)	U	-	II
Kilns (Mills, Rotary)	M	II	II
Cement	Refer to Application Engr.		
Laundry Washers and Tumblers	M	II	II
Line Shafts			
Heavy Shock Load	V	III	III
Moderate Shock Load	M	II	II
Uniform Load	U	I	II
Live Roll Conveyors			
Package	U	I	II
Lobe Blower or Compressors	M	II	II
Log Hauls (Paper and Lumber)	V	III	III
Looms (Textile)	M	II	II
Lumber Industry			
Barkers - Spindle Feed	V	II	III
Barkers - Main Drive	V	III	III
Carriage Drive	Refer to Application Engr.		
Conveyors			
Burner	V	II	III
Main or Heavy Duty	V	II	III
Main Log	V	III	III
Re-Saw Merry-Go-Round	V	II	III
Slab	V	III	III
Transfer	V	II	III
Chains - Floor	V	II	III
Chains - Green	V	II	III
Cut-Off Saws-Chain	V	II	III
Cut-Off Saws-Drag	V	II	III
Debarking Drums	V	III	III
Feeds - Edger	V	II	III
Feeds - Gang	V	III	III
Feeds - Trimmer	V	II	III
Log Deck	V	III	III
Log Hauls - Incline, Well Type	V	III	III
Log Turning Devices	V	III	III
Planer Feed	V	II	III
Planer Tilting Hoists	V	II	III
Rolls - Live-Off Bearing Roll Cases	V	III	III
Sorting Table	V	II	III
Tipple Hoist	V	II	III
Transfers - Chain	V	II	III
Transfers - Craneway	V	II	III
Tray Drives	V	II	III
Machine Tools			
Auxiliary Drives	U	I	II
Bending Rolls	M	II	II
Main Drives	M	II	II
Notching Press (Belted)	Refer to Application Engr.		
Plate Planers	V	III	III
Punch Press (Geared)	V	III	III
Tapping Machines	V	III	III
Mangle (Textile)	M	II	II
Mash Tubs (Brewing and Distilling)	U	-	II
Meat Grinder (Food)	M	II	II
Metal Mills			
Draw Bench Carriages & Main Drives	V	III	III
Forming Machines	V	III	III
Pinch, Dryer & Scrubber Rolls Reversing	Refer to Application Engr.		
Slitters	M	II	II
Table Conveyors, Non-Reversing	M	II	III
Reversing	V	-	III
Wire Drawing & Flattening Machines	M	II	III
Wire Winding Machines	M	II	II
Mills, Rotary Type			
Ball, Pebble, Rod	V	III	III
Cement Kilns	Refer to Application Engr.		
Coolers, Dryers, Kilns	V	II	II
Tumbling Barrels	V	III	III
Mixers (Also see Agitators)			
Concrete - Continuous	M	II	II
Concrete - Intermittent	M	I	-
Constant Density	U	I	II
Variable Density	M	II	II
Nappers (Textile)	M	II	II
Oil Industry			
Chillers	M	II	II
Oil Well Pumping	Refer to Application Engr.		
Paraffin Filter Press	M	II	II
Rotary Kilns	M	II	II
Ore Crushers	V	III	III
Oven Conveyors			
Uniform	U	I	II
Heavy Duty	M	II	II

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Paper Mills			
Agitator (Mixers)	M	II	II
Barker - Auxiliaries - Hyd.	V	-	III
Barker, Mechanical	V	-	III
Barking Drum	V	III	
Beater & Pulper	M	-	II
Bleacher	M	-	II
Calenders	M	-	II
Calenders - Super	M	-	II
Converting Mach.- Except Cutters - Platers	M	-	II
Conveyors	M	-	II
Couch	M	-	II
Cutters, Platers	V	-	III
Cylinders	U	-	II
Dryers	U	-	II
Felt Stretchers	U	-	II
Felt Whippers	V	-	III
Jordans	M	-	II
Log Haul	V	-	III
Presses	M	-	II
Pulp Machine Reels	M	-	II
Stock Chests	M	-	II
Suction Rolls	M	-	II
Washers & Thickeners	M	-	II
Winders	M	-	II
Passenger Elevators	Refer to Application Engr.		
Pebble Mills	V	III	III
Plate Planers	V	III	III
Presses (Paper)	V	-	III
Proportioning Pumps	M	II	II
Pub Mills (Clay)	M	II	II
Pullers (Barge Haul)	V	III	III
Pulp Machine Reels	U	-	II
Pumps			
Centrifugal	U	I	II
Proportioning	M	II	
Reciprocating			
Single Act., 3 or more cyl.	M	II	II
Double Act., 2 or more cyl.	M	II	II
Single Act., 1 or 2 cyl.	Refer to Application Engr.		
Rotary: Gear, Lobe, Vane	U	I	II
Punch Press (Gear Driven)	V	III	III
Reciprocating			
Conveyors, Feeders	V	III	III
Reciprocating Compressors			
Multi-Cylinder	M	II	II
Single cylinder	V	III	III
Rod Mills	V	III	III
Rotary			
Pumps, Gear, Lobe, Vane	U	I	II
Screens (Sand or Gravel)	V	II	II
Rubber Industry			
Mixer	V	III	III
Rubber Calender	M	II	II
Rubber Mill (2 or more)	M	II	II
Sheeter	M	II	II
Tire Building Machines	Refer to Application Engr.		
Tire, Tube Press Openers	Refer to Application Engr.		
Tubers & Strainers	M	II	II
Sand Mullers	Refer to Application Engr.		
Screens			
Air Washing	U	I	II
Rotary - Sand or Gravel	M	II	II
Traveling Water Intake	U	I	II
Screw Conveyors			
Uniform	U	I	II
Heavy Duty or Feeder	M	II	II
Scum Breakers (Sewage)	M	II	II
Sewage Disposal			
Aerators	Refer to Application Engr.		
Bar Screens	U	I	II
Chemical Feeders	U	I	II
Collectors	U	I	II
Dewatering Screens	M	II	II
Grit Collectors	U	I	II
Scum Breakers	M	II	II
Slow or Rapid Mixers	M	II	II
Sludge Collectors	U	I	II
Thickeners	M	II	II
Vacuum Filters	M	II	II
Shaker Conveyors	V	III	III
Sheeters (Rubber)	M	II	II
Single Acting Pump			
1 or 2 Cylinders	Refer to Application Engr.		
3 or more Cylinders	M	II	II
Skip Hoist	M	II	II
Slab Pushers	M	II	II
Slitters (Metal)	M	II	II
Sludge Collectors (Sewage)	U	I	II
Soapers (Textile)	M	II	II
Spinners (Textile)	M	II	II
Steering Gears	M	II	II
Stock Chests (Paper)	U	-	II
Stokers	U	I	II
Stone Crushers	V	III	III
Suction Rolls (Paper)	U	-	II
Table Conveyors (Metal Mills) Non-Reversing	V	II	III
Reversing	V	-	III
Tenter Frames (Textile)	M	II	II
Textile Industry			
Batchers	M	II	II
Calenders	M	II	II
Card Machines	M	II	II
Cloth Finishing Mach. (Calenders, Dryers, Pads, Tenters, Washers)	M	II	II
Dry Cans	M	II	II
Dyeing Machinery	M	II	II
Knitting Machinery	Refer to Application Engr.		
Looms, Mangles, Nappers	M	II	II
Range Drives	Refer to Application Engr.		
Soapers, Spinners	M	II	II
Tenter Frames	M	II	II
Winders	M	II	II
Yarn Preparatory Mach. (Cards, Spinners, Slashers)	M	II	II
Thickeners (Sewage)	M	II	II
Tumbling Barrels	V	III	III
Vacuum Filters (sewage)	M	II	II
Vane Blowers	U	I	II
Winches (Dredges)	M	II	-
Winders			
(Paper)	U	-	II
(Textile)	M	II	II
Windlass	M	II	II
Wire			
Drawing Machines	M	II	III
Winding Machines	M	II	II

Applications not listed in this table, or where the user has data indicating the severity of this usage to be greater than average, should be referred to Application Engineering.

1/3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	14	172	1.25	3001	56	T,S,C,X°,
1199	I, II, III	3+	17	181	1.4	3001	56	T,S,C,X°,
1136	I, II, III	3+	18	184	1.6	3001	56	T,S,C,X°,
956	I, II, III	3+	21	193	1.8	3001	56	T,S,C,X°,
893	I, II, III	3+	23	197	2	3001	56	T,S,C,X°,
799	I, II, III	3+	26	204	2.24	3001	56	T,S,C,X°,
686	I, II, III	3+	30	213	2.5	3001	56	T,S,C,X°,
636	I, II, III	3+	32	217	2.8	3001	56	T,S,C,X°,
540	I, II, III	3+	38	227	3.15	3001	56	T,S,C,X°,
482	I, II, III	3+	42	234	3.55	3001	56	T,S,C,X°,
429	I, II, III	3+	47	241	4	3001	56	T,S,C,X°,
382	I, II, III	3+	53	248	4.5	3001	56	T,S,C,X°,
338	I, II, III	3.0	60	255	5	3001	56	T,S,C,X°,
338	I, II, III	3.0	68	262	5.6	3001	56	T,S,C,X°,
273	I, II, III	3.0	75	267	6.3	3001	56	T,S,C,X°,
242	I, II, III	3.0	84	274	7.1	3001	56	T,S,C,X°,
215	I, II, III	2.7	95	280	8	3001	56	T,S,C,X°,
204	I, II, III	3+	98	522	9	3012	56	T,S,C,X°,
172	I, II, III	3+	116	550	10	3012	56	T,S,C,X°,
160	I, II, III	3+	125	562	11.2	3012	56	T,S,C,X°,
143	I, II, III	3+	140	582	12.5	3012	56	T,S,C,X°,
123	I, II, III	3+	162	600	14	3012	56	T,S,C,X°,
114	I, II, III	3+	175	600	16	3012	56	T,S,C,X°,
97	I, II, III	3+	206	600	18	3012	56	T,S,C,X°,
86	I, II, III	3+	231	600	20	3012	56	T,S,C,X°,
77	I, II, III	3.0	260	600	22.4	3012	56	T,S,C,X°,
68	I, II, III	2.7	292	600	25	3012	56	T,S,C,X°,
61	I, II, III	2.4	329	600	28	3012	56	T,S,C,X°,
52	I, II, III	2.1	371	600	31.5	3012	56	T,S,C,X°,
49	I, II	1.9	408	1211	35.5	3012	56	T,S,C,X°,
43	I, II	1.7	460	600	40	3012	56	T,S,C,X°,
45	III	3+	443	1211	40	3132	56	T,S,C,X,
39	I, II	1.5	517	600	45	3012	56	T,S,C,X°,
39	III	3.0	508	1260	45	3132	56	T,S,C,X,
36	I, II	1.6	549	600	50	3013	56	T,S,C,X°,
36	III	3.0	561	1296	50	3132	56	T,S,C,X,
32	I, II	1.4	615	600	56	3013	56	T,S,C,X°,
30	III	2.1	646	1345	56	3133	56	T,S,C,X,
27	I	1.2	716	600	63	3013	56	T,S,C,X°,
27	II	1.9	729	1345	63	3133	56	T,S,C,X,

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

1/3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
25	I	1.1	772	600	71	3013	56	T,S,C,X°
25	II	1.8	774	1345	71	3133	56	T,S,C,X
25	III	3+	766	1610	71	3253	56	T,S,C,X
22	I	1.0	908	600	80	3013	56	T,S,C,X°
22	II	1.6	919	1345	80	3133	56	T,S,C,X
22	III	3+	870	1610	80	3253	56	T,S,C,X
20	I, II	1.6	919	1345	90	3133	56	T,S,C,X
20	III	3+	966	1610	90	3253	56	T,S,C,X
18	I, II	1.5	1110	1345	100	3133	56	T,S,C,X
18	III	3+	1097	1610	100	3253	56	T,S,C,X
16	I, II	1.4	1239	1345	112	3133	56	T,S,C,X
16	III	3+	1221	1610	112	3253	56	T,S,C,X
14	I	1.2	1390	1345	125	3133	56	T,S,C,X
14	II, III	2.9	1374	1610	125	3253	56	T,S,C,X
12	I	1.1	1609	1345	140	3133	56	T,S,C,X
12	II, III	2.5	1610	1610	140	3253	56	T,S,C,X
11	I	1.0	1767	1345	160	3133	56	T,S,C,X
11	II, III	2.3	1777	1610	160	3253	56	T,S,C,X
10	I, II, III	2.1	1949	1610	180	3253	56	T,S,C,X
8.6	I, II	1.8	2276	1610	200	3253	56	T,S,C,X
8.6	III	2.7	2239	2305	200	3363	56	T,S,C,X
7.9	I, II	1.8	2416	1610	224	3254	56	T,S,C,X°
7.9	III	3+	2416	2905	224	3374	56	T,S,C,X°
7.1	I, II	1.5	2701	1610	250	3254	56	T,S,C,X°
7.1	III	2.6	2701	2905	250	3374	56	T,S,C,X°
6.7	I, II	1.4	2843	1610	280	3254	56	T,S,C,X°
6.7	III	2.5	2843	2905	280	3374	56	T,S,C,X°
5.7	I	1.2	3368	1610	315	3254	56	T,S,C,X°
5.7	II, III	2.1	3368	2905	315	3374	56	T,S,C,X°
5.3	I	1.1	3619	1610	355	3254	56	T,S,C,X°
5.3	II, III	2.0	3619	2905	355	3374	56	T,S,C,X°
4.7	I	1.0	4046	1610	400	3254	56	T,S,C,X°
4.7	II	1.7	4046	2905	400	3374	56	T,S,C,X°
4.4	III	3+	4241	4340	400	3484	56	T,S,C,X
4.1	I, II	1.5	4713	2905	450	3374	56	T,S,C,X°
3.9	III	2.9	4845	4340	450	3484	56	T,S,C,X
3.8	I, II	1.4	5073	2905	500	3374	56	T,S,C,X°
3.4	III	2.6	5470	4340	500	3484	56	T,S,C,X
3.2	I	1.2	5970	2905	560	3374	56	T,S,C,X°
3.2	II, III	2.4	5804	4340	560	3484	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

1/3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
2.9	I	1.1	6692	2905	630	3374	56	T,S,C,X°
2.7	II, III	2.1	6893	4340	630	3484	56	T,S,C,X
2.6	I, II	1.9	7288	4340	710	3484	56	T,S,C,X
2.4	III	3+	7869	4580	710	3594	56	T,S,C,X
2.2	I, II	1.7	8329	4340	800	3484	56	T,S,C,X
2.1	III	3+	8785	4580	800	3594	56	T,S,C,X
2.0	I, II	1.5	9298	4340	900	3484	56	T,S,C,X
1.9	III	2.7	9849	4580	900	3594	56	T,S,C,X
1.8	I, II	1.4	10423	4340	1000	3484	56	T,S,C,X
1.6	II, III	2.4	11403	4580	1000	3594	56	T,S,C,X
1.6	I	1.2	12069	4340	1120	3484	56	T,S,C,X
1.5	II, III	2.1	12521	4580	1120	3594	56	T,S,C,X
1.4	I	1.1	13253	4340	1250	3484	56	T,S,C,X
1.3	II	1.9	14359	4580	1250	3594	56	T,S,C,X
1.2	I, II	1.7	15845	4580	1400	3594	56	T,S,C,X
1.1	I, II	1.7	16064	4580	1600	3595	56	T,S,C,X
1.0	I, II	1.5	18177	4580	1800	3595	56	T,S,C,X
.89	I	1.3	20421	4580	2000	3595	56	T,S,C,X
.78	I	1.1	23594	4580	2240	3595	56	T,S,C,X
.69	I	1.0	26638	4580	2500	3595	56	T,S,C,X
.65	-	.97	28259	4580	2800	3595	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	22	163	1.25	3001	56	T,S,C,X°
1199	I, II, III	3+	26	171	1.4	3001	56	T,S,C,X°
1136	I, II, III	3+	27	173	1.6	3001	56	T,S,C,X°
956	I, II, III	3+	32	182	1.8	3001	56	T,S,C,X°
893	I, II, III	3+	35	185	2	3001	56	T,S,C,X°
799	I, II, III	3+	39	191	2.24	3001	56	T,S,C,X°
686	I, II, III	3+	45	198	2.5	3001	56	T,S,C,X°
636	I, II, III	3+	49	202	2.8	3001	56	T,S,C,X°
540	I, II, III	3+	57	209	3.15	3001	56	T,S,C,X°
482	I, II, III	3+	64	214	3.55	3001	56	T,S,C,X°
429	I, II, III	3+	72	220	4	3001	56	T,S,C,X°
382	I, II, III	3+	81	224	4.5	3001	56	T,S,C,X°
338	I, II, III	2.0	91	229	5	3001	56	T,S,C,X°
338	I, II, III	2.0	103	233	5.6	3001	56	T,S,C,X°
273	I, II, III	2.0	113	236	6.3	3001	56	T,S,C,X°
242	I, II, III	2.0	127	239	7.1	3001	56	T,S,C,X°
215	I, II	1.8	143	241	8	3001	56	T,S,C,X°
214	III	3+	141	505	8	3012	56	T,S,C,X°
204	I, II, III	3+	148	513	9	3012	56	T,S,C,X°
172	I, II, III	3+	176	540	10	3012	56	T,S,C,X°
160	I, II, III	3+	189	551	11.2	3012	56	T,S,C,X°
143	I, II, III	3+	211	569	12.5	3012	56	T,S,C,X°
123	I, II, III	3+	246	584	14	3012	56	T,S,C,X°
114	I, II, III	2.9	265	590	16	3012	56	T,S,C,X°
97	I, II, III	2.5	312	600	18	3012	56	T,S,C,X°
86	I, II, III	2.2	350	600	20	3012	56	T,S,C,X°
77	I, II, III	2.0	393	600	22.4	3012	56	T,S,C,X°
68	I, II	1.8	442	600	25	3012	56	T,S,C,X°
69	III	2.0	439	1027	25	3122	56	T,S,C,X
64	III	3+	471	1062	28	3132	56	T,S,C,X
61	I, II	1.6	499	600	28	3012	56	T,S,C,X°
57	I, II, III	3+	528	1097	31.5	3132	56	T,S,C,X
52	I, II	1.4	562	600	31.5	3012	56	T,S,C,X°
49	I	1.3	618	600	35.5	3012	56	T,S,C,X°
49	II, III	2.9	611	1141	35.5	3132	56	T,S,C,X
45	I, II, III	2.7	671	1170	40	3132	56	T,S,C,X
43	I	1.1	697	589	40	3012	56	T,S,C,X°
39	I	1.0	784	572	45	3012	56	T,S,C,X°
39	II, III	2.0	770	1212	45	3132	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
36	I	1.1	832	600	50	3013	56	T,S,C,X°
36	II, III	2.0	850	1243	50	3132	56	T,S,C,X, IG
30	I, II	1.4	979	1297	56	3133	56	T,S,C,X, IG
30	III	3+	943	1610	56	3253	56	T,S,C,X
27	I	1.3	1104	1335	63	3133	56	T,S,C,X
27	II, III	3+	1087	1610	63	3253	56	T,S,C,X
25	I	1.2	1172	1345	71	3133	56	T,S,C,X
25	II, III	3.5	1161	1610	71	3253	56	T,S,C,X
22	I	1.1	1392	1345	80	3133	56	T,S,C,X
22	II, III	3+	1318	1610	80	3253	56	T,S,C,X
20	I	1.0	1472	1345	90	3133	56	T,S,C,X
20	II, III	2.7	1464	1610	90	3253	56	T,S,C,X
18	I	1.0	1682	1345	100	3133	56	T,S,C,X
18	II, III	2.4	1663	1610	100	3253	56	T,S,C,X
16	I, II, III	2.2	1850	1610	112	3253	56	T,S,C,X
14.2	I, II	1.9	2081	1610	125	3253	56	T,S,C,X
14.1	III	2.9	2125	2305	125	3363	56	T,S,C,X
12.1	I, II	1.6	2440	1610	140	3253	56	T,S,C,X
12.4	III	2.6	2375	2305	140	3363	56	T,S,C,X
11.0	I, II	1.5	2693	1610	160	3253	56	T,S,C,X
10.8	III	2.2	2743	2305	160	3363	56	T,S,C,X
10.0	I, II	1.4	2953	1610	180	3253	56	T,S,C,X
9.7	III	2.0	3065	2305	180	3363	56	T,S,C,X
8.7	I	1.2	3448	1610	200	3253	56	T,S,C,X
8.7	II	1.8	3393	2305	200	3363	56	T,S,C,X
8.7	III	2.2	3393	2905	200	3373	56	T,S,C,X
7.9	I, II	1.2	3661	1610	224	3254	56	T,S,C,X°
7.9	III	2.1	3661	2905	224	3374	56	T,S,C,X°
7.2	III	3+	3914	4340	250	3484	56	T,S,C,X
7.1	I, II	1.7	4092	2905	250	3374	56	T,S,C,X°
6.7	I, II	1.7	4307	2905	280	3374	56	T,S,C,X°
6.4	III	3+	4431	4340	280	3484	56	T,S,C,X
5.7	I, II	1.4	5103	2905	315	3374	56	T,S,C,X°
5.7	III	2.8	5000	4340	315	3484	56	T,S,C,X
5.3	I	1.3	5467	2905	355	3374	56	T,S,C,X°
5.0	II, III	2.5	5656	4340	355	3484	56	T,S,C,X
4.7	I	1.2	6130	2905	400	3374	56	T,S,C,X°
4.4	II, III	2.2	6426	4340	400	3484	56	T,S,C,X
4.1	I	1.0	7140	2905	450	3374	56	T,S,C,X°

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
3.9	I,II	1.9	7342	4340	450	3484	56	T,S,C,X
3.4	I,II	1.7	8288	4340	500	3484	56	T,S,C,X
3.4	III	3+	8309	4580	500	3594	56	T,S,C,X
3.2	I,II	1.6	8794	4340	560	3484	56	T,S,C,X
2.9	III	2.7	9866	4580	560	3594	56	T,S,C,X
2.7	I,II	1.4	10443	4340	630	3484	56	T,S,C,X
2.7	III	2.6	10434	4580	630	3594	56	T,S,C,X
2.6	I	1.3	11043	4340	710	3484	56	T,S,C,X
2.4	III	2.3	11923	4580	710	3594	56	T,S,C,X
2.2	I	1.1	12620	4340	800	3484	56	T,S,C,X
2.1	II,III	2.0	13310	4580	800	3594	56	T,S,C,X
2.0	I	1.0	14088	4340	900	3484	56	T,S,C,X
1.9	II	1.8	14923	4580	900	3594	56	T,S,C,X
1.97	III	2.6	14755	13617	900	3604	56	T,S,C,X
1.78	III	2.4	16047	13617	1000	3605	56	T,S,C,X
1.6	I,II	1.6	17278	4580	1000	3594	56	T,S,C,X
1.5	III	2.1	18496	13617	1120	3605	56	T,S,C,X
1.5	I,II	1.4	18971	4580	1120	3594	56	T,S,C,X
1.4	II,III	2.0	19767	13617	1250	3605	56	T,S,C,X
1.3	I	1.2	21756	4580	1250	3594	56	T,S,C,X
1.3	II	1.7	22432	13617	1400	3605	56	T,S,C,X
1.2	III	3.5	23617	18558	1400	3735	56	T,S,C,X
1.2	I	1.1	24008	4580	1400	3594	56	T,S,C,X
1.1	II	1.5	24915	13617	1600	3605	56	T,S,C,X
1.1	III	3.3	25239	18558	1600	3735	56	T,S,C,X
1.1	I	1.1	24340	4580	1600	3595	56	T,S,C,X
1.0	II	1.4	28303	13617	1800	3605	56	T,S,C,X
1	I	1.0	27541	4580	1800	3595	56	T,S,C,X
0.99	III	2.9	28642	18558	1800	3735	56	T,S,C,X
0.90	I	1.2	31490	13617	2000	3605	56	T,S,C,X
0.90	II,III	2.6	31813	18558	2000	3735	56	T,S,C,X
0.79	I,II,III	2.3	36139	18558	2240	3735	56	T,S,C,X
0.71	I,II,III	2.1	40207	18558	2500	3735	56	T,S,C,X
0.64	III	2.7	44535	22000	2800	3845	56	T,S,C,X
0.63	I,II	1.8	45232	18558	2800	3735	56	T,S,C,X
0.58	III	2.5	49191	22000	3150	3845	56	T,S,C,X
0.54	I,II	1.6	53020	18558	3150	3735	56	T,S,C,X
0.52	III	2.2	54622	22000	3550	3845	56	T,S,C,X
0.49	I,II	1.4	58527	18558	3550	3735	56	T,S,C,X
0.44	I	1.3	64177	18558	4000	3735	56	T,S,C,X
0.44	II	1.9	64747	22000	4000	3845	56	T,S,C,X
0.38	I, II	1.8	73118	22000	4500	3846	56	T,S,C,X
0.34	I, II	1.6	81616	22000	5000	3846	56	T,S,C,X
0.30	I, II	1.5	91646	22000	5600	3846	56	T,S,C,X
0.27	I	1.3	103690	22000	6300	3846	56	T,S,C,X
0.24	I	1.1	118421	22000	7100	3846	56	T,S,C,X
0.22	I	1.1	127079	22000	8000	3846	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

3/4 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3+	33	150	1.25	3001	56	T,S,C,X°
1199	I, II, III	3+	39	156	1.4	3001	56	T,S,C,X°
1136	I, II, III	3+	41	158	1.6	3001	56	T,S,C,X°
956	I, II, III	3+	48	165	1.8	3001	56	T,S,C,X°
893	I, II, III	3+	52	167	2	3001	56	T,S,C,X°
799	I, II, III	3+	58	171	2.24	3001	56	T,S,C,X°
686	I, II, III	3+	67	176	2.5	3001	56	T,S,C,X°
636	I, II, III	3+	73	179	2.8	3001	56	T,S,C,X°
540	I, II, III	3+	86	183	3.15	3001	56	T,S,C,X°
482	I, II, III	3+	96	186	3.55	3001	56	T,S,C,X°
429	I, II, III	3+	108	188	4	3001	56	T,S,C,X°
382	I, II, III	3.0	121	190	4.5	3001	56	T,S,C,X°
338	I, II	1.4	137	191	5	3001	56	T,S,C,X°
356	III	3+	130	427	5	3101	56	T,S,C,X
301	I, II	1.4	154	191	5.6	3001	56	T,S,C,X°
308	III	2.9	151	447	5.6	3101	56	T,S,C,X
273	I, II	1.4	169	190	6.3	3001	56	T,S,C,X°
280	III	2.7	165	459	6.3	3101	56	T,S,C,X
242	I	1.3	191	188	7.1	3001	56	T,S,C,X°
237	II, III	3+	180	469	7.1	3012	56	T,S,C,X°
215	I	1.2	215	185	8	3001	56	T,S,C,X°
214	II, III	3+	212	481	8	3012	56	T,S,C,X°
204	I, III, III	3+	223	484	9	3012	56	T,S,C,X°
172	I, III, III	2.9	264	493	10	3012	56	T,S,C,X°
160	I, III, III	2.7	283	495	11.2	3012	56	T,S,C,X°
143	I, III, III	2.4	317	499	12.5	3012	56	T,S,C,X°
123	I, III, III	2.1	369	500	14	3012	56	T,S,C,X°
114	I, II	1.9	398	500	16	3012	56	T,S,C,X°
111	III	3.1	409	869	16	3122	56	T,S,C,X
97	I, II	1.7	468	495	18	3012	56	T,S,C,X°
96	III	2.6	474	903	18	3122	56	T,S,C,X
87	I, II	1.5	525	488	20	3012	56	T,S,C,X°
87	III	2.4	520	925	20	3122	56	T,S,C,X
82	II, III	3.2	520	933	22.4	3132	56	T,S,C,X
77	I	1.3	590	477	22.4	3012	56	T,S,C,X°
69	I	1.2	664	462	25	3012	56	T,S,C,X°
69	II	1.4	660	957	25	3122	56	T,S,C,X
69	III	2.8	658	980	25	3132	56	T,S,C,X
64	II, III	2.5	707	1020	28	3132	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
61	I	1.1	748	442	28	3012	56	T,S,C,X°
57	I, II, III	2.2	792	1049	31.5	3132	56	T,S,C,X
49	I, II	1.9	917	1086	35.5	3132	56	T,S,C,X
49	III	3+	921	1500	35.5	3252	56	T,S,C,X
45	I, II	1.8	1007	1109	40	3132	56	T,S,C,X
45	III	3+	1016	1541	40	3252	56	T,S,C,X
41	II, III	3+	1115	1580	45	3252	56	T,S,C,X
39	I	1.3	1155	1142	45	3132	56	T,S,C,X
36	I	1.3	1274	1166	50	3132	56	T,S,C,X
35	II, III	3+	1302	1610	50	3252	56	T,S,C,X
31	I, II, III	2.8	1414	1610	56	3253	56	T,S,C,X
27	I, II, III	2.5	1630	1610	63	3253	56	T,S,C,X
26	I, II, III	2.3	1742	1610	71	3253	56	T,S,C,X
22	I, II, III	2.0	1977	1610	80	3253	56	T,S,C,X
20	I, II	1.8	2196	1610	90	3253	56	T,S,C,X
19	III	2.7	2335	2305	90	3363	56	T,S,C,X
18	I, II	1.6	2494	1610	100	3253	56	T,S,C,X
17	III	2.4	2450	2305	100	3363	56	T,S,C,X
16	I, II	1.5	2775	1610	112	3253	56	T,S,C,X
15	III	2.1	2769	2305	112	3363	56	T,S,C,X
14	I	1.3	3122	1610	125	3253	56	T,S,C,X
14	II	1.9	3188	2305	125	3363	56	T,S,C,X
14	III	2.4	3188	2905	125	3373	56	T,S,C,X
12	I	1.1	3659	1610	140	3253	56	T,S,C,X
12	II	1.9	3563	2305	140	3363	56	T,S,C,X
12	III	2.1	3563	2905	140	3373	56	T,S,C,X
11.3	III	3+	3768	4340	160	3483	56	T,S,C,X
11.0	I	1.0	4039	1610	160	3253	56	T,S,C,X
10.8	II	1.5	3943	2305	160	3363	56	T,S,C,X
10.8	II	1.9	3940	2905	160	3373	56	T,S,C,X
10.2	II, III	3+	4183	4340	180	3483	56	T,S,C,X
9.7	I	1.3	4598	2305	180	3363	56	T,S,C,X
9.7	II	1.7	4598	2905	180	3373	56	T,S,C,X
8.7	I	1.2	5089	2305	200	3363	56	T,S,C,X
8.7	II	1.5	5089	2905	200	3373	56	T,S,C,X
8.6	III	2.9	4959	4340	200	3483	56	T,S,C,X
7.9	I, II	1.4	5492	2905	224	3374	56	T,S,C,X°
7.6	III	2.5	5574	4340	224	3484	56	T,S,C,X
7.2	II, III	2.4	5871	4340	250	3484	56	T,S,C,X
7.1	I	1.2	6138	2905	250	3374	56	T,S,C,X°
6.5	I	1.1	6685	2905	280	3374	56	T,S,C,X°
6.4	II, III	2.1	6646	4340	280	3484	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts
C CorroGard® motor, three phase, 230/460 or 575V
X° Explosionproof, CL1 group D, three phase, 230/460 or 575V
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.7	I,II	1.9	7500	4340	315	3484	56	T,S,C,X
5.3	III	3+	8015	4580	315	3594	56	T,S,C,X
5.0	I,II	1.7	8484	4340	355	3484	56	T,S,C,X
4.7	III	3.0	9104	4580	355	3594	56	T,S,C,X
4.4	I,II	1.5	9639	4340	400	3484	56	T,S,C,X
4.1	III	2.6	10405	4580	400	3594	56	T,S,C,X
3.9	I	1.3	11012	4340	450	3484	56	T,S,C,X
3.6	II,III	2.3	11744	4580	450	3594	56	T,S,C,X
3.4	I	1.1	12432	4340	500	3484	56	T,S,C,X
3.4	II,III	2.2	12464	4580	500	3594	56	T,S,C,X
3.3	III	2.9	13357	13617	560	3604	56	T,S,C,X
3.2	I	1.1	13190	4340	560	3484	56	T,S,C,X
2.9	II	1.8	14800	4580	560	3594	56	T,S,C,X
2.8	III	2.5	15659	13617	630	3604	56	T,S,C,X
2.7	I,II	1.7	15651	4580	630	3594	56	T,S,C,X
2.5	III	2.2	17286	13617	710	3604	56	T,S,C,X
2.4	I,II	1.5	18282	4580	710	3594	56	T,S,C,X
2.3	II,III	2.0	18953	13617	800	3604	56	T,S,C,X
2.1	I	1.3	20407	4580	800	3594	56	T,S,C,X
2.0	III	3.7	22072	18558	900	3734	56	T,S,C,X
2.0	II	1.7	22133	13617	900	3604	56	T,S,C,X
1.9	I	1.2	22882	4580	900	3594	56	T,S,C,X
1.8	III	3.4	24200	18558	1000	3734	56	T,S,C,X
1.8	II	1.6	24562	13617	1000	3605	56	T,S,C,X
1.6	I	1.0	26492	4580	1000	3594	56	T,S,C,X
1.5	III	2.9	28260	18558	1120	3734	56	T,S,C,X
1.5	I,II	1.4	27744	13617	1120	3605	56	T,S,C,X
1.4	I	1.3	29650	13617	1250	3605	56	T,S,C,X
1.4	II,III	2.7	30735	18558	1250	3735	56	T,S,C,X
1.3	I	1.1	33648	13617	1400	3605	56	T,S,C,X
1.2	II,III	2.3	35425	18558	1400	3735	56	T,S,C,X
1.1	I	1.0	37373	13617	1600	3605	56	T,S,C,X
1.1	II,III	2.2	37858	18558	1600	3735	56	T,S,C,X
0.99	II	1.9	42962	18558	1800	3735	56	T,S,C,X
0.99	III	2.8	43167	22000	1800	3845	56	T,S,C,X
0.90	I,II	1.7	47719	18558	2000	3735	56	T,S,C,X
0.87	III	2.5	49296	22000	2000	3845	56	T,S,C,X
0.81	III	2.3	52900	22000	2240	3845	56	T,S,C,X
0.79	I,II	1.5	54208	18558	2240	3735	56	T,S,C,X
0.71	I,II	1.4	60311	18558	2500	3735	56	T,S,C,X
0.69	III	2.0	61551	22000	2500	3845	56	T,S,C,X
0.64	II	1.8	66802	22000	2800	3845	56	T,S,C,X
0.63	I	1.2	67848	18558	2800	3735	56	T,S,C,X
0.58	II	1.7	73786	22000	3150	3845	56	T,S,C,X
0.54	I	1.0	79530	18558	3150	3735	56	T,S,C,X
0.52	II	1.5	81933	22000	3550	3845	56	T,S,C,X
0.44	I	1.3	97120	22000	4000	3845	56	T,S,C,X
0.38	I	1.2	109677	22000	4500	3846	56	T,S,C,X
0.34	I	1.1	122424	22000	5000	3846	56	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575V

Δ see page E-9

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	3.1	44	137	1.25	3001	143T	T,S,C,X°
1199	I, II, III	3.1	52	142	1.4	3001	143T	T,S,C,X°
1136	I, II, III	3.1	54	143	1.6	3001	143T	T,S,C,X°
956	I, II, III	3.1	64	148	1.8	3001	143T	T,S,C,X°
893	I, II, III	3.1	69	150	2	3001	143T	T,S,C,X°
799	I, II, III	3.1	77	152	2.24	3001	143T	T,S,C,X°
686	I, II, III	3.1	90	155	2.5	3001	143T	T,S,C,X°
636	I, II, III	3.1	97	156	2.8	3001	143T	T,S,C,X°
540	I, II, III	3.0	114	158	3.15	3001	143T	T,S,C,X°
482	I, II, III	2.7	128	158	3.55	3001	143T	T,S,C,X°
429	I, II, III	2.6	144	157	4	3001	143T	T,S,C,X°
382	I, II, III	2.2	162	156	4.5	3001	143T	T,S,C,X°
338	I	1.0	182	153	5	3001	143T	T,S,C,X°
356	I, II, III	2.6	174	419	5	3101	143T	T,S,C,X
308	I, II, III	2.2	201	437	5.6	3101	143T	T,S,C,X
301	I, II, III	1.0	205	149	5.6	3001	143T	T,S,C,X°
273	I	1.0	226	145	6.3	3001	143T	T,S,C,X°
280	I, II, III	2.0	221	448	6.3	3101	143T	T,S,C,X
242	I	1.0	255	137	7.1	3001	143T	T,S,C,X°
237	I, II, III	2.7	240	428	7.1	3012	143T	T,S,C,X°
214	I, II, III	2.7	282	432	8	3012	143T	T,S,C,X°
204	I, II, III	2.6	297	433	9	3012	143T	T,S,C,X°
172	I, II, III	2.2	353	433	10	3012	143T	T,S,C,X°
160	I, II, III	2.0	378	431	11.2	3012	143T	T,S,C,X°
143	I, II	1.8	423	427	12.5	3012	143T	T,S,C,X°
139	III	2.9	436	794	12.5	3122	143T	T,S,C,X
124	I, II	1.6	492	416	14	3012	143T	T,S,C,X°
124	III	2.6	487	816	14	3122	143T	T,S,C,X
114	I, II	1.5	531	409	16	3012	143T	T,S,C,X°
111	III	2.3	546	839	16	3122	143T	T,S,C,X
97	I	1.3	625	388	18	3012	143T	T,S,C,X°
96	II, III	2.0	632	869	18	3122	143T	T,S,C,X
86	I	1.1	700	368	20	3012	143T	T,S,C,X
87	II	1.8	694	887	20	3122	143T	T,S,C,X
87	III	2.5	698	932	20	3132	143T	T,S,C,X
82	II, III	2.4	739	924	22.4	3132	143T	T,S,C,X
77	I	1.0	787	343	22.4	3012	143T	T,S,C,X°
72	II, III	2.1	844	953	25	3132	143T	T,S,C,X
69	I	1.0	878	914	25	3122	143T	T,S,C,X
64	I, II	1.9	942	977	28	3132	143T	T,S,C,X
58	I, II	1.7	1056	1001	31.5	3132	143T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
58	III	3.8	1047	1398	31.5	3252	143T	T,S,C,X
49	I, II	1.5	1223	1030	35.5	3132	143T	T,S,C,X
49	III	3.3	1228	1456	35.5	3252	143T	T,S,C,X
45	I	1.3	1343	1048	40	3132	143T	T,S,C,X
45	II, III	3.0	1355	1493	40	3252	143T	T,S,C,X
41	II, III	2.7	1486	1526	45	3252	143T	T,S,C,X
39	I	1.0	1540	1072	45	3132	143T	T,S,C,X
36	I	1.0	1699	1089	50	3132	143T	T,S,C,X
35	II, III	2.3	1735	1583	50	3252	143T	T,S,C,X
31	I, II, III	2.1	1886	1610	56	3253	143T	T,S,C,X
27	I, II	1.9	2173	1610	63	3253	143T	T,S,C,X
26	III	2.7	2238	2305	63	3363	143T	T,S,C,X
26	I, II	1.7	2323	1610	71	3253	143T	T,S,C,X
24	III	2.4	2364	2305	71	3363	143T	T,S,C,X
22	I, II	1.5	2636	1610	80	3253	143T	T,S,C,X
22	III	2.2	2653	2305	80	3363	143T	T,S,C,X
20	I, II	1.4	2928	1610	90	3253	143T	T,S,C,X
19	III	2.0	3003	2305	90	3363	143T	T,S,C,X
18	I	1.2	3326	1610	100	3253	143T	T,S,C,X
17	II	1.8	3266	2305	100	3363	143T	T,S,C,X
17	III	2.2	3246	2905	100	3373	143T	T,S,C,X
16	I	1.1	3700	1610	112	3253	143T	T,S,C,X
15	II	1.6	3652	2305	112	3363	143T	T,S,C,X
15	III	2.0	3632	2905	112	3373	143T	T,S,C,X
14	I	1.0	4163	1610	125	3253	143T	T,S,C,X
14	II	1.5	4251	2305	125	3363	143T	T,S,C,X
14	II	1.8	4216	2905	125	3373	143T	T,S,C,X
14	III	3+	4377	4340	125	3483	143T	T,S,C,X
12.5	III	3.0	4750	4340	140	3483	143T	T,S,C,X
12.4	I	1.3	4750	2305	140	3363	143T	T,S,C,X
12.4	II	1.6	4720	2905	140	3373	143T	T,S,C,X
11.3	III	2.7	5247	4340	160	3483	143T	T,S,C,X
10.8	I	1.1	5258	2305	160	3363	143T	T,S,C,X
10.8	II	1.4	5238	2905	160	3373	143T	T,S,C,X
10.2	III	2.5	5826	4340	180	3483	143T	T,S,C,X
9.7	I	1.0	6130	2305	180	3363	143T	T,S,C,X
9.7	I	1.2	6105	2905	180	3373	143T	T,S,C,X
8.7	I	1.1	6786	2905	200	3373	143T	T,S,C,X
8.6	II, III	2.1	6906	4340	200	3483	143T	T,S,C,X
7.9	I	1.0	7679	2905	224	3374	143T	T,S,C,X°
7.7	II	1.9	7530	4340	224	3484	143T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
7.7	III	3+	7561	4580	224	3594	143T	T,S,C,X
7.2	I,II	1.8	8002	4340	250	3484	143T	T,S,C,X
6.8	III	3+	8558	4580	250	3594	143T	T,S,C,X
6.4	I,II	1.6	9059	4340	280	3484	143T	T,S,C,X
6.0	III	2.8	9658	4580	280	3594	143T	T,S,C,X
5.7	I,II	1.4	10222	4340	315	3484	143T	T,S,C,X
5.3	III	2.5	10924	4580	315	3594	143T	T,S,C,X
5.0	I	1.2	11563	4340	355	3484	143T	T,S,C,X
4.7	I,II,III	2.2	12408	4580	355	3594	143T	T,S,C,X
4.4	I	1.1	13137	4340	400	3484	143T	T,S,C,X
4.1	II	1.9	14181	4580	400	3594	143T	T,S,C,X
4.1	III	2.7	14229	13617	450	3604	143T	T,S,C,X
3.9	-	0.95	15009	4340	450	3484	143T	T,S,C,X
3.7	III	2.4	15834	13617	500	3604	143T	T,S,C,X
3.6	I,II	1.7	16003	4580	450	3594	143T	T,S,C,X
3.4	I,II	1.6	16987	4580	500	3594	143T	T,S,C,X
3.3	III	2.2	17809	13617	560	3604	143T	T,S,C,X
2.9	I	1.3	20105	4580	560	3594	143T	T,S,C,X
2.9	III	4.1	20217	18558	630	3734	143T	T,S,C,X
2.8	II	1.8	20879	13617	630	3604	143T	T,S,C,X
2.7	I	1.3	21331	4580	630	3594	143T	T,S,C,X
2.6	III	3.6	22740	18558	710	3734	143T	T,S,C,X
2.5	II,III	1.7	23048	13617	710	3604	143T	T,S,C,X
2.4	I	1.1	24376	4580	710	3594	143T	T,S,C,X
2.3	I,III	1.5	25271	13617	800	3604	143T	T,S,C,X
2.2	III	3.1	26659	18558	800	3734	143T	T,S,C,X
2.1	-	0.99	27212	4580	800	3594	143T	T,S,C,X
2.0	II,III	2.8	29429	18558	900	3734	143T	T,S,C,X
2.0	I	1.3	29510	13617	900	3604	143T	T,S,C,X
1.8	II,III	2.6	32267	18558	1000	3734	143T	T,S,C,X
1.8	I	1.2	32750	13617	1000	3605	143T	T,S,C,X
1.5	II,III	2.2	37679	18558	1120	3734	143T	T,S,C,X
1.5	I	1.0	36992	13617	1120	3605	143T	T,S,C,X
1.4	I	1.0	39534	13617	1250	3605	143T	T,S,C,X
1.4	II,III	2.0	40980	18558	1250	3735	143T	T,S,C,X
1.2	I,II	1.7	47233	18558	1400	3735	143T	T,S,C,X
1.1	I,II	1.6	50478	18558	1600	3735	143T	T,S,C,X
1.1	III	2.4	50849	22000	1600	3845	143T	T,S,C,X
0.99	I,II	1.4	57283	18558	1800	3735	143T	T,S,C,X
0.99	III	2.1	57551	22000	1800	3845	143T	T,S,C,X
0.90	I	1.3	63625	18558	2000	3735	143T	T,S,C,X
0.87	II	1.9	65728	22000	2000	3845	143T	T,S,C,X
0.81	II	1.7	70533	22000	2240	3845	143T	T,S,C,X
0.79	I	1.1	72277	18558	2240	3735	143T	T,S,C,X
0.71	I	1.0	80414	18558	2500	3735	143T	T,S,C,X
0.69	I, II	1.5	82067	22000	2500	3845	143T	T,S,C,X
0.64	I, II	1.4	89069	22000	2800	3845	143T	T,S,C,X
0.58	I	1.2	98382	22000	3150	3845	143T	T,S,C,X
0.52	I	1.1	109243	22000	3550	3845	143T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

1 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II, III	2.0	66	110	1.25	3001	145T	T,S,C,X°
1199	I, II, III	2.0	77	112	1.4	3001	145T	T,S,C,X°
1136	I, II, III	2.0	81	113	1.6	3001	145T	T,S,C,X°
956	I, II, III	2.0	97	114	1.8	3001	145T	T,S,C,X°
893	I, II, III	2.0	104	114	2	3001	145T	T,S,C,X°
799	I, II, III	2.0	116	114	2.24	3001	145T	T,S,C,X°
686	I, II, III	2.0	135	112	2.5	3001	145T	T,S,C,X°
636	I, II, III	2.0	146	111	2.8	3001	145T	T,S,C,X°
540	I, II, III	2.0	171	106	3.15	3001	145T	T,S,C,X°
509	I, II, III	2.4	182	364	3.55	3101	145T	T,S,C,X
482	I, II	1.8	192	101	3.55	3001	145T	T,S,C,X°
445	I, II, III	2.1	208	377	4	3101	145T	T,S,C,X
429	I, II	1.7	216	95	4	3001	145T	T,S,C,X°
401	I, II	1.9	232	389	4.5	3101	145T	T,S,C,X
382	I, II	1.5	243	87	4.5	3001	145T	T,S,C,X°
356	I, II	1.7	260	401	5	3101	145T	T,S,C,X
351	III	4.1	259	596	5	3122	145T	T,S,C,X
310	I, II, III	3+	293	616	5.6	3122	145T	T,S,C,X
308	I, II	1.5	301	417	5.6	3101	145T	T,S,C,X
280	I	1.3	331	426	6.3	3101	145T	T,S,C,X
273	II, III	3+	333	637	6.3	3122	145T	T,S,C,X
238	I, II	1.8	359	347	7.1	3012	145T	T,S,C,X°
238	III	3+	365	652	7.1	3122	145T	T,S,C,X
214	I, II	1.8	423	336	8	3012	145T	T,S,C,X°
211	III	2.9	429	659	8	3122	145T	T,S,C,X
204	I, II	1.7	445	332	9	3012	145T	T,S,C,X°
199	III	2.7	456	689	9	3122	145T	T,S,C,X
172	I,II	1.4	529	312	10	3012	145T	T,S,C,X°
168	III	2.3	541	679	10	3122	145T	T,S,C,X
160	I, II	1.4	567	302	11.2	3012	145T	T,S,C,X°
159	III	2.2	572	726	11.2	3122	145T	T,S,C,X
143	I	1.2	634	282	12.5	3012	145T	T,S,C,X°
140	II	1.9	654	689	12.5	3122	145T	T,S,C,X
140	III	2.5	645	781	12.5	3132	145T	T,S,C,X
123	I	1.0	738	248	14	3012	145T	T,S,C,X°
123	II	1.7	730	717	14	3122	145T	T,S,C,X
123	III	2.3	737	801	14	3132	145T	T,S,C,X
114	I	1.0	796	228	16	3012	145T	T,S,C,X°
111	II	1.5	819	726	16	3122	145T	T,S,C,X
109	III	2.1	831	813	16	3132	145T	T,S,C,X
103	II, III	2.0	882	821	18	3132	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase frame, 115/230 volts, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
96	I	1.3	948	747	18	3122	145T	T,S,C,X
88	I	1.2	1041	764	20	3122	145T	T,S,C,X
88	II	1.7	1047	849	20	3132	145T	T,S,C,X
88	III	2.1	1041	1175	20	3242	145T	T,S,C,X
82	I, II	1.6	1108	857	22.4	3132	145T	T,S,C,X
80	III	2.0	1193	1212	22.4	3242	145T	T,S,C,X
72	I, II	1.4	1266	877	25	3132	145T	T,S,C,X
72	III	3.1	1255	1256	25	3252	145T	T,S,C,X
69	I, II	1.7	1317	1238	25	3242	145T	T,S,C,X
65	I	1.3	1413	891	28	3132	145T	T,S,C,X
65	II, III	2.8	1397	1288	28	3252	145T	T,S,C,X
57	I	1.1	1585	905	31.5	3132	145T	T,S,C,X
58	II, III	2.5	1571	1323	31.5	3252	145T	T,S,C,X
49	I	1.0	1786	919	35.5	3132	145T	T,S,C,X
49	II, III	2.2	1842	1368	35.5	3252	145T	T,S,C,X
45	I, II, III	2.0	2033	1396	40	3252	145T	T,S,C,X
41	I, II	1.8	2229	1420	45	3252	145T	T,S,C,X
39	III	2.6	2265	2305	45	3363	145T	T,S,C,X
35	I, II	1.5	2603	1459	50	3252	145T	T,S,C,X
34	III	2.3	2601	2305	50	3363	145T	T,S,C,X
31	I, II	1.4	2828	1492	56	3253	145T	T,S,C,X
30	III	2.1	2929	2305	56	3363	145T	T,S,C,X
27	I	1.2	3260	1511	63	3253	145T	T,S,C,X
26	II	1.8	3181	2305	63	3363	145T	T,S,C,X
26	III	2.2	3417	2905	63	3373	145T	T,S,C,X
26	I	1.2	3484	1534	71	3253	145T	T,S,C,X
24	II	1.6	3704	2305	71	3363	145T	T,S,C,X
24	III	2.0	3699	2905	71	3373	145T	T,S,C,X
22	I	1.0	3954	1555	80	3253	145T	T,S,C,X
22	II	1.5	3979	2305	80	3363	145T	T,S,C,X
22	II	1.9	4039	2905	80	3373	145T	T,S,C,X
22	III	3+	4069	4340	80	3483	145T	T,S,C,X
19	I	1.3	4504	2305	90	3363	145T	T,S,C,X
19	II	1.7	4576	2905	90	3373	145T	T,S,C,X
19	III	3+	4604	4340	90	3483	145T	T,S,C,X
17	I	1.2	5136	2305	100	3363	145T	T,S,C,X
17	II	1.5	5116	2905	100	3373	145T	T,S,C,X
17	III	2.7	5258	4340	100	3483	145T	T,S,C,X
16	II, III	2.5	5642	4340	112	3483	145T	T,S,C,X
15	I	1.0	5813	2305	112	3363	145T	T,S,C,X
15	I	1.3	5798	2905	112	3373	145T	T,S,C,X
14	I	1.2	6324	2905	125	3373	145T	T,S,C,X
14	II, III	2.2	6565	4340	125	3483	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase frame, 115/230 volts, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
12.5	II,III	2.0	7125	4340	140	3483	145T	T,S,C,X
12	I	1.1	7125	2905	140	3373	145T	T,S,C,X
11.3	I,II	1.8	7870	4340	160	3483	145T	T,S,C,X
11	III	3+	8067	4580	160	3593	145T	T,S,C,X
10.2	I,II	1.6	8739	4340	180	3483	145T	T,S,C,X
10.1	III	3+	8776	4580	180	3593	145T	T,S,C,X
8.6	I,II	1.4	10359	4340	200	3483	145T	T,S,C,X
8.6	III	2.6	10333	4580	200	3593	145T	T,S,C,X
7.7	I	1.3	11295	4340	224	3484	145T	T,S,C,X
7.7	II,III	2.4	11341	4580	224	3594	145T	T,S,C,X
7.2	I	1.2	12002	4580	250	3484	145T	T,S,C,X
6.8	I,II,III	2.1	12837	4580	250	3594	145T	T,S,C,X
6.4	I	1.1	13588	4580	280	3484	145T	T,S,C,X
6.2	III	2.8	13952	13617	280	3604	145T	T,S,C,X
6.0	II	1.9	14487	4580	280	3594	145T	T,S,C,X
5.9	III	2.6	14905	13617	315	3604	145T	T,S,C,X
5.3	I,II	1.6	16386	4580	315	3594	145T	T,S,C,X
5.2	III	2.3	16916	13617	355	3604	145T	T,S,C,X
4.7	I,II	1.4	18613	4580	355	3594	145T	T,S,C,X
4.6	II,III	2.1	18794	13617	400	3604	145T	T,S,C,X
4.1	I	1.3	21271	4580	400	3594	145T	T,S,C,X
4.1	I,II	1.8	21343	13617	450	3604	145T	T,S,C,X
4.0	III	3.8	21599	18558	450	3734	145T	T,S,C,X
3.7	I,II	1.6	23751	13617	500	3604	145T	T,S,C,X
3.6	III	3.4	23997	18558	500	3734	145T	T,S,C,X
3.6	I	1.1	24010	4580	450	3594	145T	T,S,C,X
3.4	I	1.1	25481	4580	500	3594	145T	T,S,C,X
3.3	II	1.4	26714	13617	560	3604	145T	T,S,C,X
3.2	III	3.0	27252	18558	560	3734	145T	T,S,C,X
2.9	II,III	2.7	30326	18558	630	3734	145T	T,S,C,X
2.8	I	1.2	31318	13617	630	3604	145T	T,S,C,X
2.6	II,III	2.4	34110	18558	710	3734	145T	T,S,C,X
2.5	I	1.1	34572	13617	710	3604	145T	T,S,C,X
2.3	I	1.0	37906	13617	800	3604	145T	T,S,C,X
2.2	II,III	2.1	39988	18558	800	3734	145T	T,S,C,X
2.1	III	3.0	41256	22000	900	3844	145T	T,S,C,X
2.0	I,II	1.9	44143	18558	900	3734	145T	T,S,C,X
1.8	I,II	1.7	48400	18558	1000	3734	145T	T,S,C,X
1.8	III	2.5	48912	22000	1000	3844	145T	T,S,C,X
1.6	III	2.3	52095	22000	1120	3845	145T	T,S,C,X
1.5	I,II	1.5	56519	18558	1120	3734	145T	T,S,C,X
1.4	I	1.3	61470	18558	1250	3735	145T	T,S,C,X
1.4	II, III	2.0	60875	22000	1250	3845	145T	T,S,C,X
1.3	II	1.8	67949	22000	1400	3845	145T	T,S,C,X
1.2	I	1.2	70850	18558	1400	3735	145T	T,S,C,X
1.1	I	1.1	75717	18558	1600	3735	145T	T,S,C,X
1.1	II	1.6	76300	22000	1600	3845	145T	T,S,C,X
0.99		0.96	85925	18558	1800	3735	145T	T,S,C,X
0.99	I, II	1.4	86327	22000	1800	3845	145T	T,S,C,X
0.87	I	1.2	98591	22000	2000	3845	145T	T,S,C,X
0.81	I	1.2	105800	22000	2240	3845	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)

T TEFC, three phase, 230/460 or 575 volts

S TEFC, single phase frame, 115/230 volts, 145TY frame

C CorroGard® motor, three phase, 230/460 or 575V

X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II, III	3+	86	260	1.25	3101	145T	T,S,C,X
1411	I, II, III	1.5	88	84	1.25	3001	145T	T,S,C,X°
1268	I, II, III	3+	97	270	1.4	3101	145T	T,S,C,X
1199	I, II	1.5	103	83	1.4	3001	145T	T,S,C,X°
1136	I, II	1.5	109	83	1.6	3001	145T	T,S,C,X°
1122	III	3+	110	280	1.6	3101	145T	T,S,C,X
994	II, III	3.0	124	291	1.8	3101	145T	T,S,C,X
956	I, II	1.5	129	80	1.8	3001	145T	T,S,C,X°
893	I, II	1.5	138	79	2	3001	145T	T,S,C,X°
875	III	2.8	141	302	2	3101	145T	T,S,C,X
799	I, II	1.5	155	75	2.24	3001	145T	T,S,C,X°
764	III	2.7	161	313	2.24	3101	145T	T,S,C,X
686	I, II	1.5	180	69	2.5	3001	145T	T,S,C,X°
678	III	2.4	182	324	2.5	3101	145T	T,S,C,X
637	I, II	1.5	194	65	2.8	3001	145T	T,S,C,X°
637	III	2.3	193	330	2.8	3101	145T	T,S,C,X
540	I, II	1.5	228	54	3.15	3001	145T	T,S,C,X°
538	II	1.9	229	345	3.15	3101	145T	T,S,C,X
510	I, II	1.8	243	351	3.55	3101	145T	T,S,C,X
510	III	2.9	245	456	3.55	3201	145T	T,S,C,X
482	I, II	1.4	256	45	3.55	3001	145T	T,S,C,X°
446	I, II	1.6	277	363	4	3101	145T	T,S,C,X
446	III	3+	271	543	4	3122	145T	T,S,C,X
429	I	1.3	288	33	4	3001	145T	T,S,C,X°
401	I, II	1.4	310	373	4.5	3101	145T	T,S,C,X
395	III	3+	306	561	4.5	3122	145T	T,S,C,X
356	I	1.3	347	383	5	3101	145T	T,S,C,X
351	II, III	3.1	345	578	5	3122	145T	T,S,C,X
309	I	1.1	402	397	5.6	3101	145T	T,S,C,X
309	II, III	3.0	391	595	5.6	3122	145T	T,S,C,X
280	I	1.0	441	405	6.3	3101	145T	T,S,C,X
273	II, III	2.8	444	613	6.3	3122	145T	T,S,C,X
238	I	1.3	479	265	7.1	3012	145T	T,S,C,X°
238	II, III	2.5	507	632	7.1	3122	145T	T,S,C,X
214	I	1.3	564	240	8	3012	145T	T,S,C,X°
211	II, III	2.2	573	648	8	3122	145T	T,S,C,X
204	I	1.3	594	230	9	3012	145T	T,S,C,X°
199	II, III	2.1	608	656	9	3122	145T	T,S,C,X
181	I, II, III	2.2	668	691	10	3132	145T	T,S,C,X
172	I	1.1	705	192	10	3012	145T	T,S,C,X°

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase frame, 115/230 volts, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
168	II	1.7	721	678	10	3122	145T	T,S,C,X
160	I	1.0	755	173	11.2	3012	145T	T,S,C,X°
160	II	1.6	763	685	11.2	3122	145T	T,S,C,X
160	III	2.0	756	709	11.2	3132	145T	T,S,C,X
141	I, II	1.9	859	727	12.5	3132	145T	T,S,C,X
139	I, II	1.4	872	700	12.5	3122	145T	T,S,C,X
128	II, II	2.3	973	1035	14	3242	145T	T,S,C,X
124	I	1.3	973	711	14	3122	145T	T,S,C,X
123	II	1.7	982	745	14	3132	145T	T,S,C,X
111	I	1.1	1091	722	16	3122	145T	T,S,C,X
114	II, III	2.1	1091	1062	16	3242	145T	T,S,C,X
109	I, II	1.6	1108	760	16	3132	145T	T,S,C,X
103	I, II	1.5	1176	767	18	3132	145T	T,S,C,X
97	II	1.8	1264	1096	18	3242	145T	T,S,C,X
96	I	1.0	1264	733	18	3122	145T	T,S,C,X
91	III	2.8	1326	1139	20	3252	145T	T,S,C,X
88	I	1.3	1397	785	20	3132	145T	T,S,C,X
88	II	1.6	1387	1116	20	3242	145T	T,S,C,X
82	I	1.2	1477	790	22.4	3132	145T	T,S,C,X
82	II, III	2.6	1473	1166	22.4	3252	145T	T,S,C,X
80	I, II	1.5	1591	1145	22.4	3242	145T	T,S,C,X
72	I	1.0	1688	800	25	3132	145T	T,S,C,X
72	II, III	2.4	1674	1197	25	3252	145T	T,S,C,X
69	I	1.3	1756	1165	25	3242	145T	T,S,C,X
65	I, II, III	2.1	1862	1222	28	3252	145T	T,S,C,X
58	I, II	1.9	2095	1248	31.5	3252	145T	T,S,C,X
54	III	2.7	2156	2305	31.5	3363	145T	T,S,C,X
49	I, II	1.6	2455	1281	35.5	3252	145T	T,S,C,X
47	III	2.4	2382	2305	35.5	3363	145T	T,S,C,X
45	I, II	1.5	2710	1299	40	3252	145T	T,S,C,X
43	III	2.2	2733	2305	40	3363	145T	T,S,C,X
41	I	1.3	2972	1314	45	3252	145T	T,S,C,X
39	II, III	2.0	3020	2305	45	3363	145T	T,S,C,X
36	III	2.1	3366	2905	50	3372	145T	T,S,C,X
35	I	1.2	3471	1335	50	3252	145T	T,S,C,X
34	II	1.7	3468	2305	50	3363	145T	T,S,C,X
32	III	3+	3704	4340	56	3483	145T	T,S,C,X
31	I	1.1	3771	1357	56	3253	145T	T,S,C,X
30	II	1.6	3905	2305	56	3363	145T	T,S,C,X
30	II	1.9	3889	2905	56	3373	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase frame, 115/230 volts, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X° Explosionproof, CL1 group D, three phase, 230/460V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
27	III	3+	4328	4340	63	3483	145T	T,S,C,X
26	I,II	1.4	4242	2305	63	3363	145T	T,S,C,X
26	III	1.7	4215	2905	63	3373	145T	T,S,C,X
25	III	2.9	4831	4340	71	3483	145T	T,S,C,X
24	I	1.2	4728	2305	71	3363	145T	T,S,C,X
24	I,II	1.5	5040	2905	71	3373	145T	T,S,C,X
22	I	1.1	5306	2305	80	3363	145T	T,S,C,X
22	III	1.4	5295	2905	80	3373	145T	T,S,C,X
22	III	2.6	5425	4340	80	3483	145T	T,S,C,X
19	I	1.0	6005	2305	90	3363	145T	T,S,C,X
19	I	1.3	6101	2905	90	3373	145T	T,S,C,X
19	II,III	2.3	6136	4340	90	3483	145T	T,S,C,X
17	I	1.1	6847	2905	100	3373	145T	T,S,C,X
17	II,III	2.0	7010	4340	100	3483	145T	T,S,C,X
16	II	1.9	7523	4340	112	3483	145T	T,S,C,X
16	III	3+	7418	4580	112	3593	145T	T,S,C,X
15	I	1.0	7751	2905	112	3373	145T	T,S,C,X
14	I,II	1.6	8753	4340	125	3483	145T	T,S,C,X
14	III	3+	8265	4580	125	3593	145T	T,S,C,X
13	III	2.9	9372	4580	140	3593	145T	T,S,C,X
12	I,II	1.5	9500	4340	140	3483	145T	T,S,C,X
11.3	I,II	1.4	10493	4340	160	3483	145T	T,S,C,X
11	III	2.5	10757	4580	160	3593	145T	T,S,C,X
10.2	I	1.2	11652	4340	180	3483	145T	T,S,C,X
10.1	II,III	2.3	11701	4580	180	3593	145T	T,S,C,X
8.7	I	1.1	13619	4340	200	3483	145T	T,S,C,X
8.7	II,III	2.0	13632	4580	200	3593	145T	T,S,C,X
8.1	III	2.7	14625	13617	224	3603	145T	T,S,C,X
7.6	-	.94	15175	4340	224	3484	145T	T,S,C,X
7.6	I,II	1.8	15122	4580	224	3594	145T	T,S,C,X
6.9	III	2.3	17062	13617	250	3603	145T	T,S,C,X
6.8	I,II	1.6	17117	4580	250	3594	145T	T,S,C,X
6.2	III	2.1	18603	13617	280	3604	145T	T,S,C,X
6.0	II	1.4	19317	4580	280	3594	145T	T,S,C,X
5.9	II	1.9	19873	13617	315	3604	145T	T,S,C,X
5.6	III	3+	20600	18558	315	3734	145T	T,S,C,X
5.3	I	1.2	21848	4580	315	3594	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575V
- S TEFC, single phase frame, 115/230V, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase,230/460V or 575V

Δ see page E-9

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.2	II	1.7	22554	13617	355	3604	145T	T,S,C,X
4.9	III	3.5	23753	18558	355	3734	145T	T,S,C,X
4.7	I	1.1	24817	4580	355	3594	145T	T,S,C,X
4.6	I,II	1.5	25059	13617	400	3604	145T	T,S,C,X
4.6	III	3.3	25375	18558	400	3734	145T	T,S,C,X
4.1	I,II	1.4	28458	13617	450	3604	145T	T,S,C,X
4.0	III	2.9	28798	18558	450	3734	145T	T,S,C,X
3.7	I	1.2	31668	13617	500	3604	145T	T,S,C,X
3.6	II,III	2.6	31996	18558	500	3734	145T	T,S,C,X
3.3	I	1.1	35619	13617	560	3604	145T	T,S,C,X
3.2	II,III	2.3	36336	18558	560	3734	145T	T,S,C,X
2.9	I,II,III	2.0	40435	18558	630	3734	145T	T,S,C,X
2.8	III	3.0	41327	22000	630	3844	145T	T,S,C,X
2.6	I,II	1.8	45480	18558	710	3734	145T	T,S,C,X
2.6	III	2.7	44851	22000	710	3844	145T	T,S,C,X
2.3	III	2.5	49541	22000	800	3844	145T	T,S,C,X
2.2	I,II	1.5	53317	18558	800	3734	145T	T,S,C,X
2.1	III	2.2	55008	22000	900	3844	145T	T,S,C,X
2.0	I,II	1.4	58858	18558	900	3734	145T	T,S,C,X
1.8	I	1.3	64533	18558	1000	3734	145T	T,S,C,X
1.8	II	1.9	65216	22000	1000	3844	145T	T,S,C,X
1.6	II	1.8	69460	22000	1120	3845	145T	T,S,C,X
1.5	I	1.1	75359	18558	1120	3734	145T	T,S,C,X
1.4	II	1.5	81166	22000	1250	3845	145T	T,S,C,X
1.4	I	1.0	81959	18558	1250	3735	145T	T,S,C,X
1.3	II	1.4	90599	22000	1400	3845	145T	T,S,C,X
1.1	I	1.2	101734	22000	1600	3845	145T	T,S,C,X
1.0	I	1.1	115103	22000	1800	3845	145T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575V
- S TEFC, single phase frame, 115/230V, 145TY frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 Grps F&G, three phase,230/460V or 575V

Δ see page E-9

3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II, III	2.3	129	248	1.25	3101	182T	T,S,C,X
1268	I, II, III	2.1	146	257	1.4	3101	182T	T,S,C,X
1122	I, II, III	2.1	165	265	1.6	3101	182T	T,S,C,X
994	I, II, III	2.0	186	275	1.8	3101	182T	T,S,C,X
902	I, II, III	3+	205	370	2	3201	182T	T,S,C,X
875	I, II	1.9	212	284	2	3101	182T	T,S,C,X
792	I, II, III	3.0	234	382	2.24	3201	182T	T,S,C,X
764	I, II	1.8	242	294	2.24	3101	182T	T,S,C,X
686	I, II, III	2.6	270	397	2.5	3201	182T	T,S,C,X
678	I, II	1.6	273	303	2.5	3101	182T	T,S,C,X
639	I, II	1.5	290	308	2.8	3101	182T	T,S,C,X
632	III	2.5	288	403	2.8	3201	182T	T,S,C,X
566	I, II, III	2.2	327	415	3.15	3201	182T	T,S,C,X
538	I	1.3	344	320	3.15	3101	182T	T,S,C,X
510	I	1.2	364	324	3.55	3101	182T	T,S,C,X
510	II, III	2.0	363	425	3.55	3201	182T	T,S,C,X
450	II	1.7	412	437	4	3201	182T	T,S,C,X
446	I	1.1	416	334	4	3101	182T	T,S,C,X
446	III	2.3	406	514	4	3122	182T	T,S,C,X
404	II	1.5	459	447	4.5	3201	182T	T,S,C,X
401	I	1.0	464	341	4.5	3101	182T	T,S,C,X
395	I, II, III	2.1	459	528	4.5	3122	182T	T,S,C,X
391	III	2.8	473	1081	4.5	3301	182T	T,S,C,X
359	I, II	1.4	516	457	5	3201	182T	T,S,C,X
359	III	2.6	516	1108	5	3301	182T	T,S,C,X
351	III	2.0	518	541	5	3122	182T	T,S,C,X
318	III	3+	586	786	5.6	3242	182T	T,S,C,X
318	III	2.3	582	1147	5.6	3301	182T	T,S,C,X
314	III	3+	590	1778	5.6	3401	182T	T,S,C,X
310	II, III	2.0	586	553	5.6	3122	182T	T,S,C,X
306	I	1.2	605	470	5.6	3201	182T	T,S,C,X
287	III	3+	666	811	6.3	3242	182T	T,S,C,X
276	III	2.0	670	1193	6.3	3301	182T	T,S,C,X
273	I,II	1.9	666	566	6.3	3122	182T	T,S,C,X
251	I, II, III	3+	761	837	7.1	3242	182T	T,S,C,X
238	I, II	1.6	761	577	7.1	3122	182T	T,S,C,X
231	I, II	1.7	786	606	8	3132	182T	T,S,C,X
218	III	2.7	859	860	8	3242	182T	T,S,C,X
211	I, II	1.5	859	587	8	3122	182T	T,S,C,X
199	I, II	1.4	911	591	9	3122	182T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
204	II	1.6	889	619	9	3132	182T	T,S,C,X
204	III	2.5	911	872	9	3242	182T	T,S,C,X
181	I, II	1.5	1003	630	10	3132	182T	T,S,C,X
180	III	2.2	1082	903	10	3242	182T	T,S,C,X
168	I	1.2	1082	601	10	3122	182T	T,S,C,X
161	I	1.1	1145	603	11.2	3122	182T	T,S,C,X
161	II	1.4	1134	614	11.2	3132	182T	T,S,C,X
161	III	2.0	1145	913	11.2	3242	182T	T,S,C,X
142	I	1.2	1289	649	12.5	3132	182T	T,S,C,X
142	II	1.7	1308	936	12.5	3242	182T	T,S,C,X
142	III	2.5	1249	959	12.5	3252	182T	T,S,C,X
128	II	1.6	1460	954	14	3242	182T	T,S,C,X
128	III	2.3	1423	985	14	3252	182T	T,S,C,X
123	I	1.1	1473	656	14	3132	182T	T,S,C,X
114	II	1.4	1637	971	16	3242	182T	T,S,C,X
110	I	1.1	1662	660	16	3132	182T	T,S,C,X
110	III	2.1	1641	1012	16	3252	182T	T,S,C,X
103	I	1.0	1764	660	18	3132	182T	T,S,C,X
103	III	2.0	1753	1023	18	3252	182T	T,S,C,X
97	I	1.2	1898	990	18	3242	182T	T,S,C,X
91	I, II	1.9	1990	1044	20	3252	182T	T,S,C,X
88	I	1.1	2081	1000	20	3242	182T	T,S,C,X
88	III	3+	2037	2620	20	3372	182T	T,S,C,X
81	I	1.0	2384	1012	22.4	3242	182T	T,S,C,X
81	II	1.7	2210	1060	22.4	3252	182T	T,S,C,X
81	III	3+	2270	2699	22.4	3372	182T	T,S,C,X
72	I, II	1.6	2510	1077	25	3252	182T	T,S,C,X
70	III	2.1	2543	2305	25	3372	182T	T,S,C,X
65	I, II	1.4	2793	1089	28	3252	182T	T,S,C,X
63	III	2.5	2883	2784	28	3372	182T	T,S,C,X
58	I	1.3	3142	1098	31.5	3252	182T	T,S,C,X
58	II, III	2.3	3137	2878	31.5	3372	182T	T,S,C,X
54	I, II	1.8	3234	2305	31.5	3363	182T	T,S,C,X
51	III	2.0	3545	2905	35.5	3372	182T	T,S,C,X
49	I	1.1	3683	1105	35.5	3252	182T	T,S,C,X
47	I, II	1.6	3781	2305	35.5	3363	182T	T,S,C,X
46	III	3+	3966	4340	40	3482	182T	T,S,C,X
45	I	1.0	4066	1105	40	3252	182T	T,S,C,X
44	I, II	1.4	4099	2305	40	3363	182T	T,S,C,X
44	I, II	1.7	4082	2905	40	3372	182T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
41	III	3+	4404	4340	45	3482	182T	T,S,C,X
39	I	1.3	4557	2305	45	3363	182T	T,S,C,X
39	II	1.6	4531	2905	45	3372	182T	T,S,C,X
35	I	1.2	5202	2305	50	3363	182T	T,S,C,X
35	II	1.4	4961	2905	50	3372	182T	T,S,C,X
35	III	2.6	5221	4340	50	3482	182T	T,S,C,X
32	II,III	2.5	5556	4340	56	3483	182T	T,S,C,X
30	I	1.0	5858	2305	56	3363	182T	T,S,C,X
30	I	1.3	5836	2905	56	3373	182T	T,S,C,X
27	II,III	2.2	6493	4340	63	3483	182T	T,S,C,X
26	I	1.1	6835	2905	63	3373	182T	T,S,C,X
25	II	1.9	7247	4340	71	3483	182T	T,S,C,X
25	III	3+	7091	4580	71	3593	182T	T,S,C,X
24	I	1.0	7405	2305	71	3373	182T	T,S,C,X
23	III	3+	7845	4580	80	3593	182T	T,S,C,X
22	I,II	1.7	8138	4340	80	3483	182T	T,S,C,X
20	III	2.9	9074	4580	90	3593	182T	T,S,C,X
19.0	I,II	1.5	9207	4340	90	3483	182T	T,S,C,X
18.0	III	2.7	9905	4580	100	3593	182T	T,S,C,X
17.0	I,II	1.4	10516	4340	100	3483	182T	T,S,C,X
16.0	I	1.3	11284	4340	112	3483	182T	T,S,C,X
16.0	II,III	2.4	11126	4580	112	3593	182T	T,S,C,X
14.3	II,III	2.2	12390	4580	125	3593	182T	T,S,C,X
13.6	I	1.1	13101	4340	125	3483	182T	T,S,C,X
13.0	II	1.9	14058	4580	140	3593	182T	T,S,C,X
12.8	III	2.8	13914	13617	140	3603	182T	T,S,C,X
12.0	I	1.0	14250	4340	140	3483	182T	T,S,C,X
11.4	III	2.5	15539	13617	160	3603	182T	T,S,C,X
11.0	I,II	1.7	16135	4580	160	3593	182T	T,S,C,X
10.1	III	2.2	17570	13617	180	3603	182T	T,S,C,X
10.0	I,II	1.6	17552	4580	180	3593	182T	T,S,C,X
9.0	I	1.3	20448	4580	200	3593	182T	T,S,C,X
8.8	III	4.4	20109	18558	200	3733	182T	T,S,C,X
8.8	II	1.9	20210	13617	200	3603	182T	T,S,C,X
8.1	II	1.8	21937	13617	224	3603	182T	T,S,C,X
8.1	III	4.1	22039	18558	224	3733	182T	T,S,C,X
8.0	I	1.2	23257	4580	224	3594	182T	T,S,C,X
7.2	III	3.6	24781	18558	250	3733	182T	T,S,C,X
7.0	I	1.0	25233	4580	250	3594	182T	T,S,C,X
6.9	II	1.5	25593	13617	250	3603	182T	T,S,C,X
6.4	III	3.0	27117	18558	280	3734	182T	T,S,C,X
6.2	I,II	1.4	27905	13617	280	3604	182T	T,S,C,X
5.9	I	1.3	29810	13617	315	3604	182T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
5.6	II,III	2.7	30900	18558	315	3734	182T	T,S,C,X
5.2	I	1.1	33832	13617	355	3604	182T	T,S,C,X
4.9	II,III	2.3	35630	18558	355	3734	182T	T,S,C,X
4.5	III	3+	38419	22000	400	3844	182T	T,S,C,X
4.0	I,II	1.9	43197	18558	450	3734	182T	T,S,C,X
4.0	III	2.8	43471	22000	450	3844	182T	T,S,C,X
3.6	I,II	1.7	47995	18558	500	3734	182T	T,S,C,X
3.5	III	2.5	49651	22000	500	3844	182T	T,S,C,X
3.3	III	2.3	53285	22000	560	3844	182T	T,S,C,X
3.2	I,II	1.5	54503	18558	560	3734	182T	T,S,C,X
2.9	I,II	1.4	60652	18558	630	3734	182T	T,S,C,X
2.8	III	2.0	61991	22000	630	3844	182T	T,S,C,X
2.6	I	1.2	68219	18558	710	3734	182T	T,S,C,X
2.6	II	1.8	67276	22000	710	3844	182T	T,S,C,X
2.3	II	1.6	74311	22000	800	3844	182T	T,S,C,X
2.2	I	1.0	79976	18558	800	3734	182T	T,S,C,X
2.1	II	1.5	82512	22000	900	3844	182T	T,S,C,X
1.8	I	1.3	97825	22000	1000	3844	182T	T,S,C,X
1.6	I	1.2	104190	22000	1120	3845	182T	T,S,C,X
1.4	I	1.0	121749	22000	1250	3845	182T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

5 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1434	I, II	1.4	215	222	1.25	3101	184T	T,S,C,X
1423	III	2.4	217	298	1.25	3201	184T	T,S,C,X
1268	I	1.3	243	229	1.4	3101	184T	T,S,C,X
1207	II, III	2.2	256	311	1.4	3201	184T	T,S,C,X
1129	II, III	2.3	273	316	1.6	3201	184T	T,S,C,X
1122	I	1.2	275	236	1.6	3101	184T	T,S,C,X
1000	II, III	2.1	309	324	1.8	3201	184T	T,S,C,X
994	I	1.2	311	229	1.8	3101	184T	T,S,C,X
902	II, III	2.1	342	332	2	3201	184T	T,S,C,X
875	I	1.1	353	217	2	3101	184T	T,S,C,X
792	II	1.8	390	340	2.24	3201	184T	T,S,C,X
778	III	2.7	397	848	2.24	3301	184T	T,S,C,X
764	I	1.1	403	200	2.24	3101	184T	T,S,C,X
686	II	1.6	449	349	2.5	3201	184T	T,S,C,X
678	I	1.0	455	179	2.5	3101	184T	T,S,C,X
678	III	2.8	456	883	2.5	3301	184T	T,S,C,X
632	I, II	1.5	480	353	2.8	3201	184T	T,S,C,X
601	III	2.4	513	913	2.8	3301	184T	T,S,C,X
566	I	1.3	545	360	3.15	3201	184T	T,S,C,X
554	II, III	2.0	558	934	3.15	3301	184T	T,S,C,X
510	I	1.2	605	365	3.55	3201	184T	T,S,C,X
497	II, III	2.0	621	962	3.55	3301	184T	T,S,C,X
450	II	1.4	676	455	4	3122	184T	T,S,C,X
450	I	1.0	687	370	4	3201	184T	T,S,C,X
450	III	3+	676	669	4	3242	184T	T,S,C,X
443	I, II	1.9	697	993	4	3301	184T	T,S,C,X
426	I, II, III	3+	725	1566	4	3401	184T	T,S,C,X
395	I	1.3	766	462	4.5	3122	184T	T,S,C,X
391	I, II, III	3+	789	1025	4.5	3301	184T	T,S,C,X
383	II, III	2.8	790	687	4.5	3242	184T	T,S,C,X
359	I, II	1.5	859	1045	5	3301	184T	T,S,C,X
359	II, III	2.6	844	704	5	3242	184T	T,S,C,X
351	I	1.2	863	466	5	3122	184T	T,S,C,X
341	I, II, III	3+	906	1666	5	3401	184T	T,S,C,X
318	I, II	1.4	971	1052	5.6	3301	184T	T,S,C,X
318	II, III	2.3	953	720	5.6	3242	184T	T,S,C,X
314	I, II, III	3.0	983	1726	5.6	3401	184T	T,S,C,X
310	I	1.2	977	469	5.6	3122	184T	T,S,C,X
287	II, III	2.1	1054	737	6.3	3242	184T	T,S,C,X
276	I	1.2	1117	1055	6.3	3301	184T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
284	I, II, III	2.7	1086	1798	6.3	3401	184T	T,S,C,X
273	I	1.1	1110	470	6.3	3122	184T	T,S,C,X
256	I, II, III	2.3	1206	1855	7.1	3401	184T	T,S,C,X
251	II	1.8	1203	752	7.1	3242	184T	T,S,C,X
247	III	2.9	1225	1893	7.1	3362	184T	T,S,C,X
238	I	1.0	1269	468	7.1	3122	184T	T,S,C,X
231	I	1.0	1309	511	8	3132	184T	T,S,C,X
229	III	2.1	1320	789	8	3252	184T	T,S,C,X
218	II	1.6	1431	764	8	3242	184T	T,S,C,X
204	I, II	1.5	1519	770	9	3242	184T	T,S,C,X
194	II	1.9	1559	810	9	3252	184T	T,S,C,X
191	III	2.3	1584	2031	9	3362	184T	T,S,C,X
181	I	1.3	1680	782	10	3242	184T	T,S,C,X
181	II	1.8	1663	818	10	3252	184T	T,S,C,X
176	III	2.1	1721	2076	10	3362	184T	T,S,C,X
162	I	1.2	1867	785	11.2	3242	184T	T,S,C,X
161	II	1.6	1880	831	11.2	3252	184T	T,S,C,X
158	II	1.9	1918	2136	11.2	3362	184T	T,S,C,X
158	III	3.3	1906	2137	11.2	3372	184T	T,S,C,X
145	I	1.5	2081	840	12.5	3252	184T	T,S,C,X
143	I	1.0	2180	790	12.5	3242	184T	T,S,C,X
141	II	1.7	2152	2200	12.5	3362	184T	T,S,C,X
138	III	3.1	2187	2216	12.5	3372	184T	T,S,C,X
128	I, II	1.4	2372	849	14	3252	184T	T,S,C,X
125	III	2.8	2417	2273	14	3372	184T	T,S,C,X
124	I, II	1.5	2436	2268	14	3362	184T	T,S,C,X
114	II	1.4	2650	2315	16	3362	184T	T,S,C,X
111	I	1.3	2734	855	16	3252	184T	T,S,C,X
109	III	2.5	2775	2354	16	3372	184T	T,S,C,X
104	I	1.2	2922	856	18	3252	184T	T,S,C,X
97	II, III	2.3	3125	2422	18	3372	184T	T,S,C,X
91	I	1.1	3316	855	20	3252	184T	T,S,C,X
89	II, III	2.1	3395	2470	20	3372	184T	T,S,C,X
82	I	1.0	3683	850	22.4	3252	184T	T,S,C,X
80	II	1.9	3783	2532	22.4	3372	184T	T,S,C,X
70	I	1.2	4239	2305	25	3362	184T	T,S,C,X
70	II	1.7	4246	2596	25	3372	184T	T,S,C,X
68	III	3+	4416	3733	25	3482	184T	T,S,C,X
64	III	2.9	4739	3800	28	3482	184T	T,S,C,X
63	I, II	1.5	4806	2663	28	3372	184T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 230 volts
C CorroGard® motor, three phase, 230/460 or 575V
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
58	II	1.4	5228	2708	31.5	3372	184T	T,S,C,X
55	III	2.5	5515	3944	31.5	3482	184T	T,S,C,X
54	I	1.1	5480	2305	31.5	3363	184T	T,S,C,X
51	I	1.2	5908	2704	35.5	3372	184T	T,S,C,X
51	II,III	2.3	5985	4021	35.5	3482	184T	T,S,C,X
46	II,III	2.1	6611	4115	40	3482	184T	T,S,C,X
44	I	1.0	6804	2749	40	3372	184T	T,S,C,X
41	I,II	1.9	7340	4211	45	3482	184T	T,S,C,X
41	III	3+	7376	4580	45	3592	184T	T,S,C,X
35	I,II	1.6	8702	4340	50	3482	184T	T,S,C,X
35	III	3+	8593	4580	50	3592	184T	T,S,C,X
32	I,II	1.5	9261	4340	56	3483	184T	T,S,C,X
31	III	2.3	9586	4580	56	3593	184T	T,S,C,X
28	II,III	2.2	10400	4580	63	3593	184T	T,S,C,X
27	I	1.3	10821	4340	63	3483	184T	T,S,C,X
25	I	1.2	12079	4340	71	3483	184T	T,S,C,X
25	II,III	2.1	11818	4580	71	3593	184T	T,S,C,X
23	II,III	2.0	13074	4580	80	3593	184T	T,S,C,X
22	I	1.0	13563	4340	80	3483	184T	T,S,C,X
20	I,II	1.8	15124	4580	90	3593	184T	T,S,C,X
20	III	2.6	14777	13617	90	3603	184T	T,S,C,X
18	III	2.3	16351	13617	100	3603	184T	T,S,C,X
18	I,II	1.6	16509	4580	100	3593	184T	T,S,C,X
16	I,II	1.5	18543	4580	112	3593	184T	T,S,C,X
16	III	2.0	18958	13617	112	3603	184T	T,S,C,X
14	I	1.3	20661	4580	125	3593	184T	T,S,C,X
14.3	II	1.9	20651	13617	125	3603	184T	T,S,C,X
13.7	III	4.1	21666	18558	125	3733	184T	T,S,C,X
12.8	II	1.7	23190	13617	140	3603	184T	T,S,C,X
12.4	III	3.7	23867	18558	140	3733	184T	T,S,C,X
12.0	I	1.0	23750	4580	140	3593	184T	T,S,C,X
11.4	I,II	1.5	25898	13617	160	3603	184T	T,S,C,X
11.1	III	3.3	26744	18558	160	3733	184T	T,S,C,X
10.1	I	1.3	29283	13617	180	3603	184T	T,S,C,X
10.0	II,III	3.0	29622	18558	180	3733	184T	T,S,C,X
8.8	I	1.2	33684	13617	200	3603	184T	T,S,C,X
8.8	II,III	2.7	33515	18558	200	3733	184T	T,S,C,X
8.1	I	1.1	36562	13617	224	3603	184T	T,S,C,X
8.1	II,III	2.4	36731	18558	224	3733	184T	T,S,C,X
7.2	I,II,III	2.2	41301	18558	250	3733	184T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C CorroGard® motor, three phase, 230/460 or 575V
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
6.6	III	2.8	43724	22000	280	3844	184T	T,S,C,X
6.4	I,II	1.8	45194	18558	280	3734	184T	T,S,C,X
5.7	III	2.4	51076	22000	315	3844	184T	T,S,C,X
5.6	I,II	1.6	51501	18558	315	3734	184T	T,S,C,X
5.1	III	2.1	57035	22000	355	3844	184T	T,S,C,X
4.9	I,II	1.4	59383	18558	355	3734	184T	T,S,C,X
4.6	I	1.3	63437	18558	400	3734	184T	T,S,C,X
4.5	II	1.9	64031	22000	400	3844	184T	T,S,C,X
4.0	I	1.1	71996	18558	450	3734	184T	T,S,C,X
4.0	II	1.7	72452	22000	450	3844	184T	T,S,C,X
3.6	I	1.0	79991	18558	500	3734	184T	T,S,C,X
3.5	II	1.5	82751	22000	500	3844	184T	T,S,C,X
3.3	1, II	1.4	88808	22000	560	3844	184T	T,S,C,X
2.8	I	1.2	103318	22000	630	3844	184T	T,S,C,X
2.6	I	1.1	112127	22000	710	3844	184T	T,S,C,X

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 230 volts
C CorroGard® motor, three phase, 230/460 or 575V
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460V or 575V

Δ see page E-9

7 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1423	I, II	1.6	325	264	1.25	3201	213T	T,C
1413	III	3+	328	1078	1.25	3401	213T	T,C
1389	II	1.9	334	688	1.25	3301	213T	T,C
1264	III	3+	367	1127	1.4	3401	213T	T,C
1207	I, II	1.5	384	272	1.4	3201	213T	T,C
1199	II	1.8	386	717	1.4	3301	213T	T,C
1129	I, II	1.5	410	275	1.6	3201	213T	T,C
1125	III	3+	412	1162	1.6	3401	213T	T,C
1087	I, II	1.8	425	738	1.6	3301	213T	T,C
1008	III	3+	459	1198	1.8	3401	213T	T,C
1000	I, II	1.4	463	280	1.8	3201	213T	T,C
989	I, II	1.9	470	759	1.8	3301	213T	T,C
902	I, II	1.4	513	284	2	3201	213T	T,C
889	I, II, III	3+	521	1249	2	3401	213T	T,C
836	I, II	1.9	539	778	2	3301	213T	T,C
806	III	3+	575	1288	2.24	3401	213T	T,C
792	I	1.2	585	288	2.24	3201	213T	T,C
778	II	1.8	596	788	2.24	3301	213T	T,C
689	II, III	3+	672	1342	2.5	3401	213T	T,C
686	I	1.1	674	291	2.5	3201	213T	T,C
678	II	1.9	684	800	2.5	3301	213T	T,C
618	II, III	3+	750	1390	2.8	3401	213T	T,C
601	I, II	1.6	770	807	2.8	3301	213T	T,C
554	I	1.3	836	809	3.15	3301	213T	T,C
550	II, III	3+	842	1424	3.15	3401	213T	T,C
497	I	1.3	908	258	3.55	3301	213T	T,C
486	II, III	3.0	953	1469	3.55	3401	213T	T,C
452	I, II, III	2.1	1015	612	4	3242	213T	T,C
443	I	1.3	1046	806	4	3301	213T	T,C
426	I, II, III	2.7	1088	1518	4	3401	213T	T,C
383	II	1.9	1148	623	4.5	3242	213T	T,C
391	I	1.1	932	810	4.5	3301	213T	T,C
381	III	3.0	1190	1621	4.5	3362	213T	T,C
359	II	1.7	1295	631	5	3242	213T	T,C
359	I	1.0	1264	806	5	3301	213T	T,C
346	III	2.8	1312	1665	5	3362	213T	T,C
341	III	2.1	1359	1608	5	3401	213T	T,C
318	I, II	1.5	1465	639	5.6	3242	213T	T,C
313	III	2.5	1449	1709	5.6	3362	213T	T,C
287	I, II	1.4	1665	644	6.3	3242	213T	T,C
284	I, II	1.8	1629	1724	6.3	3401	213T	T,C
273	III	2.2	1663	1771	6.3	3362	213T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

7 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
256	I, II	1.5	1809	1774	7.1	3401	213T	T,C
251	I	1.2	1903	646	7.1	3242	213T	T,C
247	II, III	2.0	1838	1816	7.1	3362	213T	T,C
229	II	1.4	1980	695	8	3252	213T	T,C
218	I	1.1	2147	644	8	3242	213T	T,C
223	III	2.8	2035	1871	8	3372	213T	T,C
215	II	1.7	2110	1879	8	3362	213T	T,C
204	I	1.0	2278	643	9	3242	213T	T,C
194	I	1.2	2339	699	9	3252	213T	T,C
192	II	1.5	2376	1932	9	3362	213T	T,C
192	III	2.6	2348	1639	9	3372	213T	T,C
182	I	1.2	2495	699	10	3252	213T	T,C
176	II	1.4	2581	1969	10	3362	213T	T,C
175	III	2.4	2588	1984	10	3372	213T	T,C
161	I	1.1	2820	697	11.2	3252	213T	T,C
159	I	1.3	2877	2016	11.2	3362	213T	T,C
159	II, III	2.2	2859	2031	11.2	3372	213T	T,C
145	I	1.0	3122	692	12.5	3252	213T	T,C
141	I	1.1	3228	2066	12.5	3362	213T	T,C
138	II, III	2.1	3280	2095	12.5	3372	213T	T,C
130	I, II, III	3+	3501	3025	14	3482	213T	T,C
125	I	1.0	3654	2117	14	3362	213T	T,C
125	II, III	1.9	3626	2140	14	3372	213T	T,C
111	III	3+	4090	3146	16	3482	213T	T,C
109	I, II	1.7	4163	2200	16	3372	213T	T,C
99	III	3.0	4566	3231	18	3482	213T	T,C
97	I, II	1.5	4688	2230	18	3372	213T	T,C
89	I, II	1.4	5092	2164	20	3372	213T	T,C
89	III	2.6	5127	3320	20	3482	213T	T,C
80	I	1.3	5675	2059	22.4	3372	213T	T,C
78	II, III	2.4	5801	3414	22.4	3482	213T	T,C
71	I	1.1	6369	1919	25	3372	213T	T,C
68	II, III	2.1	6625	3513	25	3482	213T	T,C
65	III	3+	7014	4580	28	3592	213T	T,C
64	I, II	1.9	7109	3564	28	3482	213T	T,C
63	I	1.0	7209	1733	28	3372	213T	T,C
58	I, II, III	3+	7815	4580	31.5	3592	213T	T,C
55	I, II	1.6	8272	3669	31.5	3482	213T	T,C
51	III	2.9	8863	4580	35.5	3592	213T	T,C
51	I, II	1.5	8978	3723	35.5	3482	213T	T,C
46	I, II	1.4	9916	3785	40	3482	213T	T,C
45	III	2.5	10172	4580	40	3592	213T	T,C
41	I	1.2	11011	3845	45	3482	213T	T,C
41	II, III	2.3	11065	4580	45	3592	213T	T,C
35	I	1.1	13052	3930	50	3482	213T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

7 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
35	II,III	2.0	12891	4580	50	3592	213T	T,C
34	II	1.6	14378	4580	56	3593	213T	T,C
32	I	1.0	13891	3994	56	3483	213T	T,C
31	III	2.7	14269	13617	56	3603	213T	T,C
28	I,II	1.5	15599	4580	63	3593	213T	T,C
28	III	2.4	15996	13617	63	3603	213T	T,C
25	I,II	1.4	17727	4580	71	3593	213T	T,C
25	III	2.1	17976	13617	71	3603	213T	T,C
23	I	1.3	19611	4580	80	3593	213T	T,C
23	II,III	2.0	19525	13617	80	3603	213T	T,C
20	II	1.7	22166	13617	90	3603	213T	T,C
20	I	1.2	22685	4580	90	3593	213T	T,C
19.5	III	3.7	22826	18558	90	3733	213T	T,C
18.1	II	1.5	24527	13617	100	3603	213T	T,C
18.0	I	1.1	24762	4580	100	3593	213T	T,C
17.2	III	3.4	25898	18558	100	3733	213T	T,C
15.8	III	3.1	28183	18558	112	3733	213T	T,C
15.6	I,II	1.4	28437	13617	112	3603	213T	T,C
14.3	I	1.2	30976	13617	125	3603	213T	T,C
13.7	II,III	2.7	32499	18558	125	3733	213T	T,C
12.8	I	1.1	34784	13617	140	3603	213T	T,C
12.4	II,III	2.5	35800	18558	140	3733	213T	T,C
11.4	I	1.0	38847	13617	160	3603	213T	T,C
11.1	II,III	2.2	40116	18558	160	3733	213T	T,C
10.0	I,II,III	2.0	44433	18558	180	3733	213T	T,C
8.8	I,II	1.8	50272	18558	200	3733	213T	T,C
8.8	III	2.5	48481	22000	200	3844	213T	T,C
8.3	III	2.4	56112	22000	224	3844	213T	T,C
8.1	I,II	1.6	55096	18558	224	3733	213T	T,C
7.3	III	2.1	59416	22000	250	3844	213T	T,C
7.2	I,II	1.4	61952	18558	250	3733	213T	T,C
6.6	II	1.9	65586	22000	280	3844	213T	T,C
6.4	I	1.2	67791	18558	280	3734	213T	T,C
5.7	II	1.6	76614	22000	315	3844	213T	T,C
5.6	I	1.1	77251	18558	315	3734	213T	T,C
5.1	I, II	1.4	85553	22000	355	3844	213T	T,C
4.5	I	1.3	96047	22000	400	3844	213T	T,C
4.0	I	1.1	108678	22000	450	3844	213T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

10 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1423	I	1.2	434	230	1.25	3201	215T	T,C
1413	III	3+	437	1059	1.25	3401	215T	T,C
1389	I,II	1.4	446	616	1.25	3301	215T	T,C
1264	I, II, III	3+	489	1106	1.4	3401	215T	T,C
1207	I	1.1	512	222	1.4	3201	215T	T,C
1199	II	1.4	514	629	1.4	3301	215T	T,C
1129	I	1.1	546	216	1.6	3201	215T	T,C
1125	II, III	3+	549	1139	1.6	3401	215T	T,C
1087	I	1.3	567	637	1.6	3301	215T	T,C
1008	II, III	3+	612	1173	1.8	3401	215T	T,C
1000	I	1.1	618	200	1.8	3201	215T	T,C
989	I,II	1.4	626	643	1.8	3301	215T	T,C
902	I	1.0	684	183	2	3201	215T	T,C
889	III	3+	694	1222	2	3401	215T	T,C
836	I, II	1.4	718	648	2	3301	215T	T,C
806	III	3+	767	1258	2.24	3401	215T	T,C
778	I, II	1.4	794	648	2.24	3301	215T	T,C
689	III	3+	896	1308	2.5	3401	215T	T,C
678	I, II	1.4	912	645	2.5	3301	215T	T,C
618	I, II, III	2.8	1000	1353	2.8	3401	215T	T,C
601	I	1.2	1027	637	2.8	3301	215T	T,C
554	I	1.0	1115	628	3.15	3301	215T	T,C
550	II, III	2.6	1123	1384	3.15	3401	215T	T,C
486	I, II, III	2.3	1271	1425	3.55	3401	215T	T,C
452	I, II	1.6	1353	556	4	3242	215T	T,C
442	III	2.6	1376	1516	4	3362	215T	T,C
426	I, II, III	2.0	1451	1469	4	3401	215T	T,C
383	I, II	1.4	1531	559	4.5	3242	215T	T,C
381	III	2.3	1587	1572	4.5	3362	215T	T,C
359	I	1.3	1727	559	5	3242	215T	T,C
346	II, III	2.1	1749	1610	5	3362	215T	T,C
318	I	1.2	1954	557	5.6	3242	215T	T,C
313	II	1.9	1932	1649	5.6	3362	215T	T,C
287	I	1.0	2220	551	6.3	3242	215T	T,C
273	II	1.6	2217	1702	6.3	3362	215T	T,C
247	I, II	1.5	2450	1740	7.1	3362	215T	T,C
229	I	1.0	2650	600	8	3252	215T	T,C
223	II, III	2.1	2714	1796	8	3372	215T	T,C
215	I	1.3	2813	1791	8	3362	215T	T,C
203	III	3+	2975	2607	9	3482	215T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

10 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
192	I	1.1	3168	1833	9	3362	215T	T,C
192	II,III	1.9	3131	1852	9	3372	215T	T,C
176	I	1.0	3441	1862	10	3362	215T	T,C
175	II	1.8	3451	1889	10	3372	215T	T,C
162	III	3+	3728	2759	11.2	3482	215T	T,C
159	I,II	1.7	3812	1926	11.2	3372	215T	T,C
143	III	3.0	4228	2843	12.5	3482	215T	T,C
138	I,II	1.5	4374	1880	12.5	3372	215T	T,C
130	III	2.8	4667	2908	14	3482	215T	T,C
125	I,II	1.4	4834	1798	14	3372	215T	T,C
111	II,III	2.5	5454	3010	16	3482	215T	T,C
109	I	1.3	5550	1655	16	3372	215T	T,C
99	II,III	2.2	6087	3079	18	3482	215T	T,C
97	I	1.1	6250	1499	18	3372	215T	T,C
89	I	1.0	6789	1370	20	3372	215T	T,C
89	II,III	2.0	6836	3150	20	3482	215T	T,C
79	III	3+	7627	4268	22.4	3592	215T	T,C
78	I,II	1.8	7735	3221	22.4	3482	215T	T,C
73	III	3+	8325	4401	25	3592	215T	T,C
68	I,II	1.6	8833	3292	25	3482	215T	T,C
65	III	2.8	9352	4471	28	3592	215T	T,C
64	I,II	1.4	9479	3327	28	3482	215T	T,C
58	II,III	2.4	10420	4580	31.5	3592	215T	T,C
55	I	1.2	11029	3394	31.5	3482	215T	T,C
51	I	1.1	11970	3424	35.5	3482	215T	T,C
51	II,III	2.2	11817	4580	35.5	3592	215T	T,C
46	I	1.0	13222	3455	40	3482	215T	T,C
45	II	1.9	13562	4580	40	3592	215T	T,C
45	III	2.7	13484	13617	40	3602	215T	T,C
41	I,II	1.7	14753	4580	45	3592	215T	T,C
41	III	2.3	14798	13617	45	3602	215T	T,C
36	III	2.1	16630	13617	50	3603	215T	T,C
35	I,II	1.5	17188	4580	50	3592	215T	T,C
31	II,III	2.0	19026	13617	56	3603	215T	T,C
31	I	1.2	19170	4580	56	3593	215T	T,C
29	III	3.7	20718	18558	63	3733	215T	T,C
28	I	1.1	20799	4580	63	3593	215T	T,C
28	II	1.8	21328	13617	63	3603	215T	T,C
25	I	1.0	23637	4580	71	3593	215T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

10 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
26	III	3.4	23122	18558	71	3733	215T	T,C
25	II	1.6	23968	13617	71	3603	215T	T,C
23	III	3.2	25999	18558	80	3733	215T	T,C
23	I,II	1.5	26033	13617	80	3603	215T	T,C
20	I	1.3	29554	13617	90	3603	215T	T,C
19	II,III	2.8	30434	18558	90	3733	215T	T,C
18	I	1.2	32702	13617	100	3603	215T	T,C
17	II,III	2.5	34530	18558	100	3733	215T	T,C
16	II,III	2.4	37577	18558	112	3733	215T	T,C
16	I	1.0	37916	13617	112	3603	215T	T,C
14	I,II,III	2.0	43671	18558	125	3733	215T	T,C
12	I,II	1.9	47733	18558	140	3733	215T	T,C
11	I,II	1.7	53488	18558	160	3733	215T	T,C
11	III	2.3	52664	22000	160	3844	215T	T,C
10.2	III	2.1	56846	22000	180	3844	215T	T,C
10	I,II	1.5	59244	18558	180	3733	215T	T,C
8.8	I	1.3	67030	18558	200	3733	215T	T,C
8.8	II	1.8	64641	22000	200	3844	215T	T,C
8.3	II	1.6	74816	22000	224	3844	215T	T,C
8.1	I	1.2	73462	18558	224	3733	215T	T,C
7.3	II	1.5	79221	22000	250	3844	215T	T,C
7.2	I	1.1	82602	18558	250	3733	215T	T,C
6.6	I, II	1.4	87448	22000	280	3844	215T	T,C
5.7	I	1.2	102152	22000	315	3844	215T	T,C
5.1	I	1.1	114070	22000	355	3844	215T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

15 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1413	I, II, III	2.6	655	1020	1.25	3401	254T	T,C
1264	I, II, III	2.7	733	1063	1.4	3401	254T	T,C
1125	I, II, III	2.8	824	1093	1.6	3401	254T	T,C
1008	I, II, III	2.4	919	1123	1.8	3401	254T	T,C
889	I, II, III	2.4	1042	1166	2	3401	254T	T,C
806	I, II, III	2.3	1150	1198	2.24	3401	254T	T,C
689	I, II, III	2.0	1344	1241	2.5	3401	254T	T,C
618	I, II	1.9	1500	1279	2.8	3401	254T	T,C
550	I, II	1.7	1684	1304	3.15	3401	254T	T,C
486	I, II	1.5	1906	1321	3.55	3401	254T	T,C
448	I, II, III	2.6	2028	1994	4	3482	254T	T,C
442	I, II	1.7	2064	1430	4	3362	254T	T,C
426	I	1.3	2176	1303	4	3401	254T	T,C
400	II, III	2.8	2268	2050	4.5	3482	254T	T,C
397	I	1.2	2336	1272	4.5	3401	254T	T,C
381	I, II	1.5	2380	1473	4.5	3362	254T	T,C
356	II, III	2.8	2548	2109	5	3482	254T	T,C
346	I, II	1.4	2624	1501	5	3362	254T	T,C
341	I	1.1	2718	1244	5	3401	254T	T,C
319	I, II, III	2.4	2842	2164	5.6	3482	254T	T,C
314	I	1.0	2950	1190	5.6	3401	254T	T,C
313	I	1.2	2898	1512	5.6	3362	254T	T,C
282	I, II, III	2.4	3223	2226	6.3	3482	254T	T,C
273	I	1.1	3326	1426	6.3	3362	254T	T,C
255	I, II, III	2.3	3558	2274	7.1	3482	254T	T,C
227	III	2.6	3990	2399	8	3482	254T	T,C
223	I, II	1.4	4071	1445	8	3372	254T	T,C
203	II, III	2.6	4462	2459	9	3482	254T	T,C
193	I	1.3	4696	1316	9	3372	254T	T,C
181	II, III	2.4	5013	2518	10	3482	254T	T,C
175	I	1.2	5176	1207	10	3372	254T	T,C
162	II, III	2.2	5592	2573	11.2	3482	254T	T,C
159	I	1.1	5718	1076	11.2	3372	254T	T,C
143	II, III	2.0	6342	2632	12.5	3482	254T	T,C
138	I	1.0	6561	858	12.5	3372	254T	T,C
130	I, II	1.9	7001	2676	14	3482	254T	T,C
125	III	3+	7251	3570	14	3592	254T	T,C
115	III	3.0	7867	3695	16	3592	254T	T,C
111	I, II	1.6	8181	2738	16	3482	254T	T,C
102	III	2.8	8941	3781	18	3592	254T	T,C
99	I, II	1.5	9131	2775	18	3482	254T	T,C
92	II, III	2.4	9891	3869	20	3592	254T	T,C
89	I	1.3	10254	2809	20	3482	254T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

15 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
79	II,III	2.3	11411	3958	22.4	3592	254T	T,C
78	I	1.2	11602	2835	22.4	3482	254T	T,C
73	II,III	2.1	12488	4047	25	3592	254T	T,C
68	I	1.0	13249	2852	25	3482	254T	T,C
65	II	1.8	14029	4090	28	3592	254T	T,C
64	I	1.0	14220	2854	28	3482	254T	T,C
63	III	2.5	14365	13617	28	3602	254T	T,C
58	I,II	1.7	15631	4175	31.5	3592	254T	T,C
56	III	2.2	16129	13617	31.5	3602	254T	T,C
51	I,II	1.5	17726	4214	35.5	3592	254T	T,C
51	III	2.0	17892	13617	35.5	3602	254T	T,C
45	I	1.3	20345	4253	40	3592	254T	T,C
45	II	1.8	20226	13617	40	3602	254T	T,C
44	III	3.1	20848	18558	40	3732	254T	T,C
41	I	1.2	22129	4285	45	3592	254T	T,C
41	II	1.6	22196	13617	45	3602	254T	T,C
41	III	2.6	22300	18558	45	3732	254T	T,C
36	III	2.1	24893	18558	50	3732	254T	T,C
36	II	1.4	24945	13617	50	3602	254T	T,C
35	I	1.0	25780	4310	50	3592	254T	T,C
32	II,III	2.6	28132	18558	56	3733	254T	T,C
31	I	1.3	28538	13617	56	3603	254T	T,C
29	II,III	2.4	31077	18558	63	3733	254T	T,C
28	I	1.2	31991	13617	63	3603	254T	T,C
26	II,III	2.3	34683	8558	71	3733	254T	T,C
25	I	1.1	35952	13617	71	3603	254T	T,C
23	II,III	2.1	38999	18558	80	3733	254T	T,C
23	I	1.0	39050	13617	80	3603	254T	T,C
19	I,II	1.9	45651	18558	90	3733	254T	T,C
18.9	III	2.8	46921	22000	90	3843	254T	T,C
17.2	I,II	1.7	51796	18558	100	3733	254T	T,C
16.8	III	2.5	52811	22000	100	3843	254T	T,C
15.8	I,II	1.6	56366	18558	112	3733	254T	T,C
15.1	III	2.3	58905	22000	112	3843	254T	T,C
13.6	I,II	1.4	65506	18558	125	3733	254T	T,C
13.5	III	2.0	66014	22000	125	3843	254T	T,C
12.4	I	1.2	71600	18558	140	3733	254T	T,C
12.0	II	1.8	74139	22000	140	3843	254T	T,C
11.1	I	1.1	80233	18558	160	3733	254T	T,C
10.6	II	1.6	83787	22000	160	3843	254T	T,C
10.0	I	1.0	88865	18558	180	3733	254T	T,C
9.5	II	1.4	93435	22000	180	3843	254T	T,C
8.9	I	1.3	100037	22000	200	3843	254T	T,C
7.9	I	1.2	112224	22000	224	3843	254T	T,C
7.3	I	1.0	118831	22000	250	3844	254T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

20 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	III	1.9	875	981	1.25	3401	256T	T,C
1268	III	2.1	974	1020	1.4	3401	256T	T,C
1122	III	2.1	1101	1041	1.6	3401	256T	T,C
1006	I, II	1.8	1228	1045	1.8	3401	256T	T,C
978	III	2.8	1264	1202	1.8	3501	256T	T,C
888	I, II	1.8	1391	1045	2	3401	256T	T,C
875	III	2.6	1412	1238	2	3501	256T	T,C
806	I, II	1.7	1532	1039	2.24	3401	256T	T,C
778	III	2.5	1588	1277	2.24	3501	256T	T,C
717	III	2.4	1722	1304	2.5	3501	256T	T,C
689	I,II	1.5	1793	1021	2.5	3401	256T	T,C
632	III	2.3	1955	1346	2.8	3501	256T	T,C
618	I, II	1.4	1998	996	2.8	3401	256T	T,C
570	III	2.1	2167	1380	3.15	3501	256T	T,C
550	I	1.3	2245	971	3.15	3401	256T	T,C
493	III	2.0	2506	1427	3.55	3501	256T	T,C
486	I	1.1	2541	930	3.55	3401	256T	T,C
448	II	1.9	2704	1914	4	3482	256T	T,C
430	III	3+	2814	2484	4	3592	256T	T,C
426	I	1.0	2901	874	4	3401	256T	T,C
400	II, III	2.1	3022	1961	4.5	3482	256T	T,C
356	I, II, III	2.1	3395	2009	5	3482	256T	T,C
319	I, II	1.8	3789	2052	5.6	3482	256T	T,C
307	III	2.9	3941	2709	5.6	3592	256T	T,C
282	I, II	1.8	4294	2099	6.3	3482	256T	T,C
274	III	2.7	4412	2793	6.3	3592	256T	T,C
255	I, II	1.7	4744	2134	7.1	3482	256T	T,C
244	III	2.4	4965	2858	7.1	3592	256T	T,C
222	I, II	1.9	5456	2267	8	3482	256T	T,C
221	III	3+	5476	2998	8	3592	256T	T,C
203	I, II	1.9	5947	2310	9	3482	256T	T,C
193	III	3+	6272	3078	9	3592	256T	T,C
181	I, II	1.8	6687	2352	10	3482	256T	T,C
176	III	3.0	6873	3160	10	3592	256T	T,C
162	I, II	1.7	7454	2387	11.2	3482	256T	T,C
158	III	2.8	7682	3235	11.2	3592	256T	T,C
143	I, II	1.5	8457	2421	12.5	3482	256T	T,C
141	III	2.6	8595	3319	12.5	3592	256T	T,C
130	I, II	1.4	9335	2443	14	3482	256T	T,C
125	III	2.4	9667	3382	14	3592	256T	T,C
115	II, III	2.1	10494	3476	16	3592	256T	T,C
111	I	1.2	10905	2466	16	3482	256T	T,C
101	II	1.8	11921	3537	18	3592	256T	T,C
99	I	1.1	12177	2472	18	3482	256T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

20 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
92	II,III	2.0	13186	3594	20	3592	256T	T, C
89	I	1.0	13670	2468	20	3482	256T	T, C
80	III	2.3	15143	12709	22.4	3602	256T	T, C
79	I,II	1.7	15254	3647	22.4	3592	256T	T, C
73	I,II	1.6	16651	3692	25	3592	256T	T, C
69	III	2.0	17633	13087	25	3602	256T	T, C
65	I,II	1.4	18704	3710	28	3592	256T	T, C
63	II	1.9	19154	13288	28	3602	256T	T, C
62	III	3.9	19638	18558	28	3732	256T	T, C
58	I	1.3	20841	3732	31.5	3592	256T	T, C
56	II	1.7	21505	13550	31.5	3602	256T	T, C
55	III	3.4	21989	18558	31.5	3732	256T	T, C
51	I	1.1	23635	3733	35.5	3592	256T	T, C
51	II	1.5	23856	13617	35.5	3602	256T	T, C
49	III	2.8	24893	18558	35.5	3732	256T	T, C
45	-	0.97	27127	3722	40	3592	256T	T, C
45	I,II	1.4	26967	13617	40	3602	256T	T, C
44	III	2.4	27797	18558	40	3732	256T	T, C
41	I	1.2	29595	13617	45	3602	256T	T, C
41	II	1.9	29733	18558	45	3732	256T	T, C
41	III	2.2	28979	18558	45	3733	256T	T, C
36	I	1.1	33260	13617	50	3602	256T	T, C
36	II	1.6	33191	18558	50	3732	256T	T, C
36	III	2.1	32499	18558	50	3733	256T	T, C
32	I,II,III	2.2	33041	18558	56	3733	256T	T, C
29	I,II,III	2.0	37510	18558	63	3733	256T	T, C
26	I,II	1.9	41437	18558	71	3733	256T	T, C
24	III	2.0	46244	12000	71	3843	256T	T, C
23	I,II	1.7	48952	18558	80	3733	256T	T, C
21	III	2.4	55452	22000	80	3843	256T	T, C
19.5	I,II	1.4	60868	18558	90	3733	256T	T, C
18.9	III	2.1	62561	22000	90	3843	256T	T, C
17.2	I	1.3	69061	18558	100	3733	256T	T, C
16.8	II,III	1.9	70415	22000	100	3843	256T	T, C
15.8	I	1.2	75155	18558	112	3733	256T	T, C
15.1	II	1.7	78540	22000	112	3843	256T	T, C
13.6	I	1.0	87342	18558	125	3733	256T	T, C
13.5	II	1.5	88019	22000	125	3843	256T	T, C
12.0	I, II	1.4	98852	22000	140	3843	256T	T, C
10.6	I	1.2	111716	22000	160	3843	256T	T, C
9.5	I	1.1	124581	22000	180	3843	256T	T, C
8.9	I	1.0	133383	22000	200	3843	256T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

25 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I, II	1.5	1094	827	1.25	3401	284T	T,C
1367	III	2.5	1129	1062	1.25	3501	284T	T,C
1268	I, II	1.7	1218	827	1.4	3401	284T	T,C
1199	III	2.4	1288	1101	1.4	3501	284T	T,C
1122	I, II	1.7	1376	822	1.6	3401	284T	T,C
1094	III	2.3	1412	1128	1.6	3501	284T	T,C
1006	I, II	1.4	1535	811	1.8	3401	284T	T,C
978	III	2.2	1579	1161	1.8	3501	284T	T,C
888	I, II	1.5	1738	788	2	3401	284T	T,C
875	III	2.1	1765	1194	2	3501	284T	T,C
806	I, II	1.4	1915	763	2.24	3401	284T	T,C
778	III	2.0	1985	1228	2.24	3501	284T	T,C
717	I, II	1.9	2153	1252	2.5	3501	284T	T,C
689	I	1.2	2241	715	2.5	3401	284T	T,C
632	I, II	1.9	2444	1288	2.8	3501	284T	T,C
618	I	1.1	2497	660	2.8	3401	284T	T,C
570	I, II	1.7	2709	1286	3.15	3501	284T	T,C
550	I	1.0	2806	614	3.15	3401	284T	T,C
545	III	3.0+	2832	7440	3.15	3602	284T	T,C
493	I, II	1.6	3132	1259	3.55	3501	284T	T,C
480	III	3.0+	3905	7431	3.55	3602	284T	T,C
486	n/a	0.91	3176	540	3.55	3401	284T	T,C
448	I, II	1.6	3380	1834	4	3482	284T	T,C
430	III	3+	3518	2421	4	3592	284T	T,C
400	I, II	1.7	3777	1872	4.5	3482	284T	T,C
376	III	3+	4028	2488	4.5	3592	284T	T,C
356	I, II	1.7	4244	1909	5	3482	284T	T,C
343	III	3.0	4408	2557	5	3592	284T	T,C
319	I, II	1.4	4737	1940	5.6	3482	284T	T,C
307	III	2.3	4927	2621	5.6	3592	284T	T,C
282	I, II	1.5	5368	1973	6.3	3482	284T	T,C
274	III	2.2	5515	2693	6.3	3592	284T	T,C
255	I, II	1.4	5929	1994	7.1	3482	284T	T,C
244	III	2.0	6206	2749	7.1	3592	284T	T,C
222	I, II	1.5	6820	2134	8	3482	284T	T,C
221	III	3.0	6846	2892	8	3592	284T	T,C
203	I, II	1.5	7433	2162	9	3482	284T	T,C
193	III	2.6	7840	2959	9	3592	284T	T,C
181	I, II	1.4	8358	2185	10	3482	284T	T,C
176	III	2.4	8592	3025	10	3592	284T	T,C
162	I	1.3	9318	2201	11.2	3482	284T	T,C
158	II, III	2.2	9603	3085	11.2	3592	284T	T,C
143	I	1.2	10571	2210	12.5	3482	284T	T,C
141	II, III	2.1	10744	3149	12.5	3592	284T	T,C
130	I	1.1	11669	2210	14	3482	284T	T,C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

25 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
130	III	2.8	11669	11168	14	3602	284T	T, C
125	II	1.9	12084	3195	14	3592	284T	T, C
116	III	2.5	13052	11440	16	3602	284T	T, C
113	II	1.9	13371	3257	16	3592	284T	T, C
111	I	1.0	13631	2193	16	3482	284T	T, C
99	III	2.2	15299	11794	18	3602	284T	T, C
92	I,II	1.5	16483	3292	18	3592	284T	T, C
92	I,II	1.6	16483	3320	20	3592	284T	T, C
88	III	2.0	17287	12068	20	3602	284T	T, C
80	II	1.8	18929	12248	22.4	3602	284T	T, C
79	I,II	1.4	19067	3336	22.4	3592	284T	T, C
77	III	3.8	19534	18558	22.4	3732	284T	T, C
73	I	1.2	20813	3337	25	3592	284T	T, C
69	III	3.4	21781	18558	25	3732	284T	T, C
69	II	1.6	22041	12250	25	3602	284T	T, C
65	I	1.1	23380	3340	28	3592	284T	T, C
63	I,II	1.5	23942	12704	28	3602	284T	T, C
62	III	3.1	24547	18558	28	3732	284T	T, C
56	I	1.3	26881	12896	31.5	3602	284T	T, C
55	II,III	2.7	27486	18558	31.5	3732	284T	T, C
51	I	1.2	29820	13050	35.5	3602	284T	T, C
49	II,III	2.2	31116	18558	35.5	3732	284T	T, C
45	I	1.1	33709	13202	40	3602	284T	T, C
45	III	2.0	33796	22000	40	3842	284T	T, C
44	II	1.9	34747	18558	40	3732	284T	T, C
41	I,II	1.5	37167	18558	45	3732	284T	T, C
41	II	1.8	36562	18558	45	3733	284T	T, C
40	III	3+	37493	22000	45	3843	284T	T, C
36	I	1.3	41488	18558	50	3732	284T	T, C
36	II	1.7	41301	18558	50	3733	284T	T, C
35	III	3.0	42909	22000	50	3843	284T	T, C
32	I,II	1.5	46887	18558	56	3733	284T	T, C
31	III	2.8	47395	22000	56	3843	284T	T, C
29	I,II	1.5	51796	18558	63	3733	284T	T, C
28	III	2.4	53658	22000	63	3843	284T	T, C
26	I,II	1.4	57805	18558	71	3733	284T	T, C
24	III	2.2	60682	22000	71	3843	284T	T, C
23	I	1.3	64999	18558	80	3733	284T	T, C
21	II	1.9	69315	22000	80	3843	284T	T, C
19.5	I	1.1	76086	18558	90	3733	284T	T, C
18.9	II	1.7	78201	22000	90	3843	284T	T, C
17.2	I	1.0	86326	18558	100	3733	284T	T, C
16.8	II	1.5	88019	22000	100	3843	284T	T, C
15.1	I, II	1.4	98175	22000	112	3843	284T	T, C
13.5	I	1.2	110024	22000	125	3843	284T	T, C
12.0	I	1.1	123565	22000	140	3843	284T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

30 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1411	I	1.3	1313	638	1.25	3401	286T	T, C
1389	II,III	2.1	1334	1030	1.25	3501	286T	T, C
1268	I,II	1.4	1461	621	1.4	3401	286T	T, C
1199	III	2.0	1546	1066	1.4	3501	286T	T, C
1122	I,II	1.4	1652	603	1.6	3401	286T	T, C
1094	I,II	1.9	1694	1091	1.6	3501	286T	T, C
1006	I	1.2	1842	577	1.8	3401	286T	T, C
978	I,II	1.8	1895	1112	1.8	3501	286T	T, C
888	I	1.2	2086	530	2	3401	286T	T, C
875	I,II	1.8	2118	1112	2	3501	286T	T, C
806	I	1.1	2298	486	2.24	3401	286T	T, C
778	I,II	1.7	2382	1104	2.24	3501	286T	T, C
717	I,II	1.6	2584	1095	2.5	3501	286T	T, C
689	I	1.0	2689	409	2.5	3401	286T	T, C
648	I,II	1.6	2859	1070	2.8	3501	286T	T, C
618	N/A	0.95	2996	325	2.8	3401	286T	T, C
570	I,II	1.4	3251	1041	3.15	3501	286T	T, C
545	III	3.0+	3290	7030	3.15	3602	286T	T, C
493	I,II	1.4	3759	984	3.55	3501	286T	T, C
480	III	3.0+	3730	7025	3.55	3602	286T	T, C
448	I	1.3	4055	1755	4	3482	286T	T, C
430	III	2.8	4221	2358	4	3592	286T	T, C
400	I,II	1.4	4533	1783	4.5	3482	286T	T, C
376	III	2.6	4833	2418	4.5	3592	286T	T, C
356	I,II	1.4	5093	1809	5	3482	286T	T, C
343	III	2.5	5290	2478	5	3592	286T	T, C
319	I	1.2	5684	1829	5.6	3482	286T	T, C
307	II	1.9	5912	2533	5.6	3592	286T	T, C
282	I	1.2	6441	1846	6.3	3482	286T	T, C
274	II	1.8	6617	2594	6.3	3592	286T	T, C
255	I	1.1	7115	1854	7.1	3482	286T	T, C
244	II	1.6	7447	2639	7.1	3592	286T	T, C
222	I	1.3	8184	2001	8	3482	286T	T, C
221	II,III	2.5	8215	2785	8	3592	286T	T, C
203	I	1.3	8920	2013	9	3482	286T	T, C
193	II,III	2.2	9408	2839	9	3592	286T	T, C
181	I	1.2	10030	2018	10	3482	286T	T, C
176	II,III	2.0	10310	2891	10	3592	286T	T, C
162	I	1.1	11181	2015	11.2	3482	286T	T, C
158	II	1.9	11523	2935	11.2	3592	286T	T, C
161	III	2.8	11306	10438	11.2	3602	286T	T, C
145	III	2.6	12550	10647	12.5	3602	286T	T, C
143	I	1.0	12685	1999	12.5	3482	286T	T, C
141	II	1.7	12893	2979	12.5	3592	286T	T, C
130	N/A	0.93	14002	1977	14	3482	286T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

30 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
130	III	2.3	14002	10682	14	3602	286T	T, C
125	I,II	1.6	14500	3007	14	3592	286T	T, C
116	III	2.1	15662	11121	16	3602	286T	T, C
115	I,II	1.4	15783	3038	16	3592	286T	T, C
102	I	1.3	17882	3048	18	3592	286T	T, C
99	III	1.8	18359	11421	18	3602	286T	T, C
98	III	3.9	18462	18558	18	3732	286T	T, C
92	I	1.3	19780	3045	20	3592	286T	T, C
88	III	1.6	20744	11645	20	3602	286T	T, C
87	III	3.5	20848	18558	20	3732	286T	T, C
80	III	1.5	22715	11788	22.4	3602	286T	T, C
79	I	1.1	22881	3026	22.4	3592	286T	T, C
77	III	3.1	23441	18558	22.4	3732	286T	T, C
73	I	1.0	24976	2764	25	3592	286T	T, C
69	II,III	2.9	26138	18558	25	3732	286T	T, C
69	I	1.3	26449	12014	25	3602	286T	T, C
63	I	1.2	28731	12120	28	3602	286T	T, C
62	II,III	2.6	29457	18558	28	3732	286T	T, C
56	I	1.1	32257	12241	31.5	3602	286T	T, C
55	II,III	2.3	32983	18558	31.5	3732	286T	T, C
51	I	1.0	35784	12323	35.5	3602	286T	T, C
51	III	2.2	35888	22000	35.5	3842	286T	T, C
49	II	1.8	37340	18558	35.5	3732	286T	T, C
45	II	1.7	40555	22000	40	3842	286T	T, C
44	I,II	1.6	41696	18558	40	3732	286T	T, C
44	III	3+	40218	22000	40	3843	286T	T, C
41	I	1.3	44600	18558	45	3732	286T	T, C
41	II	1.5	43874	18558	45	3733	286T	T, C
40	III	2.9	44991	22000	45	3843	286T	T, C
36	I	1.1	49786	18558	50	3732	286T	T, C
36	II	1.4	49561	18558	50	3733	286T	T, C
35	III	2.5	51491	22000	50	3843	286T	T, C
32	I	1.3	56264	18558	56	3733	286T	T, C
31	II,III	2.3	56874	22000	56	3843	286T	T, C
29	I	1.2	62155	18558	63	3733	286T	T, C
28	II, III	2.0	64389	22000	63	3843	286T	T, C
26	I	1.1	69366	18558	71	3733	286T	T, C
24	II	1.8	72819	22000	71	3843	286T	T, C
23	I	1.1	77998	18558	80	3733	286T	T, C
21	II	1.6	83178	22000	80	3843	286T	T, C
19	I, II	1.4	93842	22000	90	3843	286T	T, C
17	I	1.3	105623	22000	100	3843	286T	T, C
15	I	1.1	117810	22000	112	3843	286T	T, C
13	I	1.0	132028	22000	125	3843	286T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575V
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

40 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1367	I,II	1.5	1807	819	1.25	3501	324T	T, C
1199	I,II	1.5	2061	812	1.4	3501	324T	T, C
1094	I,II	1.4	2259	802	1.6	3501	324T	T, C
978	I,II	1.4	2527	784	1.8	3501	324T	T, C
875	I	1.3	2824	757	2	3501	324T	T, C
778	I	1.3	3176	718	2.24	3501	324T	T, C
717	I	1.2	3445	684	2.5	3501	324T	T, C
632	I	1.2	3911	317	2.8	3501	324T	T, C
570	I	1.1	4334	550	3.15	3501	324T	T, C
545	II,III	3.0	4439	7616	3.15	3602	324T	T, C
493	I	1.0	5012	431	3.55	3501	324T	T, C
481	II,III	3.0	5034	7834	3.55	3602	324T	T, C
451	III	3.0	5366	7870	4	3602	324T	T, C
430	I,II	1.7	5629	2233	4	3592	324T	T, C
403	III	3.0	6002	7999	4.5	3602	324T	T, C
376	I,II,	1.7	6445	2278	4.5	3592	324T	T, C
356	III	3.0	6790	8226	5	3602	324T	T, C
343	I,II	1.9	7053	2321	5	3592	324T	T, C
315	III	3.0	7689	8717	5.6	3602	324T	T, C
307	I,II	1.4	7883	2358	5.6	3592	324T	T, C
285	II,III	3.0	8505	8907	6.3	3602	324T	T, C
274	I	1.3	8823	2395	6.3	3592	324T	T, C
255	II,III	2.7	9487	9124	7.1	3602	324T	T, C
244	I	1.2	9930	2419	7.1	3592	324T	T, C
227	III	2.5	10663	9348	8	3602	324T	T, C
221	I,II	1.9	10953	2571	8	3592	324T	T, C
194	III	2.1	12488	9637	9	3602	324T	T, C
193	I,II	1.6	12543	2600	9	3592	324T	T, C
182	III	2.3	13318	9755	10	3602	324T	T, C
176	I,II	1.5	13747	2623	10	3592	324T	T, C
161	III	2.1	15074	9977	11.2	3602	324T	T, C
158	I,II	1.4	15365	2636	11.2	3592	324T	T, C
145	II	1.9	16734	10139	12.5	3602	324T	T, C
143	III	3.0	16872	17316	12.5	3732	324T	T, C
141	I	1.3	17190	2639	12.5	3592	324T	T, C
130	II	1.7	18670	10314	14	3602	324T	T, C
127	III	3.0	19085	17831	14	3732	324T	T, C
125	I	1.2	19334	2632	14	3592	324T	T, C
116	II	1.6	20883	10482	16	3602	324T	T, C
115	I	1.1	21044	2601	16	3592	324T	T, C
111	III	3.0	21712	18352	16	3732	324T	T, C
102	I	1	23842	2535	18	3592	324T	T, C
99	II	1.4	24478	10675	18	3602	324T	T, C
98	III	2.9	24616	18558	18	3732	324T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575V
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

40 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
88	I	1.2	27659	10799	20	3602	324T	T, C
87	II,III	2.6	27797	18558	20	3732	324T	T, C
80	I	1.1	30287	10866	22.4	3602	324T	T, C
77	II,III	2.4	31255	18558	22.4	3732	324T	T, C
69	II,III	2.1	34850	18558	25	3732	324T	T, C
69	I	1.0	35265	10940	25	3602	324T	T, C
63	III	2.6	38169	22000	28	3842	324T	T, C
62	I, II	1.9	39276	18558	28	3732	324T	T, C
57	III	2.3	42733	22000	31.5	3842	324T	T, C
55	I,II	1.7	43978	18558	31.5	3732	324T	T, C
55	III	3.0	42926	22000	31.5	3843	324T	T, C
51	III	1.7	47850	22000	35.5	3842	324T	T, C
50	III	2.7	47801	22000	35.5	3843	324T	T, C
49	I, II	1.4	49786	18558	35.5	3732	324T	T, C
45	I	1.3	54073	22000	40	3842	324T	T, C
44	I	1.2	55595	18558	40	3732	324T	T, C
44	II, III	2.4	53624	22000	40	3843	324T	T, C
41	I	1.1	58499	18558	45	3732	324T	T, C
40	III	2.2	59988	22000	45	3843	324T	T, C
36	I	1.0	66082	18558	45	3733	324T	T, C
35	II	1.9	68655	22000	50	3843	324T	T, C
31	I, II	1.7	75832	22000	56	3843	324T	T, C
28	I, II	1.5	85852	22000	63	3843	324T	T, C
24	I, II	1.4	97092	22000	71	3843	324T	T, C
21	I	1.2	110904	22000	80	3843	324T	T, C
19	I	1.1	125122	22000	90	3843	324T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575V
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

50 HP

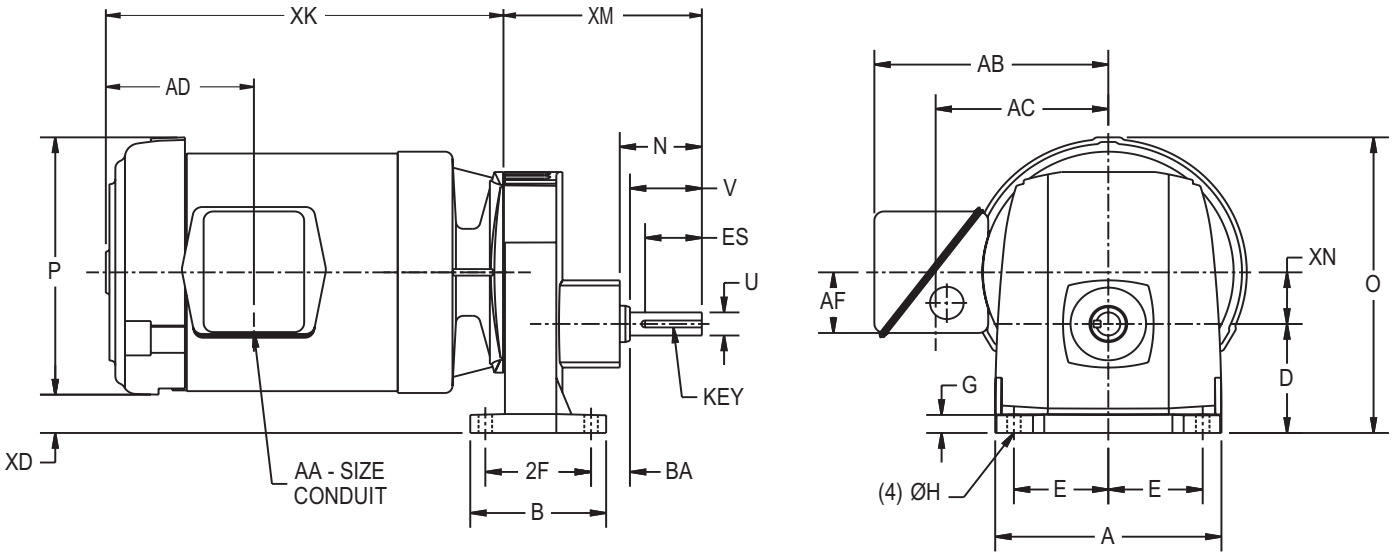
General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
545	I,II,III	2.4	5549	7482	3.15	3602	326T	T, C
481	I,II,III	2.4	6292	7684	3.55	3602	326T	T, C
451	I,II,III	2.4	6707	7837	4	3602	326T	T, C
403	I,II,III	2.4	7502	8043	4.5	3602	326T	T, C
356	I,II,III	2.4	8488	8261	5	3602	326T	T, C
315	I,II,III	2.4	9611	8482	5.6	3602	326T	T, C
285	I,II,III	2.4	10631	8648	6.3	3602	326T	T, C
255	I,II,III	2.2	11859	8834	7.1	3602	326T	T, C
227	I,II,III	2.0	13328	9022	8	3602	326T	T, C
194	I,II	1.7	15610	9257	9	3602	326T	T, C
193	III	2.4	15714	15833	9	3732	326T	T, C
182	I,II	1.9	16647	9349	10	3602	326T	T, C
170	III	2.4	17805	16283	10	3732	326T	T, C
161	I,II	1.7	18843	9516	11.2	3602	326T	T, C
159	III	2.4	19016	16561	11.2	3732	326T	T, C
145	I,II	1.5	20917	9631	12.5	3602	326T	T, C
143	III	2.4	21090	16923	12.5	3732	326T	T, C
130	I,II	1.4	23337	9746	14	3602	326T	T, C
127	III	2.4	23856	17385	14	3732	326T	T, C
116	I	1.3	26103	9843	16	3602	326T	T, C
111	II,III	2.4	27140	17846	16	3732	326T	T, C
99	I	1.1	30598	9929	18	3602	326T	T, C
98	II,III	2.3	30771	18300	18	3732	326T	T, C
88		0.99	34574	9954	20	3602	326T	T, C
87	I,II,III	2.1	34747	18558	20	3732	326T	T, C
77	I,II	1.9	39068	18558	22.4	3732	326T	T, C
71	III	2.4	42699	22000	25	3842	324T	T, C
69	I,II	1.7	43563	18558	25	3732	326T	T, C
63	III	2.1	47712	22000	28	3842	324T	T, C
62	I,II	1.5	49095	18558	28	3732	326T	T, C
57	II	1.8	53416	22000	31.5	3842	324T	T, C
55	I,II	1.4	54972	18558	31.5	3732	326T	T, C
55	III	2.4	53658	22000	31.5	3843	324T	T, C
50	II, II	2.2	59751	22000	35.5	3843	324T	T, C
49	I	1.1	62233	18558	35.5	3732	326T	T, C
45	I	1.0	67592	22000	40	3842	324T	T, C
44	II	1.9	67030	22000	40	3843	324T	T, C
40	I, II	1.7	74985	22000	45	3843	324T	T, C
35	I, II	1.5	85818	22000	50	3843	324T	T, C
31	I, II	1.4	94790	22000	56	3843	324T	T, C
28	I	1.2	107315	22000	63	3843	324T	T, C
24	I	1.1	121365	22000	71	3843	324T	T, C

◊ **Standard Motor Types** (see page E-14 for product codes)
T TEFC, three phase, 230/460 or 575V
C CorroGard® motor, three phase, 230/460 or 575V

Δ see page E-9

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
30	5.90	3.54	2.95	2.46	.49	.35	2.14	.625	1.88	1.01	2.76	1.48	1.40	5.75	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

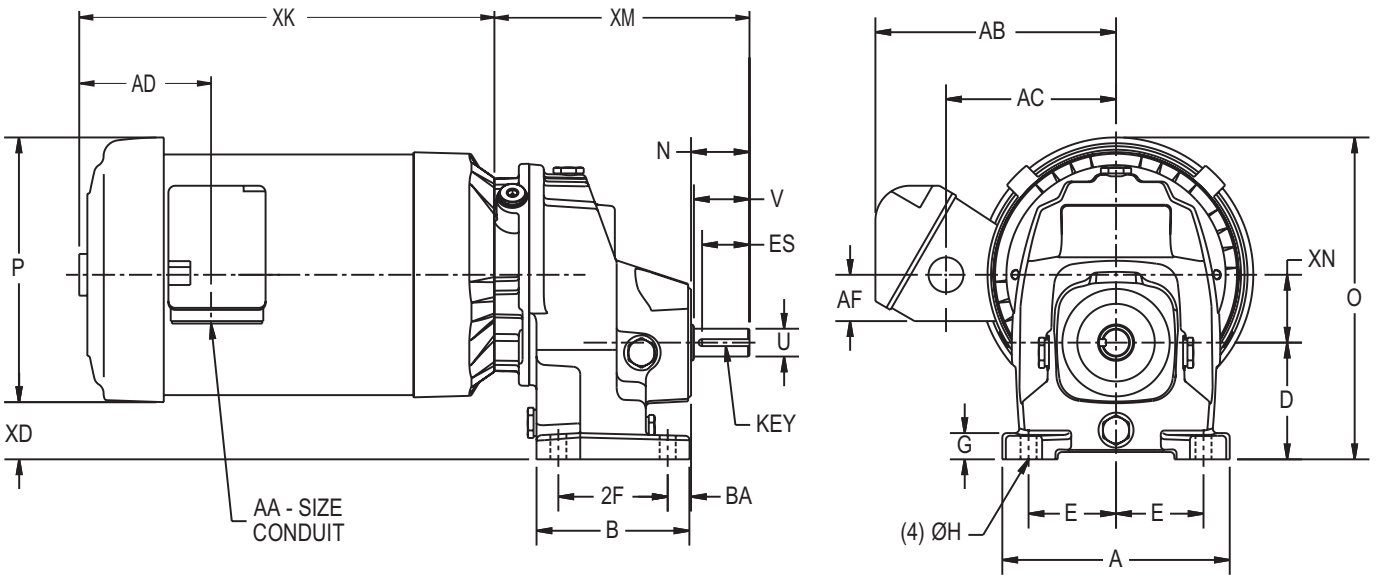
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
31	6.14	4.13	3.15	2.36	.71	.43	1.58	.750	1.50	.71	2.95	1.28	1.83	6.89	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.65
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.65
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	0.64

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

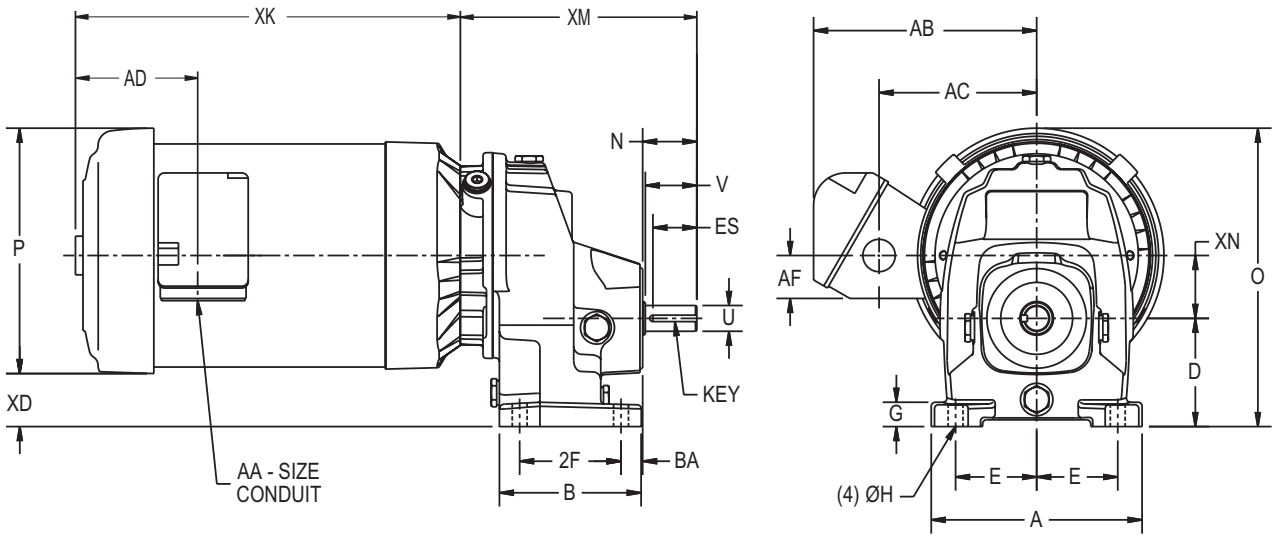
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	7.08	4.48	3.54	2.76	.77	.55	2.08	1.000	2.00	.75	3.15	1.56	2.48	7.51	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	2.75
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	2.75
182T,184T	T	14.53	9.76	9.56	3/4[6]	7.8	6.00	7.79	2.32	1.68
213T	T	16.15	11.65	11.25	3/4	8.42	7.17	5.6	2.13	0.96
215T	T	17.65	11.65	11.25	3/4	8.42	7.17	5.6	2.13	1.09

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

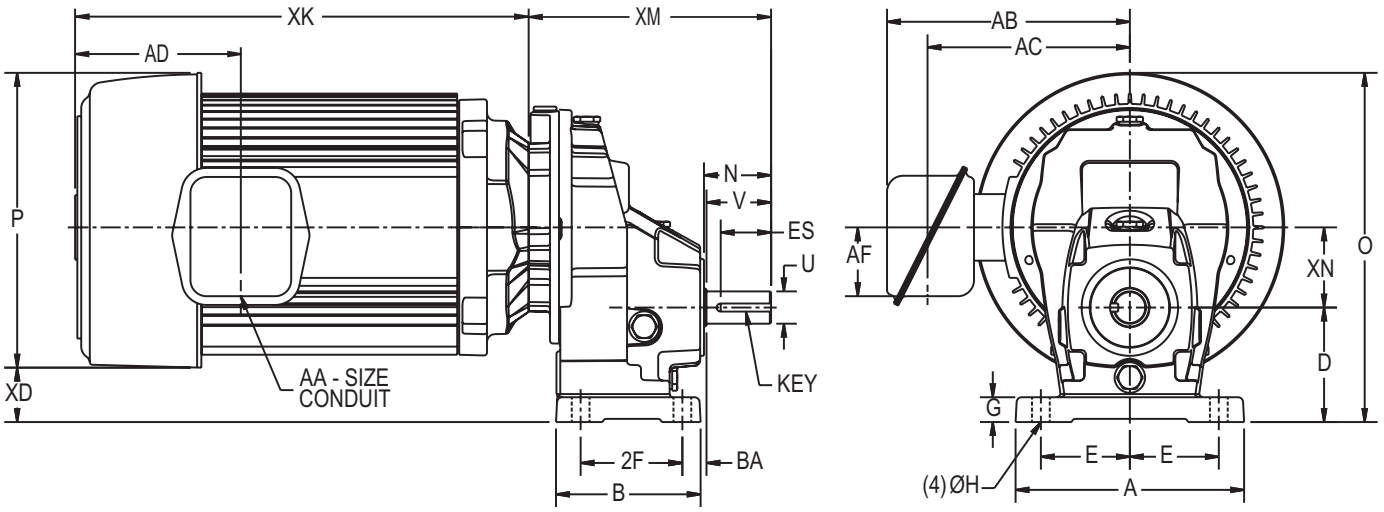
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
33	9.69	5.30	4.41	3.74	1.00	.63	2.83	1.375	2.75	1.09	3.94	2.40	2.76	8.91	5/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.8	6	7.79	2.32	2.83
213T	T	16.15	12.79	11.25	1	8.42	7.16	5.60	2.13	2.10
215T	T	17.65	12.79	11.25	1	8.42	7.16	5.60	2.13	2.10
254T	T	20.58	13.86	13.38	1 1/4	9.79	7.68	8.29	1.81	1.17
256T	T	22.33	13.86	13.38	1 1/4	9.79	7.68	8.29	1.81	1.17

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

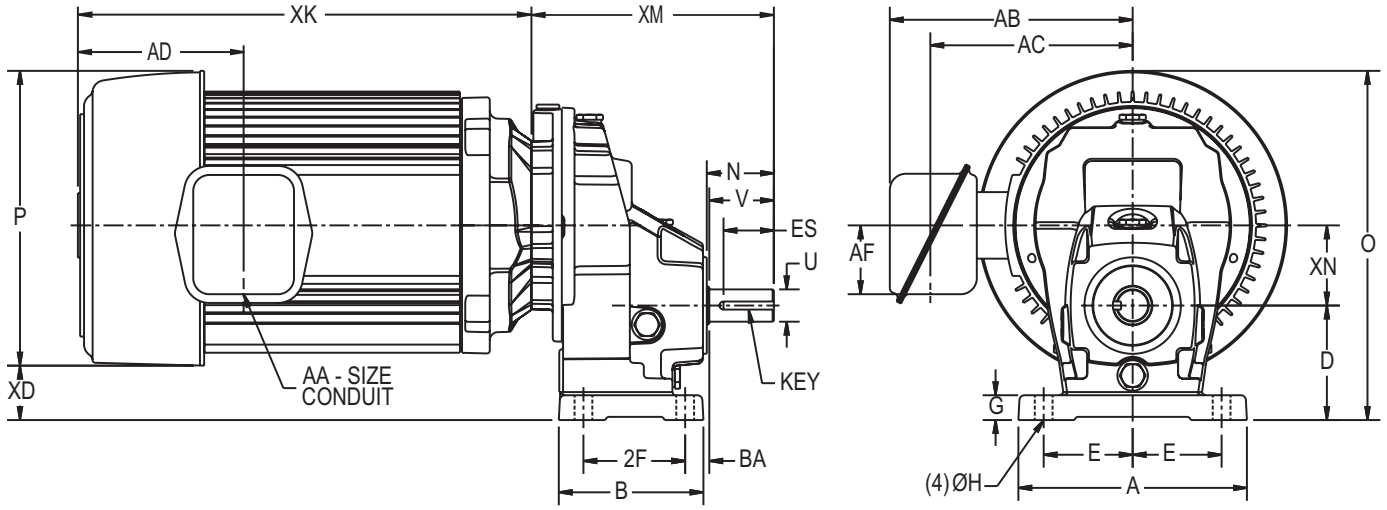
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														182T-215T	254T-286T	
34	11.02	6.59	5.20	4.25	1.34	.71	3.06	1.50	3.00	1.10	4.92	2.56	3.43	9.98	10.63	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
182T, 184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	4.28
213T	T	16.15	14.25	11.25	1	8.42	7.17	5.60	2.13	3.56
215T	T	17.65	14.25	11.25	1	8.42	7.17	5.60	2.13	3.56
254T	T	19.61	15.31	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
256T	T	21.36	15.31	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
284T, 286T	T, C	24.71	15.96	14.66	1 1/2	11.33	9.16	13.19	2.63	1.34

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

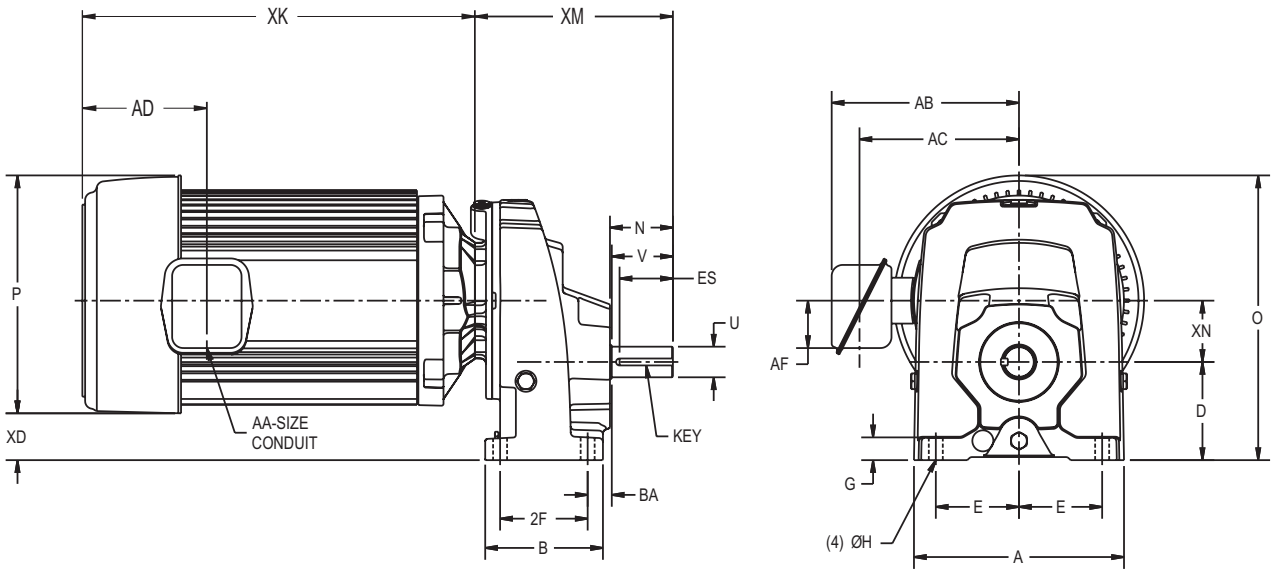
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Foot Mounted - Single Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														213T-215T	254T-324T	
35	13.65	7.76	6.30	5.12	1.61	.79	3.56	1.750	3.50	1.18	6.30	3.06	4.33	10.84	11.36	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
213T	T	16.15	17.37	11.25	1	8.42	7.17	5.6	2.13	5.57
215T	T	17.65	17.37	11.25	1	8.42	7.17	5.6	2.13	5.57
254T	T	19.61	17.37	13.38	1 1/4	9.79	7.68	8.29	1.81	4.63
256T	T	21.36	17.37	13.38	1 1/4	9.79	7.68	8.29	1.81	4.63
284T, 286T	T, C	24.71	17.99	14.66	1 1/2	11.33	9.16	13.19	2.63	3.37
324T	T, C	24.96	18.81	16.34	2	14.30	10.69	14.16	3.25	2.85

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

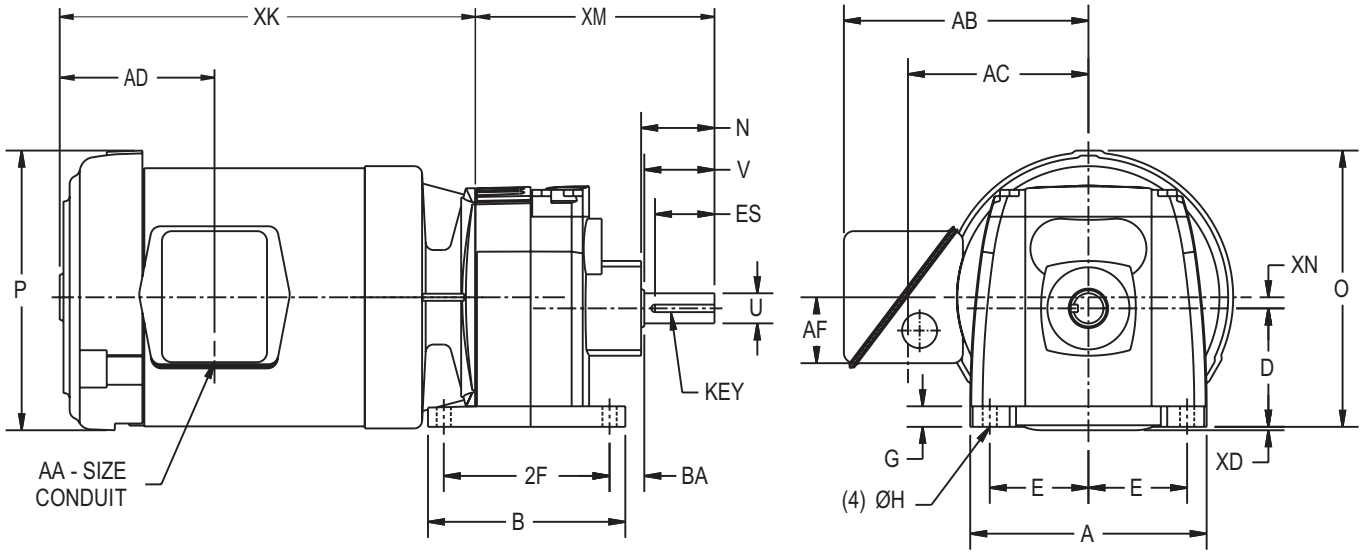
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Three Phase Gearmotor[2]

Foot Mounted - Double/Triple Reduction



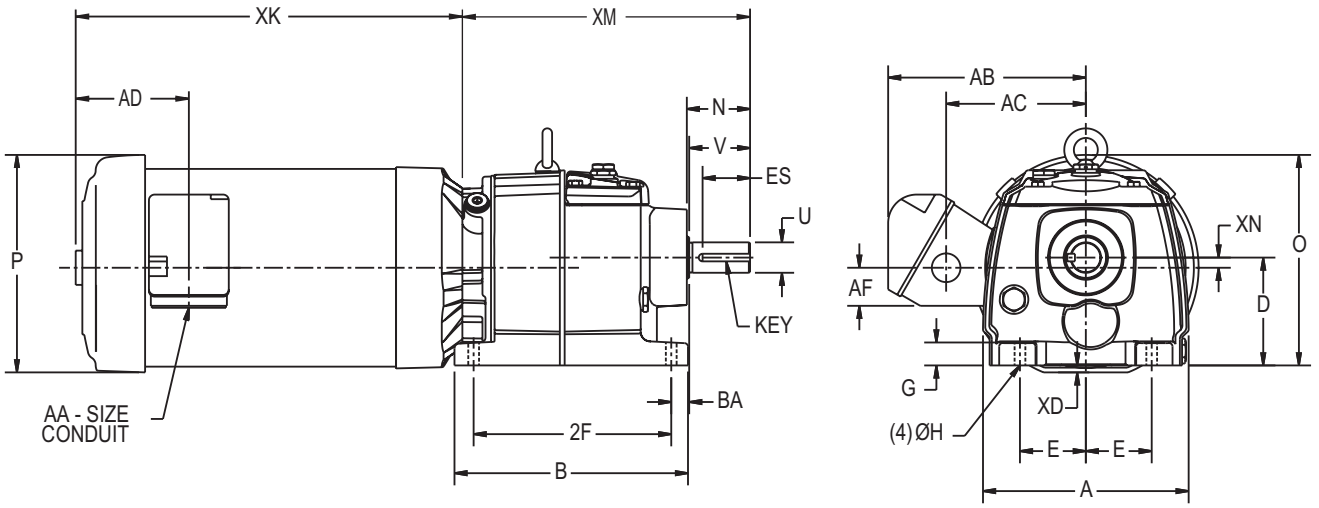
Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
3012	5.90	4.92	2.95	2.46	.51	.35	1.83	.750	1.75	.87	4.13	1.48	.28	6.54	3/16 Sq.
3013	5.90	5.71	2.95	2.46	.51	.35	1.83	.750	1.75	.87	4.92	1.48	.28	7.33	3/16 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.08
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.08

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.

Three Phase Gearmotor[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	XN	N	U[3]	V	BA	2F	ES	XM	Key
31	6.76	7.68	3.54	2.17	.75	.35	.33	2.08	1.000	2.00	.59	6.50	1.56	9.46	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.10
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.10
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	1.13

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

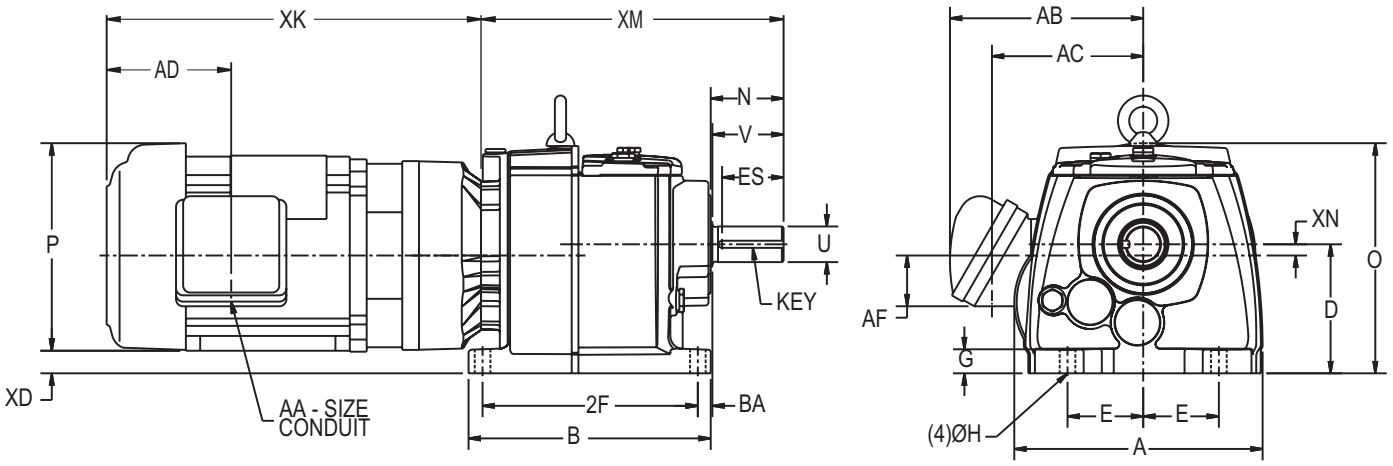
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	8.72	8.50	4.53	2.66	.84	.55	2.56	1.250	2.50	.51	7.56	2.16	.39	10.63	1/4 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.87
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	0.87
182T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	1.08
213T	T	16.15	9.76	11.25	1	8.42	7.17	5.60	2.13	2.05
215T	T	17.65	9.76	11.25	1	8.42	7.17	5.60	2.13	2.05

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

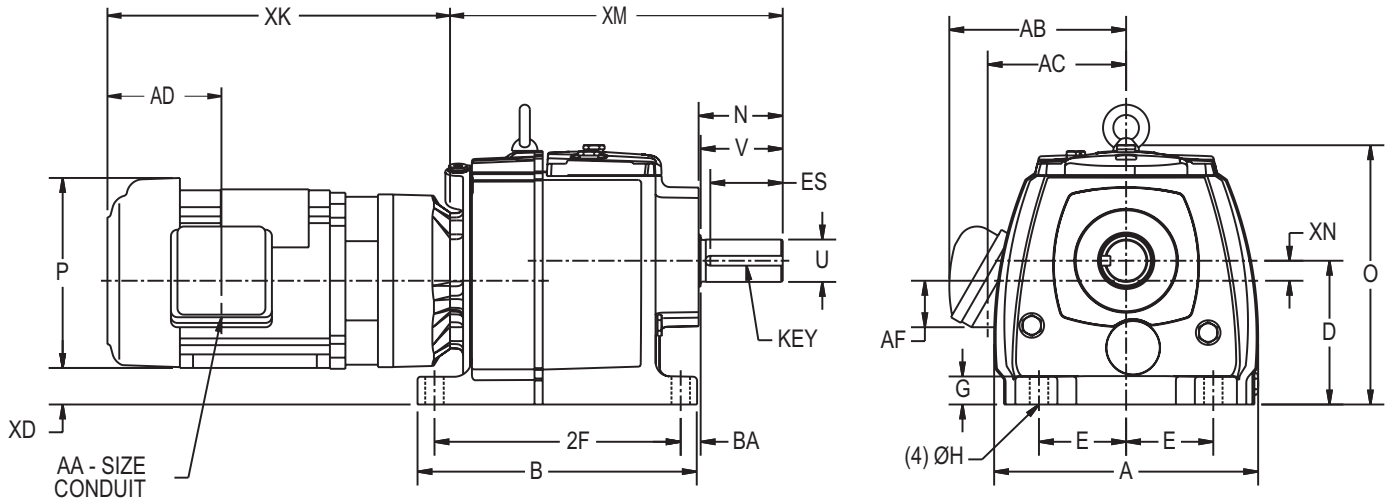
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
3362,3363	10.13	10.72	5.51	3.35	1.07	.71	3.08	1.50	3.00	.77	9.45	2.56	.77	12.62	3/8 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	.71	3.23	1.625	3.15	.77	9.45	2.78	.77	12.77	3/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.47
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.47
182T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	0.40
213T	T	16.15	10.37	11.25	1	8.42	7.16	5.60	2.13	0.32
215T	T	17.65	10.37	11.25	1	8.42	7.16	5.60	2.13	0.32
254T	T	20.58	11.44	13.38	1 1/4	9.79	7.68	8.29	1.81	1.25
256T	T	22.33	11.44	13.38	1 1/4	9.79	7.68	8.29	1.81	1.25

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

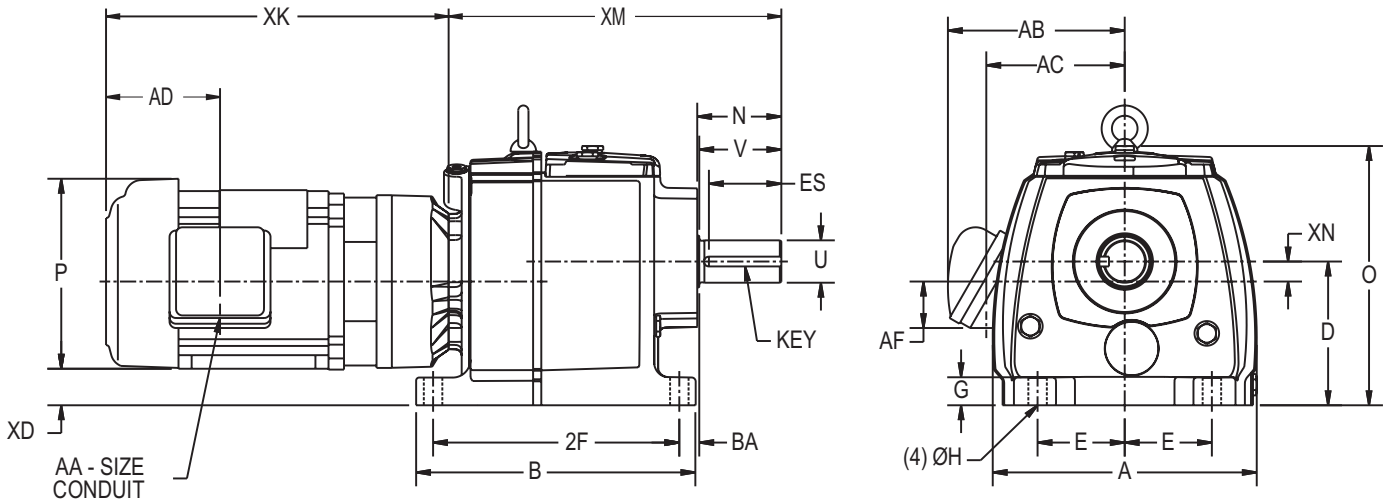
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														143T-256T	284T-324T	
34	11.97	10.87	7.09	4.53	1.37	.71	3.58	2.125	3.50	.98	9.25	3.06	1.02	14.34	14.69	1/2 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	2.75
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	2.75
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	1.72
213T	T	16.15	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
215T	T	17.65	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
254T	T	19.61	12.75	13.38	1 1/4	9.79	7.68	8.29	1.81	0.06
256T	T	21.36	12.75	13.38	1 1/4	9.79	7.68	8.29	1.81	0.06
284T, 286T	T	24.71	13.44	14.66	1 1/2	11.33	9.16	13.19	2.63	-1.22

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

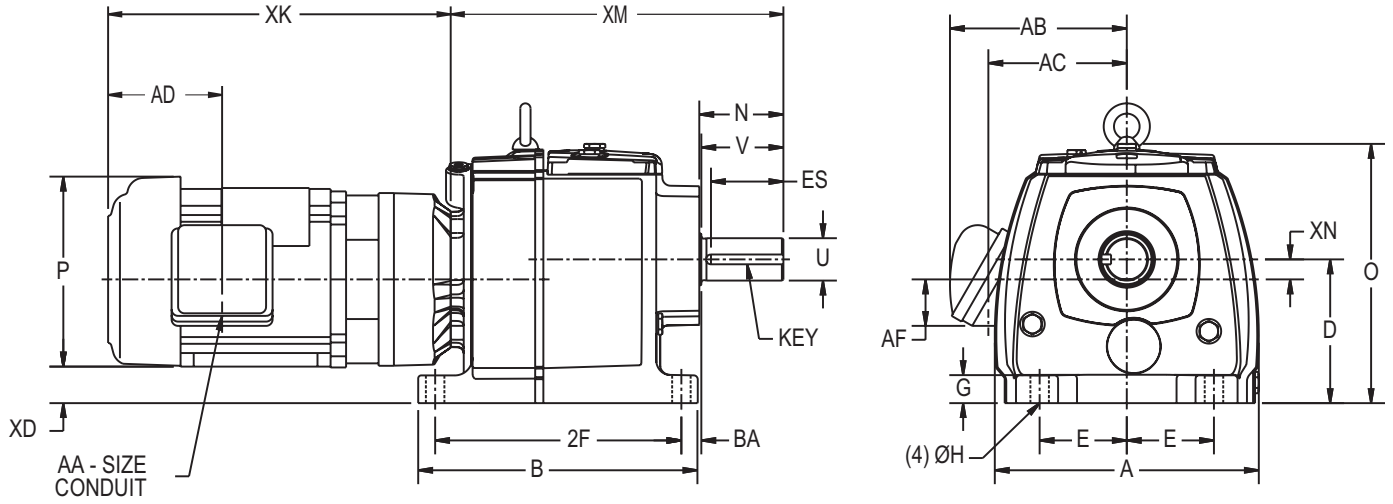
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM		Key
														143T-256T	284T-324T	
35	14.19	12.89	8.86	5.51	1.73	.87	4.81	2.375	4.72	1.10	11.02	4.19	1.14	16.60	17.12	5/8 Sq.

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	4.40
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	3.38
213T	T	16.15	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
215T	T	17.65	11.89	11.25	1	8.42	7.17	5.60	2.13	1.00
254T	T	19.61	12.75	13.38	1 1/4	9.79	7.68	8.29	1.81	0.06
256T	T	21.36	12.75	13.38	1 1/4	9.79	7.68	8.29	1.81	0.06
284T, 286T	T, C	24.71	13.44	14.66	1 1/2	11.33	9.16	13.19	2.63	-1.22

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

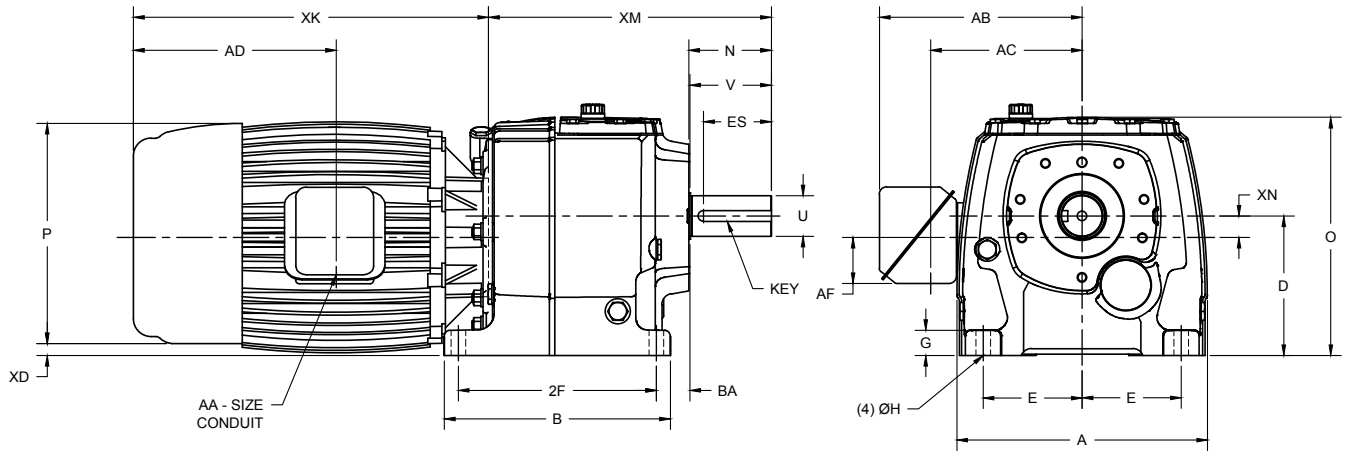
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U [3]	V	BA	2F	ES	XN	XM		Key
															145T-215T	254T-326T	
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.102	19.96	20.31	3/4 Sq

Motor Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	1.64	5.42
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	2.32	4.40
213T	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	3.68
215T	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42	3.68
254T	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	2.74
256T	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	2.74
284T,286T	T, C	24.71	14.62	1.50	11.33	8.51	12.44	2.63	1.45
324T,326T	T, C	24.96	17.20	2.00	14.99	11.34	14.16	3.63	0.55

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

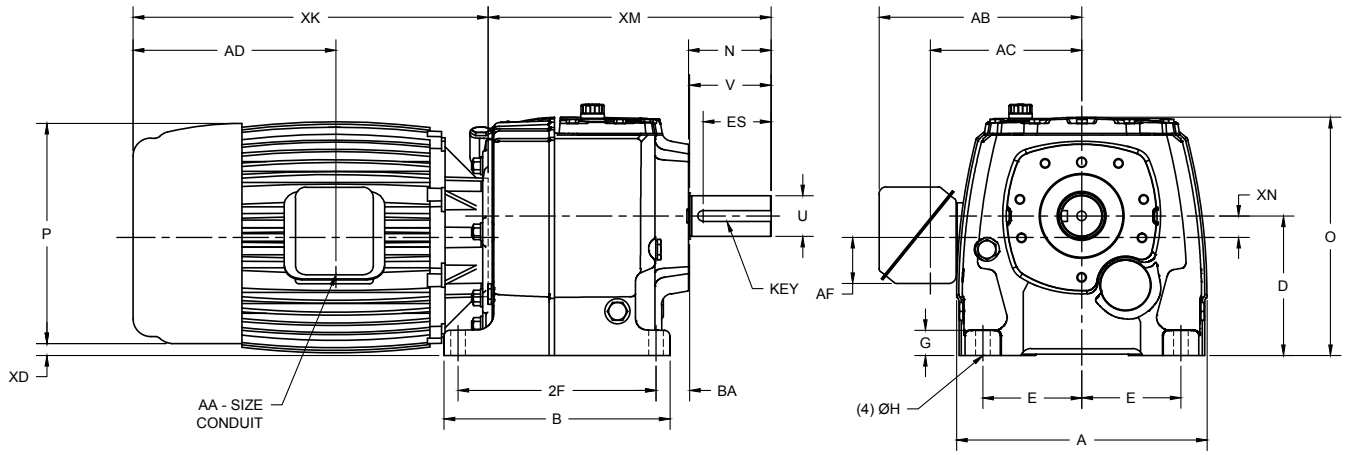
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U [3]	V	BA	2F	ES	XN	XM		Key
															182T-215T	254T-326T	
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.362	23.88	24.23	7/8 Sq

Motor Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	2.32	5.69
213T	T	16.16	11.25	1.00	8.42	7.17	$5.60	2.42	4.97
215T	T	17.65	11.25	1.00	8.42	7.17	$5.60	2.42	4.97
254T	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	4.03
256T	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	4.03
284T,286T	T, C	24.71	14.62	1.50	11.33	8.51	12.44	2.63	2.75
324T,326T	T, C	24.96	17.20	2.00	14.99	11.34	14.16	3.63	1.84

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

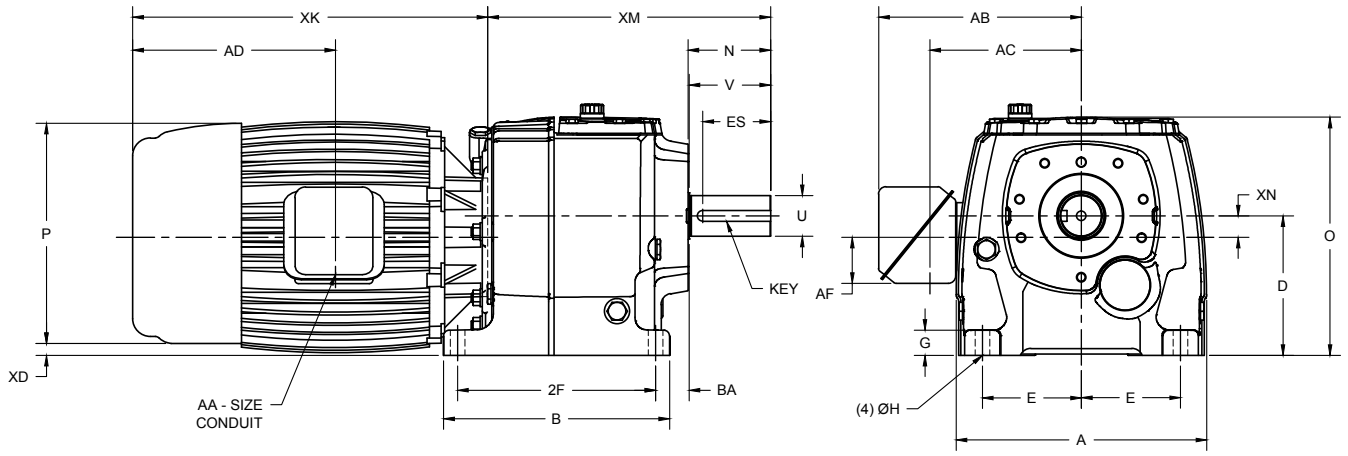
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	29.98	1 SQ

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
254T	T	19.61	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81	5.41
256T	T	21.36	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81	5.41
284T,286T	T, C	24.71	23.47	14.66	1 1/2	11.33	9.16	13.19	2.63	4.01
324T,326T	T, C	24.96	27.60	17.20	2	14.99	11.34	14.16	3.63	3.11

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

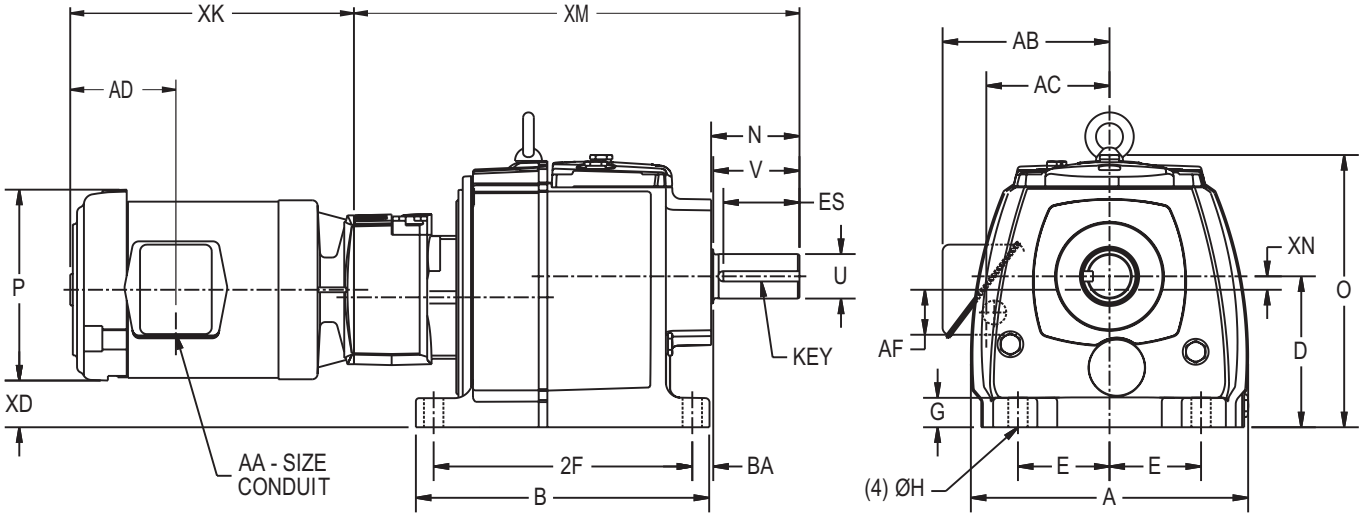
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
32	8.72	8.50	4.53	2.66	.84	.55	2.56	1.250	2.50	.51	7.56	2.16	.12	14.71	1/4 Sq.
33	10.13	10.72	5.51	3.35	1.07	.71	3.23	1.625	3.15	.77	9.45	2.78	.49	16.86	3/8 Sq.
34	11.97	10.87	7.09	4.53	1.37	.71	3.58	2.125	3.50	.98	9.25	3.06	1.35	21.31	1/2 Sq.

Frame	Motor Type[4]	XK	O			P[5]	AA	AB	AC	AD	AF	XD		
			32	33	34							32	33	34
56	T	9.79	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.10	1.71	2.42
143T	T	11.26	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.10	1.71	2.42
145T	T	12.04	8.07	9.94	11.89	7.22	3/4	6.10	4.50	3.86	1.64	1.10	1.71	2.42

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

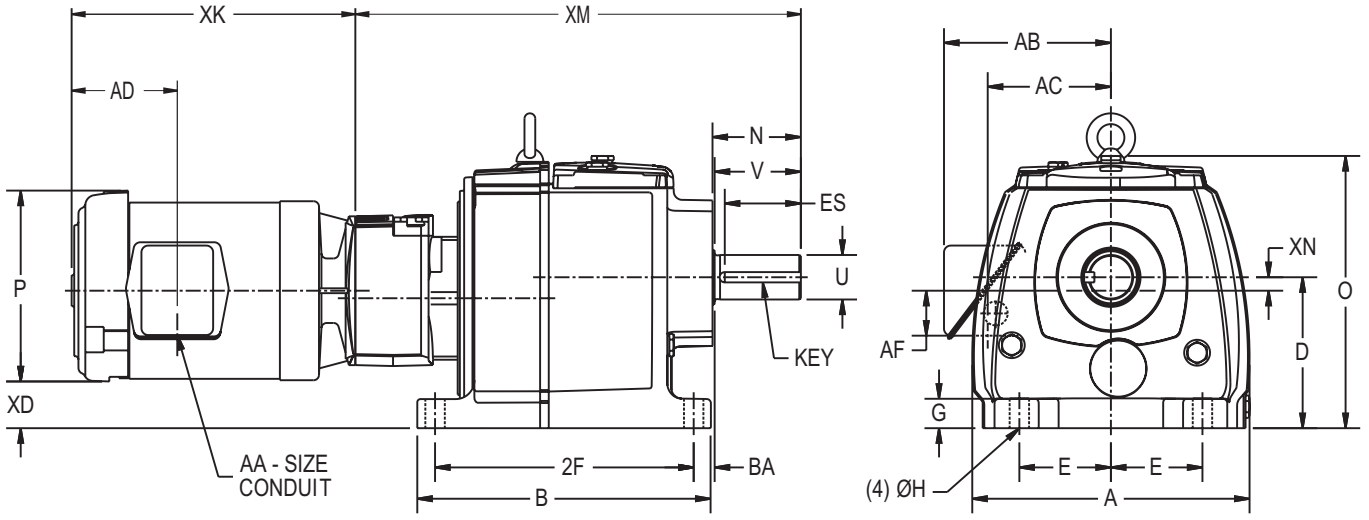
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Three Phase Gearmotor[2]

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	U[3]	V	BA	2F	ES	XN	XM	Key
35	14.19	12.89	8.86	5.51	1.73	.87	4.81	2.375	4.72	1.10	11.02	4.19	1.47	23.72	5/8 Sq.

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	4.07
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	4.07

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

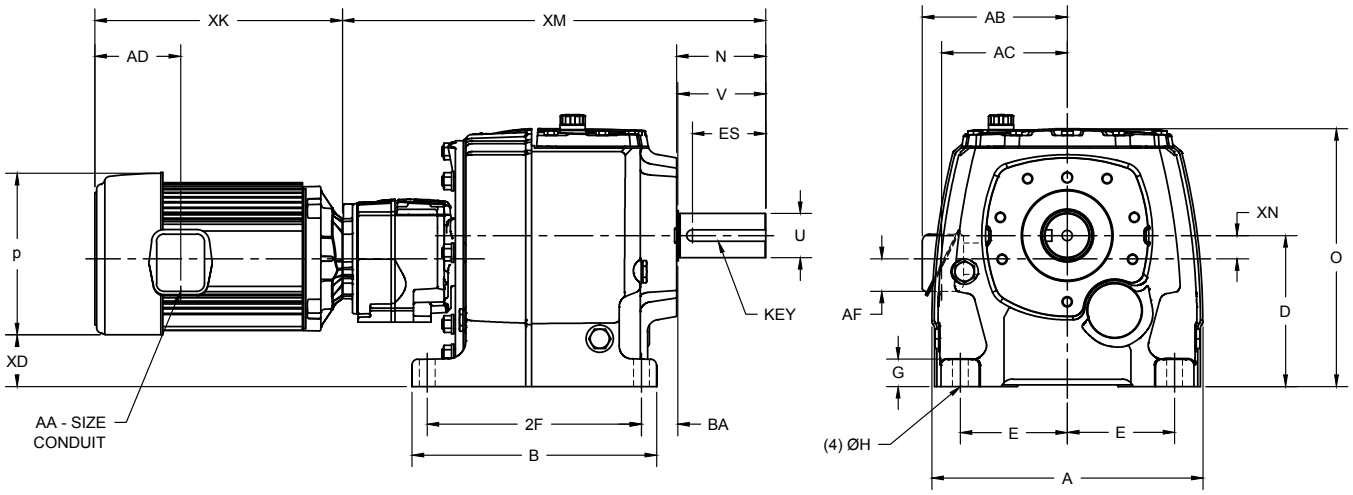
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.492	27.62	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.752	31.54	7/8 Sq

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD	
										36	37
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	5.03	6.33
143T	All	T	11.26	7.22	3/4	6.10	4.50	3.86	1.64	5.03	6.33
145T	All	T	12.04	7.22	3/4	6.10	4.50	3.86	1.64	5.03	6.33
182T,184T	All	T	14.23	9.56	3/4 [6]	7.80	6.00	7.79	2.32	4.01	5.30
213T	37	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	-	4.58

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

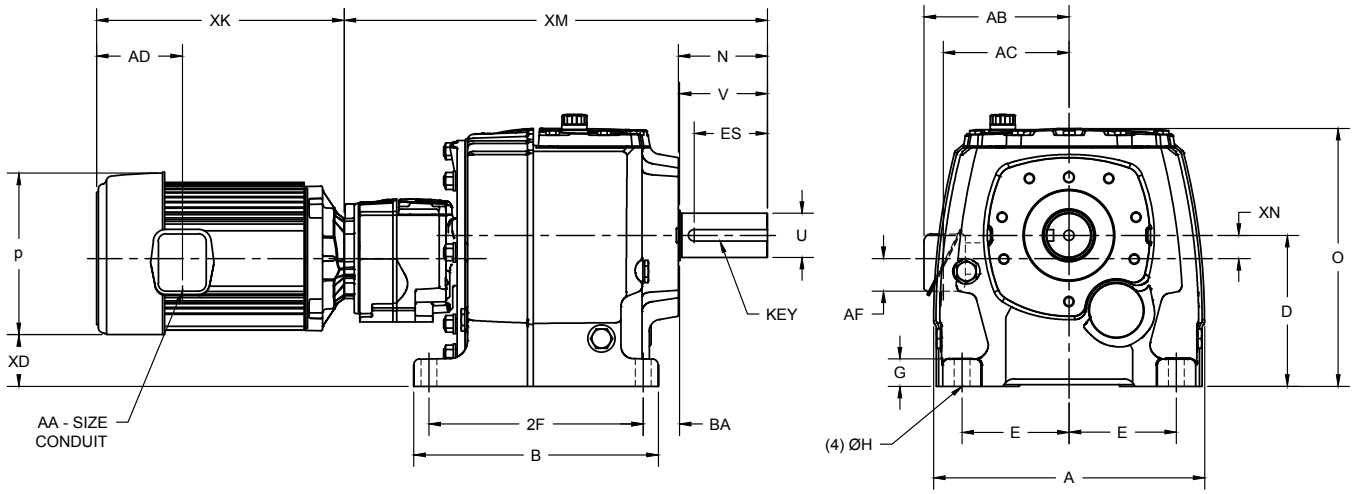
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	XM	Key
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	40.20	1 SQ

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	8.10
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	8.10
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	7.07
213T	T	16.15	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35
215T	T	17.65	23.47	11.25	1	8.25	6.39	5.6	1.56	6.35

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

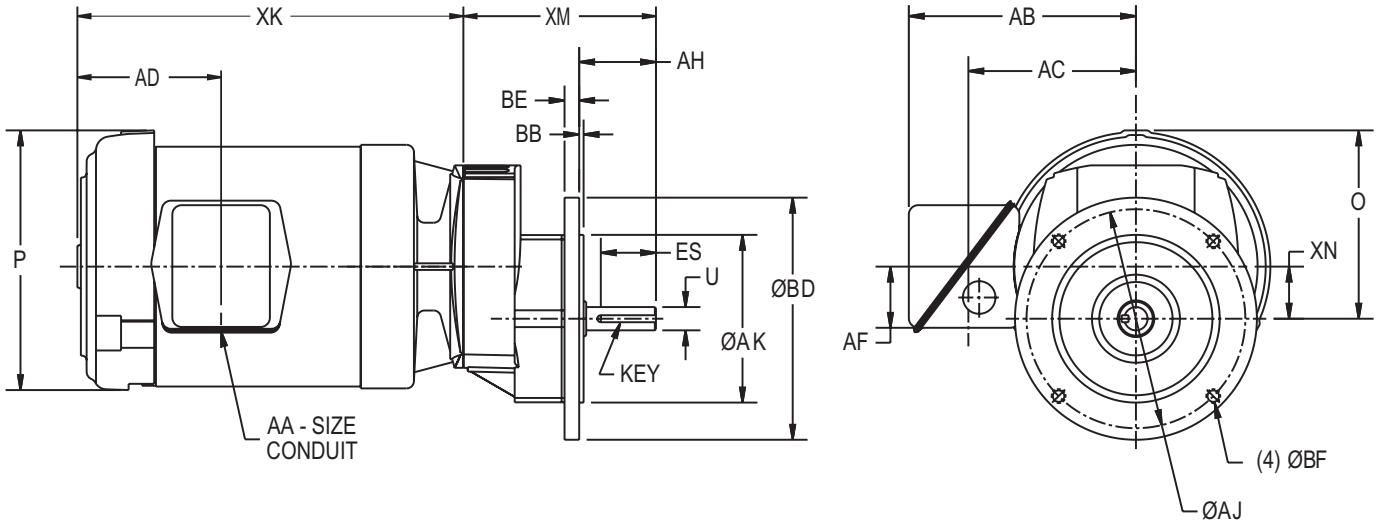
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XN	XM	Key
30	.625	2.06	1.48	1.40	5.75	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.875	.12	6.50	.39	3/8-16
BS	3.74	4.53	.12	5.51	.31	.35
BD1	3.15	3.94	.12	4.72	39	.28
BD2	4.33	5.12	.08	6.30	39	.35
BD3	5.12	6.50	.12	7.87	.31	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64

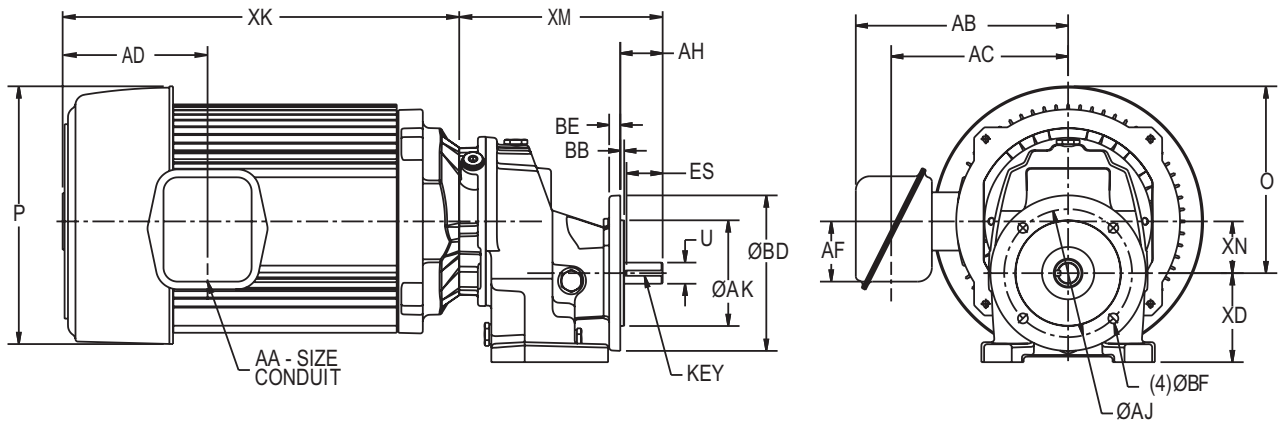
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109. Standard as shown with conduit opening down.

[5] Largest motor width.

Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
31	.75	1.50	1.28	3.15	1.83	7.20	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	4.33	5.12	.14	6.29	.39	.35
BD2	3.74	4.53	.14	5.50	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.52	7.80	7.79	2.32

[2] All rough casting dimensions may vary by .25" due to casting variations.

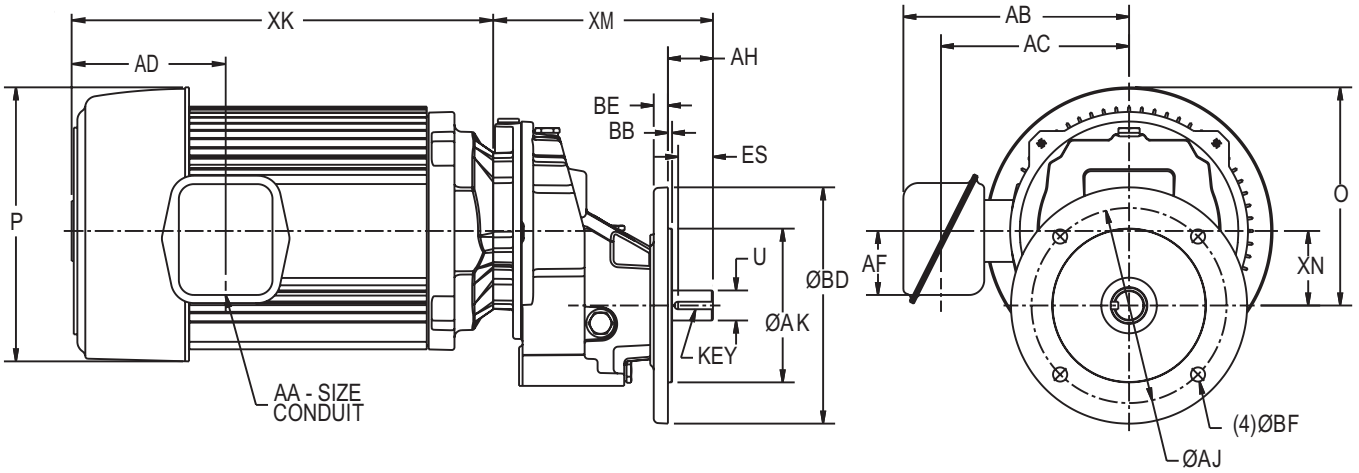
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Flange Mounted - Single Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
32	1.00	1.50	1.16	3.54	2.48	7.32	1/4 Sq.

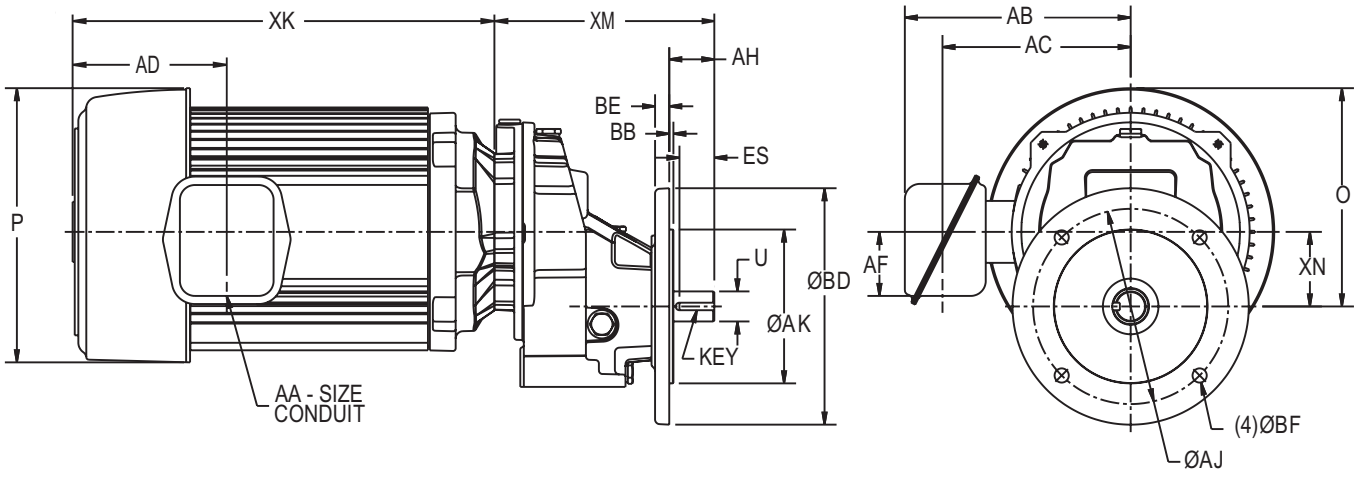
Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	.14	7.87	.47	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	8.11	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	8.11	11.25	1	8.42	7.17	5.6	2.13

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Single Reduction



Gear Frame	D	U[3]	AH	ES	XN	XM	Key
33	4.41	1.375	2.75	2.40	2.76	9.3	5/16 Sq.

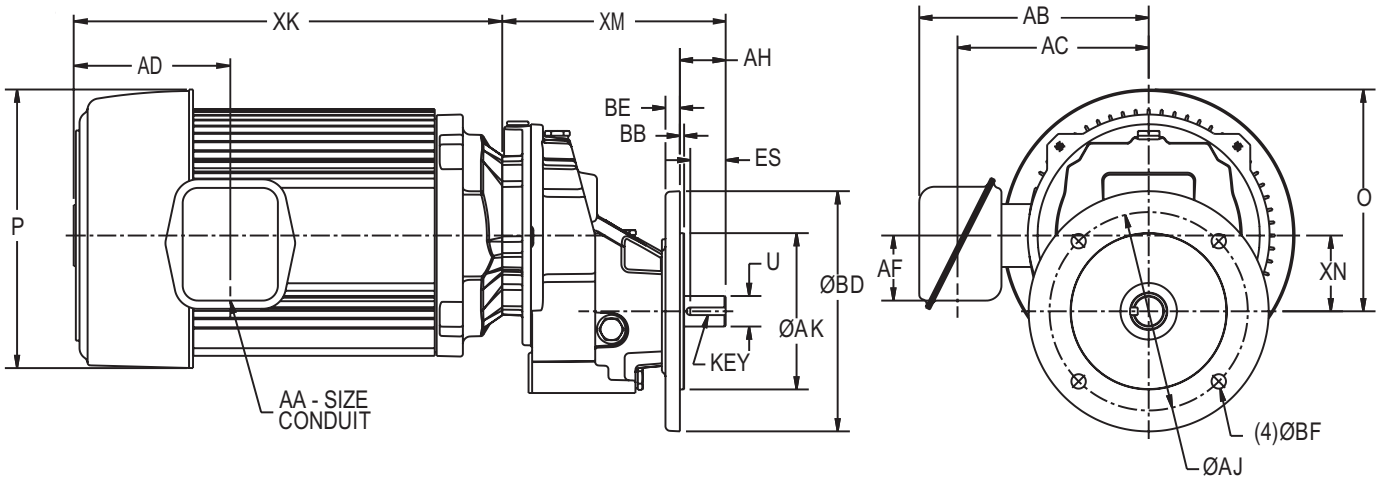
Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.16	7.86	.47	.43

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	7.79	2.32	2.13
213T	T	16.15	8.39	11.25	1	8.42	7.16	5.60	2.13
215T	T	17.65	8.39	11.25	1	8.42	7.16	5.60	2.13
254T	T	20.58	9.45	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	22.33	9.45	13.38	1 1/4	9.79	7.68	8.29	1.81

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Single Reduction



Gear Frame	XD	U[3]	AH	ES	XN	XM		Key
						182T-215T	254T-324T	
34	5.20	1.50	3.00	2.56	3.43	11.05	11.4	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	59	.55
BD2	7.09	8.46	.16	9.84	59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF	XD
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64	1.04
182T,184T	T	14.23	9.76	9.56	3/4[6]	7.80	6.00	7.79	2.32	4.28
213T	T	16.15	9.05	11.25	1	8.42	7.17	5.60	2.13	3.56
215T	T	17.65	9.05	11.25	1	8.42	7.17	5.60	2.13	2.62
254T	T	19.61	10.12	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
256T	T	21.36	10.12	13.38	1 1/4	9.79	7.68	8.29	1.81	2.62
284T, 286T	T, C	24.71	10.12	14.66	1 1/2	11.33	9.16	13.19	2.63	1.34

[2] All rough casting dimensions may vary by .25" due to casting variations.

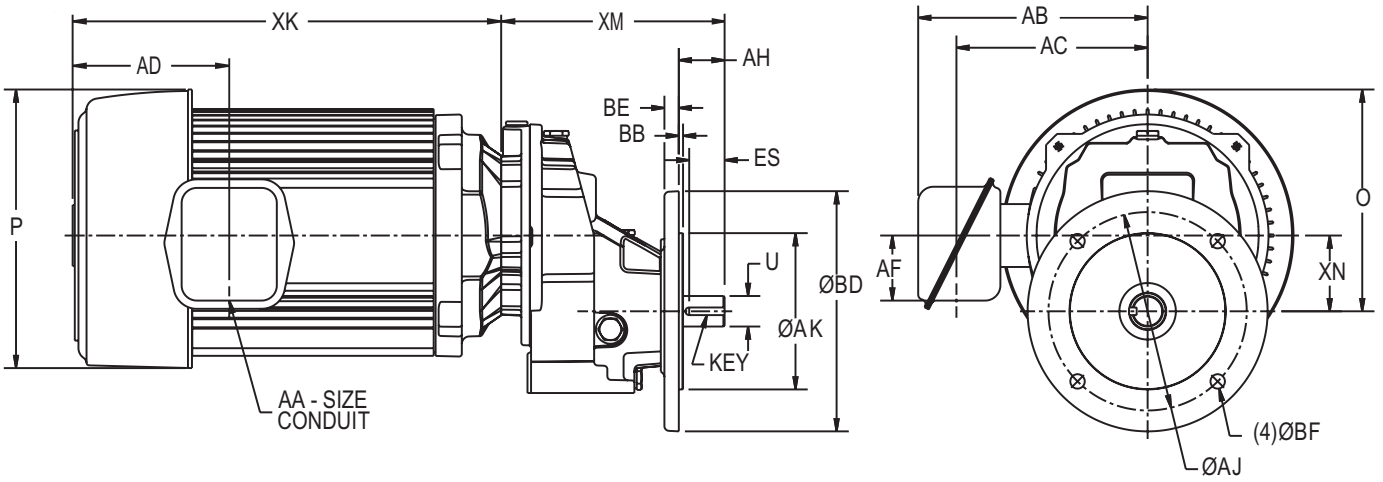
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Flange Mounted - Single Reduction



Gear Frame	XD	U[3]	AH	ES	XN	XM		Key
						213T-215T	254T-324T	
35	6.30	1.750	3.50	3.06	4.33	12.04	12.56	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
213T	T	16.15	11.07	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	11.07	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	11.07	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	11.07	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T, C	24.71	11.66	14.66	1 1/2	11.33	9.16	13.19	2.63

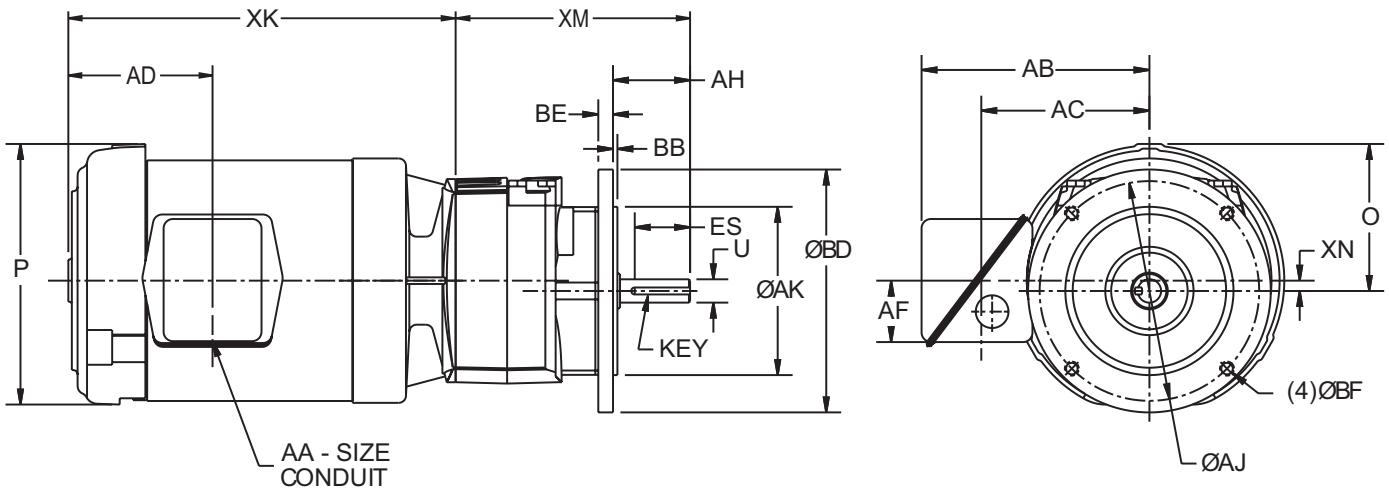
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XN	XM	Key
3012	.625	2.06	1.48	.28	6.85	3/16 Sq.
3013	.625	2.06	1.48	.28	7.64	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.875	.12	6.50	.39	3/8-16
BS	3.74	4.53	.12	5.51	.31	.35
BD1	3.15	3.94	.10	4.72	.28	.28
BD2	4.33	5.12	.12	6.30	.31	.35
BD3	5.12	6.50	.12	7.87	.31	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64

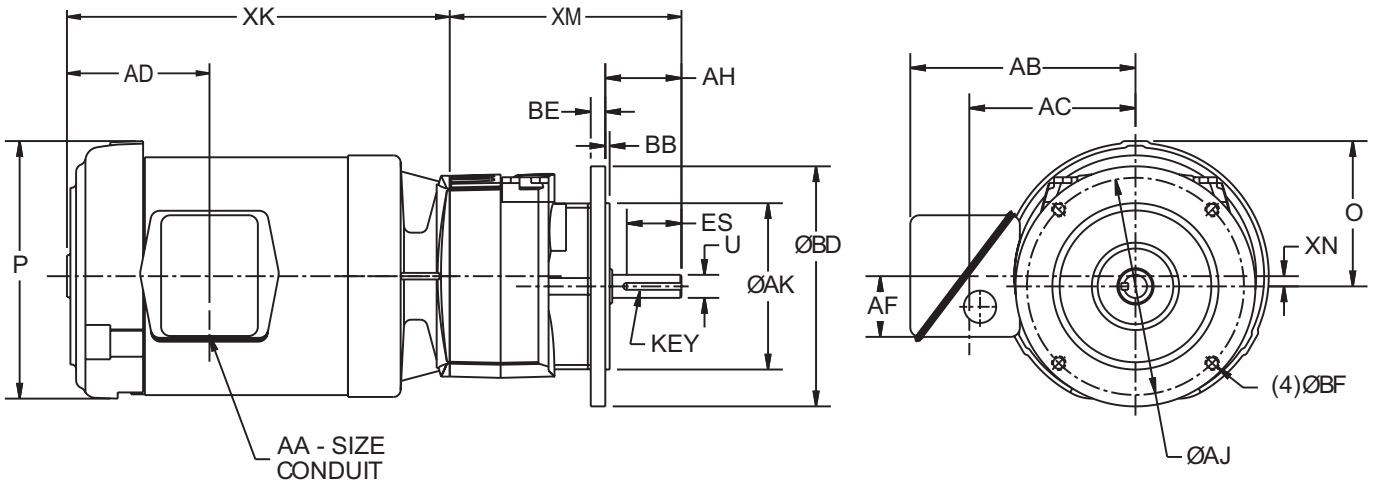
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
31	1.00	1.50	1.16	3.54	.33	9.27	1/4 Sq.

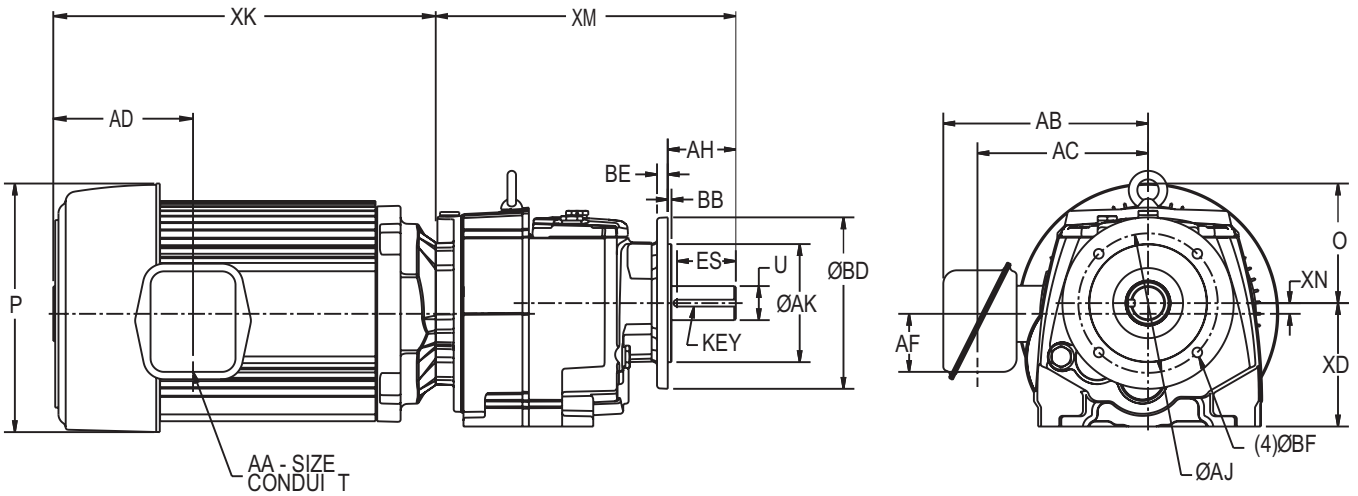
Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	.14	7.87	.47	.47
BD1	4.33	5.12	.14	6.29	.39	.35
BD2	3.74	4.53	.14	5.50	.39	.35
BD3	3.15	3.96	.10	4.72	.39	.28

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Double/Triple Reduction



Gear Frame	D	U[3]	AH	ES	XD	XN	XM	Key
32	4.53	1.250	2.50	2.16	4.53	0.39	11.02	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD1	5.12	6.50	.14	7.87	.39	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	6.02	11.25	1	8.42	7.17	5.60	2.13
215T	T	17.65	6.02	11.25	1	8.42	7.17	5.60	2.13

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

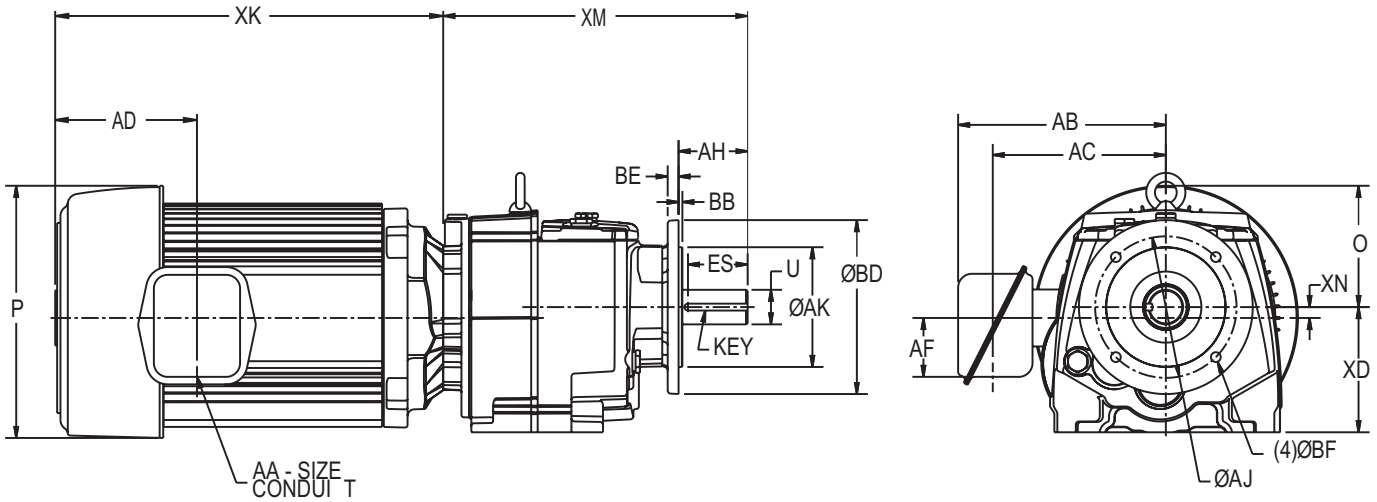
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
3362,3363	1.50	3.00	2.56	5.51	.77	13.64	3/8 Sq.
3372,3373	1.625	3.15	2.78	5.51	.77	13.79	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	.47	.55
BD1	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.14	7.86	.47	.47

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	4.86	11.25	1	8.42	7.16	5.6	2.13
215T	T	17.65	4.86	11.25	1	8.42	7.16	5.6	2.13
254T	T	20.58	5.93	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	22.33	5.93	13.38	1 1/4	9.79	7.68	8.29	1.81

[2] All rough casting dimensions may vary by .25" due to casting variations.

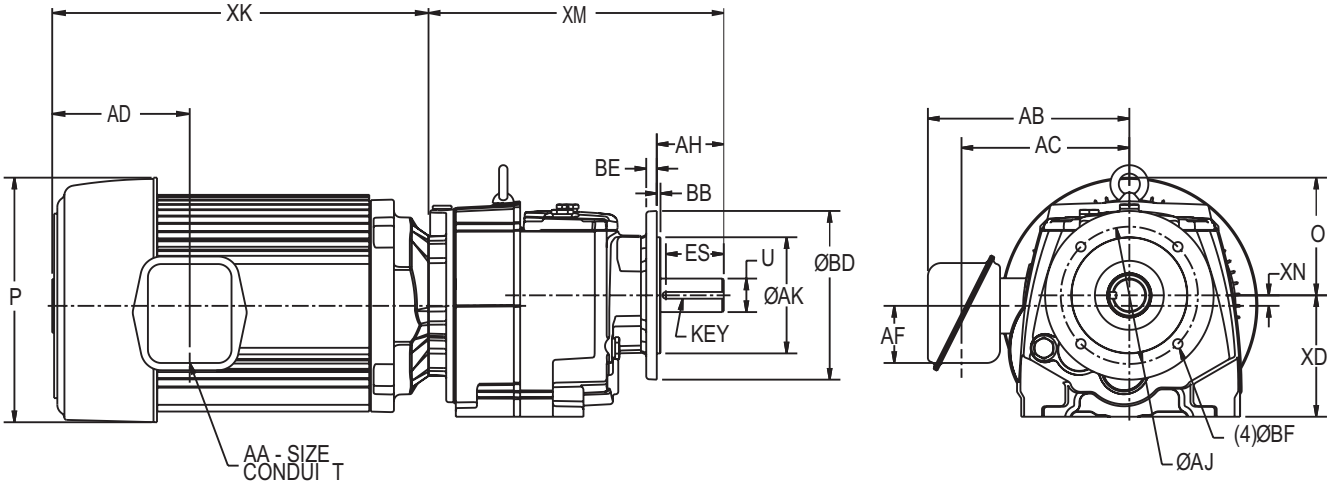
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Flange Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM		Key
						56-215T	254T-286T	
34	2.125	3.50	3.06	7.09	1.02	15.09	15.44	1/2 Sq.

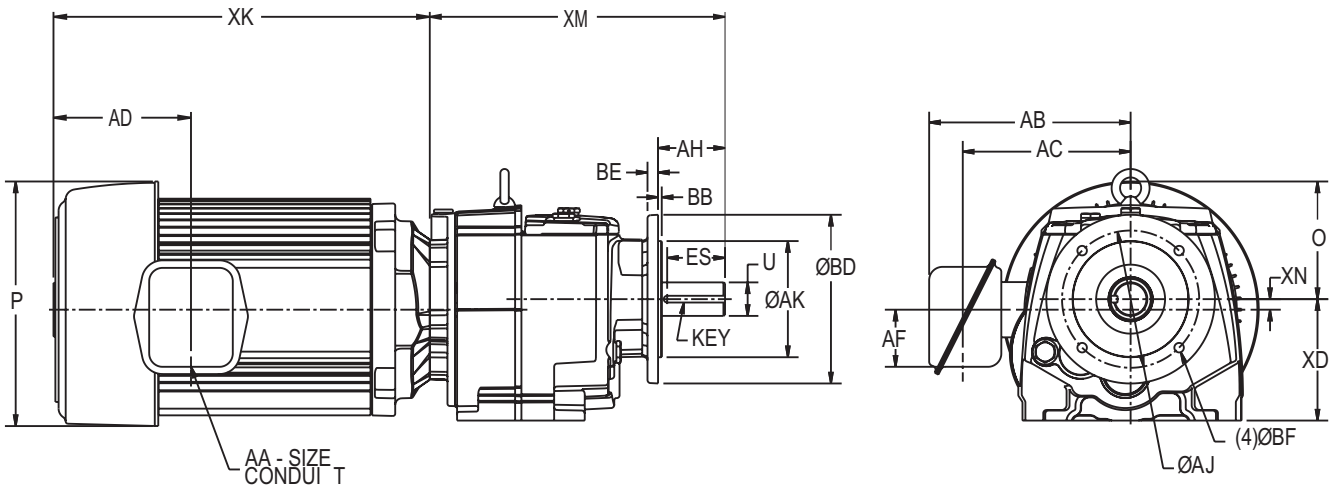
Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.16	13.77	.59	.71
BD1	9.06	10.43	.16	11.80	.59	.55
BD2	7.09	8.46	.16	9.83	.59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	4.80	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	4.80	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	5.67	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	5.67	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T, C	24.71	6.31	14.66	1 1/2	11.33	9.16	13.19	2.63

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Flange Mounted - Double/Triple Reduction



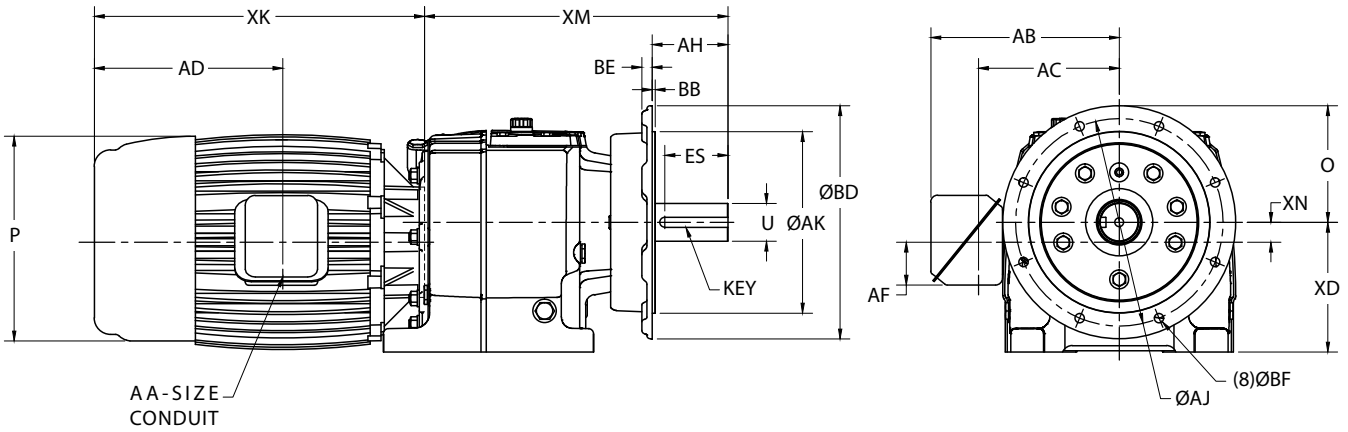
Gear Frame	U[3]	AH	ES	XD	XN	XM		Key
						143T-215T	254T-324T	
35	2.375	4.72	4.19	8.86	1.14	17.6	18.12	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	.20	15.75	.71	.71
BD1	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	5.98	11.25	1	8.42	7.17	5.6	2.13
215T	T	17.65	5.98	11.25	1	8.42	7.17	5.6	2.13
254T	T	19.61	5.98	13.38	1 1/4	9.79	7.68	8.29	1.81
256T	T	21.36	5.98	13.38	1 1/4	9.79	7.68	8.29	1.81
284T, 286T	T, C	24.71	6.19	14.66	1 1/2	11.33	9.16	13.19	2.63

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Flanged Mounted - Double/Triple Reduction



Gear Frame	O	U[3]	AH	ES	XD[1]	XN	XM			Key
							145T	182T-215T	254T-326T	
36	**7.87**	2.875	5.75	4.784	9.85	1.102	19.96	19.96	20.31	3/4 Sq
37	**8.00**	3.625	7.00	5.89	12.40	2.362	-	23.88	24.23	7/8 Sq

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF
145T	36	T	12.04	8.01	7.22	3/4	4.50	3.86	1.64
182T,184T	All	T	14.23	9.76	9.56	3/4 [6]	6.00	7.79	2.32
213T	All	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42
215T	All	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42
254T	All	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81
256T	All	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81
284T,286T	All	T, C	24.71	14.62	1.50	11.33	8.51	12.44	2.63
324T,326T	All	T, C	24.96	17.20	2.00	14.99	11.34	14.16	3.63

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

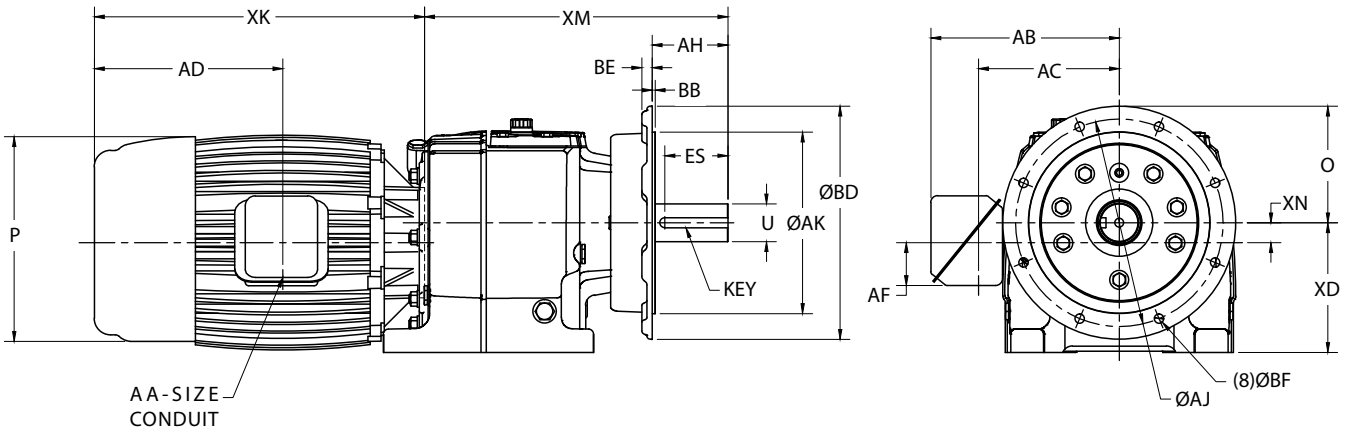
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Flanged Mounted - Double/Triple Reduction



Gear Frame	U[3]	AH	ES	XD[1]	XN	XM	Key
38	4.375	6.84	9.02	13.98	2.559	29.98	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
38	BS	21.65	23.62	.197	25.98	.79	.87
	BD1	17.72	19.69	.197	21.65	.79	.69

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
254T	T	19.61	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81
256T	T	21.36	23.47	13.38	1 1/4	9.96	7.72	8.29	1.81
284T,286T	T, C	24.71	23.47	14.66	1 1/2	11.33	9.16	13.19	2.63
324T,326T	T, C	24.96	27.60	17.20	2	14.99	11.34	14.16	3.63

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

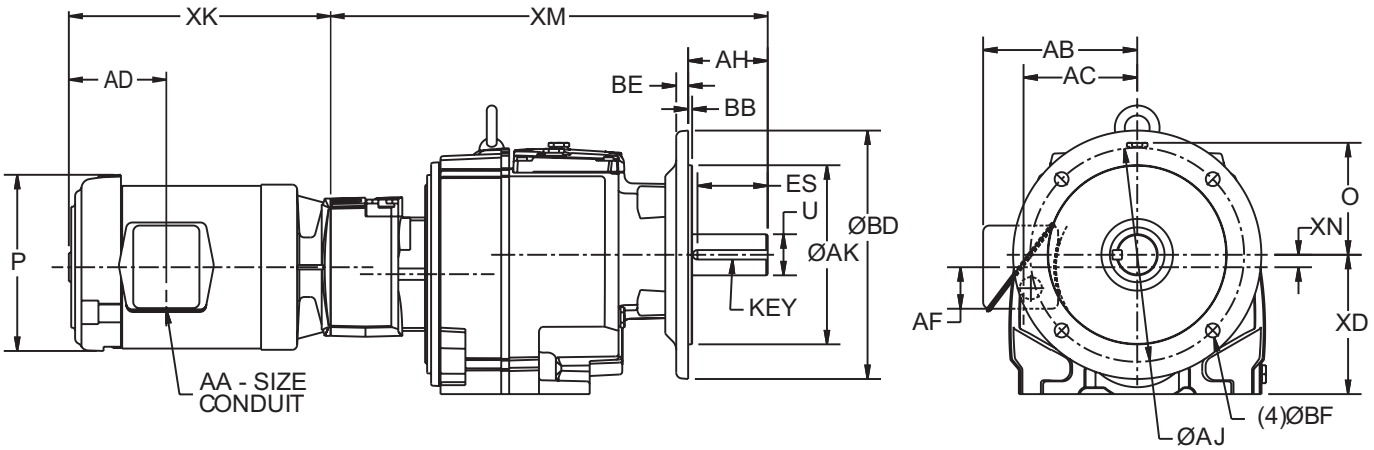
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
32	1.250	2.50	2.16	4.53	.12	15.1	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	.16	9.83	.47	.55
BD1	5.12	6.50	.14	7.87	.39	.47
BD2	4.33	5.12	.14	6.29	.39	.35

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	3.54	7.22	3/4	6.10	4.50	3.86	1.64

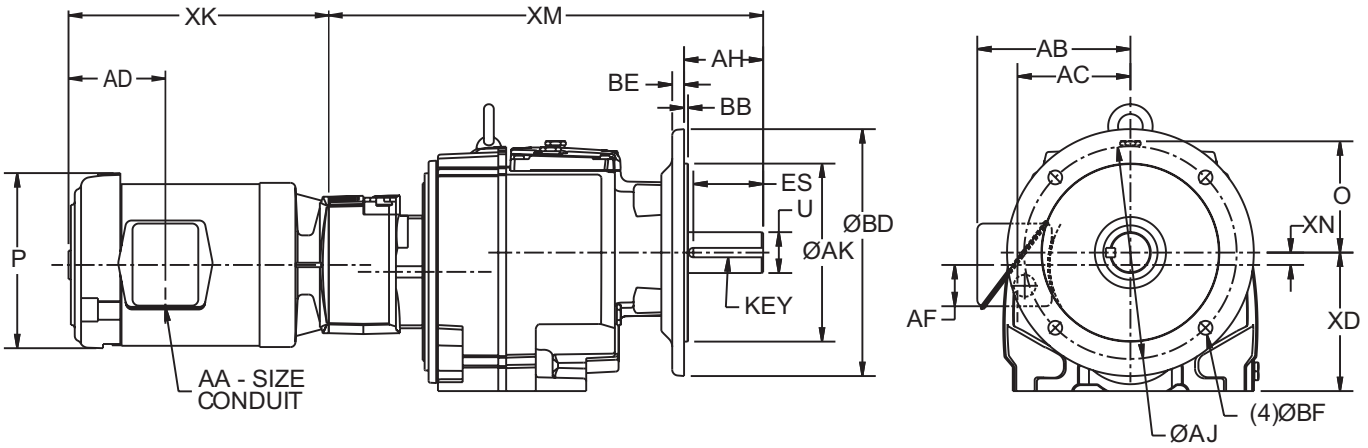
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
33	1.625	3.15	2.78	5.51	.49	17.88	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	.16	11.80	.47	.55
BD1	7.09	8.46	.16	9.83	.47	.55
BD2	5.12	6.50	.14	7.86	.47	.47

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64

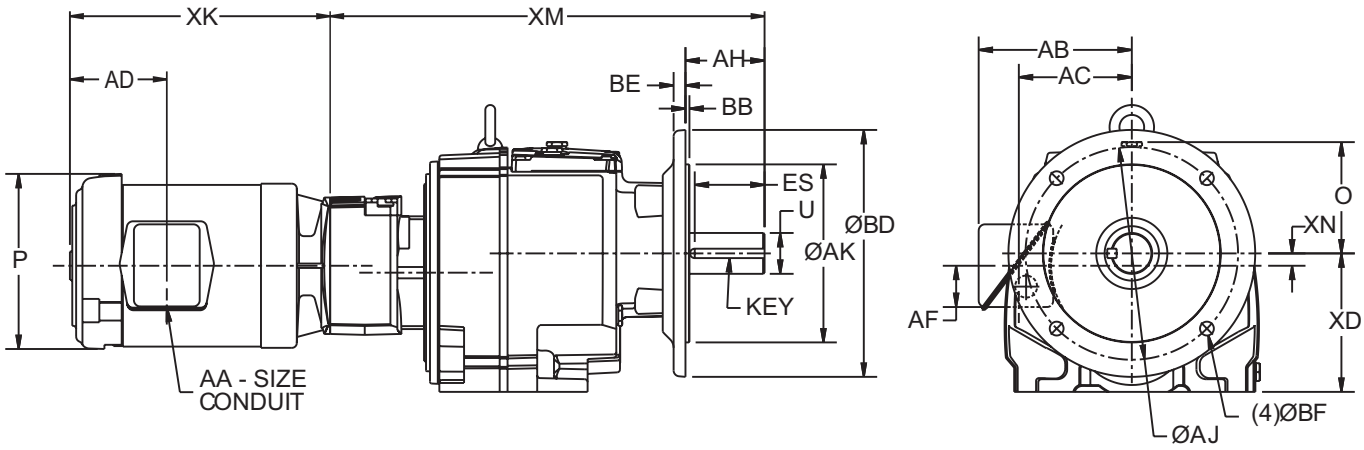
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Combined Reduction



Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
34	2.125	3.50	3.06	7.09	1.35	22.06	1/2 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	.16	13.77	.59	.71
BD1	9.06	10.43	.16	11.80	.59	.55
BD2	7.09	8.46	.16	9.83	.59	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64

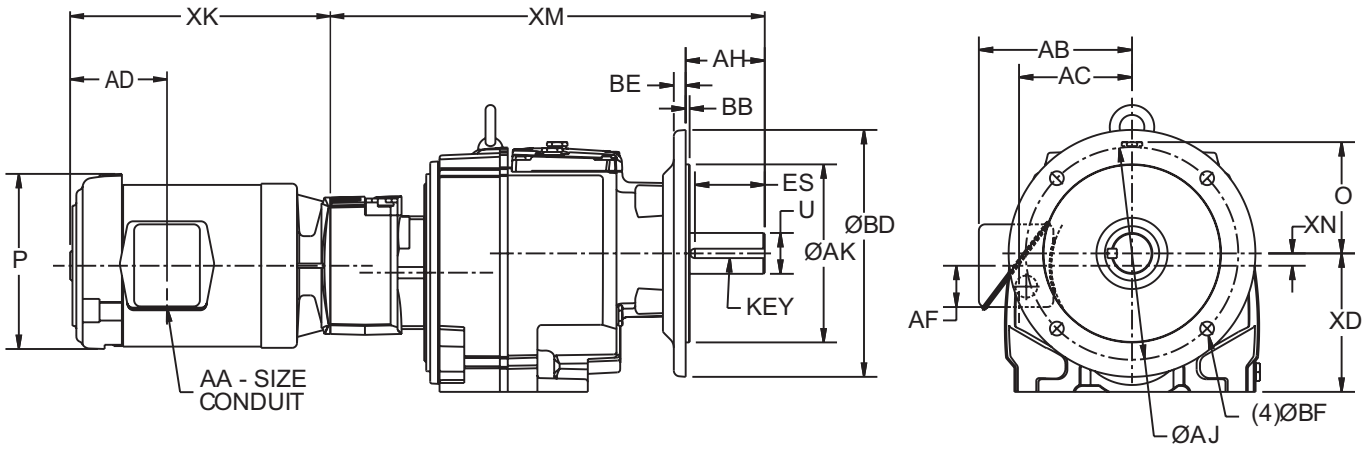
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

Flange Mounted - Combined Reduction



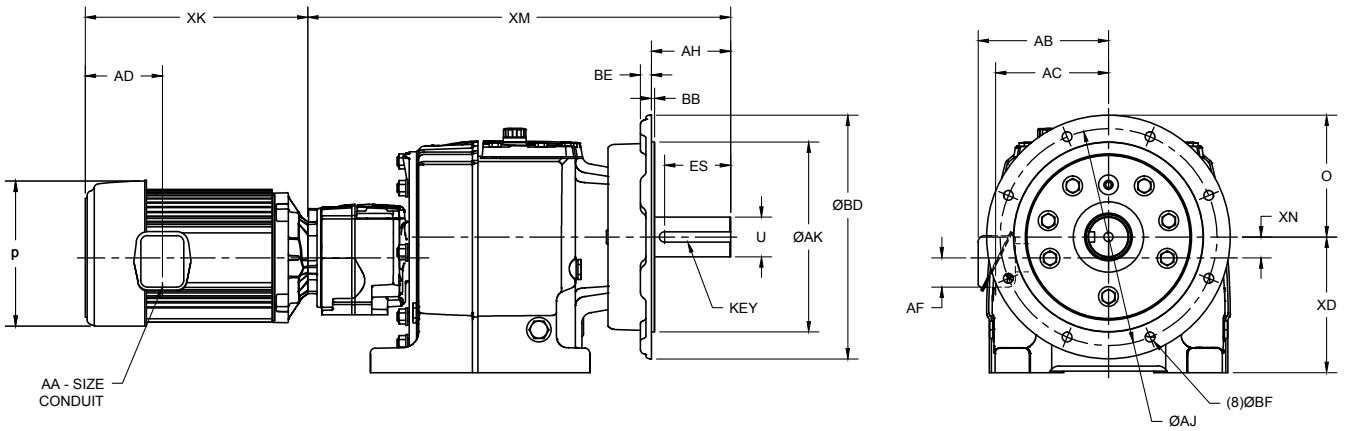
Gear Frame	U[3]	AH	ES	XD	XN	XM	Key
35	2.875	4.72	4.19	8.86	1.47	24.73	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	.20	15.75	.71	.71
BD1	9.84	11.81	.20	13.78	.71	.71
BD2	9.06	10.43	.20	11.81	.71	.55

Motor Frame	Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T	T	14.23	9.76	9.56	3/4 [6]	7.52	6.00	7.79	2.132

[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".
[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.
[5] Largest motor width.
[6] There are 2 openings in the conduit box.

Flanged Mounted - Combined Reduction



Gear Frame	O	U[3]	AH	ES	XD[1]	XN	XM	KEY
36	**7.87**	2.875	5.75	4.784	9.85	1.492	27.62	3/4 Sq
37	**8.00**	3.625	7.00	5.89	12.40	2.752	31.54	7/8 Sq

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70

Motor Frame	Gear Frame	Type [4]	XK	P[5]	AA	AB	AC	AD	AF
56	All	T	9.79	7.22	3/4	6.10	4.50	3.86	1.64
143T	All	T	11.26	7.22	3/4	6.10	4.50	3.86	1.64
145T	All	T	12.04	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	All	T	14.23	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	37	T	16.16	11.25	1	8.42	7.17	5.60	2.42

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

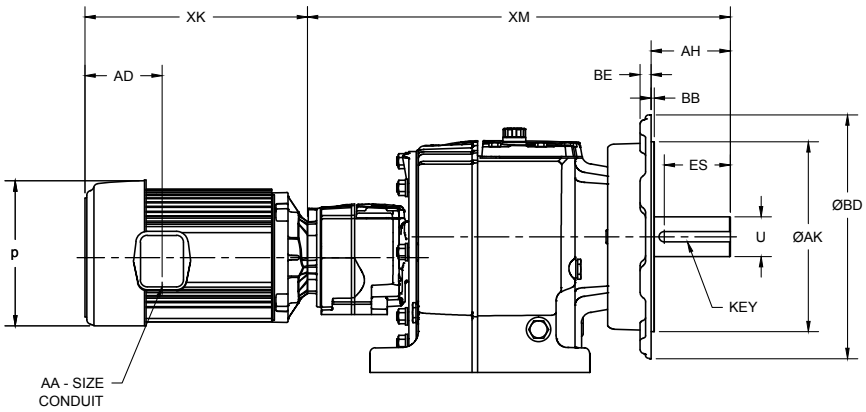
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

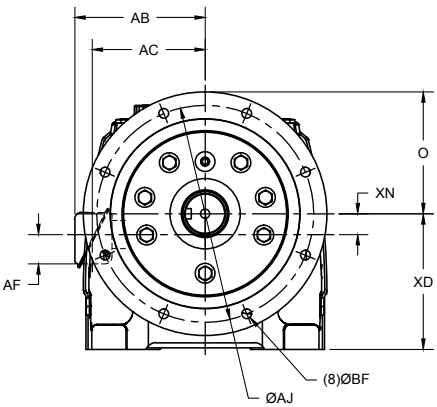
[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Flange Mounted - Combined Reduction





Gear Frame	U[3]	AH	ES	XD[1]	XN	XM	Key
38	4.375	6.84	9.02	13.98	2.559	40.20	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
38	BS	21.65	23.62	.197	25.98	.79	.87
	BD1	17.72	19.69	.197	21.65	.79	.69

Frame	Motor Type[4]	XK	O	P[5]	AA	AB	AC	AD	AF
56	T	9.79	8.01	7.22	3/4	6.10	4.50	3.86	1.64
143T	T	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64
145T	T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64
182T,184T	T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32
213T	T	16.15	23.47	11.25	1	8.25	6.39	5.6	1.56
215T	T	17.65	23.47	11.25	1	8.25	6.39	5.6	1.56

[1] Dimension "D" will never be exceeded, buy may vary from value shown. When exact dimensions are required, shims up to .03" may be necessary

[2] All rough casting dimensions may vary by .25" due to casting variations.

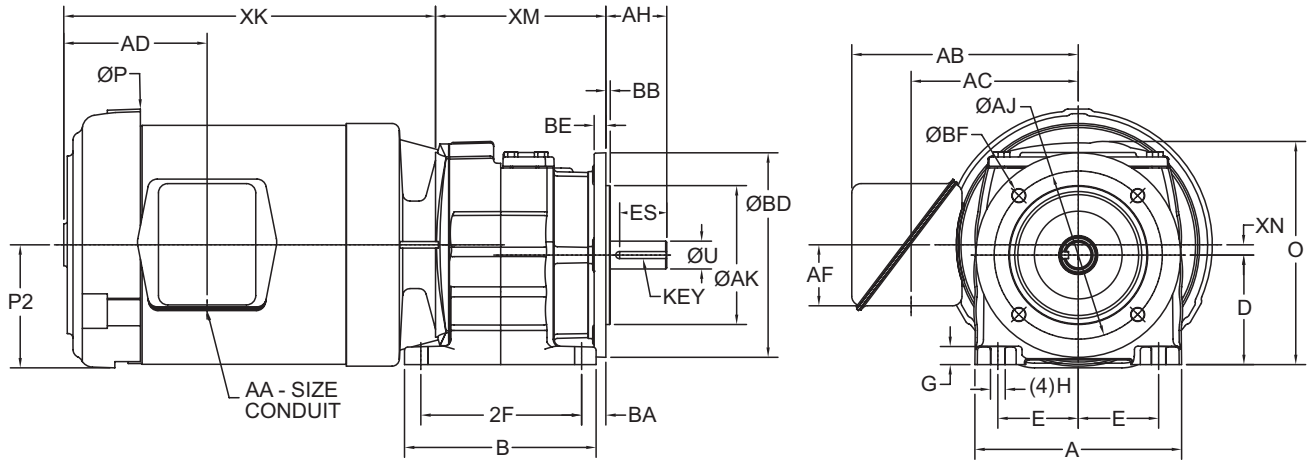
[3] Shaft extension tolerance: +.0000; -.001".

[4] For any motor type other than T (3 phase TEFC) or type T and S with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A[2]	B[2]	D[1]	E	2F	G	H	U[3]	ES	XM	XN	Key
3012A	5.62	5.16	2.95	2.165	4.33	.47	.35	0.750	1.25	4.81	.276	3/16 Sq
31	6.76	7.68	3.54	2.170	6.50	.75	.35	1.000	1.16	9.45	-.330	1/4 Sq

Gear Frame	Flange Type	AH	AJ	AK	BA	BB	BD	BE	BF
3012A	SBD1	2.06	3.94	3.15	.65	.12	4.72	.28	.28
	SBS	2.06	4.53	3.74	.65	.12	5.51	.31	.35
31	SBD1	1.50	5.12	4.33	.944	.14	6.29	.39	.35
	SBD2	1.50	4.53	3.74	.944	.14	5.51	.39	.35
	SBD3	1.50	3.94	3.15	.944	.10	4.72	.39	.28

Gear Frame	Motor Type[4]	Motor Frame	XK	O	P[5]	AA	AB	AC	AD	AF	XD
3012A	T	143	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	.08
	T	145T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	.08
31	T	143	11.26	8.01	7.22	3/4	6.10	4.50	3.86	1.64	.10
	T	145T	12.04	8.01	7.22	3/4	6.10	4.50	3.86	1.64	.10
	T	182,184T	14.23	9.76	9.56	3/4 [6]	7.80	6.00	7.79	2.32	1.13

[1] Dimension "D" will never be exceeded, but may vary from value shown. When exact dimension is required, shims up to .03" may be required.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance +.0000", -.0005" up to 1.5" diameter.

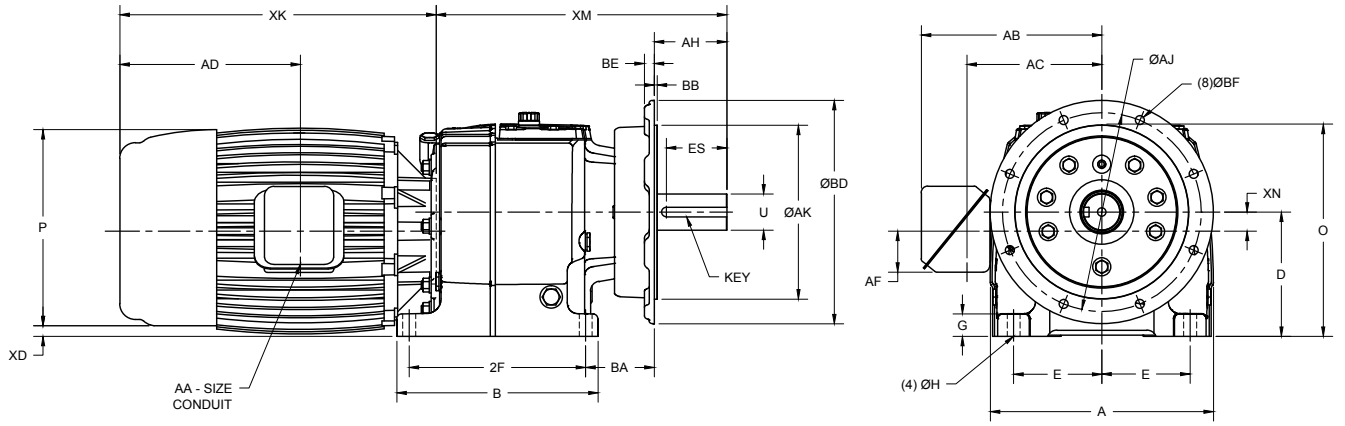
[4] For any motor types other than T (3 phase TEFC) or for T and S with brakes, refer to pages E-109 to A111.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

Three Phase Gearmotor[2]

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	O	U [3]	2F	ES	XN	XM			Key
												145T	182T-215T	254T-326T	
36	17.68	15.95	9.85	6.99	1.77	1.02	7.87	2.875	13.98	4.784	1.102	19.96	19.96	20.31	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	8.00	3.625	15.35	5.893	2.362	-	23.88	24.23	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02		4.375	18.90	9.02		-	40.20	40.20	1 SQ

Gear Frame	Flange Type	AH	AK	AJ	BA	BB	BD	BE	BF
36	SBS	5.75	17.717	19.685	.79	0.236	21.65	0.79	0.70
	SBD1	5.75	13.780	15.748	.79	0.236	17.70	0.79	0.70
37	SBS	7.00	17.717	19.685	.79	0.236	21.65	0.79	0.70
	SBD1	7.00	13.780	15.748	.79	0.236	17.70	0.79	0.70
38	SBS	6.84	21.65	23.62	1.97	.197	25.98	.79	.87
	SBD1	6.84	17.72	19.69	1.97	.197	21.65	.79	.69

Motor Frame	Gear Frame	Type [4]	XK	P [5]	AA	AB	AC	AD	AF	XD		
										36	37	38
145T	36	T	12.04	7.22	3/4	6.10	4.50	3.86	1.64	5.42	-	-
182T,184T	36, 37	T	14.23	9.56	3/4 [6]	7.80	6.00	7.79	2.32	4.40	5.69	-
213T	36,37	T	16.16	11.25	1.00	8.42	7.17	5.60	2.42	3.68	4.97	-
215T	36,37	T	17.65	11.25	1.00	8.42	7.17	5.60	2.42	3.68	4.97	-
254T	All	T	19.61	13.38	1.25	9.79	7.68	8.29	1.81	2.74	4.03	5.41
256T	All	T	21.36	13.38	1.25	9.79	7.68	8.29	1.81	2.74	4.03	5.41
284T,286T	All	T, C	24.71	14.62	1.50	11.33	8.51	12.44	2.63	1.45	2.75	4.01
324T,326T	All	T, C	24.96	17.20	2.00	14.99	11.34	14.16	3.63	0.55	1.84	3.11

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

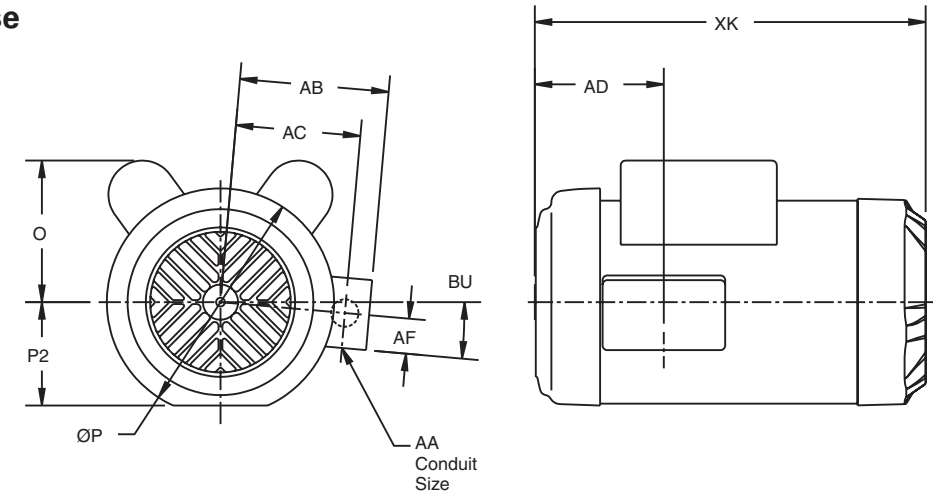
[4] For any motor type other than T (3 phase TEFC) or type T with brakes, refer to pages E-107 to E-109.

[5] Largest motor width.

[6] There are 2 openings in the conduit box.

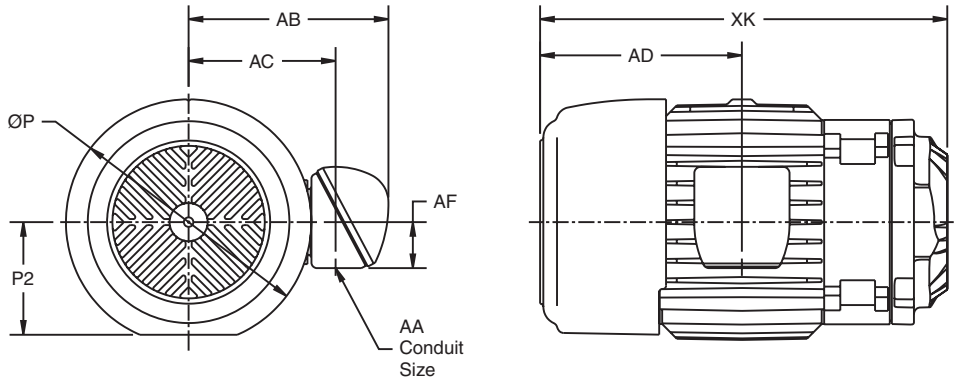
Alternate Motor Dimensions

Single Phase



Motor Frame	HP	O	P	P2	AA	AB	AC	AD	AF	BU	XK
56	1/3, 1/2	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	9.52 [2]
	3/4	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.78 [2]
143T	1	5.09	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.78 [2]
145TY	1 1/2, 2	4.53	7.28	3.31	3/4	4.78	3.83	4.14	1.13	5°	13.27 [2]
184T	3, 5	5.11	9.56	4.39	3/4	8.58	6.45	7.14	3.09	N/A	16.54

CorroGard®

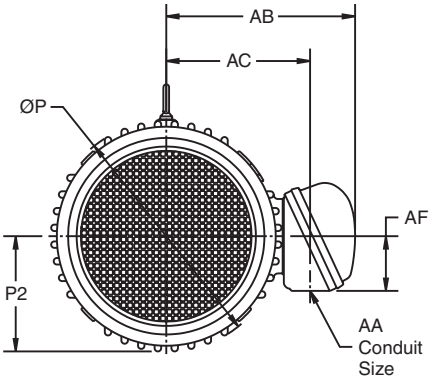


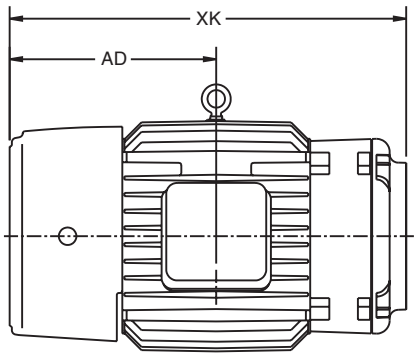
Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.41	3.44	3/4	6.50	4.59	3.72	1.25	10.21 [2]
143T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	11.43 [2]
145T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	12.21 [2]
182T, 184T	9.57	4.33	3/4 [3]	7.80	6.00	7.79	2.32	14.23
213T, 215T	11	5.44	1	9.47	7.15	9.63	2.00	19.67
254T, 256T	13.31	6.58	1 1/2	11.33	8.51	12.44	2.63	24.26 [1]

[1] XK = 23.29 on CbN 33 all reductions.
[2] XK will increase by .58" if applied to frames 32 and 33 combined units.
[3] This frame has two openings in conduit box.

Alternate Motor Dimensions

Explosion Proof

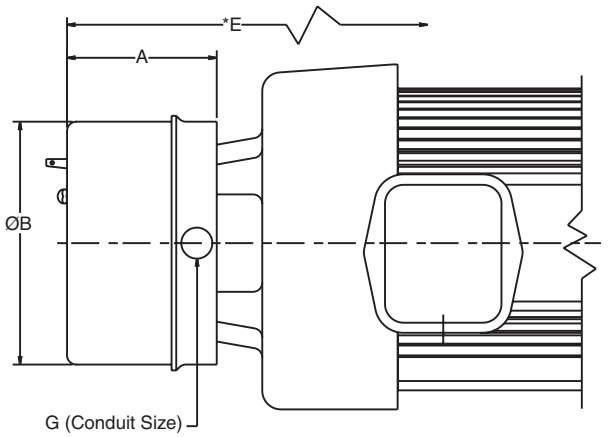




Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.15[2]
143T, 145T	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.90[2]
182T, 184T	9.50	4.56	3/4	7.70	5.79	7.75	2.25	15.70

[2] XK will increase by .58" if applied to frames 32 and 33 combined units.

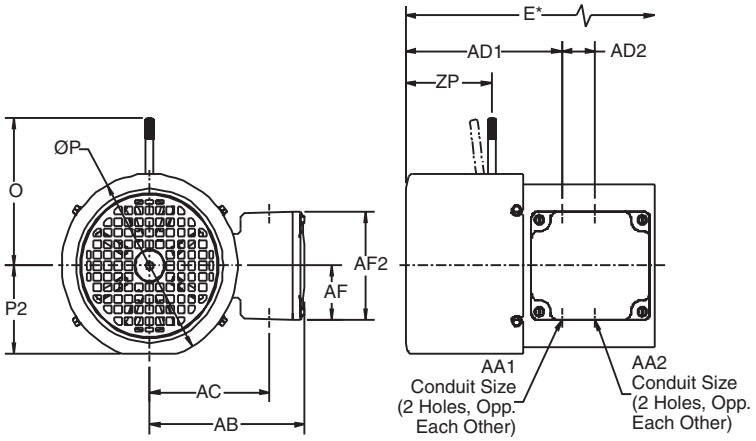
Dimensional Supplement



AC Brake with Type "T" and "S" Motor

Motor Type	Motor Frame	Brake Torque (ft. lbs.)	A	B	E*	G
T&S	56	1.5	4.01	6.54	4.56	1/2
		3	4.01	6.54	4.56	1/2
	143T	3	4.01	6.54	4.56	1/2
T	145T	6	4.01	6.54	4.56	1/2
S	145TY	6	4.01	6.54	4.56	1/2
T	182T	10	4.01	6.54	4.56	1/2
T&S	184T	15	4.01	6.54	4.56	1/2
T	213T	25	7.38	9.38	8.75	1/2
	215T	35	7.38	9.38	8.75	1/2

* Dimension "E" represents the additional length of motor with brake mounted. Add "E" to XK of equivalent three phase frame motor.



DC FCR Brake with Type "T" Motor

Motor Frame	E*	O	P	AA1	
				Size	Qty
56-143/145T	2.63	5.80	7.24	3/4 NPT	2
182/184T	1.95	7.3	9.23	3/4 NPT	1

Motor Frame	AA2		AB	AC	AD1
	Size	Qty			
56-143/145T	1/2 NPT	2	6.38	4.94	6.43
182/184T	3/4 NPT	1	7.8	6.14	8.84

Motor Frame	AD2	AF	AF2	P2	ZP
56-143/145T	1.38	2.13	4.25	3.46	3.54
182/184T	1.81	2.32	4.65	N/A	4.41

Product Weights (Lbs.)

Foot Mounted Single Reduction - TEFC Three Phase Motor

Gear Frame	Motor Frame												
	56	143T	145T	182T	184T	213T	215T	254T	256T	284T	286T	324T	326T
30	31	50	56	-	-	-	-	-	-	-	-	-	-
31	51	70	76	122	127	-	-	-	-	-	-	-	-
32	56	73	79	125	130	-	-	-	-	-	-	-	-
33	-	98	99	145	150	170	175	255	-	-	-	-	-
34	-	-	-	-	153	173	183	263	278	448	498	-	-
35	-	-	-	-	-	223	233	303	328	498	548	728	-

Foot Mounted Multiple Reduction - TEFC Three Phase Motor

Gear Frame	Stages	Motor Frame												
		56	143T	145T	182T	184T	213T	215T	254T	256T	284T	286T	324T	326T
30	2, 3	39	56	59	-	-	-	-	-	-	-	-	-	-
31	2, 3	65	82	89	135	140	-	-	-	-	-	-	-	-
32	2, 3	78	95	101	147	152	167	172	-	-	-	-	-	-
	4, 5	86	103	-	-	-	-	-	-	-	-	-	-	-
33	2, 3	107	124	129	177	182	207	212	290	-	-	-	-	-
	4, 5	117	134	-	-	-	-	-	-	-	-	-	-	-
34	2, 3	130	147	152	201	206	227	232	299	319	489	539	-	-
	4, 5	129	156	153	-	-	-	-	-	-	-	-	-	-
35	2, 3	-	240	244	294	299	313	318	2398	418	588	638	818	-
	4, 5	234	251	257	302	307	-	-	-	-	-	-	-	-
36	2, 3	-	-	364	411	407	423	428	508	528	768	818	998	1058
	4, 5, 6	399	423	426	-	-	-	-	-	-	-	-	-	-
37	2, 3	-	-	-	510	515	522	527	607	627	867	917	1097	1157
	4, 5, 6	454	478	481	533	538	545	-	-	-	-	-	-	-
38	2, 3	-	-	-	-	-	-	-	926	946	1186	1236	1416	1476
	4, 5, 6	799	823	826	878	883	890	900	-	-	-	-	-	-

Weight Adders

Optional Motor Types

Type	Motor Frame												
	56	143T	145T	145TY	182T	184T	213T	215T	254T	256T	284T	286T	320T
C CorroGard®	8	9	11		13	13	73	73	165	170	-	-	-
X Explosionproof	19	21	25	-	5	5	-	-	-	-	-	-	-
S Single Phase	6	-4	-	-5	-	-28	-	-	-	-	-	-	-

B14 and Flange Mounted

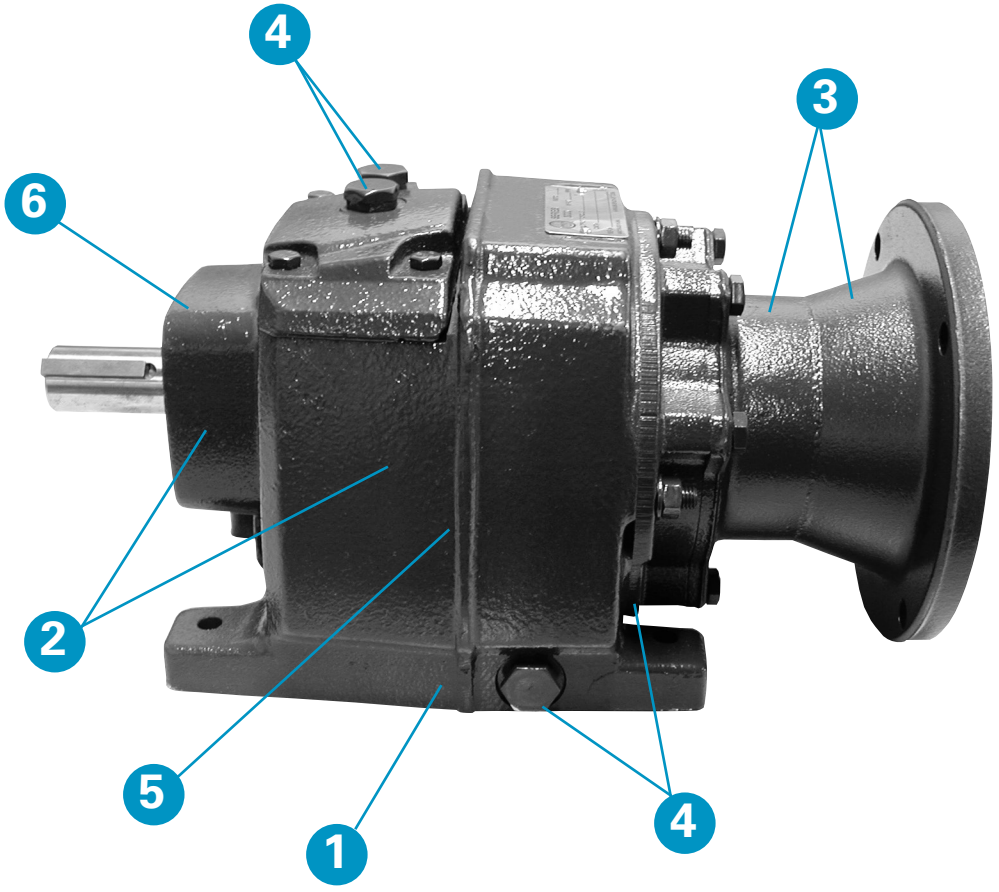
Single Reduction

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	3
32	-1	4
33	-1	8
34	-2	8
35	-2	9

Multiple and Combined

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	2
32	-1	4
33	-3	8
34	-5	8
35	-6	9
36	0	21
37	0	21
38	0	35

Type CbN Helical In-line Series 3000 Speed Reducer Features...



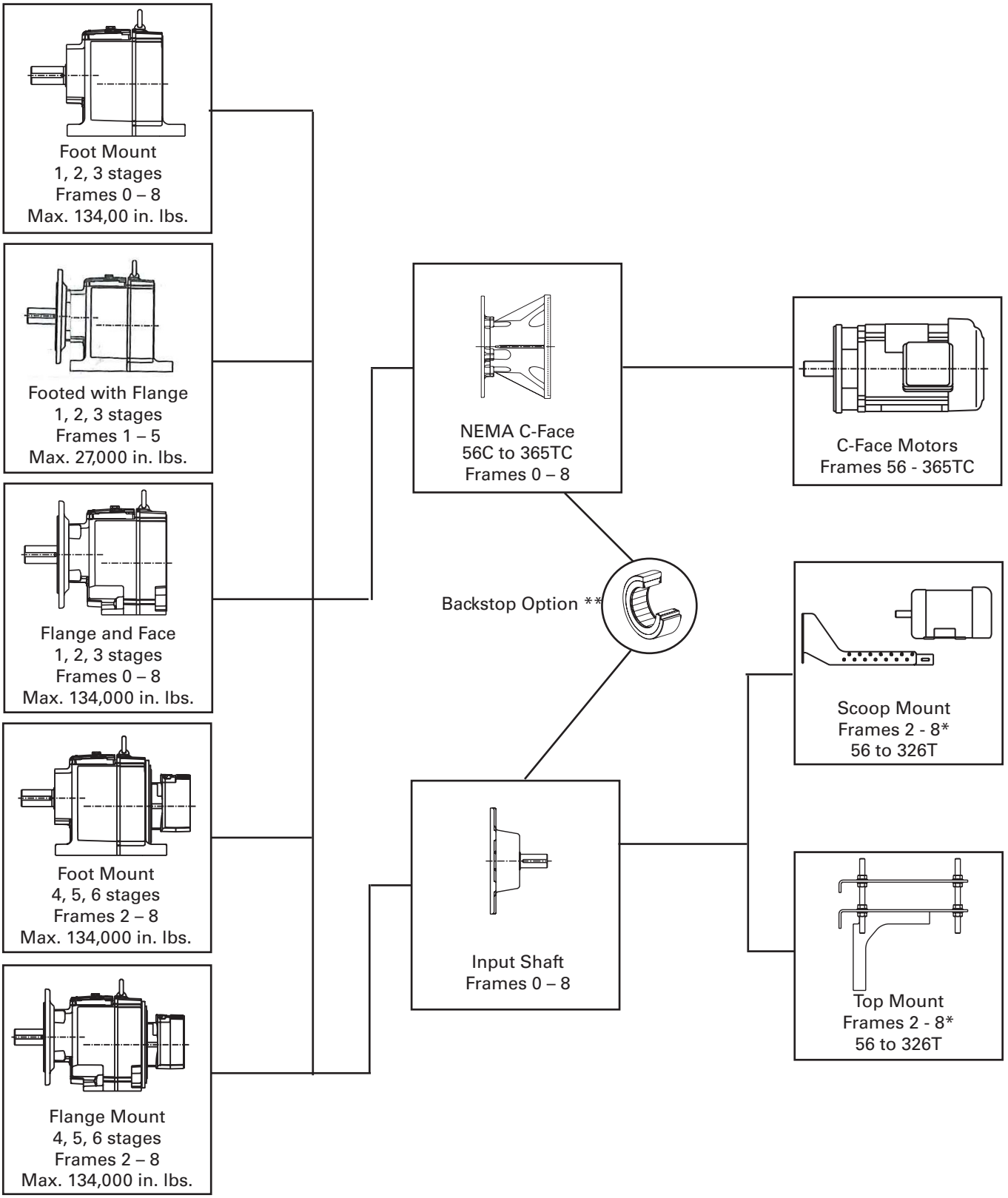
Design Features

1. Gear reducers are delivered factory filled with synthetic hydrocarbon lubricant.
2. Cast one-piece housing/endshield construction provides added strength and rigidity.
3. Series 3000 C-Face reducers utilize compact quill construction with two bearings for support and the quill has a non-metallic liner to eliminate fretting.
4. Oversized plugs and magnetic drain plug make normal maintenance easier. Dipstick provided on frames >35 to simplify oil checks
5. All gears are keyed to shafts and finished to provide quiet operation.
6. Oversized bearings are used to help provide longer life.

Table of Contents

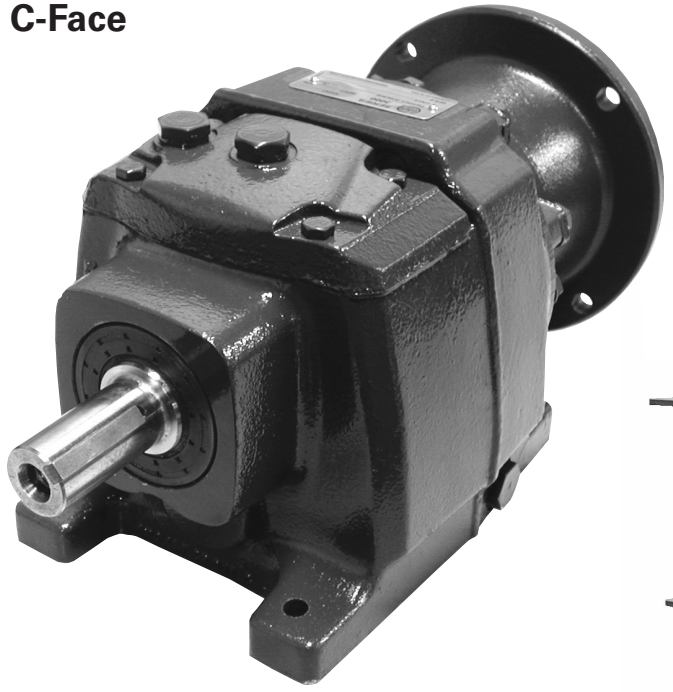
Section	Page
Mounting Versatility and Size Range	E-113 - E-114
Reducer Selection	E-115
Overhung Load Capacities	E-116
Catalog Nomenclature	E-117 - E-118
Mounting Positions	E-119
Reducer Types and Availability	E-120
AGMA Application Tables	E-121 - E-123
Lubrication	E-222 - E-223
Reducer Selection Tables	E-124 - E-141
Thermal Ratings	E-142
Modifications	E-143
Dimension Prints (inch)	
C-Face Reducers - Footed	E-144 - E-159
C-Face Reducers - Flanged	E-160 - E-176
C-Face Reducers - Foot with Flange	E-177
Scoop Mount Reducers - Footed	E-178 - E-183
Scoop Mount Reducers - Flanged	E-184 - E-188
Input Shaft Reducers - Footed	E-189 - E-195
Input Shaft Reducers - Flanged	E-196 - E-204
Top Mount Reducers - Footed	E-205 - E-208
Top Mount Reducers - Flanged	E-209 - E-212
Dimension Print Supplements	
B14 Face Mount	E-213 - E-214
Metric Output Shafts	E-215 - E-220
Reducer Weights	E-221
Motor Performance Data	Section H

Mounting Versatility and Size Range



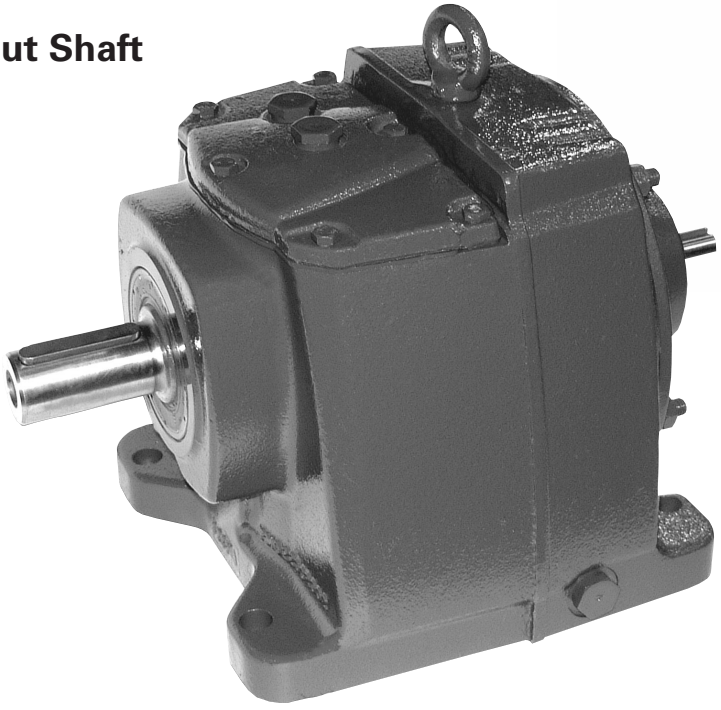
* Refer to page E-122 for availability of this option for any single and combined stage product
**Excluding all Frame 0 and Frames 2 and 3 combined

C-Face



Top Mount

Input Shaft



Selection Information

1. Input HP
- Based on application data.

2. Speed/Ratio
- Obtain either desired output speed (RPM) or gearbox ratio based on application.

3. Service Factor
- Determine the required service factor using either the AGMA application classification chart (pages E-121 to E-123), or the duration of operation, load type, and drive type with the table below:

Prime Mover	Hours of Operation	Uniform Load U	Moderate Shock Load M	Heavy Shock Load V
Electric Motor	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Internal Combustion Engine	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

Size Selection

Step 1
- Locate speed reducer selection tables (pages E-124 to E-141) based on input speed to gearbox.

Step 2
- Choose the nominal ratio appropriate for the output speed required.

Step 3
- Select the gear unit size for the chosen ratio and the known input speed so that the mechanical power rating P (hp) satisfies the following:

$$P \geq P_m \times SF$$

P = mechanical power rating (hp) of gearbox

P_m = motor power (hp)

SF = required service factor

Note: Size selection based on absorbed power (Pa) or absorbed torque (Ta) at the low speed shaft instead of motor power (Pm) is allowed when the former is known with sufficient accuracy and if the number of start operations is limited. When Ta is applied in size selection, verify if:

$$T \geq T_a \times SF$$

T = torque rating (in. lbs.) at low speed shaft

T_a = absorbed torque (in. lbs.) from load at low speed shaft

SF = required service factor

Size Selection (cont.)

Step 4
- Verify overhung load ratings where required (see page E-116).

Example

1. Application Data

Rotary lobe pump, 10+ hours per day, speed reducer direct coupled to load, foot mounted, 1.25 service factor.

Motor rating: 7 1/2 HP, 1750 RPM, 213TC frame footed[1].

Output speed: 280 RPM

2. Size Selection

280 RPM required output	
Equals 6.3:1 nominal ratio	6.1 **3242** Example 10.45 2208
P_m x SF = P	
7.5 HP x 1.25 = 9.4 HP	
3242 (10.45 HP) > 9.4 HP	pg. E-126
Select CbN 3242 [1]	

(There are no thermal or OHL considerations.)

3. Catalog Designation
(see "ordering" page E-117)

CbN • 3242 • S • B3 • 6.3 • U • 213TC

[1] CbN frame 3242 with 210TC motor required a footed motor with motor outboard foot supported.

Overhung Load Capacities

When a sprocket, sheave, pulley or pinion is mounted on any shaft of a reducer, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{RPM \times r}$$

OHL capacities are calculated at gear capacity rounded to the closest motor HP at mid shaft. For capacity when HP is known, refer to gearmotor selection tables.

Where:
OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
Timing Belt	1.25
V-Belt	1.50
Flat Belt	2.50

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Single Reduction Overhung Load (lbs.)

Output R.P.M.	Reducer Size					
	0	1	2	3	4	5
	30	31	32	33	34	35
>1000	84	222	230	500	580	802
801-1000	80	229	250	600	615	757
551-800	75	240	288	648	674	1041
451-550	54	320	360	668	874	1234
351-450	33	334	370	806	1244	1495
<350	153	366	457	786	1560	1744

Multiple Reduction Overhung Load (lbs.)

Output R.P.M.	Reducer Size											
	0	1		2		3		4	5	6	7	8
	3012	3122	313X	3242	325X	336X	337X	34	35	36	37	38
301-450	-	455	-	460	-	890	-	1755	1983	6200	9800	15963
201-300	-	469	-	557	-	1200	-	1829	2065	6400	10300	16165
151-200	129	591	619	670	699	1233	1233	2013	2065	7100	10800	16647
101-150	138	603	649	685	692	1296	1296	2015	2163	7700	11350	16610
51-100	388	701	714	850	856	1305	1305	2472	2213	9620	14400	17710
31-50	600	-	1030	-	1105	-	1305	3424	3733	12300	18558	22000
16-30	600	-	1297	-	1357	-	1905	3670	4580	13620	18558	22000
<15	600	-	1345	-	1610	-	1905	4340	4580	13620	18558	22000

Minimum OHL capacity based on minimum recommended sheave diameter and unit driven by maximum motor HP.

Catalog Nomenclature

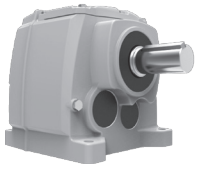
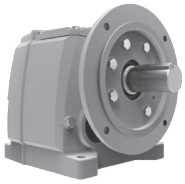
CbN • 3252 • S • B3 • 40 • U • 143TC

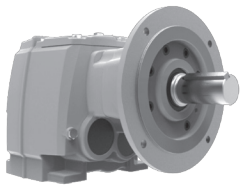
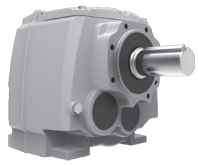
See below and next page prior to ordering

See page 120 prior to ordering

Series	Gear Frame	Number of Reductions	Mounting Configuration For Gear (housing and Shaft Extension)	Mounting Position	Nom. Gear Ratio	Gear Input	Motor Frame
3 = 3000	0	1 = 1 stage	Refer to the illustrations below of the basic mounting options based on gear frame and stages of reduction. For any Foot with Flange or Flanged gear mounting, refer to details for options that are available on E-118 based on frame size, flange dimensions, and thrust loads for the application	See Page E-119	Determine from selection pages	AP = Input shaft AD = Input shaft w/backstop* SP = Scoop mount SD = Scoop mount w/backstop* U = C-face UD = C-face w/backstop* TM = Top mount TD = Top mount w/backstop*	Req'd for any order for c-face or scoop reducer
	1	2 = 2 stages					
	2	3 = 3 stages					
	3	4 = 4 stages					
	4	5 = 5 stages					
	5	6 = 6 stages					
	6						
	7						
	8						

* For units with backstops, specify output shaft rotation facing the output shaft extension.

Gear Output	Foot Mounted	Foot Mounted (w/ flange)	Flange Mount (footless)		Face Mount (footless)
			Std. Thrust	High Thrust	
Configuration Code (inches)	**S**[1]	See Page E-120	See Page E-120	See Page E-120	**B14**
Frame(s) Available	All	See Page E-120	All	See Page E-120	30 - 35

[1] Inch ouput shaft. For output with metric shaft, insert "M" following last alpha character (i.e. metric footmount, S becomes SM).

Flange - No Feet

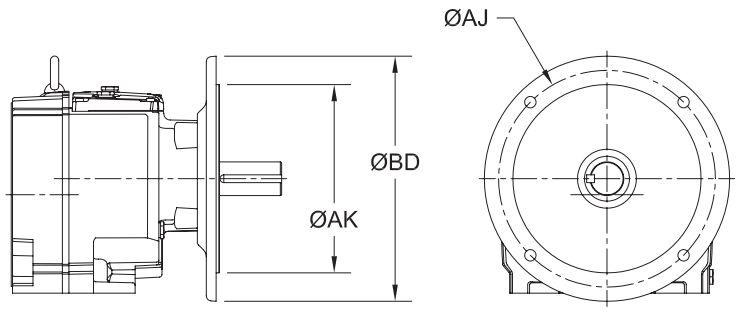
		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	30	56C	BD1	BS	BD2	BD3							
		31			BD2	BS								
		32				BD2	BS							
		33					BD2	BS						
		34						BD2	BS					
		35							BD2	BS				
	Multiple	30	56C	BD1	BS	BD2	BD3							
		31		BD3	BD2	BD1	BS							
		32				BD2	BD1	BS						
		33					BD2	BD1	BS					
		34						BD2	BD1	BS				
		35							BD2	BD1	BS			
		36										BD1	BS	
		37										BD1	BS	
		38											BD1	BS
High Thrust	Multiple	33						BR						
		34							BR					
		35								BR				

Footed - with Flange

		Output Flange Dimensions Available												
	Reduction Stages		Inches	MM										
		BD	6.50	120	140	160	200	250	300	350	400	450	550	650
		AK	4.50	80	95	110	130	180	230	250	300	350	450	550
		AJ	5.875	100	115	130	165	215	254	300	350	400	500	600
		Gear Frame												
Normal Thrust	Single	31			SBD2	SBS								
		32				SBD2	SBS							
		33					SBD2	SBS						
		34						SBD2	SBS					
		35							SBD2	SBS				
	Multiple	30A		SBD1	SBS									
		31		SBD3	SBD2	SBD1								
		32					SBD1	SBS						
		33						SBD1	SBS					
		34							SBD1	SBS				
		35								SBD1	SBS			
		36										SBD1	SBS	
		37										SBD1	SBS	
		38											SBD1	SBS

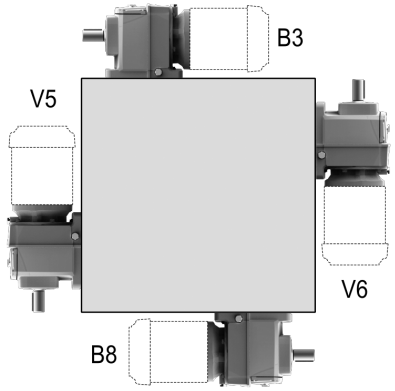
Shaded fields indicate factory lead-time applies

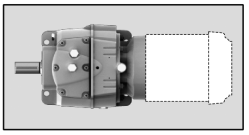
Note: For metric output shaft on any output nomenclature above, add "M" before any numeric designator. (i.e. metric shaft with BD1 flange = BDM1)

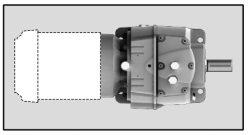


Mounting Positions

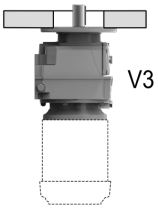
Foot Mounted (with/without flange) Any Reduction

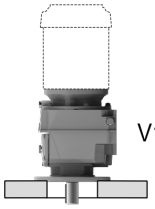


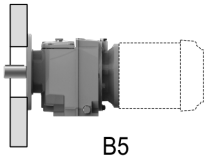




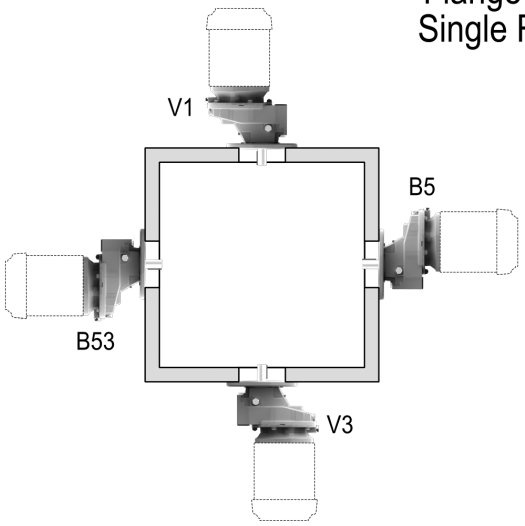
Flange Mounted (footless) Multiple Reductions

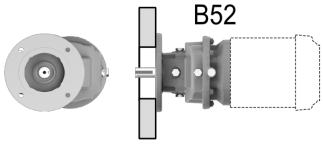


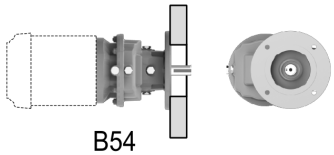




Flange Mounted Single Reduction







C-Face Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes							
		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
30	1,2,3	X	X [1]	-	-	-	-	-	-
31	1,2,3	X	X	X [3]	-	-	-	-	-
32	1,2.3	X	X	X	X [3]	-	-	-	-
	4,5	X				-	-	-	-
33	1,2,3	X	X	X	X [2]	-	-	-	-
	4,5	X	X	-	-	-	-	-	-
34	1,2,3	X	X	X	X	X	X [3]		
	4,5	X	X	-	-	-	-	-	-
35	1	X	X	X	X	X	X [3]	X [3]	-
	2,3	X	X	X	X	X	X	X [3]	-
	4,5	X	X	X	-	-	-	-	-
36	2,3	-	X	X	X	X	X	X	-
	4,5,6	X	X	X	-	-	-	-	-
37	2,3	-	-	X	X	X	X	X	X
	4,5,6	X	X	X	X	-	-	-	-
38	3	-	-	-	X	X	X	X	X
	4,5,6	X	X	X	X	X	-	-	-

Scoop Mount Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes						
		56	140T	180T	210T	250T	280T	320T
32	2,3	X	X	-	-	-	-	-
33	2,3	X	X	X	-	-	-	-
34	1,2,3	-	X	X	X	-	-	-
35	1	-	-	X	X	X	-	-
	2,3	-	X	X	X	X	X	-
36	2,3	-	-	X	X	X	X	X
	4,5,6	-	X	-	-	-	-	-
37	2,3	-	-	X	X	X	X	X
	4,5,6	-	X	-	-	-	-	-
38	2, 3	-	-	-	-	X	X	X
	4,5,6	-	X	X	X	-	-	-

Top Mount Reducer Availability

Gear Frame	Reduction Stages	AC Motor Frames Sizes						
		56	140T	180T	210T	250T	280T	320T
32	2,3	X	X	X	-	-	-	-
33	2,3	X	X	X	X	-	-	-
34	1		X	X	X	-	-	-
	2,3	-	X	X	X	X	-	-
35	1	-	X	X	X	X	X	-
	2,3	-	X	X	X	X	X	-
36,37	2,3	-	-	X	X	X	X	X
	4,5,6	-	-	-	-	-	-	-
38	2, 3	-	-	-	X	X	X	X
	4,5,6		-	-	-	-	-	-

[1] Not available on 3012 with ratios of 31.5, 35.5, 40,45. Use frame 3013 in these requirements
[2] When using this frame with 3301 gear, a footed motor with outboard foot supported.
[3] Motor selected must be a footed C-face motor with outboard foot supported

Backstop can be supplied in this input.

AGMA Application Classifications

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Agitators (Mixers)			
Pure Liquids	—	1.00	1.25
Liquids & Solids	1.00	1.25	1.50
Liquids - Variable Density	1.00	1.25	1.50
Blowers			
Centrifugal	1.00	1.25	—
Lobe	1.00	1.25	1.50
Vane —	1.00	1.25	
Brewing and Distillers			
Bottling Machinery	—	1.00	1.25
Brew Kettles, Continuous Duty	—	1.00	1.25
Cookers - Continuous Duty	—	1.00	1.25
Mash Tubs - Continuous Duty	—	1.00	1.25
Scale Hoppers, Frequent Starts	1.00	1.25	1.50
Can Filling Machines	—	1.00	1.25
Car Dumpers	1.25	1.50	1.75
Car Pullers	1.00	1.25	1.50
Clarifiers	—	1.00	1.25
Classifiers	1.00	1.25	1.50
Clayworking Industry			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
Compactors	1.50	1.75	2.00
Compressors			
Centrifugal	—	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi - Cylinder	1.00	1.25	1.50
Reciprocating, Single - Cylinder	1.25	1.50	1.75
Conveyors - General Purpose			
Uniformly Loaded or Fed	—	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
Cranes			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer To Application Engineering		

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Cranes (Continued)			
Boom Hoist	Refer To Application Engineering		
Trolley Drive	Refer To Application Engineering		
(Gantry Drive)			
(Traction Drive)	Refer To Application Engineering		
Mill Duty			
Main	Refer To Application Engineering		
Auxiliary	Refer To Application Engineering		
Bridge & Trolley Travel	Refer To Application Engineering		
Industrial Duty			
Main	1.25	1.50	1.75
Auxiliary	Refer To Application Engineering		
Bridge & Trolley Travel	Refer To Application Engineering		
Crusher			
Stone or Ore	1.50	1.75	2.00
Dredges			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps 1.00	1.25	1.50	
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
Elevators			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	—	1.00	1.25
Escalators	Refer To Application Engineering		
Freight	Refer To Application Engineering		
Gravity Discharge	—	1.00	1.25
Extruders			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75
Fans			
Centrifugal	—	1.00	1.25
Cooling Towers	Refer To Application Engineering		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
Feeders			
Apron	—	1.25	1.50
Belt	1.00	1.25	1.50
Disc	—	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
Food Industry			

AGMA Application Classifications

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Cereal Cooker	—	1.00	1.25
Dough Mixers	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
Generators and Executors	—	1.00	1.25
Hammer Mills	1.50	1.50	1.75
Hoists			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
Laundry Tumblers	1.00	1.25	1.50
Laundry Washers	1.00	1.25	1.50
Lumber Industry			
Barkers			
- Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planner Feed	1.25	1.25	1.25
Planer Tilting Hoists	1.50	1.50	1.50
Rolls - Live-Off Bearing.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer To Application Engineering		

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Metal Mills			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
Metal Strip Processing Machinery			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
Mills, Rotary Type			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
Mixers, Concrete	1.00	1.25	1.50
Paper Mills			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barkers - Mechanical	1.75	1.75	1.75
Barking Drums	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
❖ Calender	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
❖ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25

❖ Anti-friction bearings only.

AGMA Application Classifications

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Paper Mills (Continued)			
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickner			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
❖ Yankee Dryers	1.25	1.25	1.25
Plastics Industry - Primary Processing			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Plastics Industry - Secondary Processing			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - Barge Haul	1.00	1.50	1.75
Pumps			
Centrifugal	—	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
- Gear	—	1.00	1.50
- Lobe	—	1.00	1.25
- Vane	—	1.00	1.25

Application	Load Class		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Rubber Industry			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, (then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand Miller	1.00	1.25	1.50
Sewage Disposal			
Bar Screens	—	1.00	1.25
Chemical Feeders	—	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
Screens			
Air Washing	—	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	—	1.00	1.25
Sugar Industry			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
Textile Industry			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

❖ Anti-friction bearings only.

NOTE: A service factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Motor RPM 1750

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
1400	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		3.06	134	6.78	292		11.98	520		14.42	643		
1250	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		3.06	158	6.37	310		11.06	567		13.73	706		
1094	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		3.06	166	6.15	338		11.39	623		13.43	761		
972	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		3.06	198	5.91	367		10.58	654		12.83	803		
875	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		3.06	212	5.65	399		10.35	708		14.33	1030		
781	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		3.06	237	5.37	434		9.08	708		13.63	1083		
700	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		3.06	275	4.86	442		7.88	708		13.96	1273		
625	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		3.06	297	4.58	443		7.37	708		11.99	1232		
556	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.98	340	3.86	442		6.5	708		10.1	1127		
493	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		2.72	348	3.65	442		5.85	708		9.79	1217		
438	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		2.58	372	3.19	442		5.15	708		9.42	1315		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				6.78	916		16.04	2150		26.24	3615		
389	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		2.24	362	2.86	442		4.63	708		8.4	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				6.32	969		13.94	2208		22.74	3615		
350	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		1.05	192	2.55	442		4.11	708		7.73	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				6.14	1061		13.07	2208		20.64	3615		
313	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		1.05	216	2.2	442		3.51	708		6.78	1315		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				5.9	1155		11.57	2208		18.68	3615		
278	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		1	226	2.01	442		3.18	708		5.94	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				5.63	1251		10.45	2208		16.28	3615		
246	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.98	250	1	253		2.9	708		5.31	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.69	683	4.93	1251		9.17	2208		14.73	3615		
219	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.88	252	1	279		2.48	708		4.8	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		2.69	762	4.37	1252	5.18	1359	7.95	2208	10.28	2718	12.83	3615	21.22	5767
194	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		2.56	763	4.11	1252	4.79	1421	7.44	2208	9.26	2891	11.39	3615	19.35	6069
175	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		2.17	768	3.46	1252	4.42	1480	6.56	2208	8.84	2947	10.49	3615	18.13	6266

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer									
		4		5		6		7		8	
1400	1.25	1.24	**3401**	1.28	**3501**						
		38.4	1679	61.53	2770						
1250	1.4	1.38	**3401**	1.46	**3501**						
		41.22	2015	59.42	3062						
1094	1.6	1.56	**3401**	1.6	**3501**						
		41.74	2292	57.18	3230						
972	1.8	1.74	**3401**	1.79	**3501**						
		35.43	2171	55.44	3496						
875	2	1.97	**3401**	2	**3501**						
		36.29	2521	52.88	3735						
781	2.24	2.17	**3401**	2.25	**3501**						
		34.03	2610	50.13	3982						
700	2.5	2.54	**3401**	2.44	**3501**						
		30.62	2745	48.17	4152						
625	2.8	2.83	**3401**	2.77	**3501**						
		28.35	2836	46.17	4522						
556	3.15	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		25.76	2894	42.96	4655	120	13318				
493	3.55	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		22.84	2903	40.6	5088	120	15102				
438	4	4.11	**3401**	3.88	**3501**						
		20	2903	38.16	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		38.77	5249	66.63	9371	120	16098				
389	4.5	4.41	**3401**	4.35	**3501**						
		18.63	2903	33.97	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		41.6	6299	66.63	10727	120	18006	120	18213		
350	5	5.13	**3401**	4.85	**3501**						
		16.01	2903	30.49	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		42.14	7168	66.63	11960	120	20371	120	20371		
313	5.6	5.57	**3401**	5.5	**3501**						
		14.76	2903	26.29	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		35.76	6786	57.53	11350	120	23068	120	23358	190	37853
278	6.3	6.15	**3401**	6.31	**3501**						
		13.36	2903	23.43	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		36.63	7883	53.87	11903	120	25515	120	25764	190	41796
246	7.1	6.83	**3401**	6.87	**3501**						
		11.32	2730	21.54	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	6.98	**3842**
		34.35	8160	48.81	12133	120	25923	120	29208	190	45871
219	8	8.1	**3401**	8	**3501**						
		9.47	2708	18.48	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		38.77	10329	66.63	18252	101.9	27163	120	33149	190	53560
194	9	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		38.41	11446	64.65	20305	84.4	26350	120	37713	190	57831
175	10	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		35.65	11933	60.86	20956	93.4	31097	119.9	42697	190	65717

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
156	**11.2**	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		2.03	769	3.28	1252	4.07	1542	5.9	2208	8.18	3082	9.41	3615	16.56	6330
140	**12.5**	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.82	772	2.87	1252	3.74	1609	5.2	2208	7.64	3186	8.39	3615	15.46	6774
125	**14**	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.57	776	2.57	1252	3.42	1681	4.67	2208	7.02	3335	7.41	3615	14.12	6839
109	**16**	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		1.46	777	2.29	1252	3.15	1750	4.15	2208	6.38	3492	6.81	3615	12.68	7052
97	**18**	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		1.25	781	1.98	1252	2.98	1753	3.54	2208	6.1	3571	6.03	3615	11.39	7132
88	**20**	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		1.12	783	1.8	1252	2.52	1762	3.21	2208	5.6	3719	5.23	3615	10.49	7132
78	**22.4**	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		1	786	1	796	2.39	1765	2.93	2208	5.22	3850	4.68	3615	9.41	7132
70	**25**	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.89	787	1	878	2.09	1771	2.51	2208	4.72	3952	4.23	3615	8.39	7132
63	**28**	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.79	789			1.88	1776			4.25	3964			7.41	7132
56	**31.5**	33.48	**3012**			30.55	**3132**			30.29	**3252**	32.32	**3363**	30.24	**3372**
		0.7	791			1.68	1780			3.79	3977	5.4	5910	6.81	7132
49	**35.5**	35.73	**3012**			35.37	**3132**			35.51	**3252**	37.29	**3363**	34.18	**3372**
		0.64	793			1.46	1786			3.25	3993	4.73	5965	6.03	7132
44	**40**	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.57	794			1.33	1790			2.95	4002	4.3	6010	5.23	7132
39	**45**	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.51	796			1	1540			2.69	4010	3.97	6070	4.68	7132
35	**50**	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.53	796			1	1699			2.32	4024	3.46	6100	4.23	7132
31	**56**	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.47	798			0.69	1351			2.13	4032	3.13	6100	3.77	7383
28	**63**	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.4	800			0.63	1406			1.85	4038	2.73	6100	3.36	7525
25	**71**	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.37	801			0.61	1434			1.73	4038	2.42	6100	3.02	7611
22	**80**	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.87	**3373**
		0.32	803			0.54	1519			1.53	4038	2.2	6100	2.78	7611
19	**90**	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.1	**3373**
		0.29	804			0.52	1547			1.37	4038	2	6100	2.5	7611
18	**100**	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.25	806			0.48	1618			1.21	4038	1.78	6100	2.22	7611
16	**112**	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.23	807			0.45	1678			1.09	4038	1.57	6100	1.96	7611
14	**125**	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.2	808			0.41	1744			0.97	4038	1.45	6100	1.8	7611
12.5	**140**	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.18	809			0.37	1804			0.82	4038	1.28	6100	1.6	7611
10.9	**160**	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.17	810			0.34	1804			0.75	4038	1.1	6100	1.39	7611
9.7	**180**	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.14	811			0.29	1804			0.68	4038	1	6100	1.24	7611
8.8	**200**	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.13	812			0.27	1804			0.58	4038	0.9	6100	1.12	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
156	**11.2**	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		33.16	12381	56.06	21544	84.1	31693	120	45637	190	72946
140	**12.5**	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		30.33	12844	52.23	22478	76.6	32045	120	50616	190	82147
125	**14**	13.5	**3482**	13.96	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		28	13089	47.77	23128	69.6	32485	120	57254	190	90690
109	**16**	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		24.63	13452	45.28	23788	63.1	32942	120	65137	173	92629
97	**18**	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		22.21	13540	41.48	24761	54.9	33596	115.9	71326	163	98366
88	**20**	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		19.86	13601	36.51	24111	49.3	34090	104.3	72481	143	96389
78	**22.4**	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		17.64	13663	33.75	25783	45.5	34451	94.2	73605	120	91313
70	**25**	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		15.52	13727	31.03	25876	39.8	35089	85.8	75754	120	102519
63	**28**	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**
		14.49	13760	27.74	25987	37.1	35530	77.4	75999	105.4	100618
56	**31.5**	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**
		12.52	13826	25	26088	33.5	36021	67.7	74432	92.6	98968
49	**35.5**	34.62	**3482**	34.18	**3592**	34.5	**3602**	36	**3732**	34.6	**3842**
		11.56	13861	22.14	26199	30.6	36499	55.2	68705	66	78985
44	**40**	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**
		10.5	13901	19.37	26314	27.5	37080	47.1	65463	50.2	67890
39	**45**	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	● **3733**		
		9.48	13941	17.85	26381	23.5	34774	44.5	65080		
35	**50**	50.34	**3482**	49.71	**3592**	48.1	**3602**	48.8	**3733**		
		8.03	14004	15.39	26496	21.4	35588	41.5	68560		
31	**56**	54.71	**3483**	56.63	**3593**	56.2	**3603**	55.4	**3733**		
		7.55	14033	11.64	22403	19.9	37861	38.5	72206		
28	**63**	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**		
		6.48	14084	11.13	23239	17.9	38177	36.5	75622		
25	**71**	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**		
		5.82	14118	10.32	24473	15.9	38109	34.2	79077		
22	**80**	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**		
		5.2	14152	9.74	25562	14.7	38269	31.9	82938		
19	**90**	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**		
		4.61	14187	8.63	26204	13	37608	28.1	85520		
18	**100**	103.54	**3483**	97.53	**3593**	96.6	**3603**	102	**3733**		
		4.04	14222	8.03	26602	11.5	37608	25.4	87707		
16	**112**	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**		
		3.77	14240	7.25	26991	10.2	38674	23.6	88682		
14	**125**	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**		
		3.25	14277	6.52	27049	9.04	38755	20.34	88827		
13	**140**	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**		
		3	14295	5.77	27115	8.37	38819	18.64	88975		
10.9	**160**	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**		
		2.72	14317	5.03	27173	7.51	38899	16.66	89112		
9.7	**180**	172.09	**3483**	172.82	**3593**	173	**3603**	175	**3733**		
		2.45	14339	4.63	27212	6.65	38947	15.06	89221		
8.8	**200**	203.99	**3483**	201.34	**3593**	199	**3603**	198	**3733**		
		2.07	14373	3.99	27274	5.79	39006	13.33	89351		
7.8	**224**					216	**3603**	217	**3733**		
						5.33	38974	12.17	89403		
7.0	**250**					252	**3603**	244	**3733**		
						4.57	38986	10.82	89375		

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

● Alternative rating

48	**3732**
32.1	53271

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
1160	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		2.54	134	5.62	292		10.54	552		12.7	684		
1036	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		2.54	158	5.61	330		9.74	602		11.82	750		
906	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		2.54	167	5.41	359		10.03	661		11.29	809		
806	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		2.54	198	5.2	390		9.31	694		12.63	854		
725	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		2.54	212	4.54	424		8.57	708		12	1095		
647	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		2.54	237	4.54	442		7.52	708		12	1151		
580	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		2.54	276	4.03	442		6.53	708		12.06	1327		
518	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		2.54	298	3.79	443		6.11	708		10.56	1309		
460	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.49	343	3.19	442		5.38	708		8.89	1198		
408	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		2.27	351	3.02	442		4.85	708		8.62	1293		
363	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		2.16	375	2.64	442		4.27	708		7.88	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				5.62	919		13.65	2150		21.74	3615		
322	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.87	365	2.37	442		3.83	708		6.96	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				5.56	1030		11.55	2208		18.85	3615		
290	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.84	178	2.11	442		3.41	708		6.4	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				5.4	1128		10.83	2208		17.1	3615		
259	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.84	201	1.82	442		2.91	708		5.62	1318		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				5.2	1228		9.58	2208		15.48	3615		
230	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.81	221	1.66	442		2.63	708		4.92	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				4.66	1252		8.66	2208		13.49	3615		
204	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.81	249	0.81	247		2.4	708		4.4	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.23	683	4.08	1252		7.59	2208		12.2	3615		
181	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.81	254	0.81	273		2.06	708		3.98	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		2.25	766	3.62	1252	4.53	1435	6.59	2208	9	2871	10.63	3615	18.57	6091
161	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		2.14	768	3.41	1252	4.19	1501	6.17	2208	8.1	3054	9.44	3615	16.94	6410
145	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.81	772	2.87	1252	3.87	1564	5.43	2208	7.74	3113	8.69	3615	15.87	6618

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer									
		4		5		6		7		8	
1160	1.25	1.24	**3401**	1.28	**3501**						
		32.27	1703	54.01	2935						
1036	1.4	1.38	**3401**	1.46	**3501**						
		34.63	2043	52.14	3243						
906	1.6	1.56	**3401**	1.6	**3501**						
		35.06	2324	50.12	3417						
806	1.8	1.74	**3401**	1.79	**3501**						
		29.75	2200	48.68	3705						
725	2	1.97	**3401**	2	**3501**						
		30.46	2554	46.41	3955						
647	2.24	2.17	**3401**	2.25	**3501**						
		28.55	2643	43.98	4217						
580	2.5	2.54	**3401**	2.44	**3501**						
		25.69	2779	42.27	4397						
518	2.8	2.83	**3401**	2.77	**3501**						
		23.77	2870	40.49	4786						
460	3.15	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		21.41	2903	37.67	4926	100	13394				
408	3.55	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		18.92	2903	34.51	5221	100	15189				
363	4	4.11	**3401**	3.88	**3501**						
		16.57	2903	31.62	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		32.58	5324	56.21	9371	100	16190				
322	4.5	4.41	**3401**	4.35	**3501**						
		15.44	2903	28.15	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		34.96	6388	55.21	10727	100	18109	100	18318		
290	5	5.13	**3401**	4.85	**3501**						
		13.27	2903	25.26	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		35.39	7266	56.21	11760	100	20488	100	20488		
259	5.6	5.57	**3401**	5.5	**3501**						
		12.23	2903	21.78	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		30.03	6877	48.35	11513	100	23200	100	23492	158	37991
230	6.3	6.15	**3401**	6.31	**3501**						
		11.07	2903	19.41	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		30.75	7986	45.26	12071	100	25662	100	25912	158	41948
204	7.1	6.83	**3401**	6.87	**3501**						
		9.38	2730	17.84	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	6.98	**3842**
		28.82	8264	41	12301	91.9	26306	100	33340	158	46037
181	8	8.1	**3401**	8	**3501**						
		7.91	2731	15.32	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		32.58	10477	55.21	18253	88.3	28407	100	33340	158	53754
161	9	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		33.43	12023	55.21	20894	70.8	31825	100	37930	158	58041
145	10	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		31.03	12535	52.96	22009	79.2	31825	100	42979	158	65956

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
129	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.69	774	2.71	1252	3.56	1630	4.89	2208	7.16	3255	7.8	3615	14.51	6685
116	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.52	776	2.37	1252	3.27	1700	4.31	2208	6.69	3365	6.95	3615	13.43	7101
104	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.31	779	2.13	1252	2.95	1753	3.87	2208	6.14	3522	6.14	3615	12.2	7127
91	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		1.22	781	1.9	1252	2.63	1759	3.44	2208	5.58	3689	5.64	3615	10.63	7132
81	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		1.04	784	1.64	1252	2.48	1763	2.93	2208	5.34	3772	4.99	3615	9.44	7132
73	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.93	786	1.49	1252	2.1	1770	2.66	2208	4.9	3928	4.34	3615	8.69	7132
65	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.83	788	0.81	778	1.99	1773	2.42	2208	4.45	3958	3.88	3615	7.8	7132
58	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.74	790	0.81	858	1.74	1779	2.08	2208	3.93	3972	3.51	3615	6.95	7132
52	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.66	792			1.57	1783			3.54	3983			6.14	7132
46	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	32.32	**3363**	30.24	**3372**
		0.58	794			1.4	1788			3.16	3995	4.6	6001	5.64	7132
41	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	37.29	**3363**	34.18	**3372**
		0.53	795			1.21	1793			2.7	4010	3.99	6100	4.99	7132
36	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.47	797			1.11	1796			2.45	4018	3.62	6100	4.34	7132
32	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.42	798			0.81	1505			2.24	4026	3.28	6100	3.88	7132
29	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.4	796			0.81	1661			1.93	4038	2.86	6100	3.51	7132
26	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.35	798			0.73	1719			1.77	4038	2.58	6100	3.13	7389
23	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.3	800			0.67	1784			1.53	4038	2.25	6100	2.79	7525
20	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.28	801			0.64	1804			1.44	4038	2	6100	2.5	7611
18	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.24	803			0.54	1804			1.26	4038	1.84	6100	2.3	7611
16	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.22	804			0.51	1804			1.14	4038	1.65	6100	2.07	7611
15	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.19	806			0.44	1804			1	4038	1.47	6100	1.84	7611
13	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.17	807			0.4	1804			0.9	4038	1.3	6100	1.63	7611
12	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.15	808			0.23	1804			0.8	4038	1.19	6100	1.5	7611
10	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.13	809			0.21	1804			0.68	4038	1.06	6100	1.32	7611
9.1	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.12	810			0.19	1804			0.62	4038	0.92	6100	1.15	7611
8.1	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.11	811			0.18	1804			0.56	4038	0.82	6100	1.03	7611
7.3	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.1	812			0.17	1804			0.48	4038	0.74	6100	0.93	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1450 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
129	11.2	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		28.86	13006	48.37	22434	71	32292	100	45900	158	73211
116	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		26.28	13433	45.25	23504	64.8	32717	100	50907	158	82445
104	14	13.5	**3482**	13.98	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		23.91	13489	40.99	23956	58.8	33123	100	57583	158	91019
91	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		20.59	13574	38.91	24673	53.3	33583	100	65511	150	97308
81	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		18.52	13631	35.59	25646	46.4	34269	98.2	72937	141	103335
73	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		16.56	13688	30.63	24416	41.7	34800	88.4	74142	124	101258
65	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		14.7	13746	28.15	25956	38.5	35182	79.9	75348	100	91837
58	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		12.93	13806	25.88	26044	33.7	35858	72.8	76550	100	103108
52	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**
		12.08	13836	23.12	26142	31.4	36293	65.7	77857	89.5	103117
46	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**
		10.42	13898	20.83	26239	28.40	36855	57.5	76298	77.4	99838
41	35.5	34.62	**3482**	34.18	**3592**	34.5	**3602**	36	**3732**	34.6	**3842**
		9.63	13930	18.44	26345	25.9	37285	46.9	70452	56.1	81028
36	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**
		8.74	13967	16.13	26451	23.2	37754	40.1	67265	42.7	69695
32	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	● **3733**		
		7.89	14005	14.87	26513	20	35718	38.8	68484		
29	50	50.34	**3482**	49.71	**3592**	48.1	**3603**	48.8	**3733**		
		6.68	14063	12.81	26619	18.3	36729	36.1	71978		
26	56	54.71	**3483**	56.63	**3593**	56.2	**3603**	55.4	**3733**		
		6.28	14090	10.19	23664	16.6	38117	33.5	75828		
23	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**		
		5.39	14137	9.75	24558	14.9	38353	31.8	79515		
20	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**		
		4.84	14169	9.03	25850	13.3	38473	29.8	83159		
18	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**		
		4.32	14201	8.49	26894	12.2	38332	27.8	87233		
16	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**		
		3.83	14233	7.36	26982	10.8	38522	24.1	88522		
15	100	103.54	**3483**	97.53	**3593**	99.6	**3603**	102	**3733**		
		3.36	14265	6.76	27027	9.79	38640	21.28	88684		
13	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**		
		3.13	14282	6.03	27080	8.47	38759	19.59	88844		
12	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**		
		2.7	14316	5.42	27133	7.8	38880	16.92	89352		
10	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**		
		2.49	14333	4.79	27195	6.96	38959	15.51	89352		
9.1	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**		
		2.26	14353	4.18	27248	6.24	39008	13.85	89409		
8.1	180	172.09	**3483**	172.82	**3593**	173	**3603**	175	**3733**		
		2.04	14373	3.85	27283	5.52	39017	12.5	89392		
7.3	200	203.99	**3483**	201.34	**3593**	199	**3603**	198	**3733**		
		1.72	14404	3.31	27345	4.8	39027	11.05	89392		
6.5	224					216	**3603**	217	**3733**		
						4.42	39007	10.08	89370		
5.8	250					252	**3603**	244	**3733**		
						3.79	39022	8.97	89424		

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

● Alternative rating

48	**3732**
32.1	53271

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
928	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		2.03	134	5.33	346		9.36	612		11.27	758		
829	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		2.03	158	4.97	365		8.64	668		10.72	832		
725	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		2.03	166	4.8	399		8.58	708		10.49	897		
644	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		2.03	198	4.61	432		7.59	708		10.02	947		
580	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		2.03	212	4.15	442		6.86	708		11.2	1214		
518	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		2.03	237	3.63	442		6.02	708		10.65	1276		
464	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		2.03	276	3.22	442		5.22	708		9.65	1327		
414	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		2.03	297	3.04	443		4.89	708		8.57	1327		
368	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		2.02	348	2.56	442		4.31	708		7.89	1327		
327	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		1.84	356	2.42	442		3.88	708		7.08	1327		
290	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		1.75	380	2.11	442		3.41	708		6.31	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				5.5	1122		10.92	2208		17.39	3615		
258	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.51	368	1.89	442		3.07	708		5.57	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				4.93	1139		9.24	2208		15.08	3615		
232	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.65	179	1.69	442		2.73	708		5.12	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				4.79	1247		8.66	2208		13.68	3615		
207	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.65	201	1.46	442		2.33	708		4.53	1327		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				4.24	1252		7.67	2208		12.38	3615		
184	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.65	221	1.33	442		2.11	708		3.93	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				3.73	1252		6.92	2208		10.79	3615		
163	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.65	249	0.65	248		1.92	708		3.52	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		2.03	781	3.26	1252		6.08	2208		9.76	3615		
145	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.59	254	0.65	274		1.65	708		3.18	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		1.82	775	2.89	1252	3.98	1575	5.27	2208	7.9	3151	8.5	3615	16.3	6685
129	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		1.73	775	2.73	1252	3.68	1648	4.93	2208	7.11	3352	7.55	3615	14.87	7035
116	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.46	777	2.3	1252	3.4	1716	4.35	2208	6.8	3417	6.95	3615	13.66	7120
104	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.37	780	2.17	1252	3.07	1756	3.91	2208	6.29	3573	6.24	3615	12.38	7132

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
928	1.25	1.24	**3401**	1.26	**3501**						
		26.45	1744	44.17	2999						
829	1.4	1.38	**3401**	1.46	**3501**						
		28.35	2091	44.17	3432						
725	1.6	1.56	**3401**	1.6	**3501**						
		28.7	2378	43.14	3677						
644	1.8	1.74	**3401**	1.79	**3501**						
		24.33	2249	41.91	3986						
580	2	1.97	**3401**	2	**3501**						
		24.9	2610	39.95	4256						
518	2.24	2.17	**3401**	2.25	**3501**						
		23.33	2699	37.85	4537						
464	2.5	2.54	**3401**	2.44	**3501**						
		20.96	2835	36.38	4731						
414	2.8	2.83	**3401**	2.77	**3501**						
		19.23	2903	34.85	5150						
368	3.15	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		17.13	2903	31.94	5221	80	13394				
327	3.55	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		15.14	2903	27.61	5221	80	15189				
290	4	4.11	**3401**	3.88	**3501**						
		13.26	2903	25.3	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		26.69	5452	44.17	9372	80	16190				
258	4.5	4.41	**3401**	4.35	**3601**	4.6	**2602**				
		12.35	2903	22.52	5221	80	11980				
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		28.62	6538	44.17	10728	80	18109	80	18318		
232	5	5.13	**3401**	4.85	**3501**						
		10.62	2903	20.21	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		28.96	7433	44.17	11761	80	20488	80	20488		
207	5.6	5.57	**3401**	5.5	**3501**						
		9.78	2903	17.42	5101						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		24.56	7031	39.63	11796	80	23200	80	23492	126	37870
184	6.3	6.15	**3401**	6.31	**3501**						
		8.86	2903	15.53	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		25.13	8159	37.06	12354	80	25662	80	25912	126	41815
163	7.1	6.83	**3401**	6.87	**3501**						
		7.5	2729	14.27	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.04	**3732**	**6.98**	**3842**
		23.55	8439	33.56	12584	75.1	26871	80	29376	126	45892
145	8	8.1	**3401**	8	**3501**						
		6.42	2769	12.25	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		26.69	10729	44.17	18254	72.1	28995	80	33340	126	53584
129	9	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		28.62	12867	44.17	20895	57.6	27129	80	37930	126	57858
116	10	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		26.68	13476	44.17	22907	65.8	33051	80	42979	126	65747
104	11.2	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		24.03	13536	39.63	22973	59	33543	80	45900	126	72979

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1		2		3					
93	**12.5**	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		1.22	776	1.9	1252	2.71	1762	3.44	2208	5.87	3693	5.56	3615	10.79	7132
83	**14**	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		1.06	787	1.7	1252	2.38	1769	3.1	2208	5.39	3866	4.91	3615	9.76	7132
73	**16**	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		0.98	785	1.52	1252	2.12	1774	2.75	2208	4.79	3960	4.51	3615	8.5	7132
64	**18**	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		0.84	791	1.31	1252	2	1776	2.35	2208	4.49	3967	3.99	3615	7.55	7132
58	**20**	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.75	792	1.19	1252	1.69	1784	2.13	2208	3.97	3980	3.47	3615	6.95	7132
52	**22.4**	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.67	795	0.65	780	1.6	1786	1.94	2208	3.59	3991	3.1	3615	6.24	7132
46	**25**	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.59	787	0.65	861	1.4	1791	1.66	2208	3.17	4003	2.8	3615	5.56	7132
41	**28**	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.53	798			1.26	1795			2.85	4013			4.91	7132
37	**31.5**	33.48	**3012**			30.55	**3132**			30.29	**3252**	31.84	**3363**	30.24	**3372**
		0.47	821			1.13	1799			2.54	4023	3.93	6416	4.51	7132
33	**35.5**	35.73	**3012**			35.37	**3132**			35.51	**3252**	35.18	**3363**	34.18	**3372**
		0.43	801			0.98	1803			2.18	4036	3.4	6100	3.99	7132
29	**40**	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.38	799			0.89	1804			1.97	4038	2.9	6100	3.47	7132
26	**45**	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.34	804			0.65	1510			1.8	4038	2.63	6100	3.1	7132
23	**50**	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.32	803			0.65	1666			1.54	4038	2.29	6100	2.8	7132
21	**56**	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.28	787			0.54	1592			1.41	4038	2.07	6100	2.5	7389
18	**63**	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.24	785			0.5	1657			1.23	4038	1.9	6100	2.18	7389
16	**71**	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.23	812			0.48	1690			1.15	4038	1.7	6100	2	7611
15	**80**	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.19	789			0.42	1790			1.01	4038	1.52	6100	1.84	7611
13	**90**	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.17	791			0.4	1804			0.91	4038	1.34	6100	1.65	7611
12	**100**	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.15	785			0.35	1804			0.8	4038	1.23	6100	1.47	7611
10	**112**	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.14	823			0.32	1804			0.72	4038	1.09	6100	1.3	7611
9.3	**125**	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.12	796			0.28	1804			0.64	4038	0.96	6100	1.19	7611
8.3	**140**	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.11	821			0.24	1804			0.55	4038	0.85	6100	1.06	7611
7.3	**160**	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.1	821			0.22	1804			0.5	4038	0.77	6100	0.92	7611
6.4	**180**	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.09	834			0.19	1804			0.45	4038	0.66	6100	0.82	7611
5.8	**200**	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.08	834			0.18	1804			0.39	4038	0.59	6100	0.74	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 1160 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
93	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		21.29	13603	37.06	24062	53.8	33954	80	50907	126	82184
83	14	13.5	**3482**	13.98	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		19.36	13653	33.55	24504	48.9	34433	80	57583	126	90731
73	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		16.66	13728	31.82	25221	44.4	34969	80	65511	126	101908
64	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		14.98	13778	28.89	26018	38.6	35636	80	74274	124	113430
58	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		13.39	13829	25.02	24929	34.7	36198	73.09	76627	109	111149
52	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		11.88	13880	22.77	26239	32.1	36667	66.08	77894	80.0	91837
46	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		10.44	13932	20.91	26310	28.1	37374	60.9	80047	80.0	103108
41	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**
		9.75	13959	18.69	26407	26.2	37854	55	81472	74.5	107293
37	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**
		8.41	14014	16.82	26487	23.40	37958	48	79615	62.8	101257
33	35.5	34.62	**3482**	34.18	**3592**	34.5	**3603**	36	**3732**	34.6	**3842**
		7.76	14042	14.88	26575	21.1	37969	39.2	73606	46.9	84675
29	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**
		7.04	14074	13.02	26673	18.7	38039	33.5	70242	35.8	73041
26	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	**3733**		
		6.36	14107	11.99	26726	16.8	37504	34	75015		
23	50	50.34	**3482**	49.71	**3592**	48.1	**3602**	48.8	**3733**		
		5.38	14158	10.33	26823	15.3	38385	31.8	79256		
21	56	54.71	**3483**	56.63	**3593**	55.4	**3603**	55.4	**3733**		
		5.06	14181	9.02	26186	13.4	38461	29.5	83467		
18	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**		
		4.34	14223	8.56	26947	12	38610	27.9	87204		
16	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**		
		3.9	14250	7.55	27009	10.7	38690	25.4	88601		
15	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**		
		3.48	14278	6.84	27062	9.86	38725	22.62	88723		
13	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**		
		3.08	14306	5.92	27133	8.71	38834	19.4	89073		
12	100	103.54	**3483**	97.53	**3593**	96.6	**3603**	102	**3733**		
		2.7	14334	5.44	27177	7.89	38926	17.14	89288		
10	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**		
		2.52	14349	4.85	27221	6.82	39011	15.77	89400		
9.3	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**		
		2.17	14378	4.36	27265	6.26	39005	13.57	89403		
8.3	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**		
		2	14393	3.85	27319	5.57	38992	12.4	89404		
7.3	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**		
		1.81	14410	3.36	27372	4.99	38992	11.08	89409		
6.4	180	172.09	**3483**	172.82	**3593**	199	**3603**	175	**3733**		
		1.64	14428	3.09	27398	3.84	39027	10	89390		
5.8	200	203.99	**3483**	201.34	**3593**	216	**3603**	198	**3733**		
		1.38	14455	2.66	27451	3.54	39052	8.84	89392		
5.2	224					216	**3603**	217	**3733**		
						3.54	39051	8.06	89325		
4.6	250					252	**3603**	244	**3733**		
						3.03	38996	7.17	89349		

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
696	1.25	1.24	**3001**	1.22	**3101**		1.23	**3201**		1.26	**3301**		
		1.52	134	4.27	370		7.5	654		9.03	810		
621	1.4	1.46	**3001**	1.38	**3101**		1.45	**3201**		1.46	**3301**		
		1.52	158	3.9	391		6.87	708		8.6	890		
544	1.6	1.54	**3001**	1.56	**3101**		1.55	**3201**		1.61	**3301**		
		1.52	166	3.85	425		6.44	708		8.41	959		
483	1.8	1.83	**3001**	1.76	**3101**		1.75	**3201**		1.77	**3301**		
		1.52	197	3.54	442		5.7	708		8.6	1083		
435	2	1.96	**3001**	2	**3101**		1.94	**3201**		2.04	**3301**		
		1.52	212	3.12	442		5.14	708		8.98	1298		
388	2.24	2.19	**3001**	2.29	**3101**		2.21	**3201**		2.25	**3301**		
		1.52	237	2.73	442		4.51	708		8.31	1327		
348	2.5	2.55	**3001**	2.58	**3101**		2.55	**3201**		2.58	**3301**		
		1.52	276	2.42	442		3.92	708		7.24	1327		
311	2.8	2.75	**3001**	2.74	**3101**		2.77	**3201**		2.91	**3301**		
		1.52	298	2.28	443		3.66	708		6.42	1327		
276	3.15	3.24	**3001**	3.25	**3101**		3.09	**3201**		3.16	**3301**		
		1.52	350	1.92	442		3.23	708		5.91	1327		
245	3.55	3.63	**3001**	3.44	**3101**		3.43	**3201**		3.52	**3301**		
		1.39	351	1.81	442		2.91	708		5.31	1327		
218	4	4.08	**3001**	3.93	**3101**		3.89	**3201**		3.95	**3301**		
		1.32	375	1.59	442		2.56	708		4.73	1327		
				3.91	**3122**		3.87	**3242**		3.96	**3362**		
				4.41	1202		8.19	2208		13.04	3615		
193	4.5	4.58	**3001**	4.36	**3101**		4.33	**3201**		4.47	**3301**		
		1.14	365	1.42	442		2.3	708		4.18	1327		
				4.43	**3122**		4.57	**3242**		4.59	**3362**		
				3.96	1221		6.93	2208		11.31	3615		
174	5	5.17	**3001**	4.92	**3101**		4.88	**3201**		4.87	**3301**		
		0.49	178	1.27	442		2.04	708		3.84	1327		
				4.99	**3122**		4.88	**3242**		5.06	**3362**		
				3.6	1252		6.5	2208		10.26	3615		
155	5.6	5.82	**3001**	5.69	**3101**		5.71	**3201**		5.5	**3301**		
		0.49	201	1.09	442		1.74	708		3.4	1327		
				5.65	**3122**		5.51	**3242**		5.59	**3362**		
				3.18	1252		5.75	2208		9.29	3615		
138	6.3	6.4	**3001**	6.25	**3101**		6.31	**3201**		6.33	**3301**		
		0.49	221	1	442		1.58	708		2.95	1327		
				6.42	**3122**		6.1	**3242**		6.41	**3362**		
				2.8	1252		5.19	2208		8.09	3615		
122	7.1	7.22	**3001**	7.17	**3101**		6.92	**3201**		7.06	**3301**		
		0.49	249	0.49	248		1.44	708		2.64	1327		
		7.38	**3012**	7.34	**3122**		6.96	**3242**		7.09	**3362**		
		1.52	733	2.45	1252		4.56	2208		7.32	3615		
109	8	8.13	**3001**	7.91	**3101**		8.06	**3201**		7.83	**3301**		
		0.45	254	0.49	274		1.23	708		2.39	1327		
		8.16	**3012**	8.28	**3122**	7.57	**3132**	8.02	**3242**	7.63	**3252**	8.14	**3362**	7.85	**3372**
		1.37	779	2.17	1252	3.17	1673	3.95	2208	6.29	3151	6.38	3615	13.01	7100
97	9	8.59	**3012**	8.79	**3122**	8.57	**3132**	8.57	**3242**	9.02	**3252**	9.16	**3362**	9.06	**3372**
		1.3	780	2.05	1252	2.93	1750	3.7	2208	5.67	3352	5.66	3615	11.31	7132
87	10	10.2	**3012**	10.43	**3122**	9.67	**3132**	9.72	**3242**	9.62	**3252**	9.95	**3362**	9.98	**3372**
		1.1	783	1.72	1252	2.61	1760	3.26	2208	5.41	3417	5.21	3615	10.26	7132
78	11.2	10.92	**3012**	11.04	**3122**	10.94	**3132**	10.8	**3242**	10.88	**3252**	11.09	**3362**	11.03	**3372**
		1.03	784	1.63	1252	2.32	1766	2.93	2208	5.01	3573	4.68	3615	9.29	7132

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
696	**1.25**	1.24	**3401**	1.28	**3501**						
		20.12	1770	33.12	2998						
621	**1.4**	1.38	**3401**	1.46	**3501**						
		21.57	2121	33.12	3432						
544	**1.6**	1.56	**3401**	1.6	**3501**						
		21.82	2411	32.35	3677						
483	**1.8**	1.74	**3401**	1.79	**3501**						
		18.49	2279	31.43	3986						
435	**2**	1.97	**3401**	2	**3501**						
		18.92	2644	29.96	4256						
388	**2.24**	2.17	**3401**	2.25	**3501**						
		17.72	2734	28.39	4537						
348	**2.5**	2.54	**3401**	2.44	**3501**						
		15.92	2870	27.29	4731						
311	**2.8**	2.83	**3401**	2.77	**3501**						
		14.42	2903	25.15	4956						
276	**3.15**	3.18	**3401**	3.07	**3501**	3.21	**3602**				
		12.84	2903	23.95	5221	60	13394				
245	**3.55**	3.6	**3401**	3.55	**3501**	3.64	**3602**				
		11.35	2903	20.71	5221	60	15189				
218	**4**	4.11	**3401**	3.88	**3501**						
		9.94	2903	18.97	5221						
		3.91	**3482**	4.07	**3592**	3.88	**3602**				
		20.31	5532	33.12	9370	60	16190				
193	**4.5**	4.41	**3401**	4.35	**3501**						
		9.26	2903	16.89	5221						
		4.37	**3482**	4.66	**3592**	4.34	**3602**	4.39	**3732**		
		21.78	6632	33.12	10725	60	18109	60	18318		
174	**5**	5.13	**3401**	4.85	**3501**						
		7.96	2903	15.16	5221						
		4.91	**3482**	5.1	**3592**	4.91	**3602**	4.91	**3732**		
		22.03	7537	33.12	11758	60	20488	60	20488		
155	**5.6**	5.57	**3401**	5.5	**3501**						
		7.34	2903	13.07	5103						
		5.48	**3482**	5.7	**3592**	5.56	**3602**	5.63	**3732**	5.76	**3842**
		18.67	7126	30.16	11968	60	23200	60	23492	95	37900
138	**6.3**	6.15	**3401**	6.31	**3501**						
		6.64	2903	11.65	5221						
		6.21	**3482**	6.38	**3592**	6.15	**3602**	6.21	**3732**	6.36	**3842**
		19.1	8267	28.19	12531	60	25662	60	25912	95	42036
123	**7.1**	6.83	**3401**	6.87	**3501**						
		5.63	2731	10.17	5221						
		6.86	**3482**	7.18	**3592**	6.86	**3602**	7.24	**3732**	6.98	**3842**
		17.89	8547	25.52	12761	57.4	27384	71.1	29376	95	46134
109	**8**	8.1	**3401**	8	**3501**						
		4.85	2792	9.19	5221						
		7.69	**3482**	7.92	**3592**	7.71	**3602**	7.99	**3732**	8.15	**3842**
		20.31	10887	33.12	18250	55	29490	60	33340	95	53868
97	**9**	8.6	**3482**	9.07	**3592**	9.03	**3602**	9.09	**3732**	8.8	**3842**
		21.78	13051	33.12	20890	43.9	27569	60	37930	95	58164
87	**10**	9.67	**3482**	9.94	**3592**	9.63	**3602**	10.3	**3732**	10	**3842**
		20.18	13589	33.12	22902	51.3	34356	60	42979	95	66095
78	**11.2**	10.78	**3482**	11.1	**3592**	10.9	**3602**	11	**3732**	11.1	**3842**
		18.17	13645	30.16	23310	46	34870	60	45900	95.0	73366

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN 3000 Reducer											
		0		1			2			3			
70	12.5	12.23	**3012**	12.61	**3122**	12.43	**3132**	12.27	**3242**	12.04	**3252**	12.45	**3362**	12.65	**3372**
		0.92	786	1.42	1252	2.05	1772	2.58	2208	4.68	3923	4.17	3615	8.09	7132
62	14	14.24	**3012**	14.08	**3122**	14.2	**3132**	13.65	**3242**	13.72	**3252**	14.09	**3362**	13.98	**3372**
		0.8	789	1.28	1252	1.8	1777	2.32	2208	4.15	3866	3.68	3615	7.32	7132
54	16	15.35	**3012**	15.79	**3122**	16.03	**3132**	15.36	**3242**	15.82	**3252**	15.33	**3362**	16.05	**3372**
		0.74	790	1.14	1252	1.6	1782	2.06	2208	3.61	3960	3.39	3615	6.38	7132
48	18	18.06	**3012**	18.28	**3122**	17.01	**3132**	18	**3242**	16.9	**3252**	17.33	**3362**	18.08	**3372**
		0.63	793	0.98	1252	1.51	1785	1.76	2208	3.39	3967	3	3615	5.66	7132
44	20	20.24	**3012**	20.07	**3122**	20.2	**3132**	19.87	**3242**	19.18	**3252**	19.95	**3362**	19.64	**3372**
		0.56	794	0.9	1252	1.27	1791	1.6	2208	2.99	3980	2.6	3615	5.21	7132
39	22.4	22.76	**3012**	23.01	**3122**	21.36	**3132**	21.79	**3242**	21.31	**3252**	22.29	**3362**	21.89	**3372**
		0.5	796	0.49	780	1.21	1793	1.45	2208	2.7	3991	2.33	3615	4.68	7132
35	25	25.59	**3012**	25.39	**3122**	24.41	**3132**	25.44	**3242**	24.2	**3252**	24.68	**3362**	24.56	**3372**
		0.45	798	0.49	861	1.06	1798	1.25	2208	2.38	4003	2.1	3615	4.17	7132
31	28	28.85	**3012**			27.25	**3132**			26.93	**3252**			27.8	**3372**
		0.4	799			0.95	1801			2.15	4013			3.68	7132
28	31.5	33.48	**3012**			30.55	**3132**			30.29	**3252**	31.84	**3363**	30.24	**3372**
		0.35	800			0.85	1804			1.91	4023	2.81	6100	3.39	7132
25	35.5	35.73	**3012**			35.37	**3132**			35.51	**3252**	35.18	**3363**	34.18	**3372**
		0.32	800			0.73	1804			1.63	4036	2.54	6100	3	7132
22	40	40.32	**3012**			38.84	**3132**			39.2	**3252**	41.1	**3363**	39.36	**3372**
		0.28	800			0.67	1804			1.48	4038	2.21	6100	2.6	7132
19	45	45.36	**3012**			44.54	**3132**			42.98	**3252**	45.4	**3363**	43.98	**3372**
		0.25	800			0.59	1804			1.35	4038	2	6100	2.33	7132
17	50	49.16	**3013**			49.15	**3132**			50.19	**3252**	52.09	**3363**	48.68	**3372**
		0.24	796			0.52	1804			1.16	4038	1.74	6100	2.1	7132
16	56	55.04	**3013**			57.83	**3133**			55.7	**3253**	57.6	**3363**	57.57	**3373**
		0.21	798			0.46	1804			1.06	4038	1.55	6100	1.88	7389
14	63	64.07	**3013**			65.25	**3133**			64.2	**3253**	66.11	**3363**	66.1	**3373**
		0.18	800			0.4	1804			0.92	4038	1.43	6100	1.64	7389
12	71	69.09	**3013**			69.24	**3133**			68.61	**3253**	74.4	**3363**	74.44	**3373**
		0.17	801			0.38	1804			0.86	4038	1.28	6100	1.5	7611
11	80	81.29	**3013**			82.23	**3133**			77.86	**3253**	80.86	**3363**	80.86	**3373**
		0.14	803			0.32	1804			0.76	4038	1.14	6100	1.38	7611
10	90	91.08	**3013**			86.97	**3133**			86.48	**3253**	90.12	**3363**	90.12	**3373**
		0.13	804			0.3	1804			0.68	4038	1.01	6100	1.24	7611
9	100	102.43	**3013**			99.4	**3133**			98.24	**3253**	101.13	**3363**	101.13	**3373**
		0.12	806			0.27	1804			0.6	4038	0.93	6100	1.1	7611
8	112	115.16	**3013**			110.94	**3133**			109.3	**3253**	114.47	**3363**	114.47	**3373**
		0.1	807			0.24	1804			0.54	4038	0.82	6100	0.97	7611
7	125	129.81	**3013**			124.4	**3133**			122.96	**3253**	124.53	**3363**	124.53	**3373**
		0.09	808			0.16	1380			0.48	4038	0.71	6100	0.89	7611
6.2	140	146.18	**3013**			144.02	**3133**			144.13	**3253**	141	**3363**	140.74	**3373**
		0.08	809			0.15	1438			0.41	4038	0.64	6100	0.79	7611
5.4	160	160.8	**3013**			158.13	**3133**			159.1	**3253**	162.1	**3363**	162.06	**3373**
		0.07	810			0.14	1497			0.37	4038	0.58	6100	0.69	7611
4.8	180	181.46	**3013**			181.32	**3133**			174.46	**3253**	181	**3363**	181.09	**3373**
		0.07	811			0.11	1560			0.34	4038	0.49	6100	0.61	7611
4.4	200	204.14	**3013**			200.11	**3133**			203.72	**3253**	200.44	**3363**	200.44	**3373**
		0.06	812			0.11	1628			0.29	4038	0.45	6100	0.56	7611

Exact ratio	**Gear frame**
Input H.P.	Output torque

Motor RPM 870 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer									
		4		5		6		7		8	
70	12.5	12.23	**3482**	12.43	**3592**	12.1	**3602**	12.2	**3732**	12.5	**3842**
		16.09	13706	28.2	24410	42	35343	60	50907	95.0	82618
62	14	13.5	**3482**	13.98	**3592**	13.5	**3602**	13.8	**3732**	13.8	**3842**
		14.62	13752	25.51	24847	38.2	35864	60	57583	95.0	91211
54	16	15.77	**3482**	15.17	**3592**	15.1	**3602**	15.7	**3732**	15.5	**3842**
		12.58	13821	24.19	25563	34.7	36439	60	65511	95.0	102447
48	18	17.61	**3482**	17.24	**3592**	17.7	**3602**	17.8	**3732**	17.5	**3842**
		11.31	13867	21.82	26206	30.2	37174	60	74274	95.0	115666
44	20	19.77	**3482**	19.07	**3592**	20	**3602**	20.1	**3732**	19.5	**3842**
		10.1	13914	19.01	25248	27.1	37693	58	81075	90.2	122391
39	22.4	22.37	**3482**	22.06	**3592**	21.9	**3602**	22.6	**3732**	22	**3842**
		8.96	13961	17.18	26404	24.9	37923	52.5	82515	60.0	91837
35	25	25.55	**3482**	24.08	**3592**	25.5	**3602**	25.2	**3732**	24.7	**3842**
		7.87	14008	15.78	26475	21.4	37950	47.8	83770	60.0	103108.
31	28	27.42	**3482**	27.05	**3592**	27.7	**3602**	28.4	**3732**	27.6	**3842**
		7.35	14033	14.1	26560	19.8	38142	43.1	85125	58.2	111758
28	31.5	31.9	**3482**	30.14	**3592**	31.1	**3602**	31.8	**3732**	30.9	**3842**
		6.34	14083	12.69	26634	17.70	38282	37.6	83153	47.7	102547
25	35.5	34.62	**3482**	34.18	**3592**	34.5	**3602**	36	**3732**	34.6	**3842**
		5.85	14108	11.22	26717	16	38388	30.7	76860	36.8	88587
22	40	38.24	**3482**	39.23	**3592**	39	**3602**	40.2	**3732**	39.1	**3842**
		5.31	14138	9.81	26802	14.2	38513	26.4	73806	28.1	76441
19	45	42.46	**3482**	42.67	**3592**	42.8	**3602**	43.2	**3733**		
		4.79	14169	9.04	26855	12.9	38397	28.1	82663		
17	50	50.34	**3482**	49.71	**3592**	48.1	**3602**	48.8	**3733**		
		4.05	14215	7.78	26941	11.5	38468	26.2	87064		
16	56	54.71	**3483**	56.63	**3593**	56.2	**3603**	55.4	**3733**		
		3.81	14236	6.92	26776	10.1	38652	23.5	88654		
14	63	63.93	**3483**	61.44	**3593**	63	**3603**	61.2	**3733**		
		3.27	14274	6.44	27053	9.05	38824	21.34	88933		
12	71	71.36	**3483**	69.82	**3593**	70.8	**3603**	68.3	**3733**		
		2.93	14299	5.68	27115	8.07	38907	19.17	89158		
11	80	80.13	**3483**	77.24	**3593**	76.9	**3603**	76.8	**3733**		
		2.62	14324	5.15	27162	7.45	39012	19.09	99836		
10	90	90.66	**3483**	89.35	**3593**	87.3	**3603**	89.9	**3733**		
		2.32	14349	4.46	27227	6.56	38997	14.6	89378		
9	100	103.54	**3483**	97.53	**3593**	96.6	**3603**	102	**3733**		
		2.03	14375	4.09	27260	5.93	39007	12.87	89392		
8	112	111.11	**3483**	109.55	**3593**	112	**3603**	111	**3733**		
		1.89	14388	3.65	27304	5.11	38972	11.82	89343		
7	125	129.28	**3483**	122.06	**3593**	122	**3603**	129	**3733**		
		1.63	14415	3.28	27348	4.69	38963	10.17	89337		
6.2	140	140.31	**3483**	138.42	**3593**	137	**3603**	141	**3733**		
		1.5	14428	2.9	27395	4.18	38995	9.31	89390		
5.4	160	154.98	**3483**	158.87	**3593**	153	**3603**	158	**3733**		
		1.36	14444	2.53	27442	3.74	38965	8.31	89408		
4.8	180	172.09	**3483**	172.82	**3593**	173	**3603**	175	**3733**		
		1.23	14460	2.33	27463	3.31	38993	7.5	89375		
4.4	200	203.99	**3483**	201.34	**3593**	199	**3603**	198	**3733**		
		1.04	14485	2	27510	2.88	39027	6.63	89392		
3.9	224					216	**3603**	217	**3733**		
						2.65	38978	6.05	89399		
3.5	250					252	**3603**	244	**3733**		
						2.27	38953	5.38	89390		

If shaded, mechanical H.P. may exceed thermal H.P. limit.
Refer to page E-142.

Exact ratio	**Gear frame**
Input H.P.	Output torque

Combined - Motor RPM 1750

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer													
		2		3		4		5		6		7		8	
12.5	140														
10.9	160														
9.7	180														
8.8	200														
7.8	224	223.5	**3254**	223.2	**3374**	229.4	**3484**	228.2	**3594**					210.21	**3844**
		0.545	4038	0.964	7132	1.869	14206	3.556	26890					17.53	122392
7	250	247.2	**3254**	246.8	**3374**	241.5	**3484**	258.3	**3594**					238.49	**3844**
		0.493	4038	0.872	7132	1.775	14206	3.142	26890					15.45	122392
6.3	280	260.2	**3254**	259.8	**3374**	273.4	**3484**	291.5	**3594**	280.01	**3604**	272.1	**3734**	263.25	**3844**
		0.468	4038	0.829	7132	1.568	14206	2.784	26890	4.148	38582	9.128	82505	14.00	122392
5.6	315	308.9	**3254**	308.4	**3374**	308.5	**3484**	329.7	**3594**	299.1	**3604**	310.07	**3734**	307.52	**3844**
		0.395	4038	0.698	7132	1.39	14206	2.462	26890	3.883	38580.	8.01	82503	11.98	122392
4.9	355	330.8	**3254**	330.2	**3374**	349	**3484**	374.5	**3594**	339.486	**3604**	357.53	**3734**	343.39	**3844**
		0.368	4038	0.652	7132	1.229	14206	2.167	26890	3.422	38590	6.947	82506	10.73	122392
4.4	400	370.4	**3254**	369.8	**3374**	396.5	**3484**	428	**3594**	377.19	**3604**	381.94	**3734**	385.52	**3844**
		0.329	4038	0.582	7132	1.081	14206	1.896	26890	3.079	38578	6.503	82506	9.56	122392
3.9	450	431.3	**3254**	430.6	**3374**	453	**3484**	483.1	**3594**	428.34	**3604**	433.47	**3734**	436.22	**3844**
		0.283	4038	0.5	7132	0.946	14206	1.68	26890	2.711	38574	5.73	82507	8.45	122392
3.5	500	465	**3254**	464.2	**3374**	511.4	**3484**	512.7	**3594**	476.66	**3604**	481.61	**3734**	498.23	**3844**
		0.262	4038	0.464	7132	0.838	14206	1.583	26890	2.437	38587	5.157	82503	7.40	122392
3.1	560	547	**3254**	546.1	**3374**	542.6	**3484**	608.8	**3594**	536.13	**3604**	546.92	**3734**	534.69	**3844**
		0.223	4038	0.394	7132	0.79	14206	1.333	26890	2.167	38592	4.541	82500	6.89	122392
2.8	630	613.1	**3254**	612.1	**3374**	644.4	**3484**	643.8	**3594**	628.53	**3604**	608.62	**3734**	622.05	**3844**
		0.199	4038	0.352	7132	0.665	14206	1.261	26890	1.848	38583	4.081	82507	5.92	122392
2.5	710	689.4	**3254**	688.3	**3374**	681.4	**3484**	735.7	**3594**	693.84	**3604**	684.55	**3734**	675.09	**3844**
		0.177	4038	0.313	7132	0.629	14206	1.103	26890	1.674	38582	3.628	82499	5.46	122392
2.2	800	775.1	**3254**	773.8	**3374**	778.7	**3484**	821.3	**3594**	760.75	**3604**	802.53	**3734**	745.68	**3844**
		0.157	4038	0.278	7132	0.551	14206	0.988	26890	1.527	38588	3.095	82508	4.94	122392
1.9	900	873.9	**3254**	872.4	**3374**	869.3	**3484**	920.8	**3594**	888.36	**3604**	885.92	**3734**	827.97	**3844**
		0.139	4038	0.247	7132	0.493	14206	0.881	26890	1.308	38598	2.804	82518	4.45	122392
1.8	1000	983.8	**3254**	982.2	**3374**	974.5	**3484**	1066.1	**3594**	986.89	**3605**	971.35	**3734**	981.63	**3844**
		0.124	4038	0.219	7132	0.44	14206	0.761	26890	1.202	38616	2.557	82506	3.75	122392
1.6	1120	1082.3	**3254**	1080.5	**3374**	1128.3	**3484**	1170.6	**3594**	1136.34	**3605**	1134.29	**3734**	1066.85	**3845**
		0.113	4038	0.199	7132	0.38	14206	0.693	26890	1.043	38583	2.19	82517	3.52	122392
1.4	1250	1221.3	**3254**	1219.3	**3374**	1239	**3484**	1342.4	**3594**	1214.4	**3605**	1258.82	**3735**	1246.64	**3845**
		0.1	4038	0.177	7132	0.346	14206	0.605	26890	0.976	38584.	2.013	82492	3.02	122392

Exact ratio	**Gear frame**
Input H.P.	Output torque

Combined - Motor RPM 1750 (Continued)

Exact Ratio rpm, HP and Torque

rpm	Nom. Ratio	Size of CbN Reducer													
		2		3		4		5		6		7		8	
1.3	**1400**	1374	**3255**	1371.7	**3375**	1420.8	**3484**	1481.4	**3594**	1378.1	**3605**	1450.92	**3735**	1391.52	**3845**
		0.091	4038	0.171	7611	0.302	14206	0.548	26890	0.860	38581	1.747	82516	2.70	122392
1.1	**1600**	1498.6	**3255**	1555.6	**3375**	1567.9	**3484**	1536.3	**3595**	1530.7	**3605**	1550.58	**3735**	1562.54	**3845**
		0.083	4038	0.151	7611	0.273	14206	0.554	27563	0.774	38568	1.635	82531	2.41	122392
0.97	**1800**	1779.5	**3255**	1847.1	**3375**	1695.5	**3485**	1738	**3595**	1738.8	**3605**	1759.6	**3735**	1767.87	**3845**
		0.07	4038	0.127	7611	0.264	14507	0.489	27563	0.862	38793	1.44	82486	2.13	122392
0.88	**2000**	1905.1	**3255**	1977.5	**3375**	1926.4	**3485**	1974.8	**3595**	1934.6	**3605**	1954.448	**3735**	2019.03	**3845**
		0.065	4038	0.119	7611	0.232	14507	0.431	27563	0.613	38606	1.297	82521	1.86	122392
0.78	**2240**	2133.6	**3255**	2214.7	**3375**	2200.7	**3485**	2256	**3595**	2176.4	**3605**	2220.22	**3735**	2166.65	**3845**
		0.058	4038	0.106	7611	0.203	14507	0.377	27563	0.545	38613	1.142	82540	1.74	122392
0.7	**2500**	2484.3	**3255**	2578.7	**3375**	2484.3	**3485**	2546.7	**3595**	2551.1	**3605**	2470.2	**3735**	2520.96	**3845**
		0.05	4038	0.091	7611	0.18	14507	0.334	27563	0.465	38617	1.026	82505	1.49	122392
0.63	**2800**	2678	**3255**	2779.7	**3375**	2636.2	**3485**	2702.4	**3595**	2816.1	**3605**	2778.896	**3735**	2736.04	**3845**
		0.047	4038	0.084	7611	0.17	14507	0.315	27563	0.421	38595	0.912	82503	1.37	122392
0.56	**3150**	3150.7	**3255**	3270.5	**3375**	3130.6	**3485**	3209.2	**3595**	3087.9	**3605**	3257.34	**3735**	3011.11	**3845**
		0.04	4038	0.072	7611	0.143	14507	0.265	27563	0.384	38601	0.778	82498	1.25	122392
0.49	**3550**	3531.1	**3255**	3665.3	**3375**	3310.4	**3485**	3393.5	**3595**	3605.8	**3605**	3595.6	**3735**	3355.76	**3845**
		0.035	4038	0.064	7611	0.135	14507	0.251	27563	0.329	38619	0.705	82521	1.12	122392
0.44	**4000**	3970.7	**3255**	4121.6	**3375**	3783.1	**3485**	3878	**3595**	3939.4	**3606**	3942.8	**3735**	3977.81	**3845**
		0.031	4038	0.057	7611	0.118	14507	0.219	27563	0.310	38960	0.643	82531	0.95	122392
0.39	**4500**	4464.4	**3255**	4634.1	**3375**	4223.2	**3485**	4329.2	**3595**	4382.9	**3606**	4604.1	**3735**	4583.78	**3846**
		0.028	4038	0.051	7611	0.106	14507	0.196	27563	0.279	39011	0.55	82435	0.92	133962
0.35	**5000**	5033.2	**3255**	5224.4	**3375**	4734.6	**3485**	4853.5	**3595**	4930.7	**3606**	5007.43	**3736**	5116.51	**3846**
		0.025	4038	0.045	7611	0.095	14507	0.175	27563	0.248	39011	0.559	89301	0.82	133962
0.31	**5600**	5666.5	**3255**	5881.8	**3375**	5481.6	**3485**	5619.2	**3595**	5779.6	**3606**	5771.58	**3736**	5745.32	**3846**
		0.022	4038	0.04	7611	0.082	14507	0.151	27563	0.211	38905	0.485	89303	0.73	133962
0.28	**6300**	6233.5	**3255**	6470.3	**3375**	6019.4	**3485**	6170.5	**3595**	6238.4	**3606**	6168	**3736**	6500.32	**3846**
		0.02	4038	0.036	7611	0.074	14507	0.138	27563	0.196	39008	0.454	89337	0.65	133962
0.25	**7100**	7034.2	**3255**	7301.6	**3375**	6904.4	**3485**	7077.7	**3595**	7190.4	**3606**	6999.6	**3736**	7423.82	**3846**
		0.018	4038	0.032	7611	0.065	14507	0.12	27563	0.170	38997	0.4	89323	0.57	133962
0.22	**8000**	7913.5	**3255**	8214.2	**3375**	7617.3	**3485**	7808.5	**3595**	7684.32	**3606**	7853.7	**3736**	7966.59	**3846**
		0.016	4038	0.029	7611	0.059	14507	0.109	27563	0.159	38979	0.357	89448	0.53	133962
0.19	**9000**	8576.5	**3256**	8982.1	**3376**	8891.1	**3486**	8876.4	**3596**	8720.3	**3606**	9052.2	**3736**	9269.38	**3846**
		0.015	4038	0.027	7611	0.051	14401	0.097	27333	0.14	38948	0.309	89236	0.45	133962
0.18	**10000**	9602.3	**3256**	9967.2	**3376**	9932.4	**3486**	9912.3	**3596**	9685.8	**3606**	9674	**3736**	10060.23	**3846**
		0.013	4038	0.024	7611	0.046	14401	0.087	27333	0.126	38934	0.2896	89379	0.42	133962

Exact ratio	**Gear frame**
Input H.P.	Output torque

Thermal Power Rating (Pt)

Nominal Ratio	Reducer Size			
	5	6	7	8
	Pt (hp)	Pt (hp)	Pt (hp)	Pt (hp)
3.15	-	65	84	-
3.55	-	65	84	-
4	46	65	84	-
4.5	46	65	83	-
5	46	65	83	-
5.6	46	65	83	95
6.3	46	65	83	95
7.1	45	64	83	95
8	45	64	82	95
9	44	64	80	95
10	43	63	78	95
11.2	43	62	76	95
12.5	43	60	76	95
14	43	59	76	95
16	43	59	76	95
18	-	-	76	80
20	-	-	76	80
22.4	-	-	76	80
25	-	-	76	80
28	-	-	76	80
31.5	-	-	-	80
35.5	-	-	-	80
40	-	-	-	80
45	-	-	-	80

Modifications

Gear Modifications

G11 CorroGard™ Gear Reducers

CorroGard™ gear reducers are designed for applications in food processing, chemical, poultry and any other industries that will be subjected to extreme humidity, washdown, steam, detergents, and mild acids. Construction of the CorroGard reducer includes the normally closed breather in the gear case. The exterior of the entire unit is then painted in one of the two options chosen at order entry:

Option #1 - CorroGard™ Grey Option (default type)
- 2 step paint system using 316 stainless steel paint
- Light grey semigloss finish
- USDA and FDA approved

Option #2 - CorroGard™ White Option
- 2 step paint system using epoxy paint
- White gloss finish
- USDA and FDA approved

G12a Foodgrade Synthetic Lubricant

When this modification is specified, the CbN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (Refer to page E-222).

G12b Washdown FG Service Reducer

When this modification is specified, a reducer will be built with all the features detailed above under G11 and G12a. When ordering, state the paint finish color that is to be provided.

G15 Export Boxing

Export boxing can be provided for "under-deck" transport. When the quantity of CbN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

G16 Extra or Special Nameplate

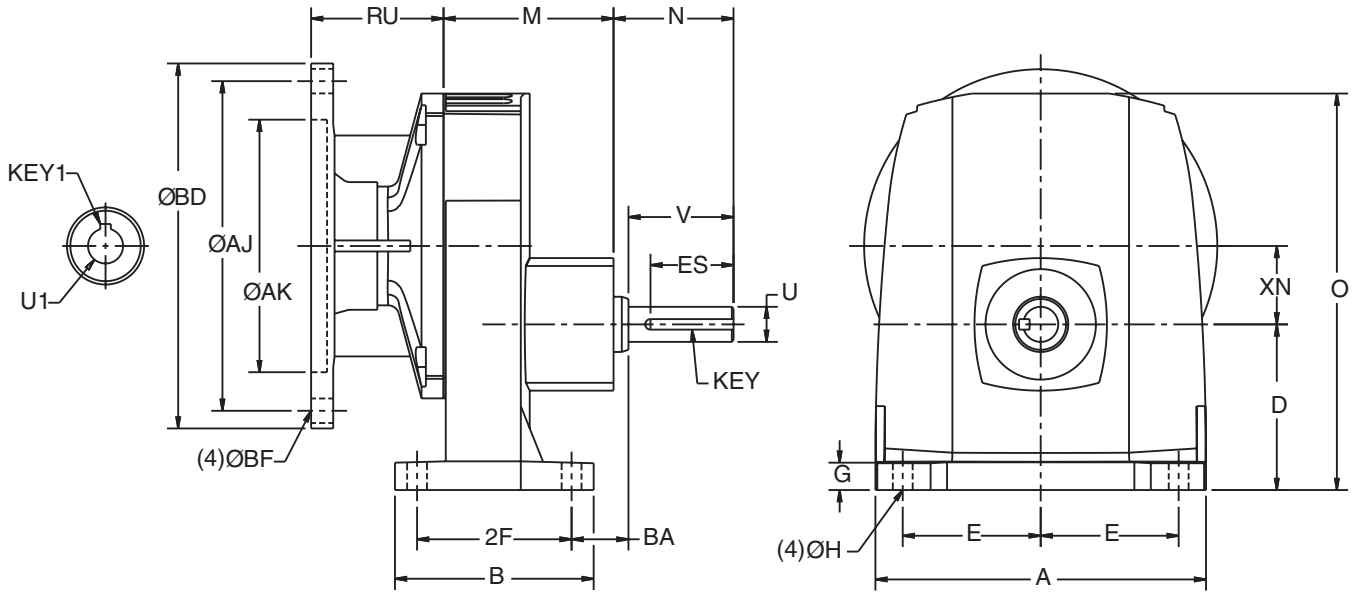
Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

Accessories

The following accessories can be ordered along with reducer and will be supplied loose for mounting by others during gearing installation.

Description	Gear Frames	Part #
NPT Adapter (1/4" NPFT)	31 to 35	0436216
NPT Adapter (3/4" NPFT)	36 to 38	0436218
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938
Scoop Guard Kit (scoop mount reducers)	32 to 35	0965634
	36/37 to 250T	0965635
	36/37 280T to 320T	0965637
	38 to 280T	0965636
	38 w/ 320T	0965637
	36 to 38 Comb.	0965634

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
30	5.90	3.54	2.95	2.46	0.49	0.35	3.03	2.14	7.07	0.625	1.88	1.01	2.76	1.48	1.40	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [4]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

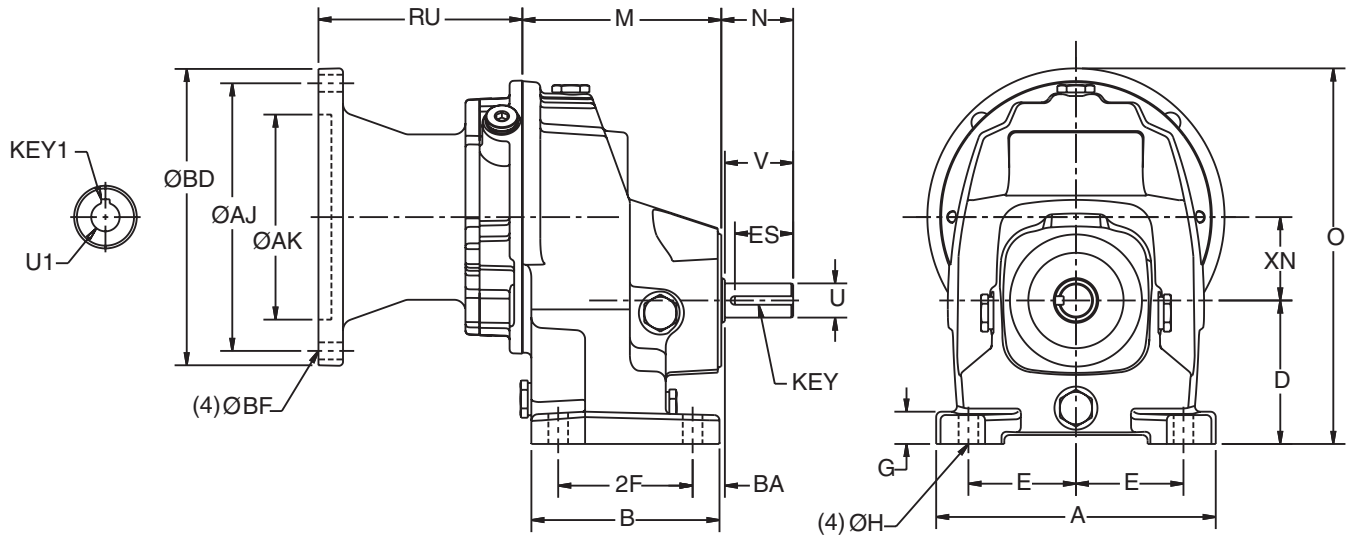
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Not available in ratios 5.6 through 8:1.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
31	6.14	4.13	3.15	2.36	0.71	0.43	4.37	1.58	8.24	0.75	1.50	0.71	2.95	1.28	1.83	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

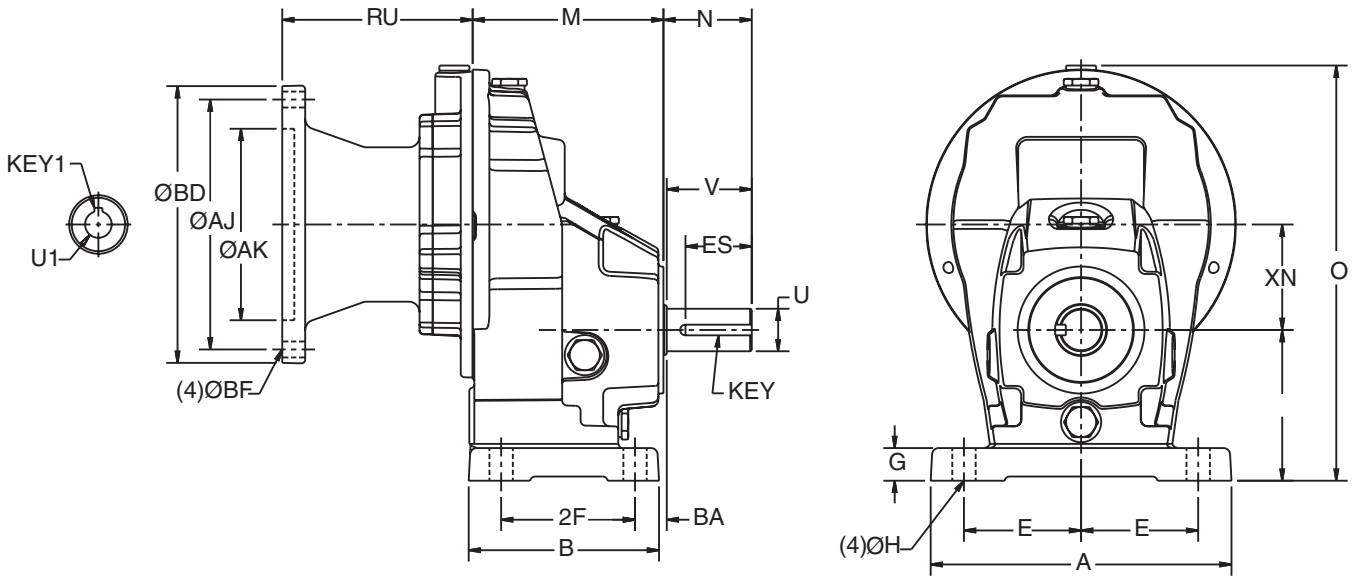
[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	7.08	4.48	3.54	2.76	0.77	0.55	4.49	2.08	9.76	1.00	2.00	0.75	3.15	1.56	2.48	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC[4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

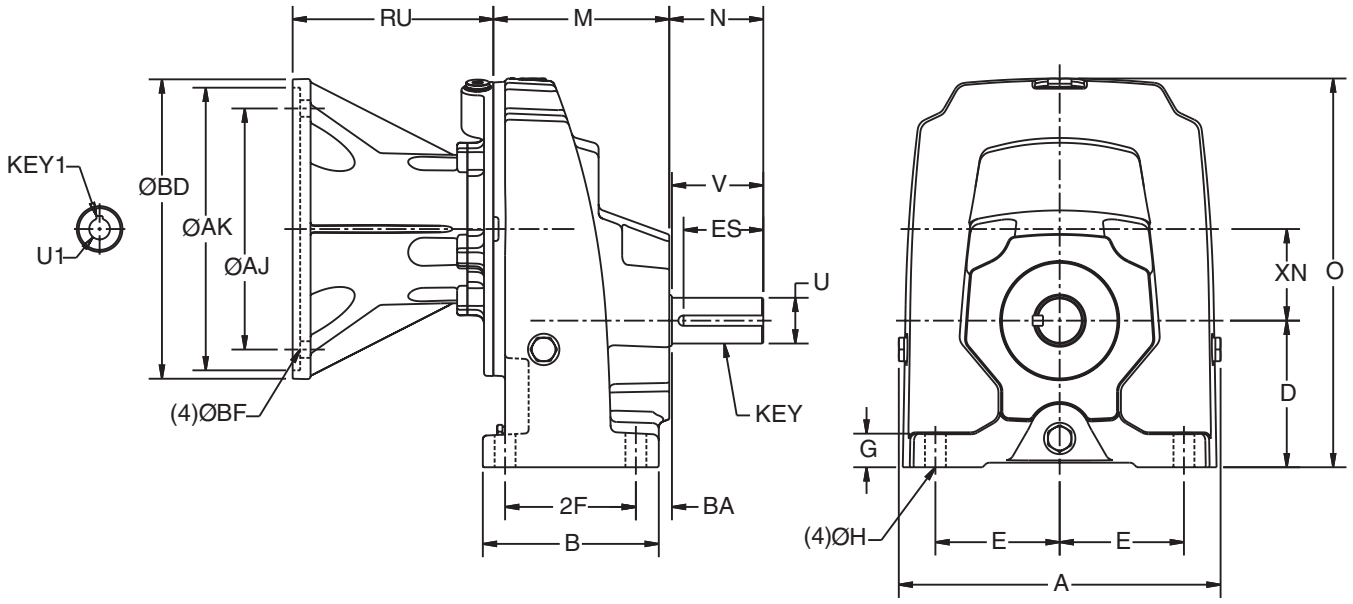
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
33	9.69	5.30	4.41	3.74	1.00	0.63	5.30	2.83	11.69	1.375	2.75	1.09	3.94	2.40	2.76	5/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.25	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

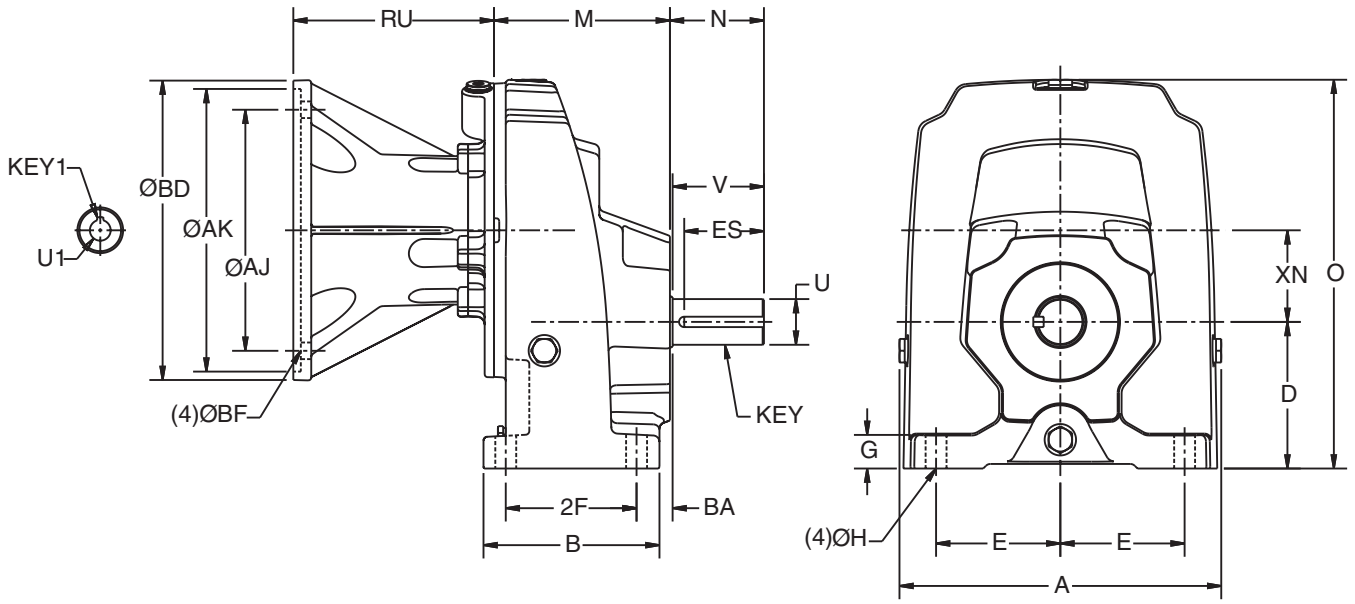
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.02	6.59	5.20	4.25	1.34	0.71	6.26	3.06	13.90	1.50	3.00	1.10	4.92	2.56	3.43	3/8 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
182/184TC	7.25	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.25	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

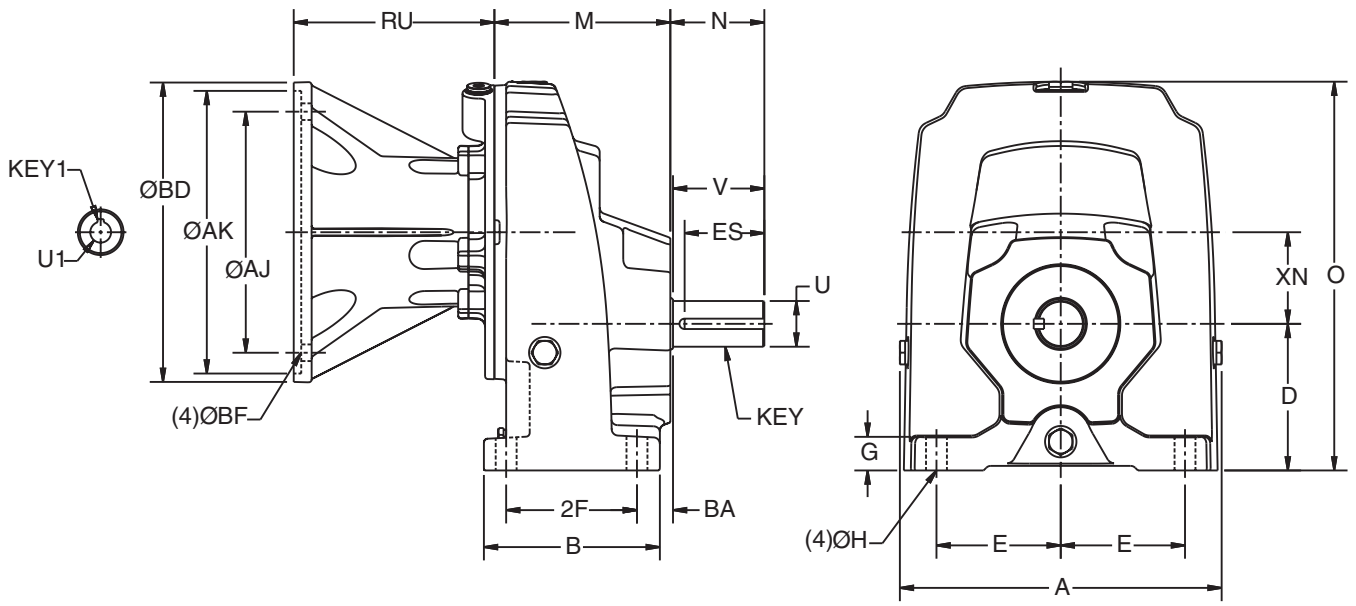
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
35	13.65	7.76	6.30	5.12	1.61	0.79	6.83	3.56	17.37	1.75	3.50	1.18	6.30	3.06	4.33	3/8 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
213/215TC	7.25	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC[4]	11.00	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

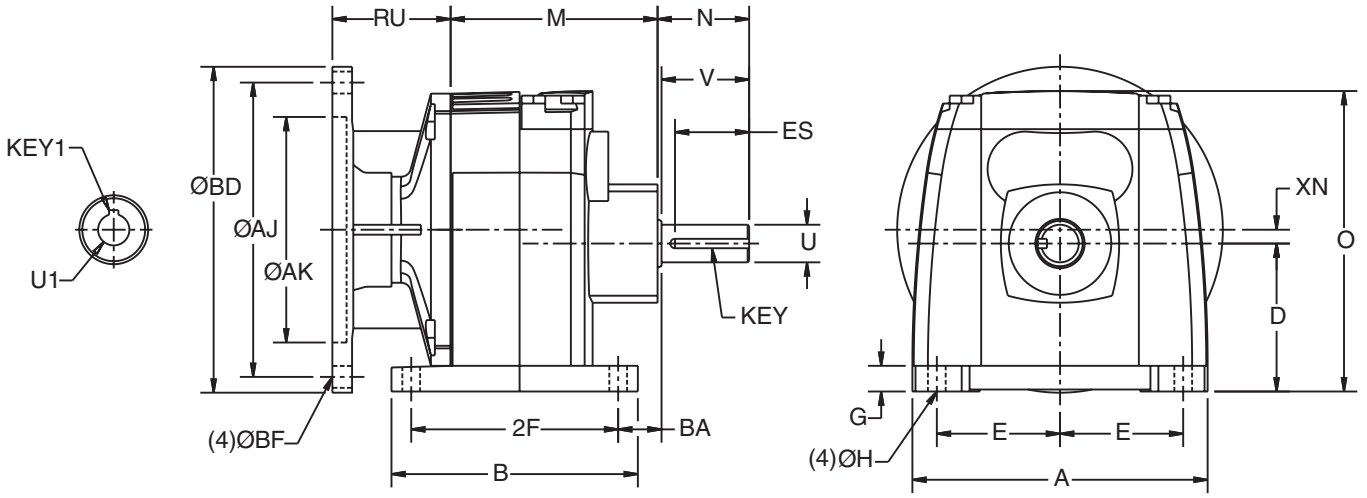
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
3012	5.90	4.92	2.95	2.46	0.51	0.35	4.13	1.83	6.00	0.75	1.75	0.87	4.13	1.48	0.28	3/16 Sq.
3013	5.90	5.71	2.95	2.46	0.51	0.35	4.92	1.83	6.00	0.75	1.75	0.87	4.92	1.48	0.28	3/16 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [4]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

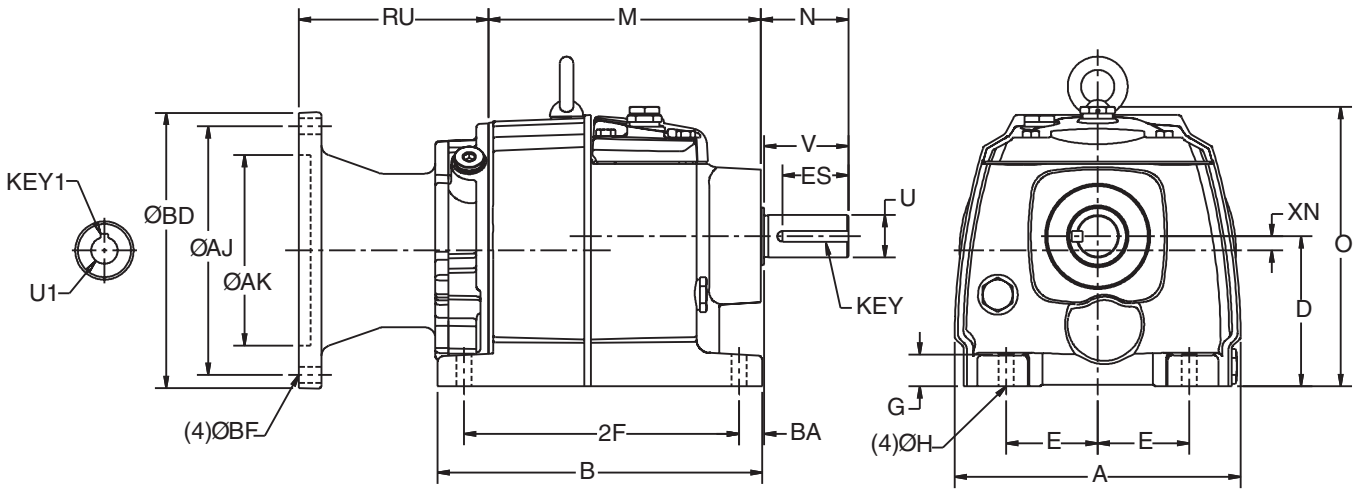
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Not available for ratio 31.5 to 45:1 in 3012. Use 3013 for 35.5 to 45:1.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
31	6.76	7.68	3.54	2.17	0.75	0.35	6.44	2.08	6.60	1.00	2.00	0.59	6.50	1.56	0.33	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.88	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.88	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

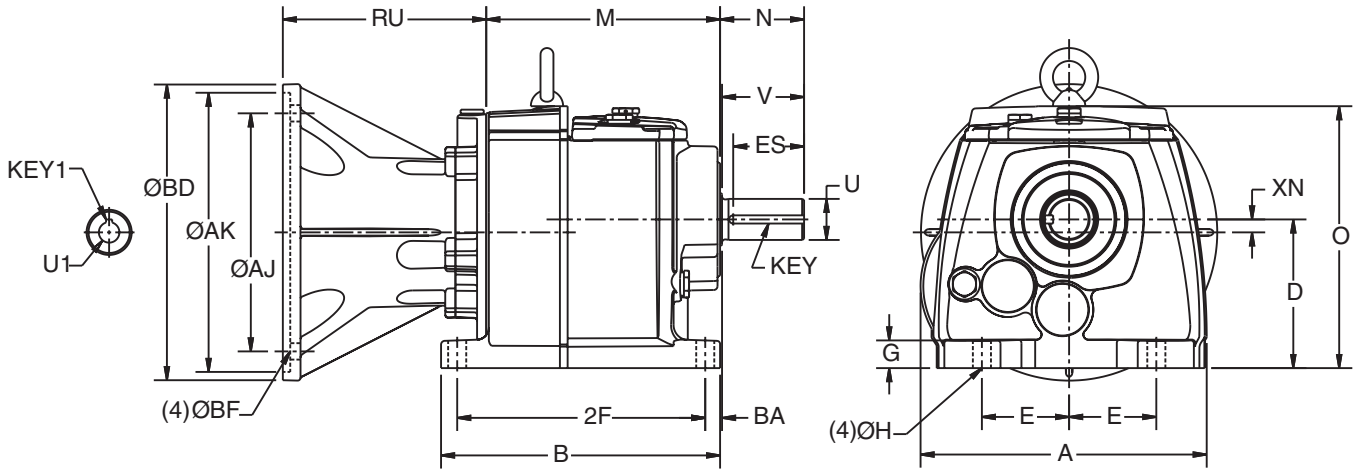
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	8.72	8.50	4.53	2.66	0.84	0.55	7.13	2.56	7.97	1.25	2.50	0.51	7.56	2.16	0.39	1/4 Sq.

Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.25	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

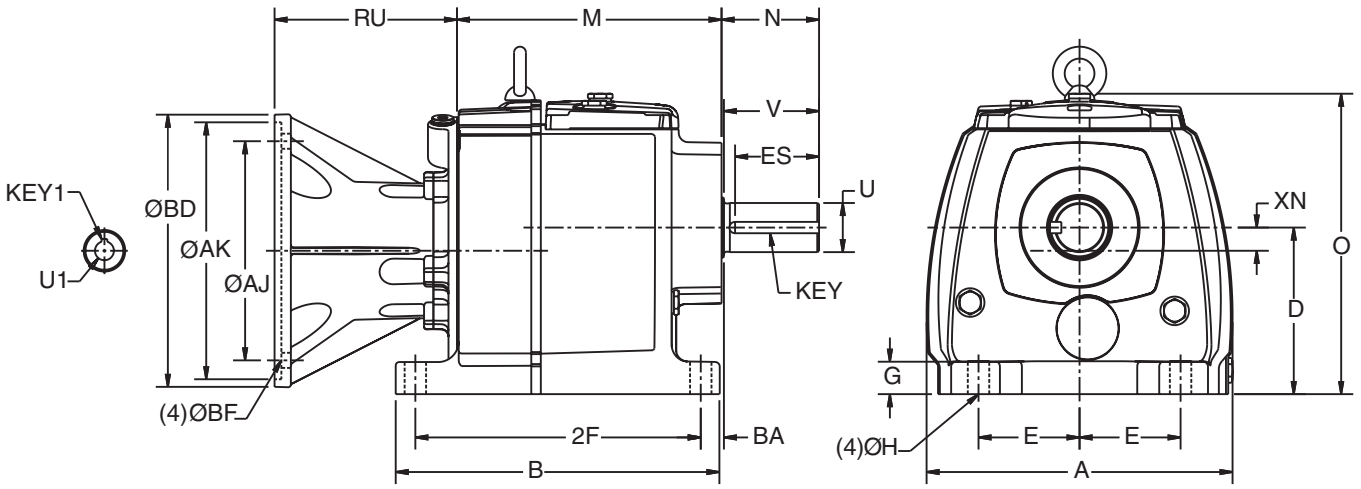
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.08	9.94	1.50	3.00	0.77	9.45	2.56	0.77	3/8 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.23	9.94	1.625	3.15	0.77	9.45	2.78	0.77	3/8 Sq.

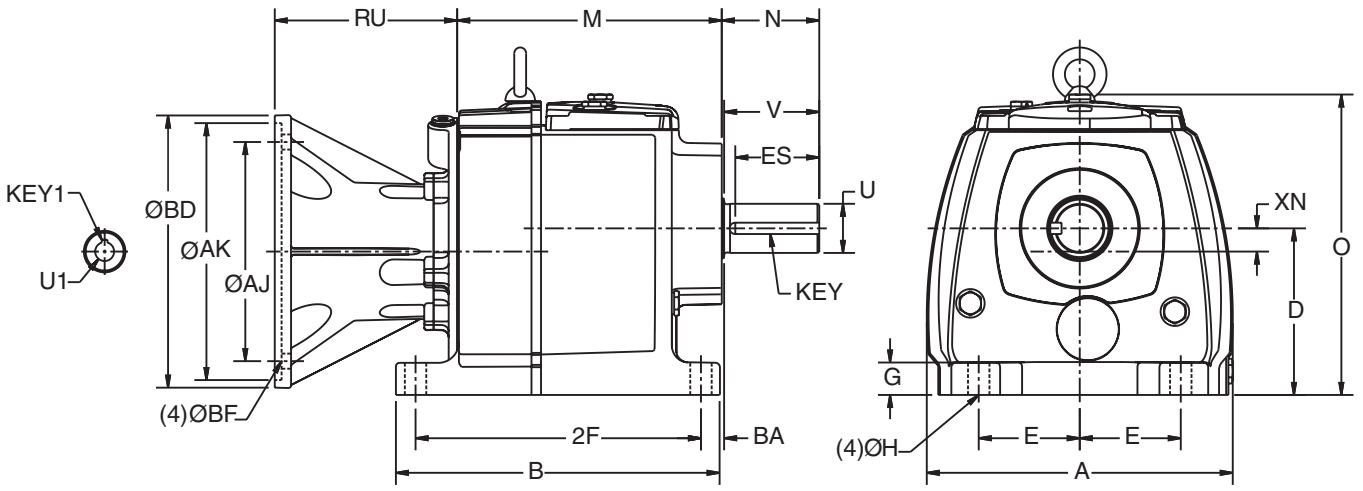
Motor Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.25	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC	7.25	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.97	10.87	7.09	4.53	1.37	0.71	9.80	3.58	11.89	2.125	3.50	0.98	9.25	3.06	1.02	1/2 Sq.
35	14.19	12.89	8.86	5.51	1.73	0.87	11.34	4.81	14.84	2.375	4.72	1.10	11.02	4.15	1.14	5/8 Sq.

Motor Frame	Gear Frame	AJ	RU	BF	AK	BD	U1	Key1
56C	All	5.875	4.14	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	All	5.875	4.14	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	All	7.250	5.87	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	All	7.250	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	All	7.250	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	34 [4], 35	9.000	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC	35 [4]	11.000	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

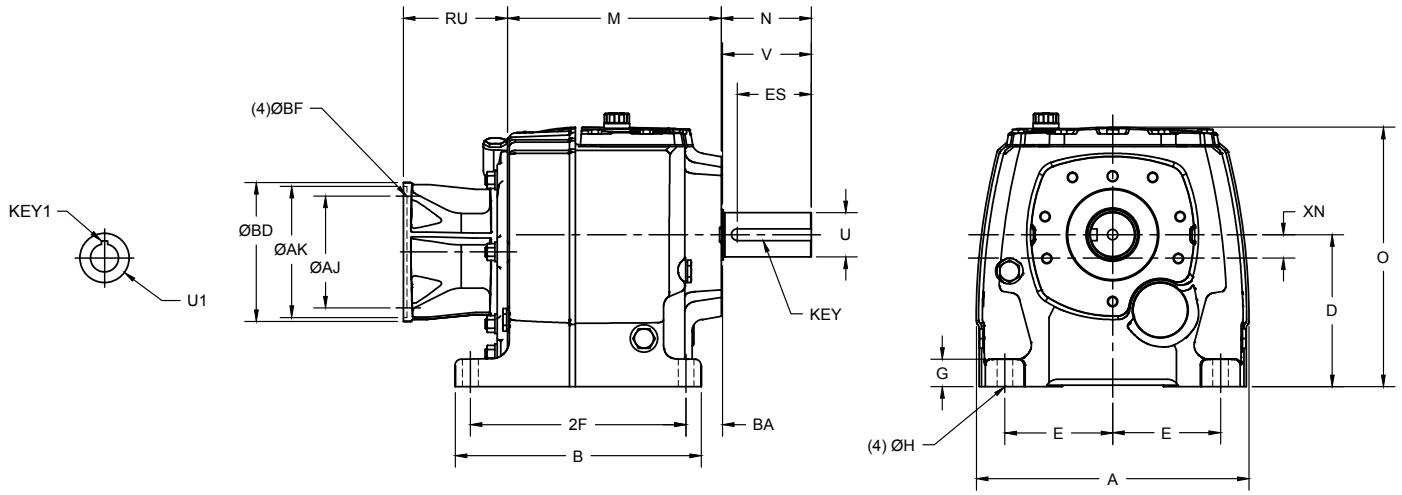
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Use foot mounted motor, utilizing separate support of motor feet for this motor frame.

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	M	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.102	13.86	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.362	16.54	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	19.88	1 SQ

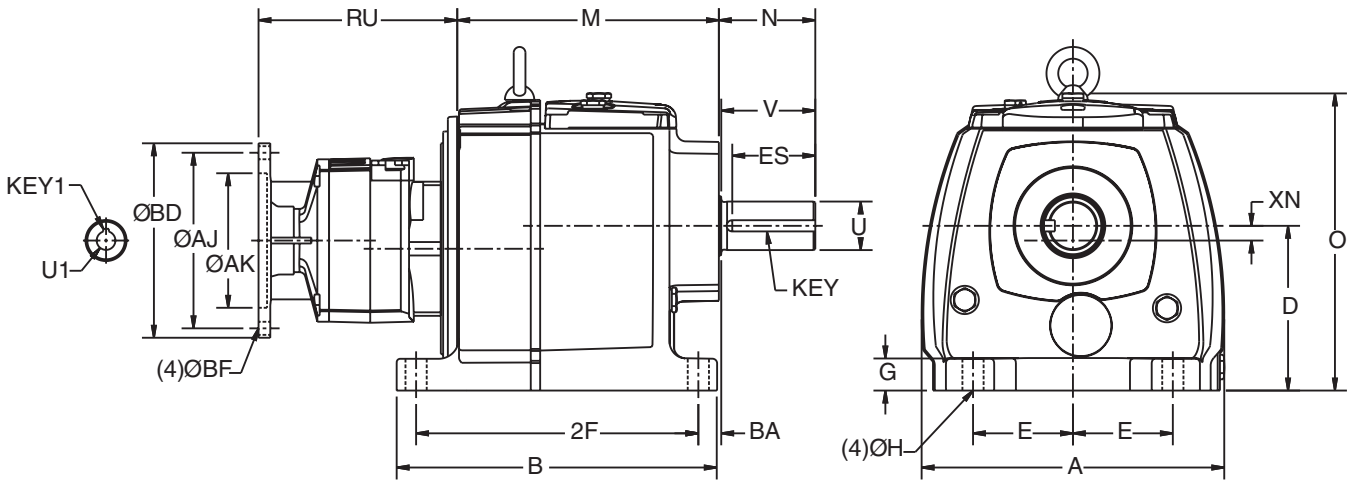
Motor Frame	Gear Frame	AJ	AK	BF	U1	RU	BDX	Key1
182TC-184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC-215TC	36,37	7.25	4.50	.50	1.375	5.26	9.00	5/16 Sq.
	38	7.25	4.50	.50	1.375	6.12	9.00	5/16 Sq.
254TC-256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC-286TC	All	9.00	10.50	.50	1.875	7.09	9.00	1/2 Sq.
324TC-326TC	All	11.00	12.50	.625	2.125	8.45	13.38	1/2 Sq.
364TC-365TC	37,38	11.00	12.50	.625	2.375	8.45	13.38	5/8 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
32	8.72	8.50	4.53	2.66	0.84	0.55	7.13	2.56	7.97	1.25	2.50	0.51	7.56	2.16	0.39	1/4 Sq.
33	10.13	10.72	5.51	3.35	1.07	0.71	8.76	3.23	9.94	1.625	3.15	0.77	9.45	2.78	0.49	3/4 Sq.

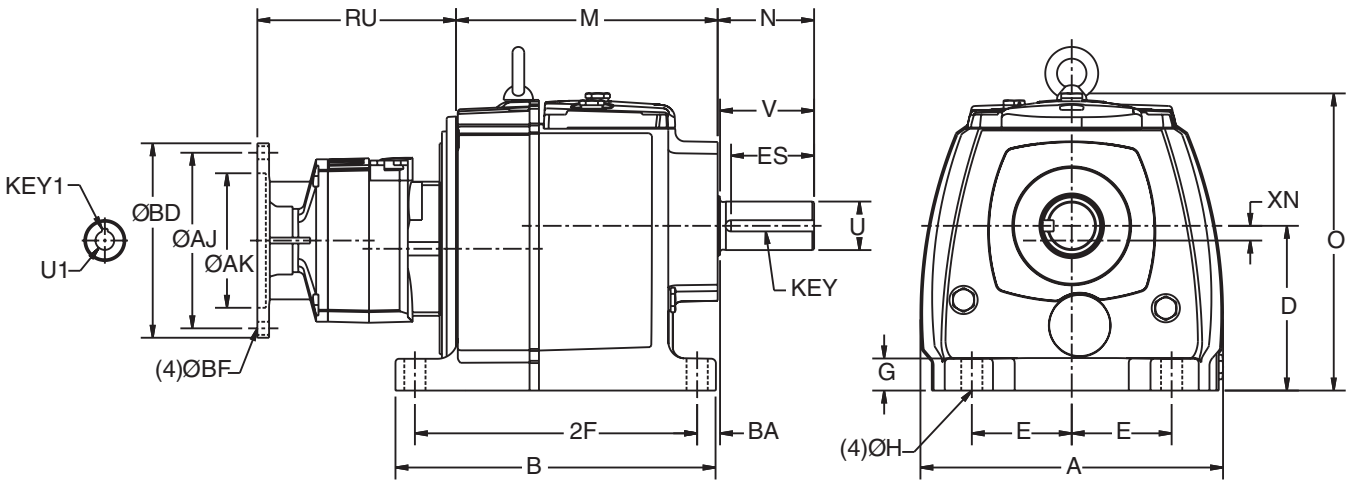
Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	7.79	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	7.79	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
34	11.97	10.87	7.09	4.53	1.37	0.71	9.80	3.58	11.89	2.125	3.50	0.98	9.25	3.12	1.35	1/2 Sq.

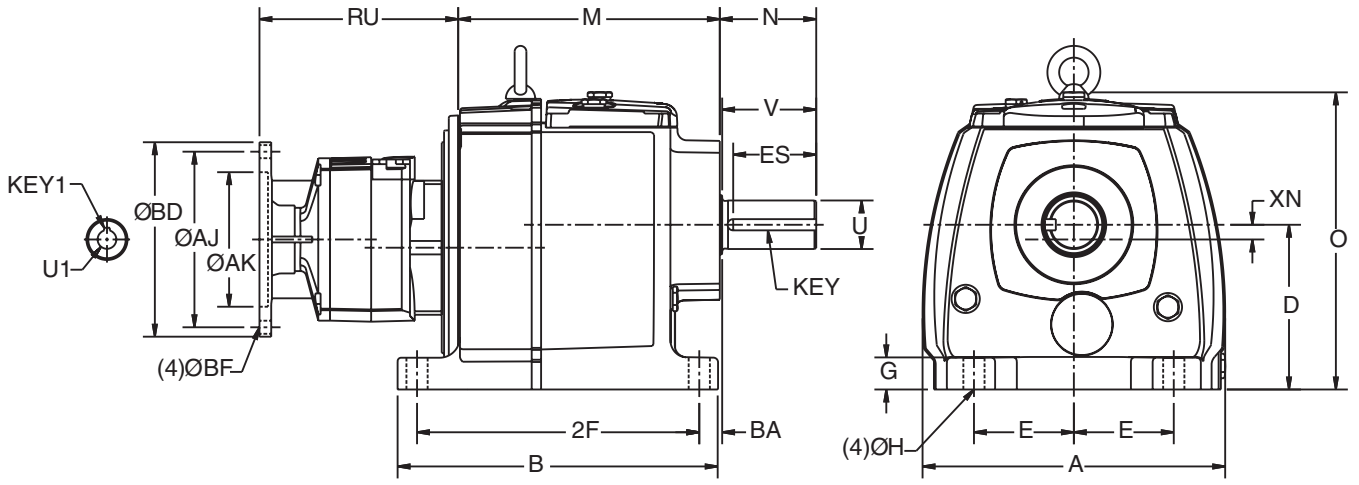
Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	11.46	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.46	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	M	N	O	U [3]	V	BA	2F	ES	XN	Key
35	14.19	12.89	8.86	5.51	1.73	0.87	11.34	4.81	14.84	2.375	4.72	1.10	11.02	4.19	1.47	5/8 Sq.

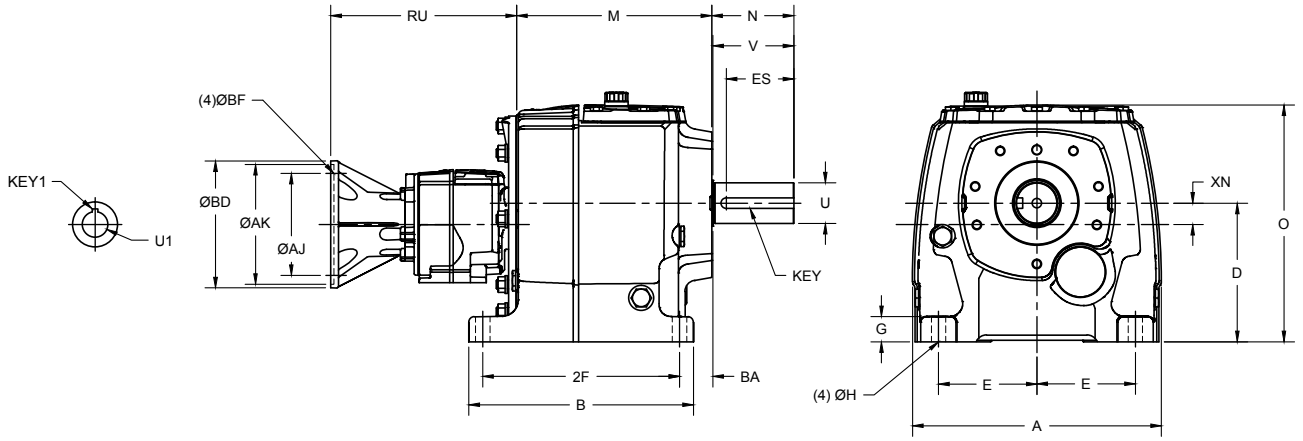
Motor Frame	RU	AJ	BF	AK	BD	U1	Key1
56C	11.11	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.11	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	12.83	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	N	O	U[3]	V	BA	2F	ES	XN	M	Key
36	17.68	15.95	9.85	6.99	1.77	1.02	5.847	17.72	2.875	5.75	2.36	13.98	4.784	1.492	13.86	3/4 Sq
37	20.39	17.91	12.40	8.27	2.17	1.02	7.127	20.40	3.625	7.00	2.56	15.35	5.893	2.752	16.54	7/8 Sq
38	23.94	21.65	13.98	10.04	2.35	1.02	9.99	22.60	4.375	9.99	1.97	18.90	9.02	2.559	28.90	1 SQ

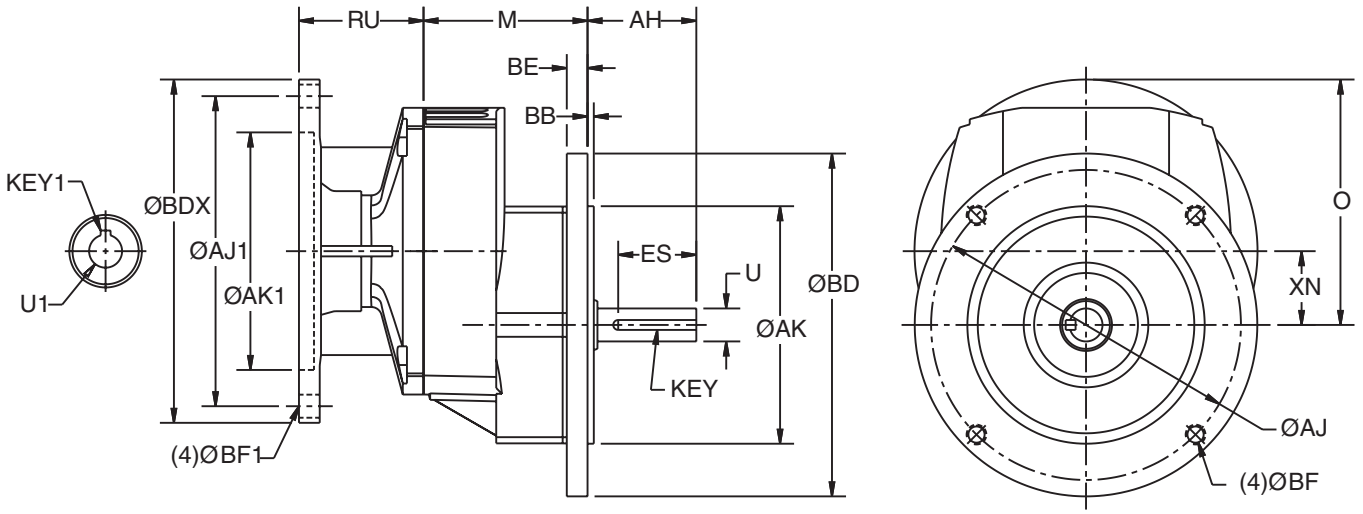
Motor Frame	Gear Frame	AJ	AK	BF1	U1	RU			BD	Key1
						36	37	38		
56C	All	5.875	4.50	.38	0.625	11.47	11.47	13.52	3/16 Sq.	3/16 Sq.
143TC-145TC	All	5.875	4.50	.38	.875	11.47	11.47	13.52	3/16 Sq.	3/16 Sq.
182TC-184TC	All	7.25	8.50	.50	1.125	13.19	13.19	15.24	1/4 Sq.	1/4 Sq.
213TC-215TC	37,38	7.25	4.50	.50	1.375	-	13.19	15.24	5/16 Sq.	5/16 Sq.
254TC-256TC	38	7.25	8.50	.50	1.625	-	-	16.44	3/8 Sq.	3/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Flange Mounted - Single Reduction



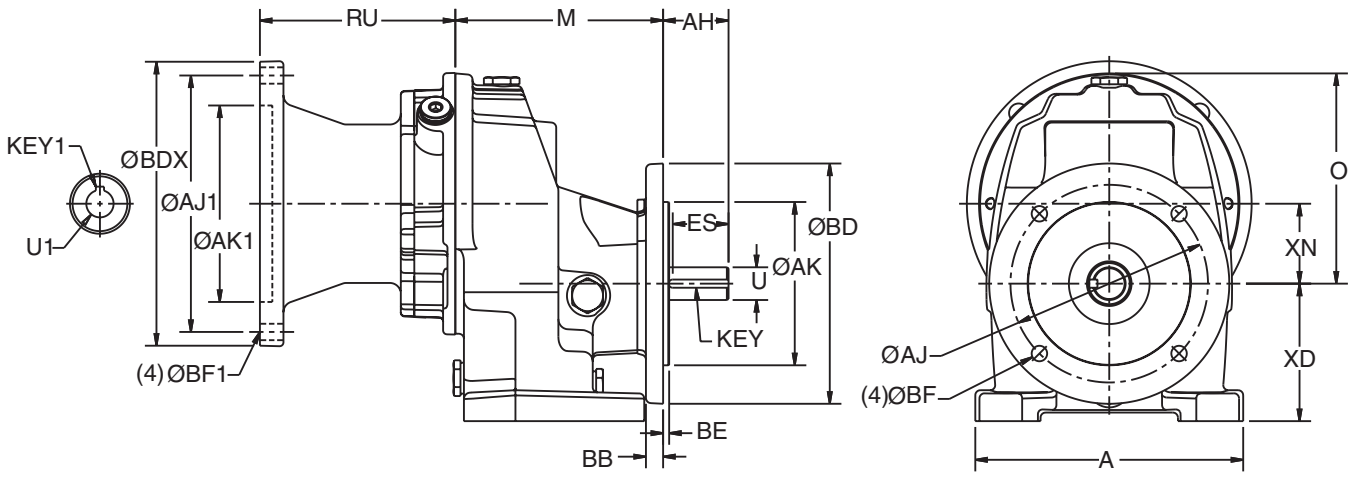
Gear Frame	M	O	U [3]	AH	ES	XN	Key
30	3.50	4.65	0.625	2.06	1.48	1.40	3/16

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16
BS	3.74	4.53	0.12	5.51	0.31	0.35
BD1	3.15	3.94	0.12	4.72	0.39	0.28
BD2	4.33	5.12	0.08	6.30	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [1]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Not available on ratios 5.6 through 8:1.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
31	6.14	4.76	4.82	0.75	1.50	1.28	3.15	1.83	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	4.33	5.12	0.14	6.29	0.39	0.35
BD2	3.74	4.53	0.14	5.50	0.39	0.35

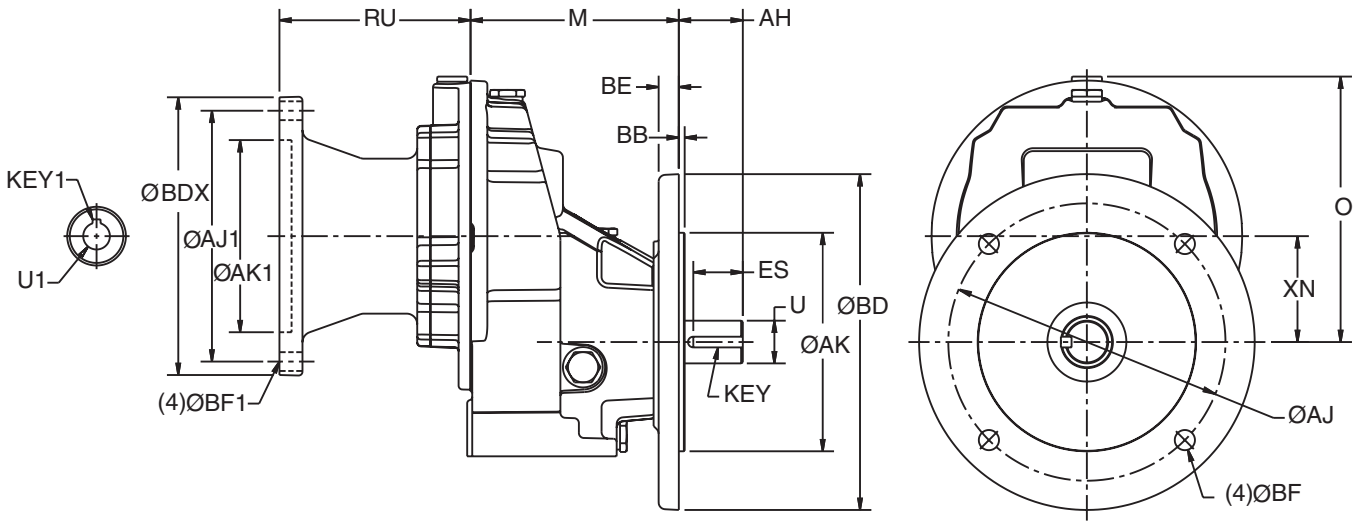
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	M	O	U [3]	AH	ES	XN	Key
32	4.88	6.22	1.00	1.50	1.16	2.48	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.5	0.14	7.87	0.47	0.47
BD2	4.33	5.12	0.14	6.29	0.39	0.35

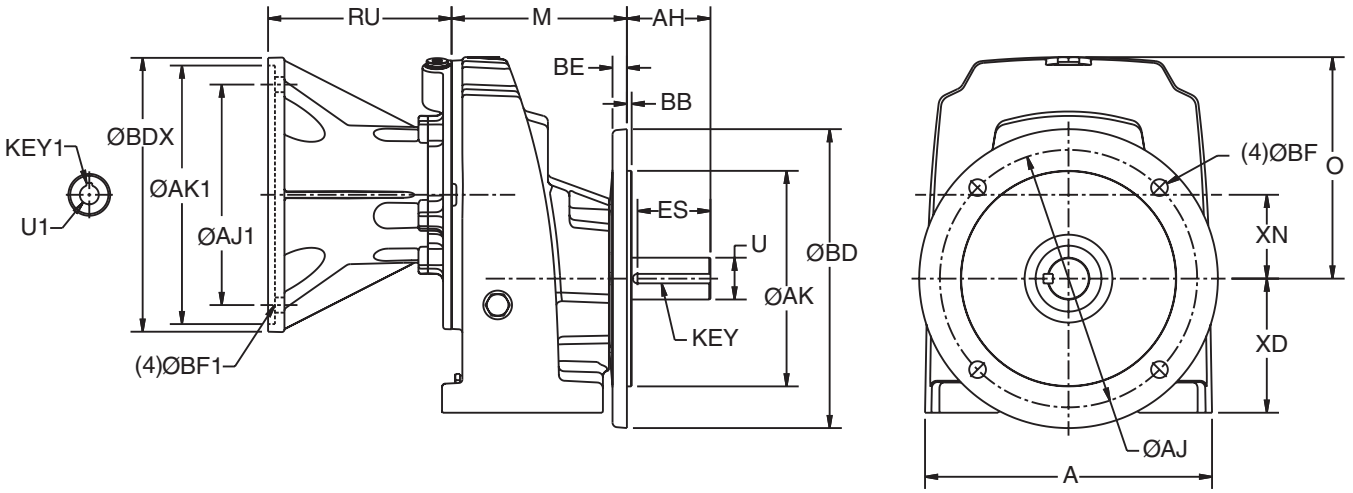
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
33	9.44	5.77	7.28	1.375	2.75	2.40	4.41	2.76	5/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55
BD2	5.12	6.50	0.16	7.86	0.47	0.43

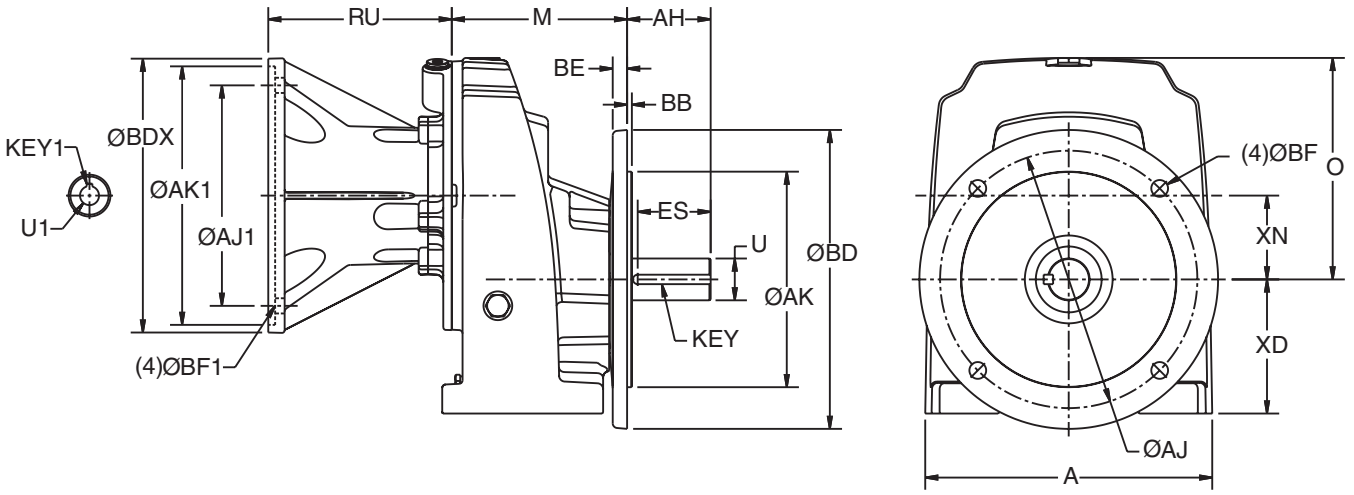
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.02	7.09	8.70	1.50	3.00	2.56	5.20	3.43	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

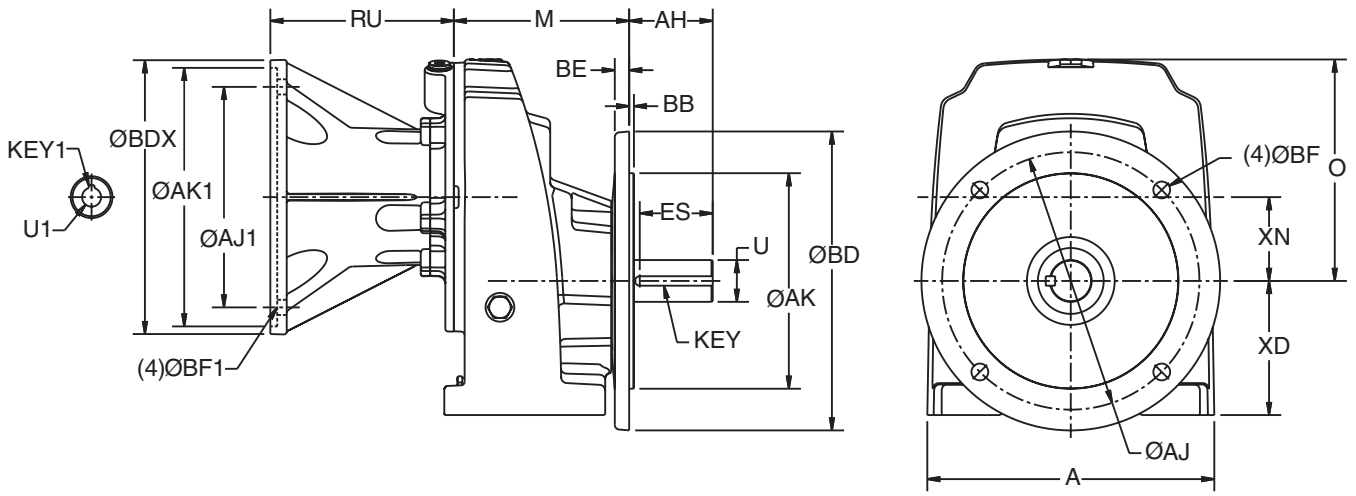
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
182/184TC	7.25	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.25	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC[4]	9.00	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Single Reduction



Gear Frame	A	M	O	U[3]	AH	ES	XD	XN	Key
35	13.65	7.89	11.07	1.75	3.50	3.06	6.30	4.33	3/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

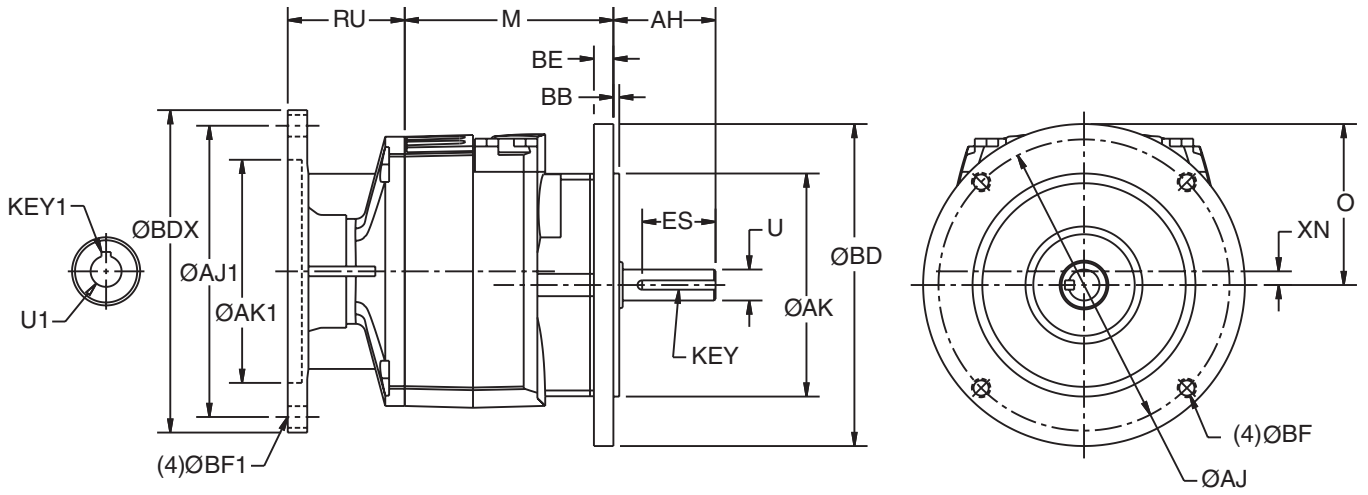
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
213/215TC	7.25	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.25	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	9.00	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC [4]	11.00	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	M	O	U [3]	AH	ES	XN	Key
3012	4.21	3.25	0.625	2.06	1.48	0.28	3/16 Sq.
3013	5.00	3.25	0.625	2.06	1.48	0.28	3/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16
BS	3.74	4.53	0.12	5.51	0.31	0.35
BD1	3.15	3.94	0.10	4.72	0.28	0.28
BD2	4.33	5.12	0.12	6.30	0.31	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35

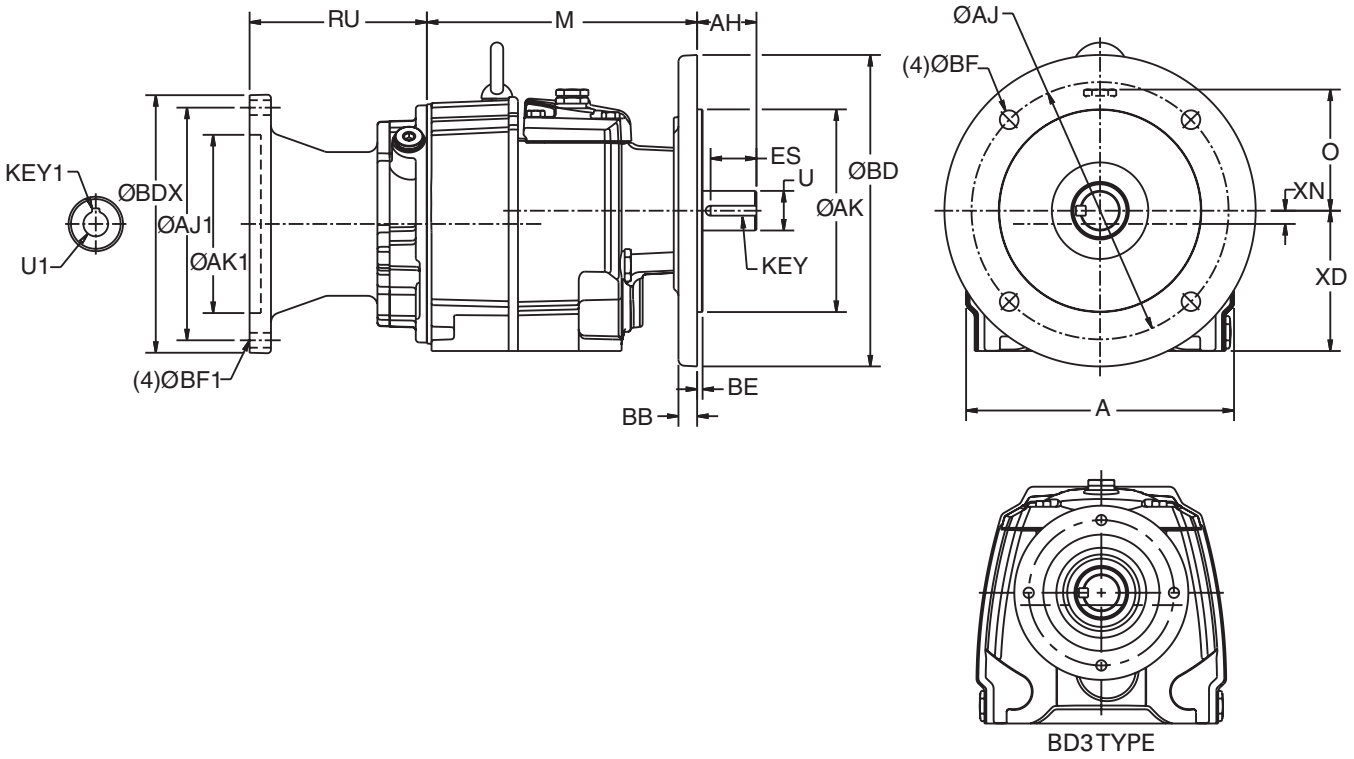
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	3.33	0.44	4.50	6.50	0.625	3/16 Sq.
140TC [1]	5.875	3.33	0.44	4.50	6.50	0.875	3/16 Sq.

[1] Not available on ratios 31.5 to 45:1 in 3012. Use 3013 for 35.5 to 45:1.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U[3]	AH	ES	XD	XN	Key
31	6.77	6.83	3.06	1.00	1.50	1.16	3.54	0.33	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	0.14	7.87	0.47	0.47
BD1	4.33	5.12	0.14	6.29	0.39	0.35
BD2	3.74	4.53	0.14	5.50	0.39	0.35
BD3	3.15	3.94	0.10	4.72	0.39	0.28

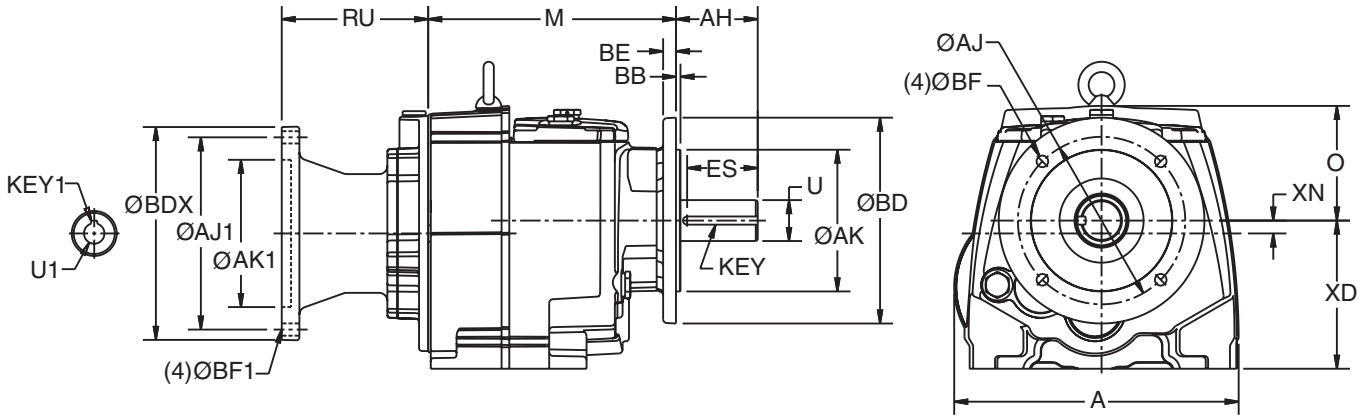
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.88	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.88	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC [4]	7.25	6.20	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
32	8.70	7.58	3.50	1.25	2.50	2.16	4.53	0.39	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47
BD2	4.33	5.12	0.14	6.29	0.39	0.35

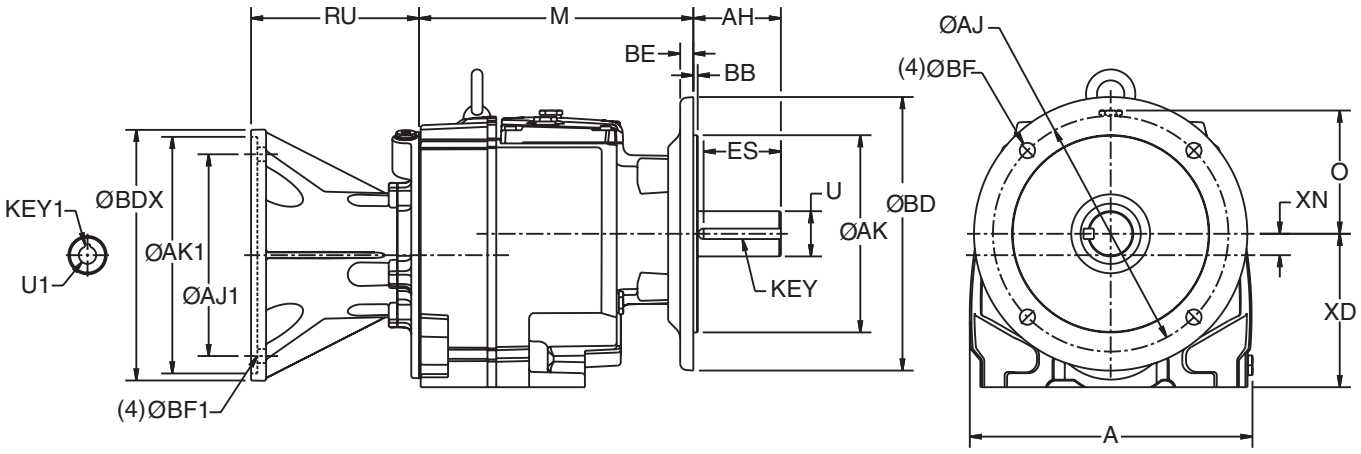
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.48	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.48	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.20	0.57	8.50	9.00	1.125	1/4 Sq.
210TC [4]	7.250	6.20	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
3362,3363	10.16	9.86	4.43	1.50	3.00	2.56	5.51	0.77	3/4 Sq.
3372,3373	10.16	9.86	4.43	1.625	3.15	2.78	5.51	0.77	3/4 Sq.

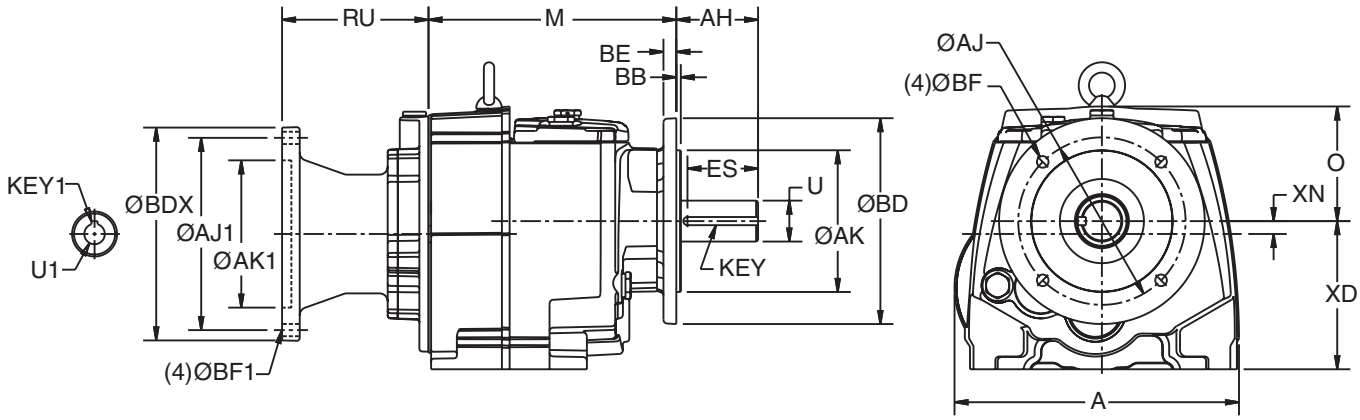
Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.47	0.55
BD1	7.09	8.46	0.16	9.83	0.47	0.55
BD2	5.12	6.50	0.14	7.86	0.47	0.47

Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.32	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	5.875	4.32	0.44	4.50	6.50	0.875	3/16 Sq.
180TC	7.250	6.04	0.57	8.50	9.00	1.125	1/4 Sq.
210TC	7.250	6.04	0.57	8.50	9.00	1.375	5/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.97	10.63	4.80	2.125	3.50	3.06	7.09	1.02	1/2 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

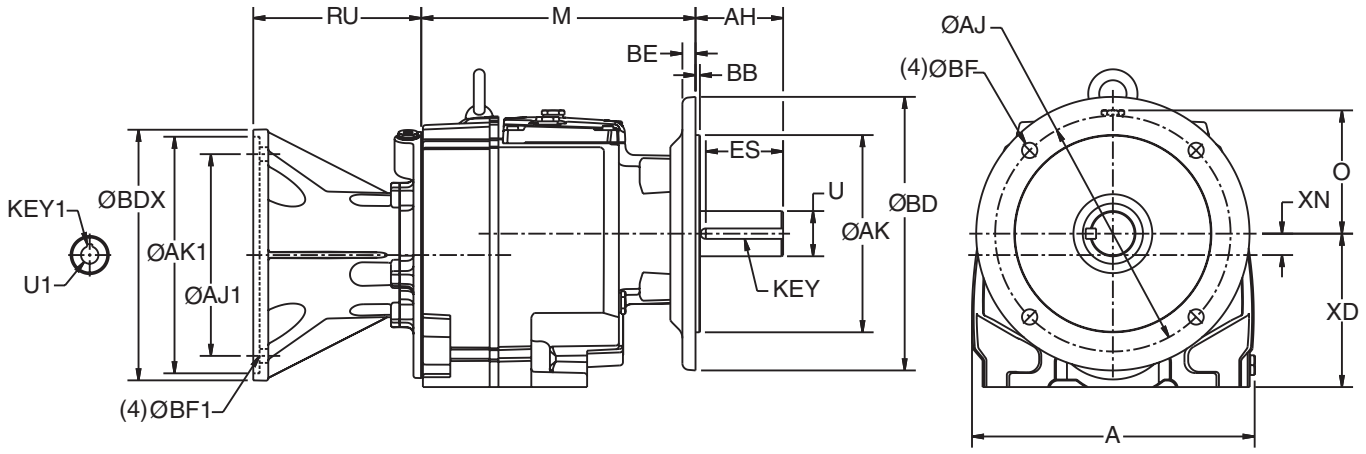
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.50	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	5.875	4.50	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	7.250	6.22	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.250	6.22	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.250	7.43	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC [4]	9.000	8.40	0.57	10.50	11.25	1.875	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
35	14.19	12.40	5.98	2.375	4.72	4.19	8.86	1.14	5/8 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

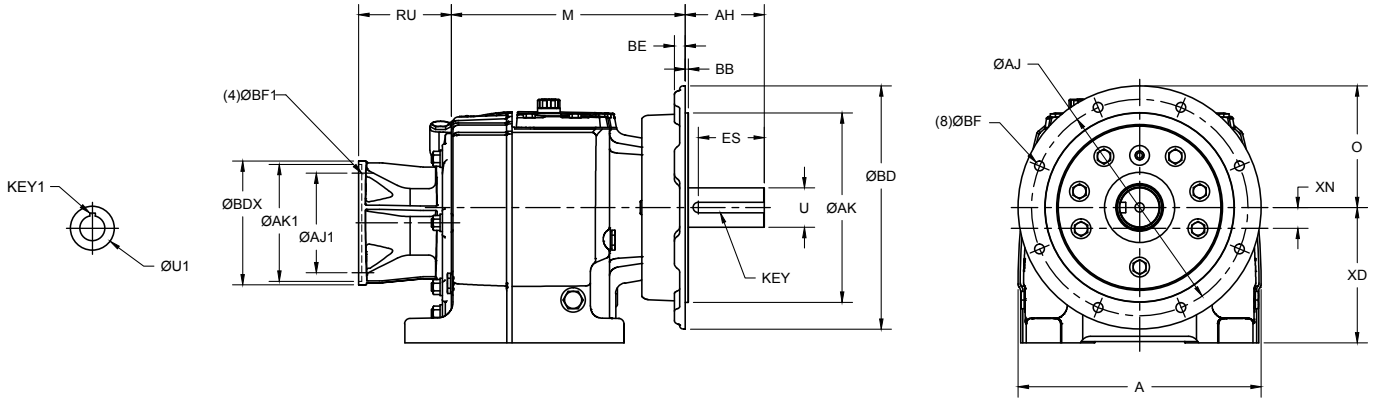
Motor Frame	AJ1	RU	BF1	AK1	BDX	U1	Key1
56C	5.875	4.14	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	5.875	4.14	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	7.250	5.87	0.57	8.50	9.00	1.125	1/4 Sq.
213/215TC	7.250	5.87	0.57	8.50	9.00	1.375	5/16 Sq.
254/256TC	7.250	7.09	0.57	8.50	9.00	1.625	3/8 Sq.
284/286TC	9.000	8.06	0.57	10.50	11.25	1.875	1/2 Sq.
324/326TC [4]	11.000	8.79	0.69	12.50	13.38	2.125	1/2 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[4] Permitted in vertical mounting only.

Flange Mounted - Double/Triple Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD[1]	XN	Key
36	17.68	17.00	7.88	2.875	5.75	4.784	9.85	1.102	3/4 Sq
37	20.39	19.69	8.00	3.625	7.00	5.893	12.40	2.362	7/8 Sq
38	23.94	23.03	8.63	4.375	6.84	9.02	13.98	2.559	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.65	23.62	.197	25.98	0.79	0.87
	BD1	17.72	19.69	.197	21.65	0.79	0.69

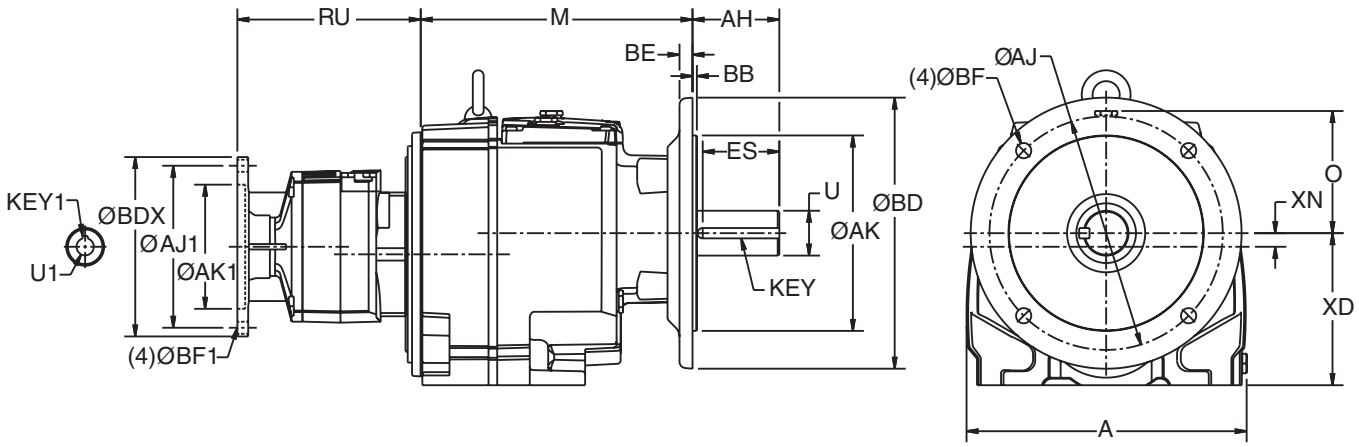
Motor Frame	Gear Frame	AJ	AK	BF	U1	RU	BDX	Key1
145TC	36	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC-184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC	36,37	7.25	4.50	.50	1.375	5.26	9.00	5/16 Sq.
215TC	38	7.25	4.50	.50	1.375	6.12	9.00	5/16 Sq.
254TC-256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC-286TC	All	9.00	10.50	.50	1.875	7.09	9.00	1/2 Sq.
324TC-326TC	All	11.00	12.50	.625	2.125	8.45	13.38	1/2 Sq.
364TC-365TC	37,38	11.00	12.50	.625	2.375	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
3254,3255	8.70	7.58	3.50	1.25	2.50	2.16	4.53	0.12	1/4 Sq.
3374,3375	10.16	9.86	4.43	1.625	3.15	2.78	5.51	0.49	3/8 Sq.

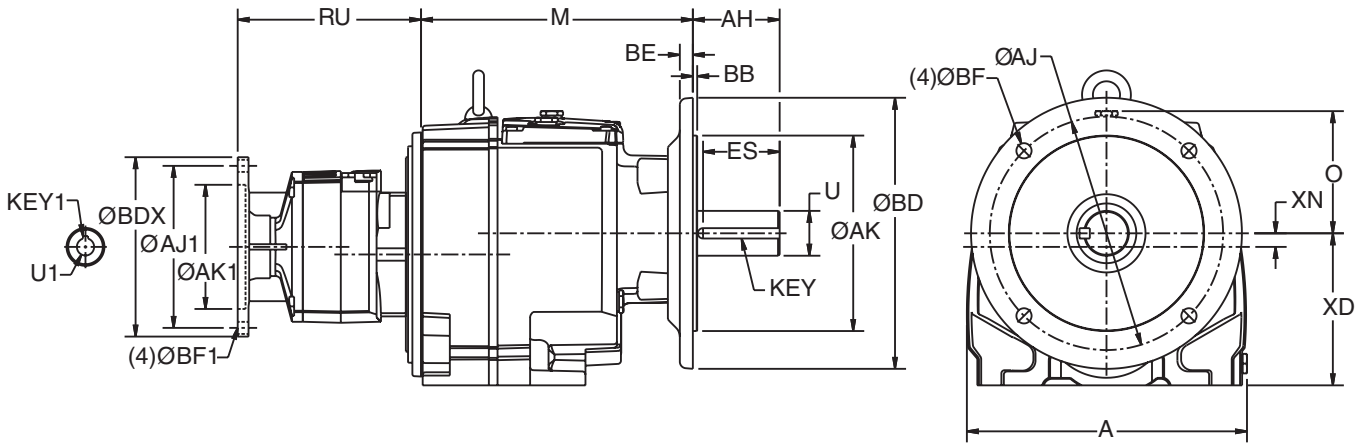
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	7.79	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
140TC	7.79	5.875	0.44	4.50	6.50	0.875	3/16 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
34	11.97	10.63	4.80	2.125	3.50	3.06	7.09	1.35	1/2 Sq.

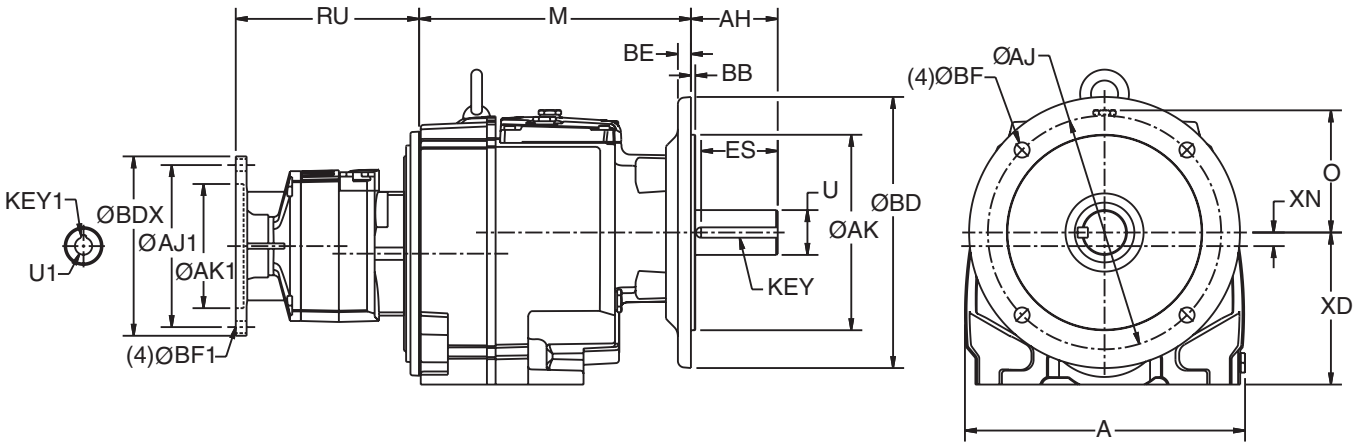
Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	11.46	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.46	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	13.18	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD	XN	Key
35	14.19	12.40	5.98	2.375	4.72	4.19	8.86	1.47	5/8 Sq.

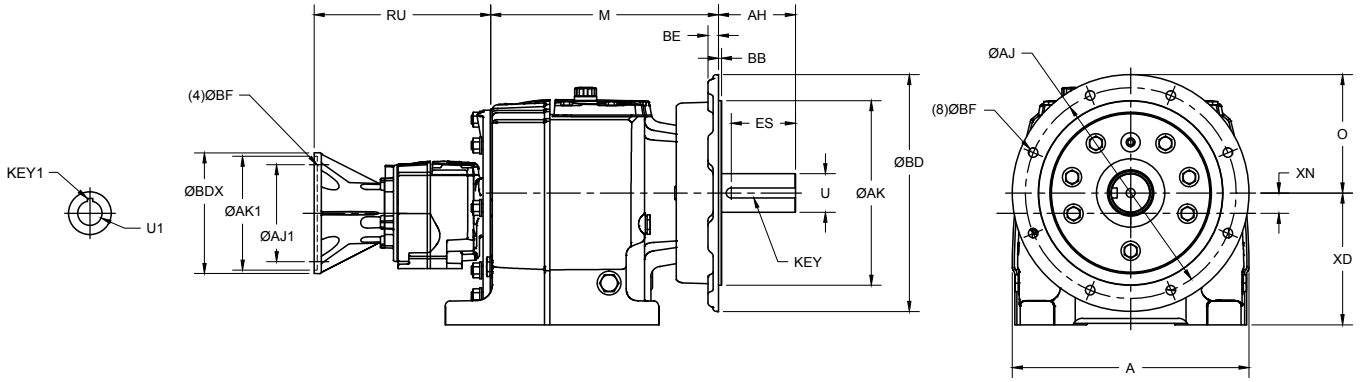
Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame	RU	AJ1	BF1	AK1	BDX	U1	Key1
56C	11.11	5.875	0.44	4.50	6.50	0.625	3/16 Sq.
143/145TC	11.11	5.875	0.44	4.50	6.50	0.875	3/16 Sq.
182/184TC	12.83	7.25	0.57	8.50	9.00	1.125	1/4 Sq.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flanged Mounted - Combined Reduction



Gear Frame	A	M	O	U [3]	AH	ES	XD[1]	XN	Key
36	17.68	17.00	7.88	2.875	5.75	4.784	9.85	1.492	3/4 Sq
37	20.39	19.69	8.00	3.625	7.00	5.893	12.40	2.752	7/8 Sq
38	23.94	32.05	8.63	4.375	6.84	9.02	13.98	2.559	1 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.65	23.62	.197	25.98	0.79	0.87
	BD1	17.72	19.69	.197	21.65	0.79	0.69

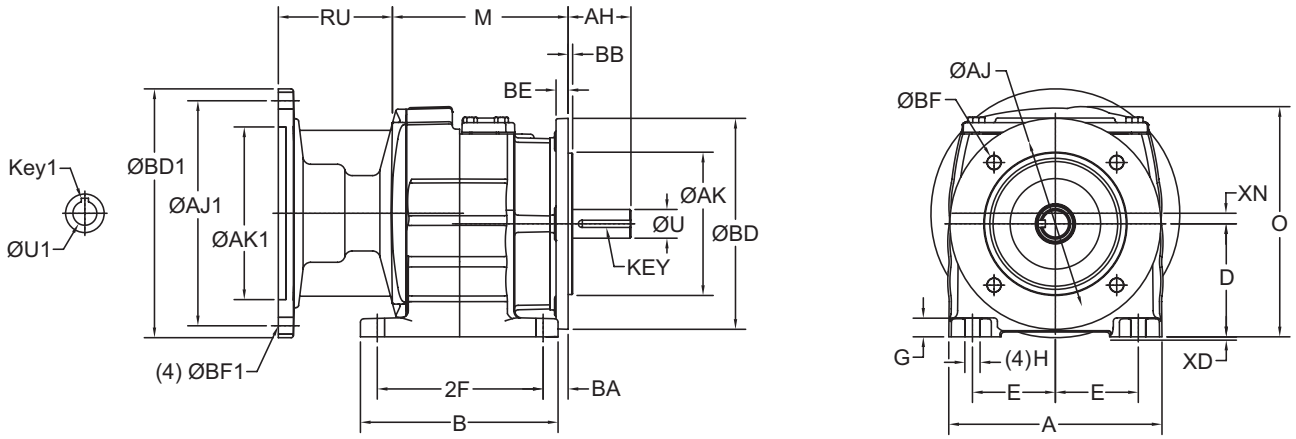
Motor Frame	Gear Frame	AJ	AK	BF1	U1	RU			BDX	Key1
						36	37	38		
56C	All	5.875	4.50	.38	0.625	11.47	11.47	13.52	6.50	3/16 Sq.
143TC-145TC	All	5.875	4.50	.38	.875	11.47	11.47	13.52	6.50	3/16 Sq.
182TC-184TC	All	7.25	8.50	.50	1.125	13.19	13.19	15.24	9.00	1/4 Sq.
213TC-215TC	37,38	7.25	4.50	.50	1.375	-	13.19	15.24	9.00	5/16 Sq.
254TC-256TC	38	7.25	8.50	.50	1.625	-	-	16.44	9.00	3/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Foot Mount with Flange - Double/Triple Reduction



Gear Frame	A[2]	B[2]	D[1]	E	2F	G	H	O	U[3]	ES	M	XN	Key
3012A[4]	5.62	5.16	2.95	2.165	4.33	.47	.35	6.00	0.750	1.25	4.21	.276	3/16 Sq
31	6.76	7.68	3.54	2.170	6.50	.75	.35	6.60	1.000	1.16	6.83	-.330	1/4 Sq

Gear Frame	Flange Type	AH	AJ	AK	BA	BB	BD	BE	BF
3012A[4]	SBD1	2.06	3.94	3.15	.65	.12	4.72	.28	.28
	SBS	2.06	4.53	3.74	.65	.12	5.51	.31	.35
31	SBD1	1.50	5.12	4.33	.944	.14	6.29	.39	.35
	SBD2	1.50	4.53	3.74	.944	.14	5.51	.39	.35
	SBD3	1.50	3.94	3.15	.944	.10	4.72	.39	.28

Gear Frame	Motor Frame	AJ1	AK1	BDX	BF1	RU	U1	Key1	XD
3012A[4]	56C	5.875	4.50	6.50	.44	3.33	0.625	3/15 Sq	0.024
	143,145TC	5.875	4.50	6.50	.44	3.33	0.875	3/15 Sq	0.024
31	56C	5.875	4.50	6.50	.44	4.48	0.625	3/15 Sq	0.040
	143,145TC	5.875	4.50	6.50	.44	4.48	0.875	3/15 Sq	0.040
31	182, 184TC	7.25	8.50	9.00	.57	6.20	1.125	1/4 Sq	1.29

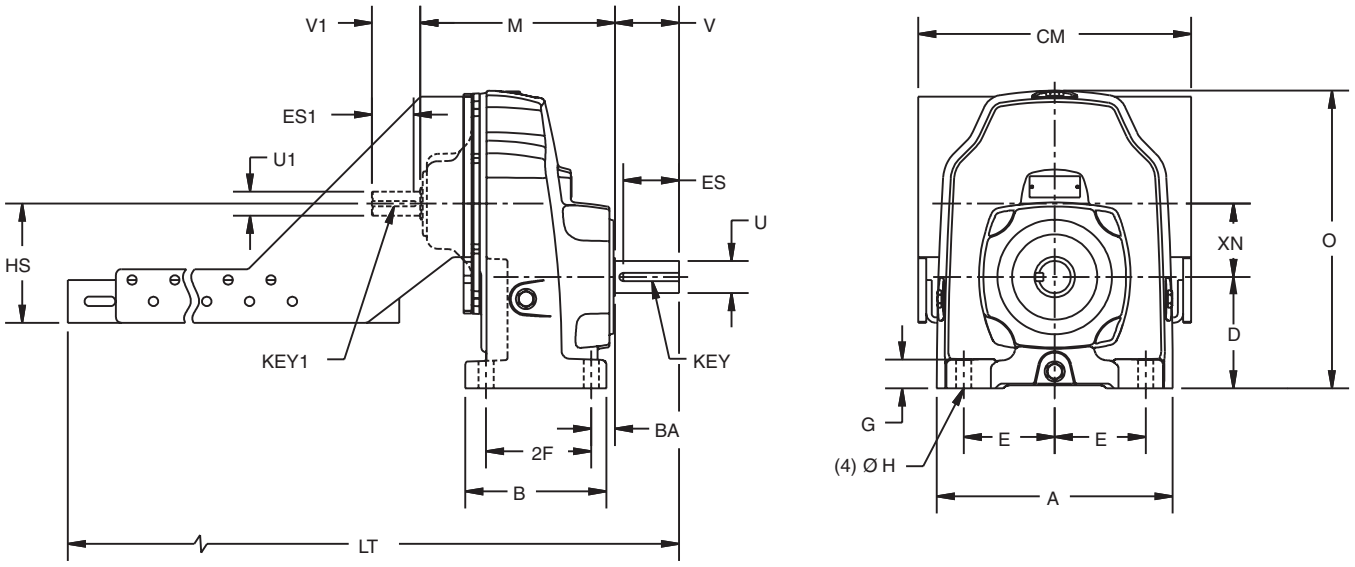
[1] Dimension "D" will never be exceeded, but may vary from value shown. When exact dimension is required, shims up to .03" may be required.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance +.0000", -.0005" up to 1.5" diameter.

[4] Not available in ratios from 31.5 through 45:1.

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
34	11.02	6.59	5.20	4.25	1.34	0.71	9.10	13.90	1.50	1.13	3.00	2.25	1.10	4.92	2.56	1.94	3.43	3/8 Sq.	1/4 Sq.

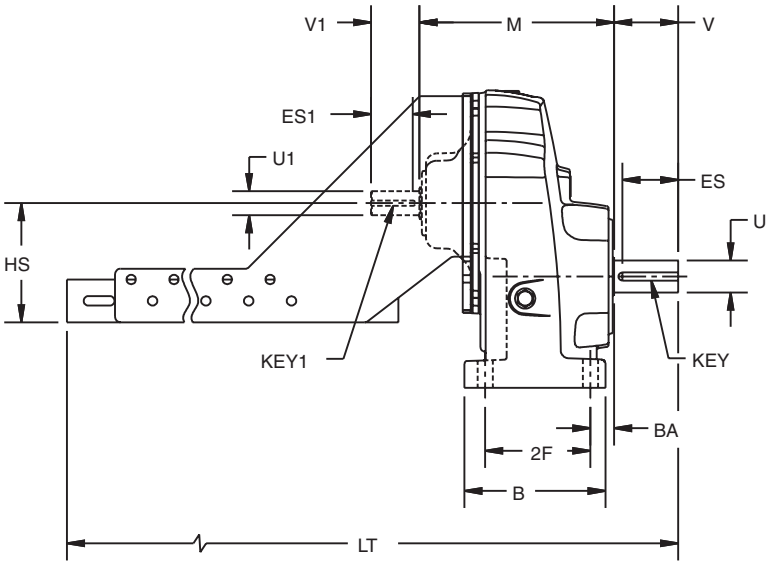
Motor Frame					
182/184T			213/215T		
CM	HS	LT	CM	HS	LT
12.75	5.56	34.98	12.75	5.56	35.38

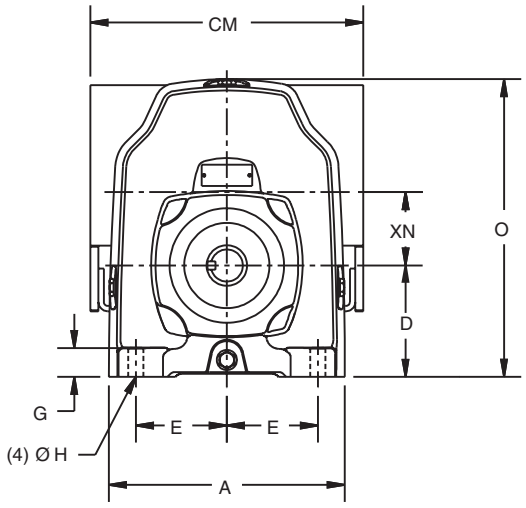
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Single Reduction





Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	13.65	7.76	6.30	5.12	1.61	0.79	10.38	17.37	1.75	1.38	3.50	2.75	1.18	6.30	3.06	2.31	4.33	3/8 Sq.	5/16 Sq.

Motor Frame					
213/215T			254/256T		
CM	HS	LT	CM	HS	LT
12.75	5.56	37.28	17.00	7.44	41.70

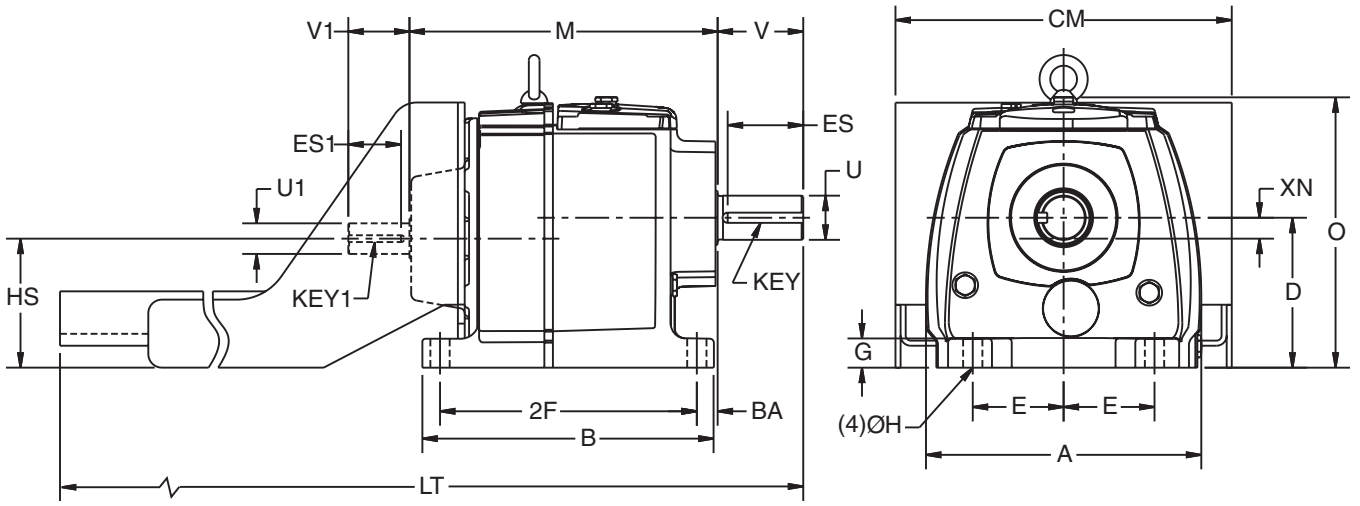
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Scoop Mount Reducer[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
32	8.72	8.50	4.53	2.66	0.84	0.55	9.11	7.97	1.25	0.63	2.50	1.25	0.51	7.56	2.16	1.00	0.39	1/4 Sq.	3/16 Sq.
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	11.34	9.94	1.50	1.13	3.00	2.25	0.77	9.45	2.56	1.94	0.77	3/8 Sq.	1/4 Sq.
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	11.34	9.94	1.625	1.13	3.15	2.25	0.77	9.45	2.78	1.94	0.77	3/8 Sq.	1/4 Sq.
34	11.97	10.87	7.09	4.53	1.37	0.71	12.66	11.89	2.125	1.13	3.50	2.25	0.98	9.25	3.06	1.94	1.02	1/2 Sq.	1/4 Sq.

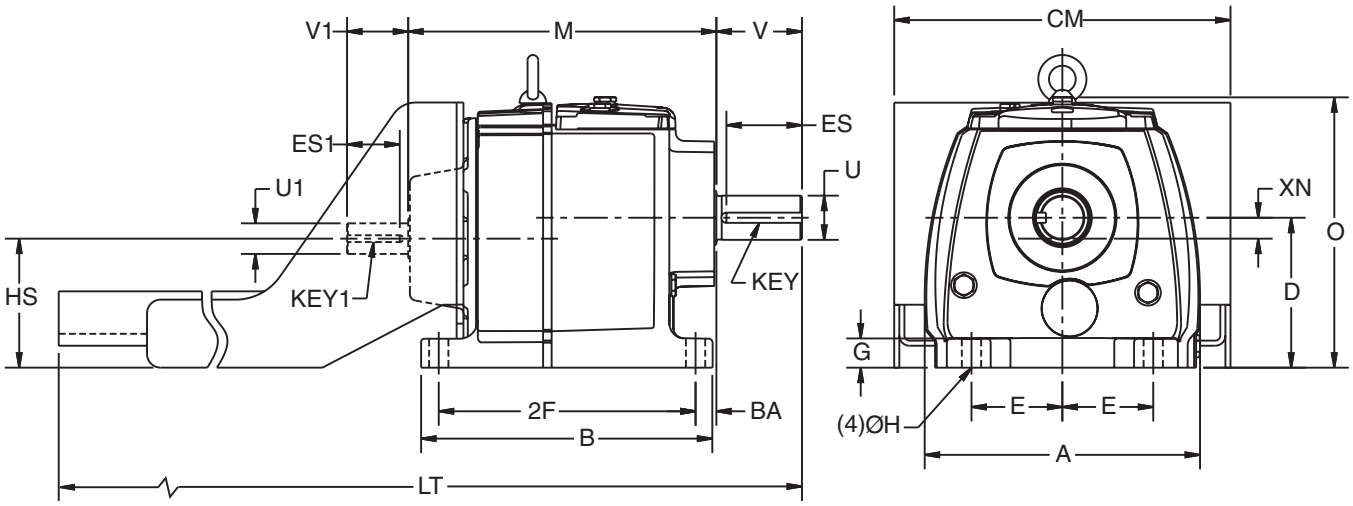
Gear Frame	Motor Frame								
	143/145T			182/184T			213/215T		
	CM	HS	LT	CM	HS	LT	CM	HS	LT
32	11.38	3.75	27.97	-	-	-	-	-	-
3362,3363	12.38	4.74	37.31	12.38	4.74	37.31	-	-	-
3372,3373	12.38	4.74	37.46	12.38	4.74	37.46	-	-	-
34	12.75	5.56	40.04	12.75	5.56	39.04	12.75	5.56	39.44

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	O	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	14.19	12.89	8.86	5.51	1.73	0.87	14.95	14.84	2.375	1.375	4.72	2.75	1.10	11.02	4.19	2.31	1.14	5/8 Sq.	5/16 Sq.

Motor Frame														
143/145T			182/184T			213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	44.08	12.75	5.56	43.08	12.75	5.56	43.41	17.00	7.44	47.83	17.00	7.44	47.96

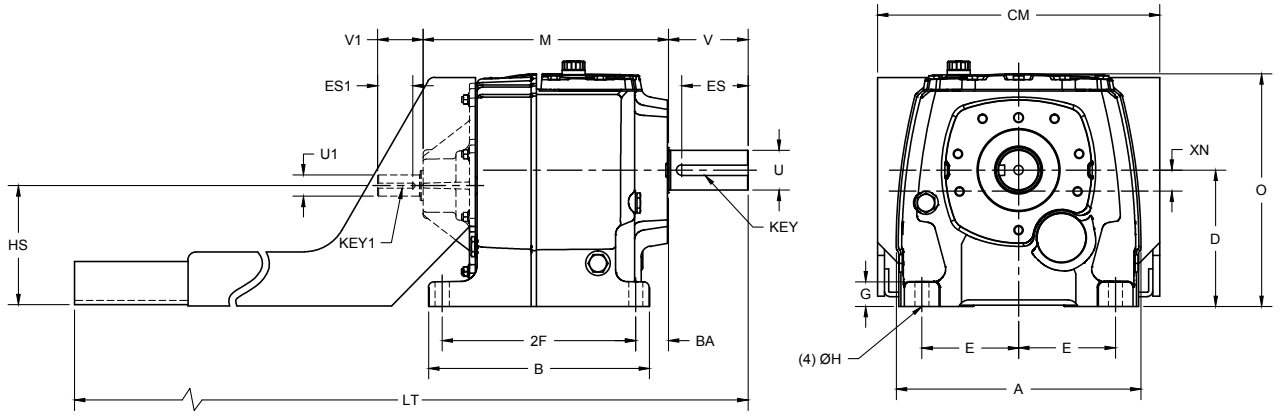
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Scoop Mount Reducer[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D[1]	E	G	H	M	O	U[3]	U1[3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	17.68	15.95	9.85	6.99	1.77	1.02	17.48	17.72	2.875	1.875	5.75	3.75	2.36	13.98	4.784	3.06	1.102	3/4 Sq	1/2 Sq.
37	20.39	17.91	12.40	8.27	2.17	1.02	20.16	20.40	3.625	1.875	7.00	3.75	2.56	15.35	5.893	3.06	2.362	7/8 Sq	1/2 Sq.
38	23.94	21.65	13.98	10.04	2.35	1.02	23.64	22.60	4.375	2.375	9.99	4.75	1.97	18.90	9.02	4.03	2.559	1 SQ	5/8 SQ

Gear Frame	Motor Frame														
	182/184T			213/215T			254/256T			284/286T			324/326T		
	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
36	15.00	6.63	48.60	15.00	6.63	48.75	15.00	6.63	51.85	19.06	8.50	57.85	19.06	8.50	59.28
37	15.00	6.63	52.02	15.00	6.63	52.17	15.00	6.63	55.27	19.06	8.50	61.27	19.06	8.50	62.70
38	-	-	-	-	-	-	19.06	8.50	60.25	19.06	8.50	60.38	19.06	8.50	71.22

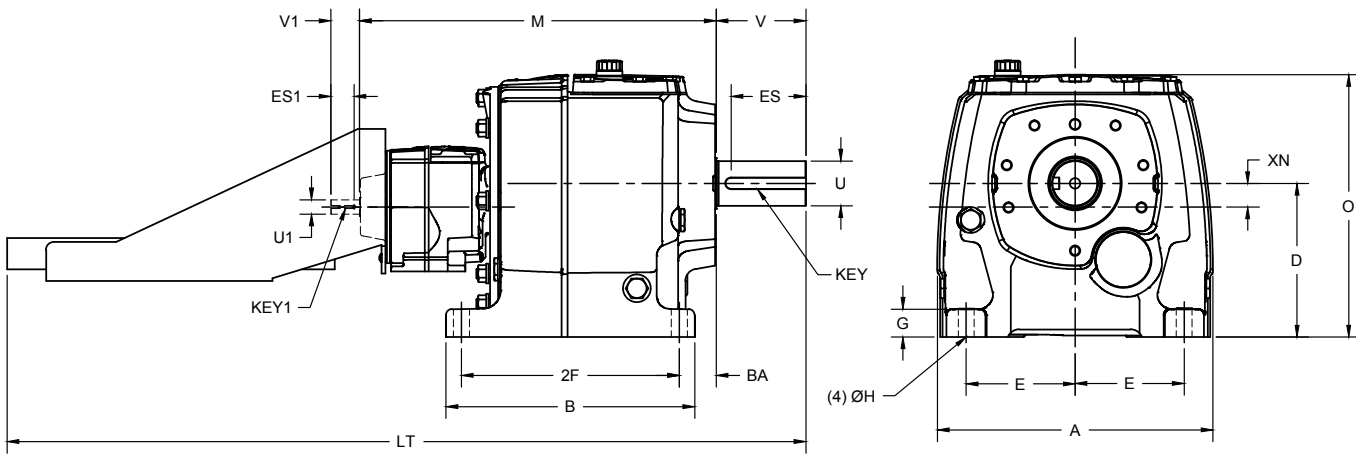
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001"

Scoop Mount Reducer[2]

Foot Mounted - Combined Reduction



Gear Frame	A	B	D[1]	E	G	H	M	O	U[3]	U1[3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	17.68	15.95	9.85	6.99	1.77	1.02	22.73	17.72	2.875	0.625	5.75	1.25	2.36	13.98	4.784	1.00	1.492	3/4 Sq	3/16 Sq.
37	20.39	17.91	12.40	8.27	2.17	1.02	25.40	20.40	3.625	0.625	7.00	1.25	2.56	15.35	5.893	1.00	2.752	7/8 Sq	3/16 Sq.
38	23.94	21.65	13.98	10.04	2.35	1.02	23.64	22.60	4.375	2.375	9.99	5.56	1.97	18.90	9.02	5.00	2.559	1 SQ	5/8 SQ

Gear Frame	Motor Frame					
	143/145T		182/184T		213/215T	
	HS	LT	HS	LT	HS	LT
36	3.75	51.21	-	-	-	-
37	3.75	55.14	-	-	-	-
38	5.56	63.03	5.56	62.03	5.56	62.16

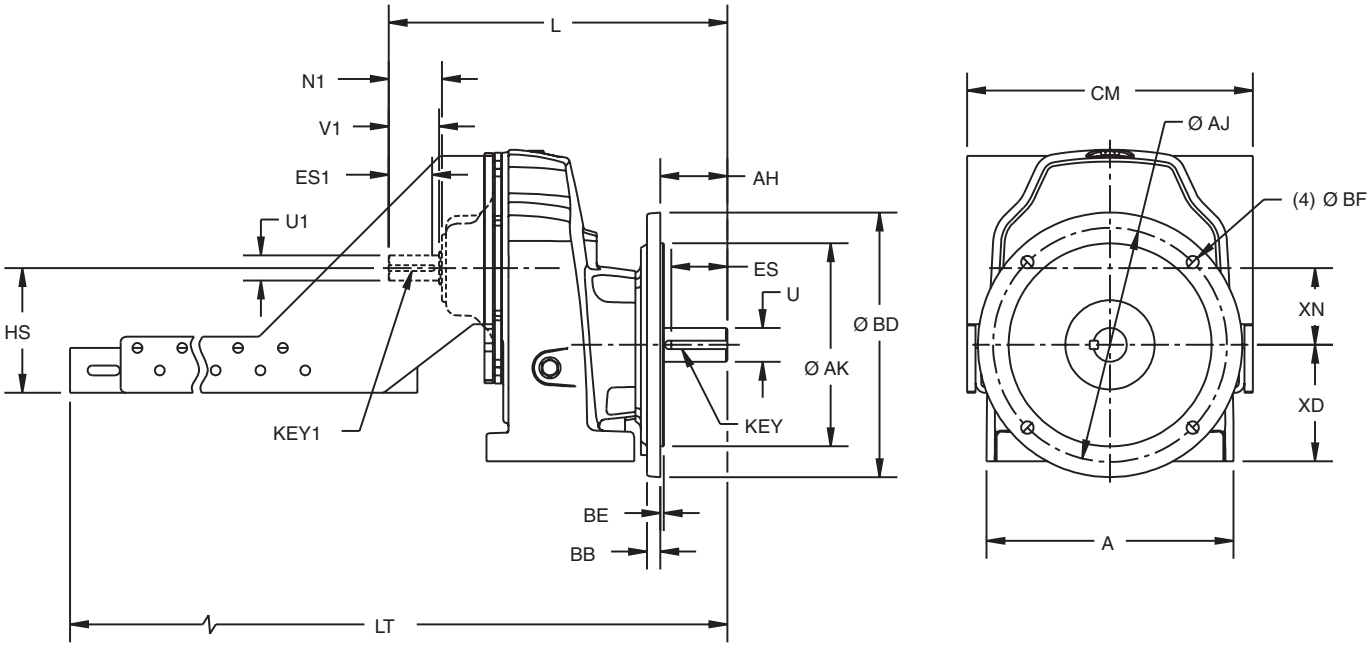
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Scoop Mount Reducer[2]

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
34	11.02	15.12	2.37	1.500	1.125	2.25	3.00	2.56	1.94	5.20	3.43	3/8 Sq.	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

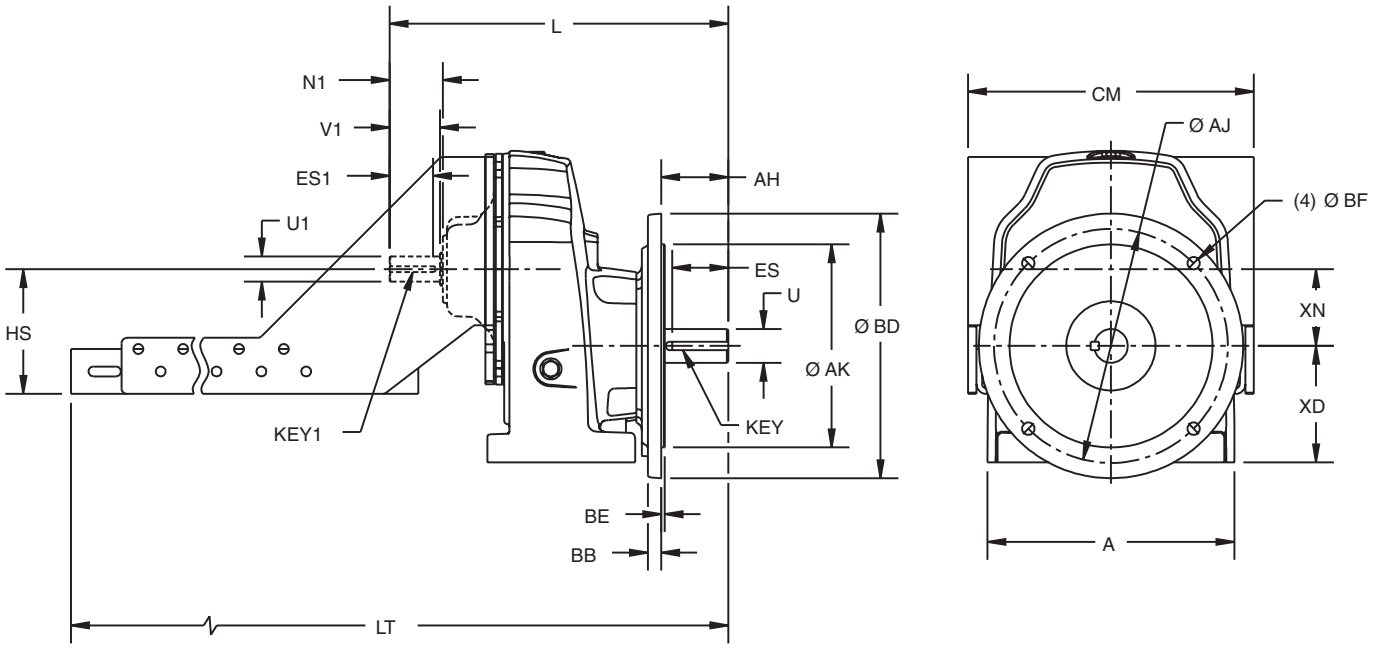
Motor Frame					
182/184T			213/215T		
CM	HS	LT	CM	HS	LT
12.75	5.56	35.75	12.75	5.56	36.05

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Scoop Mount Reducer[2]

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
35	13.65	17.90	2.92	1.750	1.375	2.75	3.50	3.06	2.31	6.30	4.33	3/8 Sq.	5/16 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

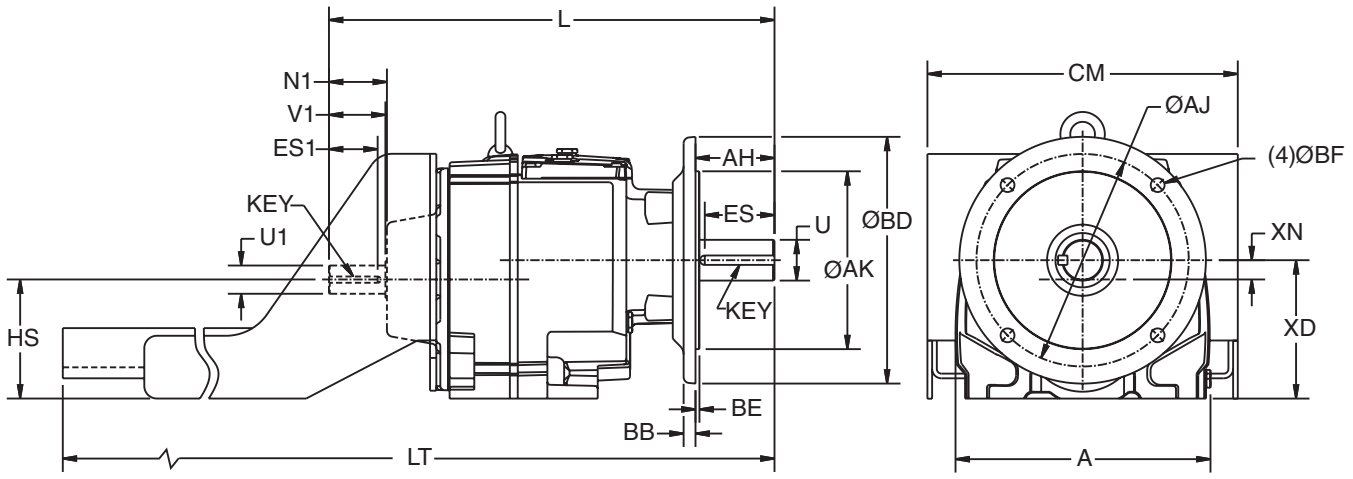
Motor Frame								
213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	38.85	17.00	7.44	43.27	17.00	7.44	43.40

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Scoop Mount Reducer[2]

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
32	8.70	13.25	1.29	1.250	0.625	1.25	2.50	2.16	1.00	4.53	0.39	1/4 Sq.	3/16 Sq.
3362,3363	10.16	17.61	2.31	1.500	1.125	2.25	3.00	2.56	1.94	5.51	0.77	3/8 Sq.	1/4 Sq.
3372,3373	10.16	17.76	2.31	1.625	1.125	2.25	3.15	2.78	1.94	5.51	0.77	3/8 Sq.	1/4 Sq.

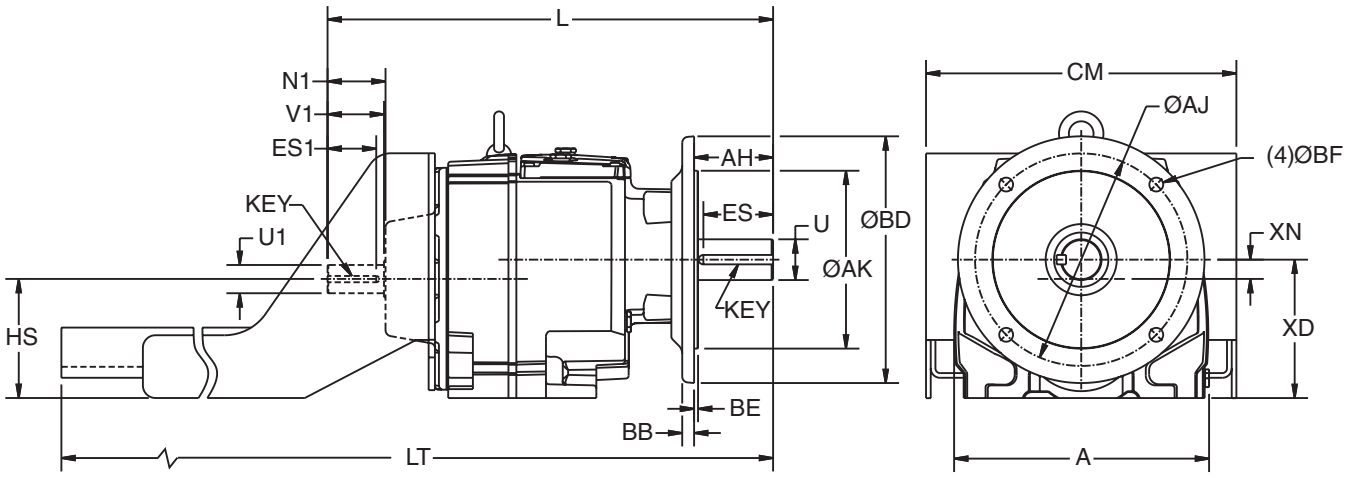
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

Gear Frame	Motor Frame					
	143/145T			182/184T		
	CM	HS	LT	CM	HS	LT
32	11.38	3.75	28.36	-	-	-
3362,3363	12.38	4.74	38.33	12.38	4.74	38.33
3372,3373	12.38	4.74	38.48	12.38	4.74	38.48

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
34	11.97	19.16	2.37	2.125	1.125	2.25	3.50	3.06	1.94	7.09	1.02	1/2 Sq.	1/4 Sq.

Flange Type	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55
BD2	7.09	8.46	0.16	9.83	0.59	0.55

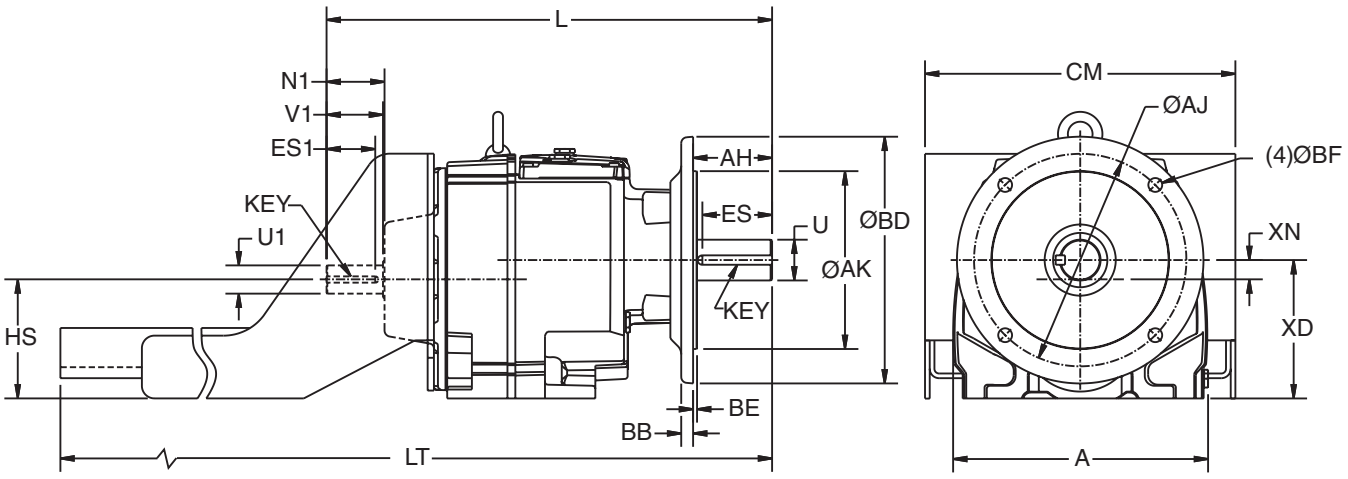
Motor Frame								
143/145T			182/184T			213/215T		
CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	40.79	12.75	5.56	39.79	12.75	5.56	40.19

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Scoop Mount Reducer[2]

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	ES	ES1	XD	XN	Key	Key1
35	14.19	23.42	2.92	2.375	1.375	2.75	4.72	4.19	2.31	8.86	1.14	5/8 Sq.	5/16 Sq.

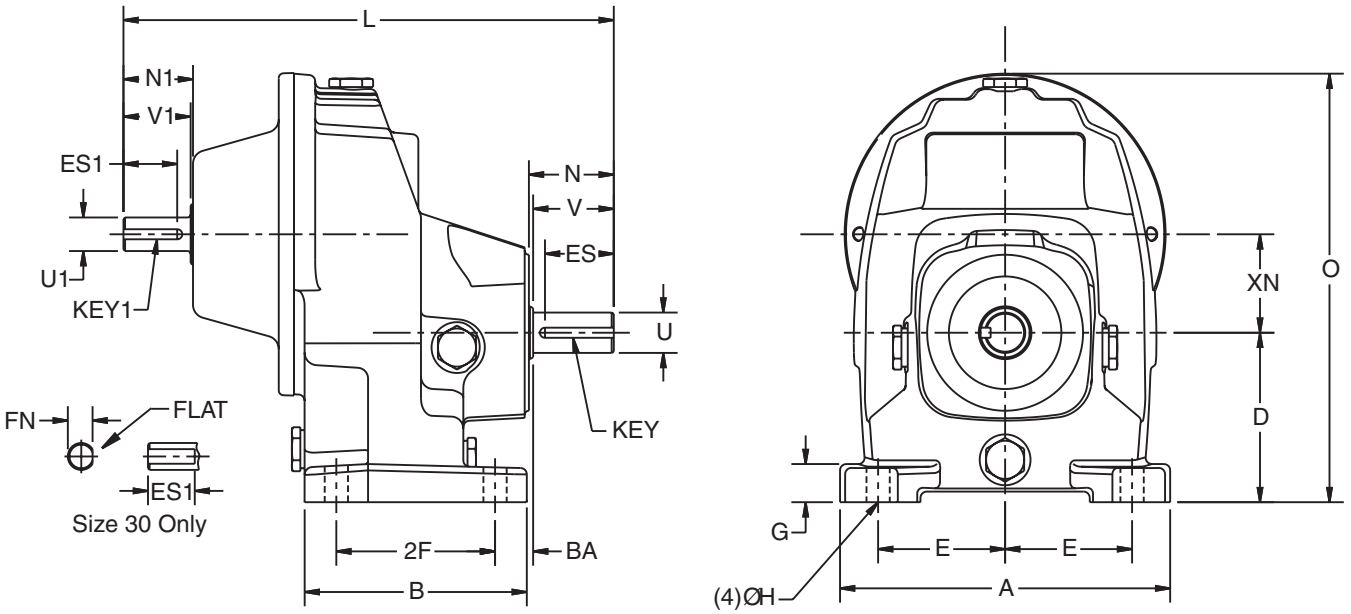
Flange Type	AK	AJ	BB	BD	BE	BF
BS	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.84	11.81	0.20	13.78	0.71	0.71
BD2	9.06	10.43	0.20	11.81	0.71	0.55

Motor Frame														
56, 143/145T			182/184T			213/215T			254/256T			284/286T		
CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT	CM	HS	LT
12.75	5.56	45.05	12.75	5.56	44.05	12.75	5.56	44.38	17.00	7.44	48.80	17.00	7.44	48.93

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	L	N	N1	O	U [3]
30	5.90	3.54	2.95	2.46	0.49	0.35	8.77	2.14	1.12	7.07	0.625
31	6.14	4.13	3.15	2.36	0.71	0.43	9.12	1.58	1.29	7.97	0.750
32	7.28	4.48	3.54	2.76	0.77	0.55	9.74	2.08	1.29	9.67	1.000
33	9.69	5.30	4.41	3.74	1.02	0.63	12.88	2.83	2.31	11.69	1.375
34	11.02	6.59	5.20	4.25	1.34	0.71	14.35	3.06	2.37	13.90	1.500
35	13.65	7.76	6.30	5.12	1.61	0.79	16.73	3.60	2.92	17.37	1.750

Gear Frame	U1 [3]	V	V1	BA	ES	ES1	2F	FN	XN	Key	Key1
30	0.500	1.87	1.00	1.01	1.48	0.87	2.76	0.46	1.40	3/16 Sq.	N/A
31	0.625	1.50	1.25	0.71	1.28	1.00	2.95	N/A	1.83	3/16 Sq.	3/16 Sq.
32	0.625	2.00	1.25	0.75	1.56	1.00	3.15	N/A	2.48	1/4 Sq.	3/16 Sq.
33	1.125	2.75	2.25	1.08	2.40	1.94	3.94	N/A	2.76	5/16 Sq.	1/4 Sq.
34	1.125	3.00	2.25	1.10	2.56	1.94	4.92	N/A	3.43	3/8 Sq.	1/4 Sq.
35	1.375	3.50	2.75	1.18	3.06	2.31	6.30	N/A	4.33	3/8 Sq.	5/16 Sq.

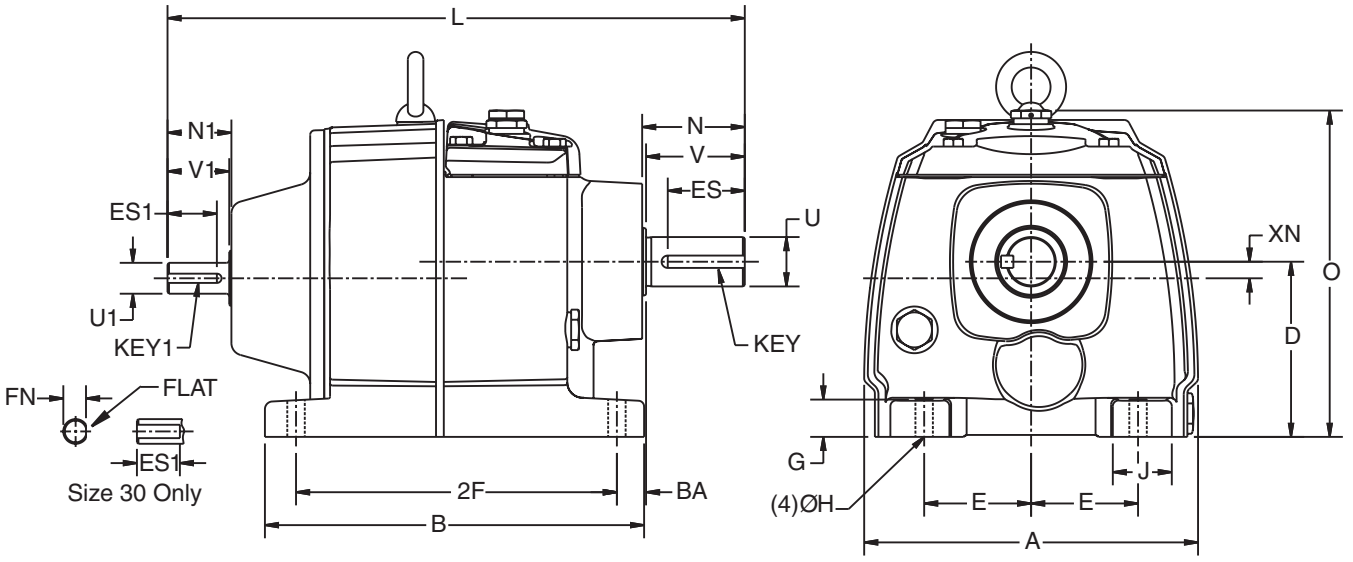
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
3012	5.90	4.92	2.95	2.46	0.51	0.35	1.10	9.56	1.83	1.12	6.00	0.75
3013	5.90	5.71	2.95	2.46	0.51	0.35	1.10	10.35	1.83	1.12	6.00	0.75
31	6.76	7.68	3.54	2.17	0.75	0.35	1.38	11.69	2.08	1.29	6.60	1.00
32	8.72	8.50	4.53	2.66	0.84	0.55	2.56	12.86	2.56	1.29	7.97	1.25
3362,3363	10.13	10.72	5.51	3.35	1.07	0.71	2.56	16.59	3.08	2.31	9.94	1.50
3372,3373	10.13	10.72	5.51	3.35	1.07	0.71	2.56	16.74	3.23	2.31	9.94	1.625
34	11.97	10.87	7.09	4.53	1.37	0.71	1.81	18.41	3.58	2.37	11.89	2.125
35	14.19	12.89	8.86	5.51	1.73	0.87	3.33	22.45	4.75	2.92	14.84	2.375

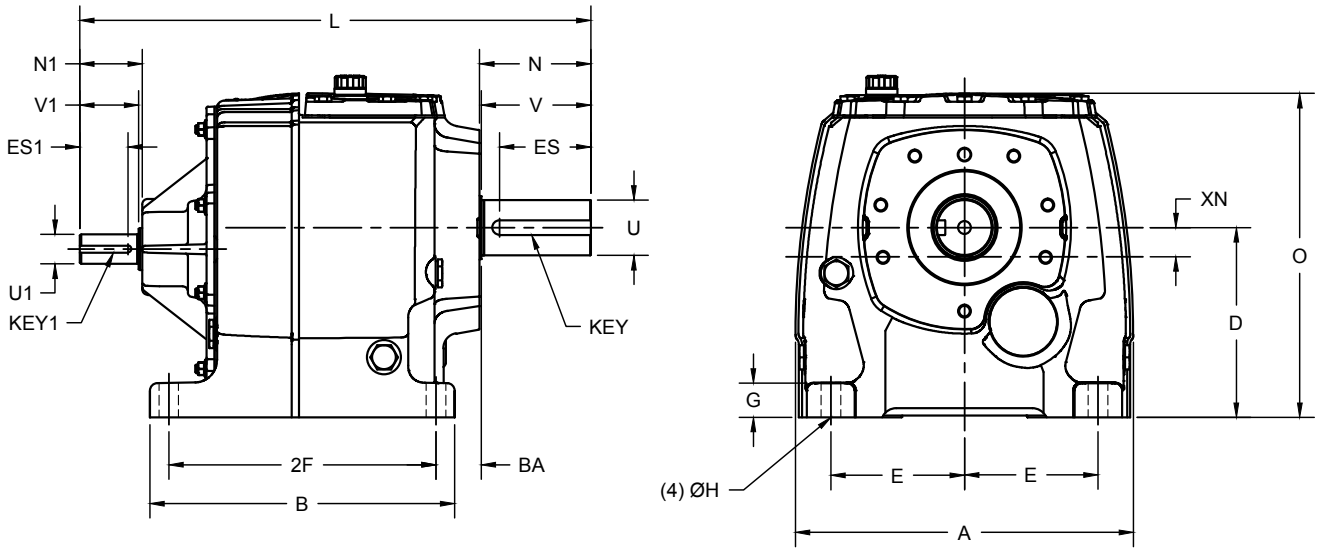
Gear Frame	U1 [3]	V	V1	BA	ES	ES1	2F	FN	XN	Key	Key1
3012	0.500	1.75	1.00	0.87	1.48	0.87	4.13	0.46	0.28	3/16 Sq.	N/A
3013	0.500	1.75	1.00	0.87	1.48	0.87	4.92	0.46	0.28	3/16 Sq.	N/A
31	0.625	2.00	1.25	0.59	1.56	1.00	6.50	N/A	0.33	1/4 Sq.	3/16 Sq.
32	0.625	2.50	1.25	0.51	2.16	1.00	7.56	N/A	0.39	1/4 Sq.	3/16 Sq.
3362,3363	1.125	3.00	2.25	0.77	2.56	1.94	9.45	N/A	0.77	3/8 Sq.	1/4 Sq.
3372,3373	1.125	3.15	2.25	0.77	2.78	1.94	9.45	N/A	0.77	3/8 Sq.	1/4 Sq.
34	1.125	3.50	2.25	0.98	3.06	N/A	9.25	1.94	1.02	1/2 Sq.	1/4 Sq.
35	1.375	4.72	2.75	1.10	4.19	2.31	11.02	N/A	1.14	5/8 Sq.	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
36	17.68	15.95	9.85	6.99	1.77	1.02	2.76	27.25	5.875	3.94	17.72	2.875
37	20.39	17.91	12.40	8.27	2.17	1.02	2.36	31.18	7.127	3.94	20.40	3.625
38	23.94	21.65	13.98	10.04	2.35	1.02	4.92	38.46	8.16	4.93	22.60	4.375

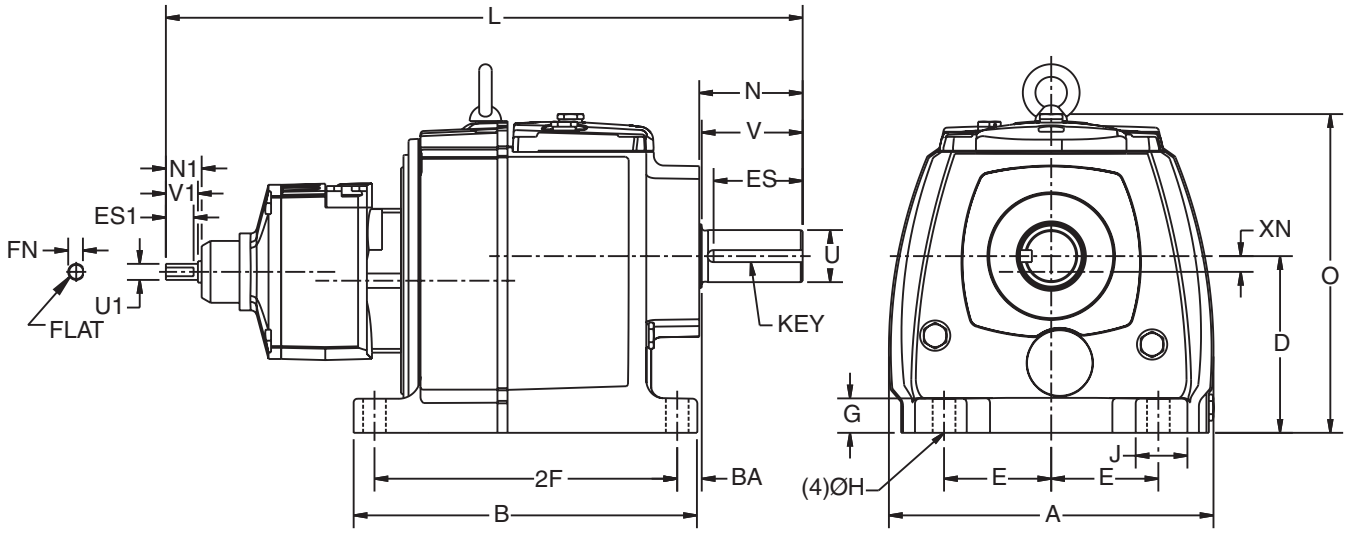
Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key 1
36	1.875	5.75	3.75	2.36	13.98	4.784	3.06	1.102	3/4 Sq	1/2 Sq.
37	1.875	7.00	3.75	2.56	15.35	5.893	3.06	2.362	7/8 Sq	1/2 Sq.
38	2.375	9.99	4.75	1.97	18.90	9.02	4.03	2.559	1 SQ	5/8 SQ

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O
32	8.72	8.50	4.53	2.66	0.84	0.55	2.56	17.73	2.56	1.12	7.97
33	10.13	10.72	5.51	3.35	1.07	0.71	2.56	19.88	3.23	1.12	9.94

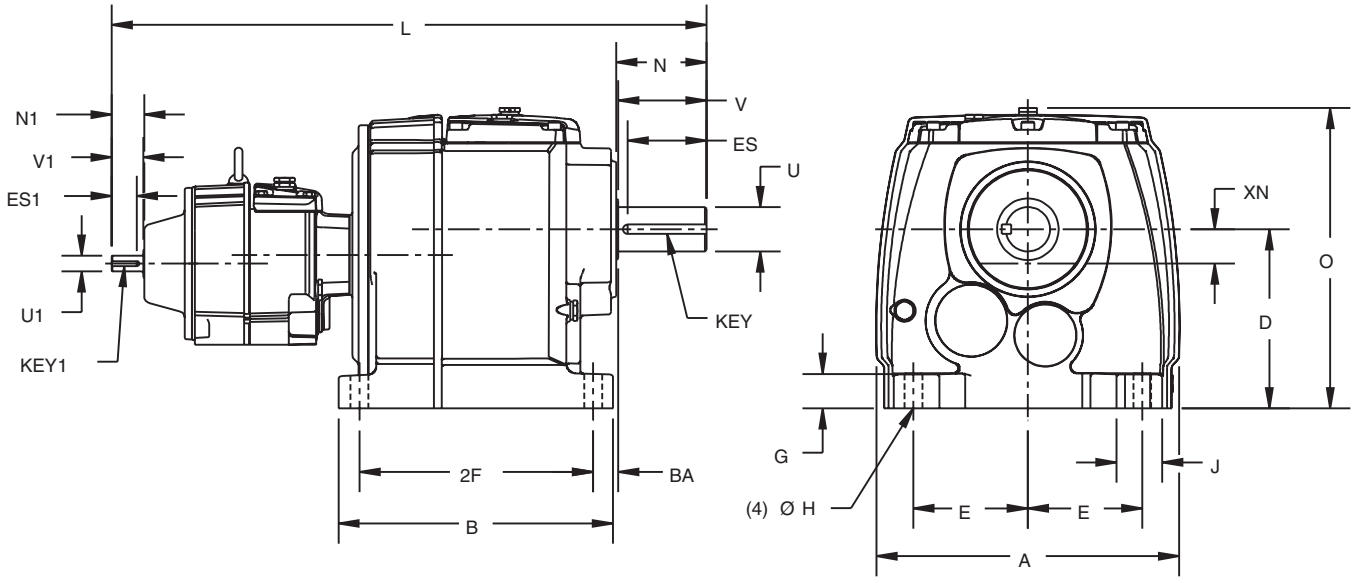
Gear Frame	U [3]	U1 [3]	V	V1	BA	2F	FN	ES	ES1	XN	Key
32	1.250	0.500	2.50	1.00	0.51	7.56	0.46	2.16	0.87	0.12	1/4 Sq.
33	1.625	0.500	3.15	1.00	0.77	9.45	0.46	2.78	0.87	0.49	3/8 Sq.

[1] Dimension “D” will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
34	11.97	10.87	7.09	4.53	1.37	0.71	1.81	23.54	3.58	1.29	11.89	2.125

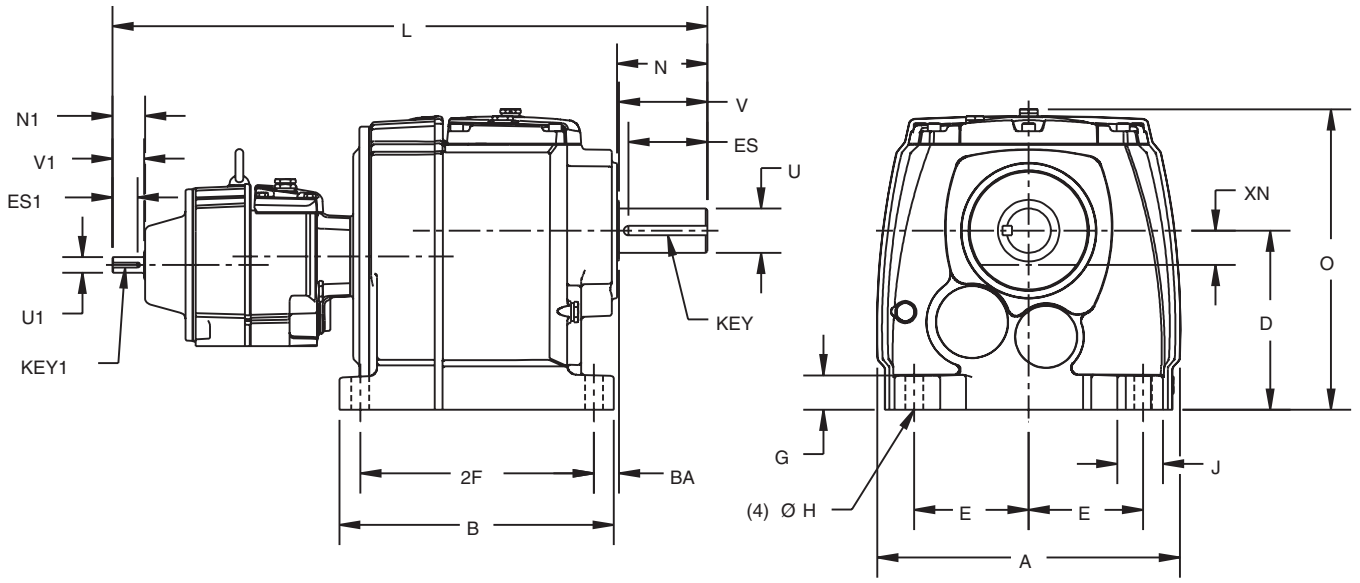
Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
34	0.625	3.50	1.25	0.98	9.25	3.06	1.00	1.35	1/2 Sq.	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O
35	14.19	12.89	8.86	5.51	1.73	0.87	3.33	25.95	4.81	1.29	14.84

Gear Frame	U [3]	U1 [3]	V	V1	BA	2F	ES	ES1	XN	Key	Key1
35	2.375	0.625	4.72	1.25	1.10	11.02	4.19	1.00	1.47	5/8 Sq.	3/16 Sq.

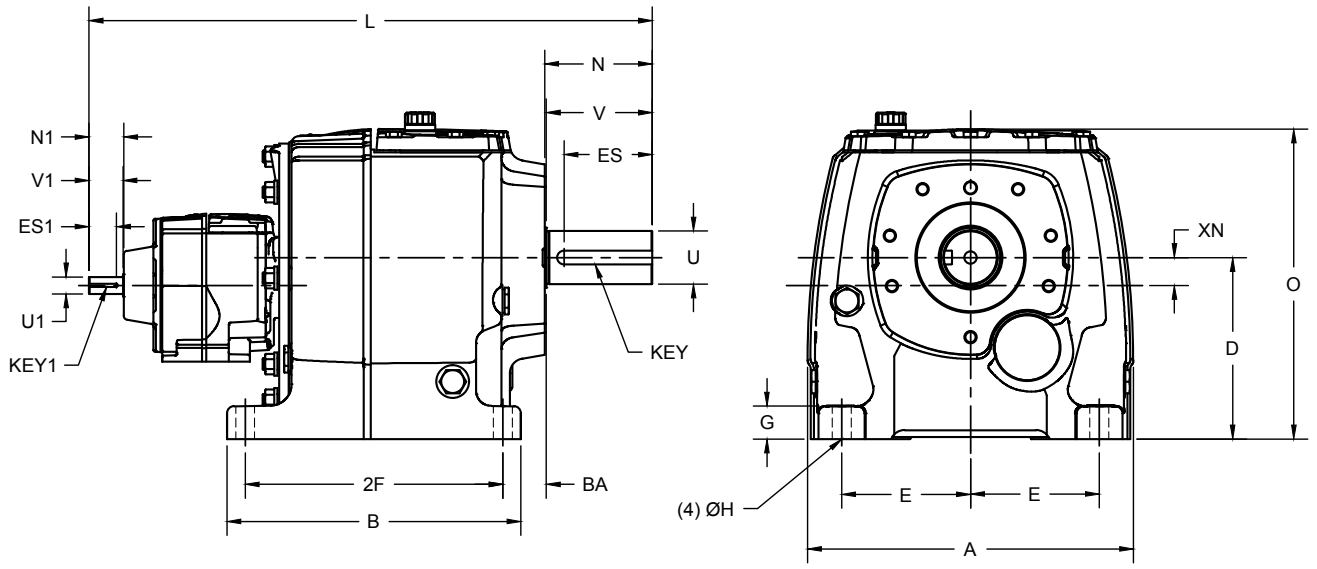
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Foot Mounted - Combined Reduction



Gear Frame	A	B	D [1]	E	G	H	J	L	N	N1	O	U [3]
36	17.68	15.95	9.85	6.99	1.77	1.02	2.76	29.91	5.875	1.35	17.72	2.875
37	20.39	17.91	12.40	8.27	2.17	1.02	2.36	33.84	7.127	1.35	20.40	3.625
38	23.94	21.65	13.98	10.04	2.35	1.02	4.92	39.19	8.16	2.37	22.60	4.375

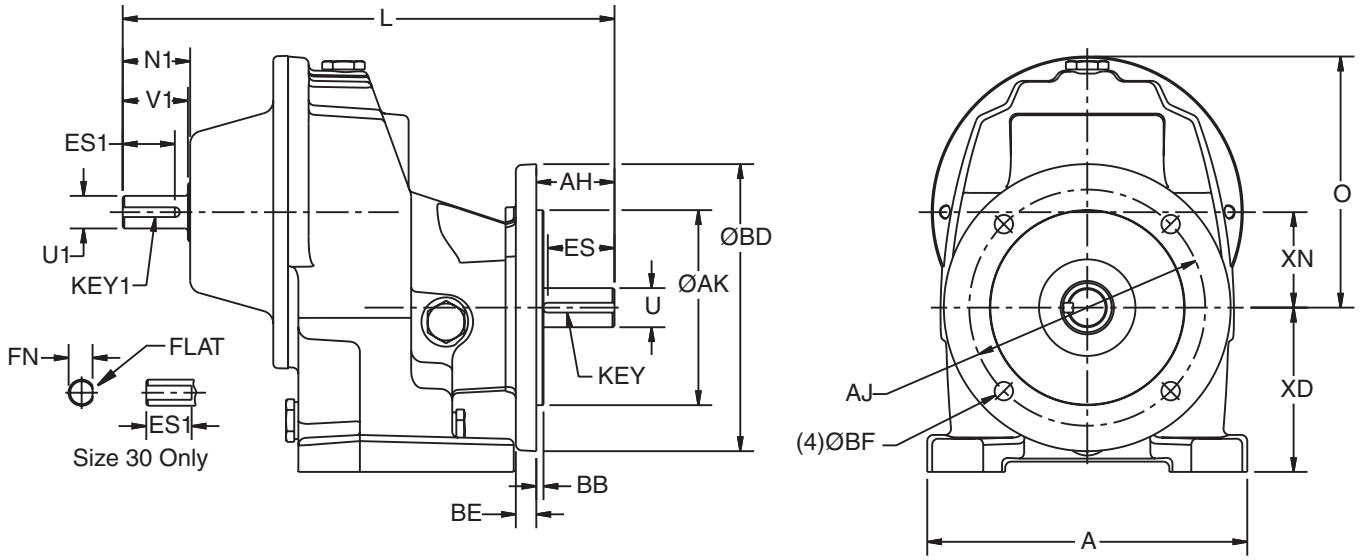
Gear Frame	U1 [3]	V	V1	BA	2F	ES	ES1	FN	XN	Key	Key 1
36	0.625	5.75	1.25	2.36	13.98	4.784	1.00	N/A	1.492	3/4 Sq	3/16 Sq.
37	0.625	7.00	1.25	2.56	15.35	5.893	1.00	N/A	2.752	7/8 Sq	3/16 Sq.
38	1.125	9.99	2.25	1.97	18.90	9.02	1.94	N/A	2.559	1 SQ	1/4 SQ

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
30	-	8.77	1.12	4.11	0.625	0.500	1.00
31	6.14	9.44	1.29	4.82	0.750	0.625	1.25
32	8.70	9.55	1.29	7.38	1.00	0.625	1.25
33	9.44	13.27	2.31	7.28	1.375	1.125	2.25

Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
30	2.06	1.48	0.87	0.46	2.24	1.40	3/16 Sq.	N/A
31	1.50	1.28	1.00	N/A	3.15	1.83	3/16 Sq.	3/16 Sq.
32	1.50	1.16	1.00	N/A	2.68	2.48	1/4 Sq.	3/16 Sq.
33	2.75	2.40	1.94	N/A	4.41	2.76	5/16 Sq.	1/4 Sq.

Flange Type	30						31					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16	-	-	-	-	-	-
BS	3.74	4.53	0.12	5.51	0.31	0.35	4.33	5.12	0.14	6.29	0.39	0.35
BD1	4.33	5.12	0.08	6.30	0.39	0.35	-	-	-	-	-	-
BD2	3.15	3.94	0.12	4.72	0.39	0.28	3.74	4.53	0.14	5.50	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35	-	-	-	-	-	-

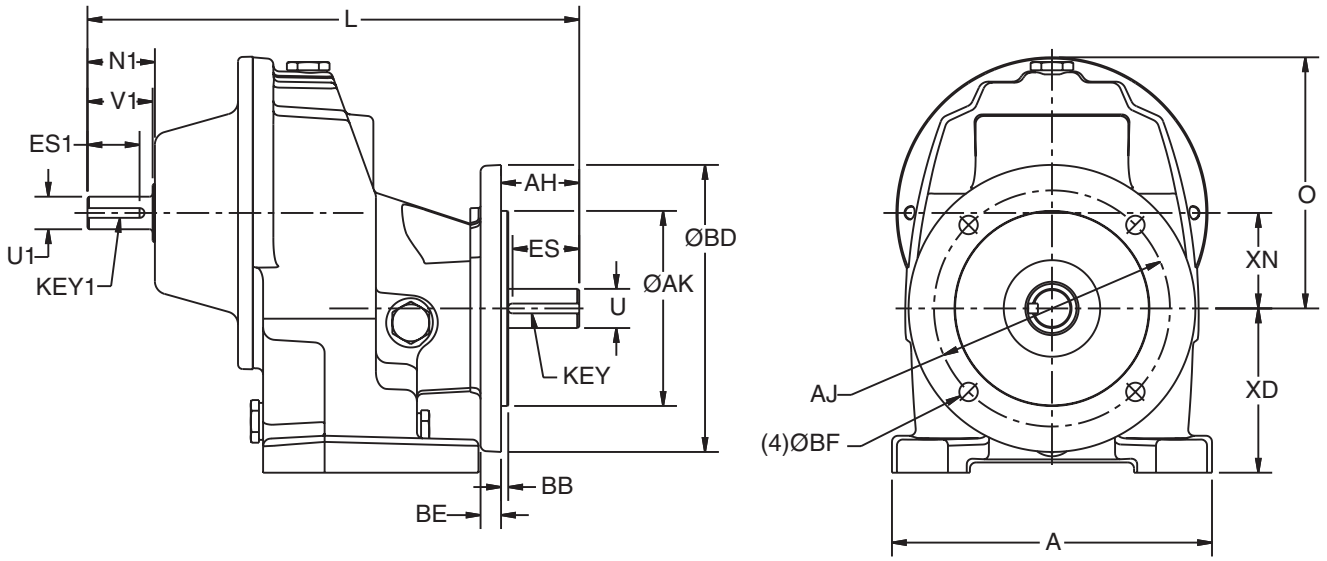
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	5.12	6.50	0.14	7.87	0.47	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.16	7.86	0.47	0.43

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.02	15.12	2.37	8.70	1.500	1.125	2.25
35	13.65	17.90	2.92	11.07	1.750	1.375	2.75

Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.00	2.56	1.94	5.20	3.43	3/8 Sq.	1/4 Sq.
35	3.50	3.06	2.31	6.30	4.33	3/8 Sq.	5/16 Sq.

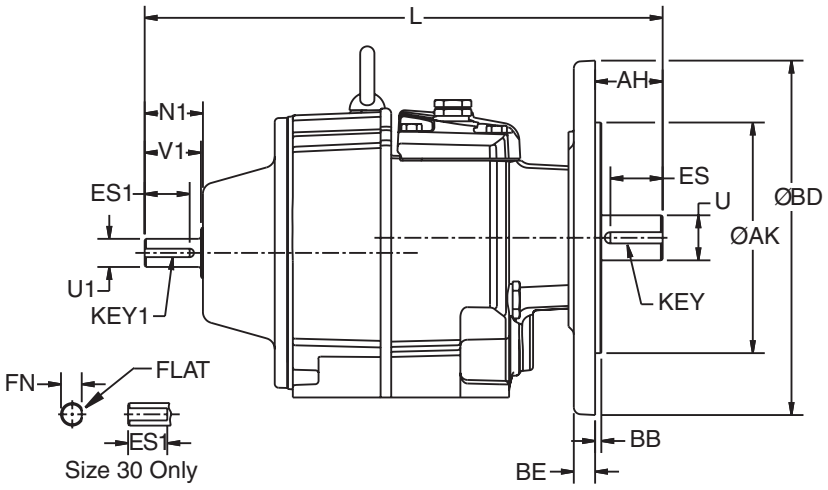
Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

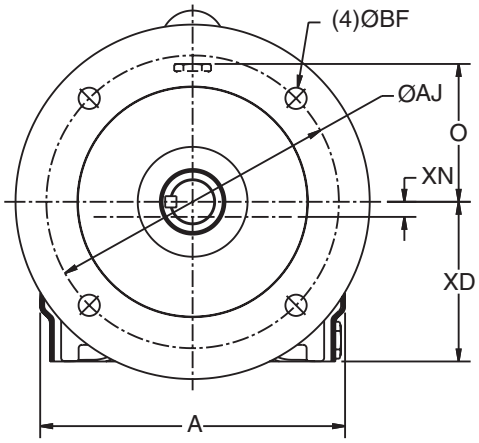
[2] All rough casting dimensions may vary by .25" due to casting variations.

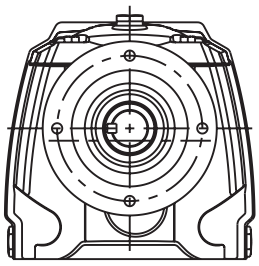
[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flange Mounted - Double/Triple Reduction







BD3 TYPE (31)

Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
3012	5.51	9.87	1.12	3.04	0.625	0.500	1.00
3013	5.51	10.66	1.12	3.04	0.625	0.500	1.00
31	6.77	11.50	1.29	3.06	1.000	0.625	1.20

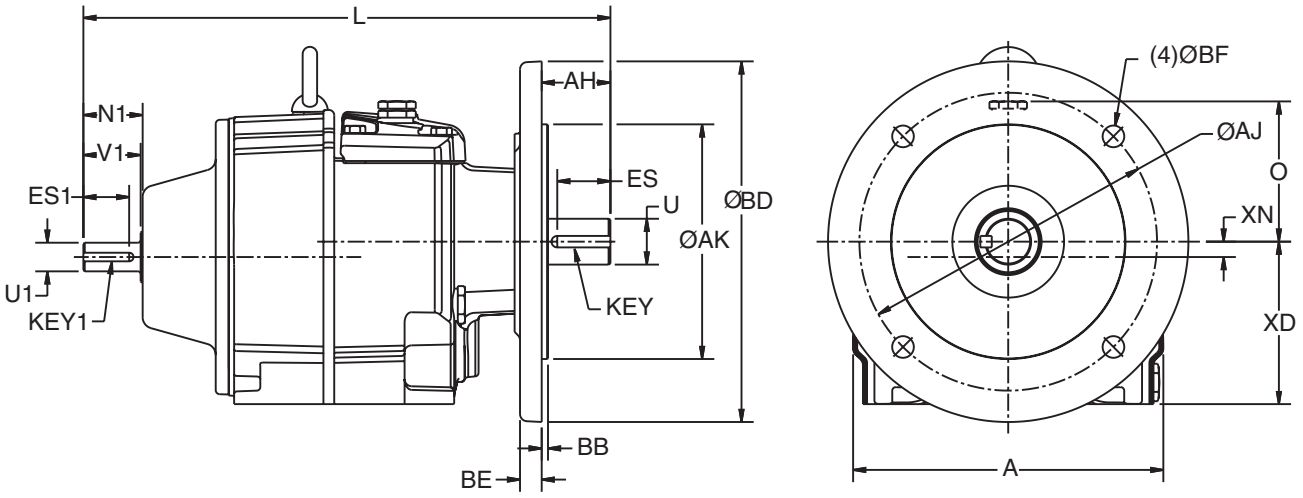
Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
3012	2.07	1.48	0.87	0.46	2.48	0.28	3/16 Sq.	N/A
3013	2.07	1.48	0.87	0.46	2.48	0.28	3/16 Sq.	N/A
31	1.50	1.16	1.00	N/A	3.54	0.33	1/4 Sq.	3/16 Sq.

Flange Type	30						31					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
56C	4.50	5.88	0.12	6.50	0.39	3/8-16	-	-	-	-	-	-
BS	3.74	4.53	0.12	5.51	0.31	0.35	5.12	6.50	0.14	7.87	0.47	0.47
BD1	3.15	3.94	0.10	4.72	0.28	0.28	4.33	5.12	0.14	6.29	0.39	0.35
BD2	4.33	5.12	0.12	6.30	0.31	0.35	3.74	4.53	0.14	5.50	0.39	0.35
BD3	5.12	6.50	0.12	7.87	0.31	0.35	3.15	3.94	0.10	4.72	0.39	0.28

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
32	8.70	13.25	1.29	3.50	1.250	0.625	1.25
3362,3363	10.16	17.62	2.31	4.43	1.500	1.125	2.25
3372,3373	10.16	17.77	2.31	4.43	1.625	1.125	2.25

Gear Frame	AH	ES	ES1	FN	XD	XN	Key	Key1
32	2.50	2.16	1.00	N/A	4.53	0.39	1/4 Sq.	3/16 Sq.
3362,3363	3.00	2.56	1.94	N/A	5.51	0.77	3/8 Sq.	1/4 Sq.
3372,3373	3.15	2.78	1.94	N/A	5.51	0.77	3/8 Sq.	1/4 Sq.

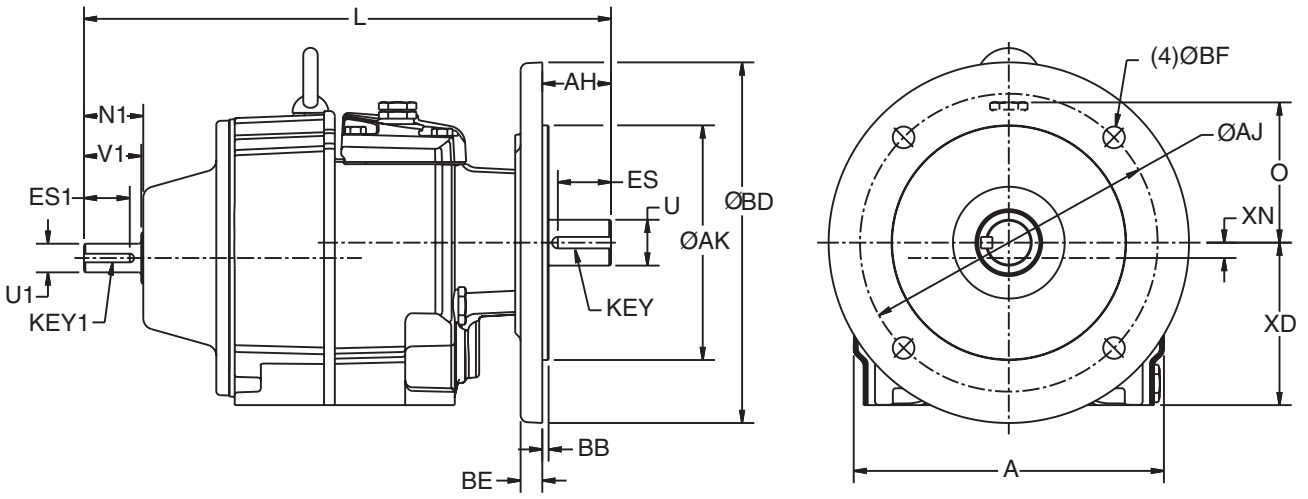
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.97	19.16	2.37	4.80	2.125	1.125	2.25
35	14.19	23.42	2.92	5.98	2.375	1.375	2.75

Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.5	3.06	1.94	7.09	1.02	1/2 Sq.	1/4 Sq.
35	4.72	4.19	2.31	8.86	1.14	5/8 Sq.	5/16 Sq.

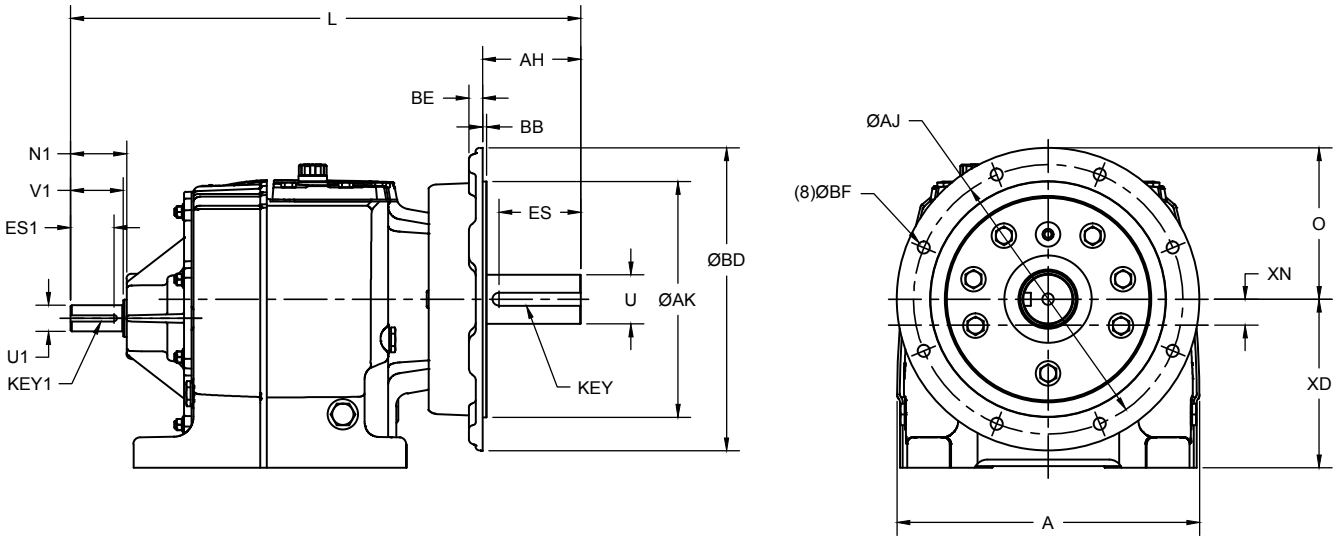
Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flanged Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
36	17.68	30.32	3.94	7.87	2.875	1.875	3.75
37	20.39	34.25	3.94	7.99	3.625	1.875	3.75
38	23.94	38.46	4.93	8.63	4.375	2.375	4.75

Gear Frame	AH	ES	ES1	XD[1]	XN	Key	Key 1
36	5.75	4.784	3.06	9.84	1.102	3/4 Sq	1/2 Sq.
37	7.00	5.893	3.06	12.40	2.362	7/8 Sq	1/2 Sq.
38	6.84	9.02	4.03	13.98	2.559	1 SQ	5/8 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.622	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

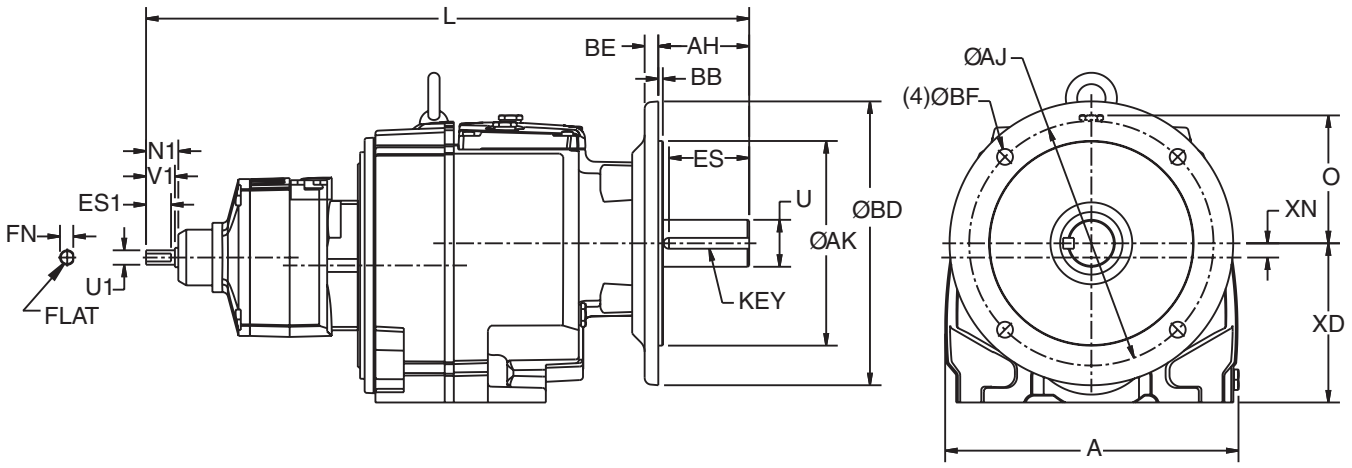
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Input Shaft Reducer[2]

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1	XD
32	8.70	18.13	1.12	3.50	1.250	0.500	1.00	4.53
33	10.16	20.90	1.12	4.43	1.625	0.500	1.00	5.51

Gear Frame	AH	ES	ES1	FN	XN	Key
32	2.50	2.16	0.86	0.46	0.12	1/4 Sq.
33	3.15	2.78	0.86	0.46	0.49	3/8 Sq.

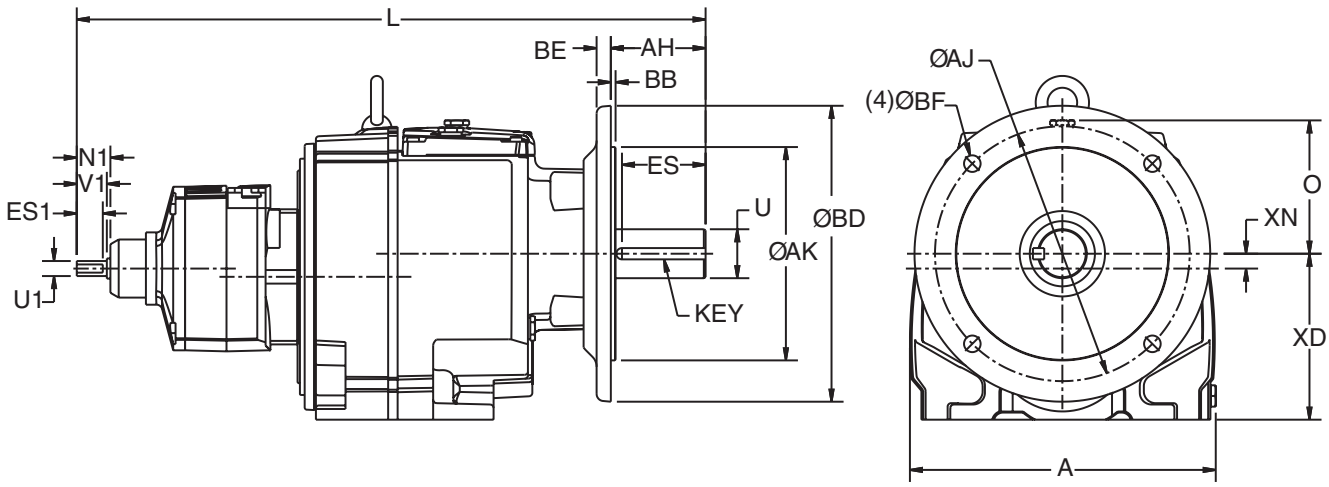
Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
34	11.97	24.29	1.29	4.80	2.125	1.125	1.25
35	14.19	26.86	1.29	5.98	2.375	0.625	1.25

Gear Frame	AH	ES	ES1	XD	XN	Key	Key1
34	3.50	3.06	1.00	7.09	1.35	1/2 Sq.	3/16 Sq.
35	4.72	4.19	1.00	8.86	1.47	5/8 Sq.	3/16 Sq.

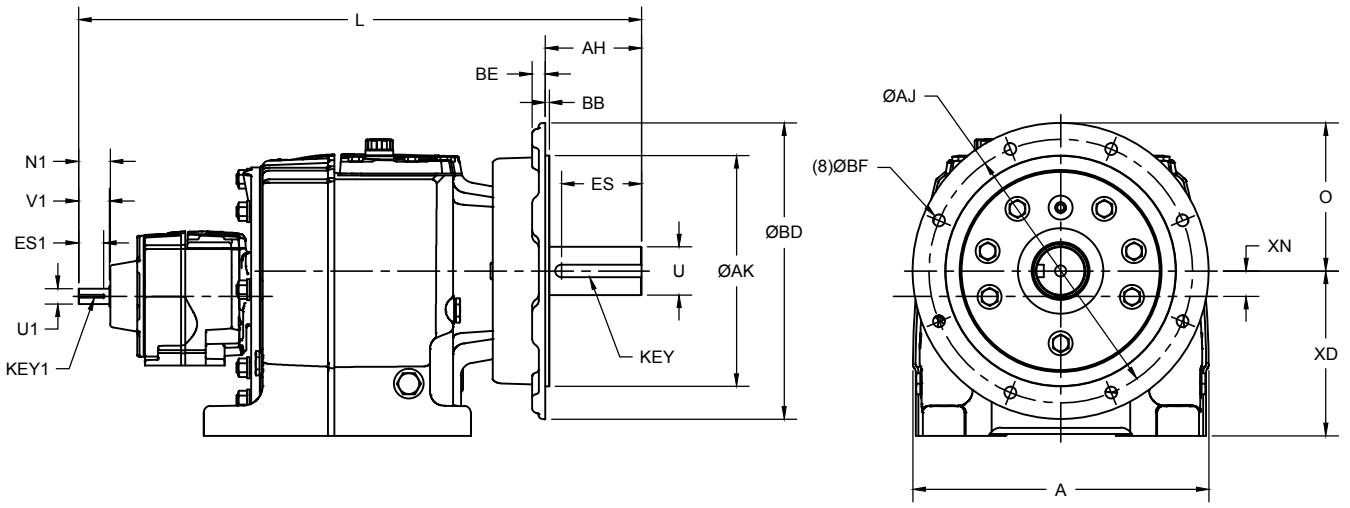
Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Input Shaft Reducer[2]

Flange Mounted - Combined Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1
36	17.68	32.98	1.35	7.87	2.875	0.625	1.25
37	20.39	36.91	1.35	7.99	3.625	0.625	1.25
38	23.94	43.92	2.37	8.63	4.375	1.125	2.25

Gear Frame	AH	ES	ES1	XD[1]	XN	Key	Key 1
36	5.75	4.784	1.00	9.86	1.492	3/4 Sq	3/16 Sq.
37	7.00	5.893	1.00	12.40	2.752	7/8 Sq	3/16 Sq.
38	6.84	9.02	1.94	13.98	2.559	1 SQ	1/4 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.620	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

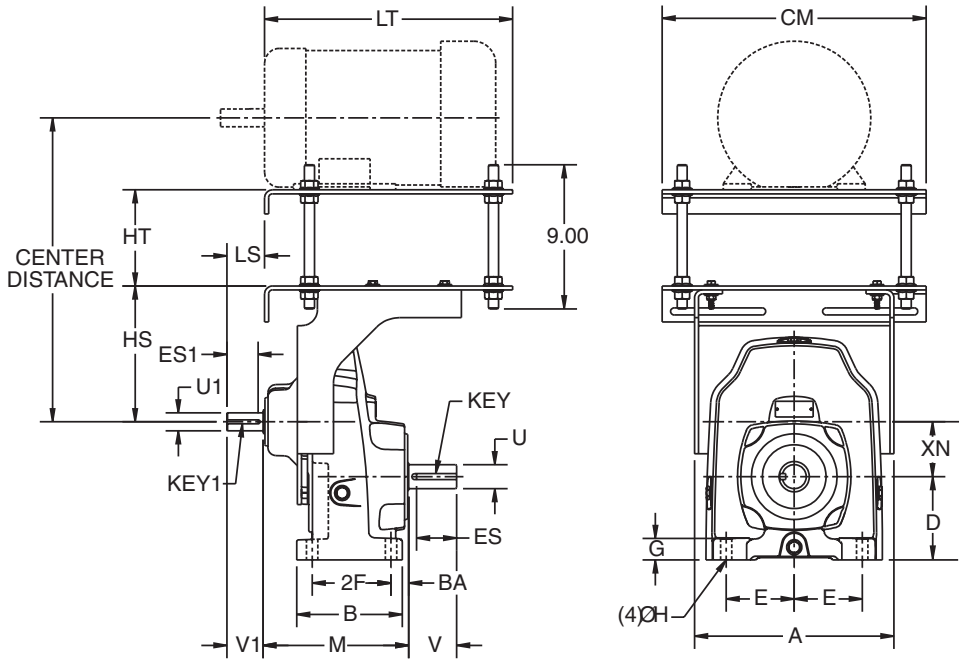
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Top Mount Reducer[2]

Foot Mounted - Single Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
34	12.47	6.59	5.20	4.25	1.34	0.71	9.10	1.500	1.125	3.00	2.25	1.10
35	15.45	7.76	6.30	5.12	1.61	0.79	10.38	1.750	1.375	3.50	2.75	1.18

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
34	16.50	4.92	14.48	1.89	7.36	2.35	15.50	2.56	1.94	3.43	3/8 Sq.	1/4 Sq.
35	20.00	6.30	10.48	1.89	7.36	2.72	20.25	3.06	2.31	4.33	3/8 Sq.	5/16 Sq.

Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	-	-	18.62	24.09
284/286T	-	-	19.37	24.84

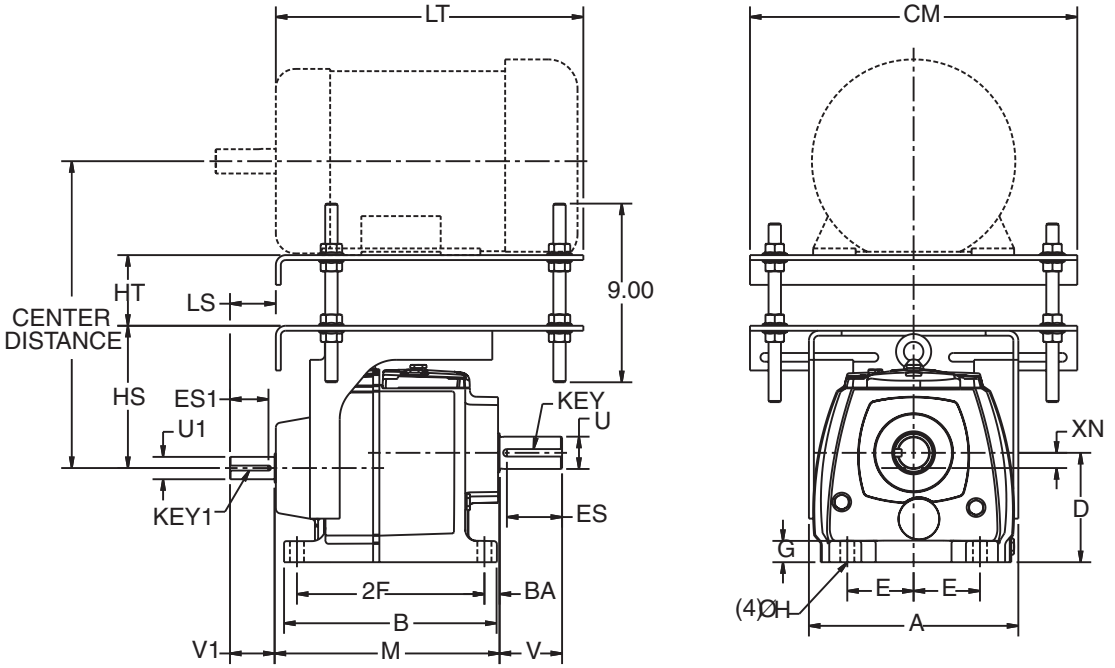
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Top Mount Reducer[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
32	10.56	8.50	4.53	2.66	0.84	0.55	9.11	1.250	0.625	2.50	1.25	0.51
3362,3363	10.56	10.72	5.51	3.35	1.07	0.71	11.34	1.500	1.125	3.00	2.25	0.77
3372,3373	10.56	10.72	5.51	3.35	1.07	0.71	11.34	1.625	1.125	3.15	2.25	0.77

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
32	16.50	7.56	7.14	1.64	7.61	1.29	15.50	2.16	1.00	0.39	1/4 Sq.	3/16 Sq.
3362,3363	16.50	9.45	7.17	1.64	7.61	2.31	15.50	2.56	1.94	0.77	3/8 Sq.	1/4 Sq.
3372,3373	16.50	9.45	7.17	1.64	7.61	2.31	15.50	2.78	1.94	0.77	3/8 Sq.	1/4 Sq.

Motor Frame	32 Center Distance		33 Center Distance	
	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28
143/145T	12.28	18.25	12.31	18.28
182/184T	13.28	19.25	13.31	19.28
213/215T	-	-	14.06	20.03

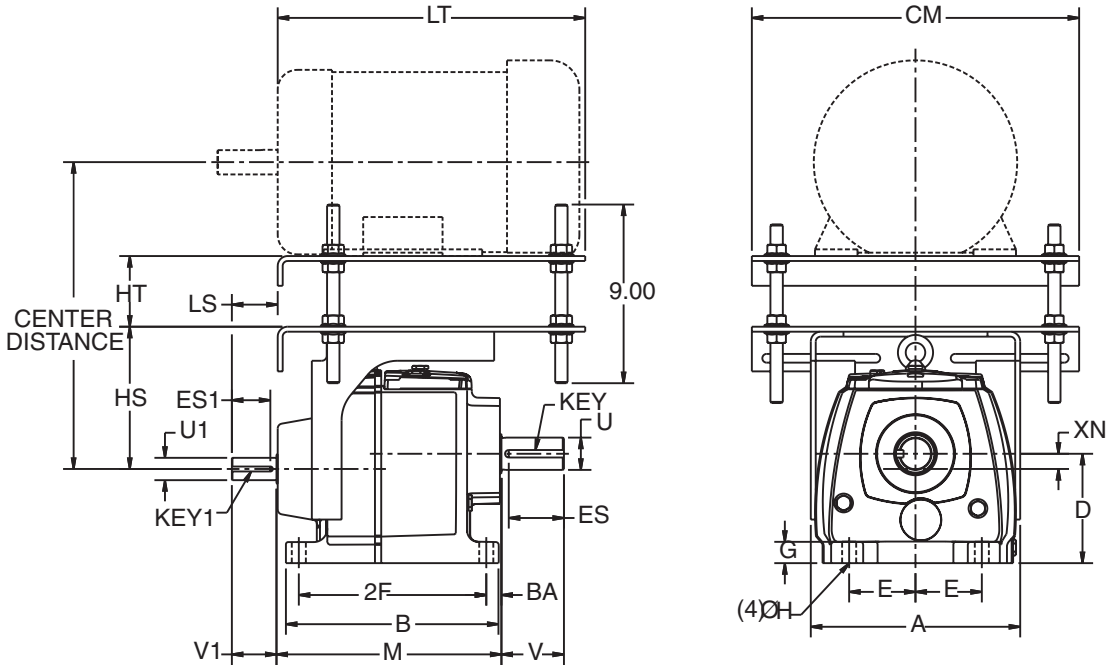
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Top Mount Reducer[2]

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
34	12.47	10.87	7.09	4.53	1.37	0.71	12.66	2.125	1.125	3.50	2.25	0.98
35	15.45	12.89	8.86	5.51	1.73	0.87	14.95	2.375	1.375	4.72	2.75	1.10

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
34	16.50	9.25	14.48	1.89	7.36	2.35	15.50	3.06	1.94	1.02	1/2 Sq.	1/4 Sq.
35	20.00	11.02	10.48	1.89	7.36	2.72	20.25	4.19	2.31	1.14	5/8 Sq.	5/16 Sq.

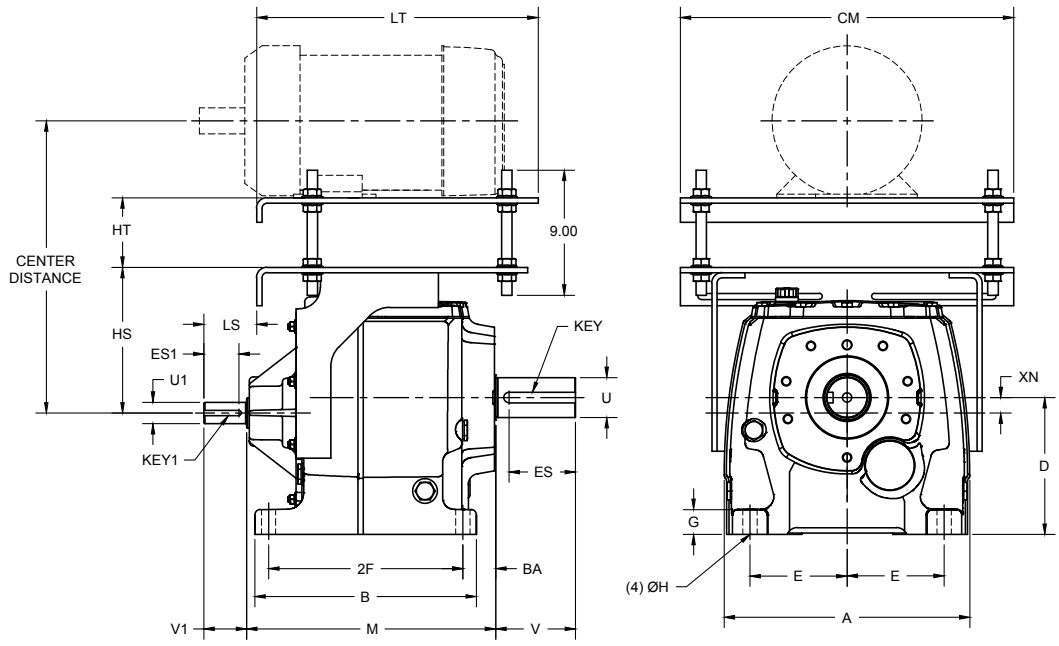
Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	16.62	22.09	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Foot Mounted - Double/Triple Reduction



Gear Frame	A	B	D [1]	E	G	H	M	U [3]	U1 [3]	V	V1	BA
36	17.68	15.95	9.85	6.99	1.77	1.02	17.48	2.875	1.875	5.75	3.75	2.36
37	20.39	17.91	12.40	8.27	2.17	1.02	20.16	3.625	1.875	7.00	3.75	2.56
38	23.94	21.65	13.98	10.04	2.35	1.02	19.88	4.375	2.375	9.99	4.75	1.97

Gear Frame	CM	2F	HS	HT		LS	LT	ES	ES1	XN	Key	Key1
				Min.	Max.							
36	24.00	13.98	10.48	1.89	7.36	3.76	10.48	4.784	1.00	1.102	3/4 Sq	1/2 Sq.
37	24.00	15.35	10.48	1.89	7.36	3.76	10.48	5.893	1.00	2.362	7/8 Sq	1/2 Sq.
38	24.00	18.90	19.38	1.89	7.36	5.47	19.25	9.02	4.03	2.559	1 SQ	5/8 SQ

Motor Frame	36 or 37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	29.28	34.75

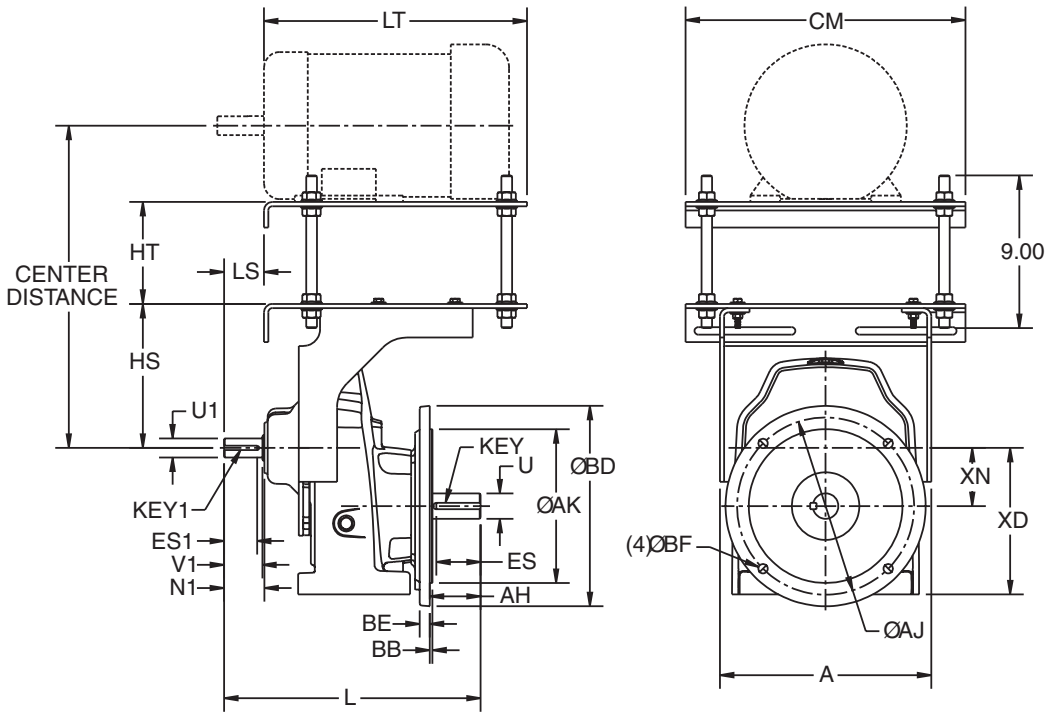
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

Top Mount Reducer[2]

Flange Mounted - Single Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
34	12.47	15.12	2.37	1.500	1.125	2.25	3.00	16.50	2.56
35	15.45	17.90	2.92	1.750	1.375	2.75	3.50	20.00	3.06

Gear Frame	ES1	XD[1]	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
34	1.94	5.20	14.48	1.89	7.36	2.35	15.50	3.43	3/8 Sq.	1/4 Sq.
35	2.31	6.30	10.48	1.89	7.36	2.72	20.25	4.33	3/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.06	10.43	0.16	11.8	0.59	0.55	9.84	11.81	0.2	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.2	11.81	0.71	0.55

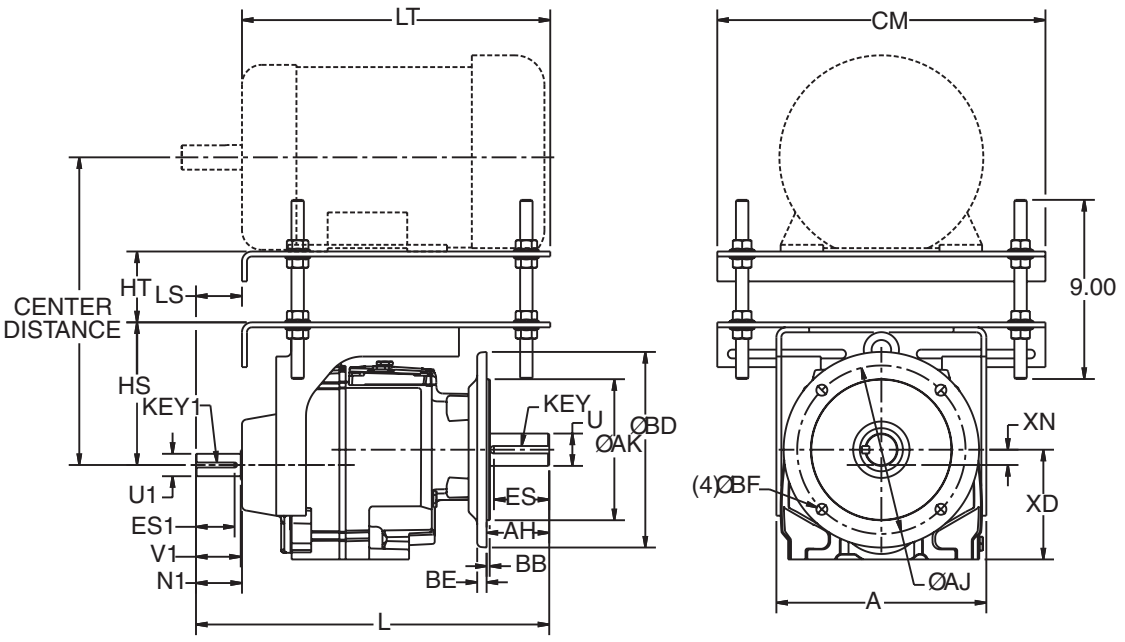
Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	-	-	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
32	10.56	13.25	1.29	1.250	0.625	1.25	2.50	16.50	2.16
3362,3363	10.56	17.61	2.31	1.500	1.125	2.25	3.00	16.50	2.56
3372,3373	10.56	17.76	2.31	1.625	1.125	2.25	3.15	16.50	2.78

Gear Frame	ES1	XD[1]	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
32	1.00	4.53	7.14	1.64	7.61	1.29	15.50	0.39	1/4 Sq.	3/16 Sq.
3362,3363	1.94	5.51	7.17	1.64	7.61	2.31	15.50	0.77	3/8 Sq.	1/4 Sq.
3372,3373	1.94	5.51	7.17	1.64	7.61	2.31	15.50	0.77	3/8 Sq.	1/4 Sq.

Flange Type	32						33					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	7.09	8.46	0.16	9.83	0.47	0.55	9.06	10.43	0.16	11.80	0.47	0.55
BD1	5.12	6.50	0.14	7.87	0.39	0.47	7.09	8.46	0.16	9.83	0.47	0.55
BD2	4.33	5.12	0.14	6.29	0.39	0.35	5.12	6.50	0.14	7.86	0.47	0.47

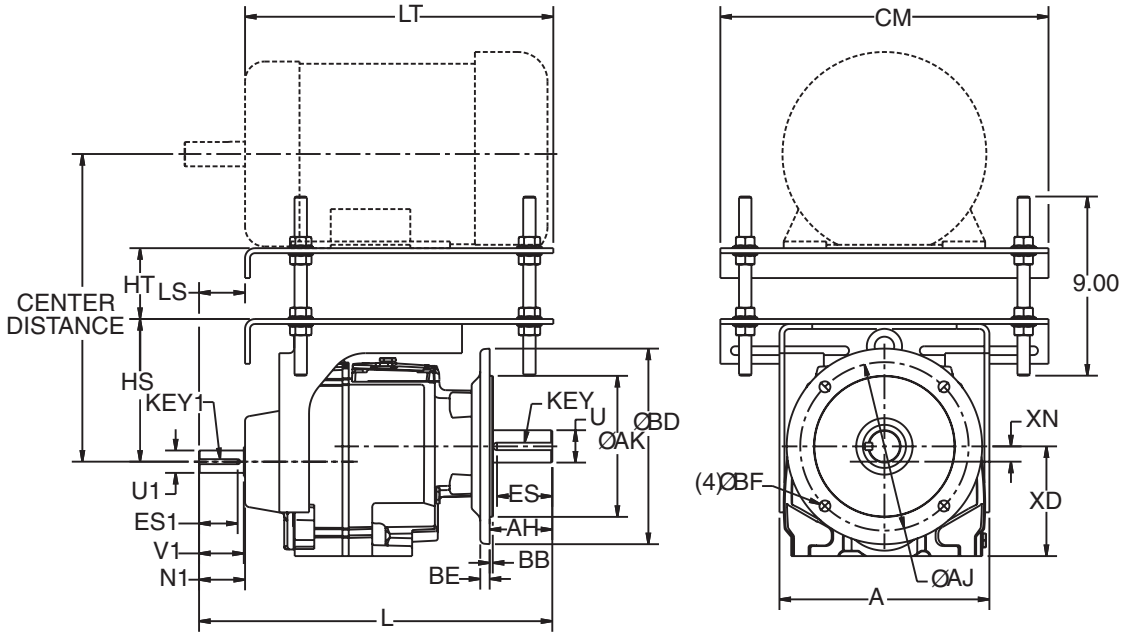
Motor Frame	32 Center Distance		33 Center Distance	
	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28
143T, 145T	12.28	18.25	12.31	18.28
182T, 184T	13.28	19.25	13.31	19.28
213T, 215T	-	-	14.06	20.03

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	U [3]	U1 [3]	V1	AH	CM	ES
34	12.47	19.16	2.37	2.125	1.125	2.25	3.50	16.50	3.06
35	15.45	23.42	2.92	2.375	1.375	2.75	4.72	20.00	4.19

Gear Frame	ES1	XD[1]	HS	HT		LS	LT	XN	Key	Key1
				Min.	Max.					
34	1.94	7.09	14.48	1.89	7.36	2.35	15.5	1.02	1/2 Sq.	1/4 Sq.
35	2.31	8.86	10.48	1.89	7.36	2.72	20.25	1.14	5/8 Sq.	5/16 Sq.

Flange Type	34						35					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
BS	9.84	11.81	0.16	13.77	0.59	0.71	11.81	13.78	0.20	15.75	0.71	0.71
BD1	9.06	10.43	0.16	11.80	0.59	0.55	9.84	11.81	0.20	13.78	0.71	0.71
BD2	7.09	8.46	0.16	9.83	0.59	0.55	9.06	10.43	0.20	11.81	0.71	0.55

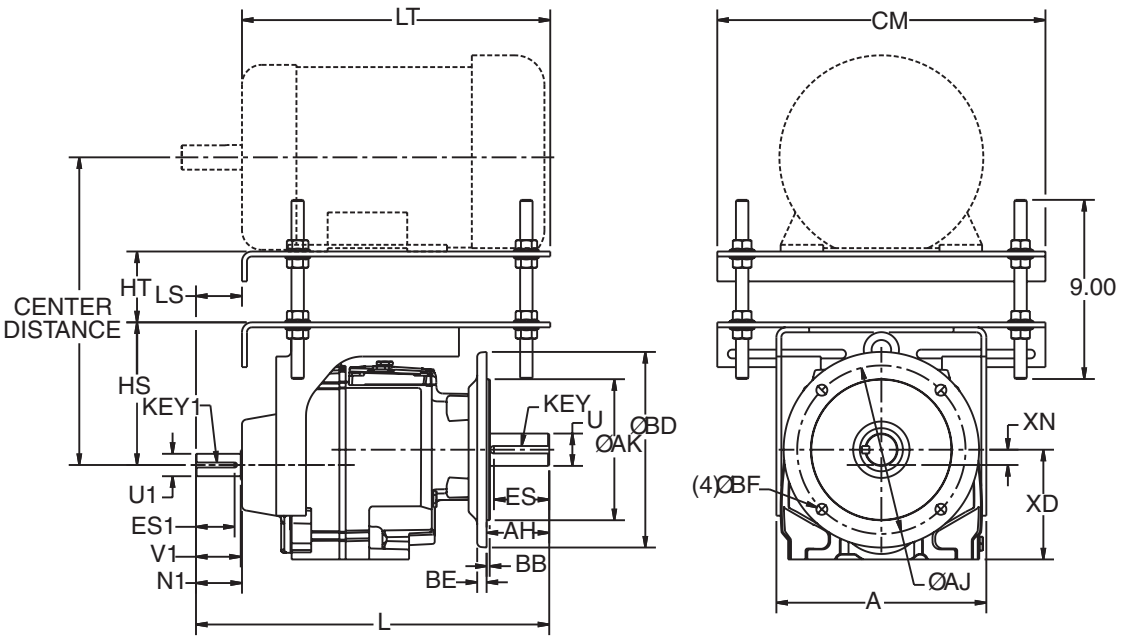
Motor Frame	34 Center Distance		35 Center Distance	
	Min.	Max.	Min.	Max.
143/145T	13.87	19.34	15.87	21.34
182/184T	14.87	20.34	16.87	22.34
213/215T	15.62	21.09	17.62	23.09
254/256T	16.62	22.09	18.62	24.09
284/286T	-	-	19.37	24.84

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

Flange Mounted - Double/Triple Reduction



Gear Frame	A	L	N1	O	U [3]	U1 [3]	V1	AH	CM	ES	ES1
36	17.68	30.32	3.94	7.87	2.875	1.875	3.75	5.75	24.00	4.784	3.06
37	20.39	34.25	3.94	7.99	3.625	1.875	3.75	7.00	24.00	5.89	3.06
38	23.94	38.46	4.93	8.63	4.375	2.375	4.75	6.84	24.00	9.02	4.03

Gear Frame	XD[1]	HT		LS	LT	ES	ES1	XN	Key	Key 1
		Min.	Max.							
36	9.84	1.89	7.36	3.76	10.48	4.784	1.00	1.102	3/4 Sq	1/2 Sq.
37	12.40	1.89	7.36	3.76	10.48	5.893	1.00	2.362	7/8 Sq	1/2 Sq.
38	13.98	1.89	7.36	5.47	19.25	9.02	5.00	2.559	1 SQ	5/8 SQ

Gear Frame	Flange Type	AK	AJ	BB	BD	BE	BF
36	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
37	BS	17.717	19.685	0.236	21.65	0.79	0.70
	BD1	13.780	15.748	0.236	17.70	0.79	0.70
38	BS	21.654	23.620	0.197	25.98	0.79	0.87
	BD1	17.717	19.685	0.197	21.65	0.79	0.69

Motor Frame	36 or 37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	29.28	34.75

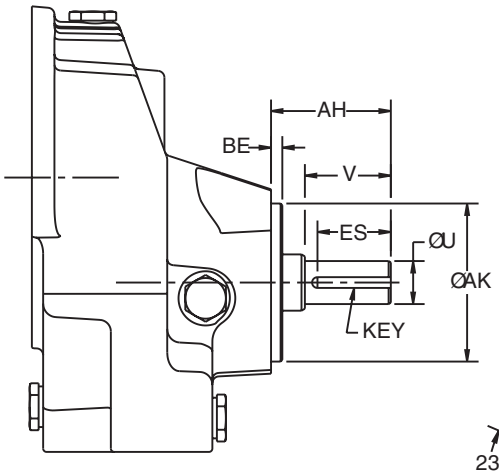
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

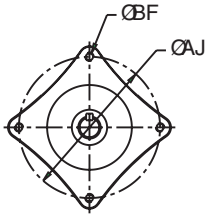
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerance: +.0000; -.001".

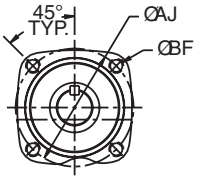
B14 Face Mounting Supplement

Single Reduction

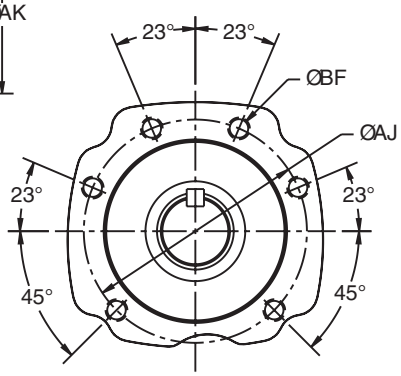




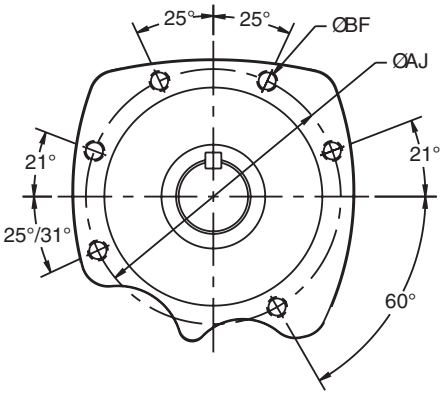
30



31 / 32



33



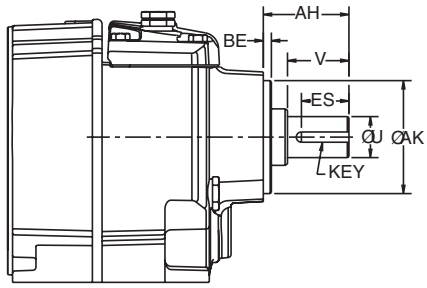
34 / 35

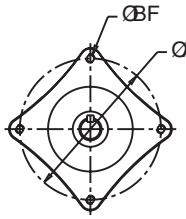
Gear Frame	U [1]	V	AH	AJ	AK [2]	BE	BF	ES	Key
30	0.625	1.88	2.53	3.937	2.362	0.12	M6x.63	1.42	3/16 Sq.
31	0.750	1.50	2.09	3.268	2.756	0.2	M10x.87	1.28	3/16 Sq.
32	1.000	2.00	2.09	3.268	2.756	0.2	M10x.87	1.56	1/4 Sq.
33	1.375	2.75	3.34	4.724	3.937	0.31	M10x.87	2.40	5/16 Sq.
34	2.125	3.00	4.10	5.984	5.118	0.28	M12x.87	2.56	3/8 Sq.
35	2.375	3.50	4.84	7.480	6.100	0.3	M16x1.06	3.06	3/8 Sq.

[1] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

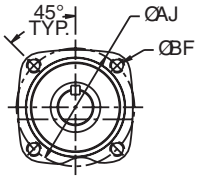
[2] Tolerance is J6.

Multiple Reduction

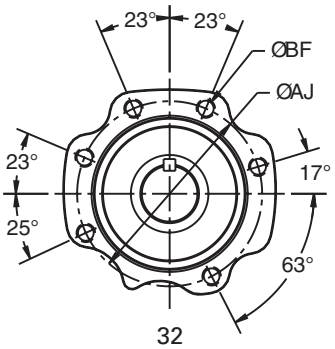




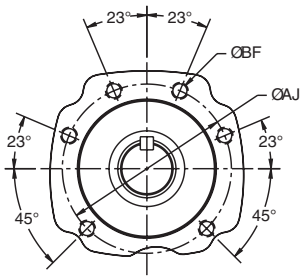
30



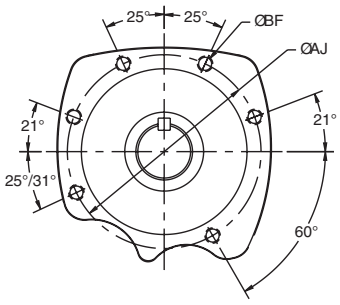
31



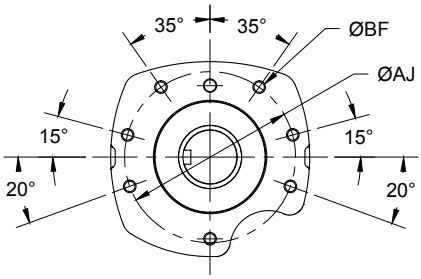
32



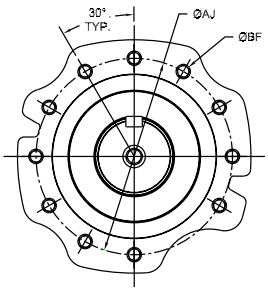
33



34 / 35



36 / 37



38

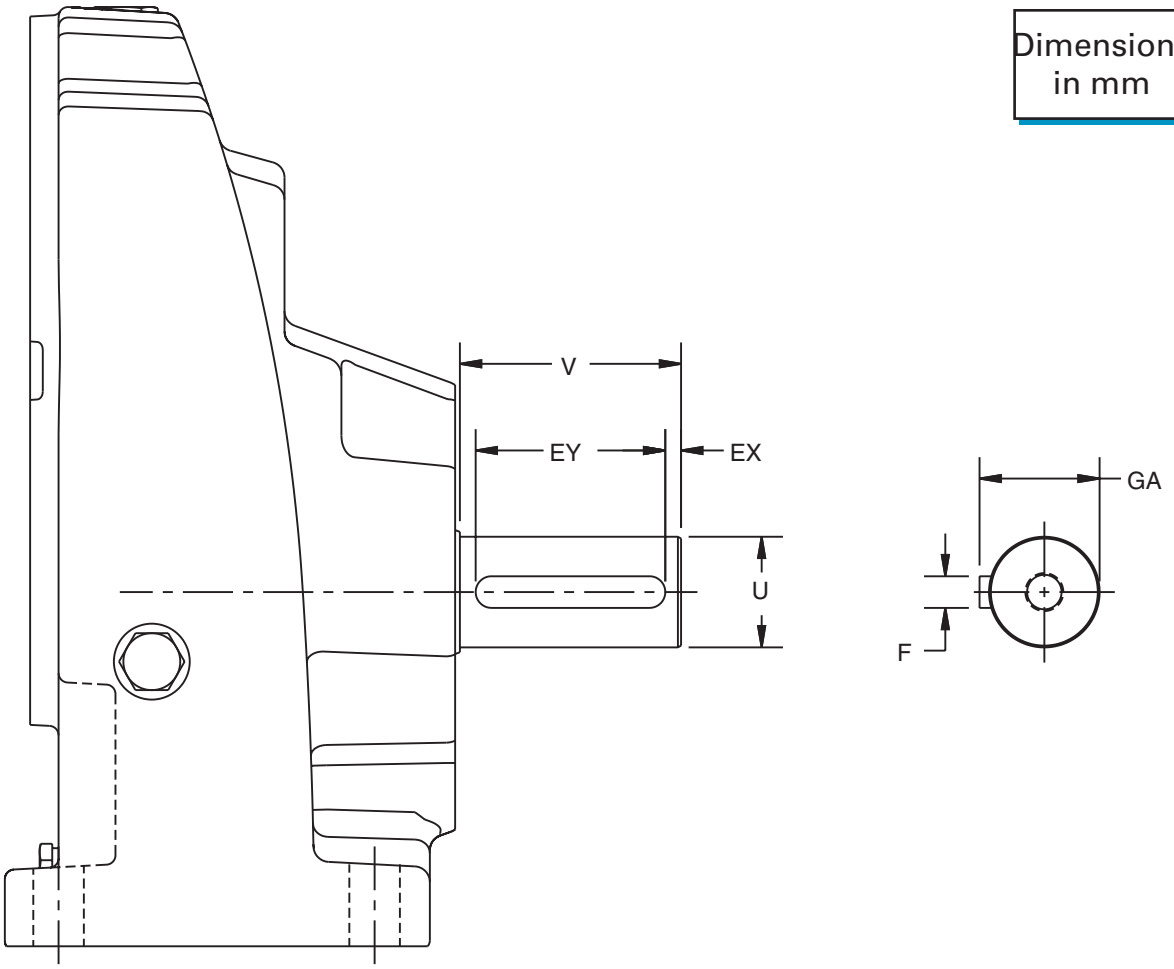
Gear Frame	U [1]	V	AH	AJ	AK [2]	BE	BF	ES	Key
30	0.625	1.50	2.53	3.937	2.362	0.39	M6x.63	1.42	3/16 Sq.
31	1.000	1.50	2.09	3.268	2.756	0.20	M10x.87	1.16	1/4 Sq.
32	1.250	2.50	3.09	3.937	3.228	0.14	M10x.87	2.16	1/4 Sq.
3362,3363	1.500	3.00	3.91	4.842	3.937	-0.14	M10x.87	2.56	3/8 Sq.
3372,3373	1.625	3.15	4.06	4.842	3.937	-0.14	M10x.87	2.78	3/8 Sq.
34	2.125	3.50	4.60	5.984	5.118	0.28	M12x.87	3.06	1/2 Sq.
35	2.375	4.72	6.09	7.480	6.100	0.30	M16x1.06	4.19	5/8 Sq.
36	2.875	5.75	5.83	9.055	5.905	-.16	M16x1.06	4.784	3/4 Sq
37	3.625	7.00	7.08	9.055	7.087	-.16	M20x1.38	5.890	7/8 Sq
38	4.375	9.99	10.26	11.811	9.84	.28	M20x1.38	9.02	1 SQ

[1] Shaft extension tolerance: +.0000"; –.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; –.001".

[2] Tolerance is J6.

SM Foot Mounted - Single Reduction

Dimensions in mm

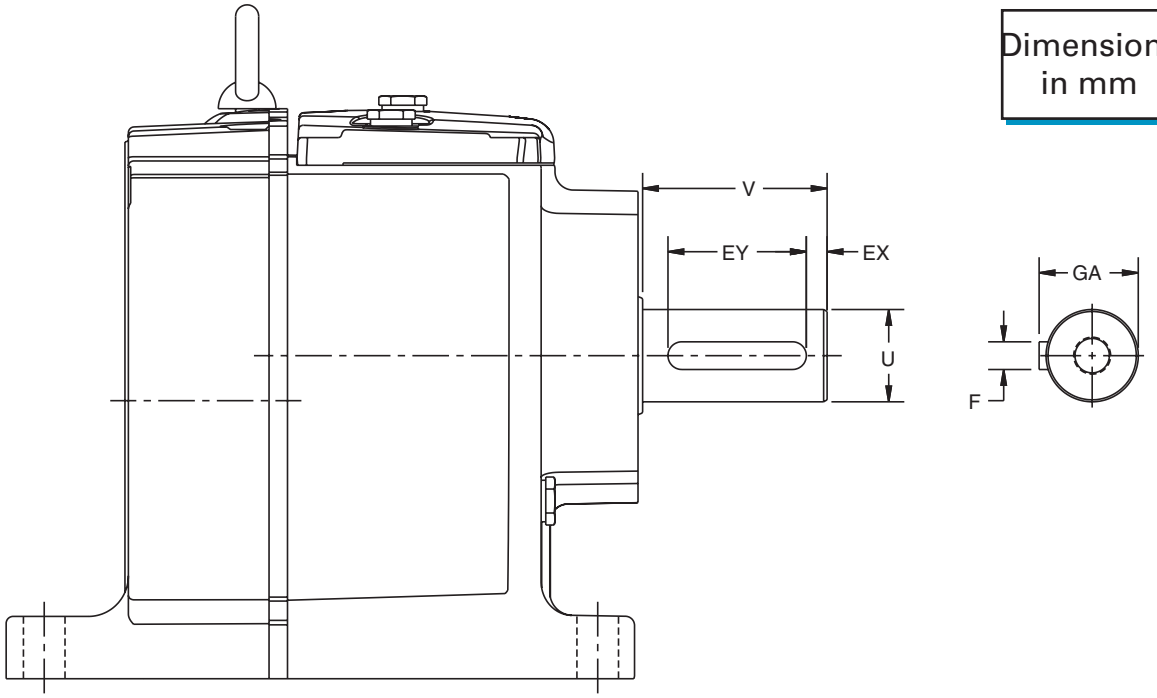


Gear Frame	F	U	GA	V	EX	EY
30	5	16j6	18	40	7	25
31	6	20j6	22,5	40	7	30
32	8	25j6	28	50	5	40
33	10	35k6	38	70	5	60
34	12	40k6	43	80	3	72
35	14	45	48.5	90	5	80

Metric Output Shaft Dimensions

SM Foot Mounted - Multiple Reduction

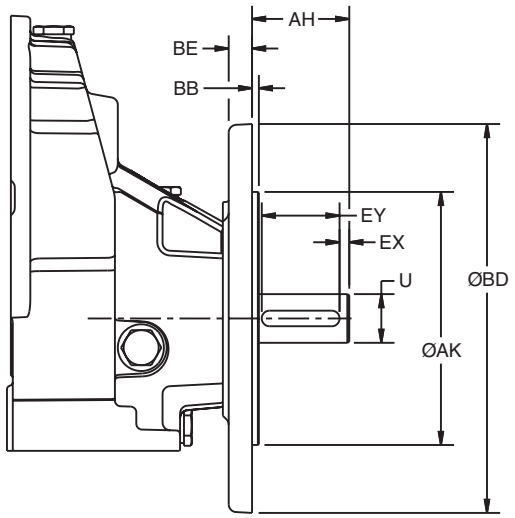
Dimensions in mm

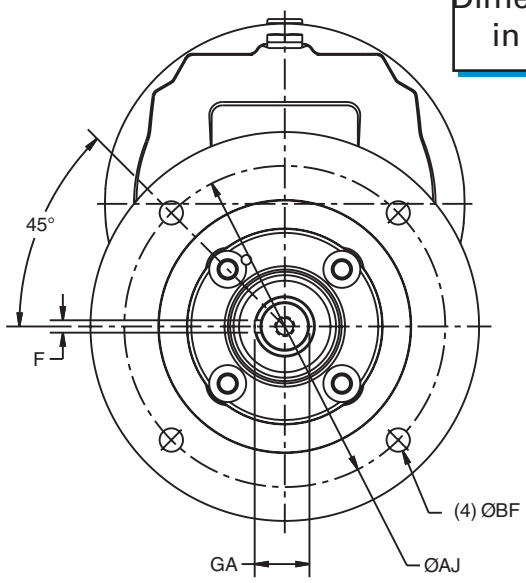


Gear Frame	F	U	GA	V	EX	EY
30	6	20j6	22.5	40	7	25
31	8	25j6	28	50	5	40
32	8	30j6	33	60	6	45
33	12	40k6	43	80	9	60
34	14	50k6	53.5	100	3	90
35	18	60m6	64	120	4	110
36	20	70m6	74.5	140	10	115
37	25	90m6	95	170	12	140
38	28	110m6	116	210	12	180

Flange Mounted - Single Reduction

Dimensions in mm





Gear Frame	F	U	AH	GA	EX	EY
30	5	16j6	40	18	7	25
31	6	20j6	40	22.5	7	30
32	8	25j6	50	28	5	40
33	10	35k6	70	38	5	60

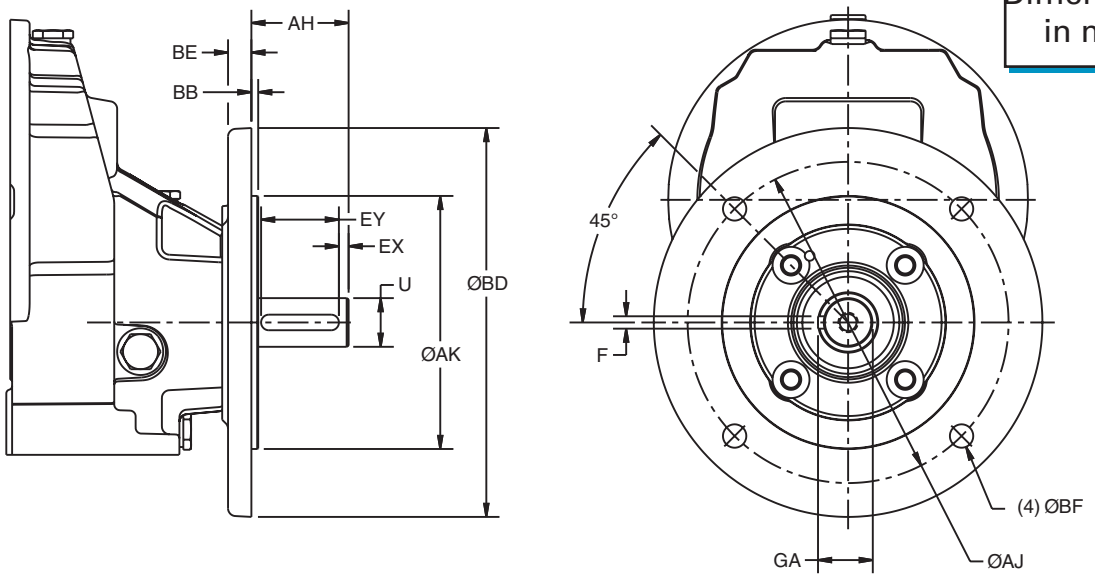
Gear Frame	BSM						BDM1					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	95j6	115	3	140	8	9	80j6	100	3	120	10	7
31	110j6	130	3.5	160	10	9	-	-	-	-	-	-
32	130j6	165	3.5	200	12	12	-	-	-	-	-	-
33	180j6	215	4	250	12	14	-	-	-	-	-	-

Gear Frame	BDM2						BDM3					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	110j6	130	2	160	10	9	130j6	165	3	200	8	9
31	95j6	115	3	140	10	9	-	-	-	-	-	-
32	110j6	130	3.5	160	9	9	-	-	-	-	-	-
33	130j6	165	3.5	200	12	11	-	-	-	-	-	-

Metric Output Shaft Dimensions

Flange Mounted - Single Reduction

Dimensions in mm

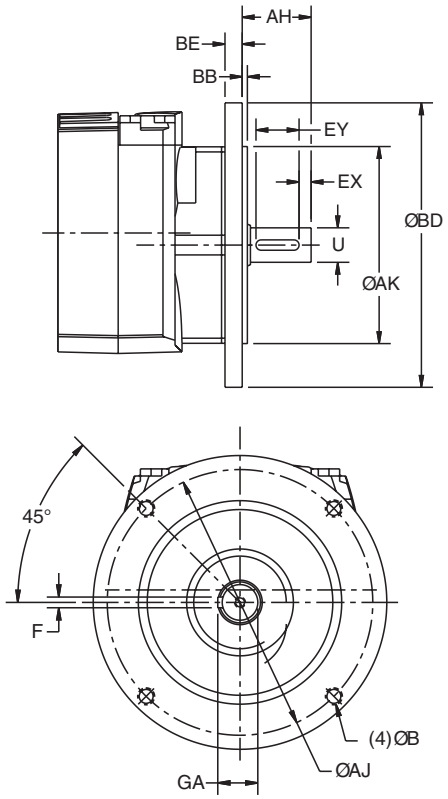


Gear Frame	F	U	AH	GA	EX	EY
34	12	40k6	80	43	3	72
35	14	45	90	48.5	5	80

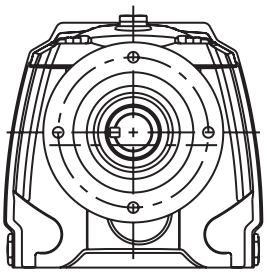
Gear Frame	BSM						BDM2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
34	230j6	265	4	300	15	14	180j6	215	4	250	15	14
35	250	300	5	350	18	18	230	265	5	300	18	14

Flange Mounted - Multiple Reduction

Dimensions in mm



BSM, BDM1, BDM2



BD3 TYPE (31)

Gear Frame	F	U	AH	GA	EX	EY
30	6	20j6	40	22.5	7	25
31	8	25j6	50	28	5	40
32	8	30j6	60	33	6	45
33	12	40k6	80	43	9	6

Gear Frame	BSM						BDM1						BDM2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
30	95j6	115	3	140	8	9	80j6	100	2.5	120	7	7	110j6	130	3	160	8	9
31	130j6	165	3.5	200	10	11	110j6	130	3.5	160	10	9	95j6	115	3.5	140	10	9
32	180j6	215	4	250	12	14	130j6	165	3.5	200	10	11	110j6	130	3.5	160	10	9
33	230j6	265	4	300	12	14	180j6	215	4	250	12	14	130j6	165	3.5	200	12	11

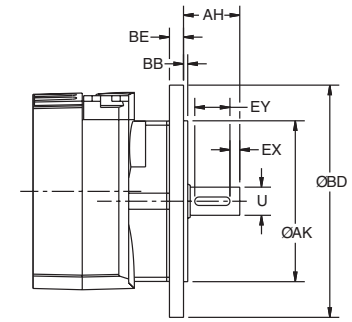
Gear Frame	BDM3					
	AK	AJ	BB	BD	BE	BF
31 (1)	80j6	100	2,5	120	10	7

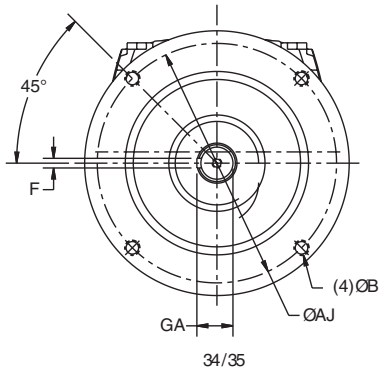
(1) Refer to illustration above for correct hole orientation in BDM3 flange.

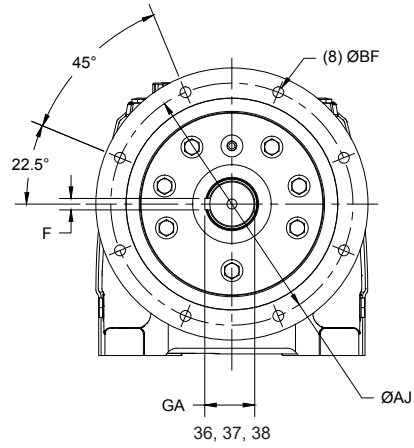
Metric Output Shaft Dimensions

Flange Mounted - Multiple Reduction

Dimensions in mm







Gear Frame	F	U	AH	GA	EX	EY
34	14	50k6	100	53.5	9	85
35	18	60m6	120	64	4	110
36	14	70m6	140	51.5	10	90
37	14	90m6	170	51.5	10	90
38	28	110m6	210	116	12	180

Gear Frame	BS						BD1						BD2					
	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF	AK	AJ	BB	BD	BE	BF
34	250	300	4	350	15	18	230	265	4	300	15	14	180	215	4	250	15	14
35	300	350	5	400	18	18	250	300	5	350	15	18	230	265	5	300	15	14
36	450	500	6	550	20	18	350	400	6	450	20	18						
37	450	500	6	550	20	18	350	400	6	450	20	18						
38	550	600	6	660	16	22	450	500	5	550	20	18						

Product Weights (Lbs.)

Foot Mounted Single Reduction

C-Face Reducers

Gear Frame	Input Size				
	56/140TC	180/210TC	250TC	280TC	320TC
30	11	-	-	-	-
31	24	30	-	-	-
32	35	44	-	-	-
33	53	62	69	-	-
34	-	63	68	70	-
35	-	88	89	92	100

Input Shaft

Gear Frame	Style
	AP
30	9
31	23
32	28
33	55
34	66
35	89

Foot Mounted Multiple Reduction

C-Face Reducers

Gear Frame	Stages	Input Size				
		56/140TC	180/210TC	250TC	280TC	320TC
30	2, 3	17	-	-	-	-
31	2, 3	45	53	-	-	-
32	2, 3	57	66	-	-	-
	4, 5	63	-	-	-	-
33	2, 3	85	94	101	-	-
	4, 5	90	-	-	-	-
34	2, 3	93	95	98	100	-
	4, 5	130	-	-	-	-
35	2, 3	160	163	166	168	178
	4, 5	197	205	-	-	-
36	2,3	-	264	267	269	279
	4,5,6	475	483	-	-	-
37	2,3	-	363	366	368	378
	4,5,6	555	563	-	-	-
38	2, 3	-	660	663	665	675
	4,5,6	920	928	-	-	-

Input Shaft

Gear Frame	Stages	Style		
		AP	Scoop	Top Mt.
30	2, 3	15	-	-
31	2, 3	37	-	-
32	2, 3	50	75	97
	4, 5	55	-	-
33	2, 3	87	120	134
	4, 5	92	-	-
34	2, 3	99	151	169
	4, 5	149	-	-
35	2, 3	198	250	172
	4, 5	235	-	-
36	2,3	308	420	411
	4,5,6	375	410	-
37	2,3	407	503	492
	4,5,6	430	465	-
38	2,3	800	925	900
	4,5,6	855	895	-

Weight Adders

B14 and Flange Mounted

Single Reduction

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	3
32	-1	4
33	-1	8
34	-2	8
35	-2	9

Multiple and Combined

Gear Frame	B14 Face Mount	Flange Mount
30	0	1
31	-1	2
32	-1	4
33	-3	8
34	-5	8
35	-6	9
36	0	21
37	0	21
38	0	35

Lubrication

CbN gearing is shipped with one of the following synthetic lubricants per the table below and fitted with a magnetic drain. Each reducer is filled according to the mounting position specified when ordered. Refer to the unit nameplate and charts below or E-119 for the mounting position arrangement of your unit.

In the case of synthetic oil, the lubricant does not require changing, but it is recommended that the oil level be checked periodically.

Standard Synthetic Gear Oil (Non-Food Grade)

No Backstop

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Fuchs*	Sintogear* 125
Mobil*	Mobilgear* SHC 150
Shell*	Omala* Fluids HD 150

With Backstop (1)

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Shell*	Omala RL 100
Mobil*	SHC 629

Synthetic Gear Oil (Food Grade)

No Backstop

Manufacturer	22°F to 125°F (-20°C to 50°C)
Mobil*	SHC Cibus 150

NOTICE

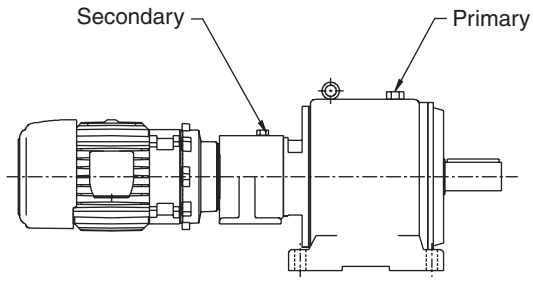
- Never mix synthetic oil and mineral oil.
- Never use extreme pressure (EP) oil in a reducer with a backstop.
- Refer to installation and maintenance manual for mineral oil selection.
- Maintaining the correct oil volume is crucial to avoid damage to gearing and bearings in a gear reducer

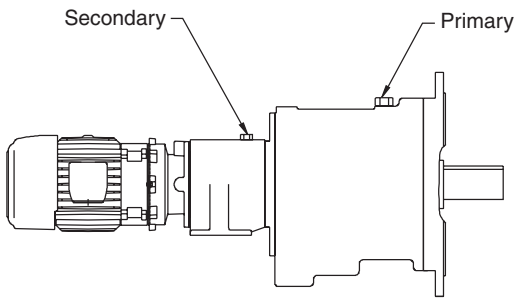
Oil Capacities (U.S. Quarts)

Reduction Stages	Gear Frame	Mounting Positions											
		B3	B5	B6	B7	B8	B52	B53	B54	V1	V3	V5	V6
One	30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
	31	0.37	0.37	0.53	0.53	0.74	0.53	0.74	0.53	0.58	1.06	0.58	1.06
	32	0.26	0.26	0.58	0.58	0.79	0.58	0.79	0.58	0.69	1.27	0.69	1.27
	33	0.95	0.95	1.48	1.48	2.01	1.48	2.01	1.48	2.22	2.22	2.22	2.22
	34	2.11	2.11	3.17	3.38	4.44	3.17	4.44	3.38	4.02	3.17	4.02	3.17
	35	3.38	3.38	5.49	5.28	7.71	5.49	7.71	5.28	6.13	5.81	6.13	5.81
Two	30	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
	30A	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
	31	0.63	0.63	1.00	0.90	1.16	-	-	-	1.22	1.48	1.22	1.48
	32	1.00	1.00	1.85	1.64	2.38	-	-	-	2.38	2.85	2.38	2.85
	33	1.69	1.69	3.49	3.12	4.76	-	-	-	4.76	4.65	4.76	4.65
	34	3.49	3.49	7.40	4.97	7.08	-	-	-	7.93	7.93	7.93	7.93
	35	5.49	5.49	13.20	8.98	13.95	-	-	-	15.53	14.48	15.53	14.48
	36	8.45	8.45	15.85	19.02	23.77	-	-	-	25.36	25.89	25.36	25.89
	37	13.74	13.74	22.19	33.81	40.15	-	-	-	44.91	43.85	44.91	43.85
	38	17.96	17.96	26.42	53.89	61.30	-	-	-	68.68	64.46	68.68	64.46
Three	30	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
	31	0.63	0.63	1.30	0.90	1.16	-	-	-	1.22	1.48	1.22	1.48
	32	1.00	1.00	2.40	1.64	2.38	-	-	-	2.38	2.85	2.38	2.85
	33	1.69	1.69	4.60	3.12	4.76	-	-	-	4.76	4.65	4.76	4.65
	34	3.49	3.49	7.40	4.97	7.08	-	-	-	7.93	7.93	7.93	7.93
	35	5.49	5.49	13.20	8.98	13.95	-	-	-	15.53	14.48	15.53	14.48
	36	8.45	8.45	15.85	19.02	23.77	-	-	-	25.36	25.89	25.36	25.89
	37	13.74	13.74	28.50	33.81	40.15	-	-	-	44.91	43.85	44.91	43.85
	38	17.96	17.96	45.44	53.89	61.30	-	-	-	68.68	64.46	68.68	64.46

*The following are believed to be the trademarks and/or trade names of their respective owners and are not owned or controlled by Regal Beloit Corporation or any of its affiliated companies. Fuchs and Sintogear: Fuchs Petrolube AG; Mobil and Mobilgear: Exxon Mobil Corporation; Shell and Omala: Shell Oil Company.

Lubrication





Foot Mounted Combined Units (U.S. Quarts)

Reduction Stages	Gear Frame	Composition		Mounting Positions											
				B3		B8		B6		B7		V5		V6	
		Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.
Four	3254	3252	3012	1	0.64	2.38	0.64	1.85	0.64	1.64	0.64	2.38	0.64	2.85	0.64
	3374	3372	3012	1.69	0.64	4.76	0.64	3.49	0.64	3.12	0.64	4.76	0.64	4.65	0.64
	3484	3482	3132	3.49	0.63	7.08	1.16	7.4	1	4.97	0.9	7.93	1.22	7.93	1.48
	3594	3592	3132	5.49	0.63	13.95	1.16	13.2	1	8.98	0.9	15.53	1.22	14.48	1.48
	3604	3602	3252	9.45	1	26.15	2.38	15.85	1.85	20.66	1.64	27.74	2.38	28.74	2.85
	3734	3732	3252	14.74	1	42.53	2.38	24.04	1.85	35.45	1.64	47.29	2.38	46.7	2.85
	3844	3842	3482	18.96	3.49	61.3	7.08	28.47	7.4	55.53	4.97	71.06	7.93	67.31	7.93
Five	3255	3253	3012	1	0.64	2.38	0.64	2.4	0.64	1.64	0.64	2.38	0.64	2.85	0.64
	3375	3373	3012	1.69	0.64	4.76	0.64	4.6	0.64	3.12	0.64	4.72	0.64	4.65	0.64
	3485	3483	3132	3.49	0.63	7.08	1.16	7.4	1	4.97	0.9	7.93	1.22	7.93	1.48
	3595	3593	3132	5.49	0.63	13.95	1.16	13.2	1	8.98	0.9	15.53	1.22	14.48	1.48
	3605	3602	3253	9.45	1	26.15	2.38	15.12	2.4	20.66	1.64	27.74	2.38	28.74	2.85
	3735	3732	3253	14.74	1	42.53	2.38	24.62	2.4	35.45	1.64	47.29	2.38	46.7	2.85
	3845	3842	3483	18.96	3.49	63.68	7.08	28.85	7.4	55.53	4.97	71.06	7.93	67.31	7.93
Six	3606	3603	3253	9.45	1	26.15	2.38	18.28	2.4	20.66	1.64	27.74	2.38	28.74	2.85
	3736	3733	3253	14.74	1	42.53	2.38	30.93	2.4	35.45	1.64	47.29	2.38	46.7	2.85
	3946	3843	3483	18.96	3.49	63.68	7.08	47.87	7.4	55.53	4.97	71.06	7.93	67.31	7.93

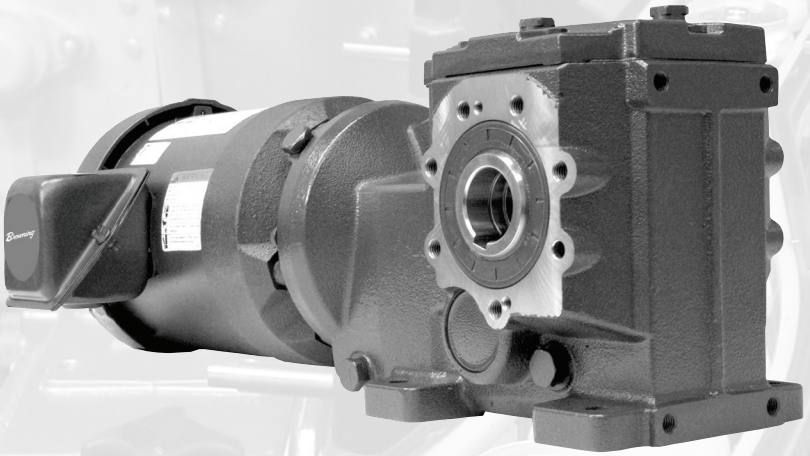
Flanged Mounted Combined Units (U.S. Quarts)

Reduction Stages	Gear Frame	Composition		Mounting Positions					
				B5		V1		V3	
		Prim.	Sec.	Prim.	Sec.	Prim.	Sec.	Prim.	Sec.
Four	3254	3252	3012	1	0.64	2.38	0.64	2.85	0.64
	3374	3372	3012	1.69	0.64	4.76	0.64	4.65	0.64
	3484	3482	3132	3.49	0.63	7.93	1.22	7.93	1.48
	3594	3592	3132	5.49	0.63	15.52	1.22	14.48	1.48
	3604	3602	3252	9.45	1	27.74	2.38	28.74	2.85
	3734	3732	3252	14.74	1	47.29	2.38	46.7	2.85
	3844	3842	3482	18.96	3.49	71.06	7.93	67.31	7.93
Five	3255	3253	3012	1	0.64	2.38	0.64	2.85	0.64
	3375	3373	3012	1.69	0.64	4.76	0.64	4.65	0.64
	3485	3483	3132	3.49	0.63	7.93	1.22	7.93	1.48
	3595	3593	3132	5.49	0.63	15.53	1.22	7.93	1.48
	3605	3602	3253	9.45	1	27.74	2.38	28.74	2.85
	3735	3732	3253	14.74	1	47.29	2.38	46.7	2.85
	3845	3842	3483	18.96	3.49	71.06	7.93	67.31	7.93
Six	3606	3603	3253	9.45	1	27.74	2.38	28.74	2.85
	3736	3733	3253	14.74	1	47.29	2.38	46.7	2.85
	3946	3843	3483	18.96	3.49	71.06	7.93	67.31	7.93

Notes:

Browning®

OtN Helical-Bevel Right Angle Gearmotors and Speed Reducers

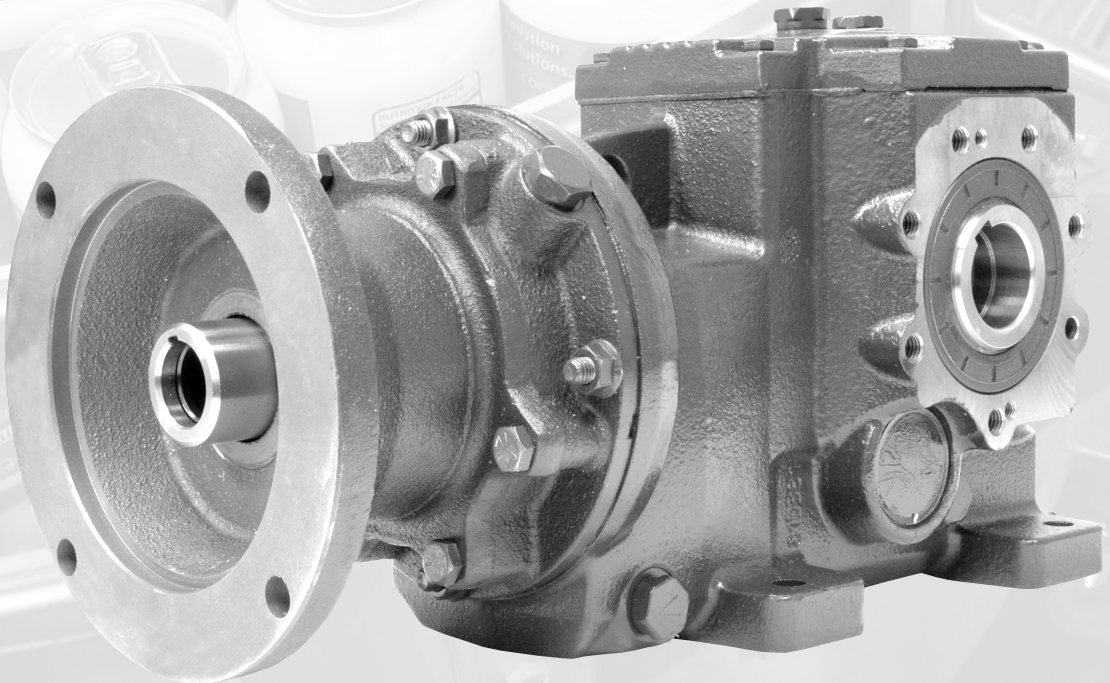


Industries

- ❑ Food and Beverage
- ❑ Warehousing
- ❑ Parcel and Package Sortation
- ❑ Oil
- ❑ Recycling
- ❑ Airport
- ❑ Waste Treatment

Applications

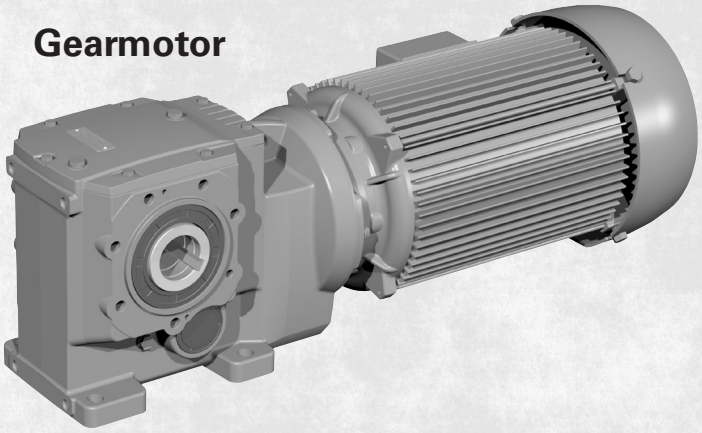
- ❑ Unit Handling Conveyors
- ❑ Mixers and Agitators
- ❑ Turntables
- ❑ Chain Conveyors
- ❑ Screw Conveyors
- ❑ Baggage Handling Conveyor
- ❑ Sludge Collection Tanks



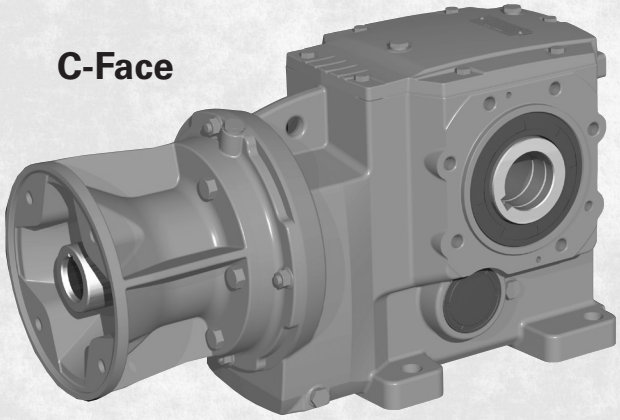
Browning®

OtN Helical-Bevel Right Angle Gearmotors and Speed Reducers

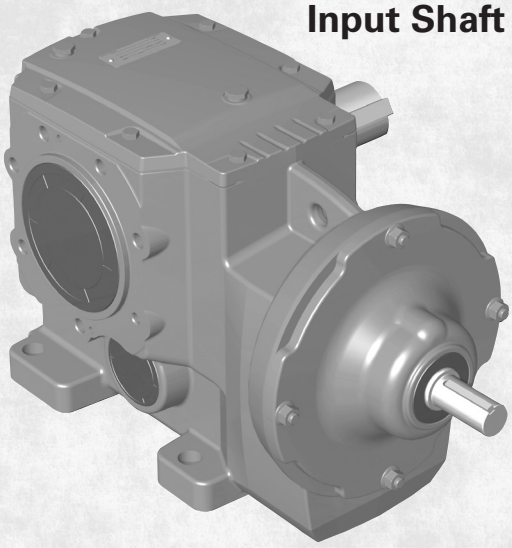
Gearmotor

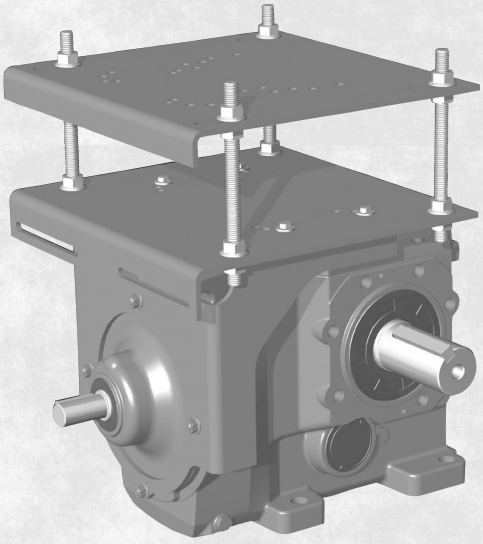


C-Face

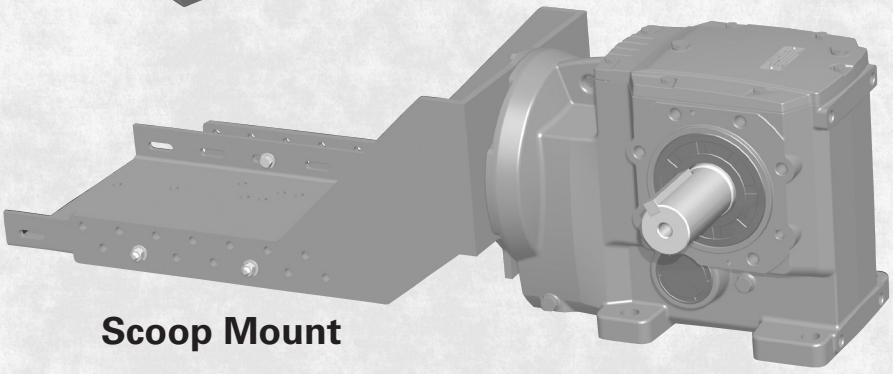


Input Shaft

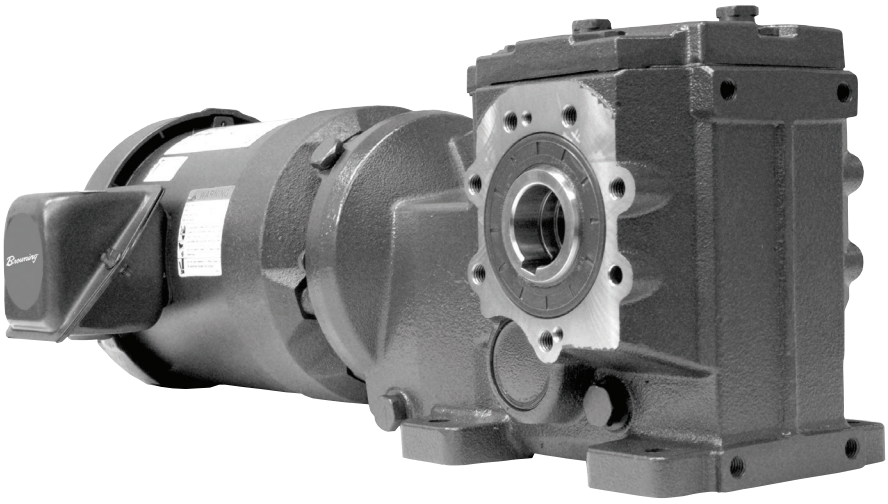




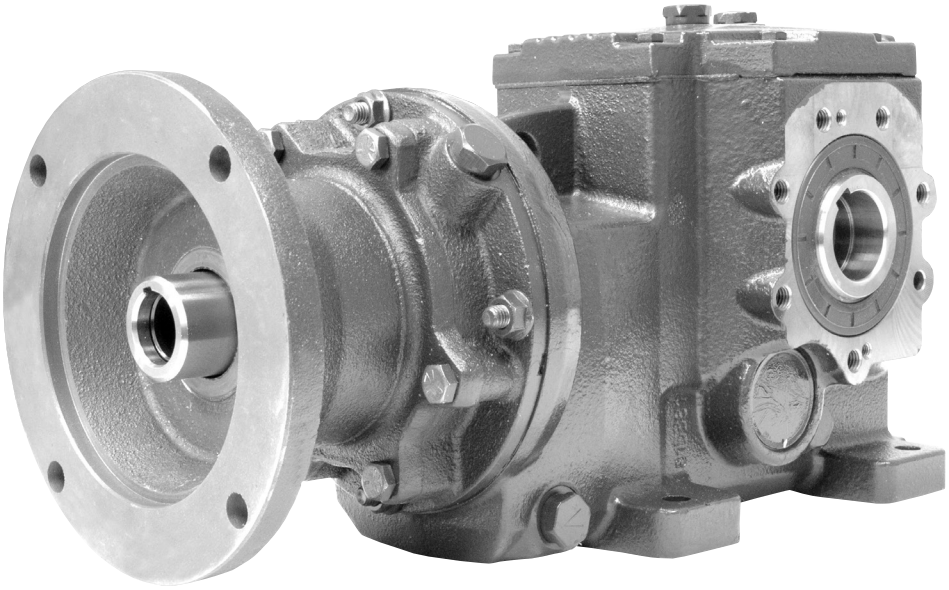
Top Mount



Scoop Mount

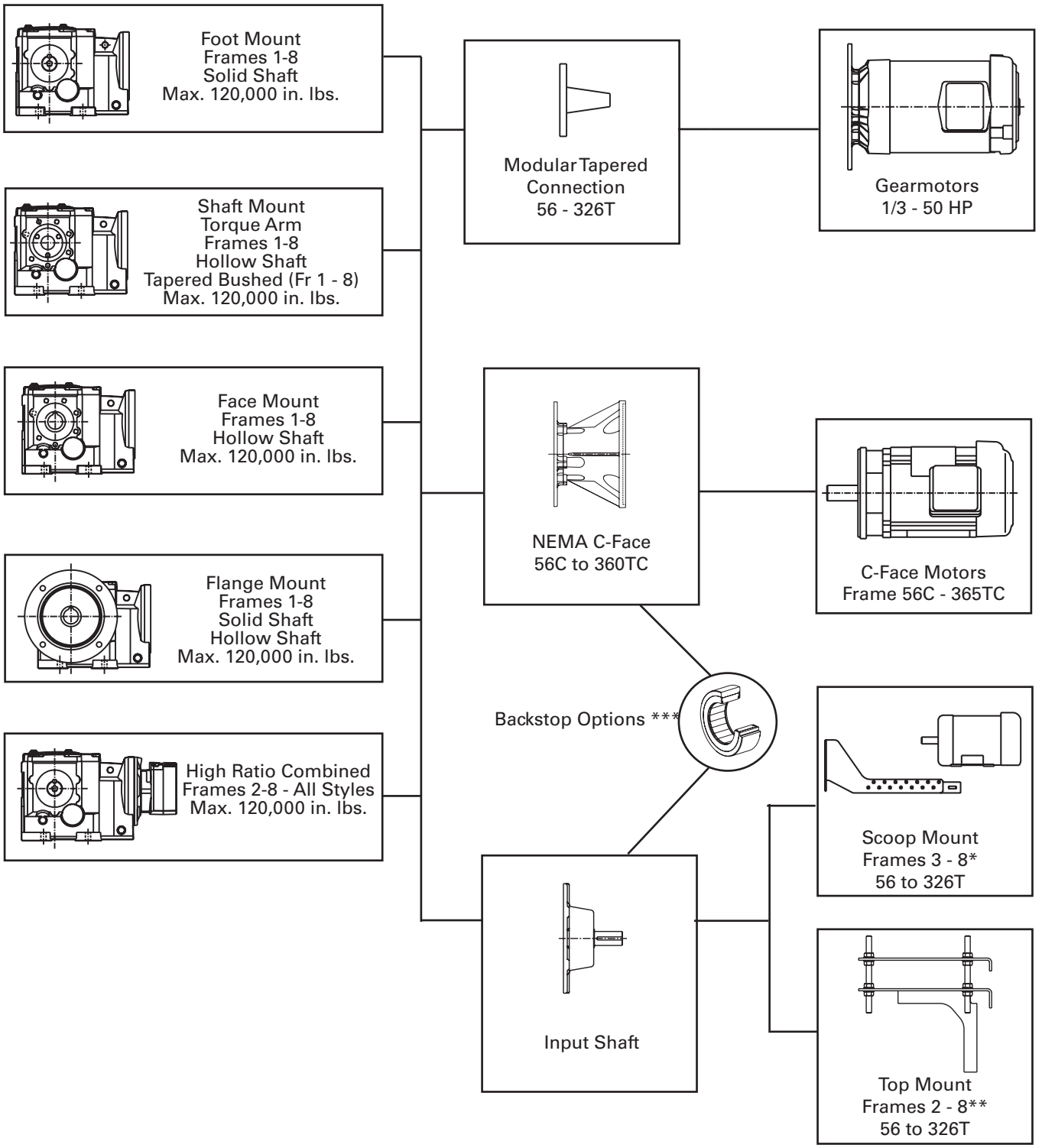


Gearmotor Section .....Page F-6 - F-103



Reducer Section.....Page F-104 - F-212

Mounting Versatility and Size Range



* Refer to page F-113 for availability based on gear and motor frame size.
** Refer to page F-113 for availability based on gear and motor frame size.
***Not available for frames 3245 and 3365A.

General Information

General

OtN helical-bevel right angle gearmotors and speed reducers incorporate the latest in design and manufacturing technologies to deliver an energy efficient, reliable, helical-bevel gear train. This gearing can be combined with either a constant or variable speed motor if a gearmotor is desired. The latest generation of OtN gearing is 98% efficient per gear stage, with two, three, five or six stages available for ratios of 3.55:1 to 10,000:1. OtN is available in a wide variety of mounting arrangements that include foot mount, face mount, flange mount or shaft mount with a torque arm. The output can be left, right, or dual solid shaft or shaft mounted with hollow quill or tapered bushing.

Gearmotors

Three phase OtN gearmotors in non-hazardous enclosures are offered as standard with (PE) premium efficiency motors starting at 1/3 HP at short lead-times. These same PE motors include full inverter duty construction features including winding thermostats and special winding designs complying with NEMA MG1 Part 31. These motors meet or exceed the requirements in the US and Canada for energy efficiency to deliver the lowest operating cost, lowest temperature rise on sine wave power, and wide constant torque speed ranges on VFD power sources with a 3 year warranty for the End User. Regal offers several motor enclosure options under the PE umbrella including CorroGard™ cast iron exterior construction for the most hostile industrial environments. In addition, OtN gearmotors up to 10 HP with TEFC are available with motor mounted failsafe brakes. Regal also offers gearmotors in single phase TEFC designs to 5HP, and dual label Explosionproof 3 phase gearmotors from .33 to 5 HP. Explosionproof gearmotors ≥ 1 HP are premium efficiency.

Housing

OtN 3000 style S2 offers mounting that is designed to allow easy replacement of many other manufacturers' footprint and flange mounting dimensions. An alternative S1 style is also available and allows for mounting to allow for replacement of older Series 2000 OtN in popular sizes for servicing the aftermarket. All housings are cast from high-strength cast iron. Additionally, the new, quill style c-face of OtN3000 is often shorter than competitive designs, while allowing room for a fully rated backstop.

Performance

OtN designs deliver ratings that are amongst the highest in the industry for similar frame sizes. For replacements, this means that dimensional replacements will exceed the original unit ratings for longer life. In new applications, this can mean cost savings through downsizing versus the competition. Each OtN unit is also supplied factory-filled with high quality synthetic hydrocarbon lubricant, an extra cost option for competitive units. This offers operation over a wide temperature range with minimal maintenance required.

Flexibility

The OtN 3000 range offers a shaft mounted version that incorporates the tapered bushing system from the Browning TorqTaper Plus® shaft mount reducer. This allows each frame size to be usable on a variety of shaft sizes. It also provides a proven bushing system with centering ring that reduces wobbling on the shaft for reduced wear and tear. All sizes are also available with a hollow quill sized to match popular competitive units. The bushing version of OtN 3000 includes a bushing to match OtN 2000 equivalent frames for replacements. OtN 3000 shaft mounted versions include hollow and tapered bushed versions to cost effectively fit onto a range of driven shaft diameters. Final mounting of these shaft mount designs is easily done using torque arm kits and bushing guard kits. There are two flanges available for most OtN 3000 frame sizes, one of which is competitively interchangeable.

All PE three phase non-explosionproof motors up to 7.5 HP are designed and delivered for use on inverters and suitable for a minimum of 10:1 constant torque speed ranges at full gearmotor output torque. C-Face inputs utilize a compact quill design with a non-metallic liner and metal key to eliminate fretting corrosion making motor removal easy, and a compact envelop with shorter overall length. Each housing can be oriented in different mounting positions by a minor adjustment in oil level and relocation of the breather and drain plug locations.

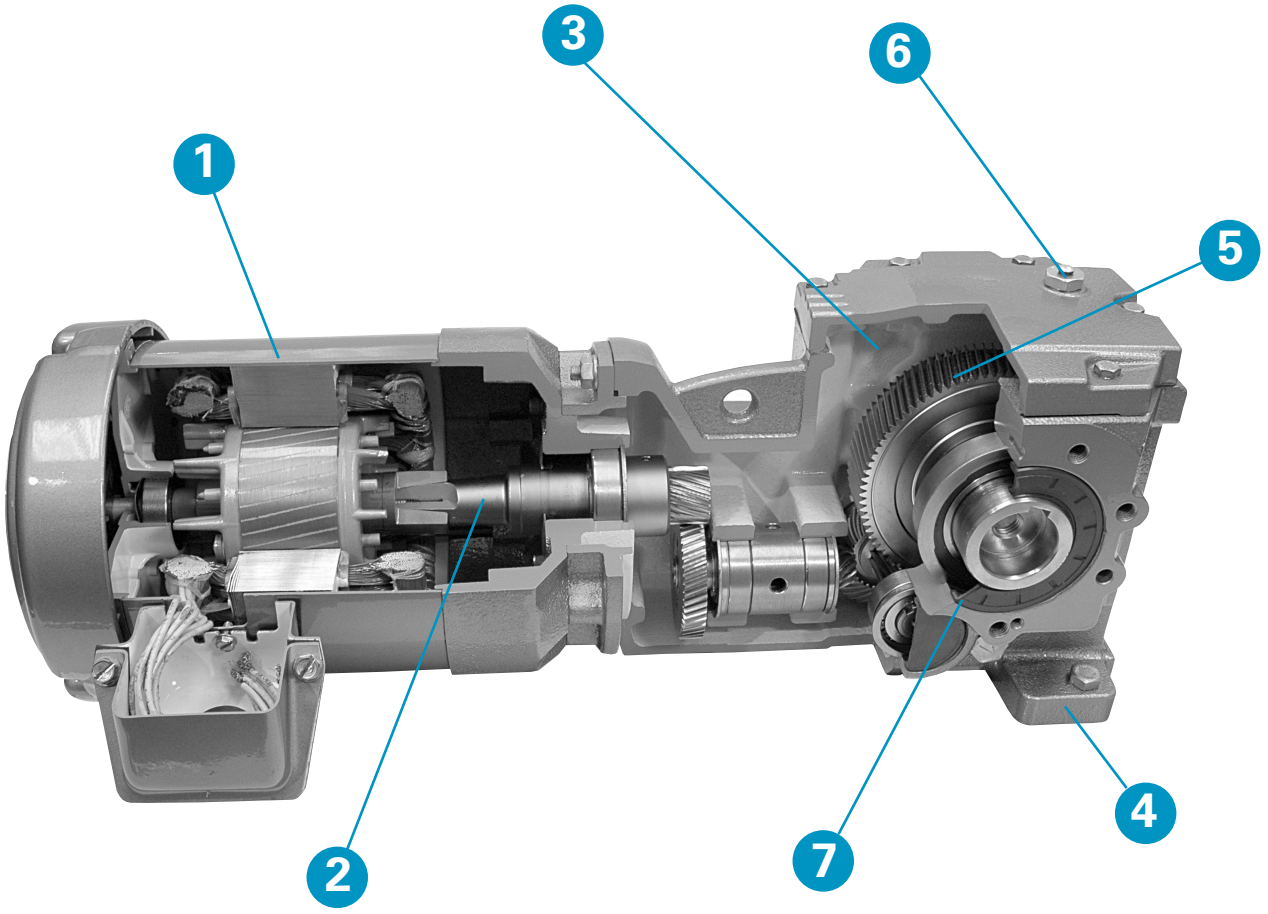
Reliability

Gear housings 1 to 5 are fitted with normally closed breathers, excluding outside contaminants and preserving low internal operating pressures. Gear housing 6 to 8 are fitted with a combination breather and dipstick. The dipstick makes periodic preventative maintenance of oil volumes quick and accurate. All oil seals operate on plunge ground shaft journals to deliver low temperatures and extended seal life. By standardizing on Inverter Duty construction for all PE OtN gearmotors, one motor can be stocked per HP/voltage for easy, on-site replacement of a motor whether that gearmotor is used on a VFD or on line power up through 575V. PE OtN Gearmotors offer a standard 3 year warranty on the motor.

Table of Contents

Section	Page
Design Features	F-7
Mounting Versatility and Size Range	F-8
Motor Options	F-9
Gearmotor Selection (constant speed)	F-10 - F-11
Catalog Nomenclature	F-12 - F-15
Gearmotor Output Brackets and Shafts	F-13
Gearmotor Mounting Positions	F-14
Standard Motor Input Types	F-15
Electrical Connection Options	F-16
Modifications, Options and Accessories	F-17 - F-19
Torque Reaction Arms	F-20
Tapered Bushing Selections	F-21
AGMA Application Classifications	F-22 - F-24
Gearmotor Selection Tables	F-25 - F-57
Dimension Prints with Standard TEFC Motors	
Output Shafted Foot Mount	F-58 - F-64
Output Shafted Flange Mount	F-65 - F-71
Finished Bore Hollow Shaft	F-72 - F-78
Finished Bore Hollow Shaft Face Mount	F-79 - F-85
Finished Bore Hollow Shaft Flange Mount	F-86 - F-92
Taper Bushed Shaft Mount	F-93 - F-99
Alternate Motor End Dimension	F-100 - F-102
Motor Brake Dimension Supplement	F-102
Gearmotor Weights	F-103
Optional "V" Mounting Position Foot Mount Dimensions	F-210
Lubrication	F-212
Motor Performance Data	Section H

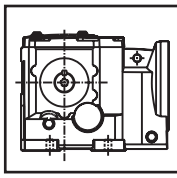
Type OtN Helical-Bevel Series 3000 PE Gearmotor Features...



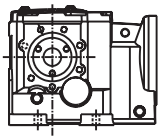
Design Features

1. **Premium Efficiency/Inverter Duty Motor Design Standard**
   - Any non-XP 3 phase gearmotor
   - XP 3 phase gearmotors ≥ 1HP are Premium Efficiency
2. **Innovative Self-Locking, Self-Aligning Taper Shaft Motor Connection**
   - Easy on-site motor replacement.
   - Change motor without draining oil, breaking the gearcase seal, or changing primary pinion.
3. **Gearbox Supplied Factory Filled with Synthetic Hydrocarbon Oil**
   - Wide temperature range and longer life.
4. **Corrosion and Shock Resistant Cast Iron Housing**
   - One piece, reinforced and ribbed for extra strength.
5. **High Efficiency Helical-Bevel Gears. 98% per Stage**
   - Helical gearing is case hardened and then skived, superfinished or ground.
   - All gears heat shrunk on shafts or mounted on self-locking tapered shafts and keyed for high shock load capability.
6. **Multiple breather locations. Breathers are normally-closed to exclude external contaminants**
   - Frame 6 to 8 use open breathers incorporating a dipstick
7. **Double Lip Seals on Heat Treated, Plunge Ground Shafts**

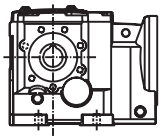
Mounting Versatility and Size Range



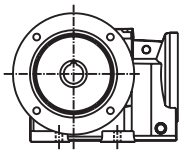
Foot Mount
Frames 1-8
Solid Shaft
Max. 120,000 in. lbs.



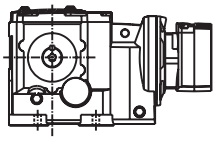
Shaft Mount
Torque Arm
Hollow Shaft
Tapered Bushed
Frames 1-8
Max. 120,000 in. lbs.



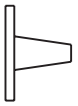
Face Mount
Frames 1-8
Hollow Shaft
Max. 120,000 in. lbs



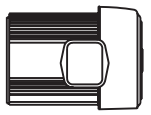
Flange Mount
Frames 1-8
Solid Shaft
Hollow Shaft
Max. 120,000 in. lbs



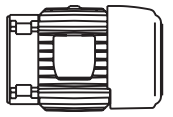
High Ratio Combined
Frames 2-8 - All Styles
Max. 120,000 in. lbs



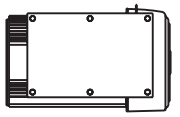
Modular Input Assembly
Tapered Connection



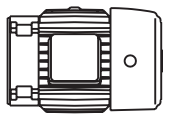
Three Phase TEFC
1/3 – 50 HP



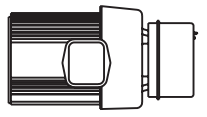
CorroGard® Motor
1/3 – 50 HP



Single Phase TEFC
1/3 – 5 HP



Explosion Proof
1/3 – 5 HP

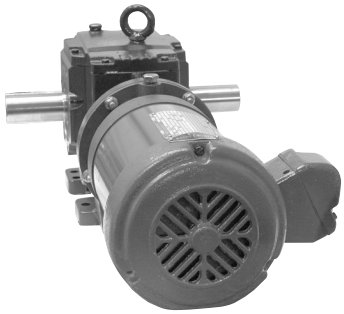


Brakemotor
1/3 – 10 HP

Motor Options

TEFC – Three Phase

- Premium Efficiency/Inverter Duty PE Gearmotors standard
  - 60 Hz from .33 to 50 HP
  - Constant torque 60-6Hz to 7.5 HP, 90-6Hz on all HPs
  - Three year motor warranty
  - Meet or exceed NEMA premium efficiency on line power
- Premium Efficiency 50 Hz option to meet EU IE3 specs through 7.5 HP
- High Efficiency (lower cost) option in frac. HP sizes
- Failsafe brake option available through 10 HP in IP23 enclosure

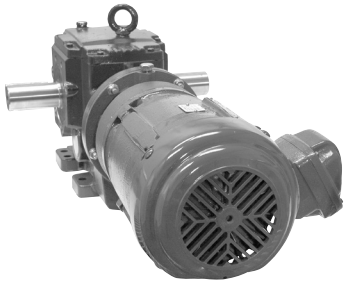


CorroGard® - Three Phase

- Designed for wet, outdoors or corrosive conditions of waste treatment, mining, lumber, and chemical processing industries
- Premium Efficiency/Inverter Duty PE Gearmotors standard
  - 60 Hz from .33 to 50 HP
  - Constant torque 60-6Hz to 7.5 HP, 90-6Hz on all HPs
  - Three year motor warranty
  - Meet or exceed NEMA premium efficiency on line power
- All cast iron construction (note: 56/140T frames are rolled steel)
- High Efficiency (lower cost) option in frac. HP sizes
- Design B, Class F, 1.25 SF through 5HP and 1.15 SF in larger HPs

TEFC – Single Phase

- For agricultural, material handling, textile and pumping applications
- 1.25 service factor up to 1.5 HP
  - (1.0 service factor @ 2 HP)
  - (1.15 service factor @ 3-5 HP)
- Capacitor start/Induction Run (capacitor run above 2 HP)
- Class B insulation, continuous duty, reversible



Explosion Proof

- Designed for most petrochemical, grain, mining and chemical applications
- Class I, group D and Class II, groups F & G, T3B
- Premium Efficiency is standard ≥ 1 HP
- Cast iron construction
- Class F insulation, Class B rise and winding thermostats standard
- 40°C ambient, NEMA B design, continuous duty

*UL is believed to be a trade name and/or trademark of Underwriters Laboratories, Inc., and is NOT owned or controlled by Regal Beloit Corporation or any of its affiliates.

Selection Information

1. Input HP
   - Based on application data

2. Speed / ratio
   - Obtain either desired output speed (RPM) or gearbox ratio based on application.

3. Mechanical service factors - gears
   - There are three standard classifications for gearmotor applications:

     Class I - uniform loading, 3-10 hours per day, service factor 1.0 (minimum).

     Class II - uniform loading over 10 hours per day or moderate shock loading up to 10 hours per day; service factor 1.4 (minimum).

     Class III - moderate shock loading over 10 hours per day or heavy shock loading up to 10 hours per day; service factor 2.0 (minimum).

   - The tables on pages F-22 through F-24 are based on past operating experience within the industries listed and information gathered by AGMA. If the user has data reflecting greater severity than normal industry usage, then the AGMA class should be increased.

   - Choose the AGMA class for your given application based on this criteria. If your application cannot be found, use the following table to determine the service factor.

Duty Cycle	Hours Operation	Uniform Load U	Moderate Shock Load M	Heavy Shock Load V
Continuous	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Frequent Starts/Stops*	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

*Greater than 10 per hour

Size Selection

Step 1 -Locate gearmotor selection tables (pages F-25 - F-57) based on motor HP.

Step 2 -Choose the appropriate nominal speed or ratio required.

Step 3 -Select the correct gearmotor based on AGMA class or service factor determined from selection information.

Step 4 - Verify overhung load ratings where required (see below).

Overhung Load

When a sprocket, sheave, pulley, or pinion is mounted on the output shaft of a gearmotor, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

Where:
OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
V-Belt	1.50
Timing Belts	1.25

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Selection Example

A right angle, foot mounted gearmotor is required to operate a uniformly loaded belt conveyor at 30 RPM, 24 hours per day. An 11" diameter sprocket is mounted at the end of the shaft and drives the conveyor with a chain drive. The customer has specified a 230/460 VAC, 3-phase, TEFC Premium efficiency motor rated 5 HP. Shaft extension is to be on the right, viewing the motor fan cover. The unit will be in the normal floor mounted position with the motor horizontal and the mounting feet on the bottom.
Refer to AGMA service classification table on page F-22.

Application	Load	Class	
		Up to 10 Hrs/Day	Over 10 Hrs/Day
Conveyors – Uniformly Loaded or Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	U	I	II

Since this application operates 24 hours per day, a Class II service factor is required.

Step 1... Locate a gearmotor for 5 HP on page F-45.

Step 2... Find a nominal speed closest to the 30 RPM output required.

Step 3... Select the row in the table for Class II service factor.

Output rpm	AGMA Class	Service Factor	Output Torque in-lb	OHL lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types
31	I,II	1.4	9661	2875	56	3473	184T	T,C,S,X
28	I	1.3	10491	2875	63	3473	184T	T,C,S,X

30 rpm falls between these two lines in the selection table, but the 28 rpm line doesn't meet the Class II service factor requirement. Size 3473 gear frame with 56:1 nominal ratio and 31 rpm output is the best selection.

Step 4... Verify that the Overhung Load Rating is sufficient for the applied load.

$$r = \frac{\text{Sprocket Diameter}}{2} \quad \frac{11}{2} = 5.5"$$

K = 1.0 (chain drive)
LLF = 1.2 (sprocket on end of shaft)
HP = 5

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r} = \frac{63025 \times 5 \times 1.0 \times 1.2}{31 \times 5.5} = 2217.9 \text{ lbs.}$$

Since the gearmotor output OHL rating is 2875 lbs (see selection table) and this is greater than the applied OHL of 2217.9 lbs, the selection is fine. If the OHL rating was too low, the sprocket diameter or gear frame could be increased.

Complete the Process by Building a Complete Part Number
Catalog designation (see "Catalog Nomenclature" page F-12):

OtN • 3473 • S2 • B33G • 56 • PT24 • 184T • 5

The codes indicate the following: Frame 3473 OtN Gearmotor, S2 = the standard output shaft and mounting dimensions, B = Floor Mount, 33 = No Faces or Flanges, G = Single Shaft on Right Facing Motor Fan, 56:1 Ratio, PT24 = 230/460V Premium efficiency/ Inverter Duty TEFC Motor, 184T Motor Frame, 5 HP. Page F-14 shows mounting positions, page F-13 explains output shaft and face or flange positions, and page F-15 shows motor types.

OtN • 34 7 3 • S2 • B 33 G • 22.4 • PT24 • 145T • 1.5 • G11

See pages F-13 - F-14

Browning® Right-Angle Helical-Bevel	Series	Reducer Size		Stages	Shaft & Foot Dimensions [1]	Mounting Position	Output Face/ Flange Right-Left Viewed From Input End	Output Shaft Configuration Viewed from Input End	Nominal Gear Ratio	Input Type	Motor Frame	Motor HP	Modification(s)
	SERIES 3000	31	3	2= 2 stages	S2 = Industry interchange dimensions	B = Floor mount P = Ceiling mount H = Wall mount, input left T = Wall mount, input right V = Input vertical up W = Input vertical down	3 = Standard round 4 = Face mount 5 = Standard dimension flange mount 6 = Alternate dimension flange mount	G = Shaft right D = Shaft left X = Dual shaft C = Finish bore B = Tapered bushed	22.4 = 22.4:1 Use nominal ratio selected from gearmotor selection tables	Motor type selected from catalog designations column in standard motor input from table on page F-15	56 143T 145T 145TY 182T 184T 213T 215T 254T 256T 284T 286T 324T 326T	0.33 0.50 0.75 1 1.5 2 3 4 5 7.5 10 15 20 25 30 40 50	Select from modifications listed on pages F-17 to F-19
		32	4	3(A) = 3 stages									
		33	6	5 = 5 stages									
		34	7	6 = 6 stages	S1 = OtN2000 replacement dimensions								
		35	8										
		36	9										
		37	0										
		38	2										

[1] Shaft and critical mounting dimensions match either OtN2000 or SEW® "K" Series units. These dimensions include the mounting base, output flanges, output shaft diameter, distance from housing center line to shaft tip, and output quill diameter. The B14 mounting faces and overall product envelope (height, width, depth) do NOT match.

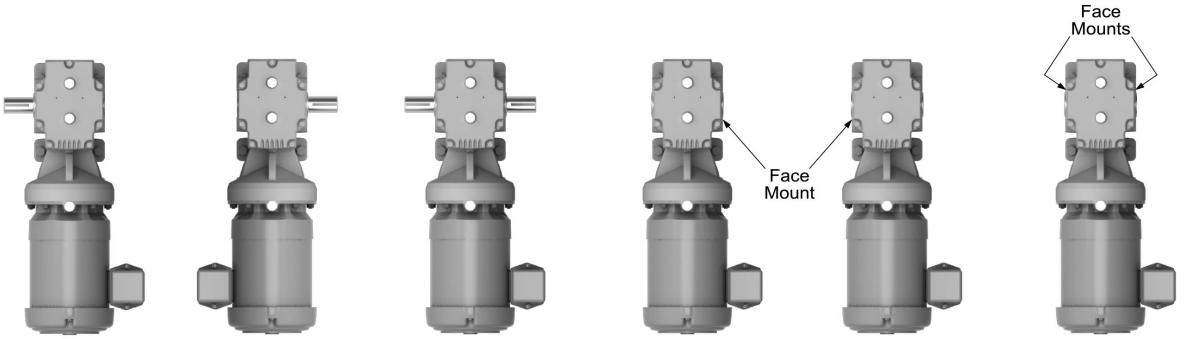
SEW is believed to be a trade name of SEW-Eurodrive GMBH & Co. and is NOT owned or controlled by Regal Beloit Corporation.

Regal cannot and does not represent or warrant the accuracy of this information.

Output Flange Sizes

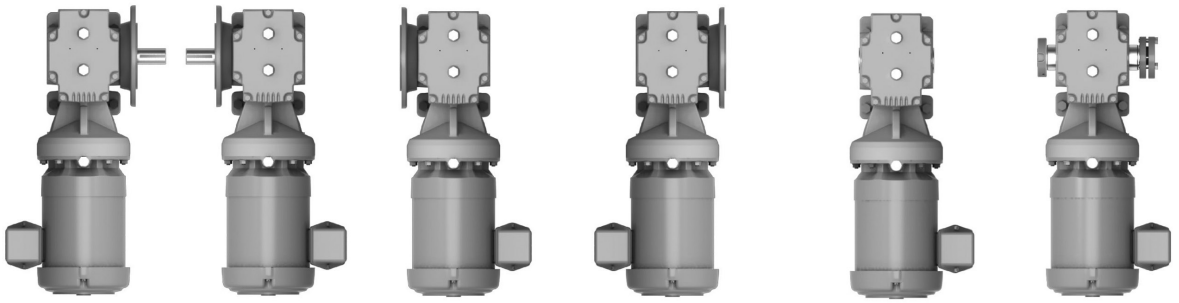
Flange Dimensions (mm)									
BD	165	200	250	300	350	400	450	550	660
AK	110	130	180	230	250	300	350	450	550
AJ	130	165	215	265	300	350	400	500	600
Gear Frame	Output Flange Type Designation Code								
31	5								
32		5	6						
33			5	6					
34				5	6				
35					5	6			
36							5	6	
37							5	6	
38								5	6

Brackets and Shaft



33D 33G 33X 43C 34C 44C

Examples are Top Views



53G* or 63G | 35D* or 36D | 35C* or 36C | 53C* or 63C | 33C | 33B**

OtN Frame Size	Shaft and/or Flange Config.	Foot Mounted			Face Mounted				Flange Mounted								Shaft Mounted	
		Solid Shaft			Hollow Shaft				Solid Shaft				Hollow Shaft					Bushed
		33G	33D	33X	33C	34C	43C	44C	53G	63G	35D	36D	53C	63C	35C	36C	33C	33B **
31	S2	●	●	●	●	●	●	●	●	-	●	-	●	-	●	-	●	●
32	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	-	-	-	-	-	-	-	●[1]	-	●[1]	-	-	-	-	-	-	-
33	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
33A	S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
34	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
35	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
36	S2	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	-	-	-	-	-	-	-	-
37	S2	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

[1] Option only for 3243 and 3245 frame/reduction combinations

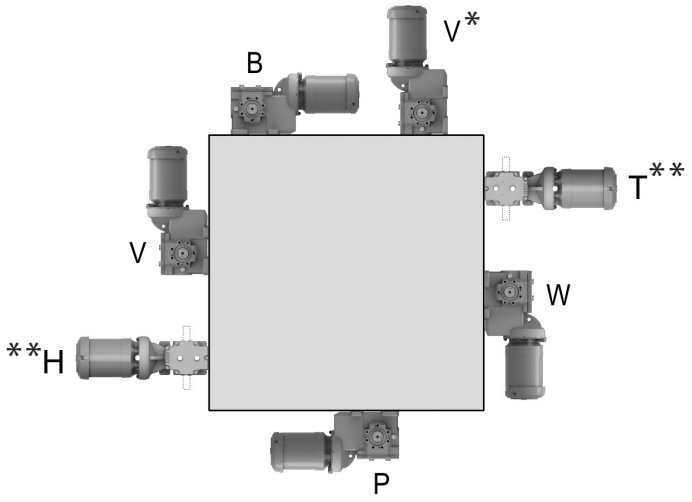
● This is available at standard lead-times

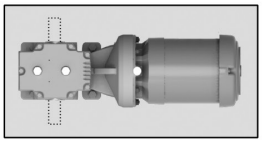
- This option is not available

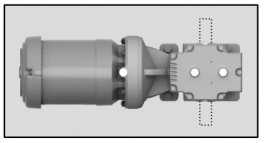
S1 Design option interchanges with Series 2000 OtN mounting

** Tapered Bushing can be assembled on either side of housing in field

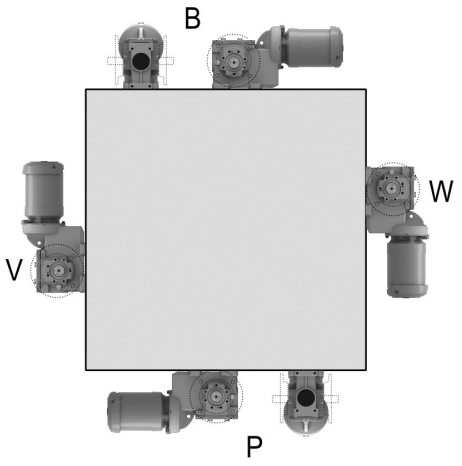
Foot Mount

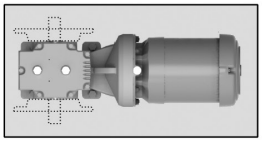


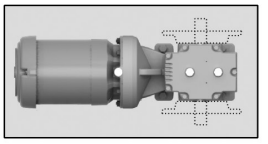

T


H

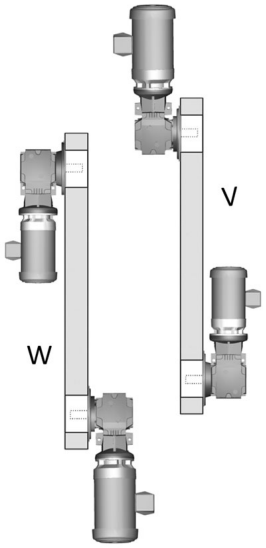
Foot Mount with Face or Flange

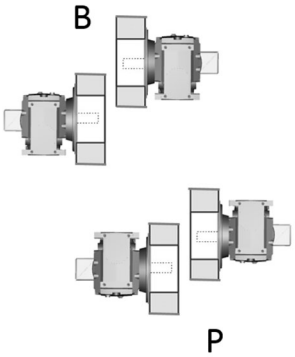


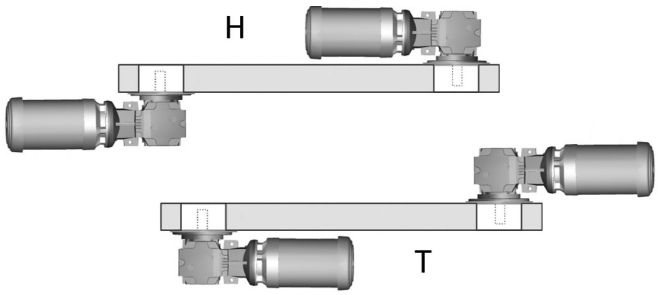

T


H

Flange, Face or Shaft Mount







* Refer to F-212 for mounting details
** Only available on frame 31. Refer to page F-212

Standard Motor Input Types

Example: Premium Efficiency, TEFC, 3 phase 60 Hz, 575V, with Fail-safe Brake

P T 5 B

1 Efficiency
- **"blank"** Normal
- **H** High
- **P** Premium

2 Enclosure, pole
- **T** TEFC, 4 pole
- **C** CorroGard®, 4 pole
- **X** Explosionproof, 4 pole

3 Phase, Hz, Voltage
- **S12** 1 Phase, 60, 115/230V
- **S2** 1 Phase, 60, 230V
- **24** 3 Phase, 60, 230/460V
- **5** 3 Phase, 60, 575V
- **53** 3 Phase, 50, 380V
- **54** 3 Phase, 50, 400/415V

4 Accessories
- **"blank"** No Brake
- **B** Fail-safe Brake

Base Design	Input Code	Motor HP															
		0.33	0.50	0.75	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50
S Single Phase TEFC	TS12	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS12B	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-
	TS2	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
	TS2B	-	-	-	-	-	-	Y	Y	-	-	-	-	-	-	-	-
T 3 Phase TEFC	HT24*	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT24B	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HT5B	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT24 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PT24B ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	PT5 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PT5B ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-
	HT53 ●	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT53 ●♦	-	-	-	Y	Y	Y	Y	RO	RO	-	-	-	-	-	-	-
	HT54 ●	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PT54 ●♦	-	-	-	Y	Y	Y	Y	RO	RO	-	-	-	-	-	-	-
C 3 Phase CorroGard	HC24*	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	HC5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PC24 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	PC5 ▲	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
X 3 Phase Explosionproof	X24	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	X5	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-
	PX24	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-
	PX5	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-

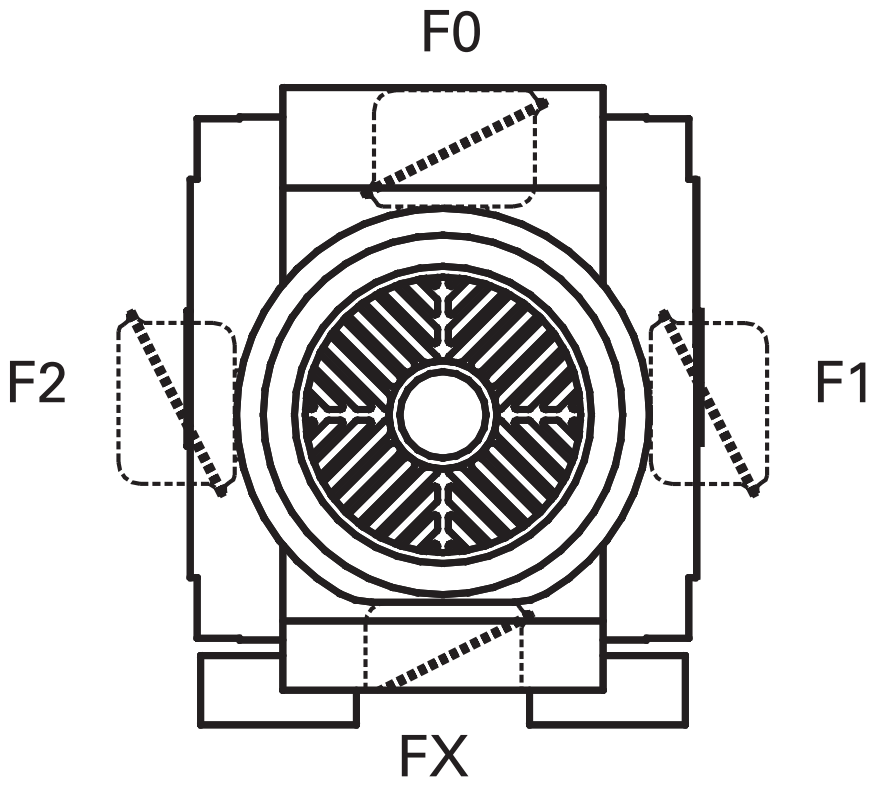
Y Available From Stock
- Not Available
***** Input code HT24 and HC24 are rated 60Hz 208-230/460 V
RO Refer To Company For Availability

▲ Motor Is NEMA Premium Efficiency and NEMA MG-1 Part 31 Inverter Duty (PE GEARMOTOR with 3 year motor warranty)
● Motor Bears CE certification of sale into EU. Designed for X-Line starting
♦ Motor Efficiency Meets EU Requirements Jan. 2017

Conduit Box Location

When ordering a conventional OtN gearmotor, specify the desired conduit box location when viewing fan cover guard of motor. If no option is specified, the conduit box location per gearbox mounting will be supplied as shown in the table below.

Output Arrangement	Standard Conduit Box Location
33D, 35D, 36D, 33X, 33B, 33C, 34C, 44C , 35C, 36C, 55C , 66C	F-1
33G, 53G, 63G, 43C, 53C, 63C	F-2



Inverter Duty Gearmotors

All standard three phase 60 Hz non-explosionproof Browning® Series 3000 PE OtN gearmotors utilize motors that are not only Premium Efficiency but are designed and nameplated for Inverter duty. Our commitment is to deliver the highest quality motor for the broadest spectrum of applications in one design. Below is a table showing the constant torque performance of these gearmotors:

Motor Type	Motor Input Codes	C/T Freq. Range	Motor HP @ Max. Hz of Range	
			1/3 to 7 1/2 HP	10 HP - Up
T and C	PT24, PT24B, PT5, PT5B,PC24, PC5	5:1 60-12 Hz	-	Yes
		10:1 60-6 Hz	Yes	-
		15:1 90-6 Hz	Yes	Yes

These inverter duty motors incorporate superior design features including but not limited to

- Three-year motor warranty
- Precision balanced rotors (to 1/2 NEMA Std.) for smooth operation above 60 Hz
- Winding thermostats (one per phase) with leads brought out to main conduit box
- Brakemotor design available

Motor Modifications

M1 Brakes

Design
These motor mounted brakes have a direct acting, spring set, electromagnetically released disc design. When power to the brake is interrupted, the brake will immediately set and hold. When power is restored to the brake then the brake will be released automatically.

Brake Enclosures
IP23 – suitable for indoors with relatively dry, clean and non-hazardous applications

Non-Hazardous Motor Types	Motor Frame Size(s)	
	56-180T	210T
S	IP23	N/A
T	IP23	IP23

Motor Modifications Continued

Operating Voltage
Brakemotors for fixed frequency operation will be arranged for operating with motor power as standard. If another lower voltage like 115 VAC is to be used for the brake on a 3 phase motor, state this voltage at order entry

Brakes for inverter controlled brakemotors require a separate fixed frequency AC power source for the brake, but interlocked with starting of the motor. The standard brake design for inverter duty gearmotors will be arranged for single phase 230 VAC.

Mounting
Brakes for OtN gearmotors are suitable for the mounting ordered for the gearmotor. The standard brake will have a manual release included.

M2 Premium Efficiency Motors

NEMA premium efficiency motor designs are standard for all non-explosionproof 60 Hz "T" and "C" enclosed designs starting at 1/3 HP. Explosionproof motors (type "X") ≥ 1HP are NEMA premium efficiency as well. These designs meet or exceed government standards required in the USA for 2016 and new standard effective in 2017 for Canada.

For 50 Hz 380V destinations, three phase motor designs up to 7.5 HP are available TODAY to meet the IE3 premium efficiency requirements effective January 2017 in Europe.

Regal does offer an alternative High Efficiency motor option for its Fractional HP three phase gearmotors in all motor enclosures.

M4 Canopy Cap/Drip Cover

This cover provides optional protection from dripping liquids when a gearmotor is ordered for either V1 or V5 mounting. These can be selected for most motor "T" or "S" designs up to 10 HP excluding units supplied with brakes.

M5 Frequency – 50 Hz

Motors for operation from 50 Hz power supplies are available using HT53 or PT53 if 380V. Other power options include HT54 or PT54 if 415V. All motors are designed for X-Line starting. Gearmotor selection and rating tables reflect performance from 60 Hz power. To select a gearmotor for 50Hz at the motor HP shown, use the following "conversion" rules:

- Reduce published "Output RPM" by (60 Hz value x 5/6) to get 50 Hz Output rpm
- Reduce published "gear service factor" by (60 Hz value x 5/6) to get 50 Hz gear service factor
- Ensure the final selection yields a suitable gear service factor for the application intended

Motor Modifications Continued

M6 Voltage (3 phase only)

Standard voltages are listed in the table below. 200 VAC will be handled by 208-230/460V motors up to 10 HP. Refer all other voltages to the Pricing Group to confirm availability.

Frequency	3 Phase Voltages Thru 30 HP
60 Hz	200, 230, 460, 575
50 Hz	380, 400/415

M7 Motor Insulation

Browning® 3 phase motors are built with a premium Class F insulation system for "T", "C" and "IG" types. All "S" and "X" type motors use a Class B insulation.

M8 Space Heaters

Space heaters are recommended for gearmotors installed in very damp locations to prevent condensation from forming on the motor windings when the motor is not operating. Leads will be brought out to the standard motor conduit box. Space heater voltages (115, 230, and 460V) must be specified when an order is entered. This is available on motors > ¾ hp.

M9 Thermal Protection – Thermostats

Three N/C winding thermostats (one per phase) are standard and pre-wired to the main motor conduit box for the following input codes:

- Motor Type "T" – PT24, PT24B, PT5, PT5B
- Motor Type "C" – PC24, PC5
- Motor Type "X" – all types

Thermostats are standard in all explosionproof dual label motors type "X".

Motor Options

Certification or Approvals For Gearmotors

Hertz	Phase	Motor Voltage	Approvals [1] Standard
60 Hz	1	115/230V	UL, CSA
	3	230/460	UL, CSA
		575	UL, CSA
50 Hz	3	380	CE
		415	CE

[1] Corresponding logo(s) will be displayed on motor nameplate

Gear Modifications

G11 CorroGard™

CorroGard™ gearmotors should be ordered when operation is near corrosive chemicals or adverse environmental conditions. For gearmotors, the unit construction should start with the specification of the CORROGARD motor input code including "C". Refer to F-15 for the one that applies to your application. Other special features of the gearmotor construction include:

- Normally closed breather design
- CorroGard™ exterior paint treatment (entire unit) Select one option of two available
  - o Grey Option (default type)
    - ■ 316 stainless steel paint (2 step)
    - ■ Light grey semigloss finish
    - ■ USDA and FDA approved
  - o White Option
    - ■ Two step epoxy paint system
    - ■ White gloss finish
    - ■ USDA and FDA approved

G12a Foodgrade Synthetic Lubricant
When this modification is specified, the OtN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (refer to page F-212).

G15 Export Boxing
Export boxing can be provided for "under-deck" transport. When the quantity of OtN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

Gear Modifications Continued

G16 Extra or Special Nameplate
Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

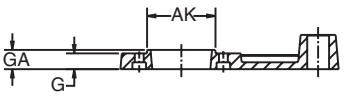
Accessories

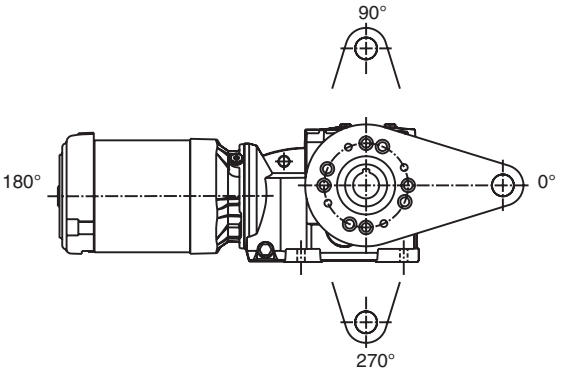
The following accessories can be ordered along with gearmotors and will be supplied loose for mounting by others

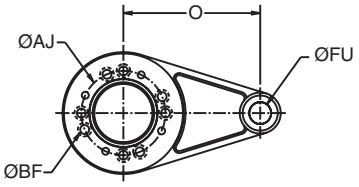
Description	Gear Frames	Part #
NPT Adapter (1/4" NPFT)	31 to 35	0436216
NPT Adapter (3/4" NPFT)	36 to 38	0436218
Bushing Guard Kit [1] (includes 2 guards to protect both sides)	32	XS9142
	33	XS9143
	34	XS9144
	35	XS9145
	36	XS9160
	37	XS9161
	38	PLA335F0002*
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938

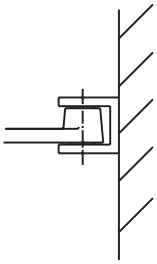
[1] These kits include all mounting hardware.
* These kit contains only (1) Guard.

Torque Reaction Arm









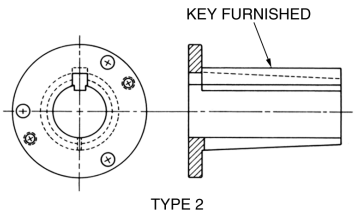
Anchoring of the Torque Arm (top view)

- Torque arm can be assembled in any of the three positions shown in the drawing above relative to the input (motor) when called out on the order.
- Torque arm can be affixed to either side of the 33C or 33B gear housing.
- If a torque arm is requested on an assembly order, it will be supplied loose for mounting by others.

Series 3000

OtN Frame	Part ID # Kit	G	O	AJ	AK	BF	FU	GA
31	ROC100KT001	-	5.118	3.74	3.246	.35	.394	.63
32	ROC200KT001	.63	5.118	3.94	3.150	.43	.394	.79
33	ROC300KT001	.91	7.874	4.84	3.937	.51	.630	1.10
34	ROC400KT001	-	9.842	5.98	5.118	.51	.630	.91
35	ROC500KT001	-	12.205	7.48	6.102	.67	.630	.908
36	ROC600KT001	0.79	13.78	9.06	5.905	.63	.940	.98
37	ROC700KT001	1.02	17.72	9.06	7.087	.87	.940	1.22
38	ROC800KT001	1.10	21.65	11.81	9.84	.87	2.20	1.34

Each Series 3000 OtN can be ordered with a Tapered Bushed Output. This "33B" mounting configuration will include the appropriate bushing kit unassembled when a bore is defined at order entry. The table below shows the various stocked bushing bores for each OtN frame that can be specified. Each bushing kit is supplied with bushing, hardware for mounting and a stabilizer ring. If bushings are required as a spare or bore changed in the field, refer to the OtN 3000 frame and select the required kit from below.



OtN Frame	Meas. Unit	Bushing Number	Bore [1]	Shaft Keyseat Required	Type
31	Inch	105TBP100	1"	1/4 x 1/8 x 2 1/2	2
		105TBP103	1 3/16"	1/4 x 1/8 x 2 1/2	2
		105TBP104	1 1/4"	1/4 x 1/8 x 2 1/2	2
		105TBP105	1 5/16"	5/16 x 5/32 x 2 1/2	2
	Metric *	105TBP30MM	30 mm	8 x 3.5 x 65 (mm)	2
32	Inch	107TBP105	1 5/16"	5/16 x 5/32 x 3 7/8	2
		107TBP106	1 3/8"	5/16 x 5/32 x 3 7/8	2
		107TBP107	1 7/16"	3/8 x 3/16 x 3 7/8	2
	Metric *	107TBP30MM	30 mm	8 x 3.5 x 100 (mm)	2
		107TBP35MM	35 mm	10 x 4 x 100 (mm)	2
33A	Inch	115TBP107	1 7/16	3/8 x 3/16 x 4 1/8	2
		115TBP108	1 1/2	3/8 x 3/16 x 4 1/8	2
		115TBP110	1 5/8	3/8 x 3/16 x 4 1/8	2
		115TBP111	1 11/16	3/8 x 3/16 x 4 1/8	2
		115TBP112	1 3/4	3/8 x 3/16 x 4 1/8	2
		115TBP114	1 7/8	1/2 x 1/4 x 4 1/8	2
		115TBP115	1 15/16	1/2 x 1/4 x 4 1/8	2
	Metric *	115TBP40MM	40 mm	12 x 4 x 105 (mm)	2
		115TBP45MM	45 mm	14 x 4.5 x 105 (mm)	2
34	Inch	115TBP111	1 11/16	3/8 x 3/16 x 4 1/8	2
		115TBP112	1 3/4	3/8 x 3/16 x 4 1/8	2
		115TBP114	1 7/8	1/2 x 1/4 x 4 1/8	2
		115TBP115	1 15/16	1/2 x 1/4 x 4 1/8	2
	Metric *	115TBP45MM	45 mm	14 x 4.5 x 105 (mm)	2

OtN Frame	Meas. Unit	Bushing Number	Bore [1]	Shaft Keyseat Required	Type
35	Inch	207TBP200	2	1/2 x 1/4 x 5 1/8	2
		207TBP202	2 1/8	1/2 x 1/4 x 5 1/8	2
		207TBP203	2 3/16	1/2 x 1/4 x 5 1/8	2
		207TBP204	2 1/4	1/2 x 1/4 x 5 1/8	2
		207TBP207	2 7/16	5/8 x 5/16 x 5 1/8	2
	Metric *	207TBP50MM	50 mm	14 x 4.5 x 130 (mm)	2
		207TBP60MM	60 mm	18 x 5.5 x 130 (mm)	2
36	Inch	215TBP207	2 7/16	5/8 X 5/16 X 5 5/8	2
		215TBP208	2 1/2	5/8 X 5/16 X 5 5/8	2
		215TBP211	2 11/16	5/8 X 5/16 X 5 5/8	2
		215TBP215	2 15/16	3/4 X 3/8 X 5 5/8	2
	Metric *	215TBP60MM	60 mm	18 x 5.5 x 140 (mm)	2
		215TBP70MM	70 mm	20 x 6 x 140 (mm)	2
37	Inch	307TBP214	2 7/8	3/4 x 3/8 x 6 3/4	2
		307TBP215	2 15/16	3/4 x 3/8 x 6 3/4	2
		307TBP300	3	3/4 x 3/8 x 6 3/4	2
		307TBP306	3 3/8	7/8 x 7/16 x 6 3/4	2
		307TBP307	3 7/16	7/8 x 7/16 x 6 3/4	2
	Metric *	307TBP75MM	75 mm	20 x 6 x 170 (mm)	2
		307TPB80MM	80 mm	22 x 7 x 170 (mm)	2
		307TBP85MM	85 mm	22 x 7 x 170 (mm)	2
38	Inch	315TBP215	2 15/16	3/4 x 3/8 x 7 15/16	2
		315TBP300	3	3/4 x 3/8 x 7 15/16	2
		315TBP303	3 3/16	3/4 x 3/8 x 7 15/16	2
		315TBP307	3 7/16	7/8 x 7/16 x 15/16	2
		315TBP315	3 15/16	1 x 1/2 x 7 15/16	2
	Metric*	315TBP90MM	90mm	25 x 7 x 190 (mm)	2

[1] Bushing bore shown must be selected by customer based on complete application details.
* Metric bushings have metric bores and require metric keyseats as shown in mm.

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Agitators			
Paper Mills	M	II	II
Pure Liquids	U	I	II
Liquids & Solids	M	II	II
Liquids - Variable Density	M	II	II
Apron Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Apron Feeders	M	II	II
Assembly Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Ball Mills	V	III	III
Barking			
Drums	V	-	III
Hydraulic Auxiliaries	V	-	III
Mechanical	V	-	III
Barscreens (Sewage)	U	I	II
Batchers (Textile)	M	II	II
Beaters and Pulpers (Paper)	U	-	II
Belt Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Belt Feeders	M	II	II
Bending Rolls (Machine)	M	II	II
Bleachers (Paper)	M	-	II
Blowers			
Centrifugal	U	I	II
Lobe	M	II	II
Vane	U	I	II
Bottling Machinery	U	I	II
Brewing and Distilling			
Bottling Machinery	U	I	II
Brew Kettles, Cont. Duty	U	-	II
Can Filling Machines	U	I	II
Cookers - Cont. Duty	U	-	II
Mash Tubs - Cont. Duty	U	-	II
Scale Hoppers - Frequent Starts	M	II	II
Brick Press (Clay Working)	V	III	III
Briquetts Machines (Clay Working)	V	III	III
Bucket			
Conveyors, Uniform	U	I	II
Conveyors, Heavy Duty	M	II	II
Elevators Cont.	U	I	II
Elevators Uniform	U	I	II
Elevators, Heavy Duty	M	II	II
Calenders			
Paper	U	-	II
Super (Paper)	U	-	II
Rubber	M	II	II
Textile	M	II	II
Cane Knives	M	II	II
Can Filling Machines	U	I	II
Card Machines (Textile)	M	II	II
Car Dumpers	V	III	-
Car Pullers	M	II	-
Cement Kilns	Refer to Application Engineering		
Centrifugal			
Blowers, Compressors, Discharge Elevators or Pumps	U	I	II
Chain Conveyors			
Uniformly Loaded or Fed	U	I	II
Heavy Duty	M	II	II
Chemical Feeders (Sewage)	U	I	II
Clarifiers	U	I	II
Classifiers	M	II	II
Clay Working Industry			
Brick Press	V	III	III
Briquette Machine	V	III	III
Clay Working Machinery	M	II	II
Pug Mill	M	II	II
Collectors (Sewage)	U	I	II
Compressors			
Centrifugal	U	I	II
Lobe	M	II	II
Reciprocating,			
Multi - Cylinder	M	II	II
Single - Cylinder	V	III	III
Concrete Mixers			
Continuous	M	II	II
Intermittent	U	I	-
Converting Machines (Paper)	M	-	II
Conveyors - Uniformly Loaded or Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	U	I	II
Conveyors - Heavy Duty Not Uniformly Fed: Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	M	II	II
Live Roll (Package)	U	I	II
Reciprocating, shaker	V	III	III
Cookers (Brewing and Distilling) (Food)	U	I	II
Cooling Tower Fans			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engineering		
Couch (Paper)	M	-	II
Cranes and Hoists			
Main Hoists			
Heavy Duty	V	III	III
Medium Duty	M	II	II
Reversing	V	II	II
Skip Hoists	M	II	II
Trolley Drive	M	II	II
Bridge Drive	M	II	II
Crushers			
Ore or Stone	V	III	III
Cutters (Paper)	V	-	III
Cylinders (Paper)	M	-	II
Dewatering Screens (Sewage)	M	II	II
Disc Feeders	U	I	II
Distilling	(See Brewing)		
Double Acting Pumps			
2 or more Cylinders	M	II	II
Single Cylinder	Refer to Application Engineering		
Dough Mixer (Food)	M	II	II
Draw Bench (Metal Mills)			
Carriage & Main Drive	V	III	III
Dredges			
Cable Reels	M	II	-
Conveyors	M	II	II
Cutter Head Drives	V	III	III
Jig Drives	V	III	III
Maneuvering Winches	M	II	-
Pumps	M	II	II
Screen Drives	V	III	III
Stackers	M	II	II
Utility Winches	M	II	-

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Dryers (Paper)	U	-	II
Dryers and Coolers (Mills, Rotary)	M	II	II
Dyeing Machinery (Textile)	M	II	II
Elevators			
Bucket - Uniform Load	U	I	II
Bucket - Heavy Duty	M	II	II
Bucket - Continuous	U	I	II
Centrifugal Discharge	U	I	II
Escalators	U	I	II
Freight	M	II	II
Gravity Discharge	U	I	II
Man Lifts, Passenger	Refer to Application Engr.		
Escalators	U	I	II
Fans			
Centrifugal	M	II	II
Cooling Towers			
Induced Draft	M	II	II
Forced Draft	Refer to Application Engr.		
Induced Draft	M	II	II
Large (Mine, etc.)	M	II	II
Large Industrial	M	II	II
Light (Small Diameter)	U	I	II
Feeders			
Apron, belt	M	II	II
Disc	U	I	II
Reciprocating	V	III	III
Screw	M	II	II
Felt			
Stretchers (Paper)	U	-	II
Whippers (Paper)	U	-	II
Flight			
Conveyors, Uniform	U	I	II
Conveyors, Heavy	M	II	II
Food Industry			
Beet Slicers	M	II	II
Bottling, Can Filling Mach.	U	I	II
Cereal Cookers	U	I	II
Dough Mixers	M	II	II
Meat Grinders	M	II	II
Forming Machines (Metal Mills)	V	III	III
Generators (Not welding)	U	I	II
Gravity Discharge Elevators	U	I	II
Grit Collectors (Sewage)	U	I	II
Hammer Mills	V	III	III
Induced Draft Fans	M	II	II
Jordans (Paper)	U	-	II
Kilns (Mills, Rotary)	M	II	II
Cement	Refer to Application Engineering		
Laundry Washers and Tumblers	M	II	II
Line Shafts			
Heavy Shock Load	V	III	III
Moderate Shock Load	M	II	II
Uniform Load	U	I	II
Live Roll Conveyors			
Package	U	I	II
Lobe Blower or Compressors	M	II	II
Log Hauls (Paper and Lumber)	V	III	III
Looms (Textile)	M	II	II
Lumber Industry			
Barkers - Spindle Feed	V	II	III
Barkers - Main Drive	V	III	III
Carriage Drive	Refer to Application Engr.		
Conveyors			
Burner	V	II	III
Main or Heavy Duty	V	II	III
Main Log	V	III	III
Re-Saw Merry-Go-Round	V	II	III
Slab	V	III	III
Transfer	V	II	III
Chains - Floor	V	II	III
Chains - Green	V	II	III
Cut-Off Saws-Chain	V	II	III
Cut-Off Saws-Drag	V	II	III
Debarking Drums	V	III	III
Feeds - Edger	V	II	III
Feeds - Gang	V	III	III
Feeds - Trimmer	V	II	III
Log Deck	V	III	III
Log Hauls - Incline, Well Type	V	III	III
Log Turning Devices	V	III	III
Planner Feed	V	II	III
Planer Tilting Hoists	V	II	III
Rolls - Live-Off Bearing Roll Cases	V	III	III
Sorting Table	V	II	III
Tipple Hoist	V	II	III
Transfers - Chain	V	II	III
Transfers - Craneway	V	II	III
Tray Drives	V	II	III
Machine Tools			
Auxiliary Drives	U	I	II
Bending Rolls	M	II	II
Main Drives	M	II	II
Notching Press (Belted)	Refer to Application Engr.		
Plate Planers	V	III	III
Punch Press (Geared)	V	III	III
Tapping Machines	V	III	III
Mangle (Textile)	M	II	II
Mash Tubs (Brewing and Distilling)	U	-	II
Meat Grinder (Food)	M	II	II
Metal Mills			
Draw Bench Carriages & Main Drives	V	III	III
Forming Machines	V	III	III
Pinch, Dryer & Scrubber Rolls Reversing	Refer to Application Engineering		
Slitters	M	II	II
Table Conveyors, Non-Reversing	M	II	III
Reversing	V	-	III
Wire Drawing & Flattening Machines	M	II	III
Wire Winding Machines	M	II	II
Mills, Rotary Type			
Ball, Pebble, Rod	V	III	III
Cement Kilns	Refer to Application Engineering		
Coolers, Dryers, Kilns	V	II	II
Tumbling Barrels	V	III	III
Mixers (Also see Agitators)			
Concrete - Continuous	M	II	II
Concrete - Intermittent	M	I	-
Constant Density	U	I	II
Variable Density	M	II	II
Nappers (Textile)	M	II	II
Oil Industry			
Chillers	M	II	II
Oil Well Pumping	Refer to Application Engineering		
Paraffin Filter Press	M	II	II
Rotary Kilns	M	II	II
Ore Crushers	V	III	III
Oven Conveyors			
Uniform	U	I	II
Heavy Duty	M	II	II

AGMA Application Classifications

U: Uniform load **M: Moderate shock load** **V: Heavy shock load**

Application	Load	Class Up to 10 hrs/day	Class Over 10 hrs/day
Paper Mills			
Agitator (Mixers)	M	II	II
Barker - Auxiliaries - Hyd.	V	-	III
Barker, Mechanical	V	-	III
Barking Drum	V	-	III
Beater & Pulper	M	-	II
Bleacher	M	-	II
Calenders	M	-	II
Calenders - Super	M	-	II
Converting Mach.- Except Cutters - Platers	M	-	II
Conveyors	M	-	II
Couch	M	-	II
Cutters, Platers	V	-	III
Cylinders	U	-	II
Dryers	U	-	II
Felt Stretchers	U	-	II
Felt Whippers	V	-	III
Jordans	M	-	II
Log Haul	V	-	III
Presses	M	-	II
Pulp Machine Reels	M	-	II
Stock Chests	M	-	II
Suction Rolls	M	-	II
Washers & Thickeners	M	-	II
Winders	M	-	II
Passenger Elevators	Refer to Application Engr.		
Pebble Mills	V	III	III
Plate Planers	V	III	III
Presses (Paper)	V	-	III
Proportioning Pumps	M	II	II
Pub Mills (Clay)	M	II	II
Pullers (Barge Haul)	V	III	III
Pulp Machine Reels	U	-	II
Pumps			
Centrifugal	U	I	II
Proportioning	M	II	II
Reciprocating			
Single Act., 3 or more cyl.	M	II	II
Double Act., 2 or more cyl.	M	II	II
Single Act., 1 or 2 cyl.	Refer to Application Engr.		
Rotary: Gear, Lobe, Vane	U	I	II
Punch Press (Gear Driven)	V	III	III
Reciprocating			
Conveyors, Feeders	V	III	III
Reciprocating Compressors			
Multi-Cylinder	M	II	II
Single cylinder	V	III	III
Rod Mills	V	III	III
Rotary			
Pumps, Gear, Lobe, Vane	U	I	II
Screens (Sand or Gravel)	V	II	II
Rubber Industry			
Mixer	V	III	III
Rubber Calender	M	II	II
Rubber Mill (2 or more)	M	II	II
Sheeter	M	II	II
Tire Building Machines	Refer to Application Engr.		
Tire,Tube Press Openers	Refer to Application Engr.		
Tubers & Strainers	M	II	II
Sand Mullers	Refer to Application Engr.		
Screens			
Air Washing	U	I	II
Rotary - Sand or Gravel	M	II	II
Traveling Water Intake	U	I	II
Screw Conveyors			
Uniform	U	I	II
Heavy Duty or Feeder	M	II	II
Scum Breakers (Sewage)	M	II	II
Sewage Disposal			
Aerators	Refer to Application Engr.		
Bar Screens	U	I	II
Chemical Feeders	U	I	II
Collectors	U	I	II
Dewatering Screens	M	II	II
Grit Collectors	U	I	II
Scum Breakers	M	II	II
Slow or Rapid Mixers	M	II	II
Sludge Collectors	U	I	II
Thickeners	M	II	II
Vacuum Filters	M	II	II
Shaker Conveyors	V	III	III
Sheeters (Rubber)	M	II	II
Single Acting Pump			
1 or 2 Cylinders	Refer to Application Engr.		
3 or more Cylinders	M	II	II
Skip Hoist	M	II	II
Slab Pushers	M	II	II
Slitters (Metal)	M	II	II
Sludge Collectors (Sewage)	U	I	II
Soapers (Textile)	M	II	II
Spinners (Textile)	M	II	II
Steering Gears	M	II	II
Stock Chests(Paper)	U	-	II
Stokers	U	I	II
Stone Crushers	V	III	III
Suction Rolls(Paper)	U	-	II
Table Conveyors (Metal Mills) Non-Reversing	V	II	III
Reversing	V	-	III
Tenter Frames (Textile)	M	II	II
Textile Industry			
Batchers	M	II	II
Calenders	M	II	II
Card Machines	M	II	II
Cloth Finishing Mach. (Calenders, Dryers, Pads, Tenters, Washers)	M	II	II
Dry Cans	M	II	II
Dyeing Machinery	M	II	II
Knitting Machinery	Refer to Application Engr.		
Looms, Mangles, Nappers	M	II	II
Range Drives	Refer to Application Engr.		
Soapers, Spinners	M	II	II
Tenter Frames	M	II	II
Winders	M	II	II
Yarn Preparatory Mach. (Cards, Spinners, Slashers)	M	II	II
Thickeners (Sewage)	M	II	II
Tumbling Barrels	V	III	III
Vacuum Filters (sewage)	M	II	II
Vane Blowers	U	I	II
Winches (Dredges)	M	II	-
Winders			
(Paper)	U	-	II
(Textile)	M	II	II
Windlass	M	II	II
Wire			
Drawing Machines	M	II	III
Winding Machines	M	II	II

Applications not listed in this table, or where the user has data indicating the severity of this usage to be greater than average, should be referred to Application Engineering.

1/3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	42	1825	3.55	3242	56	T,C,S,X
374	I, II, III	3+	53	1955	4.5	3242	56	T,C,S,X
343	I, II, III	3+	58	1294	5	3132	56	T,C,S,X
313	I, II, III	3+	64	2062	5.6	3242	56	T,C,S,X
272	I, II, III	3+	73	1294	6.3	3132	56	T,C,S,X
242	I, II, III	3+	82	1294	7.1	3132	56	T,C,S,X
230	I, II, III	3+	87	1294	8	3132	56	T,C,S,X
203	I, II, III	3+	98	1294	9	3132	56	T,C,S,X
180	I, II, III	3+	111	1294	10	3132	56	T,C,S,X
159	I, II, III	3+	126	1294	11.2	3132	56	T,C,S,X
140	I, II, III	3+	143	1294	12.5	3132	56	T,C,S,X
122	I, II, III	3+	163	1294	14	3132	56	T,C,S,X
109	I, II, III	3+	184	1294	16	3132	56	T,C,S,X
102	I, II, III	3+	195	1294	18	3132	56	T,C,S,X
86	I, II, III	3+	232	1294	20	3132	56	T,C,S,X
81	I, II, III	3+	245	1294	22.4	3132	56	T,C,S,X
71	I, II, III	3+	281	1294	25	3132	56	T,C,S,X
64	I, II, III	3+	313	1294	28	3132	56	T,C,S,X
57	I, II, III	3+	350	1294	31.5	3132	56	T,C,S,X
49	I, II, III	3+	406	1294	35.5	3132	56	T,C,S,X
45	I, II, III	3+	446	1294	40	3132	56	T,C,S,X
39	I, II, III	3+	511	1294	45	3132	56	T,C,S,X
35	I, II, III	3+	564	1294	50	3132	56	T,C,S,X
32	I, II, III	3+	605	1490	56	3243	56	T,C,S,X
27	I, II, III	3+	719	1490	63	3243	56	T,C,S,X
26	I, II, III	3+	761	1490	71	3243	56	T,C,S,X
23	I, II, III	3+	869	1490	80	3243	56	T,C,S,X
20	I, II, III	3+	970	1490	90	3243	56	T,C,S,X
18	I, II, III	3+	1087	1490	100	3243	56	T,C,S,X
15	I, II, III	3+	1264	1490	112	3243	56	T,C,S,X
14	I, II, III	2.9	1387	1490	125	3243	56	T,C,S,X
12	I, II, III	2.5	1588	1490	140	3243	56	T,C,S,X
11	I, II, III	2.3	1745	1490	160	3243	56	T,C,S,X
10.1	I, II, III	3+	1869	2090	180	3365	56	T,C,S,X
9.8	I, II, III	2.1	1912	1490	180	3245	56	T,C,S,X°
8.9	I, II, III	3+	2106	2090	200	3365	56	T,C,S,X
8.9	I, II	1.9	2116	1490	200	3245	56	T,C,S,X°
8.5	I, II	1.8	2224	1490	224	3245	56	T,C,S,X°
7.9	I, II, III	3+	2385	2090	224	3365	56	T,C,S,X
7.1	I, II	1.5	2643	1490	250	3245	56	T,C,S,X°

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1/3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
6.9	I, II, III	2.6	2707	2090	250	3365	56	T,C,S,X
6.7	I, II	1.4	2825	1490	280	3245	56	T,C,S,X°
6.1	I, II, III	2.3	3094	2090	280	3365	56	T,C,S,X
5.9	I	1.2	3169	1490	315	3245	56	T,C,S,X°
5.4	I, II, III	2.0	3491	2090	315	3365	56	T,C,S,X
5.1	I	1.1	3685	1490	355	3245	56	T,C,S,X°
5.1	I, II	1.9	3706	2090	355	3365	56	T,C,S,X
4.7	I	1.0	3975	1490	400	3245	56	T,C,S,X°
4.5	I, II, III	3+	4147	2875	400	3475	56	T,C,S,X
4.3	I, II	1.6	4405	2090	400	3365	56	T,C,S,X
4.0	I, II	1.5	4662	2090	450	3365	56	T,C,S,X
4.0	I, II, III	3+	4695	2875	450	3475	56	T,C,S,X
3.6	I, II, III	2.8	5178	2875	500	3475	56	T,C,S,X
3.5	I	1.3	5329	2090	500	3365	56	T,C,S,X
3.2	I, II, III	2.4	5887	2875	560	3475	56	T,C,S,X
3.2	I	1.2	5941	2090	560	3365	56	T,C,S,X
2.8	I	1.1	6661	2090	630	3365	56	T,C,S,X
2.8	I, II, III	2.1	6725	2875	630	3475	56	T,C,S,X
2.5	I, II	1.9	7594	2875	710	3475	56	T,C,S,X
2.4	I, II, III	2.9	7961	4100	800	3585	56	T,C,S,X
2.3	I, II	1.8	8057	2875	800	3475	56	T,C,S,X
2.0	I, II, III	2.5	9303	4100	900	3585	56	T,C,S,X
2.0	I, II	1.5	9572	2875	900	3475	56	T,C,S,X
1.9	I, II	1.4	10120	2875	1000	3475	56	T,C,S,X
1.8	I, II, III	2.2	10485	4100	1000	3585	56	T,C,S,X
1.6	I, II, III	2.0	11871	4100	1120	3585	56	T,C,S,X
1.5	I	1.1	12730	2875	1120	3475	56	T,C,S,X
1.4	I, II	1.7	13482	4100	1250	3585	56	T,C,S,X
1.3	I, II	1.7	14170	4100	1400	3585	56	T,C,S,X
1.3	I	1.0	14557	2875	1250	3475	56	T,C,S,X
1.2	I, II	1.5	16104	4100	1600	3585	56	T,C,S,X
1	I	1.3	18403	4100	1800	3585	56	T,C,S,X
0.91	I	1.1	20766	4100	2000	3585	56	T,C,S,X
0.85	I	1.1	22034	4100	2240	3585	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	64	1825	3.55	3242	56	T,C,S,X
374	I, II, III	3+	81	1955	4.5	3242	56	T,C,S,X
343	I, II, III	3+	88	1294	5	3132	56	T,C,S,X
313	I, II, III	3+	97	2062	5.6	3242	56	T,C,S,X
272	I, II, III	3+	111	1294	6.3	3132	56	T,C,S,X
242	I, II, III	3+	125	1294	7.1	3132	56	T,C,S,X
230	I, II, III	3+	132	1294	8	3132	56	T,C,S,X
203	I, II, III	3+	149	1294	9	3132	56	T,C,S,X
180	I, II, III	3+	168	1294	10	3132	56	T,C,S,X
159	I, II, III	3+	190	1294	11.2	3132	56	T,C,S,X
140	I, II, III	3+	216	1294	12.5	3132	56	T,C,S,X
122	I, II, III	3+	247	1294	14	3132	56	T,C,S,X
109	I, II, III	3+	278	1294	16	3132	56	T,C,S,X
102	I, II, III	3+	296	1294	18	3132	56	T,C,S,X
86	I, II, III	3+	351	1294	20	3132	56	T,C,S,X
81	I, II, III	3+	372	1294	22.4	3132	56	T,C,S,X
71	I, II, III	3+	425	1294	25	3132	56	T,C,S,X
64	I, II, III	3+	474	1294	28	3132	56	T,C,S,X
57	I, II, III	3+	531	1294	31.5	3132	56	T,C,S,X
49	I, II, III	3+	615	1294	35.5	3132	56	T,C,S,X
45	I, II, III	3+	676	1294	40	3132	56	T,C,S,X
39	I, II, III	2.0	774	1294	45	3132	56	T,C,S,X
35	I, II, III	2.0	854	1294	50	3132	56	T,C,S,X
32	I, II, III	3+	917	1490	56	3243	56	T,C,S,X
27	I, II, III	3+	1090	1490	63	3243	56	T,C,S,X
26	I, II, III	3+	1152	1490	71	3243	56	T,C,S,X
23	I, II, III	3+	1317	1490	80	3243	56	T,C,S,X
20	I, II, III	2.7	1469	1490	90	3243	56	T,C,S,X
18	I, II, III	2.4	1647	1490	100	3243	56	T,C,S,X
15	I, II, III	2.1	1915	1490	112	3243	56	T,C,S,X
14	I, II	1.9	2102	1490	125	3243	56	T,C,S,X
14	I, II, III	3+	2119	2090	125	3363	56	T,C,S,X
13	I, II, III	3+	2322	2090	140	3363	56	T,C,S,X
12	I, II	1.7	2407	1490	140	3243	56	T,C,S,X
11	I, II	1.5	2644	1490	160	3243	56	T,C,S,X
11	I, II, III	2.6	2712	2090	160	3363	56	T,C,S,X
10	I, II, III	2.5	2832	2090	180	3365	56	T,C,S,X
10	I, II	1.4	2897	1490	180	3245	56	T,C,S,X°
7.9	I, II, III	2.0	3614	2090	224	3365	56	T,C,S,X
7.1	I	1.0	4004	1490	250	3245	56	T,C,S,X°

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X° Explosionproof, CL1 group D, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
7.0	I, II, III	3+	4069	2875	250	3475	56	T,C,S,X
6.9	I, II	1.7	4102	2090	250	3365	56	T,C,S,X
6.1	I, II, III	3+	4655	2875	280	3475	56	T,C,S,X
6.1	I, II	1.5	4688	2090	280	3365	56	T,C,S,X
5.4	I, II, III	2.7	5241	2875	315	3475	56	T,C,S,X
5.4	I	1.3	5290	2090	315	3365	56	T,C,S,X
5.1	I, II, III	2.6	5567	2875	355	3475	56	T,C,S,X
5.1	I	1.3	5616	2090	355	3365	56	T,C,S,X
4.5	I, II, III	2.3	6283	2875	400	3475	56	T,C,S,X
4.3	I	1.1	6674	2090	400	3365	56	T,C,S,X
4.2	I, II, III	3+	6723	4100	450	3585	56	T,C,S,X
4.0	I	1.0	7064	2090	450	3365	56	T,C,S,X
4.0	I, II, III	2.0	7113	2875	450	3475	56	T,C,S,X
3.6	I, II	1.8	7846	2875	500	3475	56	T,C,S,X
3.6	I, II, III	2.9	7976	4100	500	3585	56	T,C,S,X
3.4	I, II, III	2.7	8432	4100	560	3585	56	T,C,S,X
3.2	I, II	1.6	8920	2875	560	3475	56	T,C,S,X
3.0	I, II, III	2.4	9636	4100	630	3585	56	T,C,S,X
2.8	I, II	1.4	10190	2875	630	3475	56	T,C,S,X
2.6	I, II, III	2.1	10759	4100	710	3585	56	T,C,S,X
2.5	I	1.2	11508	2875	710	3475	56	T,C,S,X
2.4	I, II	1.9	12061	4100	800	3585	56	T,C,S,X
2.3	I	1.2	12208	2875	800	3475	56	T,C,S,X
2.0	I, II	1.7	14096	4100	900	3585	56	T,C,S,X
2.0	I	1.0	14503	2875	900	3475	56	T,C,S,X
1.9	I, II, III	2.2	14420	13249	900	3695	56	T,C,S,X
1.8	I, II	1.5	15887	4100	1000	3585	56	T,C,S,X
1.6	I	1.3	17986	4100	1120	3585	56	T,C,S,X
1.6	II, III	2.3	17482	13249	1120	3695	56	T,C,S,X
1.5	I, II, III	3+	18816	18242	1120	3705	56	T,C,S,X
1.4	I	1.1	20428	4100	1250	3585	56	T,C,S,X
1.4	II	1.9	20411	13249	1250	3695	56	T,C,S,X
1.3	II, III	3+	21128	18242	1250	3705	56	T,C,S,X
1.3	I	1.1	21470	4100	1400	3585	56	T,C,S,X
1.2	I	1.0	24400	4100	1600	3585	56	T,C,S,X
1.2	III	3+	23878	18242	1400	3705	56	T,C,S,X
1.2	II	1.7	24481	13249	1400	3695	56	T,C,S,X
1.1	I, II	1.6	26157	13249	1600	3695	56	T,C,S,X
1.1	III	2.9	26434	18242	1600	3705	56	T,C,S,X
1.0	I, II	1.4	29673	13249	1800	3695	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
0.95	III	2.5	30129	18242	1800	3705	56	T,C,S,X
0.86	I	1.2	32961	13249	2000	3695	56	T,C,S,X
0.82	II, III	2.6	34735	18242	2000	3705	56	T,C,S,X
0.81	III	3.4	35084	21873	2240	3825	56	T,C,S,X
0.77	II, III	2.0	37112	18242	2240	3705	56	T,C,S,X
0.76	I	1.1	37453	13249	2240	3695	56	T,C,S,X
0.70	II, III	2.9	40970	21873	2500	3825	56	T,C,S,X
0.68	I	1.0	41669	13249	2500	3695	56	T,C,S,X
0.68	II	1.8	42125	18242	2500	3705	56	T,C,S,X
0.64	II, III	2.7	44791	21873	2800	3825	56	T,C,S,X
0.61	I, II	1.6	46780	18242	2800	3705	56	T,C,S,X
0.54	I, II	1.4	53144	18242	3150	3705	56	T,C,S,X
0.54	III	2.3	52502	21873	3150	3825	56	T,C,S,X
0.49	II, III	2.1	57954	21873	3550	3825	56	T,C,S,X
0.48	I	1.3	59118	18242	3550	3705	56	T,C,S,X
0.45	II	1.9	63549	21873	4000	3825	56	T,C,S,X
0.43	I	1.1	66508	18242	4000	3705	56	T,C,S,X
0.38	II	1.6	74209	21873	4500	3825	56	T,C,S,X
0.37	I	1.0	77967	18242	4500	3705	56	T,C,S,X
0.35	II	1.5	80705	21873	5000	3826	56	T,C,S,X
0.30	I	1.3	93026	21873	5600	3826	56	T,C,S,X
0.28	I	1.2	99405	21873	6300	3826	56	T,C,S,X
0.25	I	1.1	112816	21873	7100	3826	56	T,C,S,X
0.22		0.95	125300	21873	8000	3826	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3/4 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	96	1825	3.55	3242	56	T,C,S,X
374	I, II, III	3+	121	1955	4.5	3242	56	T,C,S,X
343	I, II, III	3+	132	1294	5	3132	56	T,C,S,X
313	I, II, III	3+	145	2063	5.6	3242	56	T,C,S,X
272	I, II, III	3+	167	1294	6.3	3132	56	T,C,S,X
242	I, II, III	3+	187	1294	7.1	3132	56	T,C,S,X
230	I, II, III	3+	198	1294	8	3132	56	T,C,S,X
203	I, II, III	3+	224	1294	9	3132	56	T,C,S,X
180	I, II, III	3+	252	1294	10	3132	56	T,C,S,X
159	I, II, III	3+	285	1294	11.2	3132	56	T,C,S,X
140	I, II, III	3+	324	1294	12.5	3132	56	T,C,S,X
122	I, II, III	3+	371	1294	14	3132	56	T,C,S,X
109	I, II, III	3+	417	1294	16	3132	56	T,C,S,X
102	I, II, III	3+	443	1294	18	3132	56	T,C,S,X
86	I, II, III	3+	526	1294	20	3132	56	T,C,S,X
81	I, II, III	3.0	558	1294	22.4	3132	56	T,C,S,X
71	I, II, III	2.7	638	1294	25	3132	56	T,C,S,X
64	I, II, III	2.5	710	1294	28	3132	56	T,C,S,X
57	I, II, III	2.3	796	1294	31.5	3132	56	T,C,S,X
49	I, II, III	2.1	923	1294	35.5	3132	56	T,C,S,X
45	I, II	1.9	1014	1294	40	3132	56	T,C,S,X
44	III	3+	1004	1490	40	3243	56	T,C,S,X
39	I,	1.3	1162	1294	45	3132	56	T,C,S,X
39	II, III	3+	1149	1490	45	3243	56	T,C,S,X
35	I,	1.3	1281	1294	50	3132	56	T,C,S,X
34	II, III	3+	1297	1490	50	3243	56	T,C,S,X
32	I, II, III	2.8	1375	1490	56	3243	56	T,C,S,X
27	I, II, III	2.4	1635	1490	63	3243	56	T,C,S,X
26	I, II, III	2.3	1729	1490	71	3243	56	T,C,S,X
23	I, II, III	2.0	1975	1490	80	3243	56	T,C,S,X
20	I, II, III	3+	2179	2090	90	3363	56	T,C,S,X
20	I, II	1.8	2204	1490	90	3243	56	T,C,S,X
18	I, II, III	2.9	2451	2090	100	3363	56	T,C,S,X
18	I, II	1.6	2471	1490	100	3243	56	T,C,S,X
15	I, II	1.4	2873	1490	112	3243	56	T,C,S,X
15	I, II, III	2.5	2873	2090	112	3363	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
14	I	1.3	3152	1490	125	3243	56	T,C,S,X
14	I, II, III	2.2	3178	2090	125	3363	56	T,C,S,X
13	I, II, III	2.1	3483	2090	140	3363	56	T,C,S,X
12	I	1.1	3610	1490	140	3243	56	T,C,S,X
11	I, II, III	3+	3915	2875	160	3473	56	T,C,S,X
11	I	$1.0	3966	1490	160	3243	56	T,C,S,X
11	I, II	1.8	4068	2090	160	3363	56	T,C,S,X
10.2	I, II, III	3+	4200	2875	180	3475	56	T,C,S,X
10.1	I, II	1.7	4248	2090	180	3365	56	T,C,S,X
9.0	I, II, III	3+	4737	2875	200	3475	56	T,C,S,X
8.9	I, II	1.5	4786	2090	200	3365	56	T,C,S,X
8.0	I, II, III	2.6	5372	2875	224	3475	56	T,C,S,X
7.9	I	1.3	5420	2090	224	3365	56	T,C,S,X
7.0	I, II, III	2.3	6104	2875	250	3475	56	T,C,S,X
6.9	I	1.1	6153	2090	250	3365	56	T,C,S,X
6.1	I, II, III	2.0	6983	2875	280	3475	56	T,C,S,X
6.1	I	1.0	7032	2090	280	3365	56	T,C,S,X
5.8	I, II, III	3+	7374	4100	315	3585	56	T,C,S,X
5.4	I, II	1.8	7862	2875	315	3475	56	T,C,S,X
5.1	I, II	1.7	8350	2875	355	3475	56	T,C,S,X
5.1	I, II, III	2.7	8423	4100	355	3585	56	T,C,S,X
4.5	I, II	1.5	9425	2875	400	3475	56	T,C,S,X
4.5	I, II, III	2.4	9498	4100	400	3585	56	T,C,S,X
4.2	I, II, III	2.3	10084	4100	450	3585	56	T,C,S,X
4.0	I	1.3	10670	2875	450	3475	56	T,C,S,X
3.6	I	1.2	11768	2875	500	3475	56	T,C,S,X
3.6	I, II	1.9	11964	4100	500	3585	56	T,C,S,X
3.4	I, II	1.8	12647	4100	560	3585	56	T,C,S,X
3.2	I	1.1	13380	2875	560	3475	56	T,C,S,X
3.0	I, II	1.6	14454	4100	630	3585	56	T,C,S,X
2.9	III	2.7	14771	13249	630	3695	56	T,C,S,X
2.6	III	2.4	16432	13249	710	3695	56	T,C,S,X
2.6	I, II	1.4	16139	4100	710	3585	56	T,C,S,X
2.4	I	1.3	18092	4100	800	3585	56	T,C,S,X
2.3	II, III	2.2	18483	13249	800	3695	56	T,C,S,X
2.0	I	1.1	21144	4100	900	3585	56	T,C,S,X
2.0	II	1.8	21657	13249	900	3695	56	T,C,S,X
1.8	III	3+	23317	18242	900	3705	56	T,C,S,X
1.8	I	1.0	23830	4100	1000	3585	56	T,C,S,X
1.8	II	1.7	23903	13249	1000	3695	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3/4 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
1.7	III	2.8	25734	18242	1000	3705	56	T,C,S,X
1.6	I, II	1.5	26222	13249	1120	3695	56	T,C,S,X
1.5	III	2.6	28224	18242	1120	3705	56	T,C,S,X
1.4	I	1.3	30617	13249	1250	3695	56	T,C,S,X
1.3	II, III	2.4	31691	18242	1250	3705	56	T,C,S,X
1.2	II, III	2.1	35818	18242	1400	3705	56	T,C,S,X
1.2	I	1.1	36721	13249	1400	3695	56	T,C,S,X
1.1	I	1.0	39236	13249	1600	3695	56	T,C,S,X
1.1	II	1.9	39651	18242	1600	3705	56	T,C,S,X
1		0.92	44510	13249	1800	3695	56	T,C,S,X
1.0	III	2.7	43478	21873	1800	3825	56	T,C,S,X
0.95	I, II	1.7	45193	18242	1800	3705	56	T,C,S,X
0.89	III	2.5	47993	21873	2000	3825	56	T,C,S,X
0.82	I, II	1.4	52103	18242	2000	3705	56	T,C,S,X
0.81	III	2.3	52626	21873	2240	3825	56	T,C,S,X
0.77	I, II	1.4	55667	18242	2240	3705	56	T,C,S,X
0.70	II	1.9	61455	21873	2500	3825	56	T,C,S,X
0.68	I, II	1.2	63187	18242	2500	3705	56	T,C,S,X
0.64	II	1.8	67186	21873	2800	3825	56	T,C,S,X
0.61	I, II	1.1	70170	18242	2800	3705	56	T,C,S,X
0.54		0.95	79717	18242	3150	3705	56	T,C,S,X
0.54	I, II	1.5	78753	21873	3150	3825	56	T,C,S,X
0.49	I, II	1.4	86931	21873	3550	3825	56	T,C,S,X
0.45	I	1.3	95324	21873	4000	3825	56	T,C,S,X
0.38	I	1.1	111314	21873	4500	3825	56	T,C,S,X
0.35		0.99	121058	21873	5000	3826	56	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	128	1808	3.55	3242	143T	T,C,S,X
374	I, II, III	3+	162	1933	4.5	3242	143T	T,C,S,X
343	I, II, III	3+	176	1294	5	3132	143T	T,C,S,X
313	I, II, III	3+	194	2036	5.6	3242	143T	T,C,S,X
272	I, II, III	3+	222	1294	6.3	3132	143T	T,C,S,X
242	I, II, III	3+	250	1294	7.1	3132	143T	T,C,S,X
230	I, II, III	3+	263	1294	8	3132	143T	T,C,S,X
203	I, II, III	3+	298	1294	9	3132	143T	T,C,S,X
180	I, II, III	3+	336	1294	10	3132	143T	T,C,S,X
159	I, II, III	3+	380	1294	11.2	3132	143T	T,C,S,X
140	I, II, III	3+	432	1294	12.5	3132	143T	T,C,S,X
122	I, II, III	2.9	494	1294	14	3132	143T	T,C,S,X
109	I, II, III	2.7	557	1294	16	3132	143T	T,C,S,X
102	I, II, III	2.6	591	1294	18	3132	143T	T,C,S,X
86	I, II, III	2.3	702	1294	20	3132	143T	T,C,S,X
81	I, II, III	2.2	743	1294	22.4	3132	143T	T,C,S,X
71	I, II, III	2.0	851	1294	25	3132	143T	T,C,S,X
64	I, II	1.9	947	1294	28	3132	143T	T,C,S,X
64	III	3+	925	1428	28	3243	143T	T,C,S,X
57	I, II	1.7	1061	1294	31.5	3132	143T	T,C,S,X
57	III	3+	1044	1471	31.5	3243	143T	T,C,S,X
50	III	3+	1178	1490	35.5	3243	143T	T,C,S,X
49	I, II	1.6	1231	1294	35.5	3132	143T	T,C,S,X
45	I, II	1.5	1352	1294	40	3132	143T	T,C,S,X
44	III	2.9	1339	1490	40	3243	143T	T,C,S,X
39	I	1.0	1549	1294	45	3132	143T	T,C,S,X
39	II, III	2.6	1532	1490	45	3243	143T	T,C,S,X
35	I	1.0	1708	1294	50	3132	143T	T,C,S,X
34	II, III	2.3	1729	1490	50	3243	143T	T,C,S,X
32	I, II, III	2.1	1834	1490	56	3243	143T	T,C,S,X
29	I, II, III	3+	2068	2090	63	3363	143T	T,C,S,X
27	I, II	1.8	2180	1490	63	3243	143T	T,C,S,X
26	I, II, III	3+	2298	2090	71	3363	143T	T,C,S,X
26	I, II	1.7	2305	1490	71	3243	143T	T,C,S,X
23	I, II, III	2.7	2610	2090	80	3363	143T	T,C,S,X
23	I, II	1.5	2634	1490	80	3243	143T	T,C,S,X
20	I, II, III	2.4	2905	2090	90	3363	143T	T,C,S,X
20	I	1.3	2939	1490	90	3243	143T	T,C,S,X
18	I, II, III	2.2	3268	2090	100	3363	143T	T,C,S,X
18	I	1.2	3295	1490	100	3243	143T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
16	I, II, III	3+	3661	2875	112	3473	143T	T,C,S,X
15	I	1.0	3830	1490	112	3243	143T	T,C,S,X
15	I, II	1.9	3830	2090	112	3363	143T	T,C,S,X
14	I, II, III	3+	4203	2875	125	3473	143T	T,C,S,X
14	I, II	1.7	4237	2090	125	3363	143T	T,C,S,X
13	I, II	1.5	4644	2090	140	3363	143T	T,C,S,X
13	I, II, III	3+	4712	2875	140	3473	143T	T,C,S,X
11	I, II, III	2.7	5220	2875	160	3473	143T	T,C,S,X
11	I	1.3	5424	2090	160	3363	143T	T,C,S,X
10.2	I, II, III	2.5	5599	2875	180	3475	143T	T,C,S,X
10.1	I	1.2	5664	2090	180	3365	143T	T,C,S,X
9.0	I, II, III	2.2	6316	2875	200	3475	143T	T,C,S,X
8.9	I	1.1	6381	2090	200	3365	143T	T,C,S,X
8.0	I, II, III	2.0	7162	2875	224	3475	143T	T,C,S,X
7.9	I	1.0	7227	2090	224	3365	143T	T,C,S,X
7.4	I, II, III	3+	7650	4100	250	3585	143T	T,C,S,X
7.0	I, II	1.7	8139	2875	250	3475	143T	T,C,S,X
6.6	I, II, III	2.6	8627	4100	280	3585	143T	T,C,S,X
6.1	I, II	1.5	9310	2875	280	3475	143T	T,C,S,X
5.8	I, II, III	2.3	9831	4100	315	3585	143T	T,C,S,X
5.4	I	1.3	10482	2875	315	3475	143T	T,C,S,X
5.1	I	1.3	11133	2875	355	3475	143T	T,C,S,X
5.1	I, II, III	2.0	11231	4100	355	3585	143T	T,C,S,X
4.5	I	1.1	12566	2875	400	3475	143T	T,C,S,X
4.5	I, II	1.8	12664	4100	400	3585	143T	T,C,S,X
4.2	I, II	1.7	13445	4100	450	3585	143T	T,C,S,X
4.1	III	2.9	13738	13249	450	3695	143T	T,C,S,X
4.0	I	1.0	14226	2875	450	3475	143T	T,C,S,X
3.7	II, III	2.6	15593	13249	500	3695	143T	T,C,S,X
3.6	I, II	1.4	15951	4100	500	3585	143T	T,C,S,X
3.4	I, II	1.4	16863	4100	560	3585	143T	T,C,S,X
3.3	III	2.3	17319	13249	560	3695	143T	T,C,S,X
3.0	I	1.2	19272	4100	630	3585	143T	T,C,S,X
2.9	II, III	2.0	19695	13249	630	3695	143T	T,C,S,X
2.6	II	1.8	21909	13249	710	3695	143T	T,C,S,X
2.6	I	1.1	21518	4100	710	3585	143T	T,C,S,X
2.4	III	3+	23569	18242	710	3705	143T	T,C,S,X
2.3	I, II	1.6	24643	13249	800	3695	143T	T,C,S,X
2.1	III	2.8	26532	18242	800	3705	143T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 volts or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
2.0	I, II	1.4	28875	13249	900	3695	143T	T,C,S,X
1.8	III	2.4	31089	18242	900	3705	143T	T,C,S,X
1.8	I	1.2	31870	13249	1000	3695	143T	T,C,S,X
1.7	II, III	2.1	34312	18242	1000	3705	143T	T,C,S,X
1.6	I	1.1	34963	13249	1120	3695	143T	T,C,S,X
1.5	II	1.9	37632	18242	1120	3705	143T	T,C,S,X
1.4	I	1	40823	13249	1250	3695	143T	T,C,S,X
1.4	III	3.0	39512	21873	1250	3825	143T	T,C,S,X
1.3	I, II	1.8	42255	18242	1250	3705	143T	T,C,S,X
1.3	III	2.7	43961	21873	1400	3825	143T	T,C,S,X
1.2	I, II	1.6	47757	18242	1400	3705	143T	T,C,S,X
1.2	III	2.4	49456	21873	1600	3825	143T	T,C,S,X
1.1	I, II	1.4	52868	18242	1600	3705	143T	T,C,S,X
1.0	III	2.1	57971	21873	1800	3825	143T	T,C,S,X
0.95	I	1.3	60258	18242	1800	3705	143T	T,C,S,X
0.89	III	1.9	63991	21873	2000	3825	143T	T,C,S,X
0.82	I	1.1	69470	18242	2000	3705	143T	T,C,S,X
0.81	III	1.7	70169	21873	2240	3825	143T	T,C,S,X
0.77	I	1	74223	18242	2240	3705	143T	T,C,S,X
0.70	II	1.5	81940	21873	2500	3825	143T	T,C,S,X
0.64	I	1.3	89581	21873	2800	3825	143T	T,C,S,X
0.54	I	1.1	105004	21873	3150	3825	143T	T,C,S,X
0.49	I	1.0	115908	21873	3550	3825	143T	T,C,S,X
0.45		0.94	127098	21873	4000	3825	143T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	192	2071	3.55	3242	145T	T,C,S,X
374	I, II, III	3+	243	2071	4.5	3242	145T	T,C,S,X
343	I, II, III	3+	264	1294	5	3132	145T	T,C,S,X
313	I, II, III	3+	290	2071	5.6	3242	145T	T,C,S,X
272	I, II, III	3.2	333	1294	6.3	3132	145T	T,C,S,X
242	I, II, III	3.0	375	1294	7.1	3132	145T	T,C,S,X
230	I, II, III	2.9	395	1294	8	3132	145T	T,C,S,X
203	I, II, III	2.7	447	1294	9	3132	145T	T,C,S,X
180	I, II, III	2.5	504	1294	10	3132	145T	T,C,S,X
159	I, II, III	2.3	570	1294	11.2	3132	145T	T,C,S,X
140	I, II, III	2.1	648	1294	12.5	3132	145T	T,C,S,X
124	III	3+	731	1146	14	3242	145T	T,C,S,X
122	I, II	1.9	742	1294	14	3132	145T	T,C,S,X
109	I, II	1.8	835	1294	16	3132	145T	T,C,S,X
112	III	3+	809	1189	16	3242	145T	T,C,S,X
102	I, II	1.7	887	1294	18	3132	145T	T,C,S,X
99	III	3+	918	1198	18	3242	145T	T,C,S,X
89	III	3.1	1022	1258	20	3242	145T	T,C,S,X
86	I, II	1.5	1053	1294	20	3132	145T	T,C,S,X
81	I, II	1.5	1115	1294	22.4	3132	145T	T,C,S,X
79	III	3+	1151	1291	22.4	3242	145T	T,C,S,X
71	I, II	1.4	1276	1294	25	3132	145T	T,C,S,X
67	III	2.4	1348	1306	25	3242	145T	T,C,S,X
64	I	1.3	1421	1294	28	3132	145T	T,C,S,X
61	II, III	2.1	1488	1340	28	3242	145T	T,C,S,X
57	I	1.2	1592	1294	31.5	3132	145T	T,C,S,X
56	II, III	2.0	1634	2071	31.5	3242	145T	T,C,S,X
50	III	2.2	1769	1403	35.5	3243	145T	T,C,S,X
49	I	1.1	1846	1294	35.5	3132	145T	T,C,S,X
48	II	1.7	1908	2071	35.5	3242	145T	T,C,S,X
46	I, II, III	3+	1947	2090	40	3363	145T	T,C,S,X
44	I, II	1.9	2008	1433	40	3243	145T	T,C,S,X
40	I, II, III	3+	2222	2090	45	3363	145T	T,C,S,X
39	I, II	1.7	2298	1461	45	3243	145T	T,C,S,X
35	I, II, III	2.7	2557	2090	50	3363	145T	T,C,S,X
34	I, II	1.5	2593	1483	50	3243	145T	T,C,S,X
33	I, II, III	2.6	2735	2090	56	3363	145T	T,C,S,X
32	I, II	1.4	2751	1490	56	3243	145T	T,C,S,X
29	I, II, III	2.3	3102	2090	63	3363	145T	T,C,S,X
27	I	1.2	3269	1490	63	3243	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase).
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
26	I, II, III	2.0	3447	2090	71	3363	145T	T,C,S,X
26	I	1.1	3457	1490	71	3243	145T	T,C,S,X
23	I, II	1.8	3915	2090	80	3363	145T	T,C,S,X
23	I, II, III	3+	3940	2875	80	3473	145T	T,C,S,X
23	I	1.0	3951	1490	80	3243	145T	T,C,S,X
20	I, II	1.6	4357	2090	90	3363	145T	T,C,S,X
20	I, II, III	3+	4459	2875	90	3473	145T	T,C,S,X
18	I, II, III	2.9	4851	2875	100	3473	145T	T,C,S,X
18	I, II	1.4	4901	2090	100	3363	145T	T,C,S,X
16	I, II, III	2.6	5491	2875	112	3473	145T	T,C,S,X
15	I	1.2	5745	2090	112	3363	145T	T,C,S,X
14	I, II, III	2.3	6305	2875	125	3473	145T	T,C,S,X
14	I	1.1	6356	2090	125	3363	145T	T,C,S,X
13	I	1.0	6966	2090	140	3363	145T	T,C,S,X
13	I, II, III	2.0	7067	2875	140	3473	145T	T,C,S,X
11	I, II	1.8	7830	2875	160	3473	145T	T,C,S,X
10.2	I, II	1.7	8399	2875	180	3475	145T	T,C,S,X
10	I, II, III	2.7	8497	4100	180	3585	145T	T,C,S,X
9.5	I, II, III	2.5	8985	4100	200	3585	145T	T,C,S,X
9.0	I, II	1.5	9473	2875	200	3475	145T	T,C,S,X
8.4	I, II, III	2.2	10157	4100	224	3585	145T	T,C,S,X
8.0	I	1.3	10743	2875	224	3475	145T	T,C,S,X
7.4	I, II, III	2.0	11475	4100	250	3585	145T	T,C,S,X
7.0	I	1.2	12208	2875	250	3475	145T	T,C,S,X
6.6	I, II	1.8	12940	4100	280	3585	145T	T,C,S,X
6.1	I	1.0	13966	2875	280	3475	145T	T,C,S,X
5.8	I, II	1.5	14747	4100	315	3585	145T	T,C,S,X
5.8	III	2.7	14835	13249	315	3695	145T	T,C,S,X
5.1	III	2.4	16651	13249	355	3695	145T	T,C,S,X
5.1	I, II	1.4	16847	4100	355	3585	145T	T,C,S,X
4.5	I	1.2	18995	4100	400	3585	145T	T,C,S,X
4.4	II, III	2.1	19288	13249	400	3695	145T	T,C,S,X
4.2	I	1.1	20167	4100	450	3585	145T	T,C,S,X
4.1	II	1.9	20607	13249	450	3695	145T	T,C,S,X
3.8	III	3+	22218	18242	450	3705	145T	T,C,S,X
3.7	II	1.7	23390	13249	500	3695	145T	T,C,S,X
3.6	I	1.0	23927	4100	500	3585	145T	T,C,S,X
3.4	III	2.9	25197	18242	500	3705	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase).
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

1 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
3.3	I, II	1.5	25978	13249	560	3695	145T	T,C,S,X
3.1	III	2.6	27980	18242	560	3705	145T	T,C,S,X
2.9	I	1.3	29543	13249	630	3695	145T	T,C,S,X
2.7	II, III	2.3	31789	18242	630	3705	145T	T,C,S,X
2.6	I	1.2	32863	13249	710	3695	145T	T,C,S,X
2.4	II, III	2.1	35354	18242	710	3705	145T	T,C,S,X
2.3	I	1.1	36965	13249	800	3695	145T	T,C,S,X
2.2	III	3.1	38735	21873	800	3825	145T	T,C,S,X
2.1	II	1.8	39787	18242	800	3705	145T	T,C,S,X
2.1	III	2.9	41391	21873	900	3825	145T	T,C,S,X
1.8	I, II	1.6	46634	18242	900	3705	145T	T,C,S,X
1.8	III	2.5	46975	21873	1000	3825	145T	T,C,S,X
1.7	I, II	1.4	51468	18242	1000	3705	145T	T,C,S,X
1.6	III	2.3	52174	21873	1120	3825	145T	T,C,S,X
1.5	I	1.3	56449	18242	1120	3705	145T	T,C,S,X
1.4	II, III	2.0	59267	21873	1250	3825	145T	T,C,S,X
1.3	I	1.2	63383	18242	1250	3705	145T	T,C,S,X
1.3	II	1.8	65942	21873	1400	3825	145T	T,C,S,X
1.2	I	1.1	71635	18242	1400	3705	145T	T,C,S,X
1.2	II	1.6	74185	21873	1600	3825	145T	T,C,S,X
1.1	I	1	79302	18242	1600	3705	145T	T,C,S,X
1.0	II	1.4	86956	21873	1800	3825	145T	T,C,S,X
0.89	I	1.2	95986	21873	2000	3825	145T	T,C,S,X
0.81	I	1.1	105253	21873	2240	3825	145T	T,C,S,X
0.70		0.97	122909	21873	2500	3825	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase).
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	257	2071	3.55	3242	145T	T,C,S,X
374	I, II, III	3+	324	2071	4.5	3242	145T	T,C,S,X
343	I, II, III	2.8	353	1294	5	3132	145T	T,C,S,X
313	I, II, III	3+	387	2071	5.6	3242	145T	T,C,S,X
272	I, II, III	2.4	445	1294	6.3	3132	145T	T,C,S,X
242	I, II, III	2.3	500	1294	7.1	3132	145T	T,C,S,X
230	I, II, III	2.2	527	1294	8	3132	145T	T,C,S,X
203	I, II, III	2.0	596	1294	9	3132	145T	T,C,S,X
180	I, II	1.9	672	1294	10	3132	145T	T,C,S,X
179	III	3+	664	1013	10	3243	145T	T,C,S,X
159	I, II	1.7	761	1294	11.2	3132	145T	T,C,S,X
141	III	3+	857	2071	12.5	3242	145T	T,C,S,X
140	I, II	1.6	864	1294	12.5	3132	145T	T,C,S,X
124	III	3+	975	2071	14	3242	145T	T,C,S,X
122	I, II	1.5	989	1294	14	3132	145T	T,C,S,X
112	II, III	3.0	1079	2071	16	3242	145T	T,C,S,X
109	I	1.3	1113	1294	16	3132	145T	T,C,S,X
102	I	1.3	1182	1294	18	3132	145T	T,C,S,X
99	II, III	2.6	1224	2071	18	3242	145T	T,C,S,X
89	II, III	2.3	1362	2071	20	3242	145T	T,C,S,X
86	I	1.2	1404	1294	20	3132	145T	T,C,S,X
81	I	1.1	1487	1294	22.4	3132	145T	T,C,S,X
76	II, III	2.0	1583	2071	22.4	3242	145T	T,C,S,X
73	III	2.3	1632	1238	25	3243	145T	T,C,S,X
71	I	1.0	1701	1294	25	3132	145T	T,C,S,X
67	II	1.8	1798	2071	25	3242	145T	T,C,S,X
64		0.91	1895	1294	28	3132	145T	T,C,S,X
64	III	2.0	1848	1252	28	3243	145T	T,C,S,X
61	I, II	1.6	1985	2071	28	3242	145T	T,C,S,X
57	III	3+	2072	2090	31.5	3363	145T	T,C,S,X
56	I, II	1.5	2178	2071	31.5	3242	145T	T,C,S,X
53	III	3+	2228	2090	35.5	3363	145T	T,C,S,X
50	II	1.7	2356	1291	35.5	3243	145T	T,C,S,X
48	I	1.3	2545	2071	35.5	3242	145T	T,C,S,X
46	I, II, III	2.7	2597	2090	40	3363	145T	T,C,S,X
44	I, II	1.5	2678	1306	40	3243	145T	T,C,S,X
40	I, II, III	2.4	2963	2090	45	3363	145T	T,C,S,X
39	I	1.3	3064	1316	45	3243	145T	T,C,S,X
35	I, II, III	2.1	3410	2090	50	3363	145T	T,C,S,X
34	I	1.1	3457	1319	50	3243	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
33	I, II	1.9	3647	2090	56	3363	145T	T,C,S,X
32	I	1.1	3668	1319	56	3243	145T	T,C,S,X
31	II, III	3+	3864	2875	56	3473	145T	T,C,S,X
29	I, II	1.7	4135	2090	63	3363	145T	T,C,S,X
28	III	3+	4196	2875	63	3473	145T	T,C,S,X
26	I, II	1.5	4596	2090	71	3363	145T	T,C,S,X
25	III	3+	4678	2875	71	3473	145T	T,C,S,X
23	I, II	1.4	5220	2090	80	3363	145T	T,C,S,X
23	III	2.7	5254	2875	80	3473	145T	T,C,S,X
20	I	1.2	5810	2090	90	3363	145T	T,C,S,X
20	II, III	2.4	5946	2875	90	3473	145T	T,C,S,X
18	II, III	2.2	6468	2875	100	3473	145T	T,C,S,X
18	I	1.1	6535	2090	100	3363	145T	T,C,S,X
16	I, II	1.9	7322	2875	112	3473	145T	T,C,S,X
14	III	2.8	8203	4100	125	3583	145T	T,C,S,X
14	I, II	1.7	8406	2875	125	3473	145T	T,C,S,X
13	III	2.5	9084	4100	140	3583	145T	T,C,S,X
13	I, II	1.5	9423	2875	140	3473	145T	T,C,S,X
11	I, II	1.4	10440	2875	160	3473	145T	T,C,S,X
11	III	2.1	10779	4100	160	3583	145T	T,C,S,X
10.2	I	1.3	11199	2875	180	3475	145T	T,C,S,X
10	II, III	2.0	11329	4100	180	3585	145T	T,C,S,X
9.5	I, II	1.9	11980	4100	200	3585	145T	T,C,S,X
9.0	I	1.1	12631	2875	200	3475	145T	T,C,S,X
8.4	I, II	1.7	13543	4100	224	3585	145T	T,C,S,X
8.0	I	1.0	14324	2875	224	3475	145T	T,C,S,X
7.4	I, II	1.5	15301	4100	250	3585	145T	T,C,S,X
7.3	III	2.5	15558	13249	250	3695	145T	T,C,S,X
6.6	I	1.3	17254	4100	280	3585	145T	T,C,S,X
6.4	II, III	2.3	17633	13249	280	3695	145T	T,C,S,X
5.8	I	1.2	19663	4100	315	3585	145T	T,C,S,X
5.8	II, III	2.0	19447	13249	315	3695	145T	T,C,S,X
5.1	I, II	1.8	22202	13249	355	3695	145T	T,C,S,X
5.1	I	1	22463	4100	355	3585	145T	T,C,S,X
4.8	III	3+	23895	18242	355	3705	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
4.4	I, II	1.5	25718	13249	400	3695	145T	T,C,S,X
4.1	I, II	1.4	27476	13249	450	3695	145T	T,C,S,X
4.1	III	2.6	27671	18242	400	3705	145T	T,C,S,X
3.8	III	2.5	29624	18242	450	3705	145T	T,C,S,X
3.7	I	1.3	31187	13249	500	3695	145T	T,C,S,X
3.4	II, III	2.2	33596	18242	500	3705	145T	T,C,S,X
3.3	I	1.1	34637	13249	560	3695	145T	T,C,S,X
3.1	II, III	2.0	37307	18242	560	3705	145T	T,C,S,X
2.9	I	1	39390	13249	630	3695	145T	T,C,S,X
2.9	III	3.0	39483	21873	630	3825	145T	T,C,S,X
2.7	II	1.7	42385	13249	630	3705	145T	T,C,S,X
2.5	III	2.7	44807	21873	710	3825	145T	T,C,S,X
2.4	I, II	1.6	47138	18242	710	3705	145T	T,C,S,X
2.2	III	2.3	51646	21873	800	3825	145T	T,C,S,X
2.1	I, II	1.4	53063	18242	800	3705	145T	T,C,S,X
2.1	II, III	2.2	55188	21873	900	3825	145T	T,C,S,X
1.8	I	1.2	62178	18242	900	3705	145T	T,C,S,X
1.8	II	1.9	62633	21873	1000	3825	145T	T,C,S,X
1.7	1	1.1	68624	18242	1000	3705	145T	T,C,S,X
1.6	II	1.7	69565	21873	1120	3825	145T	T,C,S,X
1.5		0.97	75265	18242	1120	3705	145T	T,C,S,X
1.4	I, II	1.5	79023	21873	1250	3825	145T	T,C,S,X
1.3	I, II	1.4	87922	21873	1400	3825	145T	T,C,S,X
1.2	I	1.2	98913	21873	1600	3825	145T	T,C,S,X
1.0	I	1.0	115941	21873	1800	3825	145T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 115/230 volts (Note that the frame is 145TY for single phase)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	3+	385	1756	3.55	3242	182T	T,C,S,X
374	I, II, III	3+	485	1868	4.5	3242	182T	T,C,S,X
343	I, II	1.9	529	1294	5	3132	182T	T,C,S,X
313	I, II, III	3+	581	1957	5.6	3242	182T	T,C,S,X
272	I, II	1.6	667	1294	6.3	3132	182T	T,C,S,X
265	III	3+	686	1294	6.3	3242	182T	T,C,S,X
248	III	3+	731	1294	7.1	3242	182T	T,C,S,X
242	I, II	1.5	750	1294	7.1	3132	182T	T,C,S,X
230	I, II	1.5	790	1294	8	3132	182T	T,C,S,X
220	III	3+	827	2071	8	3242	182T	T,C,S,X
203	I	1.3	894	1294	9	3132	182T	T,C,S,X
198	II, III	3+	916	2071	9	3242	182T	T,C,S,X
180	I, II, III	1.2	1008	1294	10	3132	182T	T,C,S,X
173	III	3.0	1048	2071	10	3242	182T	T,C,S,X
159	I	1.1	1141	1294	11.2	3132	182T	T,C,S,X
151	II, III	2.6	1203	2071	11.2	3242	182T	T,C,S,X
141	II, III	2.5	1286	2071	12.5	3242	182T	T,C,S,X
140	I	1.1	1297	1294	12.5	3132	182T	T,C,S,X
124	I, II, III	2.2	1462	2071	14	3242	182T	T,C,S,X
122		0.9	1483	1294	14	3132	182T	T,C,S,X
112	I, II, III	2.0	1618	2071	16	3242	182T	T,C,S,X
99	I, II	1.7	1836	2071	18	3242	182T	T,C,S,X
94	III	3.3	1889	2090	20	3363	182T	T,C,S,X
89	I, II	1.6	2043	2071	20	3242	182T	T,C,S,X
79	I, II	1.4	2303	2071	22.4	3242	182T	T,C,S,X
75	III	2.9	2366	2090	22.4	3363	182T	T,C,S,X
73	I, II	1.5	2500	1074	25	3243	182T	T,C,S,X
72	III	2.8	2468	2090	25	3363	182T	T,C,S,X
67	I	1.2	2697	2071	25	3242	182T	T,C,S,X
64	II	1.4	2773	1077	28	3243	182T	T,C,S,X
61	I	1.1	2977	2071	28	3242	182T	T,C,S,X
61	II, III	2.5	2915	2090	28	3363	182T	T,C,S,X
57	II, III	2.3	3112	2090	31.5	3363	182T	T,C,S,X
57	I	1.2	3132	1075	31.5	3243	182T	T,C,S,X
51	II, III	2.0	3518	2090	35.5	3363	182T	T,C,S,X
50	I	1.1	3539	1068	35.5	3243	182T	T,C,S,X
46	I, II	1.8	3895	2090	40	3363	182T	T,C,S,X
44	I	1.0	4017	1052	40	3243	182T	T,C,S,X
44	II, III	3+	4057	2875	40	3473	182T	T,C,S,X
40	I, II	1.6	4444	2090	45	3363	182T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 230 volts (Note that single phase motor has 184T frame.)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
40	III	3+	4485	2875	45	3473	182T	T,C,S,X
35	I, II	1.4	5115	2090	50	3363	182T	T,C,S,X
35	III	2.6	5146	2875	50	3473	182T	T,C,S,X
33	I	1.3	5471	2090	56	3363	182T	T,C,S,X
31	I, II, III	2.4	5796	2875	56	3473	182T	T,C,S,X
29	I	1.1	6203	2090	63	3363	182T	T,C,S,X
28	I, II, III	2.2	6295	2875	63	3473	182T	T,C,S,X
26	I	1.0	6895	2090	71	3363	182T	T,C,S,X
25	I, II, III	2.0	7017	2875	71	3473	182T	T,C,S,X
23	I, II	1.8	7881	2875	80	3473	182T	T,C,S,X
22	I, II, III	2.8	8196	4100	80	3583	182T	T,C,S,X
20	I, II, III	2.6	8796	4100	90	3583	182T	T,C,S,X
20	I, II	1.6	8918	2875	90	3473	182T	T,C,S,X
18	I, II	1.5	9701	2875	100	3473	182T	T,C,S,X
17	I, II, III	2.2	10271	4100	100	3583	182T	T,C,S,X
16	I	1.3	10983	2875	112	3473	182T	T,C,S,X
16	I, II, III	2.1	11084	4100	112	3583	182T	T,C,S,X
14	I, II	1.9	12305	4100	125	3583	182T	T,C,S,X
14	I	1.1	12610	2875	125	3473	182T	T,C,S,X
14	III	3+	12304	13249	125	3693	182T	T,C,S,X
13	III	2.9	13728	13249	140	3693	182T	T,C,S,X
13	I, II	1.7	13627	4100	140	3583	182T	T,C,S,X
13	I	1.0	14135	2875	140	3473	182T	T,C,S,X
11	III	2.5	15965	13249	160	3693	182T	T,C,S,X
11	I, II	1.4	16169	4100	160	3583	182T	T,C,S,X
10.1	I	1.3	16993	4100	180	3585	182T	T,C,S,X
9.7	II, III	2.3	17502	13249	180	3695	182T	T,C,S,X
9.5	I	1.3	17970	4100	200	3585	182T	T,C,S,X
9.2	II, IIII	2.0	18572	13249	200	3695	182T	T,C,S,X
8.4	I	1.1	20314	4100	224	3585	182T	T,C,S,X
7.7	II	1.9	21879	13249	224	3695	182T	T,C,S,X
7.6	III	3+	22462	18242	224	3705	182T	T,C,S,X
7.4	I	1.0	22951	4100	250	3585	182T	T,C,S,X
7.3	II	1.7	23337	13249	250	3695	182T	T,C,S,X
6.7	III	2.9	25490	18242	250	3705	182T	T,C,S,X
6.4	I, II	1.5	26449	13249	280	3695	182T	T,C,S,X
6.0	II, III	2.6	28322	18242	280	3705	182T	T,C,S,X
5.8	I	1.3	29172	13249	315	3695	182T	T,C,S,X
5.3	II, III	2.3	32228	18242	315	3705	182T	T,C,S,X
5.1	I	1.2	33303	13249	355	3695	182T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 230 volts (Note that single phase motor has 184T frame.)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

3 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
4.8	II, III	2.0	35842	18242	355	3705	182T	T,C,S,X
4.4	I	1.0	39065	13249	400	3695	182T	T,C,S,X
4.4	II, III	3.1	38936	21873	400	3825	182T	T,C,S,X
4.1	I, II	1.8	41506	18242	400	3705	182T	T,C,S,X
4.1	III	2.9	41526	21873	450	3825	182T	T,C,S,X
3.8	I, II	1.6	44436	18242	450	3705	182T	T,C,S,X
3.6	III	2.5	46966	21873	500	3825	182T	T,C,S,X
3.4	I, II	1.5	50394	18242	500	3705	182T	T,C,S,X
3.3	III	2.3	51973	21873	560	3825	182T	T,C,S,X
3.1	I	1.3	55960	18242	560	3705	182T	T,C,S,X
2.9	I, II	2.0	59224	21873	630	3825	182T	T,C,S,X
2.7	I	1.2	63578	18242	630	3705	182T	T,C,S,X
2.5	II	1.8	67210	21873	710	3825	182T	T,C,S,X
2.4	I	1.0	70707	18242	710	3705	182T	T,C,S,X
2.2	I, II	1.5	77470	21873	800	3825	182T	T,C,S,X
2.1	I, II	1.4	82782	21873	900	3825	182T	T,C,S,X
1.8	I	1.3	93950	21873	1000	3825	182T	T,C,S,X
1.6	I	1.1	104347	21873	1120	3825	182T	T,C,S,X
1.4	I	1.0	118535	21873	1250	3825	182T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
S TEFC, single phase, 230 volts (Note that single phase motor has 184T frame.)
C CorroGard®, three phase, 230/460 or 575 volts
X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

5 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	4.2	641	1704	3.55	3242	184T	T,C,S,X
374	I, II, III	3.7	809	1803	4.5	3242	184T	T,C,S,X
343	I	1.1	882	1294	5	3132	184T	T,C,S,X
313	I, II, III	3.3	968	1850	5.6	3242	184T	T,C,S,X
265	I, II, III	2.8	1143	1906	6.3	3242	184T	T,C,S,X
248	I, II, III	2.6	1219	1977	7.1	3242	184T	T,C,S,X
220	I, II, III	2.3	1378	2028	8	3242	184T	T,C,S,X
198	I, II, III	2.1	1526	2070	9	3242	184T	T,C,S,X
179	III	3.3	1655	1771	10	3363	184T	T,C,S,X
173	I, II	1.8	1746	2071	10	3242	184T	T,C,S,X
151	I, II	1.6	2005	2071	11.2	3242	184T	T,C,S,X
142	III	2.7	2082	1866	12.5	3363	184T	T,C,S,X
141	I, II	1.5	2144	2071	12.5	3242	184T	T,C,S,X
124	I	1.3	2437	2071	14	3242	184T	T,C,S,X
118	II, III	2.4	2505	1941	14	3363	184T	T,C,S,X
112	I	1.2	2697	2071	16	3242	184T	T,C,S,X
109	II, III	2.3	2725	1963	16	3363	184T	T,C,S,X
99	I	1.0	3060	2071	18	3242	184T	T,C,S,X
94	II, III	2.0	3148	2026	18	3363	184T	T,C,S,X
86	I, II, III	2.0	3441	2057	20	3363	184T	T,C,S,X
86	I	1.0	3457	800	20	3243	184T	T,C,S,X
82	I, II, III	3+	3610	2875	22.4	3473	184T	T,C,S,X
75	I, II	1.7	3949	2090	22.4	3363	184T	T,C,S,X
72	I, II	1.7	4118	2090	25	3363	184T	T,C,S,X
71	III	3+	4203	2875	25	3473	184T	T,C,S,X
61	III	2.7	4847	2875	28	3473	184T	T,C,S,X
61	I, II	1.5	4864	2090	28	3363	184T	T,C,S,X
57	I, II	1.4	5186	2090	31.5	3363	184T	T,C,S,X
56	III	2.5	5339	2875	31.5	3473	184T	T,C,S,X
51	I	1.2	5864	2090	35.5	3363	184T	T,C,S,X
50	III	2.3	5898	2875	35.5	3473	184T	T,C,S,X
46	I	1.1	6491	2090	40	3363	184T	T,C,S,X
44	I, II, III	2.0	6762	2875	40	3473	184T	T,C,S,X
41	III	3+	7220	4100	45	3583	184T	T,C,S,X
40	I, II	1.8	7474	2875	45	3473	184T	T,C,S,X
35	III	2.7	8440	4100	50	3583	184T	T,C,S,X
35	I, II	1.6	8576	2875	50	3473	184T	T,C,S,X
32	III	2.4	9406	4100	56	3583	184T	T,C,S,X
31	I, II	1.4	9661	2875	56	3473	184T	T,C,S,X
28	I	1.3	10491	2875	63	3473	184T	T,C,S,X
28	II, III	2.1	10576	4100	63	3583	184T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

5 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
25	III	3+	11796	12633	71	3693	184T	T,C,S,X
25	I	1.2	11694	2875	71	3473	184T	T,C,S,X
25	II	1.9	11966	4100	71	3583	184T	T,C,S,X
23	III	3+	12864	12956	80	3693	184T	T,C,S,X
23	I	1.1	13135	2875	80	3473	184T	T,C,S,X
22	II	1.7	13660	4100	80	3583	184T	T,C,S,X
21	III	2.7	14457	13249	90	3693	184T	T,C,S,X
20	I, II	1.6	14660	4100	90	3583	184T	T,C,S,X
18	II, II	2.5	16118	13249	100	3693	184T	T,C,S,X
17	I	1.3	17118	4100	100	3583	184T	T,C,S,X
16	II, III	2.2	18304	13249	112	3693	184T	T,C,S,X
16	I	1.2	18474	4100	112	3583	184T	T,C,S,X
14	III	3+	20846	18242	125	3703	184T	T,C,S,X
14	II	1.9	21016	13249	125	3693	184T	T,C,S,X
14	I	1.1	20508	4100	125	3583	184T	T,C,S,X
13	I	1.0	22711	4100	140	3583	184T	T,C,S,X
13	II	1.8	22880	13249	140	3693	184T	T,C,S,X
13	III	3+	22880	18242	140	3703	184T	T,C,S,X
12	III	2.9	25761	18242	160	3703	184T	T,C,S,X
11	I, II	1.5	26609	13249	160	3693	184T	T,C,S,X
9.7	I, II	1.4	29171	13242	180	3695	184T	T,C,S,X
9.4	III	2.3	31693	18242	180	3705	184T	T,C,S,X
9.1	I	1.2	30954	13249	200	3695	184T	T,C,S,X
8.1	II, III	2.0	36608	18242	200	3705	184T	T,C,S,X
7.8	I	1.1	36464	13242	224	3695	184T	T,C,S,X
7.6	II, III	2.0	37437	18242	224	3705	184T	T,C,S,X
7.3	I	1.0	38895	13249	250	3695	184T	T,C,S,X
6.7	II	1.7	42483	18242	250	3705	184T	T,C,S,X
6.0	I, II	1.5	47203	18242	280	3705	184T	T,C,S,X
5.3	I, II	1.4	53714	18242	315	3705	184T	T,C,S,X
5.2	II, III	2.1	54894	21873	355	3825	184T	T,C,S,X
4.8	I	1.2	59737	18242	355	3705	184T	T,C,S,X
4.4	II	1.8	64893	21873	400	3825	184T	T,C,S,X
4.1	II	1.7	69210	21873	450	3825	184T	T,C,S,X
4.1	I	1.1	69177	18242	400	3705	184T	T,C,S,X
3.8	I	1	74060	18242	450	3705	184T	T,C,S,X
3.6	I, II	1.5	78276	21873	500	3825	184T	T,C,S,X
3.3	I, II	1.4	86621	21873	560	3825	184T	T,C,S,X
2.9	I	1.2	98707	21873	630	3825	184T	T,C,S,X
2.5	I	1.1	112017	21873	710	3825	184T	T,C,S,X

◊ **Standard Motor Types** (see page F-15 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- X Explosionproof, Cl 1 group D, Cl 2 groups F&G, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

7 1/2 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	2.8	962	1639	3.55	3242	213T	T,C
374	I, II, III	2.5	1214	1721	4.5	3242	213T	T,C
313	I, II, III	2.2	1462	1735	5.6	3242	213T	T,C
265	I, II, III	1.9	1714	1834	6.3	3242	213T	T,C
248	I, II	1.7	1828	1854	7.1	3242	213T	T,C
220	I, II	1.5	2067	1889	8	3242	213T	T,C
198	I, II	1.4	2290	1916	9	3242	213T	T,C
179	II, III	2.2	2483	1644	10	3363	213T	T,C
173	I	1.2	2619	1947	10	3242	213T	T,C
151	I	1.1	3008	1974	11.2	3242	213T	T,C
142	I, II	1.8	3123	1707	12.5	3363	213T	T,C
142	III	3.1	3123	2875	12.5	3473	213T	T,C
141		0.99	3215	2071	12.5	3242	213T	T,C
118	I, II	1.6	3763	1750	14	3363	213T	T,C
115	I, II, III	3+	3864	2875	14	3473	213T	T,C
113	I, II, III	3+	3941	2875	16	3473	213T	T,C
109	I, II	1.6	4093	1765	16	3363	213T	T,C
100	I, II, III	2.6	4449	2875	18	3473	213T	T,C
94	I	1.3	4729	1786	18	3363	213T	T,C
87	I, II, III	2.4	5110	2875	20	3473	213T	T,C
86	I	1.3	5161	1794	20	3363	213T	T,C
82	I, II, III	2.1	5415	2875	22.4	3473	213T	T,C
75	I	1.1	5923	1800	22.4	3363	213T	T,C
72	I	1.1	6178	1799	25	3363	213T	T,C
71	I, II, III	2.0	6305	2875	25	3473	213T	T,C
65	I, II, III	3+	6890	4100	28	3583	213T	T,C
61	II	1.8	7271	2875	28	3473	213T	T,C
61	I	1.0	7296	1785	28	3363	213T	T,C
57	III	2.8	7754	4100	31.5	3583	213T	T,C
56	I, II	1.7	8008	2875	31.5	3473	213T	T,C
51	III	2.6	8644	4100	35.5	3583	213T	T,C
50	I, II	1.5	8847	2875	35.5	3473	213T	T,C
45	III	2.3	9813	4100	40	3583	213T	T,C
44	I	1.3	10144	2875	40	3473	213T	T,C
41	II, III	2.1	10830	4100	45	3583	213T	T,C
40	I	1.2	11211	2875	45	3473	213T	T,C
37	III	3+	12152	11250	50	3693	213T	T,C
35	II	1.8	12660	4100	50	3583	213T	T,C
35	I	1.0	12864	2875	50	3473	213T	T,C
32	III	2.8	13830	11485	56	3693	213T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

7 1/2 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
32	I,II	1.6	14110	4100	56	3583	213T	T,C
29	III	2.6	15279	11667	63	3693	213T	T,C
28	I, II	1.4	15864	4100	63	3583	213T	T,C
25	II, III	2.2	17694	12097	71	3693	213T	T,C
25	I	1.3	17948	4100	71	3583	213T	T,C
23	II, III	2.1	19296	12349	80	3693	213T	T,C
21	I, II	1.8	21685	12686	90	3693	213T	T,C
20	III	3+	22219	18242	90	3703	213T	T,C
18	I, II	1.6	24177	12995	100	3693	213T	T,C
18	III	3.0	24914	18242	100	3703	213T	T,C
16	I, II	1.5	27456	13249	112	3693	213T	T,C
14	II, III	2.4	31269	18242	125	3703	213T	T,C
14	I	1.3	31524	13249	125	3693	213T	T,C
13	I	1.2	34320	13249	140	3693	213T	T,C
13	II, III	2.1	34320	18242	140	3703	213T	T,C
12	II	1.9	38593	18242	160	3703	213T	T,C
11	III	3.1	39150	20214	160	3823	213T	T,C
11	I	1.0	39913	13249	160	3693	213T	T,C
9.4	I, II	1.6	45857	18242	180	3705	213T	T,C
8.1	I, II	1.4	52738	18242	200	3705	213T	T,C
7.6	I, II	1.3	56156	18242	224	3705	213T	T,C
6.7	I, II	1.1	63725	18242	250	3705	213T	T,C
6.0	I, II	1	70805	18242	280	3705	213T	T,C
5	I, II	1.4	82341	21873	355	3825	213T	T,C
4	I	1.2	97340	21873	400	3825	213T	T,C
4	I	1.2	103815	21873	450	3825	213T	T,C
4	I	1.0	117414	21873	500	3825	213T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

10 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
472	I, II, III	2.1	1283	1575	3.55	3242	215T	T,C
374	I, II	1.9	1618	1639	4.5	3242	215T	T,C
313	I, II	1.6	1936	1670	5.6	3242	215T	T,C
265	I, II	1.4	2285	1719	6.3	3242	215T	T,C
248	I	1.3	2437	1731	7.1	3242	215T	T,C
220	I	1.2	2756	1750	8	3242	215T	T,C
198	I	1.0	3053	1762	9	3242	215T	T,C
179	III	2.5	3311	2761	10	3473	215T	T,C
179	I, II	1.7	3311	1539	10	3363	215T	T,C
173		0.91	3492	1850	10	3242	215T	T,C
142	I	1.3	4169	1549	12.5	3363	215T	T,C
142	I, II, III	2.3	4169	2875	12.5	3473	215T	T,C
118	I	1.2	5017	1558	14	3363	215T	T,C
115	I, II, III	2.2	5152	2875	14	3473	215T	T,C
113	I, II, III	2.2	5254	2875	16	3473	215T	T,C
109	I	1.2	5457	1557	16	3363	215T	T,C
100	I, II, III	2.0	5932	2875	18	3473	215T	T,C
94	I	1.0	6305	1546	18	3363	215T	T,C
88	I, II, III	2.9	6779	4100	20	3583	215T	T,C
87	I, II	1.8	6813	2875	20	3473	215T	T,C
86	I	1.0	6881	1532	20	3363	215T	T,C
82	I, II	1.6	7220	2875	22.4	3473	215T	T,C
74	I, II, III	2.6	8000	4100	22.4	3583	215T	T,C
72	III	2.6	8237	4100	25	3583	215T	T,C
71	I, II	1.5	8406	2875	25	3473	215T	T,C
65	I, II, III	2.3	9186	4100	28	3583	215T	T,C
61	I	1.3	9694	2875	28	3473	215T	T,C
57	I, II, III	2.1	10338	4100	31.5	3583	215T	T,C
56	I	1.3	10677	2875	31.5	3473	215T	T,C
51	I, II	1.9	11525	4100	35.5	3583	215T	T,C
50	I	1.1	11796	2875	35.5	3473	215T	T,C
45	I, II	1.7	13084	4100	40	3583	215T	T,C
45	III	2.9	13287	10115	40	3693	213T	T,C
44	I	1.0	13525	2875	40	3473	215T	T,C
41	I, II	1.6	14440	4100	45	3583	215T	T,C
40	III	2.6	14948	10414	45	3693	215T	T,C
37	III	2.4	16202	10619	50	3693	215T	T,C
35	I	1.3	16880	4100	50	3583	215T	T,C
32	III	2.1	18440	10941	56	3693	215T	T,C
32	I, II	1.6	18444	4100	56	3583	215T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

10 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
29	II	1.9	20372	11187	63	3693	215T	T,C
28	I	1.1	21151	4100	63	3583	215T	T,C
28	III	3.3	21422	16900	63	3703	215T	T,C
25	III	3.1	23355	17304	71	3703	215T	T,C
25	I, II	1.7	23592	11541	71	3693	215T	T,C
23	I, II	1.5	25727	11743	80	3693	215T	T,C
22	III	2.7	27253	18036	80	3703	215T	T,C
21	I, II	1.4	28914	12005	90	3693	215T	T,C
20	III	2.5	29625	18242	90	3703	215T	T,C
18	I	1.2	32235	12236	100	3693	215T	T,C
18	II, III	2.2	33218	18242	100	3703	215T	T,C
16	I	1.1	36608	12485	112	3693	215T	T,C
16	II, III	2.0	36947	18242	112	3703	215T	T,C
14		0.95	42220	12500	125	3693	215T	T,C
14	I, II	1.8	41879	18242	125	3703	215T	T,C
14	III	2.8	43387	18945	125	3823	215T	T,C
13	I, II	1.6	45965	18242	140	3703	215T	T,C
13	III	2.6	46438	19265	140	3823	215T	T,C
11	I, II	1.4	51753	18242	160	3703	215T	T,C
11	III	2.3	52200	19790	160	3823	215T	T,C
9.4	I	1.2	60876	18242	180	3705	215T	T,C
8.1	I	1.0	70317	18242	200	3705	215T	T,C
7.6		0.98	74874	18242	224	3705	215T	T,C
5	I	1.0	109789	21873	355	3825	215T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

15 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
185	III	3+	4815	3659	10	3583	254T	T,C
184	I, II	1.7	4835	2545	10	3473	254T	T,C
142	I, II	1.5	6254	2641	12.5	3473	254T	T,C
142	III	3+	6254	3874	12.5	3583	254T	T,C
117	III	2.6	7576	4022	14	3583	254T	T,C
115	I, II	1.5	7728	2698	14	3473	254T	T,C
113	I, II	1.5	7881	2702	16	3473	254T	T,C
113	III	2.3	7881	4051	16	3583	254T	T,C
100	I	1.3	8898	2720	18	3473	254T	T,C
94	II, III	2.2	9508	4100	18	3583	254T	T,C
88	II, III	2.0	10169	4100	20	3583	254T	T,C
87	I	1.2	10220	2728	20	3473	254T	T,C
82	I	1.1	10830	2726	22.4	3473	254T	T,C
82	II, III	3+	10867	8265	22.4	3693	254T	T,C
74	II	1.8	11999	4100	22.4	3583	254T	T,C
72	I, II	1.7	12355	4100	25	3583	254T	T,C
71	I	1.0	12609	2705	25	3473	254T	T,C
70	III	3.0	12695	8586	25	3693	254T	T,C
65	I, II	1.6	13779	4100	28	3583	254T	T,C
61	III	2.5	14523	8863	28	3693	254T	T,C
57	I, II	1.4	15508	4100	31.5	3583	254T	T,C
56	III	2.3	15945	9052	31.5	3693	254T	T,C
51	I	1.3	17287	4100	35.5	3583	254T	T,C
50	II, III	2.1	17773	9261	35.5	3693	254T	T,C
45	I	1.1	19626	4100	40	3583	254T	T,C
45	II, III	2.0	19906	9489	40	3693	254T	T,C
41	I	1.0	21660	4100	45	3583	254T	T,C
41	III	2.9	21582	14612	45	3703	254T	T,C
40	II	1.7	22394	9709	45	3693	254T	T,C
37	I, II	1.6	24273	9853	50	3693	254T	T,C
37	III	2.7	24222	15056	50	3703	254T	T,C
32	I, II	1.4	27624	10073	56	3693	254T	T,C
31	III	2.8	28386	15687	56	3703	254T	T,C
29	I	1.3	30519	10227	63	3693	254T	T,C
28	II, III	2.2	32093	16170	63	3703	254T	T,C
25	I,	1.1	35343	10429	71	3693	254T	T,C
25	II, III	2.0	34988	16508	71	3703	254T	T,C
23	I	1.0	38542	10530	80	3693	254T	T,C
22	II	1.8	40827	17107	80	3703	254T	T,C
22	III	2.9	40930	16370	80	3823	254T	T,C
21		0.92	43315	10610	90	3693	254T	T,C
20	I, II	1.6	44382	17426	90	3703	254T	T,C
19	III	2.6	46167	16850	90	3823	254T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

15 HP (Continued)

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
18	I, II	1.5	49765	17855	100	3703	254T	T,C
17	III	2.3	51861	17309	100	3823	254T	T,C
16	I	1.3	55350	18241	112	3703	254T	T,C
15	II, III	2.0	58471	17795	112	3823	254T	T,C
14	I	1.2	62460	18242	125	3703	254T	T,C
14	II	1.8	65081	18236	125	3823	254T	T,C
13	I	1.1	68553	18242	140	3703	254T	T,C
13	II	1.7	69657	18507	140	3823	254T	T,C
12	I	1.0	77186	18242	160	3703	254T	T,C
11	II	1.5	78301	18942	160	3823	254T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

20 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
185	I, II, III	2.7	6420	3469	10	3583	256T	T,C
142	I, II, III	2.3	8339	3626	12.5	3583	256T	T,C
117	I, II	1.9	10101	3722	14	3583	256T	T,C
113	I, II	1.8	10508	3739	16	3583	256T	T,C
109	III	2.4	10833	7410	16	3693	256T	T,C
98	III	2.3	12120	7610	18	3693	256T	T,C
94	I, II	1.6	12677	3803	18	3583	256T	T,C
88	I, II	1.5	13559	3819	20	3583	256T	T,C
91	III	2.4	13000	7734	20	3693	256T	T,C
82	II, III	2.4	14489	7923	22.4	3693	256T	T,C
74	I	1.3	15999	3837	22.4	3583	256T	T,C
72	I	1.3	16474	3837	25	3583	256T	T,C
70	II, III	2.2	16927	8187	25	3693	256T	T,C
65	III	3.1	18213	12568	28	3703	256T	T,C
65	I	1.2	18372	3826	28	3583	256T	T,C
61	II	1.5	19364	8406	28	3693	256T	T,C
58	III	2.7	20583	12981	31.5	3703	256T	T,C
57	I	1.1	20677	3793	31.5	3583	256T	T,C
56	II	1.8	21260	8551	31.5	3693	256T	T,C
51	III	2.5	23020	13401	35.5	3703	256T	T,C
50	I, II	1.6	23697	8709	35.5	3693	256T	T,C
46	III	2.3	25796	13749	40	3703	256T	T,C
45	I, II	1.5	26541	8862	40	3693	256T	T,C
41	II, III	2.2	28775	14121	45	3703	256T	T,C
40	I	1.3	29859	9004	45	3693	256T	T,C
37	I	1.2	32364	9090	50	3693	256T	T,C
37	II, III	2.0	32296	14512	50	3703	256T	T,C
32	I	1.1	36833	9203	56	3693	256T	T,C
31	II, III	2.1	37848	15041	56	3703	256T	T,C
29	I	1.0	40692	8210	63	3693	256T	T,C
28	II	1.6	42791	15440	63	3703	256T	T,C
27	III	2.7	43591	15130	63	3823	256T	T,C
25	I, II	1.5	46650	15713	71	3703	256T	T,C
24	III	2.4	48946	15537	71	3823	256T	T,C
22	I	1.3	54436	16179	80	3703	256T	T,C
22	II, III	2.2	54573	15925	80	3823	256T	T,C
20	I	1.2	59176	16416	90	3703	256T	T,C
19	II	1.9	61556	16349	90	3823	256T	T,C
18	I	1.1	66353	16723	100	3703	256T	T,C
17	II	1.7	69149	16746	100	3823	256T	T,C
16	I	1.0	73800	16800	112	3703	256T	T,C
15	II	1.5	77962	17160	112	3823	256T	T,C
14	I, II	1.4	86775	17528	125	3823	256T	T,C
13	I	1.3	92876	17748	140	3823	256T	T,C
11	I	1.1	104401	18095	160	3823	256T	T,C

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

25 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊	Special Note(s)
185	I, II, III	2.2	8025	3278	10	3583	284T	T,C	TL
161	I, II, III	2.4	9225	6549	11.2	3693	284T	T,C	
142	I, II	1.8	10423	3379	12.5	3583	284T	T,C	TL
138	III	2.2	10748	6793	12.5	3693	284T	T,C	
120	III	2.1	12357	7012	14	3693	284T	T,C	
117	I, II	1.5	12626	3422	14	3583	284T	T,C	TL
113	I, II	1.4	13135	3427	16	3583	284T	T,C	TL
113	III	2.9	13118	10592	16	3703	284T	T,C	
109	II	1.9	13541	7154	16	3693	284T	T,C	
99	III	2.8	14896	10172	18	3703	284T	T,C	
98	II	1.9	15149	7324	18	3693	284T	T,C	
94	I	1.3	15847	3427	18	3583	284T	T,C	TL
91	II	1.9	16250	7427	20	3693	284T	T,C	
88	I	1.2	16948	3416	20	3583	284T	T,C	TL
88	III	2.8	16842	11341	20	3703	284T	T,C	
82	II	1.9	18112	7581	22.4	3693	284T	T,C	
77	III	2.8	19127	11726	22.4	3703	284T	T,C	
74	I	1.1	19999	3362	22.4	3583	284T	T,C	TL
73	III	2.8	20312	11909	25	3703	284T	T,C	
72	I	1.0	20592	3347	25	3583	284T	T,C	TL
70	II	1.8	21158	7788	25	3693	284T	T,C	
65	III	2.4	22766	12287	28	3703	284T	T,C	
61	I, II	1.5	24205	7949	28	3693	284T	T,C	
58	III	2.2	25729	12630	31.5	3703	284T	T,C	
56	I, II	1.4	26575	8049	31.5	3693	284T	T,C	
51	II, III	2.0	28775	13004	35.5	3703	284T	T,C	
50	I	1.3	29622	8150	35.5	3693	284T	T,C	
46	II	1.9	32245	13309	40	3703	284T	T,C	
45	I	1.2	33176	8236	40	3693	284T	T,C	
43	III	3.5	34405	13292	40	3823	284T	T,C	
41	II, III	1.7	35969	13631	45	3703	284T	T,C	
40	I	1.0	37323	8300	45	3693	284T	T,C	
38	II, III	3.2	38811	13679	45	3823	284T	T,C	
37	I	1.0	40455	8410	50	3693	284T	T,C	
37	II	1.6	40370	13961	50	3703	284T	T,C	
35	III	2.8	42455	13974	50	3823	284T	T,C	
31	I, II	1.7	47310	14395	56	3703	284T	T,C	
31	III	2.5	48302	14388	56	3823	284T	T,C	
28	I	1.3	53488	14710	63	3703	284T	T,C	
27	II, III	2.2	54488	14775	63	3823	284T	T,C	
25	I	1.2	58313	14171	71	3703	284T	T,C	
24	I, III	2.0	61183	15138	71	3823	284T	T,C	
22	I	1.1	68045	15250	80	3703	284T	T,C	
22	II	1.8	68216	15481	80	3823	284T	T,C	
20	I	1.0	73970	15250	90	3703	284T	T,C	
19	II	1.6	76945	15848	90	3823	284T	T,C	
17	II	1.4	86436	16184	100	3823	284T	T,C	
17	I	1.0	86411	15250	100	3703	284T	T,C	
15	I	1.2	97452	16526	112	3823	284T	T,C	
14	I	1.1	108468	16819	125	3823	284T	T,C	
13	I	1.0	116095	16989	140	3823	284T	T,C	

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

TL Denotes a selection of HP/gear frame where thermal limits may restrict this selection based on mounting position. See table on F-127

30 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊	Special Note(s)
185	I, II	1.8	9618	3278	10	3583	286T	T,C	TL
178	III	2.2	9963	6223	10	3693	286T	T,C	TL
161	III	2.0	11070	6375	11.2	3693	286T	T,C	TL
142	I, II	1.5	12492	3379	12.5	3583	286T	T,C	TL
142	III	2.7	12492	9787	12.5	3703	286T	T,C	
138	II	1.9	12898	6590	12.5	3693	286T	T,C	
128	III	2.4	13914	10079	14	3703	286T	T,C	
120	II	1.7	14828	6779	14	3693	286T	T,C	
117	I	1.3	15191	3422	14	3583	286T	T,C	TL
113	I	1.2	15728	3427	16	3583	286T	T,C	TL
113	III	2.4	15742	10418	16	3703	286T	T,C	
109	II	1.6	16250	6898	16	3693	286T	T,C	
99	III	2.3	17875	10770	18	3703	286T	T,C	
98	II	1.6	18179	7038	18	3693	286T	T,C	
94	I	1.1	18908	3427	18	3583	286T	T,C	TL
91	II	1.6	19524	7120	20	3693	286T	T,C	
88	I	1.0	20197	3416	20	3583	286T	T,C	TL
88	III	2.3	20236	11111	20	3703	286T	T,C	
82	I, II	1.6	21761	7239	22.4	3693	286T	T,C	
77	III	2.3	22982	11465	22.4	3703	286T	T,C	
73	III	2.3	24405	11623	25	3703	286T	T,C	
70	I, II	1.5	25422	7388	25	3693	286T	T,C	
65	II, III	2.0	27320	11976	28	3703	286T	T,C	
61	I	1.2	29046	7492	28	3693	286T	T,C	
58	II	1.8	30874	12278	31.5	3703	286T	T,C	
56	I	1.2	31890	7547	31.5	3693	286T	T,C	
54	III	3.4	32947	12252	31.5	3823	286T	T,C	
51	II	1.7	34530	12606	35.5	3703	286T	T,C	
50	I	1.1	35546	7591	35.5	3693	286T	T,C	
48	III	3+	37015	12656	35.5	3823	286T	T,C	
46	II	1.6	38694	12869	40	3703	286T	T,C	
45	III	3.0	39557	12947	40	3823	286T	T,C	
45	I	1.0	39812	7600	40	3693	286T	T,C	
41	I, II	1.5	43163	13140	45	3703	286T	T,C	
40	III	2.6	44947	13321	45	3823	286T	T,C	
37	I, II	1.4	48444	13410	50	3703	286T	T,C	
35	III	2.3	50946	13698	50	3823	286T	T,C	
31	I	1.2	56772	13750	56	3703	286T	T,C	
31	II, III	2.1	57963	14073	56	3823	286T	T,C	
28	I	1.1	64186	13970	63	3703	286T	T,C	
27	II	1.8	65386	14420	63	3823	286T	T,C	
25	I	1.0	69975	14121	71	3703	286T	T,C	
24	II	1.6	73420	14740	71	3823	286T	T,C	
22	I, II	1.5	81860	15036	80	3823	286T	T,C	
19	I	1.3	92334	15346	90	3823	286T	T,C	
17	I	1.2	103723	15622	100	3823	286T	T,C	
15	I	1.0	116942	15891	112	3823	286T	T,C	

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.
TL Denotes a selection of HP/gear frame where thermal limits may restrict this selection based on mounting position. See table on F-127

40 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊	Special Note(s)
178	I, II	1.6	13284	5910	10	3693	324T	T,C	TL
173	III	2.3	13677	9100	10	3703	324T	T,C	TL
161	I, II	1.5	14760	6026	11.2	3693	324T	T,C	TL
152	III	2.1	15573	9314	11.2	3703	324T	T,C	TL
142	III	2.1	16656	9503	12.5	3703	324T	T,C	TL
138	I, II	1.4	17198	6184	12.5	3693	324T	T,C	TL
128	II	1.8	18552	9763	14	3703	324T	T,C	TL
120	I	1.3	19770	6313	14	3693	324T	T,C	TL
113	II	1.8	20989	10060	16	3703	324T	T,C	TL
109	I	1.2	21666	6387	16	3693	324T	T,C	TL
99	II	1.7	23833	10363	18	3703	324T	T,C	
98	I	1.1	24239	6466	18	3693	324T	T,C	TL
91	I	1.2	26032	6506	20	3693	324T	T,C	TL
88	II	1.8	26947	10652	20	3703	324T	T,C	
82	I	1.2	29015	6555	22.4	3693	324T	T,C	TL
79	III	3.0	30100	11052	22.4	3823	324T	T,C	
77	II	1.8	30603	10943	22.4	3703	324T	T,C	
73	II	1.7	32499	11078	25	3703	324T	T,C	
70	I	1.1	33896	6589	25	3693	324T	T,C	TL
69	III	3.0	34303	11387	25	3823	324T	T,C	
65	I, II	1.5	36426	11375	28	3703	324T	T,C	
61	III	2.7	38913	11726	28	3823	324T	T,C	
58	I, II	1.4	41166	11576	31.5	3703	324T	T,C	
54	III	2.6	43930	12042	31.5	3823	324T	T,C	
51	I	1.3	46041	11812	35.5	3703	324T	T,C	
48	II, III	2.3	49353	12340	35.5	3823	324T	T,C	
46	I	1.2	51593	11989	40	3703	324T	T,C	
43	II, III	2.2	55048	12621	40	3823	324T	T,C	
41	I	1.1	57551	11670	45	3703	324T	T,C	
38	II, III	2.0	62098	12922	45	3823	324T	T,C	
37	I	1.0	64592	12308	50	3703	324T	T,C	
35	II	1.8	67928	13144	50	3823	324T	T,C	
31		0.91	75696	12410	56	3703	324T	T,C	
31	I, II	1.5	77284	13444	56	3823	324T	T,C	
27	I, II	1.4	87181	13709	63	3823	324T	T,C	
24	I	1.2	97893	13943	71	3823	324T	T,C	
22	I	1.1	109146	14147	80	3823	324T	T,C	

◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorroGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

TL Denotes a selection of HP/gear frame where thermal limits may restrict this selection based on mounting position. See tables on F-126 and F- 127

50 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output RPM	AGMA Class	Service Factor	Output Torque in - lbs	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊	Special Note(s)
128	I, II	1.4	23219	9446	14	3703	326T	T,C	TL
113	I, II	1.4	26270	9702	16	3703	326T	T,C	TL
99	I, II	1.4	29829	9957	18	3703	326T	T,C	TL
88	I, II	1.4	33727	10192	20	3703	326T	T,C	TL
79	III	2.4	37625	10807	22.4	3823	326T	T,C	
77	I, II	1.4	38303	10421	22.4	3703	326T	T,C	TL
73	I, II	1.4	40676	10523	25	3703	326T	T,C	TL
69	III	2.4	42879	11109	25	3823	326T	T,C	
65	I	1.2	45533	10704	28	3703	326T	T,C	
61	II. III	2.1	48641	11409	28	3823	326T	T,C	
58	I	1.1	51457	10874	31.5	3703	326T	T,C	
54	II, III	2.1	54912	11685	31.5	3823	326T	T,C	
51	I	1.0	57551	11012	35.5	3703	326T	T,C	
48	II	1.8	61691	11939	35.5	3823	326T	T,C	
46		0.94	64491	11158	40	3703	326T	T,C	
43	I, II	1.7	68810	12173	40	3823	326T	T,C	
41		0.87	71939	11350	45	3703	326T	T,C	
38	I, II	1.6	77623	12416	45	3823	326T	T,C	
35	I, II	1.4	84910	12814	50	3823	326T	T,C	
31	I	1.2	96605	12999	56	3823	326T	T,C	
27	I	1.1	108977	13147	63	3823	326T	T,C	
24		0.98	122366	13258	71	3823	326T	T,C	

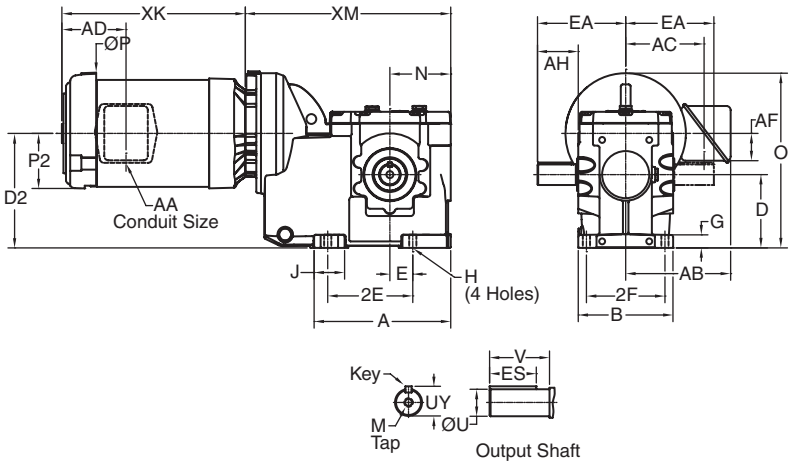
◊ **Standard Motor Types** (see page F-15 for product codes)
T TEFC, three phase, 230/460 or 575 volts
C CorrGard®, three phase, 230/460 or 575 volts

Δ Overhung load rating is at shaft midpoint.

TL Denotes a selection of HP/gear frame where thermal limits may restrict this selection based on mounting position. See tables on F-126 and F-127

2-Stage Output Shafted Foot Mount
OtN31 - 32

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
3132	S2	1.000	1.10	1.77	1.83	4.33	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.38	2.45	5.31	1/4 Sq.	2.03	1/2-13 X 1.12

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4 [6]	6.10	4.50	3.86	1.64	11.85
182T/184T	T	Any	9.56	4.34	3/4	7.80	4.50	7.79	2.32	14.23
213T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

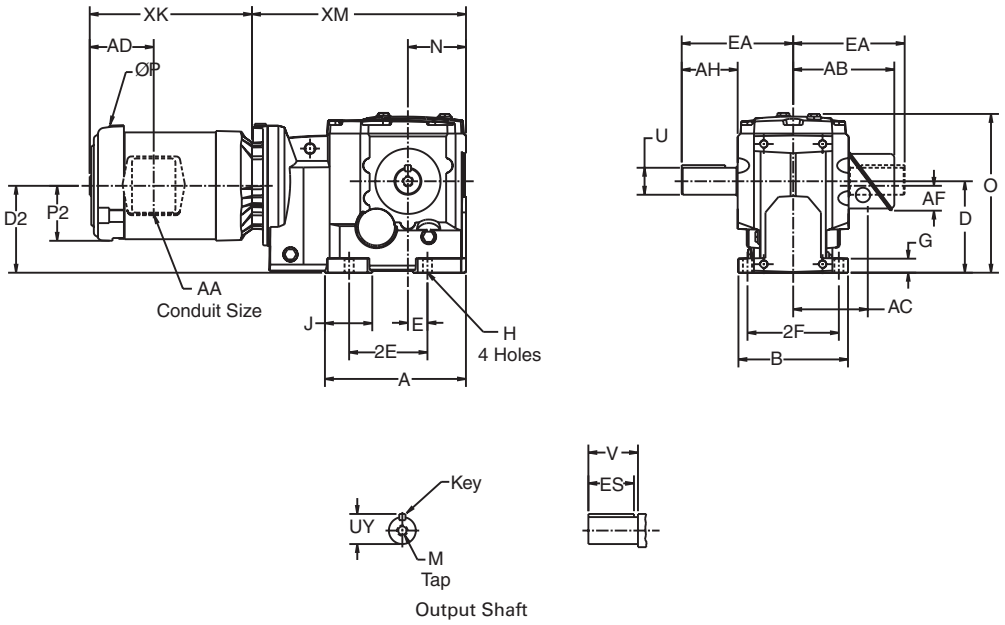
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

3-Stage Output Shafted Foot Mount
OtN32 - 33

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.72	.73	.43	2.34	8.09	3.03	10.98
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	12.90
	S1	8.08	8.58	4.92	5.20	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	12.90

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2-13 x 1.12
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 x 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 x 1.38

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4 [6]	6.10	4.50	3.86	1.64	12.04
182T/184T	T	Any	9.56	4.34	3/4	7.80	4.50	7.79	2.32	14.23
213T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

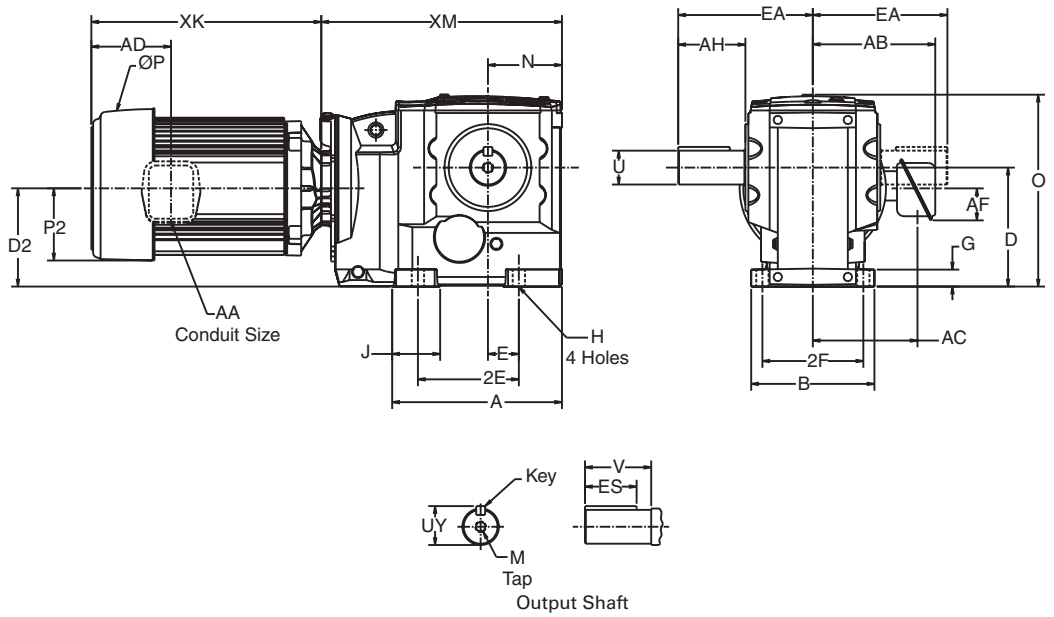
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5"
diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

3-Stage Output Shafted Foot Mount
OtN34 - 35

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														56T-215T	254T-286T
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	14.56	-
	S1	10.69	9.60	6.30	7.49	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49		
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	16.90	17.25
	S1	13.07	10.98	7.87	9.33	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20		

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
34	S2	2.000	2.21	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1 3/4	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1 3/4	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1 3/4	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1 3/4	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	35	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

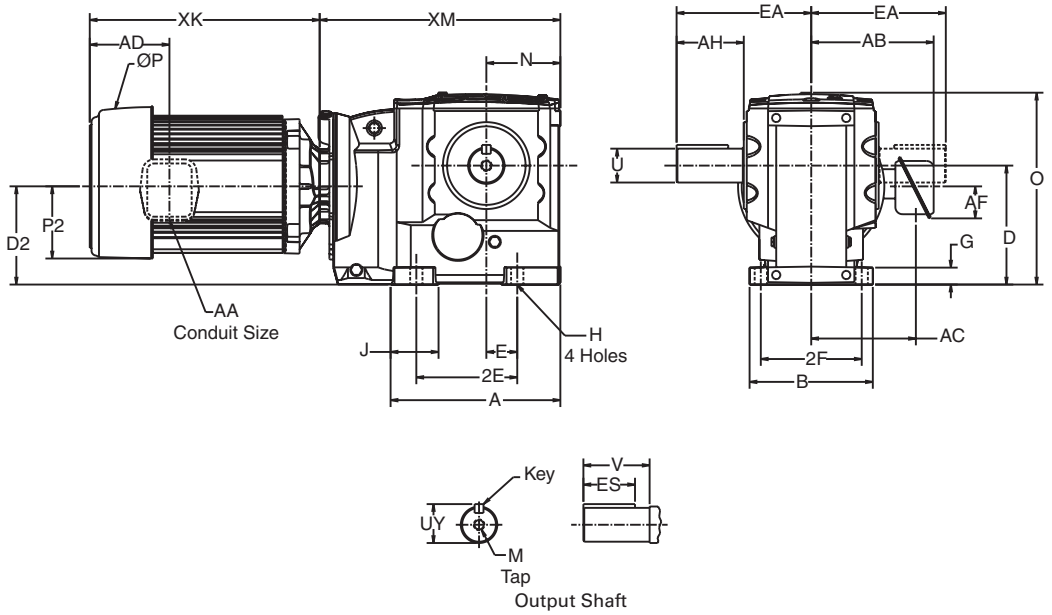
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5"
diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

3-Stage Output Shafted Foot Mount
OtN36-38

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM		
														182T/184T	213T-215T	254T-UP
36	S1	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.38	23.38	23.73
37	S1	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	-	24.29	24.64

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
36	S1	2.875	3.200	5.75	5.92	11.94	3/4 SQ.	5.00	3/4-10 X 1.61
37	S1	3.625	4.010	6.86	7.04	13.66	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	36	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2	14.99	11.34	14.16	3.63	27.36

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

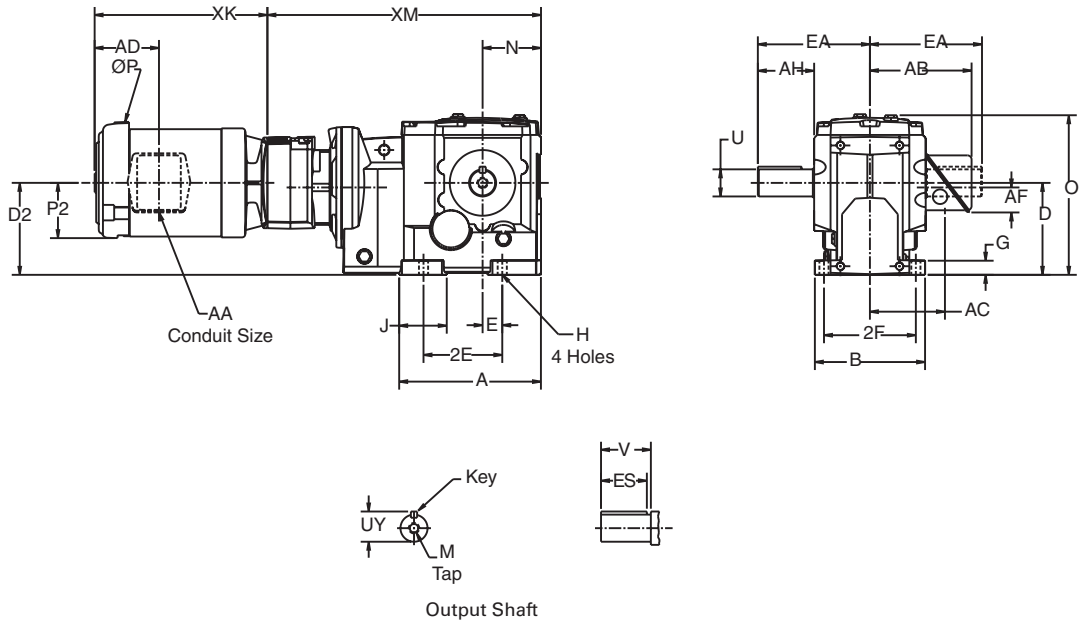
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

Combined Output Shafted Foot Mount
OtN32 - 33

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.72	.73	.43	2.34	8.09	3.03	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.90
	S1	8.08	8.58	4.92	4.87	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	19.90

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 X 1.38

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	10.37
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.84
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

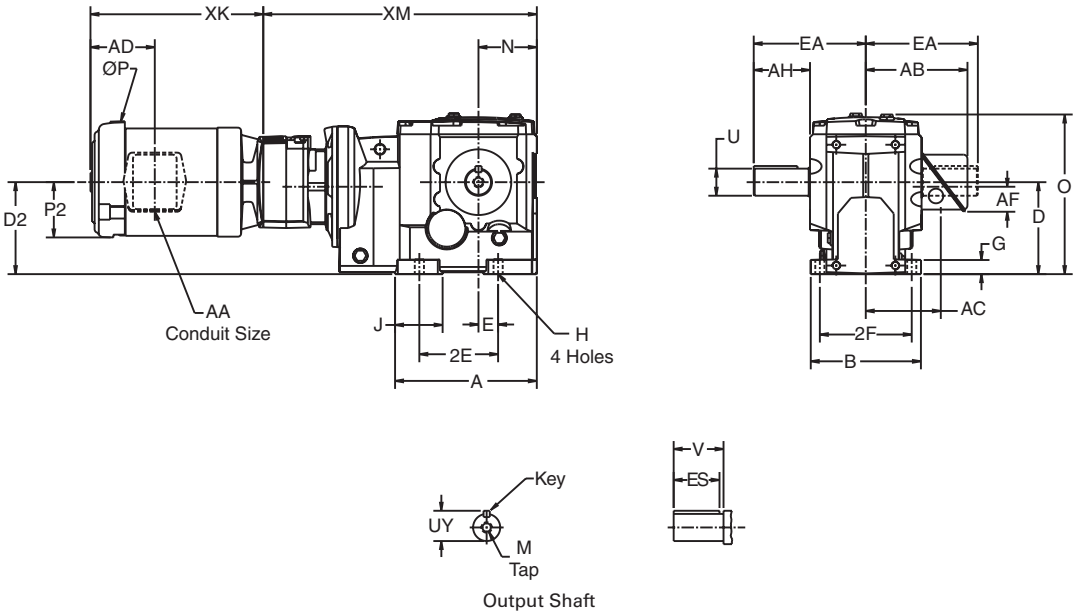
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

Combined Output Shafted Foot Mount
OtN34 - 35

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Output Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
	S1	10.69	9.60	6.30	7.16	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	23.87
	S1	13.07	10.98	7.87	9.00	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	23.87

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
34	S2	2.000	2.21	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04
182T, 184T	T	Any	9.56	4.34	3/4 [6]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

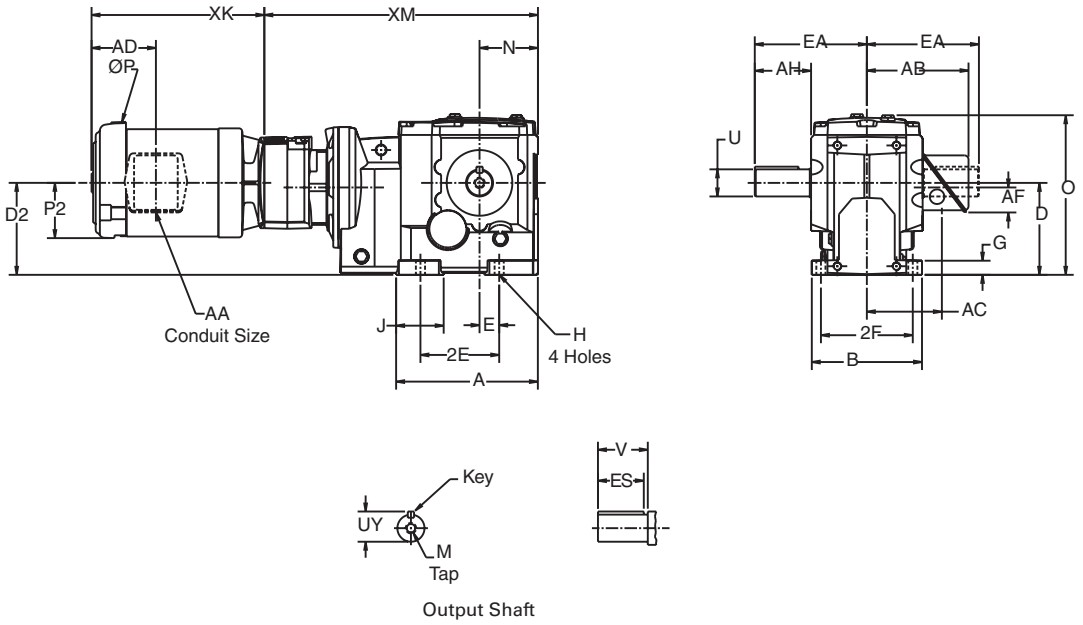
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102

[6] There are 2 openings in conduit box

Combined Output Shafted Foot Mount
OtN36 - 38

Standard conduit box location will be opposite shaft extension unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
														56 -215T
36	S1	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	31.04
37	S1	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.94

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 SQ.	5.00	3/4-10 X 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04
182T, 184T	T	Any	9.56	4.34	3/4 [6]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

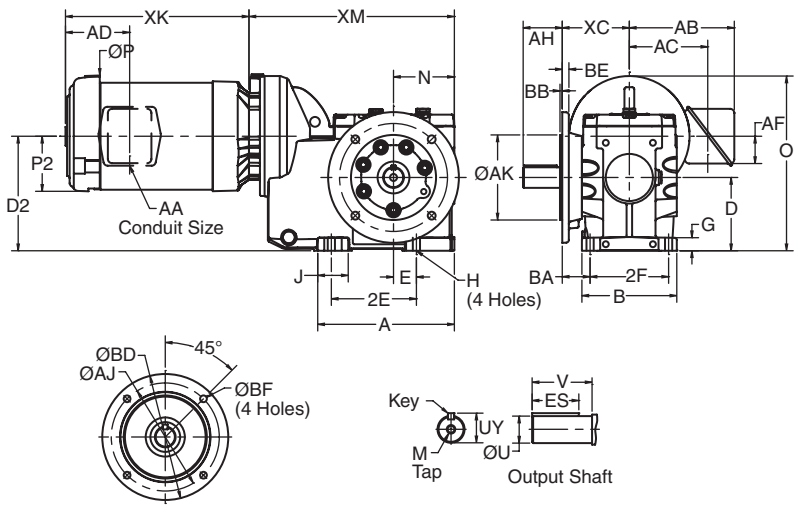
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102

[6] There are 2 openings in conduit box

2-Stage Output Shafted Flange Mount
OtN31 - 32

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	4.04	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
3132	S2	1.000	1.10	1.97	1.97	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.36	2.35	1/4 Sq.	2.03	1/2-13 X 1.13

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04
182T, 184T	T	Any	9.56	4.34	3/4 [6]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

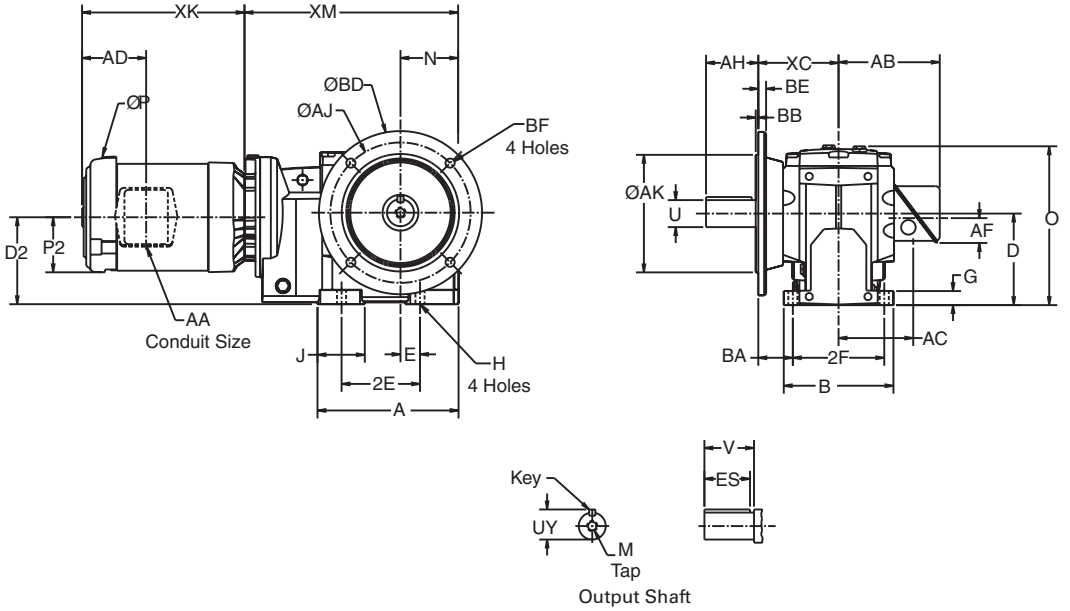
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102

[6] There are 2 openings in conduit box

3-Stage Output Shafted Flange Mount
OtN32 - 33

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
32	S1,S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	10.98
33	S1,S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	12.90

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04
182T, 184T	T	Any	9.56	4.34	3/4 [6]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

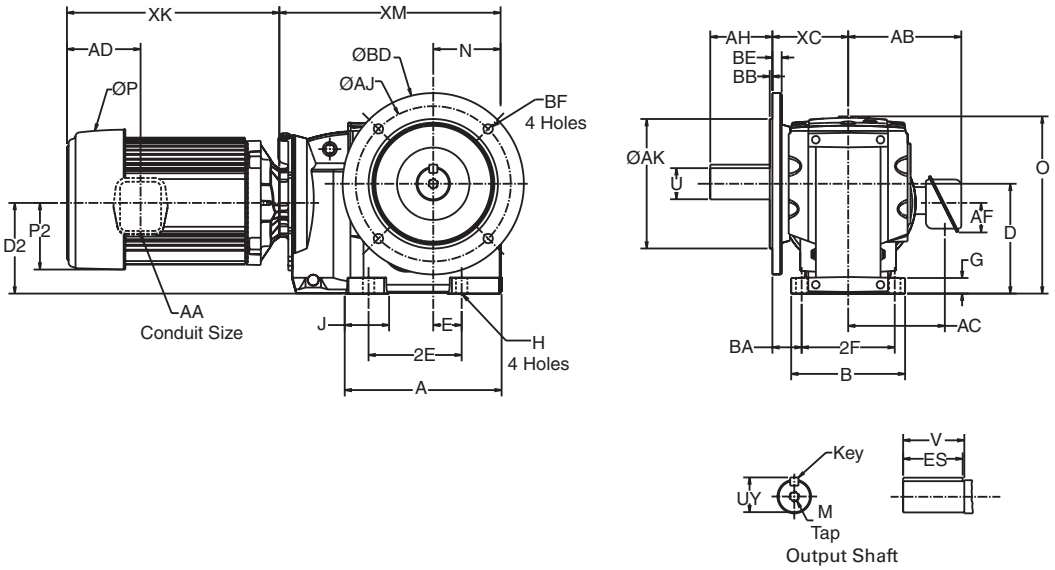
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

3-Stage Output Shafted Flange Mount
OtN34 - 35

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM	
																56T-215T	254T-286T
34	S1,S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.19	.87	3.45	13.58	5.20	2.22	5.76	16.90	17.25

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04
182T, 184T	T	Any	9.56	4.34	3/4 [6]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	24.36
284T/286T	T, C	35	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

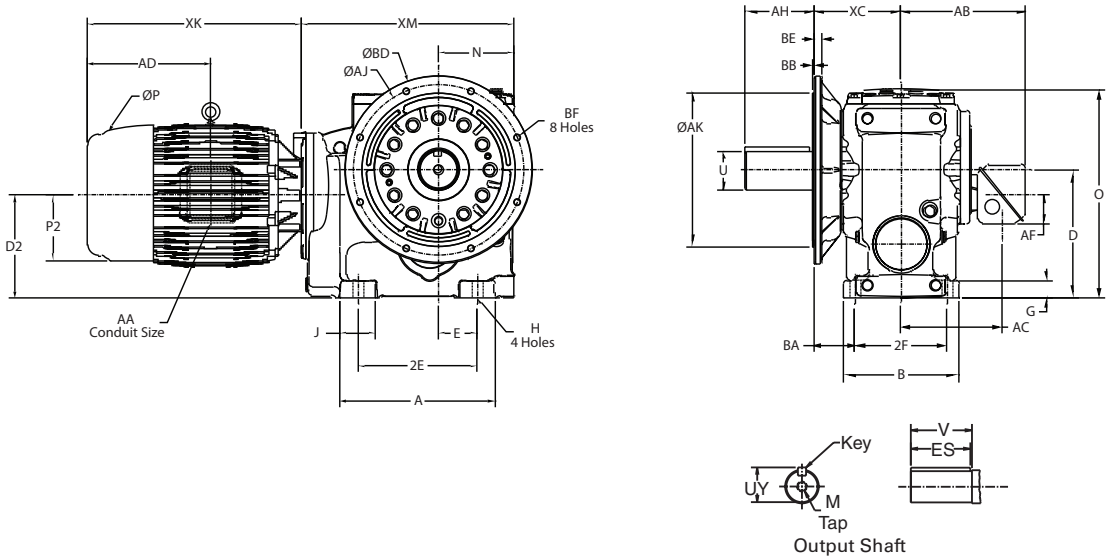
Browning

Gearmotor Dimensions

OtN SERIES 3000

3-Stage Output Shafted Flange Mount
OtN36 - 38

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM		
																182T/184T	213T-215T	254T-UP
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	23.38	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	-	24.29	24.64

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36	S2	2.875	3.200	7.68	5.51	3/4 SQ.	5.00	3/4-10 X 1.61
37	S2	3.625	4.010	8.88	6.69	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 SQ.	7.00	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	36	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	1.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2.00	14.99	11.34	14.16	3.63	27.36

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

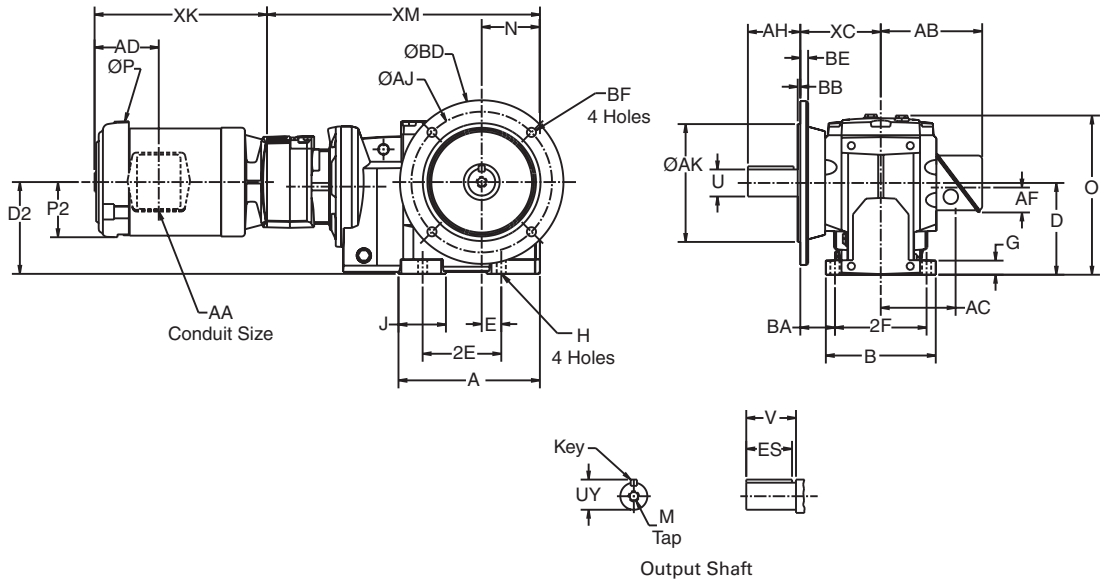
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102

[6] There are 2 openings in conduit box

Combined Output Shafted Flange Mount
OtN32 - 33

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
32	S1,S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	14.49
33	S1,S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	19.90

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	10.37
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.84
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

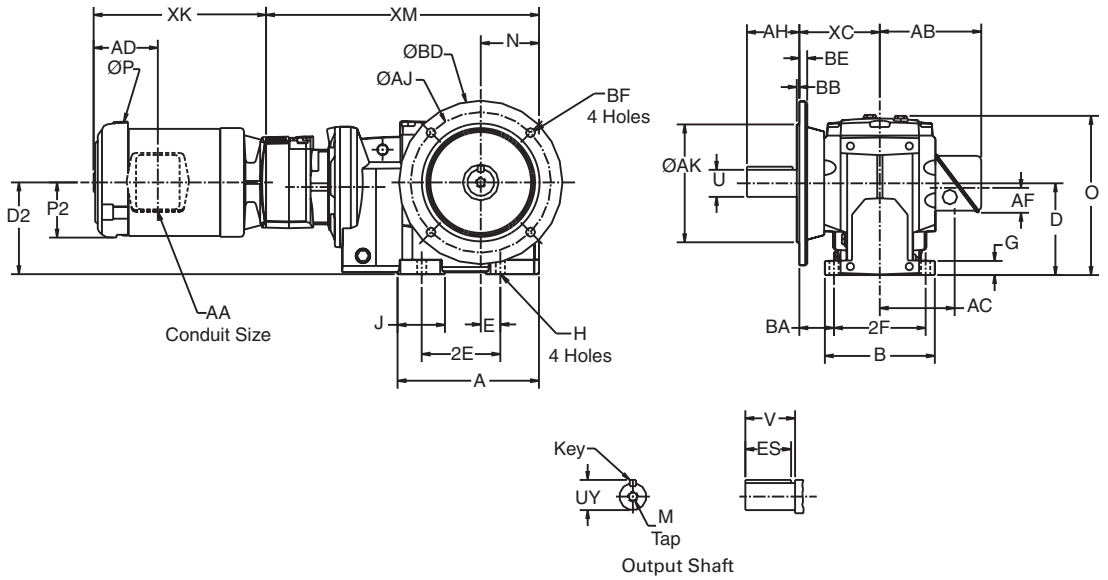
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102

Combined Output Shafted Flange Mount
OtN34 - 35

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
34	S1, S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.19	.87	3.45	13.58	5.20	2.22	5.76	23.87

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
34	S2	2.000	2.21	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	35	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

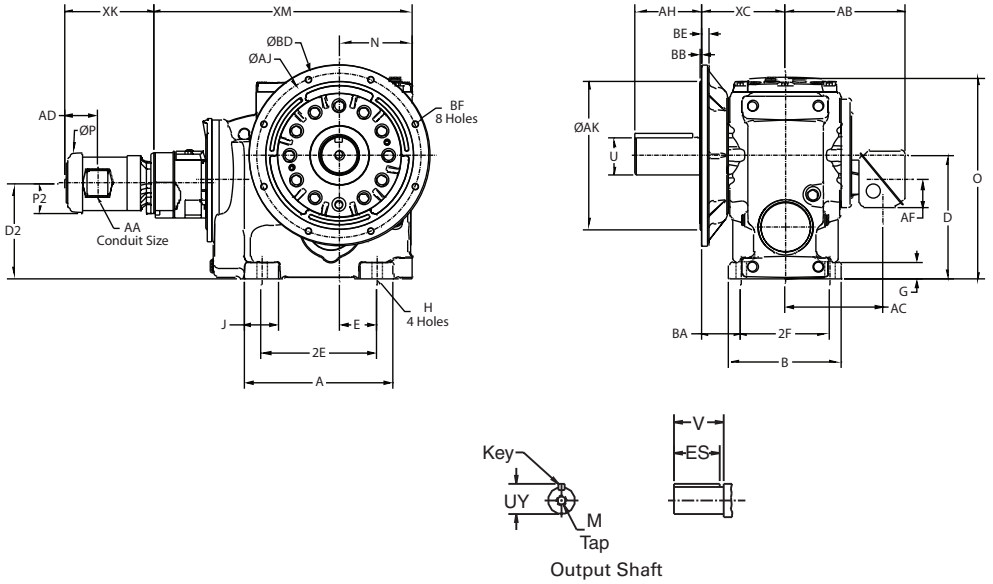
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

Combined Output Shafted Flange Mount
OtN36 - 38

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
																56 -215T
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	31.94

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 SQ.	5.00	3/4-10 X 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 SQ.	7.00	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

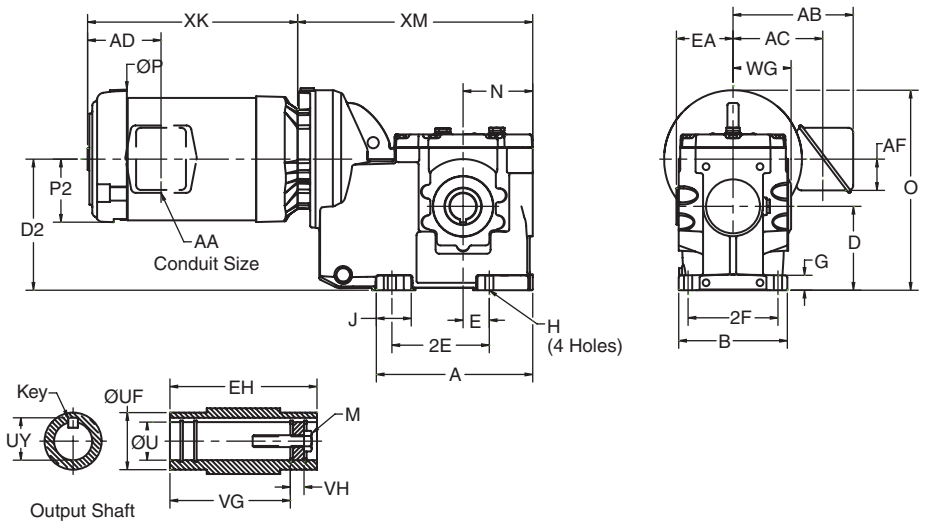
[3] Shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter: "U", +.000"; –.001".

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[6] There are 2 openings in conduit box

2-Stage Finished Bore Hollow Shaft
OtN31 - 32

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

Output Shaft

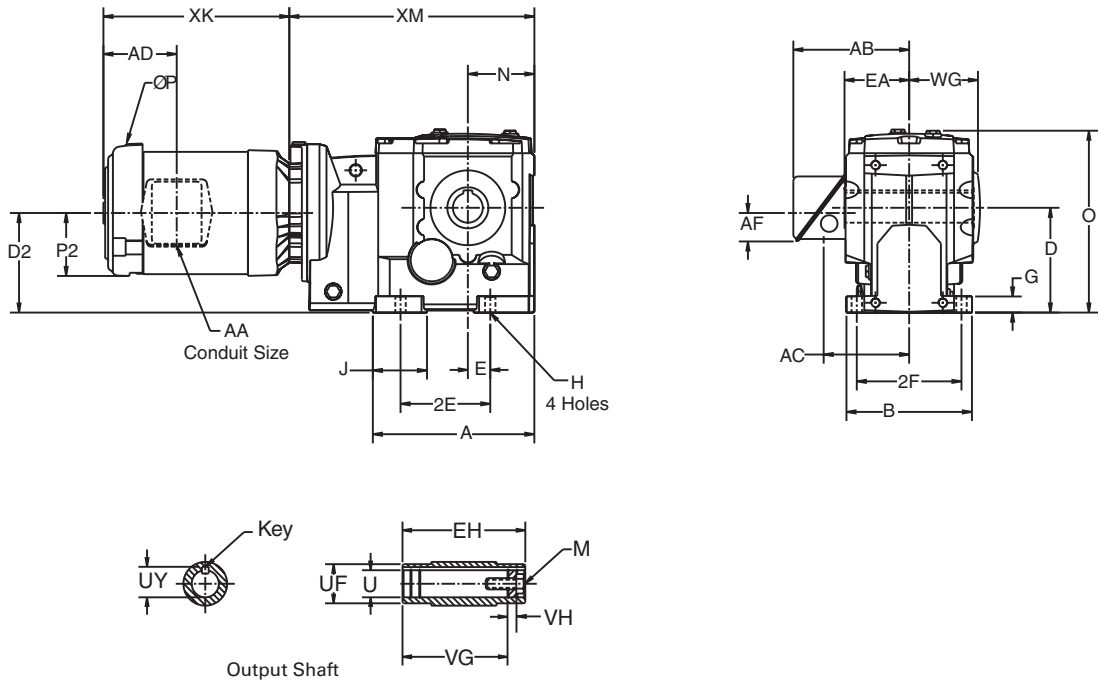
Gear Frame	Version	EA	EH	U[3 7]	UF	UY	VG	VH	Key[5]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Motor Frame	Motor Type[8]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-21 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] Output key not supplied.
[6] For details of the torque arm kit, refer to page F-20.
[7] Output bore tolerance: +.0020", - .0000" for all diameters.
[8] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[9] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft
OtN32 - 33

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	10.98
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	12.90

Output Shaft

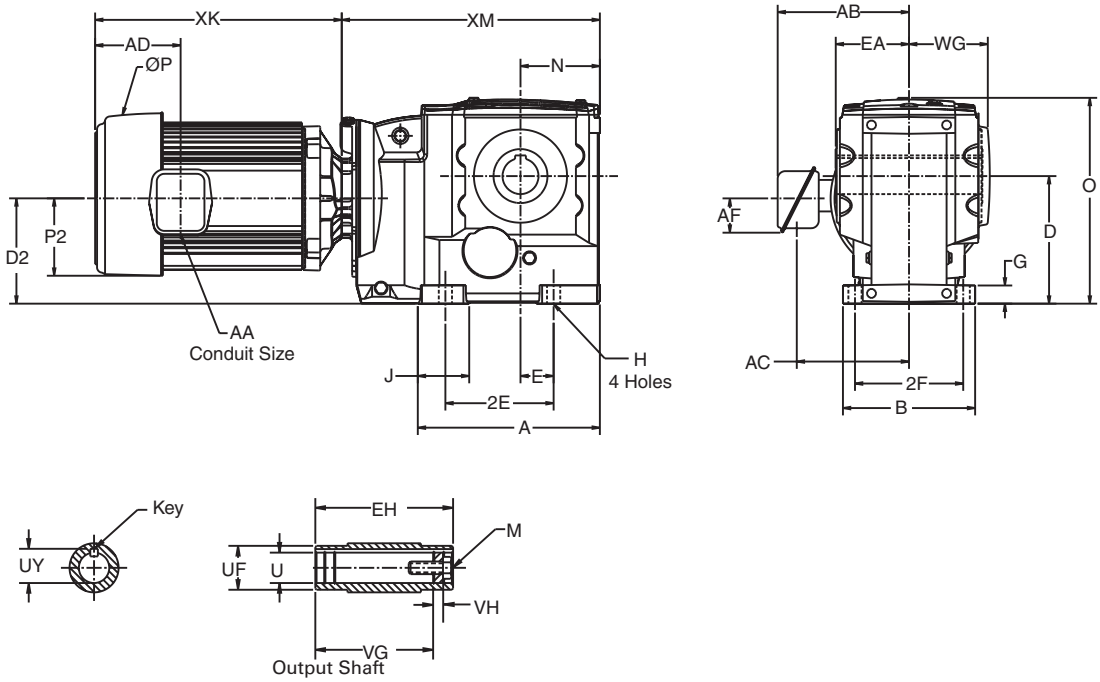
Gear Frame	Version	EA	EH	U[3 7]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Motor Frame	Motor Type[8]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	33	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	33	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-21 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] Output key not supplied.
[6] For details of the torque arm kit, refer to page F-20.
[7] Output bore tolerance: +.0020", - .0000" for all diameters.
[8] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102
[9] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft
OtN34 - 35

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															56T-215T	254T-286T
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[3] [7]	UF	UY	VG	VH	Key[5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Motor Frame	Motor Type[8]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	35	14.62	7.29	1.50	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Refer to page F-21 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output key supplied on frame 34 only.

[6] For details of the torque arm kit, refer to page F-20.

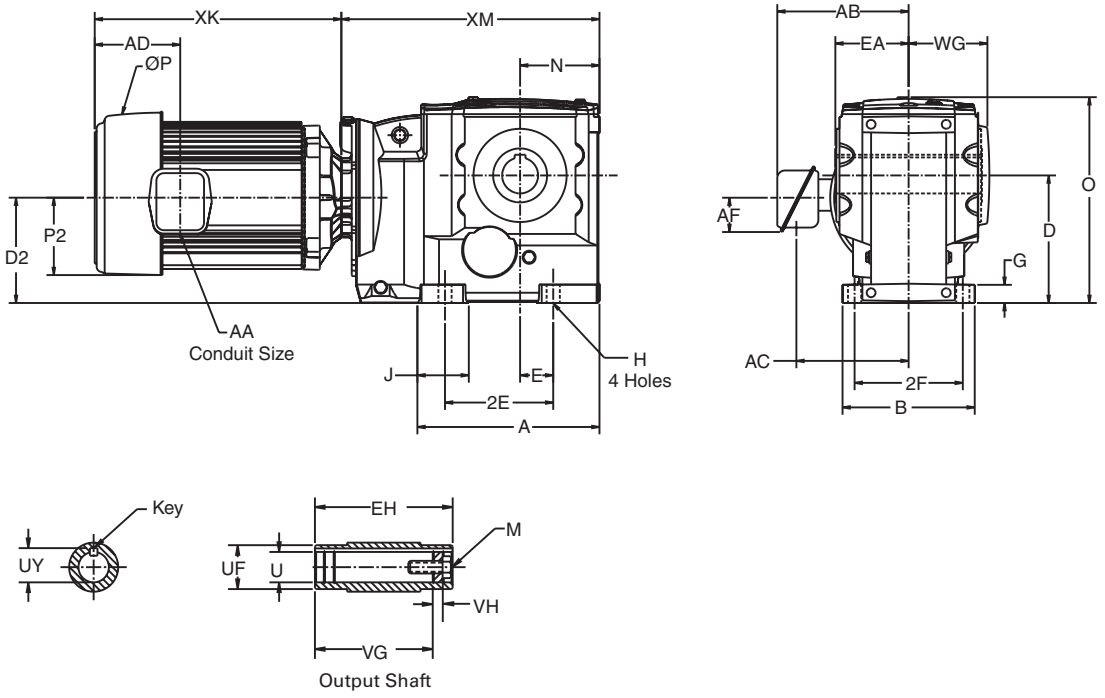
[7] Output bore tolerance: +.0020", - .0000" for all diameters.

[8] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[9] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft
OtN36 - 38

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM		
															182T/184T	213T-215T	254T-UP
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.38	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	-	24.29	24.64

Output Shaft

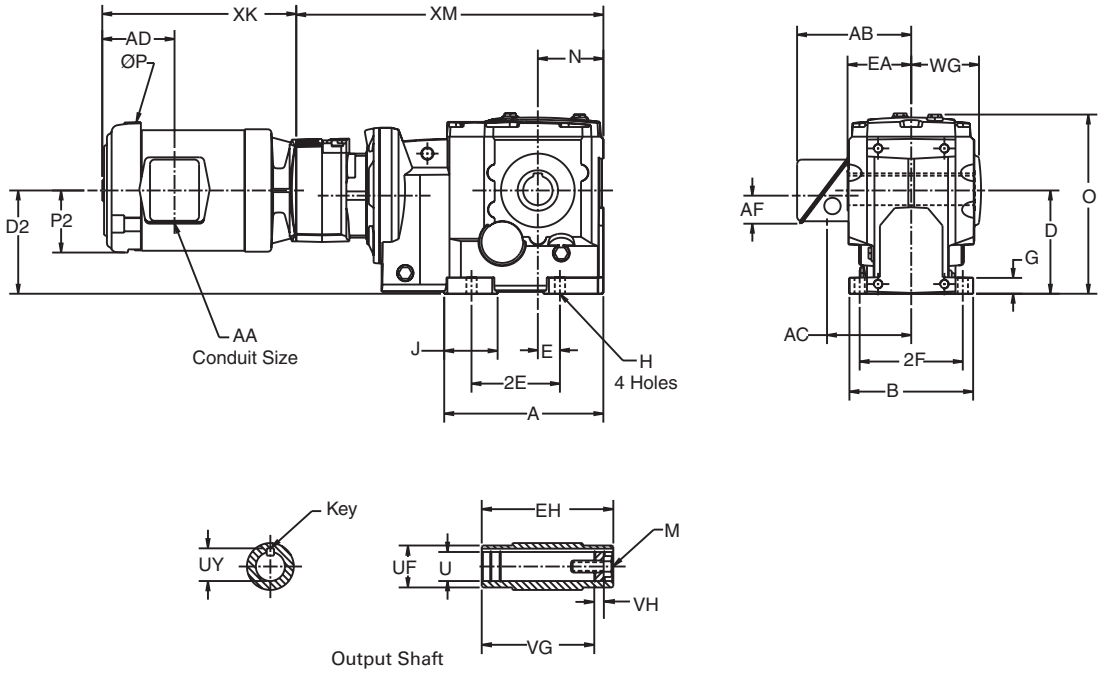
Gear Frame	Version	EA	EH	U[3 6]	UF	UY	VG	VH	Key[8]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Motor Frame	Motor Type[7]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2	14.99	11.34	14.16	3.63	27.36

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] For details of the torque arm kit, refer to pages F-20.
[6] Output bore tolerance: +.0020", - .0000" for all diameters.
[7] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[8] Key not supplied with reducer.
[9] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft
OtN32 - 33

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	19.90

Output Shaft

Gear Frame	Version	EA	EH	U[3] [6]	UF	UY	VG	VH	Key[8]	M
32	S2	2.98	5.96	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Motor Frame	Motor Type[7]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	10.37
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.84
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Refer to page F-21 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] For details of the torque arm kit, refer to page F-20.

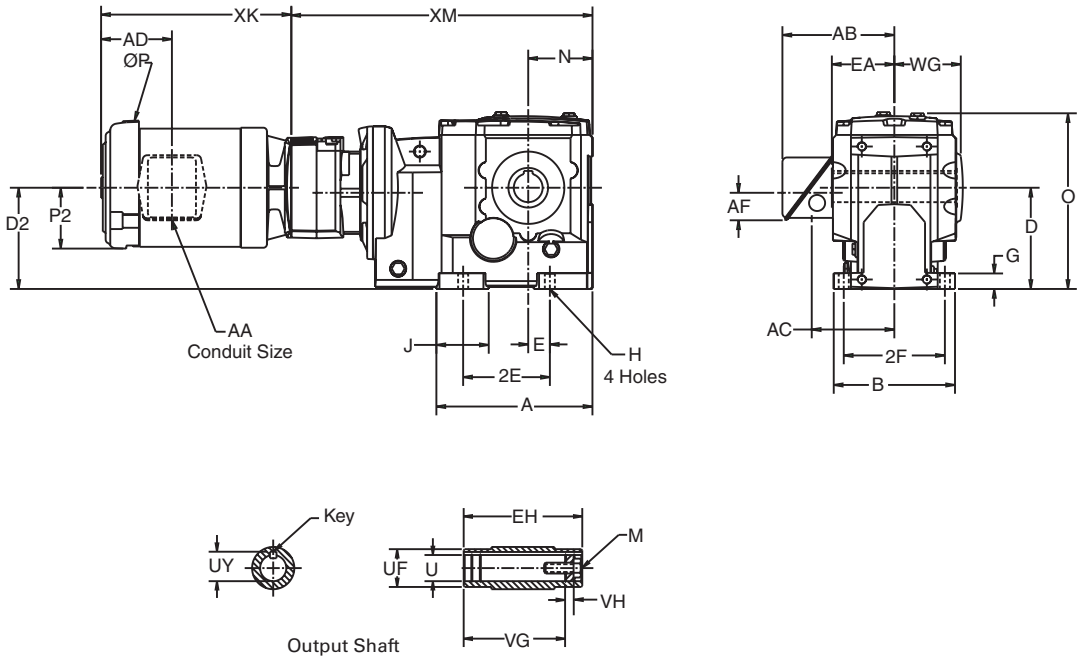
[6] Output bore tolerance: +.0020", - .0000" for all diameters.

[7] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[8] Output key not supplied.

Combined Finished Bore Hollow Shaft
OtN34 - 35

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87

Output Shaft

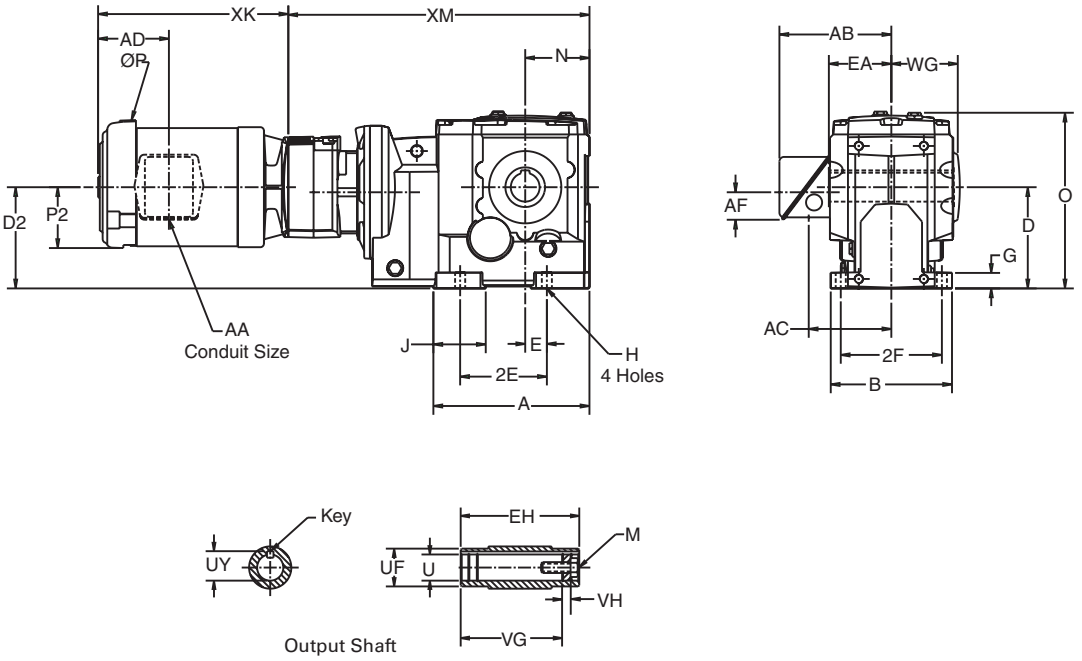
Gear Frame	Version	EA	EH	U[3 7]	UF	UY	VG	VH	Key [5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Motor Frame	Motor Type[8]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-21 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] Output key supplied on frame 34 only.
[6] For details of the torque arm kit, refer to page F-20.
[7] Output bore tolerance: +.0020", - .0000" for all diameters.
[8] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[9] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft
OtN36 - 38

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
															56 -215T
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.94

Output Shaft

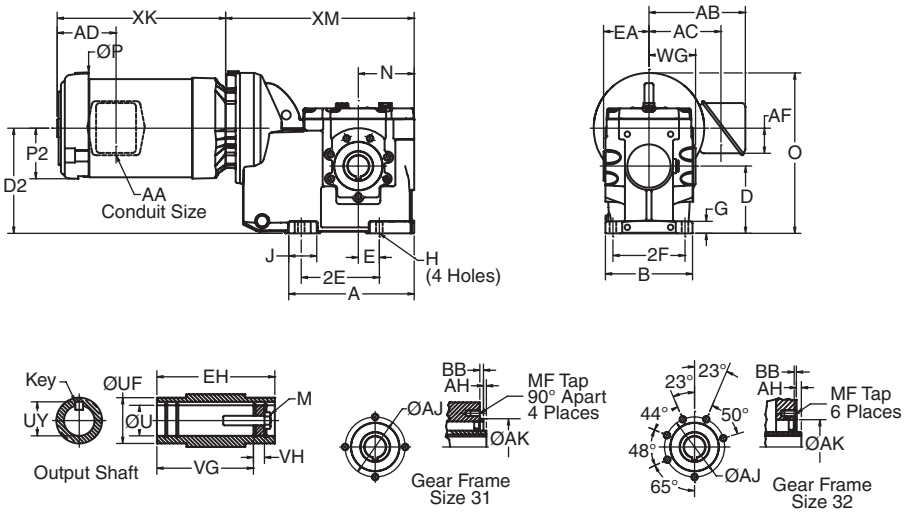
Gear Frame	Version	EA	EH	U[3 5]	UF	UY	VG	VH	Key[8]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] For details of the torque arm kit, refer to page F-20.
[5] Output bore tolerance: +.0020", - .0000" for all diameters.
[6] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102
[7] There are 2 openings in conduit box
[8] Output key not supplied with the reducer

2-Stage Finished Bore Hollow Shaft Face Mount - OtN31 - 32

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

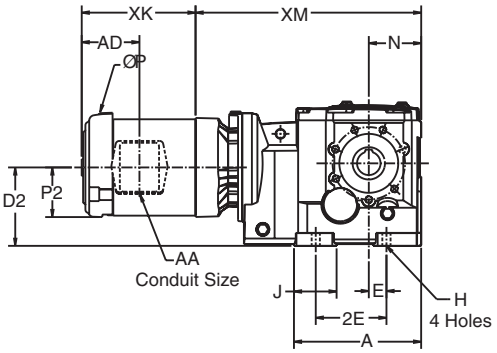
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

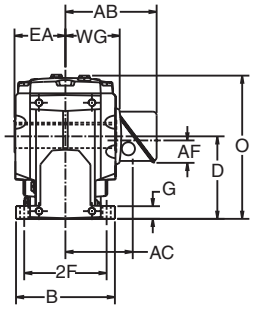
[6] Output key not supplied.

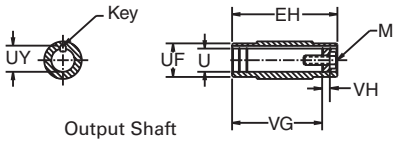
[7] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Face Mount - OtN32 - 33

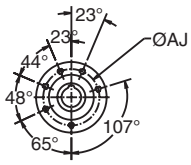
Standard conduit box location will be opposite face mounting unless specified otherwise.



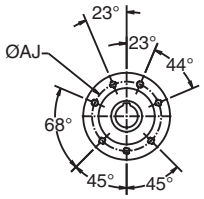




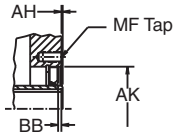
Output Shaft



Gear Frame - Size 32



Gear Frame - Size 33



Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Face Mount

Gear Frame	Flange Code	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	33	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	33	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "TypeT" three phaseTEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

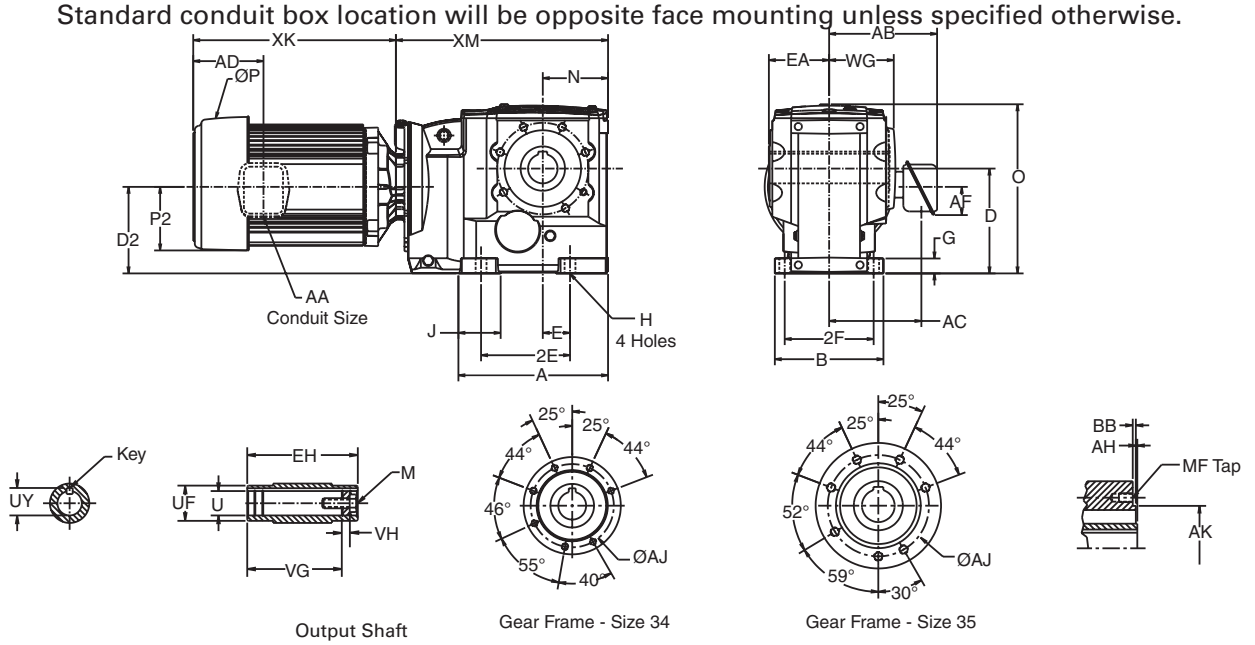
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied.

[7] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Face Mount - OtN34 - 35

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															56T-215T	254T-286T
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[6]	UF	UY	VG	VH	Key[5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	35	14.62	7.29	1.50	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "TypeT" three phaseTEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

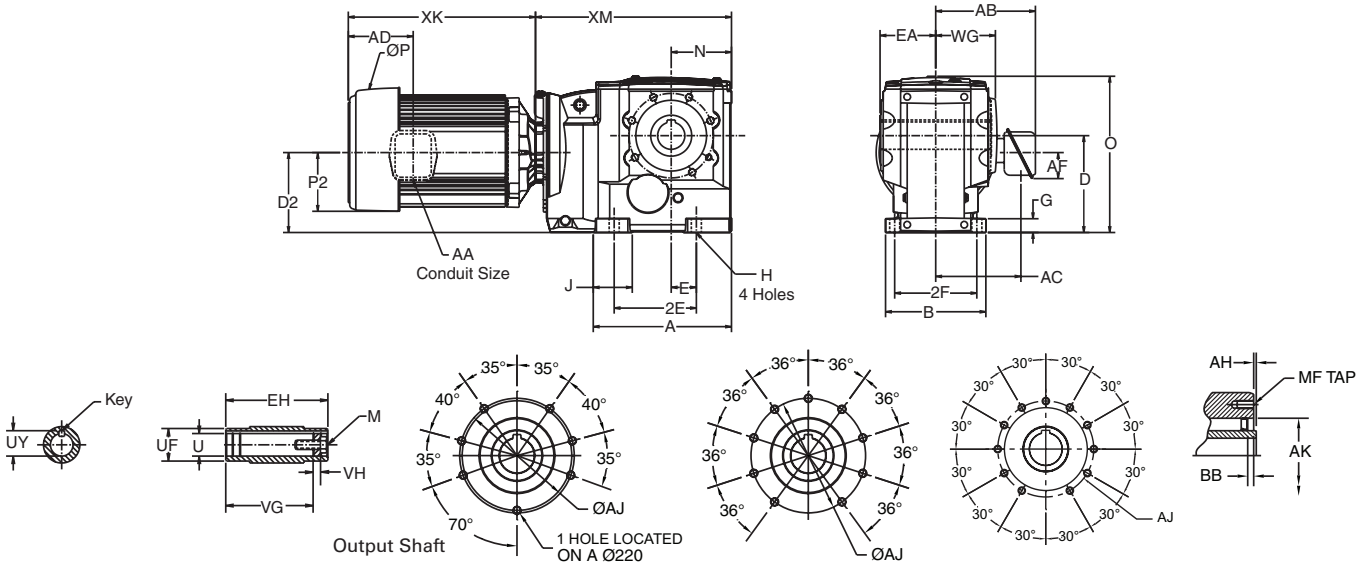
[5] Output key supplied on frame 34 only.

[6] Output bore tolerance: +.0020", - .0000" for all diameters.

[7] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Face Mount - OtN36 - 38

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM		
															182T/184T	213T-215T	254T-UP
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.38	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	-	24.29	24.64

Output Shaft

Gear Frame	Version	EA	EH	U[3, 5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 X 6 1/2	1-8 X 2.25

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
36	S2	.20	9.06	5.91	.28	M16-2.0 X 27
37	S2	.20	9.06	7.09	.28	M20-2.5 X 35
38	S2	.10	11.81	9.84	.20	M20-2.00 X 35

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2	14.99	11.34	14.16	3.63	27.36

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

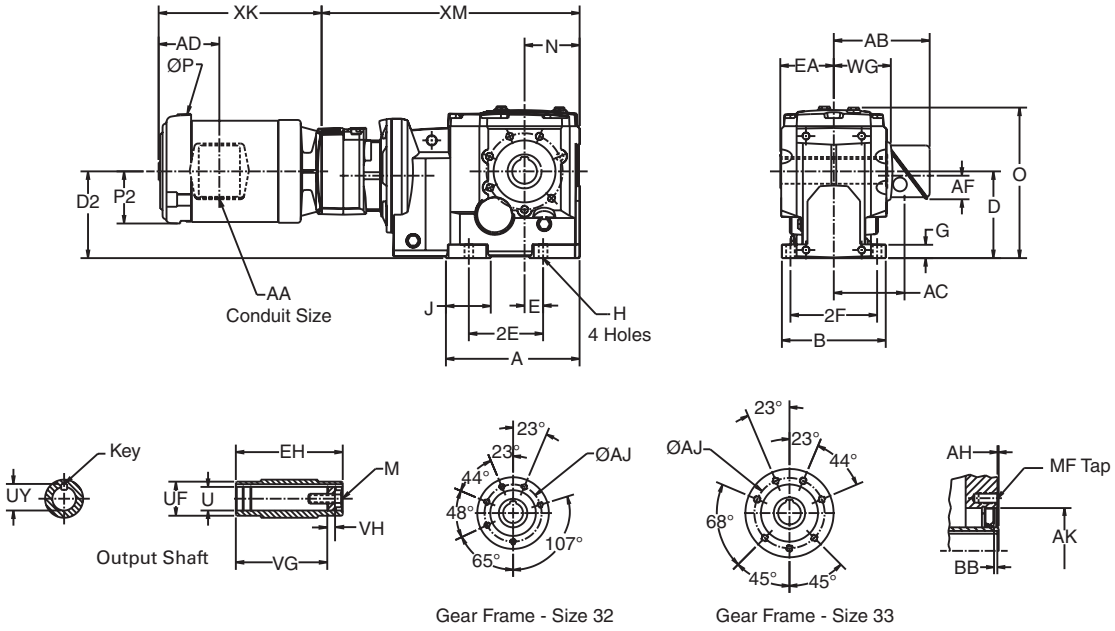
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied with reducer

[7] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft Face Mount - OtN32 - 33

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.15	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	19.90

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
32	S2	2.98	5.96	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	.75	6.10	4.50	3.86	1.77	10.37
	T	33	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.84
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

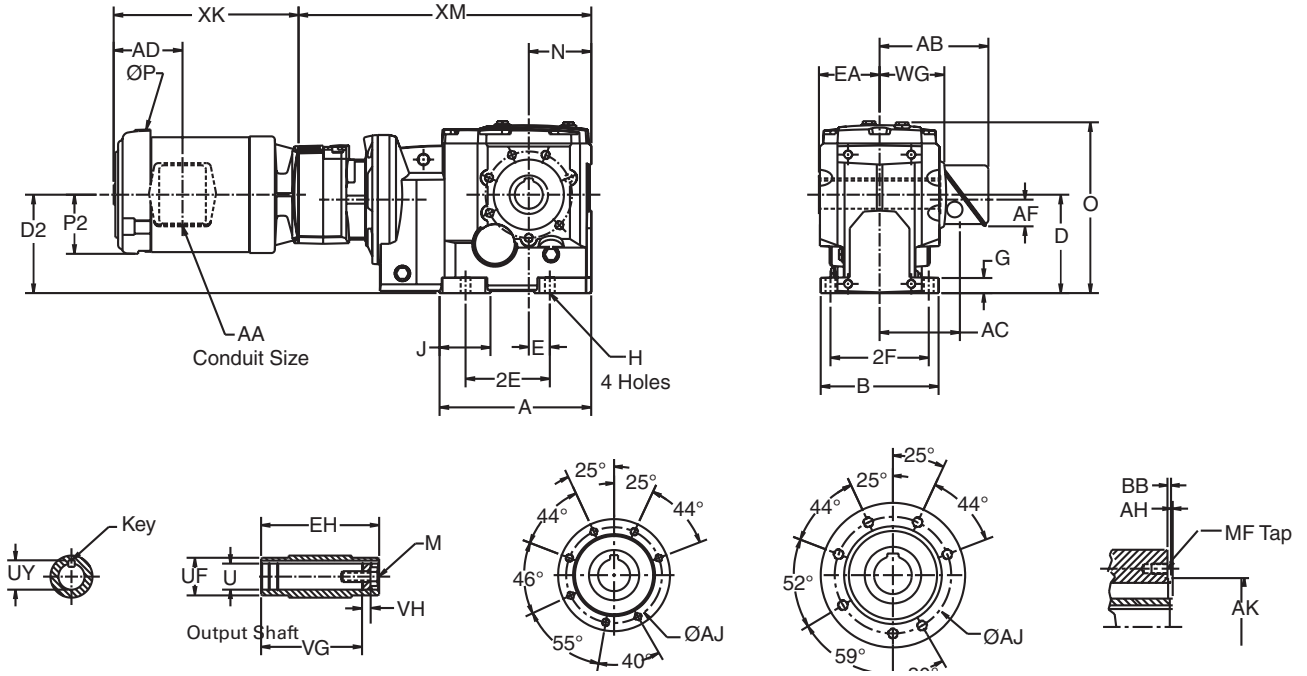
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied.

Combined Finished Bore Hollow Shaft Face Mount - OtN34 - 35

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87

Output Shaft

Gear Frame	Version	EA	EH	U[6]	UF	UY	VG	VH	Key[5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

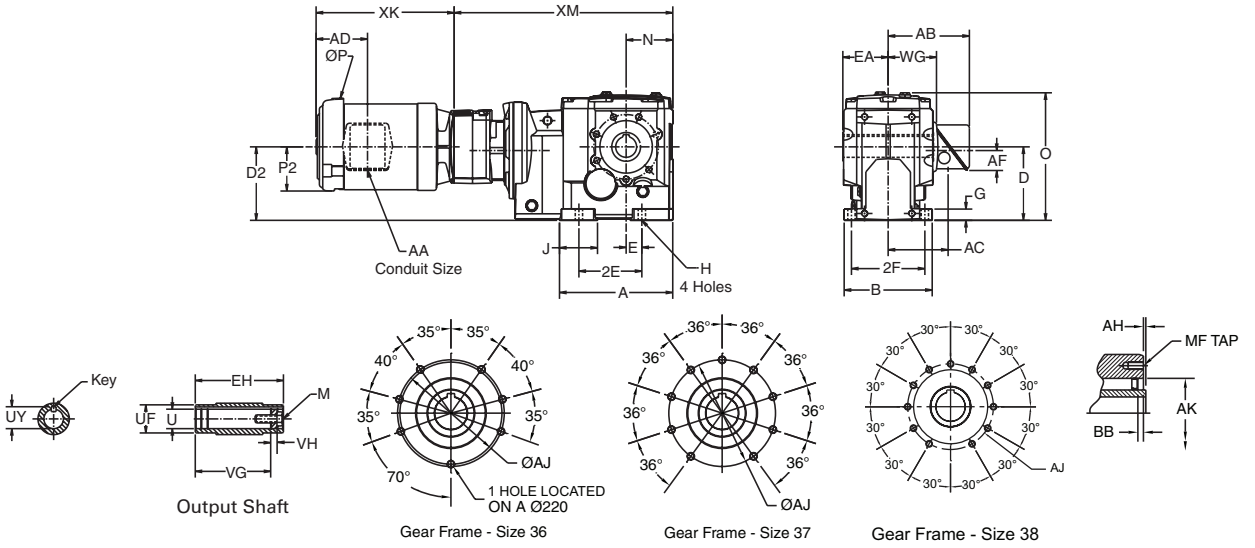
[5] Output key supplied only on frame 34 "S2" version.

[6] Output bore tolerance: +.0020", - .0000" for all diameters.

[7] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft Face Mount - OtN36 - 38

Standard conduit box location will be opposite face mounting unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
															56 -215T
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.94

Output Shaft

Gear Frame	Version	EA	EH	U[3, 5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
36	S2	.20	9.06	5.91	.28	M16-2.0 X 27
37	S2	.20	9.06	7.09	.28	M20-2.5 X 35
38	S2	.10	11.81	9.84	.20	M20-2.00 X 35

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

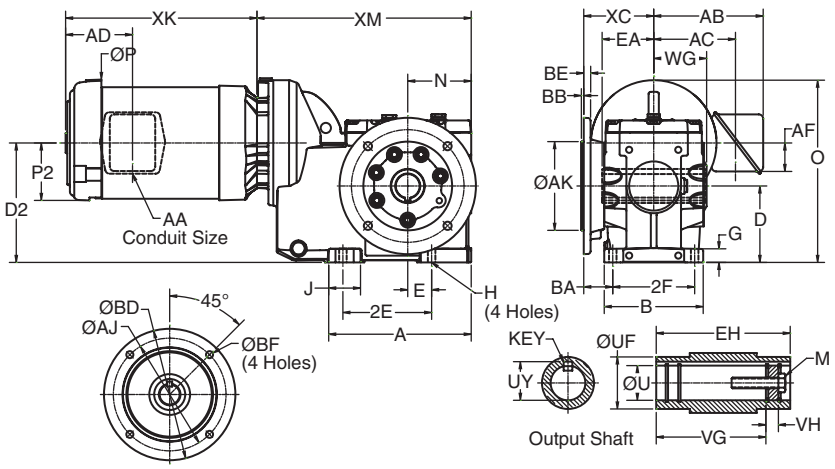
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied with reducer

[7] There are 2 openings in conduit box

2-Stage Finished Bore Hollow Shaft Flange Mount - OtN31 - 32

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	2.85	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	3.22	4.04	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

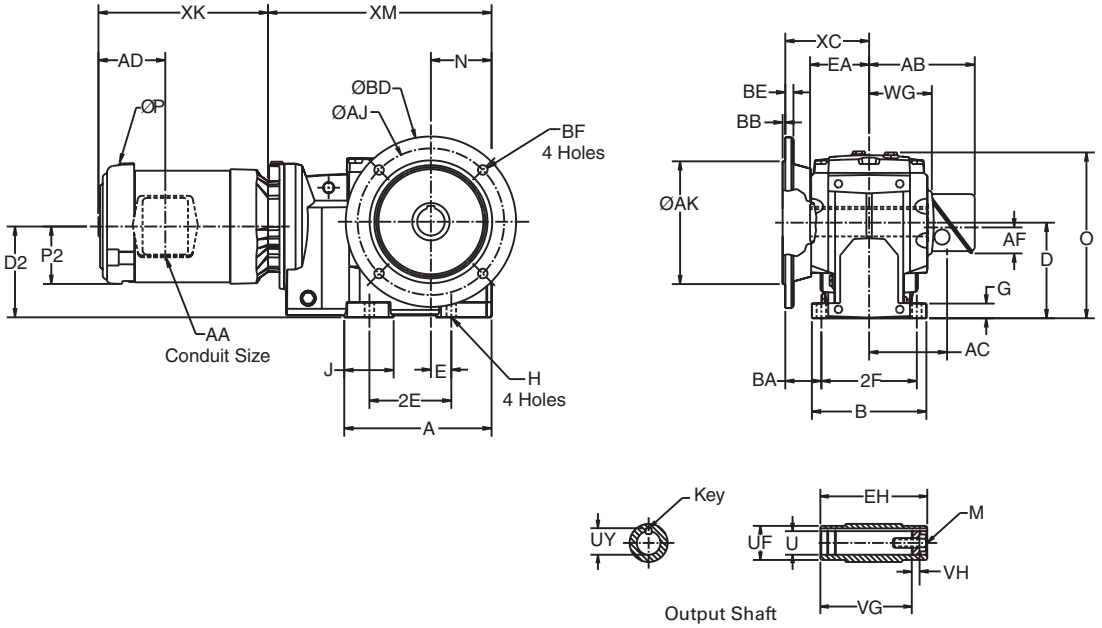
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied.

[7] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Flange Mount - OtN32 - 33

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	10.98
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	12.90

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key	M
32	S2	2.98	5.96	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[6]	7.80	6.00	7.79	2.32	14.23
213T	T	33	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	33	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

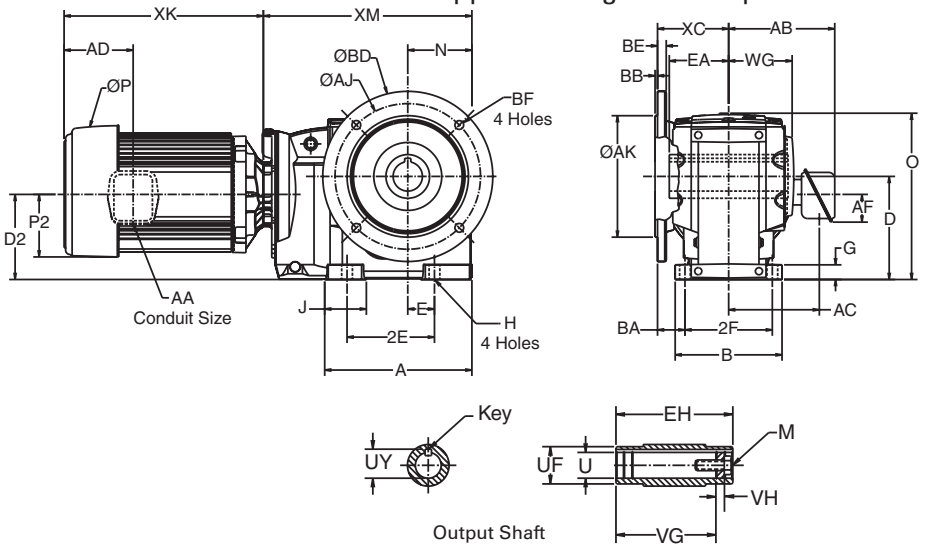
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Flange Mount - OtN34 - 35

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM	
																	56T-215T	254T-286T
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.76	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[6]	UF	UY	VG	VH	Key[5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
34	5	9.055	10.43	.16	11.80	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1.25	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T, 286T	T, C	35	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

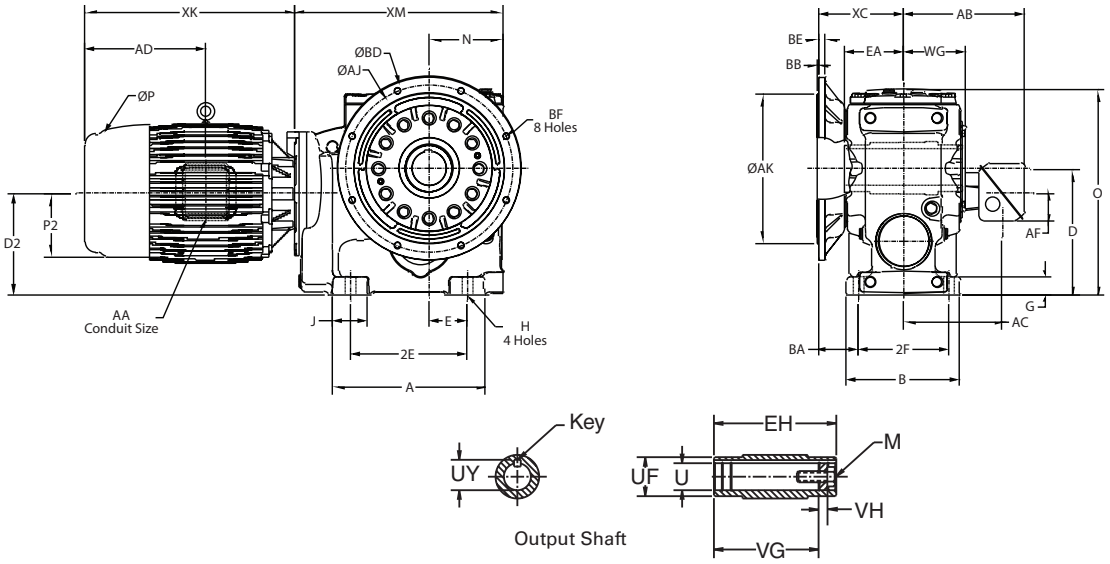
[5] Output key supplied on frame 34 only.

[6] Output bore tolerance: +.0020", - .0000" for all diameters.

[7] There are 2 openings in conduit box

3-Stage Finished Bore Hollow Shaft Flange Mount - OtN36 - 38

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM		
																	182T/184T	213T-215T	254T-UP
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	23.38	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	-	24.29	24.64

Output Shaft

Gear Frame	Version	EA	EH	U[4,5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Output Flange

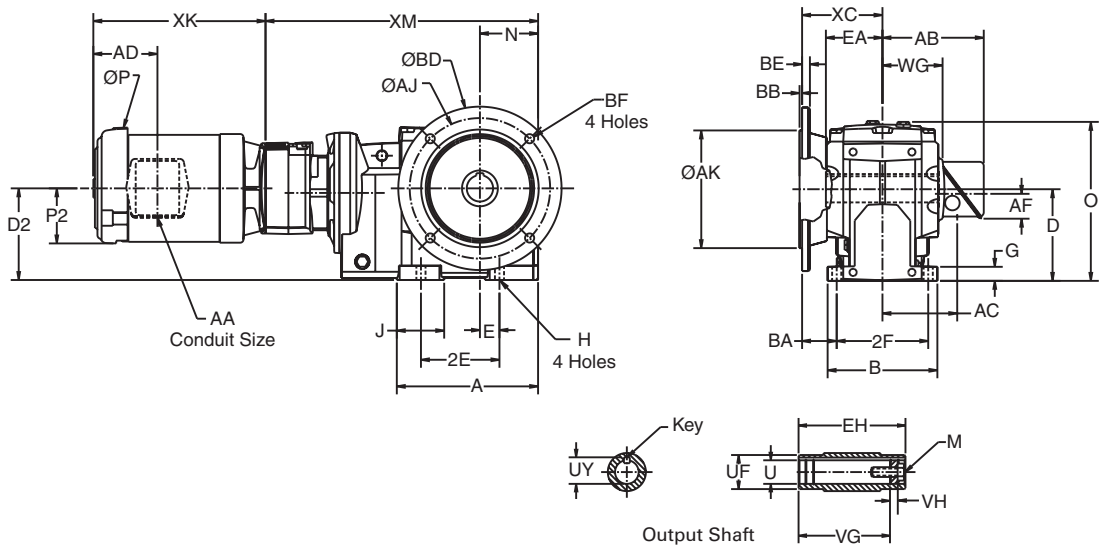
Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1.25	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2.00	14.99	11.34	14.16	3.63	24.96

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "TypeT" three phaseTEFC motors, refer to pages F-100 to F-102.
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] Output bore tolerance: +.0020", - .0000" for all diameters.
[6] Output shaft key not supplied.
[7] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft Flange Mount - OtN32 - 33

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	19.90

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[6]	M
32	S2	2.98	5.96	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	10.37
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.84
	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	33	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

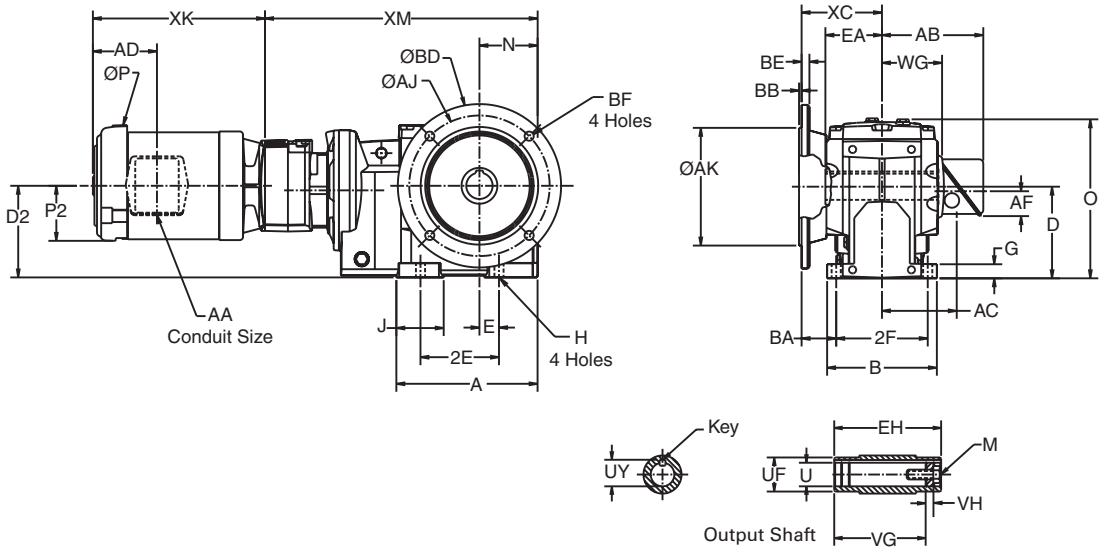
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied.

Combined Finished Bore Hollow Shaft Flange Mount - OtN34 - 35

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.76	23.87

Output Shaft

Gear Frame	Version	EA	EH	U[6]	UF	UY	VG	VH	Key[5]	M
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
34	5	9.055	10.43	.16	11.80	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

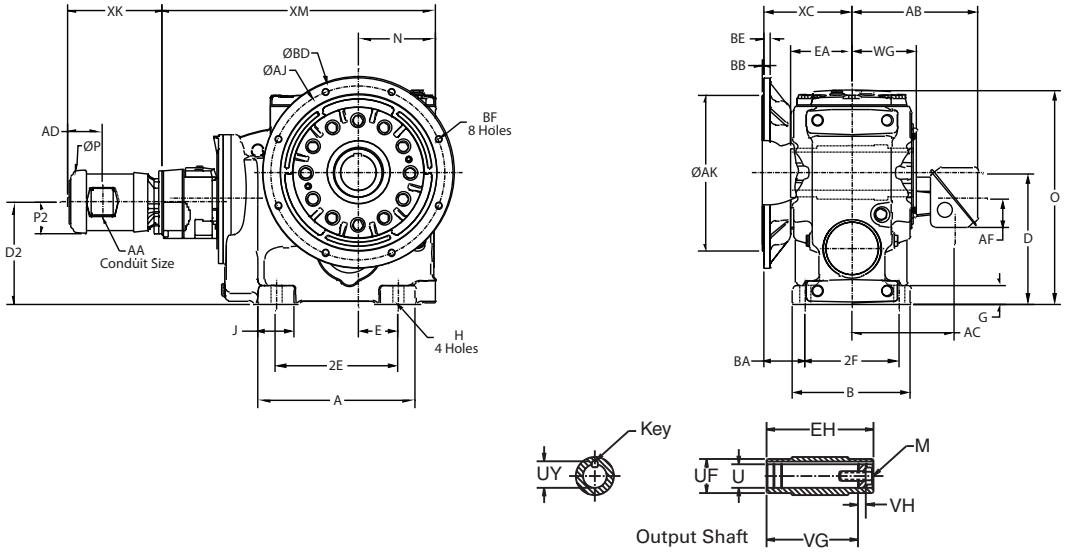
[5] Output key supplied only on frame 34 "S2" version.

[6] Output bore tolerance: +.0020", - .0000" for all diameters.

[7] There are 2 openings in conduit box

Combined Finished Bore Hollow Shaft Flange Mount - OtN36 - 38

Standard conduit box location will be opposite flange unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM 56 -215T
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	31.94

Output Shaft

Gear Frame	Version	EA	EH	U[4, 5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Motor Type[4]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

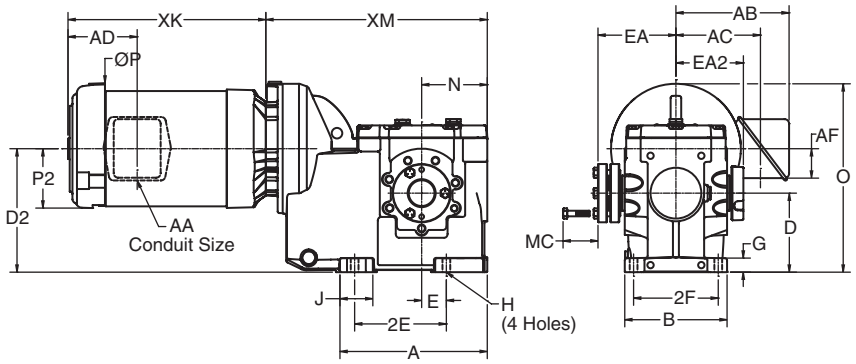
[5] Output bore tolerance: +.0020", - .0000" for all diameters.

[6] Output key not supplied with unit

[7] There are 2 openings in conduit box

2-Stage Bushed Shaft Mount
OtN31 - 32

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

Output Shaft

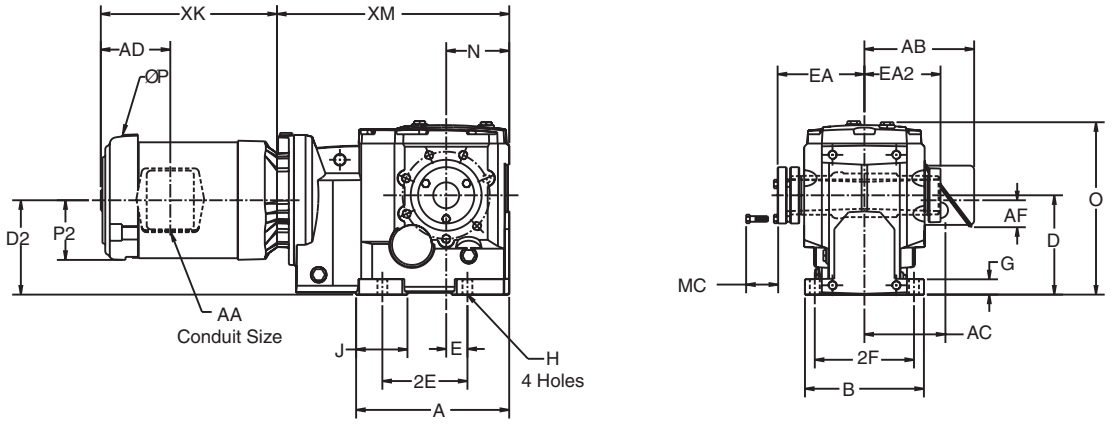
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
3132	S2	4.25	3.80	1.50	1	1 5/16
3242	S2	4.85	4.27	1.75	1 5/16	1 7/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	.75	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[7]	7.80	6.00	7.79	2.32	14.23
213T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	16.15
215T	T	32	11.25	5.06	1.00	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.
[8] For details of the torque arm kit,refer to page F-20.
[9] There are 2 openings in conduit box

3-Stage Taper Bushed Shaft Mount
OtN32 - 33

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	37.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	10.98
33A	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	12.90

Output Shaft

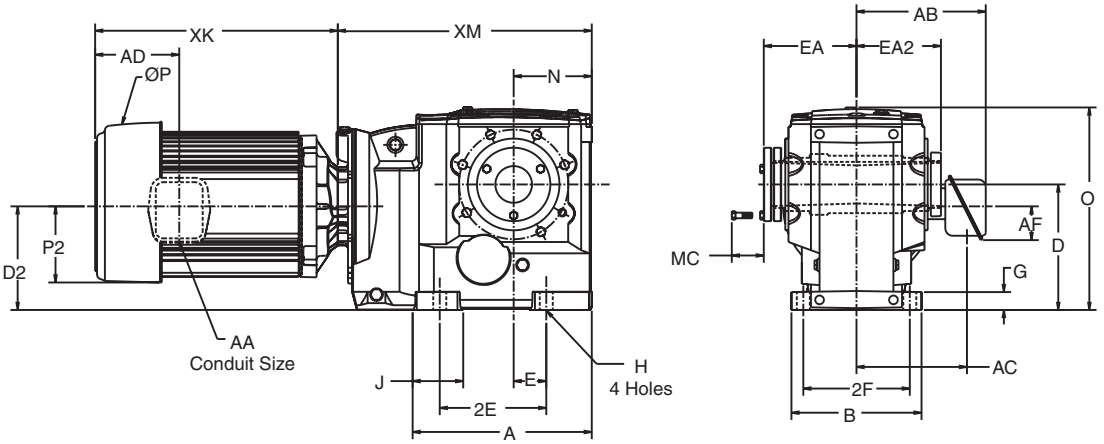
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
32	S2	4.85	4.27	1.75	1 5/16	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	33A	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	33A	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.
[8] For details of the torque arm kit,refer to page F-20.
[7] There are 2 openings in conduit box

3-Stage Taper Bushed Shaft Mount
OtN34 - 35

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														56-215T	254T-286T
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	16.90	17.25

Output Shaft

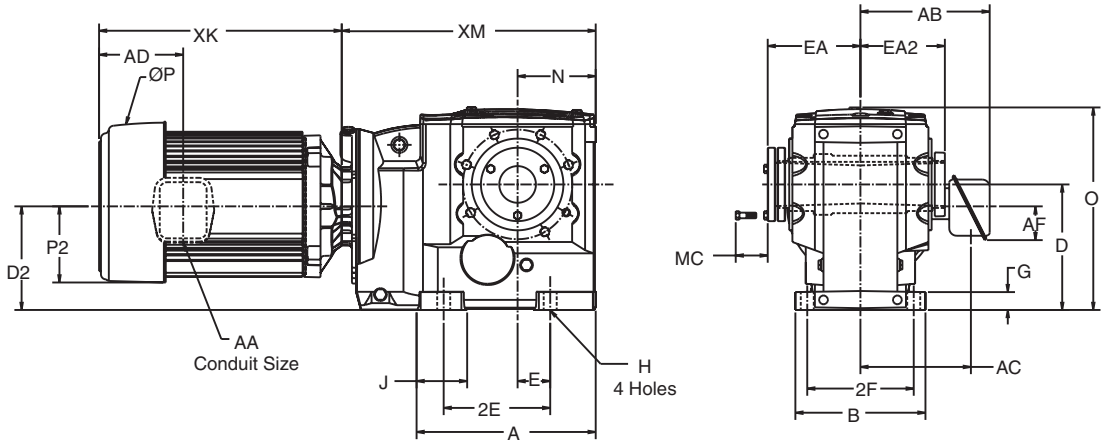
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max
34	S2	5.84	5.27	1.88	1 11/16	1 15/16
35	S2	6.17	5.62	1.88	2	2 7/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	Any	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	34	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	20.58
	T	35	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	19.61
256T	T	34	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	22.33
	T	35	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	35	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.
[8] For details of the torque arm kit,refer to page F-20.
[9] There are 2 openings in conduit box

3-Stage Taper Bushed Shaft Mount
OtN36 - 38

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM		
														182T/184T	213T-215T	254T-UP
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.38	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	-	29.06	29.41
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	-	24.29	24.64

Output Shaft

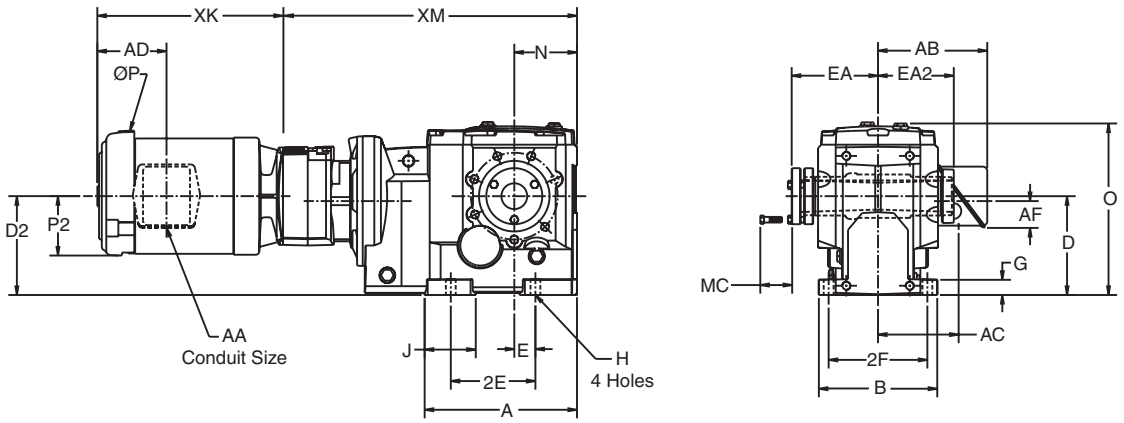
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65
254T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	19.61
256T	T	All	13.38	6.00	1 1/4	9.79	7.68	8.29	1.81	21.36
284T/286T	T, C	All	14.62	7.29	1 1/2	11.33	9.16	13.19	2.63	24.71
324T/326T	T, C	All	17.20	7.78	2	14.99	11.34	14.16	3.63	27.36

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.
[8] For details of the torque arm kit,refer to pages F-20.
[9] There are 2 openings in conduit box

Combined Taper Bushed Shaft Mount
OtN32 - 33

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	14.49
33A	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.90

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
32	S2	4.85	4.27	1.75	1 5/16	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.77	10.37
	T	33A	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	32	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.84
	T	33A	7.31	3.31	3/4	6.10	4.50	3.86	1.64	11.26
145T	T	33A	7.31	3.31	3/4	6.10	4.50	3.86	1.64	12.04

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.

[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.

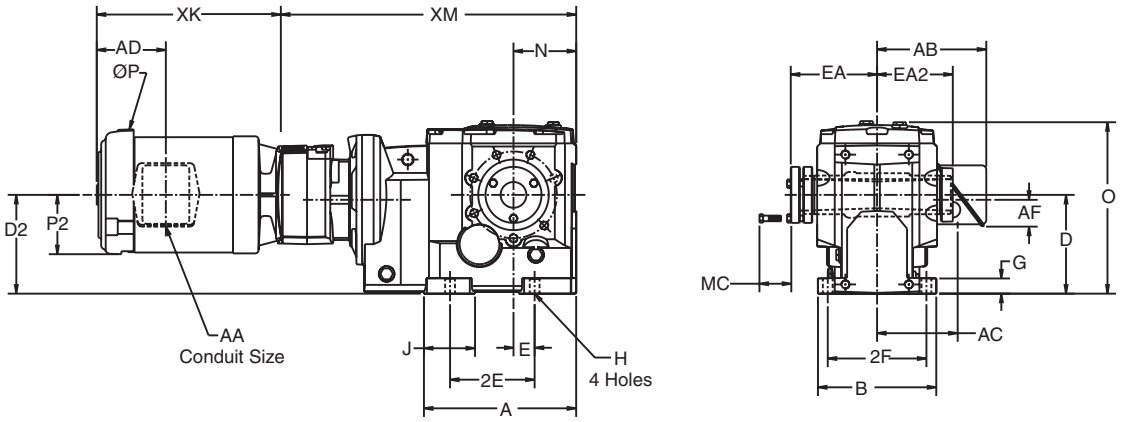
[6] Bushing and dust cap can be installed opposite of how they are shown above.

[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.

[8] For details of the torque arm kit,refer to page F-20.

Combined Taper Bushed Shaft Mount
OtN34 - 35

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	23.87

Output Shaft

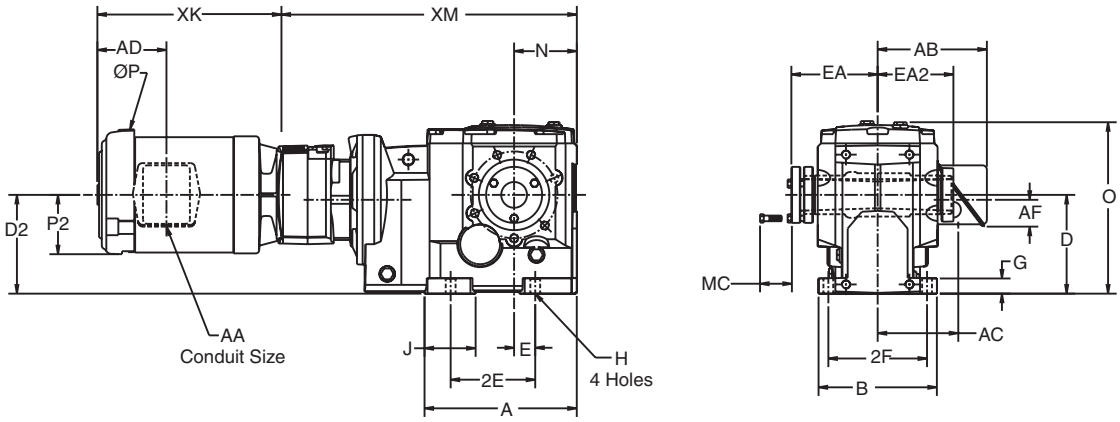
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max
34	S2	5.84	5.27	1.88	1 11/16	1 15/16
35	S2	6.17	5.62	1.88	2	2 7/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.
[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.
[8] For details of the torque arm kit,refer to page F-20.
[9] There are 2 openings in conduit box

Combined Taper Bushed Shaft Mount
OtN36 - 38

Standard conduit box location will be F1 unless specified otherwise.



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.94

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Motor Frame	Motor Type[3]	Gear Frame	P	P2	AA	AB	AC	AD	AF	XK
56	T	All	7.31	3.31	3/4	6.10	4.50	3.86	1.77	9.79
143T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	11.26
145T	T	Any	7.31	3.31	3/4	6.10	4.50	3.86	1.77	12.04
182T/184T	T	Any	9.56	4.34	3/4[9]	7.80	6.00	7.79	2.32	14.23
213T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	16.15
215T	T	All	11.25	5.06	1	8.42	7.17	5.60	2.42	17.65

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Motor dimensions for other than "Type T" three phase TEFC motors, refer to pages F-100 to F-102.

[4] Refer to page F-21 by gear frame for listing of all inch and metric bushing bore sizes available.

[5] The "MC" dimension shows spacing required to install or remove the bushing from the reducer.

[6] Bushing and dust cap can be installed opposite of how they are shown above.

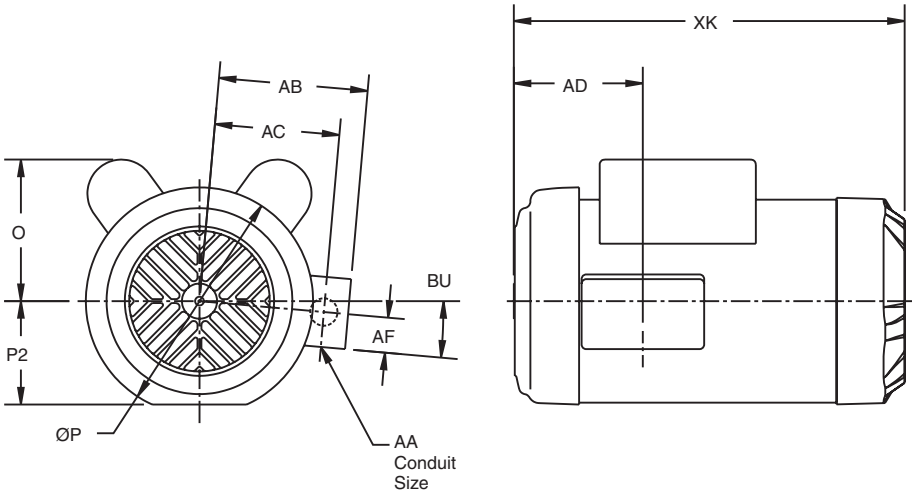
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to Installation Manual for requirements.

[8] For details of the torque arm kit,refer to pages F-20.

[9] There are 2 openings in conduit box

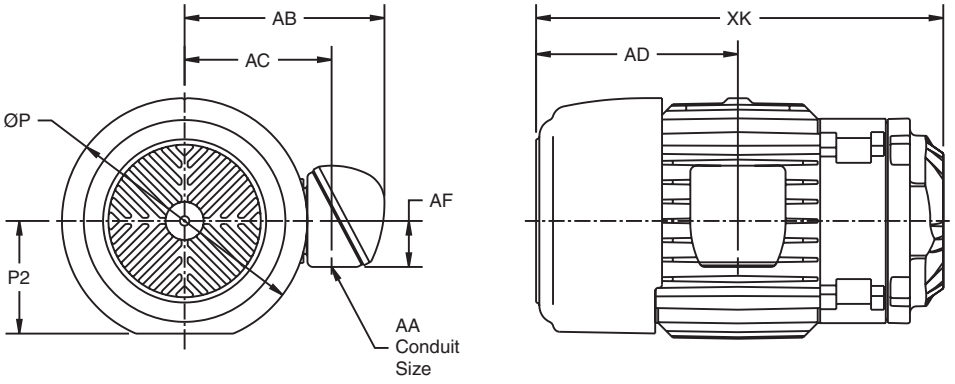
Alternate Motor Dimensions

Single Phase



Motor Frame	HP	O	PP	P2	AA	AB	AC	AD	AF	BU	XK
56	1/3, 1/2	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	9.52[2]
	3/4	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.78[2]
143T	1	5.09	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	11.78[2]
145TY	1 1/2, 2	4.53	7.28	3.31	3/4	4.78	3.83	4.14	1.13	5°	13.27
184T	3, 5	5.11	9.56	4.39	3/4	8.58	6.45	7.14	3.09	N/A	16.54

CorroGard®

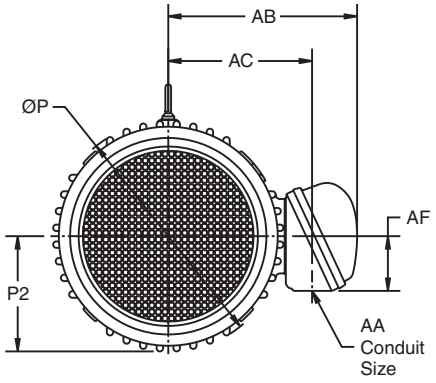


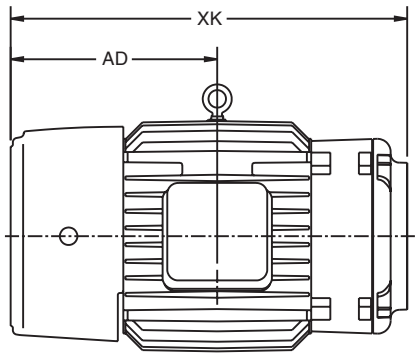
Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.41	3.44	3/4	6.50	4.59	3.72	1.25	10.21 [2]
143T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	11.43 [2]
145T	9.57	4.33	3/4	7.80	6.00	7.79	2.32	12.02 [2]
182T, 184T	9.57	4.33	3/4 [3]	7.80	6.00	7.79	2.32	14.23
213T, 215T	11	5.44	1	9.47	7.15	9.63	2.00	19.67
254T, 256T	13.31	6.58	1 1/2	11.33	8.51	12.44	2.63	24.26 [1]

[1] XK = 23.29 on OtN 34 three stage.
[2] XK will increase by .58" if used on 32 combined units.
[3] There are 2 conduit openings on this frame size.

Alternate Motor Dimensions

Explosion Proof

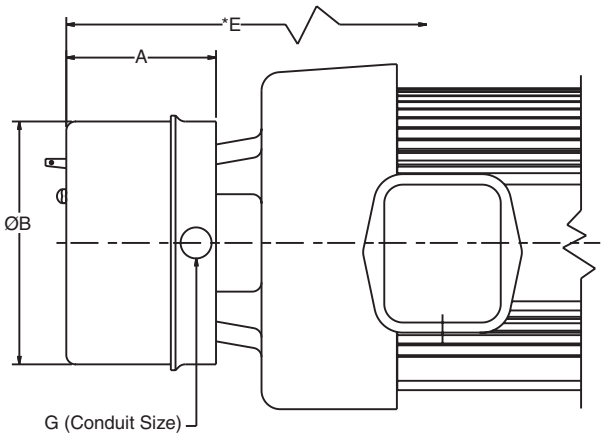




Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.15[2]
143T, 145T	7.88	3.38	3/4	6.79	5.31	4.37	1.78	13.90[2]
182T, 184T	9.50	4.56	3/4	7.70	5.79	7.75	2.25	15.70

[2] XK will increase by 0.58" is used on combined OtN frame 32.

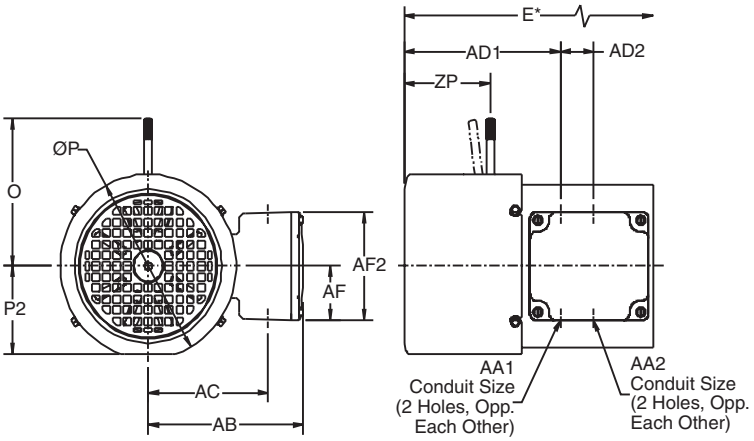
Dimensional Supplement



AC Brake with Type "T" and "S" Motor

Motor Type	Motor Frame	Brake Torque (ft. lbs.)	A	B	E*	G
T&S	56	1.5	4.01	6.54	4.56	1/2
		3	4.01	6.54	4.56	1/2
	143T	3	4.01	6.54	4.56	1/2
T	145T	6	4.01	6.54	4.56	1/2
S	145TY	6	4.01	6.54	4.56	1/2
T	182T	10	4.01	6.54	4.56	1/2
T&S	184T	15	4.01	6.54	4.56	1/2
T	213T	25	7.38	9.38	8.75	1/2
	215T	35	7.38	9.38	8.75	1/2

* Dimension "E" represents the additional length of motor with brake mounted. Add "E" to XK of equivalent three phase frame motor.



DC FCR Brake with Type "T" Motor

Motor Frame	E*	O	P	AA1	
				Size	Qty
56-143/145T	2.63	5.80	7.24	3/4 NPT	2
182/184T	1.95	7.3	9.23	3/4 NPT	1

Motor Frame	AA2		AB	AC	AD1
	Size	Qty			
56-143/145T	1/2 NPT	2	6.38	4.94	6.43
182/184T	3/4 NPT	1	7.8	6.14	8.84

Motor Frame	AD2	AF	AF2	P2	ZP
56-143/145T	1.38	2.13	4.25	3.46	3.54
182/184T	1.81	2.32	4.65	N/A	4.41

OtN Gearmotors - TEFC Three Phase Motors *													
Gear Frame	Reduction Stages	Motor Frame											
		56	143T	145T	182T	184T	213T	215T	254T	256T	284T	286T	324T	326T
31	2	65	89	90	143	141	-	-	-	-	-	-	-	-
32	2	70	94	95	148	146	159	169	-	-	-	-	-	-
	3	77	101	102	155	156	-	-	-	-	-	-	-	-
	5	85	-	-	-	-	-	-	-	-	-	-	-	-
33	3	99	123	124	178	179	190	200	-	-	-	-	-	-
	5, 6	129	153	154	-	-	-	-	-	-	-	-	-	-
34	3	147	171	172	226	227	238	248	323	343	-	-	-	-
	5, 6	176	200	202	-	-	-	-	-	-	-	-	-	-
35	3	-	246	247	297	299	309	319	394	414	584	604	-	-
	5, 6	240	265	267	320	321	-	-	-	-	-	-	-	-
36	3	-	-	-	535	540	562	572	654	674	753	773	845	910
	5, 6	509	526	532	578	583	598	603	-	-	-	-	-	-
37	3	-	-	-	771	786	798	808	890	910	949	969	1081	1146
	5, 6	745	762	768	814	819	834	839	-	-	-	-	-	-
38	3	-	-	-	-		885	895	970	990	1160	1180	1380	1440
	5, 6	930	955	957	1030	1031	1016	1020	-	-	-	-	-	-

Weight Adders

Optional Motor Types													
Motor Type	Motor Frame												
	56	143T	145T	145TY	182T	184T	213T	215T	254T	256T	284T	286T	320T
C CorroGard®	8	9	11		13	13	73	73	165	170	-	-	-
X Explosionproof	19	21	25	-	5	5	-	-	-	-	-	-	-
S Single Phase	6	-4	-	-5	-	-28	-	-	-	-	-	-	-

Gear Options

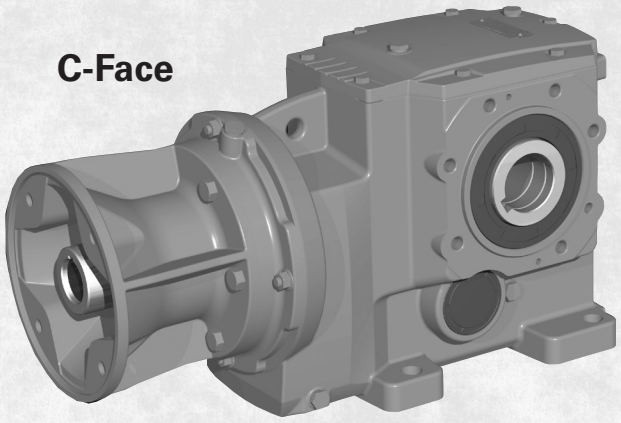
Gear Frame	Std Flange Mount	Footed S1
31	3	-
32	4	-
33	5	2
34	7	3
35	8	5
36	10	-
37	12	-
38	15	-

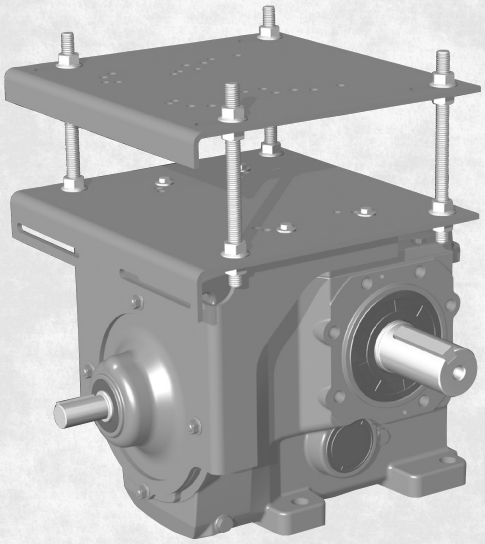
* These weights are for premium efficiency design motor (Input Code PT24 or PT5), less brake

Browning®

OtN Helical-Bevel Right Angle Speed Reducers

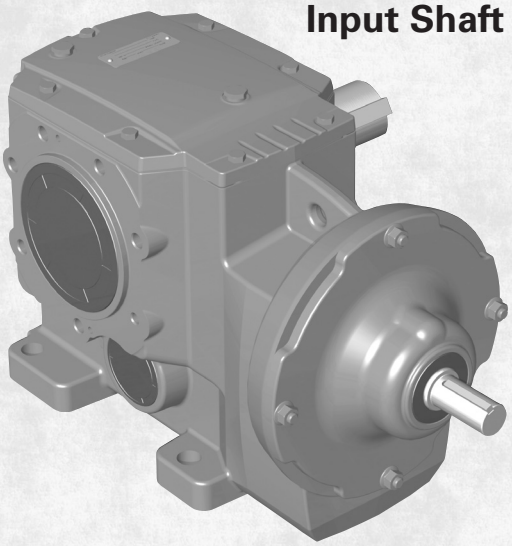
C-Face

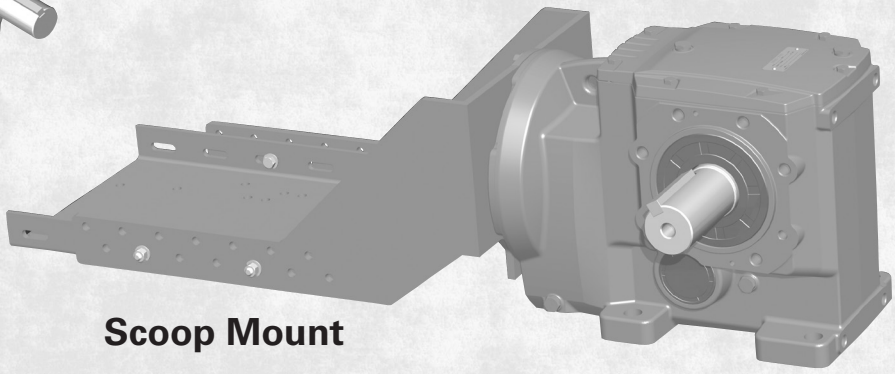




Top Mount

Input Shaft



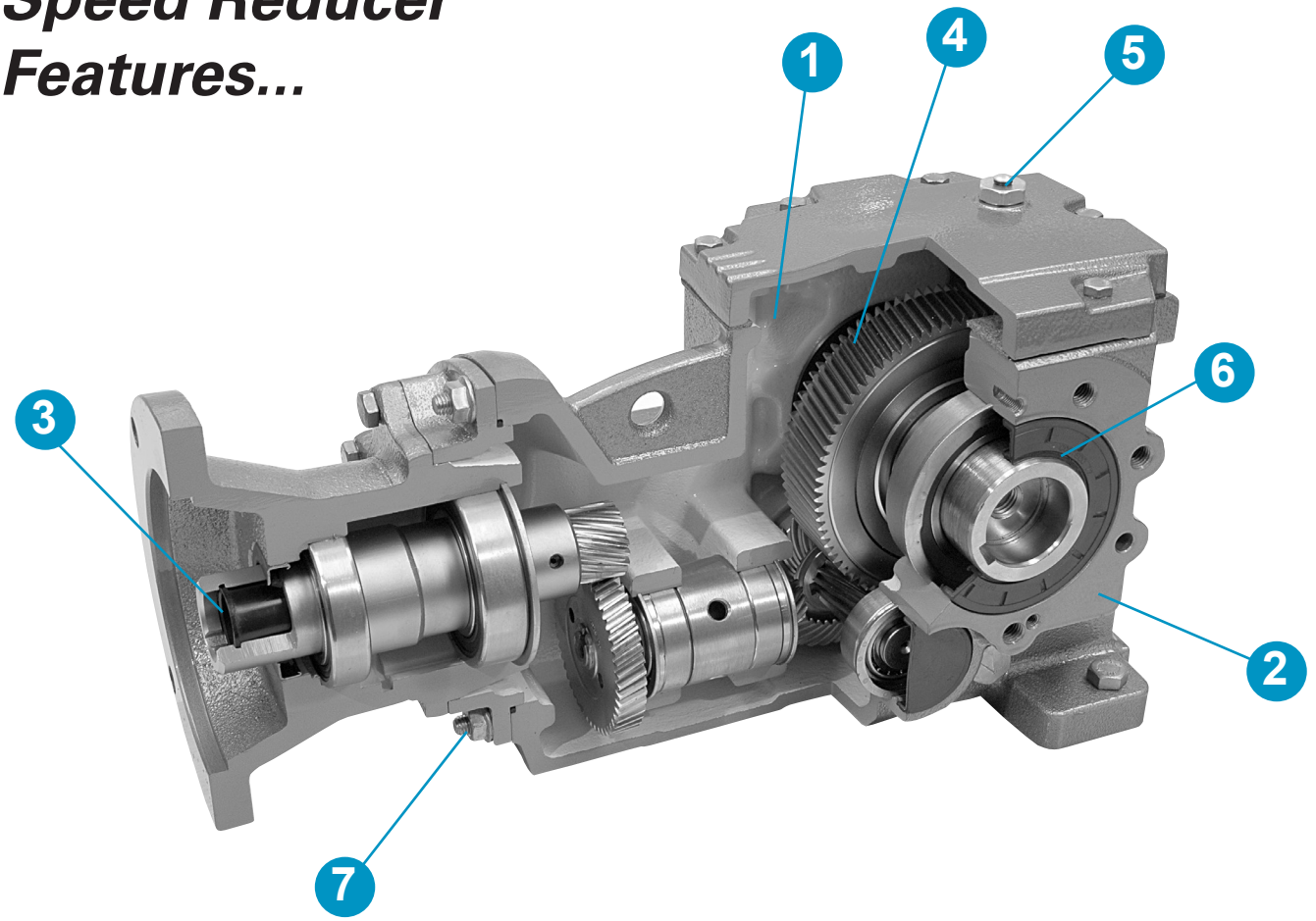


Scoop Mount

Table of Contents

Section	Page
Design Features	F-106
Mounting Versatility and Size Range	F-107
Speed Reducer Selection	F-108 - F-109
Catalog Nomenclature	F-110 - F-111
Reducer Mounting Positions	F-112
Reducer Input Options	F-113
Modifications, Options and Accessories	F-114
Torque Reaction Arms	F-115
Tapered Bushing Selections	F-116
AGMA Application Classifications	F-117 - F-119
Speed Reducer Selection Tables	F-120 - F-125
Thermal Power Ratings	F-126 - F-127
Dimension Prints	
C-Face Reducers Output Shafted Foot Mount	F-128 - F-132
C-Face Reducers Output Shafted Flange Mount	F-133 - F-137
C-Face Reducers Finished Bore Hollow Shaft	F-138 - F-142
C-Face Reducers Finished Bore Hollow Shaft Face Mount	F-143 - F-147
C-Face Reducers Finished Bore Hollow Shaft Flange Mount	F-148 - F-152
C-Face Reducers Taper Bushed Shaft Mount	F-153 - F-157
Input Shaft Reducers Output Shafted Foot Mount	F-158 - F-160
Input Shaft Reducers Output Shafted Flange Mount	F-161 - F-165
Input Shaft Reducers Finished Bore Hollow Shaft	F-166 - F-168
Input Shaft Reducers Finished Bore Hollow Shaft Face Mount	F-169 - F-173
Input Shaft Reducers Finished Bore Hollow Shaft Flange Mount	F-174 - F-178
Input Shaft Reducers Taper Bushed Shaft Mount	F-179 - F-181
Scoop Mount Reducers Output Shafted Foot Mount	F-183 - F-184
Scoop Mount Reducers Output Shafted Flange Mount	F-185 - F-187
Scoop Mount Reducers Finished Bore Hollow Shaft	F-188 - F-190
Scoop Mount Reducers Finished Bore Hollow Shaft Face Mount	F-191 - F-193
Scoop Mount Reducers Finished Bore Hollow Shaft Flange Mount	F-194 - F-196
Scoop Mount Reducers Taper Bushed Shaft Mount	F-197 - F-198
Top Mount Reducers Output Shafted Foot Mount	F-199 - F-201
Top Mount Reducers Finished Bore Hollow Shaft	F-202 - F-204
Top Mount Reducers Finished Bore Hollow Shaft Face Mount	F-205 - F-206
Top Mount Reducers Taper Bushed Shaft Mount	F-207 - F-209
Optional "V" Mounting Position Foot Mount Dimensions	F-210
Reducer Weights	F-211
Lubrication	F-212
Motor Performance Data	Section H

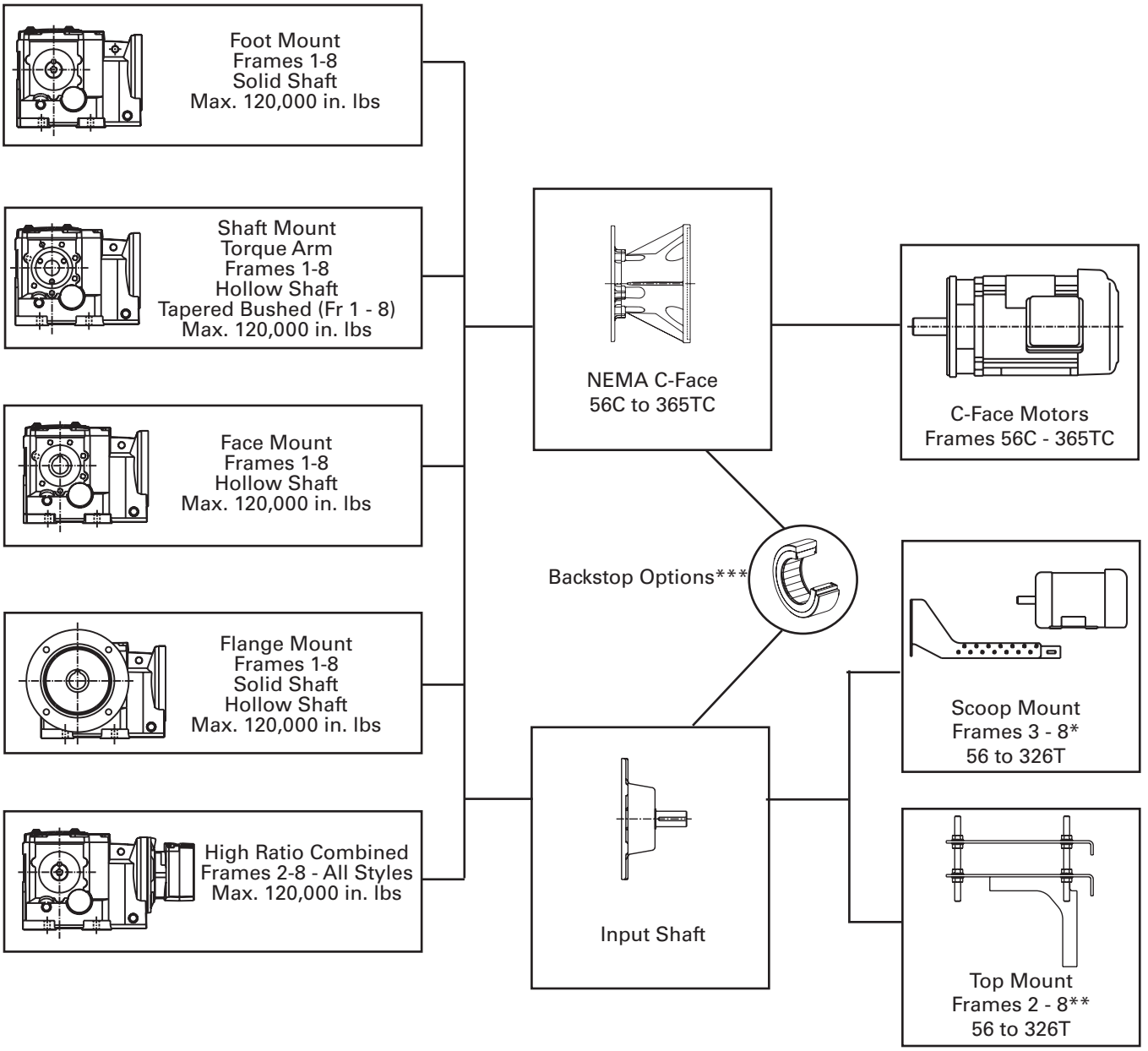
Type OtN Helical-Bevel Speed Reducer Features...



Design Features

1. **Gearcase Supplied Factory Filled with Synthetic Oil**
   - Wide temperature range and longer life.
2. **Corrosion and Shock Resistant Cast Iron Housing**
   - One-piece, reinforced and ribbed for extra strength.
3. **Series 3000 C-Face Reducers with Compact Quill Design**
   - Non-metallic liner to eliminate fretting.
   - Shorter design.
   - Two bearings for support.
4. **High Efficiency Helical-Bevel Gears. 98% per Stage**
   - Helical gearing is case hardened and then skived, superfinished or ground.
   - All gears heat shrunk on shafts or mounted on self-locking tapered shafts and keyed for high shock load capability.
5. **Normally Closed Breather with Multiple Locations**
   - Frame 6 to 8 use open breathers incorporating a dipstick
6. **Double Lip Seals on Heat Treated, Plunge Ground Shafts**
7. **Magnetic Drain Plug Standard**

Mounting Versatility and Size Range



* Refer to page F-113 for availability based on gear and motor frame size.
** Refer to page F-113 for availability based on gear and motor frame size.
***Not available for frame 3245

Selection Information

1. ***Input HP***
   - Based on application data.
2. ***Speed/Ratio***
   - Obtain either desired output speed (rpm) or gearbox ratio based on application.
3. ***Service Factor***
   - Determine the required service factor using either the AGMA application classification chart (pages F-117 - F-119), or the duration of operation, load type, and drive type with the table below:

Prime Mover	Hours of Operation	Uniform Load U	Moderate Shock Load M	Heavy Shock Load V*
Electric Motor	0 - 3	0.80	1.00	1.50
	3 - 10	1.00	1.25	1.75
	10 - 24	1.25	1.50	2.00
Internal Combustion Engine	0 - 3	1.00	1.25	1.75
	3 - 10	1.25	1.50	2.00
	10 - 24	1.50	1.75	2.25

** Applications with reversing or frequent starts and stops should not utilize a C-Face reducer design.*

Size Selection

Step 1
- Locate speed reducer selection tables (pages F-120 - F-125) based on input speed to gearbox.

Step 2
- Choose the nominal ratio appropriate for the speeds required.

Step 3
- Select the gear unit size for the chosen ratio and the known input speed so that the mechanical power rating P (hp) satisfies the following:

$$P \geq P_m \bullet SF$$

P = mechanical power rating (hp) of gearbox

P_m = motor power (hp)

SF = required service factor

Note: Size selection based on absorbed power (Pa) or absorbed torque (Ta) at the low speed shaft instead of motor power (Pm) is allowed when the former is known with sufficient accuracy and if the number of start operations is limited. When Ta is applied in size selection, verify if:

$$T \geq T_a \bullet SF$$

T = torque rating (in. lbs.) at low speed shaft

T_a = absorbed torque (in. lbs.) at low speed shaft

SF = required service factor

Size Selection (cont.)

Step 4
- Verify overhung load ratings where required (see page F-109).

Example

1. Application Data

Bottling conveyor, 24-hrs/day operation. Requires right angle hollow shaft mounted speed reducer to be mounted directly to the conveyor drive shaft with a torque arm. The customer prefers a c-face mounted motor.

Motor rating: 5 HP, 1750 rpm, 184TC Footless Frame, 230/460 VAC, 3-Phase, 60 Hz, TEFC

Output speed: 44 rpm

2. Size Selection

Nominal Ratio: Locate nominal rpm closest to 44 rpm. 40:1 nominal ratio is the proper selection.

Service Factor: Using AGMA application classification chart (page F-117) under the "Brewing and Distilling" heading, bottling machinery that operates over 10 hours/day should have a 1.25 service factor.

Rating Req'd: Minimum reducer rating required is

$P = P_m \times SF$

$P = 5\ HP \times 1.25 = 6.25\ HP$

Catalog Rating:

Exact ratio	**Gear Frame**	39.9	**3473**
Input H.P.	Output Torque	9.96	13453

Selection: OtN3473 is rated 9.96 HP input /13453 in. lbs. output with 39.9:1 ratio. 1750 rpm / 39.9 = 43.9 rpm output speed. 9.96 / 5 = 1.99 SF.

3. Catalog Designation

Reducer: OtN-3473-S2-B33C-40-U-184TC (See page F-120)

Torque Arm: ROC400KT001 (See page F-113)

Overhung Load Capacities

When a sprocket, sheave, pulley, or pinion is mounted on the output shaft of a reducer, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded.To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times HP \times K \times LLF}{rpm \times r}$$

Where:

OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
HP = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
Timing Belt	1.25
V-Belt	1.50
Flat Belt	2.50

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Overhung Load (lbs.)

Output RPM	Frame								
	Two Stages		Three of More Stages						
	31	32	32	33	34	35	36	37	38
301 - 550	1366	1358	-	-	-	-	-	-	-
175 - 300	1366	1579	-	-	-	-	4497	7097	-
151 - 175	1366	825	825	1392	1653	2565	5126	7834	-
101-150	1366	834	834	1549	1707	2815	5253	8124	9039
51 - 100	1366	902	902	1737	1892	3339	5689	9273	10077
31-50	1366	1148	1148	2090	2435	4100	6595	11017	11537
16-30	1366	1490	1490	2090	2875	4100	8584	12910	12184
5-15	-	-	1490	2090	2875	4100	12209	16982	15622
< 5	-	-	1490	2090	2875	4100	13249	18242	19780

OHL capacities above are calculated at gear capacity rounded to the closest motor HP at mid shaft. For capacity when HP is known, refer to gearmotor selection tables.

Ordering

OtN • 34 7 3 • S2 • B 33 G • 22.4 • U • 145TC • G11

See pages F-111 and F-112

Browning® Right-Angle Helical-Bevel	Series	Reducer Size		Stages	Shaft & Foot Dimensions [1]	Mounting Position	Output Face/ Flange Right-Left Viewed From Input End	Output Shaft Configuration Viewed from Input End	Nominal Gear Ratio	Input Type	Motor Frame	Modification(s)
	SERIES 3000	31	3	2= 2 stages	S2 = Industry interchange dimensions	B = Floor mount	3 = Standard round	G = Shaft right	22.4 = 22.4:1	AP = Input Shaft	C-Face 56C-365TC	Select from modifications listed on page F-114
		32	4	3(A) = 3 stages		P = Ceiling mount	4 = Face mount	D = Shaft left	Use nominal ratio selected from reducer selection tables	AD = Input Shaft w/backstop	Scoop Mount 143T-326T	
		33	6	5 = 5 stages		H = Wall mount, input left	5 = Standard dimension flange mount	X = Dual shaft		SP = Scoop Mount	Top Mount 56-286T	
		34	7	6 = 6 stages	S1 = OtN2000 replacement dimensions	T = Wall mount, input right	6 = Alternate	C = Finish bore		SD = Scoop Mount w/backstop	See Page F-113	
		35	8			V = Input vertical up	dimension flange mount	B = Tapered bushed		U = C-Face		
		36	9			W =Input vertical down				UD = C-Face w/backstop		
		37	0							TM = Top mount		
										TMD = Top Mount w/backstop		
		38	2									

[1] Shaft and critical mounting dimensions match either OtN2000 or SEW "K" Series units. These dimensions include the mounting base, output flanges, output shaft diameter, distance from housing center line to shaft tip, and output quill diameter. B14 mounting faces and overall product envelope (height, width, depth) do NOT match.

SEW is believed to be a trade name of SEW-Eurodrive GMBH & Co. and is NOT owned or controlled by Regal Beloit Corporation.

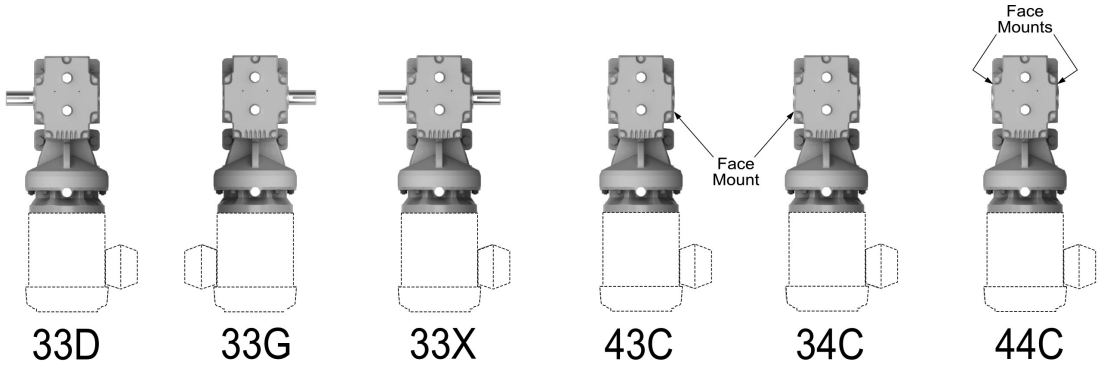
Regal cannot and does not represent or warrant the accuracy of this information.

Output Flange Sizes

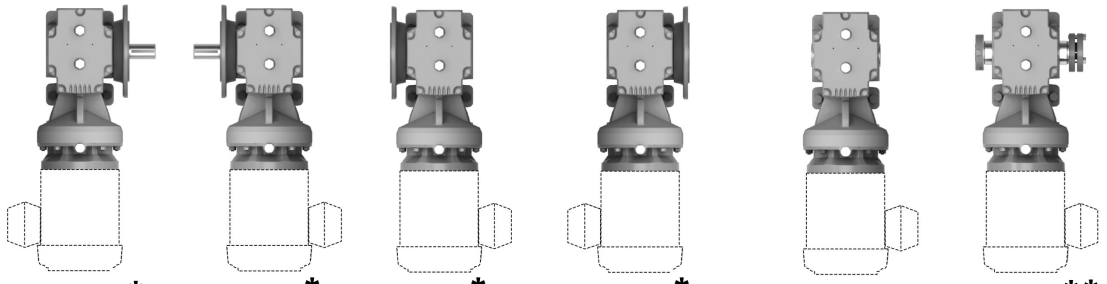
Flange Dimensions (mm)									
BD	165	200	250	300	350	400	450	550	660
AK	110	130	180	230	250	300	350	450	550
AJ	130	165	215	265	300	350	400	500	600
Gear Frame	Output Flange Type Designation Code								
31	5								
32		5	6						
33			5	6					
34				5	6				
35					5	6			
36							5	6	
37							5	6	
38								5	6

Gear Output Options

Brackets and Shaft



Examples are Top Views (with C-Face motor)

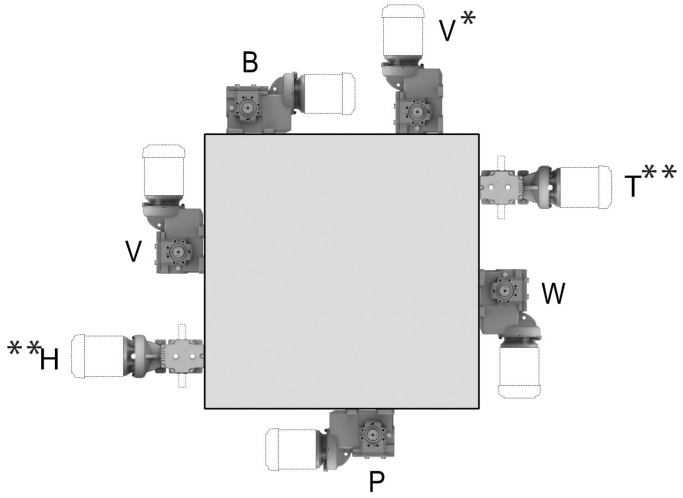


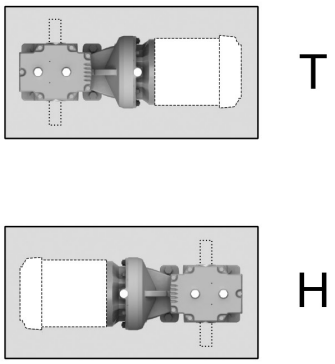
OtN Frame Size	Shaft and/or Flange Config.	Foot Mounted				Face Mounted			Flange Mounted								Shaft Mounted	
		Solid Shaft			Hollow Shaft				Solid Shaft				Hollow Shaft					Bushed
		33G	33D	33X	33C	34C	43C	44C	53G	63G	35D	36D	53C	63C	35C	36C	33C	33B **
31	S2	●	●	●	●	●	●	●	●	-	●	-	●	-	●	-	●	●
32	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	-	-	-	-	-	-	-	●[1]	-	●[1]	-	-	-	-	-	-	-
33	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
33A	S2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
34	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
35	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	●	-	-	-	-	-	-	-
36	S2	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	●	-	-	-	-	-	-	-	-	-
37	S2	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	S1	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	S2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

[1] Option only for 3243 and 3245 frame/reduction combinations
● This is available at standard lead-times
- This option is not available

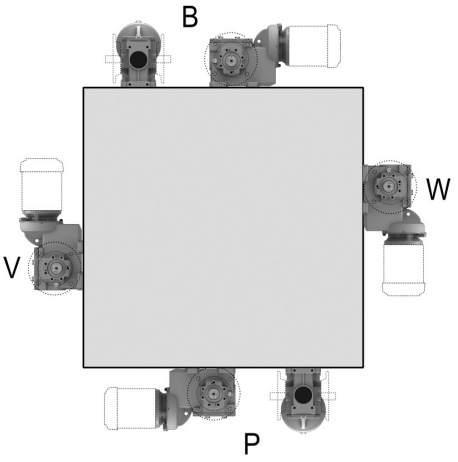
S1 Design option interchanges with Series 2000 OtN mounting
** Tapered Bushing can be assembled on either side of housing in field

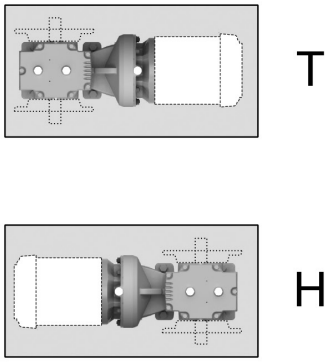
Foot Mount



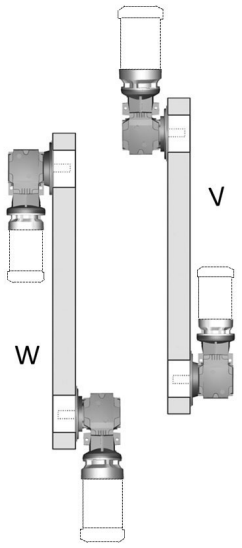


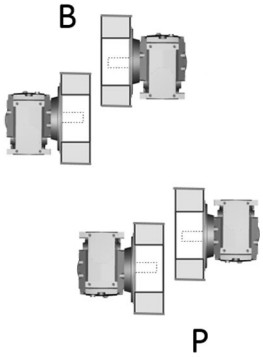
Foot Mount with Face or Flange

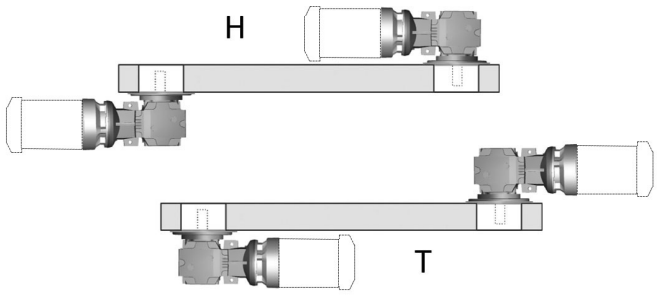




Flange, Face or Shaft Mount







* Refer to F-210 for mounting details
** Only available on frame 31. Refer to page F-210

Input Availability

C-Face Frames

Gear Frame	AC Motor Frame Sizes							
	56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
3132	X	X						
3242	X	X	X					
3243	X	X	X					
3245	X	X						
3363 (A)	X	X	X	X				
3365	X	X	X					
3473	X	X	X	X				
3475/3476	X	X	X					
3583	X	X	X	X	X	X		
3585/3586	X	X	X					
3693			X	X	X	X	X	
3695/3696	X	X	X	X				
3703			X	X	X	X	X	X
3705/3706	X	X	X	X				
3823				X	X	X	X	X
3825/3826	X	X	X	X				

Scoop Mount Frames

Gear Frame [1]	AC Motor Frame Sizes						
	56	140T	180T	210T	250T	280T	320T
3363 (A)	X	X					
3473	X	X	X				
3583		X	X	X			
3693			X	X	X	X	
3695/3696	X	X					
3703		X	X	X	X	X	X
3705/3706	X	X					
3823				X	X	X	X
3825/3826	X	X					

Top Mount Frames

Gear Frame [1]	AC Motor Frame Sizes						
	56	140T	180T	210T	250T	280T	320T
3242	X	X	X				
3363 (A)	X	X	X				
3473	X	X	X	X			
3583		X	X	X	X		
3693			X	X	X	X	X
3703			X	X	X	X	X
3823			X	X	X	X	X

1 Frames not listed on the above tables are not offered in this configuration
X Available in this input design for frame of motor noted.

Gear Modifications

G11 CorroGard™ Reducer

CorroGard™ treatment can be applied to a reducer when the unit will be subjected to harsh chemicals or used outside. Special features of this treatment include:

- Normally closed breather design
- CorroGard exterior paint treatment (entire unit)
  - o Grey Option (default type)
    - ■ 316 stainless steel paint (2 step)
    - ■ Light grey semigloss finish
    - ■ USDA and FDA approved
  - o White Option
    - ■ Two step epoxy paint system
    - ■ White gloss finish
    - ■ USDA and FDA approved

For washdown application, refer to G12b Washdown FG Service Reducer modification.

G12a Foodgrade Synthetic Lubricant

When this modification is specified, the OtN oil sump is filled with the required volume of an FDA approved H1 rated synthetic lubricant for helical gearing (refer to page F-212).

G12b Washdown FG Service Reducer

When this modification is specified, a reducer will be built with all the features detailed above under G11 and G12a. When ordering, state the paint finish that is to be provided.

G15 Export Boxing

Export boxing can be provided for "under-deck" transport. When the quantity of OtN gearmotors or reducers exceeds five (5) units, refer to international sales for most economical accommodations.

G16 Extra or Special Nameplate

Units can be provided with limited additional special information on the standard product nameplate. When required, an extra nameplate may be provided, stamped with custom markings.

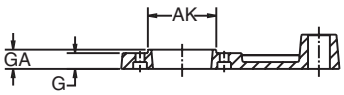
Accessories

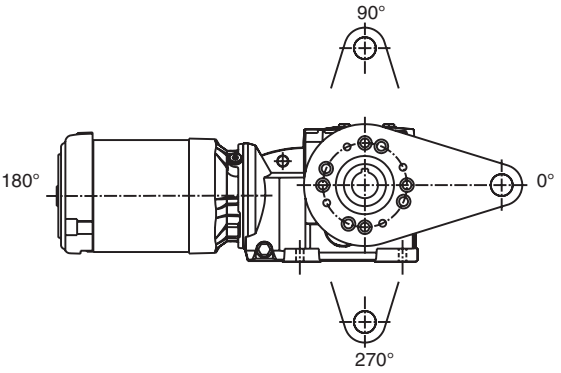
The following accessories can be ordered along with reducers and will be supplied loose for mounting by others:

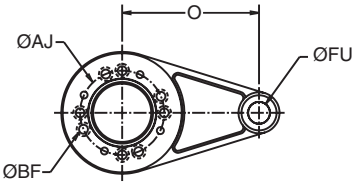
Description	Gear Frames	Part #
NPT Adapter (1/4" NPFT)	31 to 35	0436216
NPT Adapter (3/4" NPFT)	36 to 38	0436218
Bushing Guard Kit [1] (includes 2 guards to protect both sides)	31	XS9154
	32	XS9134
	33	XS9135
	33A	XS9768
	34	XS9136
	35	XS9137
	36	XS9158
	37	XS9159
	38	PLA335F0002*
Oil Level View Port	31 to 35	0435936
	36 to 38	0435938
Coupling Guard Kit (scoop mount reducers)	33 to 35	0965634
	36 to 38 up to 250T	0965635
	36 to 38 280-320T	0965636
	36 to 38 combined	0965634

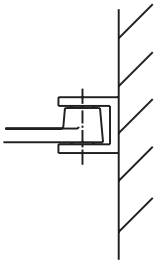
[1]These kits include all mounting hardware.
*These kit contains only (1) Guard.

Torque Reaction Arm









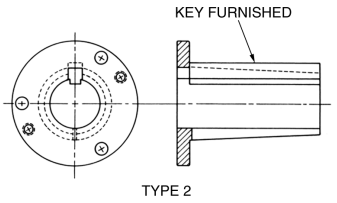
Anchoring of the Torque Arm (top view)

- Torque arm can be assembled in any of the three positions shown in the drawing above relative to the input (motor) when called out on the order.
- Torque arm can be affixed to either side of the 33C or 33B gear housing.
- If torque arm is requested on an assembly order, it will be supplied loose for mounting by others.

Series 3000

OtN Frame	Part ID # Kit	G	O	AJ	AK	BF	FU	GA
31	ROC100KT001	-	5.118	3.74	3.246	.35	.394	.63
32	ROC200KT001	.63	5.118	3.94	3.150	.43	.394	.79
33	ROC300KT001	.91	7.874	4.84	3.937	.51	.630	1.10
34	ROC400KT001	-	9.842	5.98	5.118	.51	.630	.91
35	ROC500KT001	-	12.205	7.48	6.102	.67	.630	.908
36	ROC600KT001	0.79	13.78	9.06	5.905	.63	.940	.98
37	ROC700KT001	1.02	17.72	9.06	7.087	.87	.940	1.22
38	ROC800KT001	1.10	21.65	11.81	9.84	.87	2.20	1.34

Each Series 3000 OtN can be ordered with a Tapered Bushed Output. This "33B" mounting configuration will include the appropriate bushing kit unassembled when if requested at order entry. The table below shows the various stocked bushing bores for each OtN frame that can be specified. Each bushing kit is supplied with bushing, hardware for mounting and a stabilizer ring. If bushings are required as a spare or bore changed in the field, refer to the OtN 3000 frame and select the required kit from below.



OtN Frame	Meas. Unit	Bushing Number	Bore [1]	Shaft Keyseat Required	Type
31	Inch	105TBP100	1"	1/4 x 1/8 x 2 1/2	2
		105TBP103	1 3/16"	1/4 x 1/8 x 2 1/2	2
		105TBP104	1 1/4"	1/4 x 1/8 x 2 1/2	2
		105TBP105	1 5/16"	5/16 x 5/32 x 2 1/2	2
	Metric *	105TBP30MM	30 mm	8 x 3.5 x 65 (mm)	2
32	Inch	107TBP105	1 5/16"	5/16 x 5/32 x 3 7/8	2
		107TBP106	1 3/8"	5/16 x 5/32 x 3 7/8	2
		107TBP107	1 7/16"	3/8 x 3/16 x 3 7/8	2
	Metric *	107TBP30MM	30 mm	8 x 3.5 x 100 (mm)	2
		107TBP35MM	35 mm	10 x 4 x 100 (mm)	2
33A	Inch	115TBP107	1 7/16	3/8 x 3/16 x 4 1/8	2
		115TBP108	1 1/2	3/8 x 3/16 x 4 1/8	2
		115TBP110	1 5/8	3/8 x 3/16 x 4 1/8	2
		115TBP111	1 11/16	3/8 x 3/16 x 4 1/8	2
		115TBP112	1 3/4	3/8 x 3/16 x 4 1/8	2
		115TBP114	1 7/8	1/2 x 1/4 x 4 1/8	2
		115TBP115	1 15/16	1/2 x 1/4 x 4 1/8	2
	Metric *	115TBP40MM	40 mm	12 x 4 x 105 (mm)	2
		115TBP45MM	45 mm	14 x 4.5 x 105 (mm)	2
34	Inch	115TBP111	1 11/16	3/8 x 3/16 x 4 1/8	2
		115TBP112	1 3/4	3/8 x 3/16 x 4 1/8	2
		115TBP114	1 7/8	1/2 x 1/4 x 4 1/8	2
		115TBP115	1 15/16	1/2 x 1/4 x 4 1/8	2
	Metric *	115TBP45MM	45 mm	14 x 4.5 x 105 (mm)	2

OtN Frame	Meas. Unit	Bushing Number	Bore [1]	Shaft Keyseat Required	Type
35	Inch	207TBP200	2	1/2 x 1/4 x 5 1/8	2
		207TBP202	2 1/8	1/2 x 1/4 x 5 1/8	2
		207TBP203	2 3/16	1/2 x 1/4 x 5 1/8	2
		207TBP204	2 1/4	1/2 x 1/4 x 5 1/8	2
		207TBP207	2 7/16	5/8 x 5/16 x 5 1/8	2
	Metric *	207TBP50MM	50 mm	14 x 4.5 x 130 (mm)	2
		207TBP60MM	60 mm	18 x 5.5 x 130 (mm)	2
36	Inch	215TBP207	2 7/16	5/8 X 5/16 X 5 5/8	2
		215TBP208	2 1/2	5/8 X 5/16 X 5 5/8	2
		215TBP211	2 11/16	5/8 X 5/16 X 5 5/8	2
		215TBP215	2 15/16	3/4 X 3/8 X 5 5/8	2
	Metric *	215TBP60MM	60 mm	18 x 5.5 x 140 (mm)	2
		215TBP70MM	70 mm	20 x 6 x 140 (mm)	2
37	Inch	307TBP214	2 7/8	3/4 x 3/8 x 6 3/4	2
		307TBP215	2 15/16	3/4 x 3/8 x 6 3/4	2
		307TBP300	3	3/4 x 3/8 x 6 3/4	2
		307TBP306	3 3/8	7/8 x 7/16 x 6 3/4	2
		307TBP307	3 7/16	7/8 x 7/16 x 6 3/4	2
	Metric *	307TBP75MM	75 mm	20 x 6 x 170 (mm)	2
		307TPB80MM	80 mm	22 x 7 x 170 (mm)	2
		307TBP85MM	85 mm	22 x 7 x 170 (mm)	2
38	Inch	315TBP215	2 15/16	3/4 x 3/8 x 7 15/16	2
		315TBP300	3	3/4 x 3/8 x 7 15/16	2
		315TBP303	3 3/16	3/4 x 3/8 x 7 15/16	2
		315TBP307	3 7/16	7/8 x 7/16 x 15/16	2
		315TBP315	3 15/16	1 x 1/2 x 7 15/16	2
	Metric*	315TBP90MM	90mm	25 x 7 x 190 (mm)	2

[1] Bushing bore shown must be selected by customer based on complete application details.
* Metric bushings have metric bores and require metric keyseats as shown in mm.

AGMA Application Classifications

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Agitators (Mixers)			
Pure Liquids	—	1.00	1.25
Liquids & Solids	1.00	1.25	1.50
Liquids - Variable Density	1.00	1.25	1.50
Blowers			
Centrifugal	1.00	1.25	—
Lobe	1.00	1.25	1.50
Vane —	1.00	1.25	
Brewing and Distilling			
Bottling Machinery	—	1.00	1.25
Brew Kettles, Continuous Duty	—	1.00	1.25
Cookers - Continuous Duty	—	1.00	1.25
Mash Tubs - Continuous Duty	—	1.00	1.25
Scale Hoppers, Frequent Starts	1.00	1.25	1.50
Can Filling Machines	—	1.00	1.25
Car Dumpers	1.25	1.50	1.75
Car Pullers 1.00	1.25	1.50	
Clarifiers	—	1.00	1.25
Classifiers 1.00	1.25	1.50	
Clay Working Industry			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
Compactors	1.50	1.75	2.00
Compressors			
Centrifugal	—	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi - Cylinder	1.00	1.25	1.50
Reciprocating, Single - Cylinder	1.25	1.50	1.75
Conveyors - General Purpose			
Uniformly Loaded or Fed	—	1.00	1.25
Not Uniformly Fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
Cranes			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	Refer to Application Engineering		

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Cranes (Continued)			
Boom Hoist	Refer to Application Engineering		
Trolley Drive	Refer to Application Engineering		
(Gantry Drive)			
(Traction Drive)	Refer to Application Engineering		
Mill Duty			
Main	Refer to Application Engineering		
Auxiliary	Refer to Application Engineering		
Bridge & Trolley Travel	Refer to Application Engineering		
Industrial Duty			
Main	1.25	1.50	1.75
Auxiliary	Refer to Application Engineering		
Bridge & Trolley Travel	Refer to Application Engineering		
Crusher			
Stone or Ore	1.50	1.75	2.00
Dredges			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
Elevators			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	—	1.00	1.25
Escalators	Refer to Application Engineering		
Freight	Refer to Application Engineering		
Gravity Discharge	—	1.00	1.25
Extruders			
General 1.25	1.25	1.25	
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75
Fans			
Centrifugal	—	1.00	1.25
Cooling Towers	Refer to Application Engineering		
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50

AGMA Application Classifications

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Feeders			
Apron	—	1.25	1.50
Belt	1.00	1.25	1.50
Disc	—	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
Food Industry			
Cereal Cooker	—	1.00	1.25
Dough Mixers	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
Generators and Exciters	—	1.00	1.25
Hammer Mills	1.50	1.50	1.75
Hoists			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50
Laundry Tumblers	1.00	1.25	1.50
Laundry Washers	1.00	1.25	1.50
Lumber Industry			
Barkers			
- Spindle Feed	1.25	1.25	1.25
- Main Drive	1.50	1.50	1.50
Conveyors			
- Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.50
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
- Transfer	1.25	1.25	1.50
Chains			
- Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws			
- Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds			
- Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
- Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline-Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planner Feed	1.25	1.25	1.25
Planer Tilting Hoists	1.50	1.50	1.50
Rolls - Live-Off Bearing.-Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers			
- Chain	1.50	1.50	1.50
- Causeway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	Refer to Application Engineering		

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Metal Mills			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Runout Table			
Non-reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
Metal Strip Processing Machinery			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
Mills, Rotary Type			
Ball & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
Mixers, Concrete	1.00	1.25	1.50
Paper Mills			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barkers - Mechanical	1.75	1.75	1.75
Barking Drums	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
♦ Calender	1.25	1.25	1.25
Chipper 1.75	1.75	1.75	
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder Molds	1.25	1.25	1.25
♦ Dryers			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes Lump Breaker, Dandy Roll, Wire Turning, and Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Roll	1.25	1.25	1.25

AGMA Application Classifications

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Paper Mills (Continued)			
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender (See Note)	1.25	1.25	1.25
Thickner			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer			
(AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind and Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
♦ Yankee Dryers	1.25	1.25	1.25
Plastics Industry - Primary Processing			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) Continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding & Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Plastics Industry - Secondary Processing			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - Barge Haul	1.00	1.50	1.75
Pumps			
Centrifugal	—	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
- Gear	—	1.00	1.50
- Lobe	—	1.00	1.25
- Vane	—	1.00	1.25

Application	Service Factor		
	Up to 3 hrs/day	Up to 10 hrs/day	Over 10 hrs/day
Rubber Industry			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls - (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 1 Corrugated Roll	1.75	1.75	1.75
Cracker - 2 Corrugated Rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand Miller	1.00	1.25	1.50
Sewage Disposal			
Bar Screens	—	1.00	1.25
Chemical Feeders	—	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
Screens			
Air Washing	—	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	—	1.00	1.25
Sugar Industry			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
Textile Industry			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

♦ Anti-friction bearings only.

Note: A service factor of 1.0 may be applied at the base of a super calender, operating over a speed range where part of the range is constant horsepower and part of the range is constant torque, provided that the constant horsepower part is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating over the entire speed range at constant torque, or where the constant horsepower speed range is less than 1.5 to 1.

Motor rpm 1750

Gear Frame

Nom. RPM	Nom. Ratio	31	32 Double	32 Triple	33	34	35	36	37	38
493	3.55		3.71 3242 21.23 2723							
389	4.5		4.68 3242 18.59 3008							
350	5	5.1 3132 5.53 975						RO	RO	
313	5.6		5.60 3242 16.27 3150					RO	RO	
278	6.3	6.43 3132 4.83 1074	6.61 3242 13.95 3188					RO	RO	
246	7.1	7.23 3132 4.5 1125	7.05 3242 13.08 3188					RO	RO	
219	8	7.62 3132 4.37 1151	7.97 3242 11.57 3188					RO	RO	
194	9	8.62 3132 4.02 1198	8.83 3242 10.44 3187					RO	RO	
175	10	9.72 3132 3.73 1253	10.10 3242 9.13 3188		9.78 3363 15.62 5172	9.51 3473 25.2 8113	9.47 3583 54.65 17520	9.81 3693 64.96 21573	10.1 3703 92.68 31689	
156	11.2	11 3132 3.45 1312	11.60 3242 7.95 3188					10.9 3693 61.20 22583	11.5 3703 85.80 33403	11.1 3823 120 45093
140	12.5	12.5 3132 3.18 1374	12.40 3242 7.44 3190		12.3 3363 13.31 5542	12.3 3473 23.08 9610	12.3 3583 45.48 18938	12.7 3693 55.94 24051	12.3 3703 82.31 34274	12.4 3823 120 50374
125	14	14.3 3132 2.91 1439	14.10 3242 6.54 3188		14.8 3363 12.06 6042	15.2 3473 22.45 11552	14.9 3583 38.69 19516	14.6 3693 51.34 25375	13.7 3703 72.29 33528	13.9 3823 120 56468
109	16	16.1 3132 2.69 1497	15.60 3242 5.91 3188	16.1 3243 6.07 3308	16.1 3363 11.68 6366	15.5 3473 22.27 11686	15.5 3583 35.13 18434	16 3693 48.54 26292	15.5 3703 71.65 37597	15.5 3823 120 62967
97	18	17.1 3132 2.61 1543	17.70 3242 5.21 3188		18.6 3363 10.01 6303	17.5 3473 19.65 11641	18.7 3583 32.7 20701	17.9 3693 46.68 28287	17.6 3703 68.88 41040	17.8 3823 120 72311
88	20	20.3 3132 2.31 1621	19.70 3242 4.68 3188	20.4 3243 5.11 3529	20.3 3363 9.92 6817	20.1 3473 18.14 12343	20 3583 29.43 19926	19.2 3693 48.50 31524	19.9 3703 70.18 47279	19.6 3823 120 79623
78	22.4	21.5 3132 2.24 1665	22.20 3242 4.15 3185	22.9 3243 4.72 3659	23.3 3363 8.61 6791	21.3 3473 15.9 11465	23.6 3583 26.36 21060	21.4 3693 47.99 34767	22.6 3703 70.01 53564	22.2 3823 120 90185
70	25	24.6 3132 2.03 1727	26.00 3242 3.55 3191	24.1 3243 4.53 3696	24.3 3363 8.48 6976	24.8 3473 15.23 12787	24.3 3583 25.63 21084	25 3693 44.31 37501	24 3703 69.80 56711	25.3 3823 120 102779
63	28	27.4 3132 1.90 1800	28.70 3242 3.21 3185	27.3 3243 4.08 3771	28.7 3363 7.47 7258	28.6 3473 13.43 13003	27.1 3583 23.4 21468	28.6 3693 37.44 36250	26.9 3703 58.43 53210	28.7 3823 107.13 104086
56	31.5	30.7 3132 1.75 1857	31.50 3242 2.93 3191	30.8 3243 3.69 3848	30.6 3363 6.89 7137	31.5 3473 12.61 13447	30.5 3583 21.2 21890	31.4 3693 35.02 37226	30.4 3703 54.12 55697	32.4 3823 102.97 112942
49	35.5	35.6 3132 1.58 1945	36.80 3242 2.51 3194	34.8 3243 3.3 3888	34.6 3363 5.93 6946	34.8 3473 11.41 13442	34 3583 19.34 22261	35 3693 32.08 38011	34.4 3703 50.08 58321	36.4 3823 91.49 112739
44	40	39.1 3132 1.46 1974		39.5 3243 2.92 3905	38.3 3363 5.37 6963	39.9 3473 9.96 13453	38.6 3583 17.11 22358	39.2 3693 29.26 38830	38.1 3703 46.88 60467	40.6 3823 87.17 119810
39	45	44.8 3132 1.00 1549		45.2 3243 2.56 3917	43.7 3363 4.72 6983	44.1 3473 9.01 13451	42.6 3583 15.55 22426	44.1 3693 26.16 39055	42.5 3703 43.69 62860	45.8 3823 79.67 123527
35	50	49.4 3132 1.00 1708		51 3243 2.27 3919	50.3 3363 4.11 6999	50.6 3473 7.85 13447	49.8 3583 13.37 22540	47.8 3693 24.20 39160	47.7 3703 40.56 65497	50.1 3823 70.36 119334
31	56			54.1 3243 2.14 3919	53.8 3363 3.85 7012	57 3473 7.06 13623	55.5 3583 12.03 22603	54.4 3693 21.34 39300	55.9 3703 36.50 69073	57 3823 61.84 119329
28	63			64.3 3243 1.81 3940	61 3363 3.41 7042	61.9 3473 6.58 13789	62.4 3583 10.73 22667	60.1 3693 19.37 39410	63.2 3703 32.99 70583	64.3 3823 54.82 119330
25	71			68 3243 1.71 3936	67.8 3363 3.07 7046	69 3473 6.01 14039	70.6 3583 9.52 22753	69.6 3693 16.79 39561	68.9 3703 30.73 71678	72.2 3823 48.82 119326
22	80			77.7 3243 1.5 3946	77 3363 2.71 7064	77.5 3473 5.37 14089	80.6 3583 8.36 22811	75.9 3693 15.43 39647	80.4 3703 26.78 72890	80.5 3823 43.79 119336
19	90			86.7 3243 1.35 3962	85.7 3363 2.44 7079	87.7 3473 4.76 14132	86.5 3583 7.81 22870	85.3 3693 13.77 39764	87.4 3703 24.68 73023	90.8 3823 38.83 119359
18	100			97.2 3243 1.21 3982	96.4 3363 2.17 7082	95.4 3473 4.38 14146	101 3583 6.71 22943	95.1 3693 12.38 39857	98 3703 22.08 73253	102 3823 34.56 119337
16	112			113 3243 1.04 3978	113 3363 1.86 7115	108 3473 3.88 14186	109 3583 6.23 22989	108 3693 10.93 39962	109 3703 19.90 73431	115 3823 30.65 119325
14	125			124 3243 0.95 3988	125 3363 1.68 7109	124 3473 3.39 14231	121 3583 5.62 23021	124 3693 9.54 40047	123 3703 17.68 73619	128 3823 27.54 119337
12.5	140			142 3243 0.83 3990	137 3363 1.54 7142	139 3473 3.03 14258	134 3583 5.09 23090	135 3693 8.78 40126	135 3703 16.14 73763	137 3823 25.73 119334
10.9	160			156 3243 0.76 4014	160 3363 1.32 7150	154 3473 2.74 14285	159 3583 4.3 23146	157 3693 7.57 40234	152 3703 14.37 73944	154 3823 22.89 119335

Note: If shaded, Mechanical HP shown may exceed thermal HP limit. Refer to Page F-126-127

R.O. Refer application details to Marketing

Exact ratio	**Gear Frame**
Input H.P.	Output Torque

Motor rpm 1450

Gear Frame																							
Nom. RPM	Nom. Ratio	31		32 Double		32 Triple		33		34		35		36		37		38	
408	3.55			3.71 18.48	3242 2861														
322	4.5			4.68 16.18	3242 3160														
290	5	5.1 4.81	3132 1024											RO		RO			
259	5.6			5.60 13.64	3242 3187									RO		RO			
230	6.3	6.43 4.21	3132 1130	6.61 11.56	3242 3188									RO		RO			
204	7.1	7.23 3.92	3132 1183	7.05 10.84	3242 3189									RO		RO			
181	8	7.62 3.8	3132 1208	7.97 9.59	3242 3189									RO		RO			
161	9	8.62 3.5	3132 1259	8.83 8.65	3242 3187									RO		RO			
145	10	9.72 3.25	3132 1318	10.10 7.56	3242 3186			9.78 13.6	3363 5434	9.51 21.23	3473 8249	9.47 47.56	3583 19577	9.81 55.21	3693 22129	10.1 80.66	3703 33285		
129	11.2	11 3	3132 1377	11.60 6.59	3242 3190									10.9 53.26	3693 23719	11.5 74.67	3703 35085	100	3823 45352
116	12.5	12.5 2.77	3132 1445	12.40 6.16	3242 3187			12.3 11.59	3363 5825	12.3 17.72	3473 8905	12.3 39.58	3583 19891	12.7 48.69	3693 25265	12.3 71.64	3703 36003	12.4 100	3823 50663
104	14	14.3 2.53	3132 1510	14.10 5.42	3242 3189			14.8 10.01	3363 6053	15.2 15.76	3473 9788	14.9 32.82	3583 19980	14.6 44.69	3693 26659	13.7 62.92	3703 35219	13.9 100	3823 56792
91	16	16.1 2.34	3132 1572	15.60 4.90	3242 3190	16.1 5.26	3243 3460	16.1 9.05	3363 5953	15.5 15.58	3473 9867	15.5 30.58	3583 19366	16 42.25	3693 27620	15.5 62.36	3703 39492	15.5 100	3823 63329
81	18	17.1 2.27	3132 1620	17.70 4.32	3242 3191			18.6 8.03	3363 6102	17.5 13.85	3473 9903	18.7 27.49	3583 21003	17.9 40.63	3693 29715	17.6 59.95	3703 43110	17.8 100	3823 72727
73	20	20.3 2.01	3132 1703	19.70 3.88	3242 3189	20.4 4.45	3243 3709	20.3 7.76	3363 6436	20.1 12.98	3473 10660	20 25.61	3583 20927	19.2 41.74	3693 32744	19.9 61.08	3703 49662	19.6 100	3823 80081
65	22.4	21.5 1.95	3132 1749	22.20 3.44	3242 3187	22.9 4.1	3243 3836	23.3 6.81	3363 6483	21.3 12.07	3473 10504	23.6 22.31	3583 21512	21.4 41.77	3693 36522	22.6 61.02	3703 56345	22.2 100	3823 90703
58	25	24.6 1.77	3132 1817	26.00 2.94	3242 3190	24.1 3.93	3243 3870	24.3 6.75	3363 6702	24.8 11.2	3473 11349	24.3 22.28	3583 22120	25 37.74	3693 38549	24 60.75	3703 59570	25.3 100	3823 103370
52	28	27.4 1.65	3132 1886	28.70 2.66	3242 3186	27.3 3.48	3243 3882	28.7 5.87	3363 6883	28.6 10.14	3473 11849	27.1 20.07	3583 22222	28.6 32.59	3693 38082	26.9 50.85	3703 55888	28.7 93.25	3823 109346
46	31.5	30.7 1.52	3132 1947	31.50 2.43	3242 3194	30.8 3.09	3243 3888	30.6 5.5	3363 6876	31.5 9.48	3473 12201	30.5 17.9	3583 22306	31.4 30.28	3693 38847	30.4 47.10	3703 58502	32.4 89.68	3823 118717
41	35.5	35.6 1.38	3132 2050	36.80 2.08	3242 3194	34.8 2.75	3243 3910	34.6 4.93	3363 6969	34.8 8.84	3473 12569	34 16.12	3583 22393	35 27.27	3693 38997	34.4 43.58	3703 61252	36.4 79.68	3823 118501
36	40	39.1 1.26	3132 2056			39.5 2.43	3243 3922	38.3 4.47	3363 6995	39.9 8.03	3473 13091	38.6 14.25	3583 22474	39.2 24.43	3693 39128	38.1 40.80	3703 63512	40.6 75.88	3823 125871
32	45	44.8 0.83	3132 1552			45.2 2.13	3243 3934	43.7 3.93	3363 7017	44.1 7.49	3473 13496	42.6 12.95	3583 22540	44.1 21.79	3693 39262	42.5 38.02	3703 66020	45.8 69.34	3823 129754
29	50	49.4 0.83	3132 1711			51 1.89	3243 3938	50.3 3.42	3363 7029	50.6 6.78	3473 14017	49.8 11.13	3583 22646	47.8 20.15	3693 39353	47.7 35.30	3703 68796	50.1 58.3	3823 119338
26	56					54.1 1.78	3243 3935	53.8 3.2	3363 7034	57 6.04	3473 14066	55.5 10.02	3583 22721	54.4 17.77	3693 39497	55.9 31.74	3703 72492	57 51.24	3823 119332
23	63					64.3 1.5	3243 3941	61 2.83	3363 7053	61.9 5.56	3473 14062	62.4 8.93	3583 22767	60.1 16.12	3693 39583	63.2 28.17	3703 72741	64.3 45.42	3823 119325
20	71					68 1.42	3243 3945	67.8 2.55	3363 7064	69 5	3473 14096	70.6 7.92	3583 22846	69.6 13.97	3693 39726	68.9 25.90	3703 72911	72.2 40.45	3823 119324
18	80					77.7 1.25	3243 3968	77 2.25	3363 7079	77.5 4.47	3473 14154	80.6 6.96	3583 22920	75.9 12.84	3693 39818	80.4 22.28	3703 73189	80.5 36.28	3823 119326
16	90					86.7 1.12	3243 3967	85.7 2.03	3363 7108	87.7 3.95	3473 14154	86.5 6.49	3583 22937	85.3 11.45	3693 39905	87.4 20.54	3703 73347	90.8 32.17	3823 119346
15	100					97.2 1	3243 3971	96.4 1.81	3363 7129	95.4 3.64	3473 14188	101 5.58	3583 23027	95.1 10.29	3693 39982	98 18.37	3703 73554	102 28.63	3823 119315
13	112					113 0.86	3243 3971	113 1.54	3363 7110	108 3.22	3473 14209	109 5.18	3583 23069	108 9.09	3693 40111	109 16.55	3703 73705	115 25.4	3823 119345
12	125					124 0.79	3243 4002	125 1.4	3363 7150	124 2.81	3473 14236	121 4.67	3583 23087	124 7.93	3693 40176	123 14.71	3703 73925	128 22.82	3823 119343
10.4	140					142 0.69	3243 4003	137 1.28	3363 7165	139 2.51	3473 14255	134 4.23	3583 23159	135 7.30	3693 40265	135 13.42	3703 74022	137 21.32	3823 119338
9.1	160					156 0.63	3243 4015	160 1.1	3363 7191	154 2.27	3473 14283	159 3.57	3583 23192	157 6.29	3693 40348	152 11.95	3703 74214	154 18.97	3823 119361

Note: If shaded, Mechanical HP shown may exceed thermal HP limit. Refer to Page F-126-127

R.O. Refer application details to Marketing

Exact ratio	**Gear Frame**
Input H.P.	Output Torque

Motor rpm 1160

Gear Frame

Nom. RPM	Nom. Ratio	31	32 Double	32 Triple	33	34	35	36	37	38
327	3.55		3.71 3242 16.01 3098							
258	4.5		4.68 3242 13.04 3183							
232	5	5.1 3132 4.17 1109						RO	RO	
207	5.6		5.60 3242 10.91 3187					RO	RO	
184	6.3	6.43 3132 3.64 1221	6.61 3242 9.25 3189					RO	RO	
163	7.1	7.23 3132 3.39 1278	7.05 3242 8.67 3188					RO	RO	
145	8	7.62 3132 3.29 1308	7.97 3242 7.67 3188					RO	RO	
129	9	8.62 3132 3.03 1362	8.83 3242 6.92 3187					RO	RO	
116	10	9.72 3132 2.81 1425	10.10 3242 6.05 3187		9.78 3363 11.78 5884	9.51 3473 17.42 8461	9.47 3583 39.91 19303	9.81 3693 44.17 22130	10.1 3703 69.89 36051	
104	11.2	11 3132 2.6 1492	11.60 3242 5.27 3189					10.9 3693 44.17 24589	11.5 3703 64.69 37994	11.1 3823 80 45352
93	12.5	12.5 3132 2.4 1565	12.40 3242 4.93 3189		12.3 3363 9.62 6043	12.3 3473 15.36 9649	12.3 3583 33.05 20762	12.7 3693 42.17 27352	12.3 3703 62.07 38991	12.4 3823 80 50663
83	14	14.3 3132 2.2 1641	14.10 3242 4.33 3184		14.8 3363 8.43 6372	15.2 3473 14.71 11419	14.9 3583 26.8 20394	14.6 3693 38.70 28857	13.7 3703 54.51 38140	13.9 3823 80 56792
73	16	16.1 3132 2.03 1705	15.60 3242 3.92 3190	16.1 3243 4.55 3741	16.1 3363 8.1 6660	15.5 3473 14.59 11550	15.5 3583 26.49 20970	16 3693 36.59 29900	15.5 3703 54.02 42763	15.5 3823 80 63329
64	18	17.1 3132 1.97 1757	17.70 3242 3.45 3185		18.6 3363 6.78 6441	17.5 3473 12.58 11243	18.7 3583 22.2 21202	17.9 3693 35.19 32170	17.6 3703 51.94 46687	17.8 3823 80 72727
58	20	20.3 3132 1.74 1842	19.70 3242 3.10 3185	20.4 3243 3.7 3855	20.3 3363 6.64 6884	20.1 3473 12.03 12349	20 3583 21.56 22022	19.2 3693 36.16 35458	19.9 3703 52.91 53774	19.6 3823 80 80081
52	22.4	21.5 3132 1.69 1895	22.20 3242 2.75 3184	22.9 3243 3.32 3883	23.3 3363 5.74 6830	21.3 3473 10.46 11379	23.6 3583 18.66 22491	21.4 3693 35.16 38428	22.6 3703 52.71 60839	22.2 3823 80 90704
46	25	24.6 3132 1.53 1963	26.00 3242 2.35 3187	24.1 3243 3.16 3889	24.3 3363 5.6 6950	24.8 3473 10.09 12780	24.3 3583 18 22339	25 3693 30.46 38891	24 3703 52.63 64510	25.3 3823 80 103370
41	28	27.4 3132 1.42 2029	28.70 3242 2.13 3189	27.3 3243 2.8 3904	28.7 3363 4.76 6977	28.6 3473 8.9 13000	27.1 3583 16.2 22422	28.6 3693 26.68 38970	26.9 3703 44.05 60517	28.7 3823 80 117261
37	31.5	30.7 3132 1.27 2034	31.50 3242 1.94 3187	30.8 3243 2.49 3917	30.6 3363 4.48 7001	31.5 3473 8.36 13449	30.5 3583 14.44 22493	31.4 3693 24.43 39177	30.4 3703 40.81 63361	32.4 3823 78.65 130145
33	35.5	35.6 3132 1.11 2061	36.80 3242 1.66 3186	34.8 3243 2.21 3928	34.6 3363 3.97 7015	34.8 3473 7.66 13614	34 3583 13 22574	35 3693 21.98 39290	34.4 3703 37.75 66322	36.4 3823 69.88 129908
29	40	39.1 3132 1.01 2060		39.5 3243 1.95 3934	38.3 3363 3.59 7022	39.9 3473 6.82 13898	38.6 3583 11.49 22651	39.2 3693 19.69 39420	38.1 3703 35.35 68786	40.6 3823 63.16 130964
26	45	44.8 3132 0.66 1542		45.2 3243 1.71 3947	43.7 3363 3.16 7053	44.1 3473 6.21 13987	42.6 3583 10.44 22714	44.1 3693 17.55 39527	42.5 3703 32.94 71498	45.8 3823 56.16 131364
23	50	49.4 3132 0.66 1701		51 3243 1.52 3959	50.3 3363 2.75 7065	50.6 3473 5.45 14084	49.8 3583 8.96 22789	47.8 3693 16.23 39621	47.7 3703 29.64 72207	50.1 3823 46.64 119338
21	56			54.1 3243 1.43 3951	53.8 3363 2.58 7089	57 3473 4.85 14119	55.5 3583 8.06 22846	54.4 3693 14.30 39730	55.9 3703 25.58 73029	57 3823 40.99 119326
18	63			64.3 3243 1.21 3974	61 3363 2.28 7103	61.9 3473 4.48 14163	62.4 3583 7.19 22914	60.1 3693 12.98 39841	63.2 3703 22.69 73238	64.3 3823 36.34 119338
16	71			68 3243 1.14 3959	67.8 3363 2.05 7098	69 3473 4.02 14166	70.6 3583 6.37 22968	69.6 3693 11.24 39954	68.9 3703 20.86 73403	72.2 3823 32.36 119324
15	80			77.7 3243 1 3968	77 3363 1.81 7118	77.5 3473 3.59 14210	80.6 3583 5.6 23052	75.9 3693 10.32 40004	80.4 3703 17.94 73665	80.5 3823 29.03 119351
13	90			86.7 3243 0.9 3985	85.7 3363 1.63 7134	87.7 3473 3.18 14243	86.5 3583 5.22 23061	85.3 3693 9.21 40123	87.4 3703 16.53 73785	90.8 3823 25.73 119319
12	100			97.2 3243 0.8 3971	96.4 3363 1.45 7139	95.4 3473 2.93 14276	101 3583 4.49 23161	95.1 3693 8.27 40167	98 3703 14.77 73925	102 3823 22.91 119346
10	112			113 3243 0.69 3982	113 3363 1.24 7156	108 3473 2.59 14286	109 3583 4.16 23158	108 3693 7.30 40265	109 3703 13.31 74095	115 3823 20.32 119345
9	125			124 3243 0.63 3990	125 3363 1.12 7150	124 3473 2.26 14312	121 3583 3.75 23174	124 3693 6.37 40341	123 3703 11.82 74252	128 3823 18.25 119304
8.3	140			142 3243 0.55 3989	137 3363 1.03 7207	139 3473 2.02 14340	134 3583 3.4 23268	135 3693 5.86 40403	135 3703 10.79 74394	137 3823 17.06 119366
7.3	160			156 3243 0.5 3984	160 3363 0.88 7191	154 3473 1.82 14314	159 3583 2.87 23306	157 3693 5.05 40492	152 3703 9.60 74524	154 3823 15.17 119313

Note: If shaded, Mechanical HP shown may exceed thermal HP limit. Refer to Page F-126-127

R.O. Refer application details to Marketing

Exact ratio	**Gear Frame**
Input H.P.	Output Torque

Gear Frame

Nom. RPM	Nom. Ratio	31	32 Double	32 Triple	33	34	35	36	37	38
245	3.55		3.71 3242 12.31 3176							
193	4.5		4.68 3242 9.79 3186							
174	5	5.1 3132 3.41 1209						RO	RO	
155	5.6		5.60 3242 8.19 3190					RO	RO	
138	6.3	6.43 3132 2.98 1333	6.61 3242 6.93 3186					RO	RO	
123	7.1	7.23 3132 2.78 1398	7.05 3242 6.50 3187					RO	RO	
109	8	7.62 3132 2.7 1431	7.97 3242 5.75 3187					RO	RO	
97	9	8.62 3132 2.48 1487	8.83 3242 5.19 3187					RO	RO	
87	10	9.72 3132 2.3 1555	10.10 3242 4.54 3189		9.78 3363 9.11 6067	9.51 3473 13.07 8464	9.47 3583 30.73 19817	9.81 3693 33.12 22125	10.1 3703 57.21 39347	
78	11.2	11 3132 2.13 1629	11.60 3242 3.95 3187					10.9 3693 33.12 24583	11.5 3703 51.04 39970	11.1 3823 60 45352
70	12.5	12.5 3132 1.96 1704	12.40 3242 3.70 3191		12.3 3363 7.32 6131	12.3 3473 12.57 10528	12.3 3583 25.21 21115	12.7 3693 33.12 28643	12.3 3703 49.10 41125	12.4 3823 60 50663
62	14	14.3 3132 1.8 1790	14.10 3242 3.25 3187		14.8 3363 6.47 6521	15.2 3473 11.3 11696	14.9 3583 21.29 21601	14.6 3693 31.68 31496	13.7 3703 44.62 41627	13.9 3823 60 56792
54	16	16.1 3132 1.66 1859	15.60 3242 2.94 3190	16.1 3243 3.53 3870	16.1 3363 6.29 6896	15.5 3473 11.05 11663	15.5 3583 20.88 22039	16 3693 29.96 32642	15.5 3703 44.22 46674	15.5 3823 60 63329
48	18	17.1 3132 1.61 1915	17.70 3242 2.59 3188		18.6 3363 5.22 6612	17.5 3473 9.82 11702	18.7 3583 16.81 21406	17.9 3693 28.34 34544	17.6 3703 42.51 50948	17.8 3823 60 72727
44	20	20.3 3132 1.42 2005	19.70 3242 2.33 3192	20.4 3243 2.81 3904	20.3 3363 5.05 6981	20.1 3473 9.2 12592	20 3583 16.45 22404	19.2 3693 29.30 38308	19.9 3703 43.31 58690	19.6 3823 60 80081
39	22.4	21.5 3132 1.35 2019	22.20 3242 2.06 3180	22.9 3243 2.51 3914	23.3 3363 4.31 6838	21.3 3473 8.37 12140	23.6 3583 14.05 22579	21.4 3693 26.81 39069	22.6 3703 43.12 66360	22.2 3823 60 90704
35	25	24.6 3132 1.19 2036	26.00 3242 1.76 3182	24.1 3243 2.39 3922	24.3 3363 4.23 7000	24.8 3473 7.94 13409	24.3 3583 13.62 22537	25 3693 23.05 39240	24 3703 43.08 70406	25.3 3823 60 103370
31	28	27.4 3132 1.08 2058	28.70 3242 1.60 3193	27.3 3243 2.11 3923	28.7 3363 3.6 7036	28.6 3473 7.08 13789	27.1 3583 12.25 22606	28.6 3693 20.22 39379	26.9 3703 36.06 66054	28.7 3823 60 117261
28	31.5	30.7 3132 0.97 2071	31.50 3242 1.46 3198	30.8 3243 1.88 3943	30.6 3363 3.38 7043	31.5 3473 6.48 13900	30.5 3583 10.92 22680	31.4 3693 18.47 39493	30.4 3703 33.40 69142	32.4 3823 59.5 131275
25	35.5	35.6 3132 0.83 2055	36.80 3242 1.25 3199	34.8 3243 1.67 3957	34.6 3363 2.99 7045	34.8 3473 5.92 14029	34 3583 9.83 22759	35 3693 16.61 39588	34.4 3703 30.52 71493	36.4 3823 53.11 131643
22	40	39.1 3132 0.75 2039		39.5 3243 1.47 3954	38.3 3363 2.71 7068	39.9 3473 5.19 14101	38.6 3583 8.68 22815	39.2 3693 14.87 39693	38.1 3703 27.84 72230	40.6 3823 47.75 132014
19	45	44.8 3132 0.5 1558		45.2 3243 1.29 3971	43.7 3363 2.38 7082	44.1 3473 4.71 14144	42.6 3583 7.88 22859	44.1 3693 13.26 39820	42.5 3703 25.23 73018	45.8 3823 42.45 132393
17	50	49.4 3132 0.5 1718		51 3243 1.14 3959	50.3 3363 2.07 7090	50.6 3473 4.11 14162	49.8 3583 6.77 22958	47.8 3693 12.25 39874	47.7 3703 22.55 73246	50.1 3823 34.98 119338
16	56			54.1 3243 1.08 3979	53.8 3363 1.94 7107	57 3473 3.66 14206	55.5 3583 6.08 22978	54.4 3693 10.79 39971	55.9 3703 19.32 73543	57 3823 30.74 119316
14	63			64.3 3243 0.91 3984	61 3363 1.72 7145	61.9 3473 3.37 14205	62.4 3583 5.42 23031	60.1 3693 9.79 40066	63.2 3703 17.13 73722	64.3 3823 27.25 119316
12	71			68 3243 0.86 3982	67.8 3363 1.55 7156	69 3473 3.03 14237	70.6 3583 4.81 23124	69.6 3693 8.48 40191	68.9 3703 15.74 73849	72.2 3823 24.27 119324
11	80			77.7 3243 0.75 3968	77 3363 1.36 7131	77.5 3473 2.7 14249	80.6 3583 4.22 23162	75.9 3693 7.78 40211	80.4 3703 13.53 74076	80.5 3823 21.77 119337
10	90			86.7 3243 0.68 4015	85.7 3363 1.23 7178	87.7 3473 2.39 14273	86.5 3583 3.94 23208	85.3 3693 6.94 40312	87.4 3703 12.47 74216	90.8 3823 19.3 119334
9	100			97.2 3243 0.6 3971	96.4 3363 1.09 7155	95.4 3473 2.2 14292	101 3583 3.38 23247	95.1 3693 6.24 40410	98 3703 11.14 74342	102 3823 17.18 119329
8	112			113 3243 0.52 4001	113 3363 0.93 7156	108 3473 1.95 14341	109 3583 3.14 23307	108 3693 5.50 40449	109 3703 10.03 74447	115 3823 15.24 119345
7	125			124 3243 0.48 4053	125 3363 0.84 7150	124 3473 1.7 14355	121 3583 2.83 23318	124 3693 4.80 40531	123 3703 8.91 74628	128 3823 13.69 119326
6.2	140			142 3243 0.42 4061	137 3363 0.77 7183	139 3473 1.52 14387	134 3583 2.56 23360	135 3693 4.41 40541	135 3703 8.13 74739	137 3823 12.79 119320
5.4	160			156 3243 0.38 4037	160 3363 0.66 7191	154 3473 1.37 14367	159 3583 2.16 23387	157 3693 3.80 40626	152 3703 7.23 74835	154 3823 11.38 119340

Note: If shaded, Mechanical HP shown may exceed thermal HP limit. Refer to Page F-126-127

R.O. Refer application details to Marketing

Exact ratio	**Gear Frame**
Input H.P.	Output Torque

Combined - Motor rpm 1750

Gear Frame															
Nom. RPM	Nom. Ratio	32		33		34		35		36		37		38	
16	112														
14	125														
12.5	140														
10.9	160														
9.7	180	178 0.686	3245 3960	174 1.252	3365 7060	172 2.523	3475 14065	174 4.051	3585 22845	180 6.817	3695 39775	187 12.067	3705 73140		
8.8	200	197 0.620	3245 3960	196 1.111	3365 7060	194 2.237	3475 14065	184 3.831	3585 22845	191 6.425	3695 39775	216 10.447	3705 73140		
7.8	224	207 0.590	3245 3960	222 0.981	3365 7060	220 1.972	3475 14065	208 3.389	3585 22845	225 5.454	3695 39775	230 9.811	3705 73140		
7.0	250	246 0.497	3245 3960	252 0.864	3365 7060	250 1.736	3475 14065	235 2.999	3585 22845	240 5.113	3695 39775	261 8.646	3705 73140		
6.3	280	263 0.465	3245 3960	288 0.756	3365 7060	286 1.517	3475 14065	265 2.660	3585 22845	272 4.512	3695 39775	290 7.781	3705 73140		
5.6	315	295 0.414	3245 3960	325 0.670	3365 7060	322 1.348	3475 14065	302 2.334	3585 22845	300 4.090	3695 39775	330 6.838	3705 73140		
4.9	355	343 0.356	3245 3960	345 0.631	3365 7060	342 1.286	3475 14259	345 2.043	3585 22845	341 3.599	3695 39775	367 6.149	3705 73140	337.3 10.28	3825 112861
4.4	400	370 0.330	3245 3960	410 0.531	3365 7060	386 1.140	3475 14259	389 1.812	3585 22845	395 3.107	3695 39775	425 5.309	3705 73140	398.7 9.2	3825 119450
3.9	450	435 0.281	3245 3960	434 0.502	3365 7060	437 1.007	3475 14259	413 1.707	3585 22845	422 2.908	3695 39775	455 4.959	3705 73140	425.2 8.63	3825 119450
3.5	500	488 0.250	3245 3960	496 0.439	3365 7060	482 0.914	3475 14286	490 1.438	3585 22845	479 2.562	3695 39775	516 4.373	3705 73140	480.9 7.63	3825 119450
3.1	560	549 0.223	3245 3960	553 0.394	3365 7060	548 0.804	3475 14286	518 1.361	3585 22845	532 2.307	3695 39775	573 3.938	3705 73140	532.2 6.89	3825 119450
2.8	630	617 0.198	3245 3960	620 0.351	3365 7060	626 0.704	3475 14286	592 1.191	3585 22845	605 2.028	3695 39775	651 3.466	3705 73140	606.4 6.05	3825 119450
2.5	710	718 0.173	3245 4032	734 0.303	3365 7215	707 0.623	3475 14286	661 1.066	3585 22845	673 1.823	3695 39775	724 3.117	3705 73140	688.2 5.33	3825 119450
2.2	800	793 0.157	3245 4032	829 0.269	3365 7215	750 0.588	3475 14286	741 0.951	3585 22845	757 1.621	3695 39775	815 2.769	3705 73140	793.2 4.63	3825 119450
1.9	900	835 0.149	3245 4032	937 0.238	3365 7215	891 0.495	3475 14286	866 0.835	3585 23447	887 1.383	3695 39775	955 2.363	3705 73140	847.6 4.33	3825 119450
1.8	1000	991 0.126	3245 4032	1010 0.221	3365 7246	942 0.468	3475 14286	976 0.741	3585 23447	979 1.253	3695 39775	1054 2.141	3705 73140	962.0 3.81	3825 119450
1.6	1120	1062 0.117	3245 4032	1116 0.200	3365 7246	1185 0.376	3475 14436	1105 0.655	3585 23447	1074 1.143	3695 39775	1156 1.952	3705 73140	1068.5 3.43	3825 119450
1.4	1250	1189 0.105	3245 4032	1175 0.190	3365 7246	1355 0.329	3475 14436	1255 0.576	3585 23447	1254 0.979	3695 39775	1298 1.792	3705 75388	1213.7 3.02	3825 119450
1.3	1400	1384 0.090	3245 4032	1394 0.160	3365 7246	1529 0.291	3475 14436	1319 0.550	3585 23500	1504 0.836	3695 40747	1467 1.585	3705 75388	1350.4 2.72	3825 119450
1.1	1600	1493 0.083	3245 4032	1494 0.150	3365 7246	1622 0.275	3475 14436	1499 0.484	3585 23500	1607 0.782	3695 40747	1624 1.432	3705 75388	1519.2 2.42	3825 119450
0.97	1800	1756 0.071	3245 4032	1673 0.134	3365 7246	1926 0.231	3475 14436	1713 0.423	3585 23500	1823 0.690	3695 40747	1851 1.257	3705 75388	1780.8 2.06	3825 119450
0.88	2000	1968 0.063	3245 4032	1947 0.115	3365 7246	2037 0.219	3475 14436	1933 0.375	3585 23500	2025 0.621	3695 40747	2134 1.090	3705 75388	1965.7 1.87	3825 119450
0.78	2240	2213 0.056	3245 4032	2100 0.106	3365 7246	2329 0.191	3475 14436	2051 0.353	3585 23500	2301 0.546	3695 40747	2280 1.020	3705 75388	2155.5 1.7	3825 119450

Exact ratio	**Gear Frame**
Input H.P.	Output Torque

Combined - Motor rpm 1750 (Continued)

Gear Frame															
Nom. RPM	Nom. Ratio	32		33		34		35		36		37		38	
0.70	2500	2488	3245	2470	3365	2599	3475	2436	3585	2560	3695	2588	3705	2517	3825
		0.050	4032	0.091	7246	0.171	14436	0.298	23500	0.491	40747	0.899	75388	1.46	119450
0.63	2800	2804	3245	2768	3365	2914	3475	2576	3585	2880	3695	2874	3705	2922	3826
		0.044	4032	0.081	7246	0.153	14436	0.281	23500	0.437	40747	0.809	75388	1.282	119450
0.56	3150	3158	3245	3113	3365	3374	3475	2944	3585	2946	3696	3265	3705	3442	3826
		0.039	4032	0.072	7246	0.132	14436	0.246	23500	0.427	40747	0.712	75388	1.089	119450
0.49	3550	3474	3245	3500	3365	3705	3475	3286	3585	3480	3696	3632	3705	3682	3826
		0.036	4032	0.064	7246	0.120	14436	0.221	23500	0.361	40747	0.640	75388	1.018	119450
0.44	4000	3920	3245	3945	3365	4248	3475	3685	3585	4196	3696	4086	3705	4158	3826
		0.032	4032	0.057	7246	0.105	14436	0.197	23500	0.300	40747	0.569	75388	0.901	119450
0.39	4500	4410	3245	4443	3365	4437	3476	4266	3585	4645	3696	4790	3705	4609	3826
		0.028	4032	0.050	7246	0.103	14419	0.170	23500	0.271	40747	0.486	75388	0.813	119450
0.35	5000	4779		4887	3365	5071	3476	4684	3585	5295	3696	5268	3706	5059	3826
		0.027		0.046	7246	0.090	14419	0.155	23500	0.237	40747	0.442	75388	0.74	119450
0.31	5600	5350		5515	3365	5721	3476	5371	3585	6103	3696	5954	3706	5831	3826
		0.024		0.041	7246	0.080	14419	0.135	23500	0.206	40747	0.391	75388	0.64	119450
0.28	6300	6229		6204	3365	6071	3476	6625	3586	6521	3696	6592	3706	6231	3826
		0.020		0.036	7246	0.075	14419	0.111	23385	0.193	40747	0.353	75388	0.6	119450
0.25	7100	6717		7014	3366	7210	3476	7008	3586	7401	3696	7513	3706	7072	3826
		0.019		0.032	7207	0.063	14419	0.105	23385	0.170	40747	0.310	75388	0.53	119450
0.22	8000	7902		7888	3366	7626	3476	8009	3586	8220	3696	8660	3706	7855	3826
		0.016		0.029	7207	0.060	14419	0.092	23385	0.153	40747	0.269	75388	0.48	119450
0.19	9000	8854		8868	3366	8715	3476	8938	3586	9338	3696	9254	3706	8923	3826
		0.014		0.026	7207	0.052	14419	0.083	23385	0.135	40747	0.251	75388	0.42	119450
0.18	10000	9958		9997	3366	9727	3476	10023	3586	10389	3696	10502	3706	9928	3826
		0.013		0.023	7207	0.047	14419	0.074	23385	0.121	40747	0.221	75388	0.38	119450

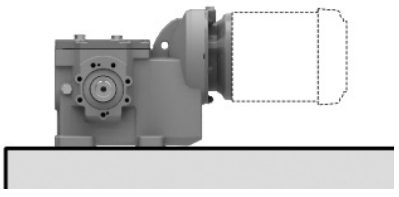
Exact ratio	**Gear Frame**
Input H.P.	Output Torque

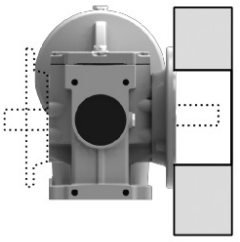
Thermal Power Rating (Pt)

Mounting Position(s): B
Ambient Temperature: 40C
Cooling Method: Convection

Nominal Ratio	Reducer Size			
	35	36	37	38
	Pt (hp)	Pt (hp)	Pt (hp)	Pt (hp)
10	27	46	66	**
11.2	N/A	44	61	**
12.5	27	44	59	**
14	27	44	51	**
16	27	44	51	**
18	27	43	49	**
20	27	43	49	**
22.4	27	43	49	59
25	#	43	-	59
28	#	-	-	59
31.5	#	-	-	59
35.5	-	-	-	59
40	-	-	-	59
45	-	-	-	-
50	-	-	-	-

Examples of "B" Mounting Positions



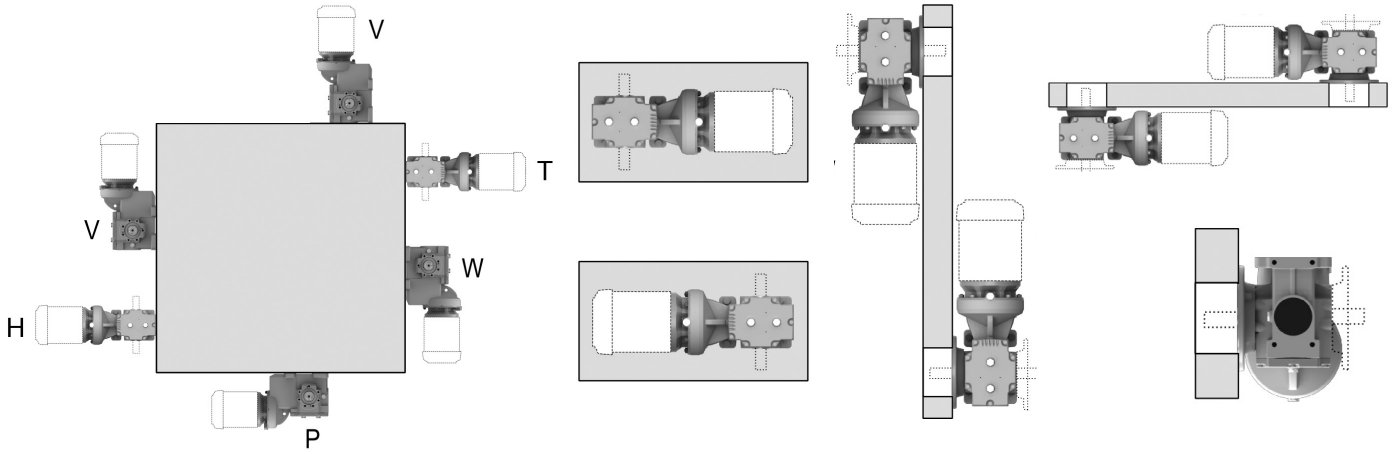


1 For operation greater than 3 hours per day and when an AP reducer design is utilized, refer to office for evaluation of a reducer equipped with a fan and guard supplied on the high speed input shaft.
** Reducers must be used with external cooling supplied by others when with these ratios, gear mounting positions(s) noted and for operation exceeding 3 hours per day.
# Refer to F-129 for other than "B" mounting position

Thermal Power Rating (Pt)

Mounting Position(s): P, H, T, V, W
Ambient Temperature: 40C
Cooling Method: Convection

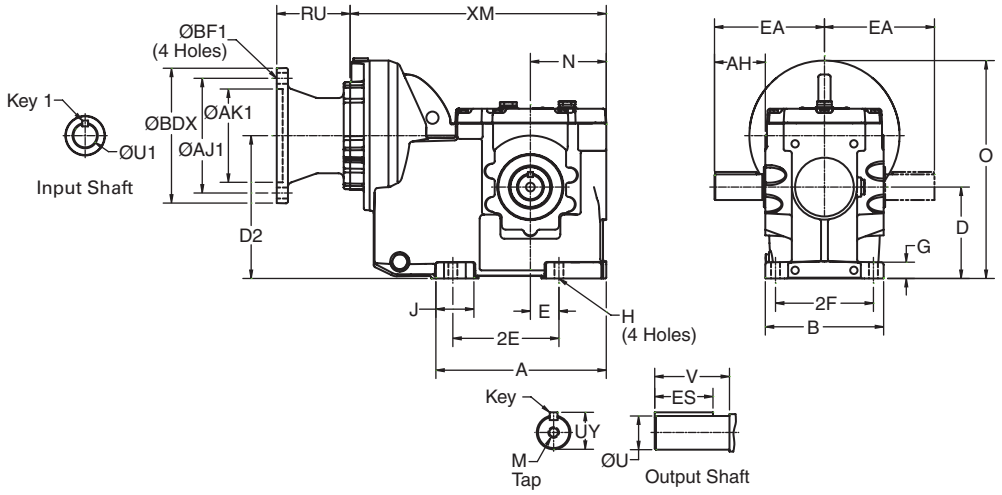
Nominal Ratio	Reducer Size			
	35	36	37	38
	Pt (hp)	Pt (hp)	Pt (hp)	Pt (hp)
10	22	**	**	**
11.2		**	**	**
12.5	22	**	**	**
14	22	**	41	**
16	22	36	41	**
18	22	34	41	**
20	22	34	41	**
22.4	22	34	41	**
25	22	34	-	**
28	22	-	-	49
31.5		-	-	49
35.5		-	-	49
40		-	-	49
45		-	-	49
50		-	-	-



1 For operation greater than 3 hours per day and when an AP reducer design is utilized, refer to office for evaluation of a reducer equipped with a fan and guard supplied on the high speed input shaft.

** Reducers must be used with external cooling supplied by others when with these ratios, gear mounting positions(s) noted and for operation exceeding 3 hours per day.

2-Stage Output Shafted Foot Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
3132	S2	1.000	1.10	1.77	1.83	4.33	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.38	2.45	5.31	1/4 Sq.	2.03	1/2-13 X 1.12

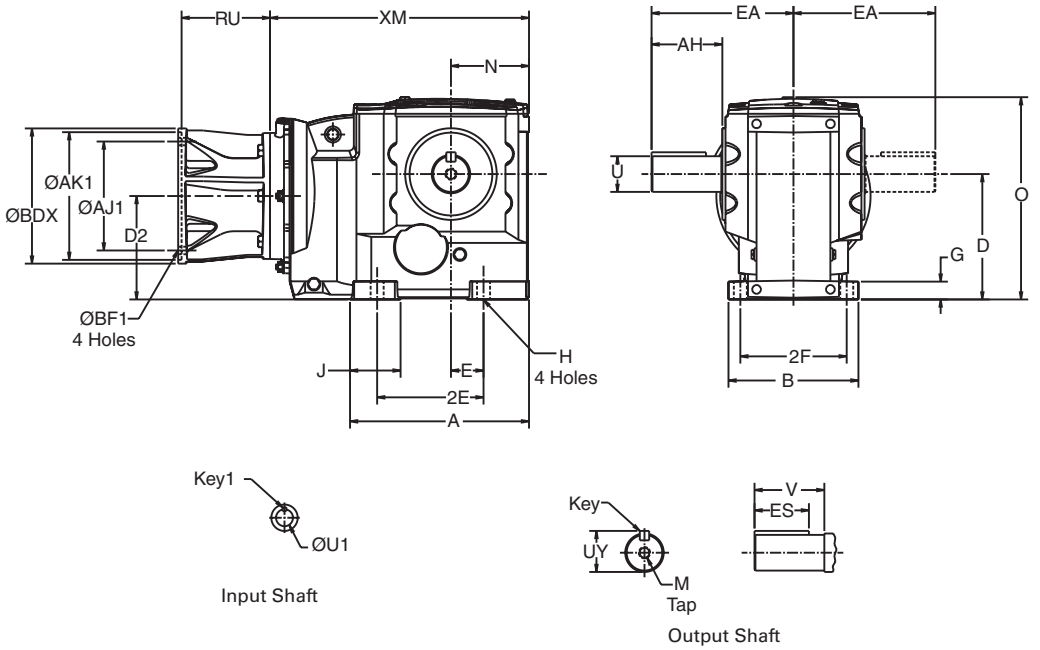
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

3-Stage Output Shafted Foot Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														56C-215TC	254TC-286TC
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.72	.73	.43	2.34	8.09	3.03	10.98	-
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	12.90	-
	S1	8.08	8.58	4.92	5.20	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54		
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	14.56	-
	S1	10.69	9.60	6.30	7.49	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49		
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	16.90	17.25
	S1	13.07	10.98	7.87	9.33	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20		

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 X 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

C-Face Input

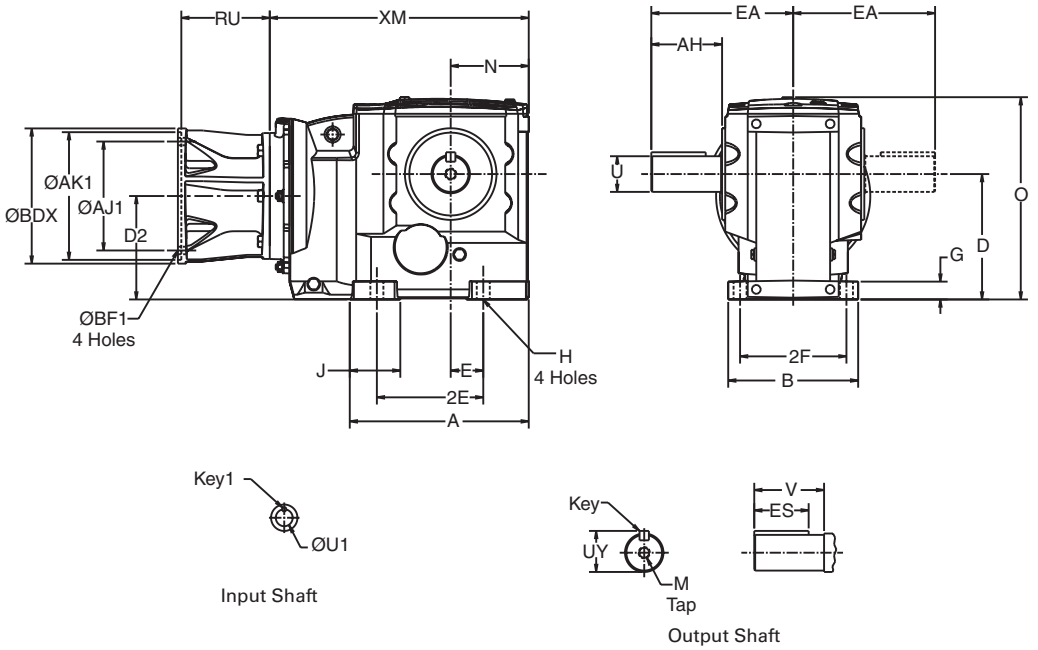
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

3-Stage Output Shafted Foot Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														182-215TC	254-365TC
36	S1	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.38	23.73
37	S1	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.29	24.64

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 SQ.	5.00	3/4-10 X 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[4]	8.45	13.38	1/2 Sq.
364TC/365TC	All	11.00	12.50	.625	2.375[4]	8.45	13.38	5/8 Sq.

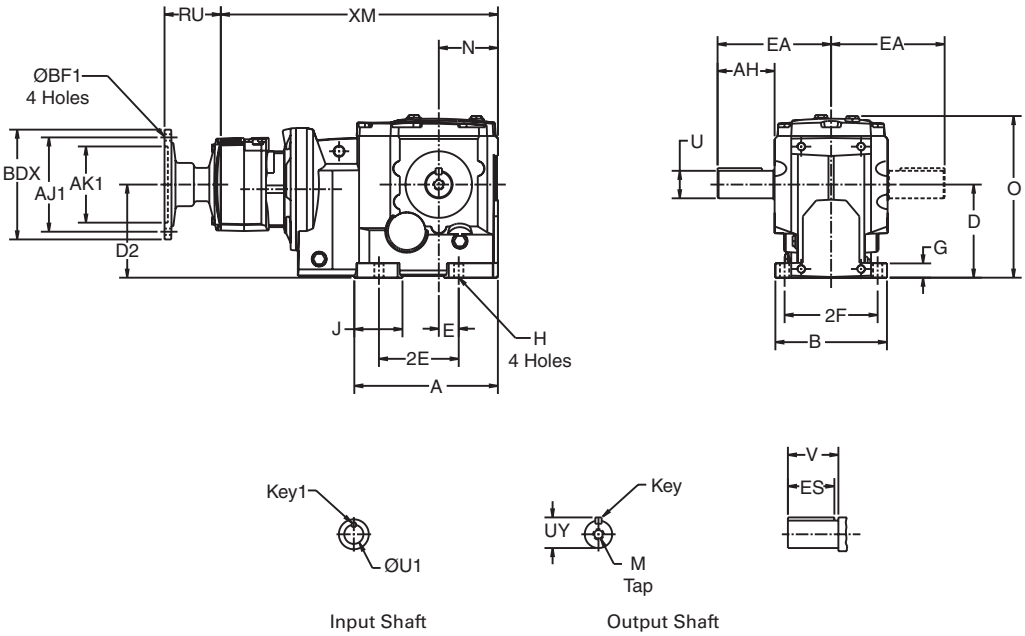
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] These frames utilize a coupling .This is the bore of the coupling for the motor shaft.

Combined Output Shafted Foot Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.72	.73	.43	2.34	8.09	3.03	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.90
	S1	8.08	8.58	4.92	4.87	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
	S1	10.69	9.60	6.30	7.16	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	23.87
	S1	13.07	10.98	7.87	9.00	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 X 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

C-Face Input

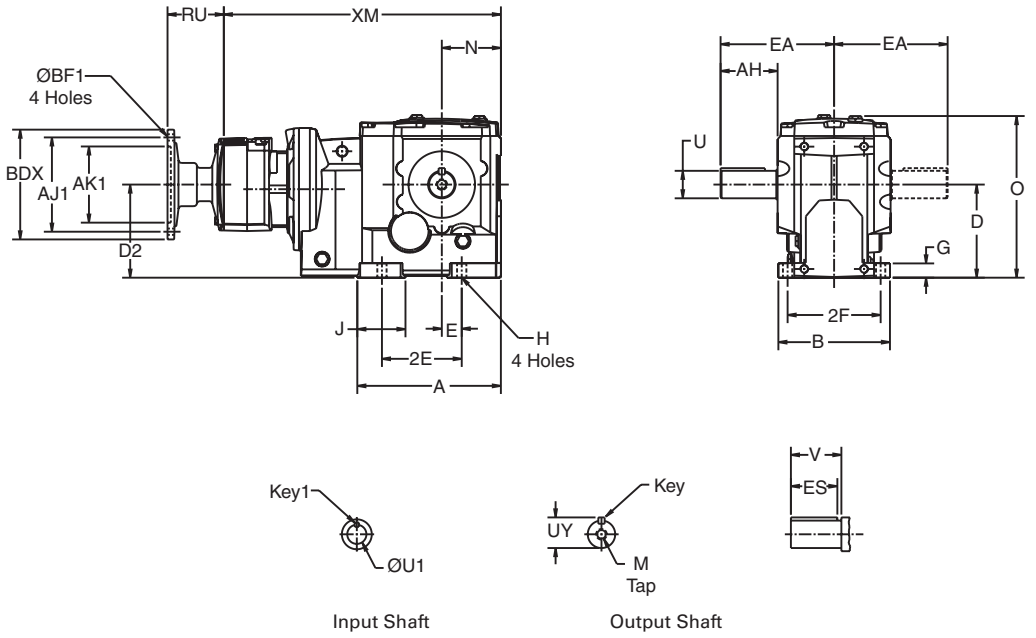
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32,33A	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32,33A	5.88	4.50	.38	.875	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

Combined Output Shafted Foot Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
														56-215TC
36	S1	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	31.04
37	S1	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.94

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 SQ.	5.00	3/4-10 X 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

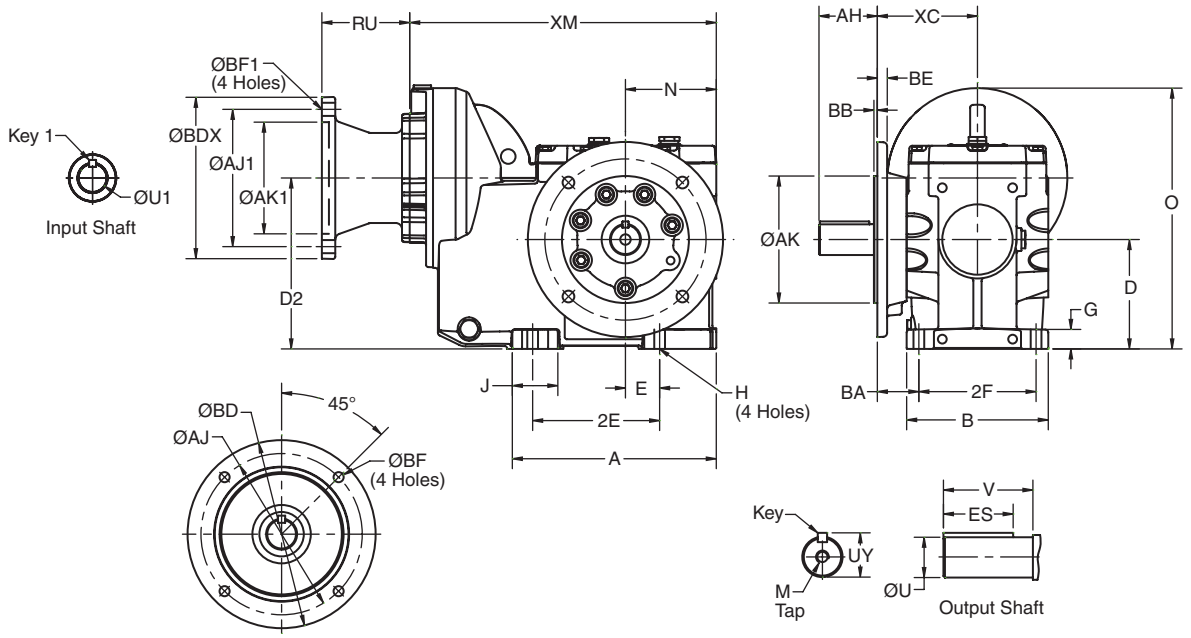
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

2-Stage Output Shafted Flange Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	4.04	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
3132	S2	1.000	1.10	1.97	1.97	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.36	2.35	1/4 Sq.	2.03	1/2-13 X 1.13

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
3242	6	7.087	8.46	.16	9.84	.47	.55

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

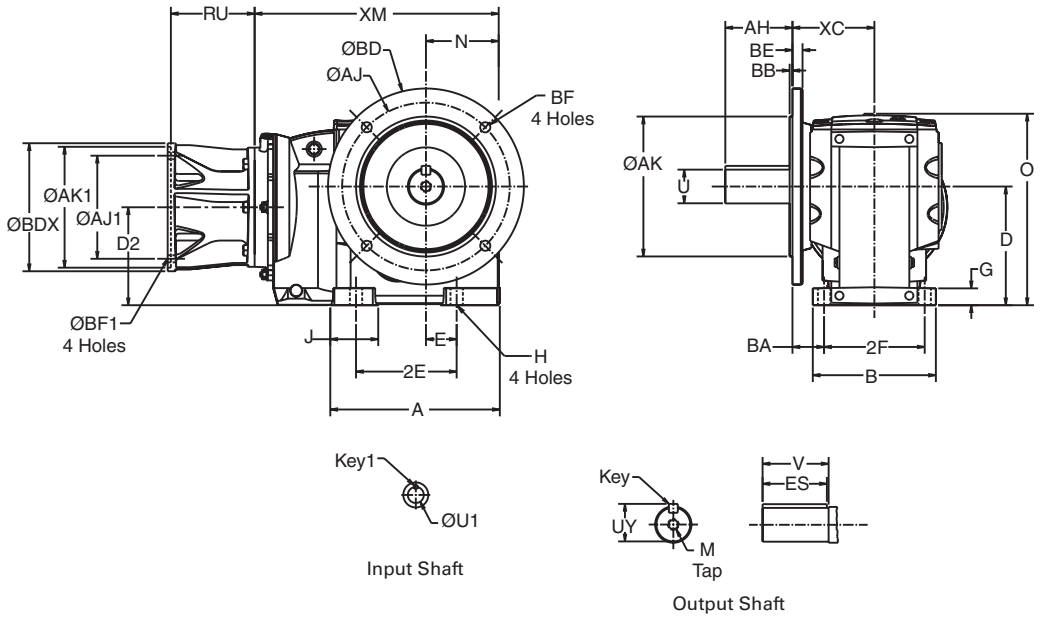
Browning®

C-Face Reducer

OtN SERIES 3000

3-Stage Output Shafted Flange Mount

OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM	
																56C-215TC	254TC-286TC
32	S1,S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	10.98	-
33	S1,S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	12.90	-
34	S1,S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.76	16.90	17.25

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

C-Face Input

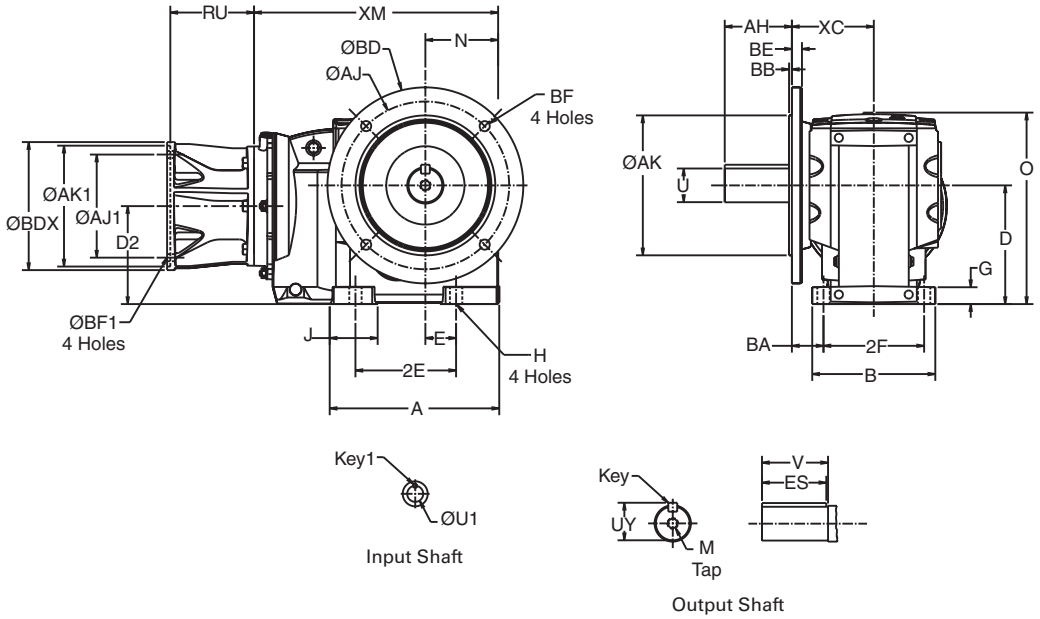
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

3-Stage Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM	
																182-215TC	254-365TC
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	24.29	24.64

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 SQ.	5.00	3/4-10 X 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 SQ.	7.00	1-8 X 2.25

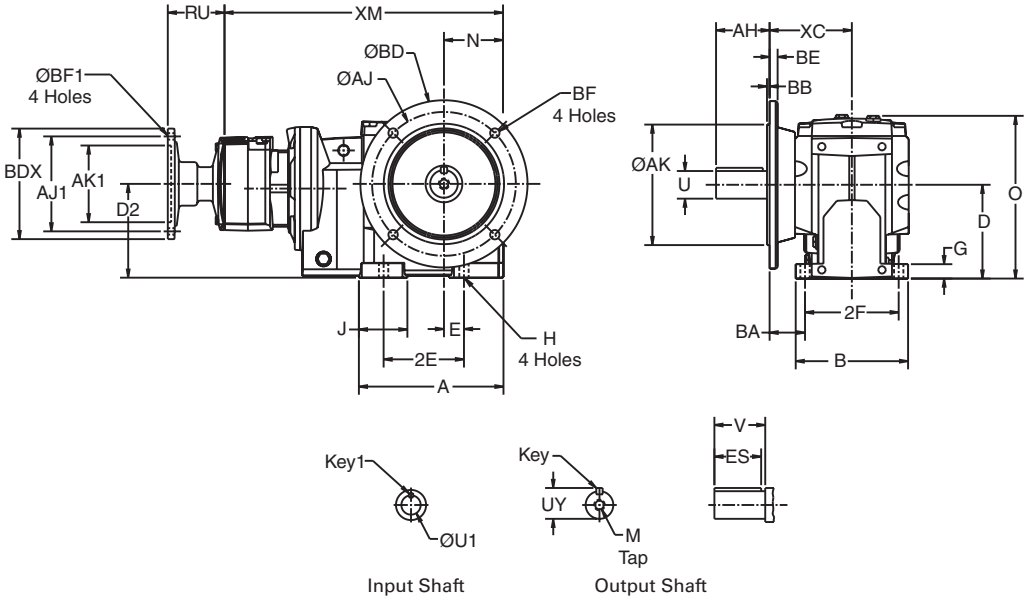
Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[4]	8.45	13.38	1/2 Sq.
364TC/365TC	37, 38	11.00	12.50	.625	2.375[4]	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[4] These frames utilize coupling input. This is input bore for coupling provided.

Combined Output Shafted Flange Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
32	S1,S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	14.49
33	S1,S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	19.90
34	S1,S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.76	23.87

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

C-Face Input

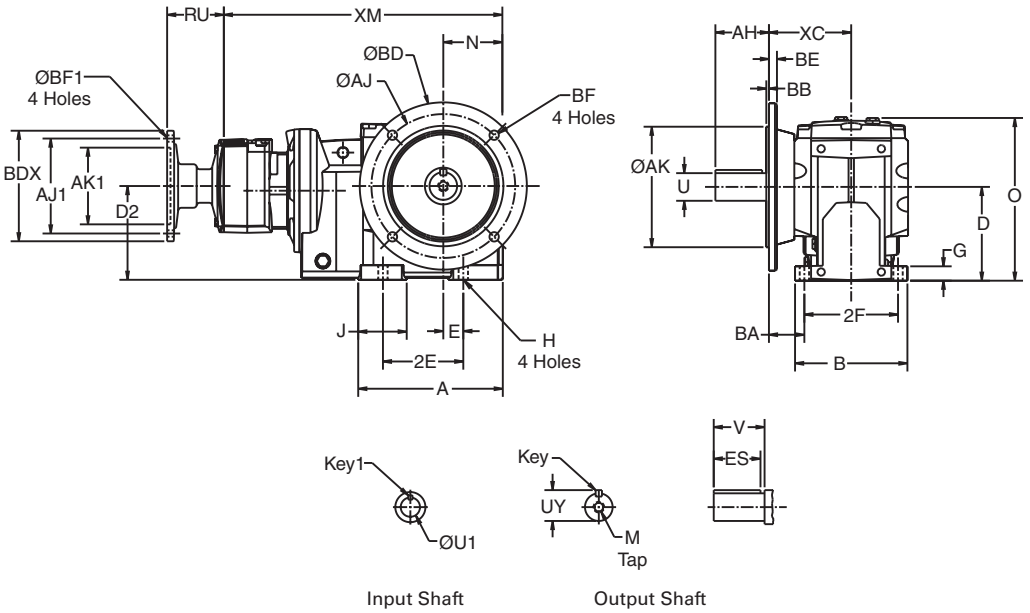
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32,33A	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32,33A	5.88	4.50	.38	.875	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

Combined Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM 56-215TC
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	31.94

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36 & 37	S2	2.875	3.20	7.68	5.51	3/4 SQ.	5.00	3/4-10 X 1.61
	S2	3.625	4.01	8.88	6.69	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 SQ.	7.00	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

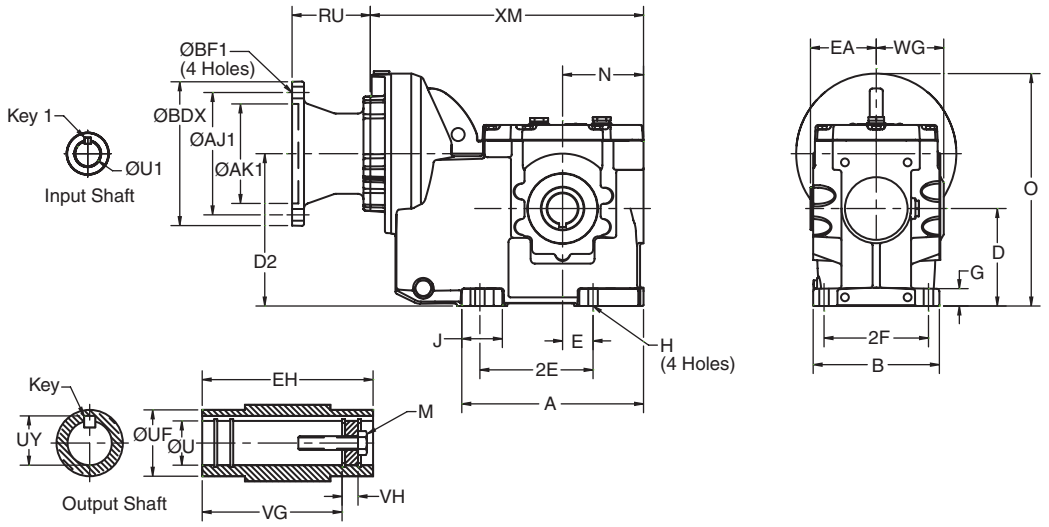
Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	38	9.00	10.50	.50	1.875	7.09	11.02	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

2-Stage Finished Bore Hollow Shaft
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

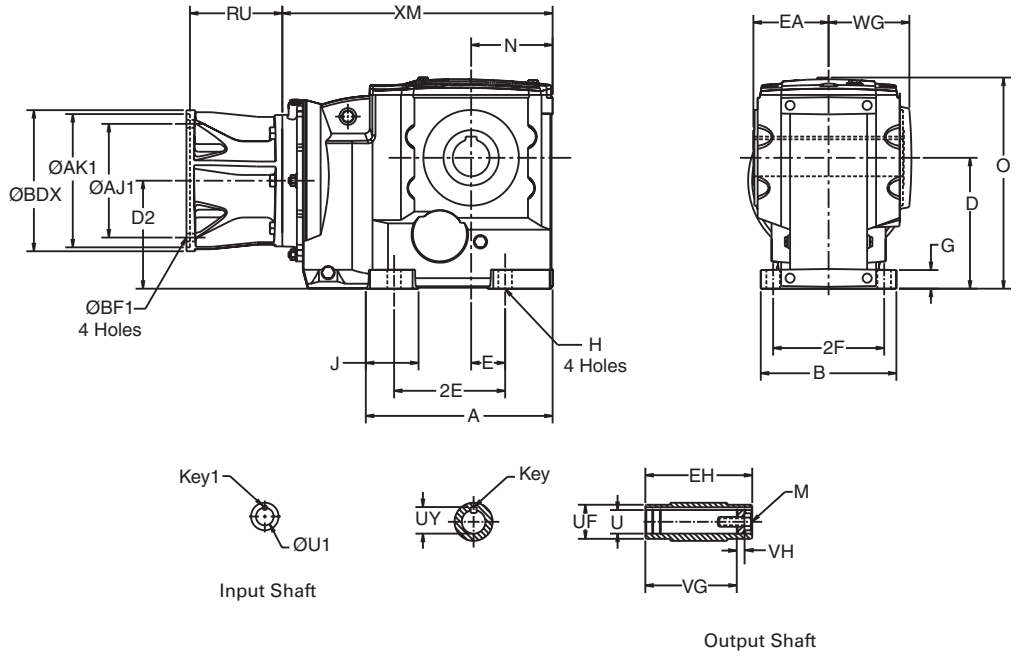
Output Shaft

Gear Frame	Version	EA	EH	U[3,5,6]	UF	UY	VG	VH	Key[7]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] For details of the torque arm kit,refer to page F-115.
[5] Output bore tolerances: +.0020",-.0000" for all diameters.
[6] Refer to page F-116 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[7] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															56C-215TC	254TC-286TC
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	10.98	-
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	12.90	-
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[6,7]	UF	UY	VG	VH	Key[4]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown.
When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

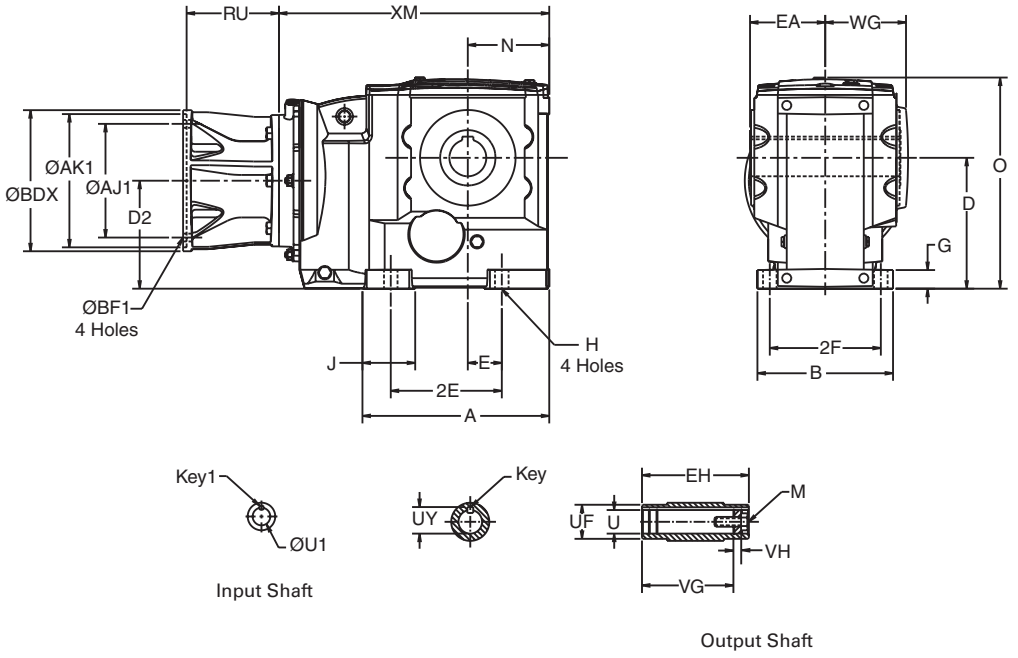
[4] Output key supplied only on frame 34 in "S2" version.

[5] For details of the torque arm kit,refer to page F-115.

[6] Output bore tolerances: +.0020",-.0000" for all diameters.

[7] Refer to page F-116 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.

3-Stage Finished Bore Hollow Shaft
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															182-215TC	254-365TC
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.29	24.64

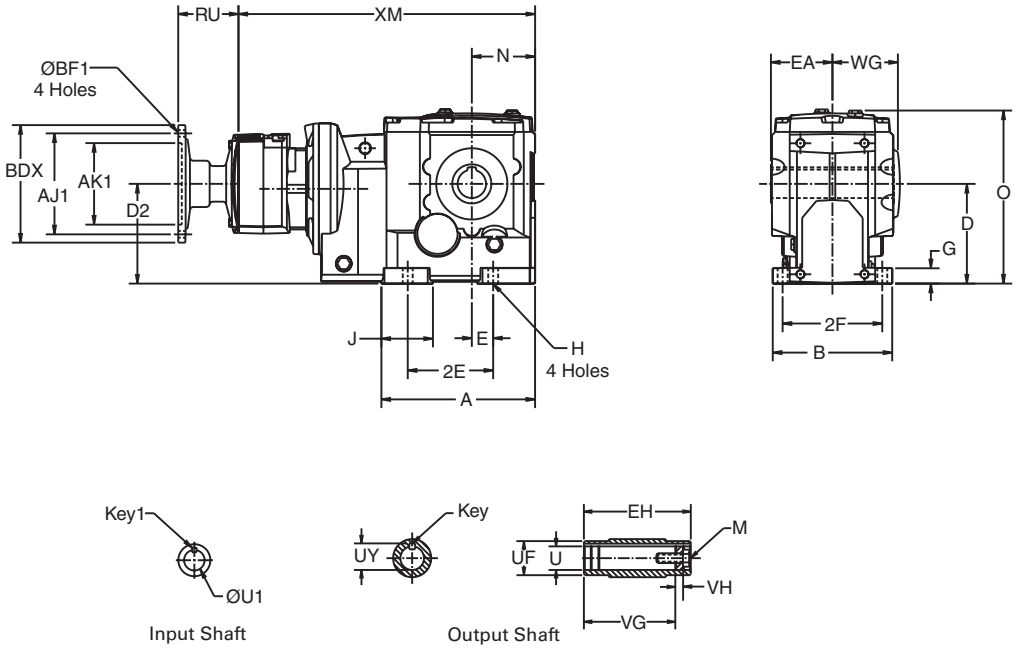
Output Shaft

Gear Frame	Version	EA	EH	U[3,5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[7]	8.45	13.38	1/2 Sq.
364TC/365TC	37, 38	11.00	12.50	.625	2.375[7]	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] For details of the torque arm kit,refer to page F-115.
[5] Output bore tolerances: +.0020",-.0000" for all diameters.
[6] Key not supplied with reducer.
[7] These frames utilize coupling input. This is input bore for coupling provided.

Combined Finished Bore Hollow Shaft
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87

Output Shaft

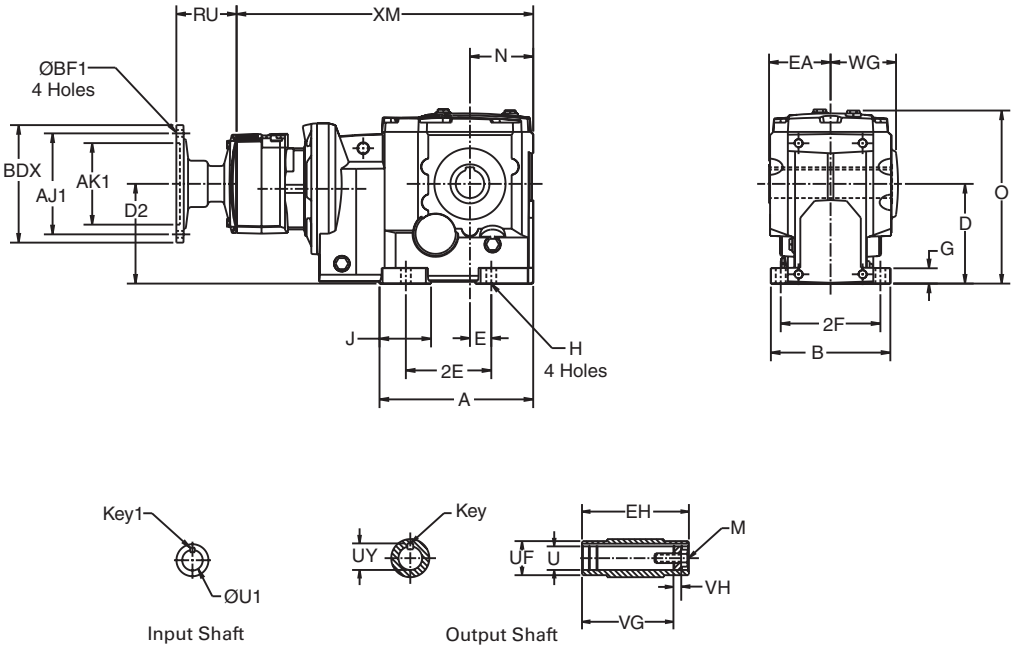
Gear Frame	Version	EA	EH	U[3,7]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32	5.88	4.50	.38	.875	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for Tapered Bushed designs if driven shaft varies from "U" dimension offered above.
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[5] Output key supplied only on frame 34 in "S2" version.
[6] For details of the torque arm kit,refer to page F-115.
[7] Output bore tolerances: +.0020",-.0000" for all diameters.

Combined Finished Bore Hollow Shaft
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
															56-215TC
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.94

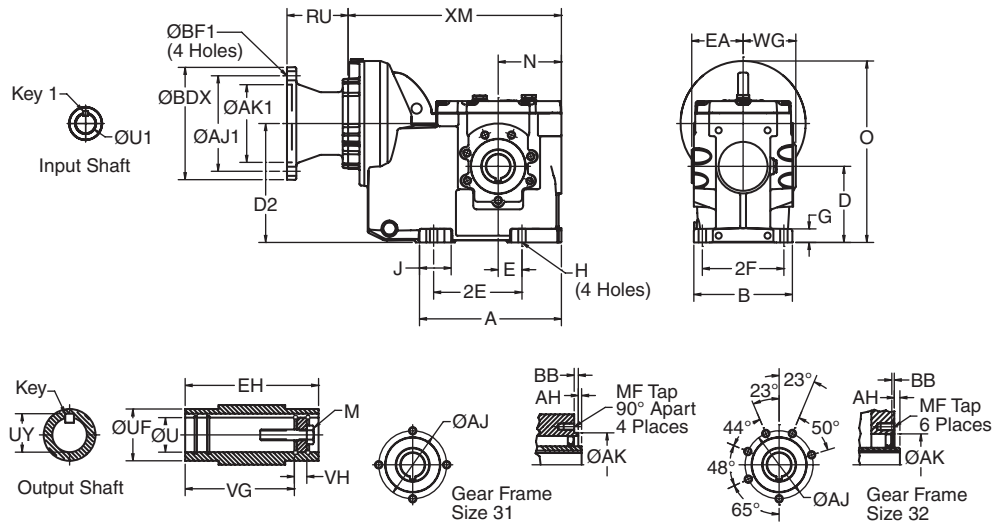
Output Shaft

Gear Frame	Version	EA	EH	U[3,5]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] For details of the torque arm kit,refer to page F-115.
[5] Output bore tolerances: +.0020",-.0000" for all diameters.
[6] Key not supplied with reducer.

2-Stage Finished Bore Hollow Shaft Face Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
31	S2	.20	3.740	3.35	.14	M8-1.25 X 12
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

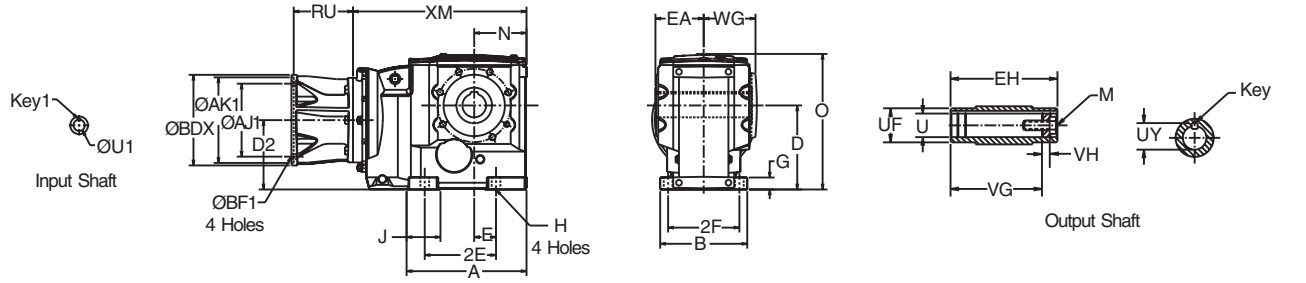
[2] All rough casting dimensions may vary by .25" due to casting variations.

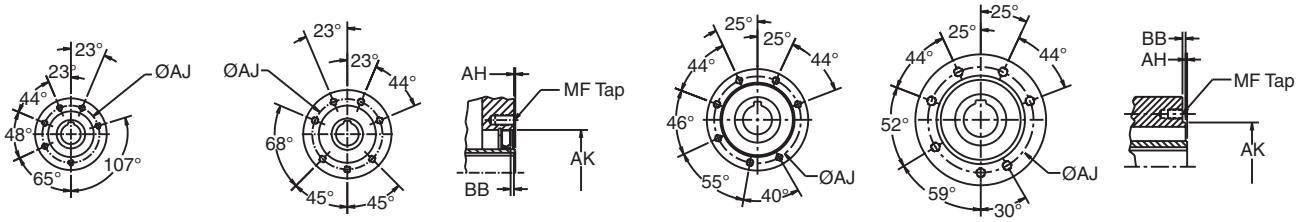
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output bore tolerances: +.0020",-.0000" for all diameters.

[5] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft Face Mount
OtN32 - 35





Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															56C-215TC	254TC-286TC
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.15	10.98	-
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	12.90	-
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

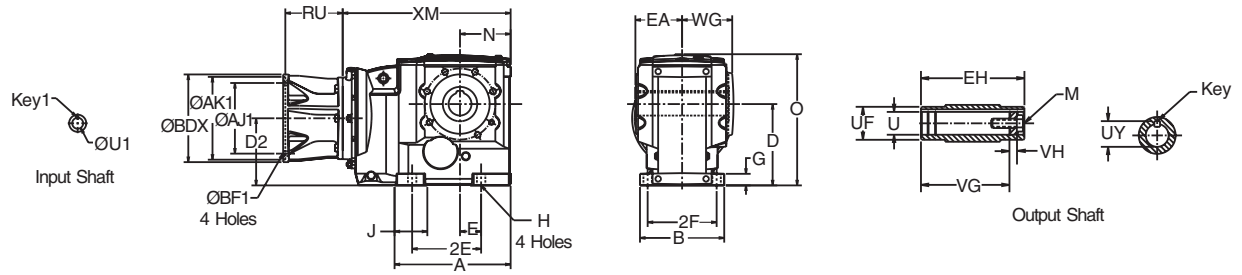
[2] All rough casting dimensions may vary by .25" due to casting variations.

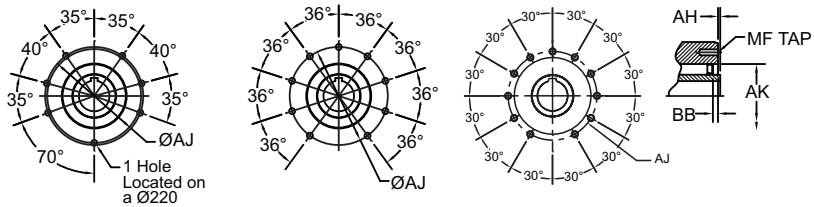
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output bore tolerances: +.0020",-.0000" for all diameters.

[5] Output key supplied only on frame 34 in "S2" version.

3-Stage Finished Bore Hollow Shaft Face Mount
OtN36 - 38





Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	
															182-215TC	254-365TC
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.29	24.64

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

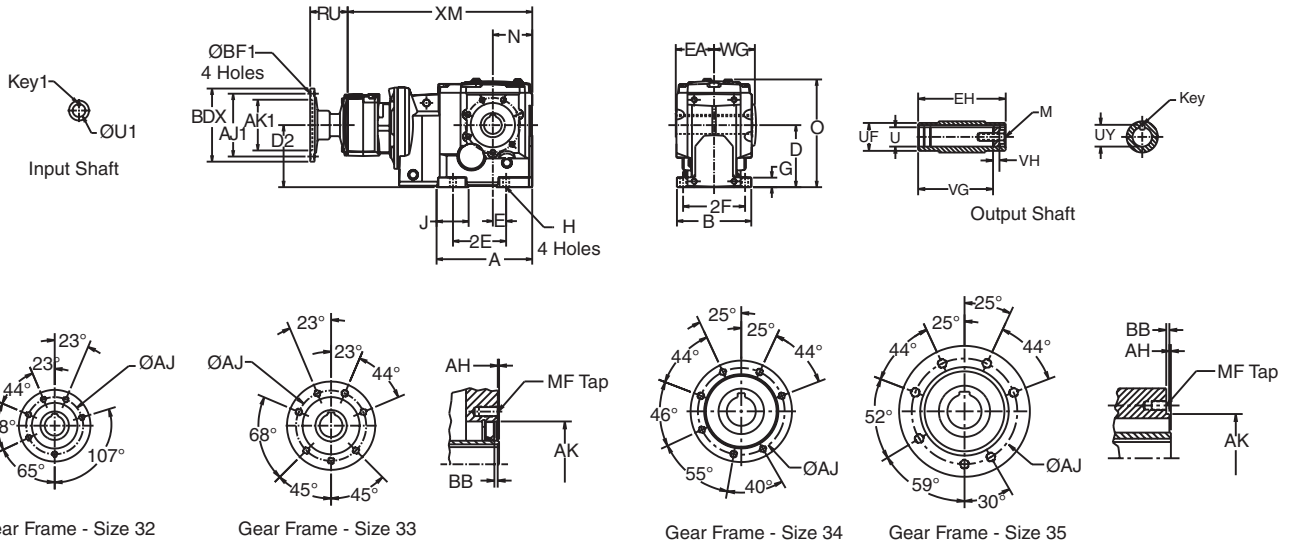
Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
36	S2	.20	9.06	5.91	.28	M16-2.0 X 27
37	S2	.20	9.06	7.09	.28	M20-2.5 X 35
38	S2	.10	11.81	9.84	.20	M20-2.00 X 35

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	36,37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[6]	8.45	13.38	1/2 Sq.
364TC/365TC	37, 38	11.00	12.50	.625	2.375[6]	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output bore tolerances: +.0020",-.0000" for all diameters.
[5] Key not supplied with reducer.
[6] These frames utilize coupling input. This is input bore for coupling provided.

Combined Finished Bore Hollow Shaft Face Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.15	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87

Output Shaft

Gear Frame	Version	EA	EH	U[4,5]	UF	UY	VG	VH	Key[6]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32	5.88	4.50	.38	.875	3.33	6.50	3/16 Sq.
	33 ,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

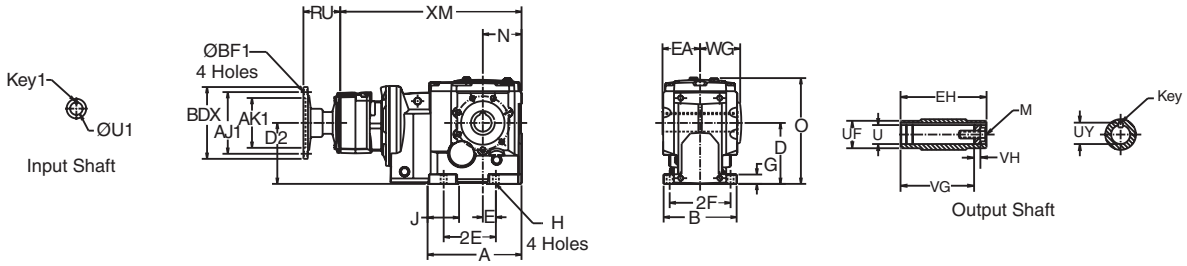
[2] All rough casting dimensions may vary by .25" due to casting variations.

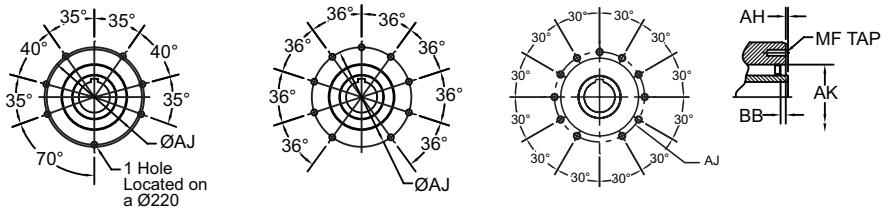
[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output bore tolerances: +.0020",-.0000" for all diameters.

[6] Output key supplied only on frame 34 in "S2" version.

Combined Finished Bore Hollow Shaft Face Mount
OtN36 - 38





Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
															56-215TC
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.94

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

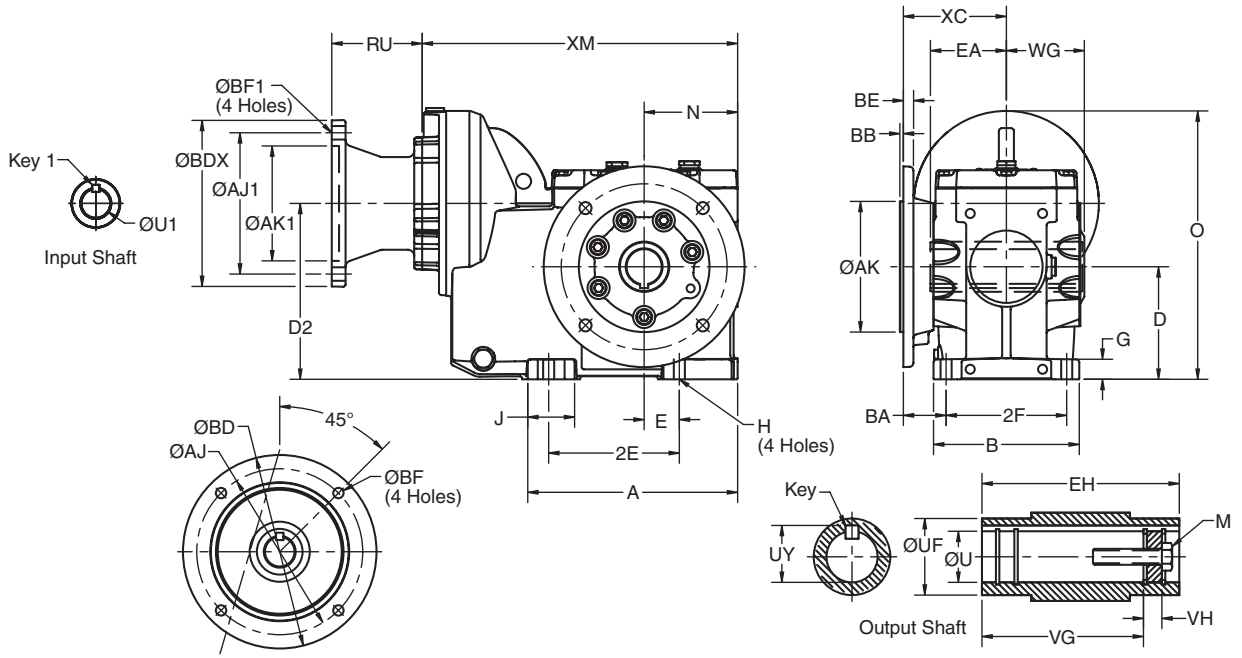
Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
36	S2	.20	9.06	5.91	.28	M16-2.0 X 27
37	S2	.20	9.06	7.09	.28	M20-2.5 X 35
38	S2	.10	11.81	9.84	.20	M20-2.00 X 35

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output bore tolerances: +.0020",-.0000" for all diameters.
[5] Key not supplied with reducer.

2-Stage Finished Bore Hollow Shaft Flange Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	2.85	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	3.22	4.04	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

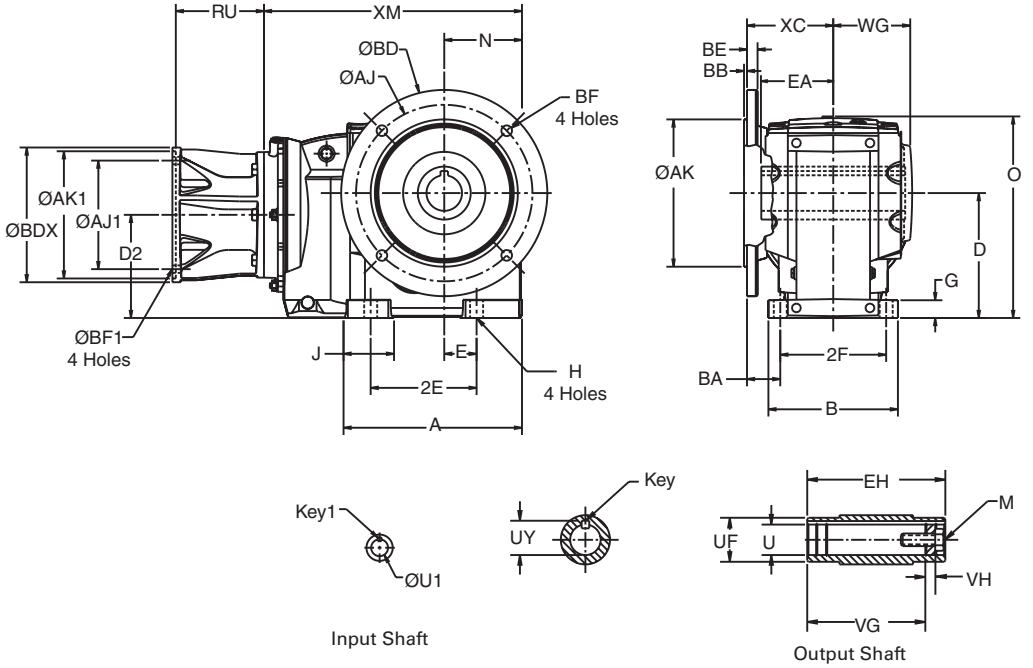
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output bore tolerances: +.0020",-.0000" for all diameters.

[5] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft Flange Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM	
																	56C-215TC	254TC-286TC
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	10.98	-
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	12.90	-
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.77	16.90	17.25

Output Shaft

Gear Frame	Version	EA	EH	U[3,5]	UF	UY	VG	VH	Key[4]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

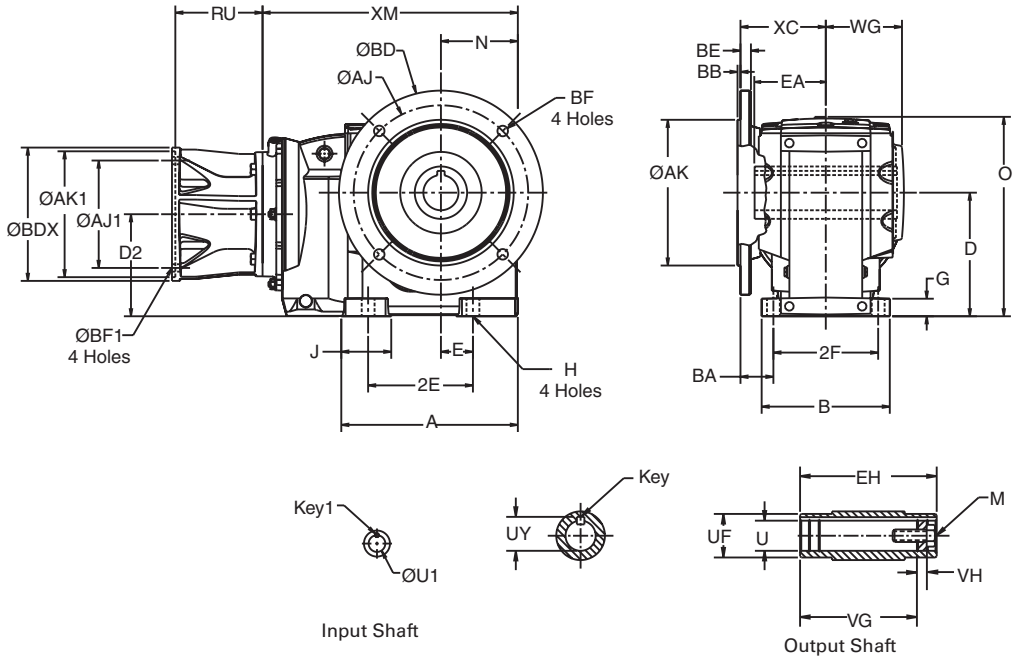
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output key supplied only on frame 34 in "S2" version.

[5] Output bore tolerances: +.0020",-.0000" for all diameters.

3-Stage Finished Bore Hollow Shaft Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM	
																	182-215TC	254-365TC
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	24.29	24.64

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[6]	8.45	13.38	1/2 Sq.
364TC/365TC	All	11.00	12.50	.625	2.375[6]	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

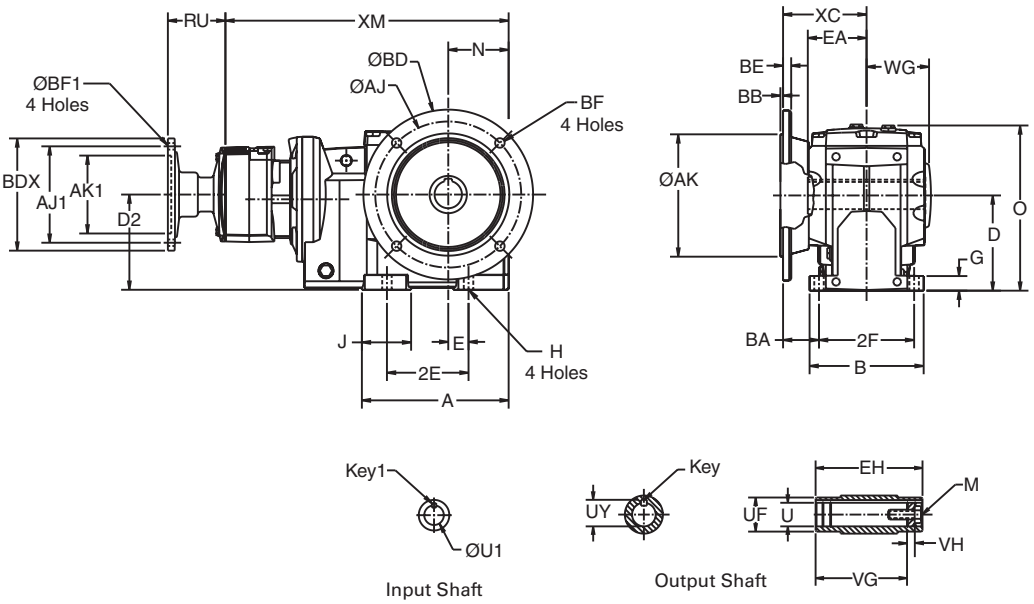
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output bore tolerances: +.0020",-.0000" for all diameters.

[5] Key not supplied with reducer.

[6] These frames utilize coupling input. This is input bore for coupling provided.

Combined Finished Bore Hollow Shaft Flange Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.77	23.87

Output Shaft

Gear Frame	Version	EA	EH	U[6]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32	5.88	4.50	.38	.875	3.33	6.50	3/16 Sq.
	33,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

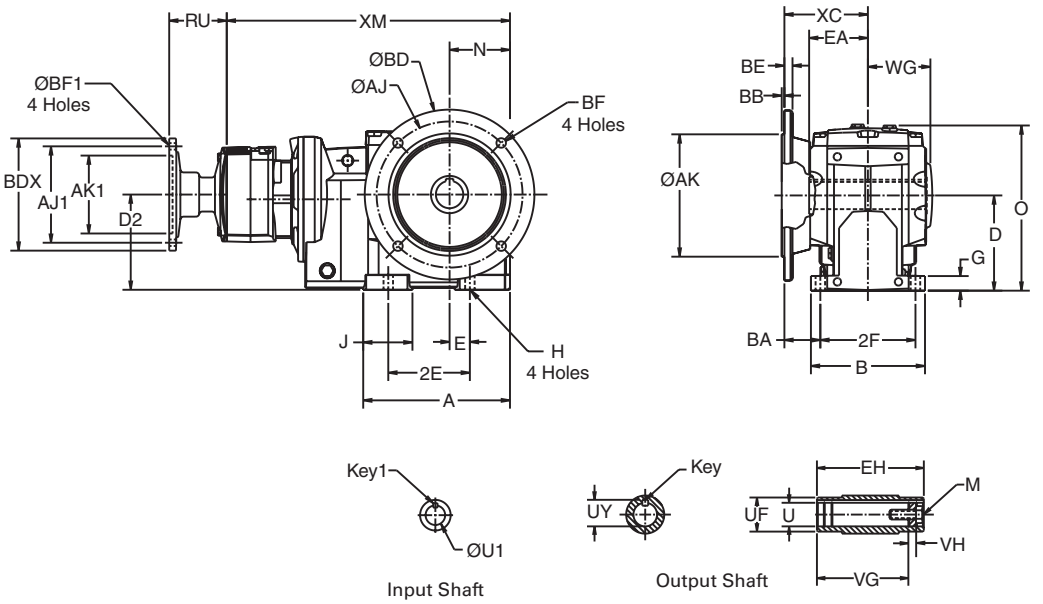
[2] All rough casting dimensions may vary by .25" due to casting variations.

[4] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[5] Output key supplied only on frame 34 in "S2" version.

[6] Output bore tolerances: +.0020",-.0000" for all diameters.

Combined Finished Bore Hollow Shaft Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM 56-215TC
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	31.94

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[5]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 X 5/8 X 5 1/2	3/4-10 X 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 X 7/8 X 5 1/2	3/4-10 X 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

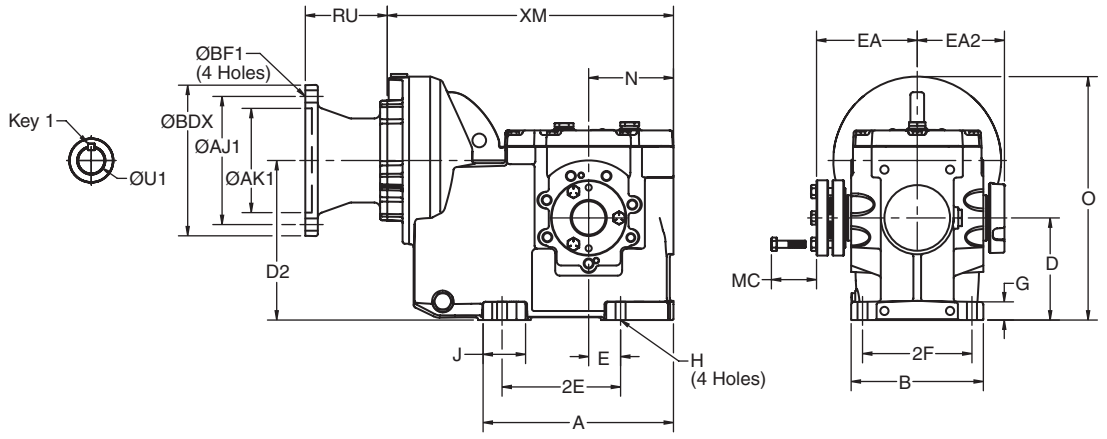
[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.

[4] Output bore tolerances: +.0020",-.0000" for all diameters.

[5] Key not supplied with reducer.

2-Stage Bushed Shaft Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

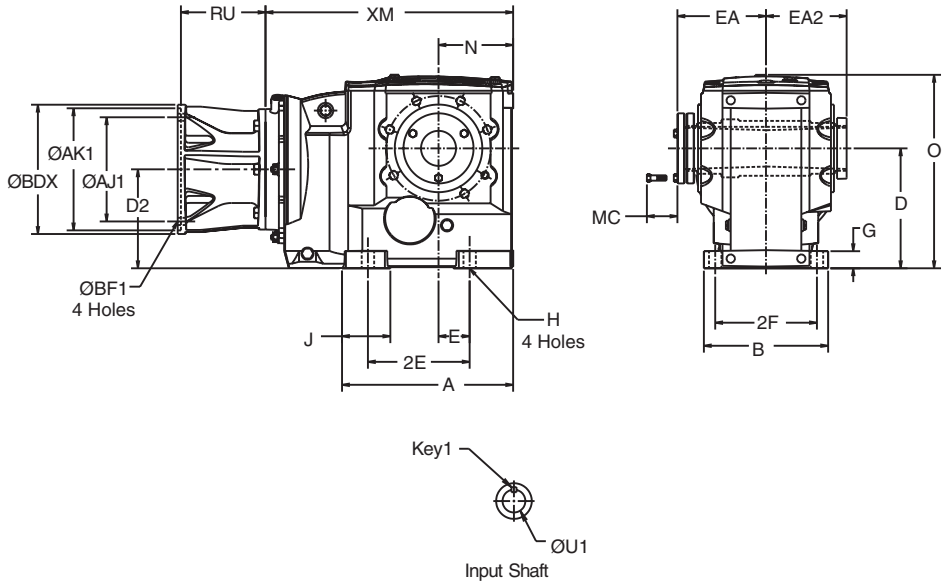
Output Shaft

Gear Frame	Version	EA	EA2	MC[4]	Bushing Bores[3]	
					Min.	Max.
3132	S2	4.25	3.80	1.50	1	1 5/16
3242	S2	4.85	4.27	1.75	1 5/16	1 7/16

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	32	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[4] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[5] Bushing and dust cap can be installed opposite of how they are shown above.
[6] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[7] For details of the torque arm kit,refer to page F-115.

3-Stage Taper Bushed Shaft Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														56C-215TC	254TC-286TC
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	10.98	-
33A	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	12.90	-
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	14.56	-
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	16.90	17.25

Output Shaft

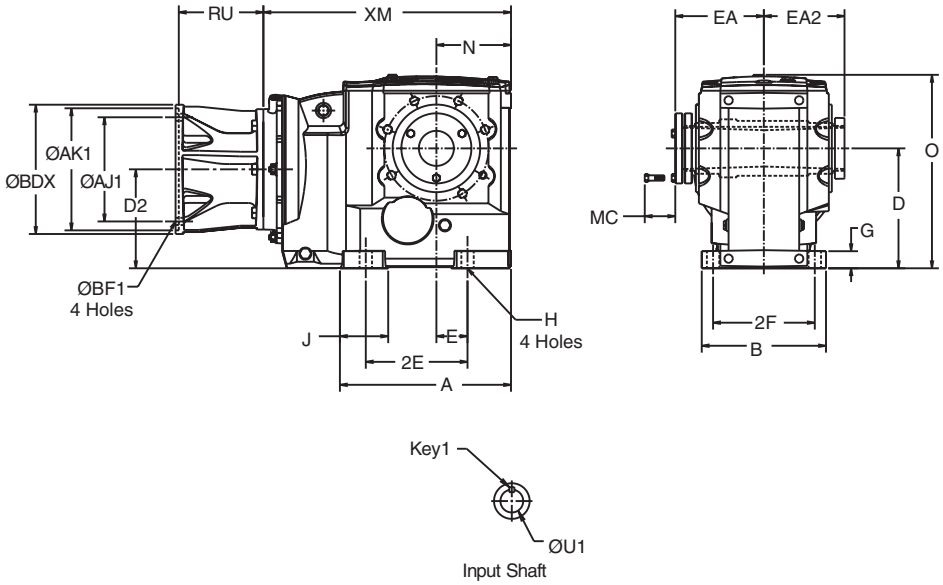
Gear Frame	Version	EA	EA2	MC[4]	Bushing Bores [3]	
					Min.	Max.
32	S2	4.85	4.27	1.75	1 5/16	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	1 11/16	1 15/16
35	S2	6.17	5.620	1.88	2	2 7/16

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	Any	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	Any	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	Any	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	33A,34,35	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	35	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	35	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[4] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[5] Bushing and dust cap can be installed opposite of how they are shown above.
[6] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[7] For details of the torque arm kit,refer to page F-115.

3-Stage Taper Bushed Shaft Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	
														182-215TC	254-365TC
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.38	23.73
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	23.38	29.06
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.29	24.64

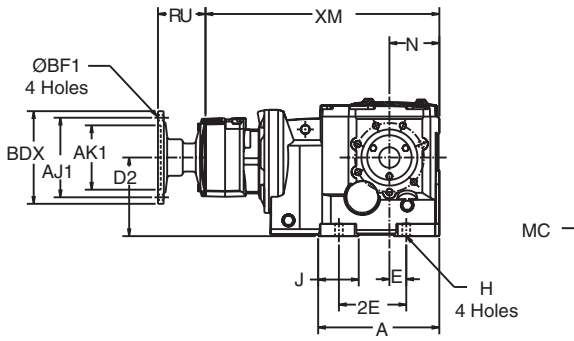
Output Shaft

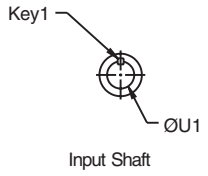
Gear Frame	Version	EA	EA2	MC[4]	Bushing Bores[3]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
182TC/184TC	36, 37	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.
254TC/256TC	All	7.25	8.50	.50	1.625	6.12	9.00	3/8 Sq.
284TC/286TC	All	9.00	10.50	.50	1.875	7.09	11.25	1/2 Sq.
324TC/326TC	All	11.00	12.50	.625	2.125[8]	8.45	13.38	1/2 Sq.
364TC/365TC	37, 38	11.00	12.50	.625	2.375[8]	8.45	13.38	5/8 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[4] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[5] Bushing and dust cap can be installed opposite of how they are shown above.
[6] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[7] For details of the torque arm kit,refer to page F-115.
[8] These frames utilize coupling input. This is input bore for coupling provided.

Combined Taper Bushed Shaft Mount
OtN32 - 35





Input Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	14.49
33A	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.90[8]
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	23.87

Output Shaft

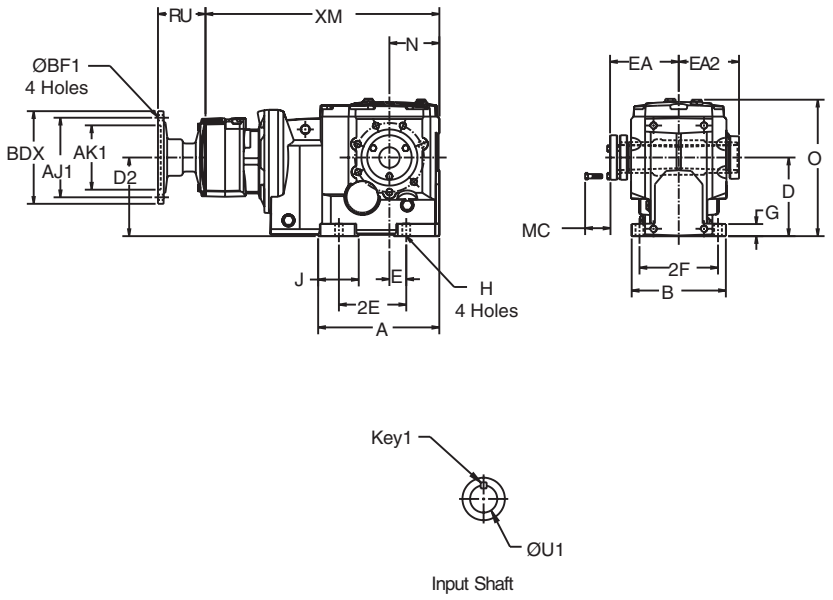
Gear Frame	Version	EA	EA2	MC[4]	Bushing Bores[3]	
					Min.	Max.
32	S2	4.85	4.27	1.75	1 5/16	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	1 11/16	1 15/16
35	S2	6.17	5.620	1.88	2	2 7/16

C-Face Input

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	32	5.88	4.50	.38	.625	3.33	6.50	3/16 Sq.
	33A,34,35	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	32	5.88	4.50	.38	.825	3.33	6.50	3/16 Sq.
	33A,34,35	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	33A,34,35	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[4] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[5] Bushing and dust cap can be installed opposite of how they are shown above.
[6] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[7] For details of the torque arm kit,refer to page F-115.
[8] XM dimension when gear frame 33A is used will be 16.42.

Combined Taper Bushed Shaft Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
														56-215TC
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	31.04
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	36.37
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.94

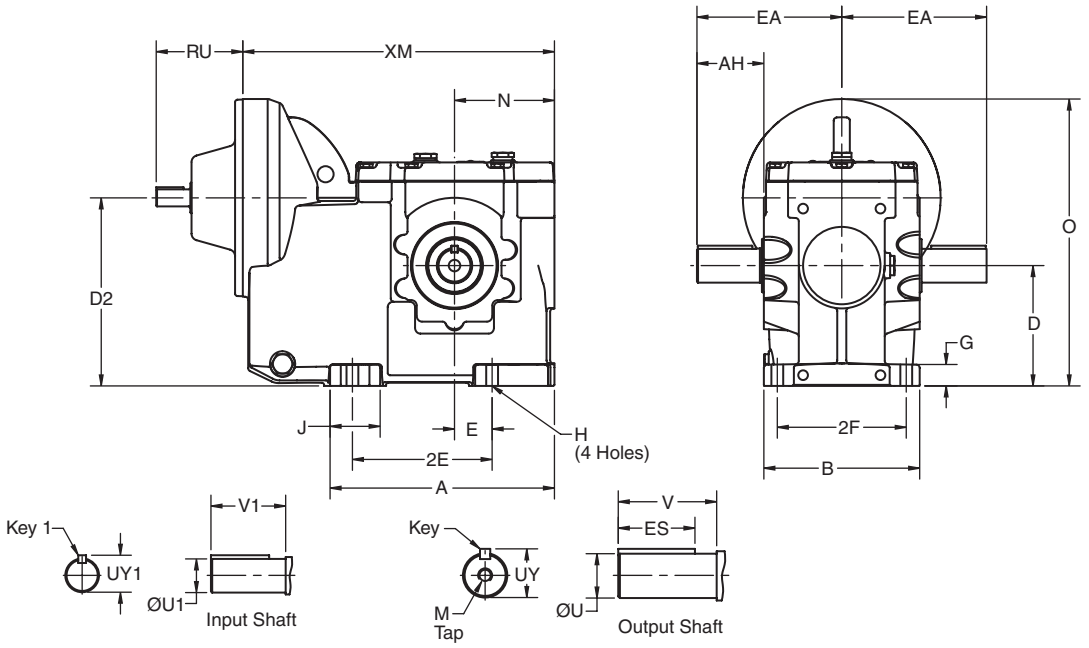
Output Shaft

Gear Frame	Version	EA	EA2	MC[4]	Bushing Bores[3]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Motor Frame	Gear Frame	AJ1	AK1	BF1	U1	RU	BDX	Key1
56C	All	5.88	4.50	.38	.625	3.54	6.50	3/16 Sq.
143TC/145TC	All	5.88	4.50	.38	.875	3.54	6.50	3/16 Sq.
182TC/184TC	All	7.25	8.50	.50	1.125	5.26	9.00	1/4 Sq.
213TC/215TC	All	7.25	8.50	.50	1.375	5.26	9.00	5/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[4] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[5] Bushing and dust cap can be installed opposite of how they are shown above.
[6] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[7] For details of the torque arm kit,refer to pages F-115.
[8] XM dimension when gear frame 33A is used will be 16.42.

2-Stage Output Shafted Foot Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
3132	S2	1.000	1.10	1.77	1.83	4.33	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.38	2.45	5.31	1/4 Sq.	2.03	1/2-13 X 1.12

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

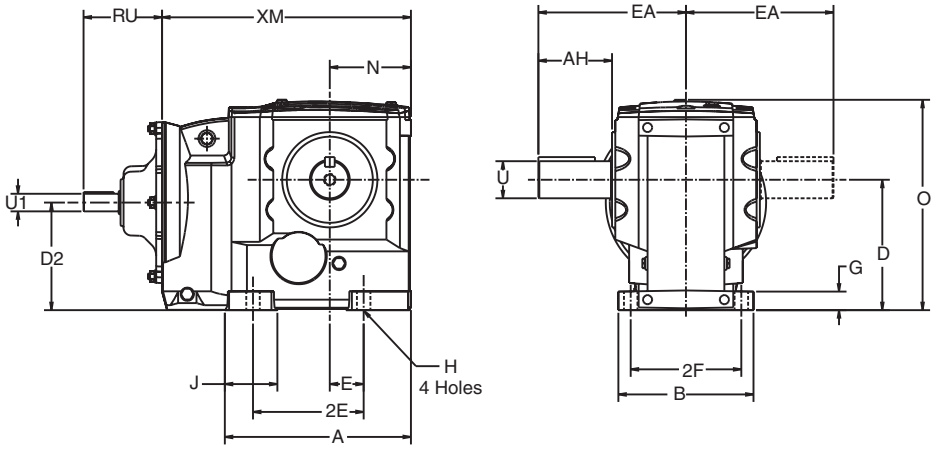
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

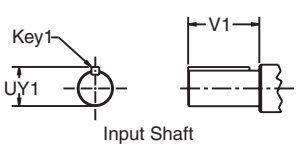
[2] All rough casting dimensions may vary by .25" due to casting variations.

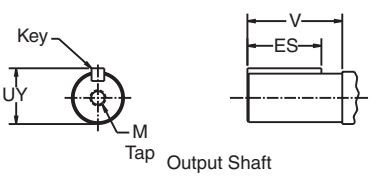
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Output Shafted Foot Mount
OtN32 - 38







Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.72	.73	.43	3.87	8.09	3.03	10.04
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	11.97
	S1	8.08	8.58	4.92	5.20	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78
	S1	10.69	9.60	6.30	7.49	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	15.95
	S1	13.07	10.98	7.87	9.33	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	15.95
36	S1	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S1	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2 -13 x 1.12
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8 -11 x 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8 - 11 x 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4 -10 x 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4 -10 x 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4 -10 x 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4 -10 x 1.61
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 Sq.	5.00	3/4 -10 x 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 Sq.	7.00	1-8 X 2.25

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
32	S2	3.17	.625	.705	1.25	3/16 Sq.
33	S1, S2	3.17	.625	.705	1.25	3/16 Sq.
34	S1, S2	4.75	1.125	1.236	2.25	1/14 Sq.
35	S1, S2	5.03	1.125	1.236	2.25	1/14 Sq.
36	S1	7.56	1.875	2.101	3.75	1/2 Sq.
37	S1	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

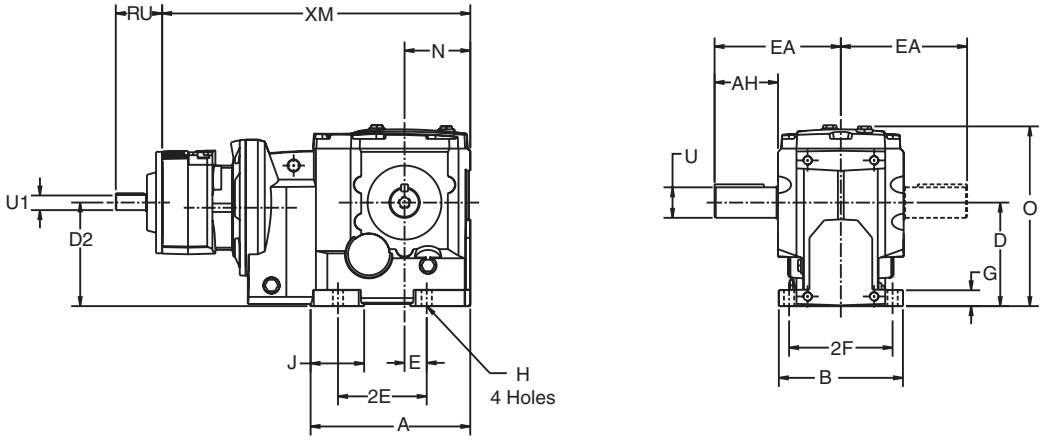
Browning

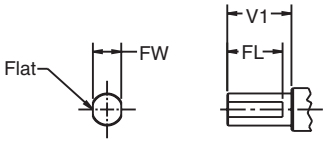
Input Shaft Reducer

OtN SERIES 3000

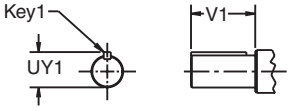
Combined Output Shafted Foot Mount

OtN32 - 38

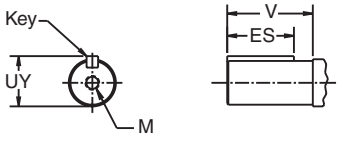




Input Shaft
Frame 32 and 33A Only



Input Shaft
Frames 33 and 34 - 38



Output Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.72	.73	.43	2.34	8.09	3.03	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.90
	S1	8.08	8.58	4.92	4.87	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
	S1	10.69	9.60	6.30	7.16	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	23.87
	S1	13.07	10.98	7.87	9.00	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	23.87
36	S1	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	30.10
37	S1	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.00

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
32	S2	1.250	1.354	2.36	2.46	5.31	1/4 Sq.	2.06	1/2 - 13 x 1.2
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8 - 11 x 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8 - 11 x 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4 -10 x 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4 -10 x 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4 -10 x 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4 -10 x 1.61
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 Sq.	5.00	3/4 -10 x 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

Input Shaft

Gear Frame	Version	RU	U1[5]	FL	FW	UY1	V1	Key1
32	S2	3.60	.500	.86	.46	-	1.00	-
33	S1, S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S1, S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S1, S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
36	S1	3.17	.625	-	-	.714	1.25	3/16 Sq.
37	S1	3.17	.625	-	-	.714	1.25	3/16 Sq.
38	S2	3.17	.625	-	-	0.714	1.25	3/16 Sq.

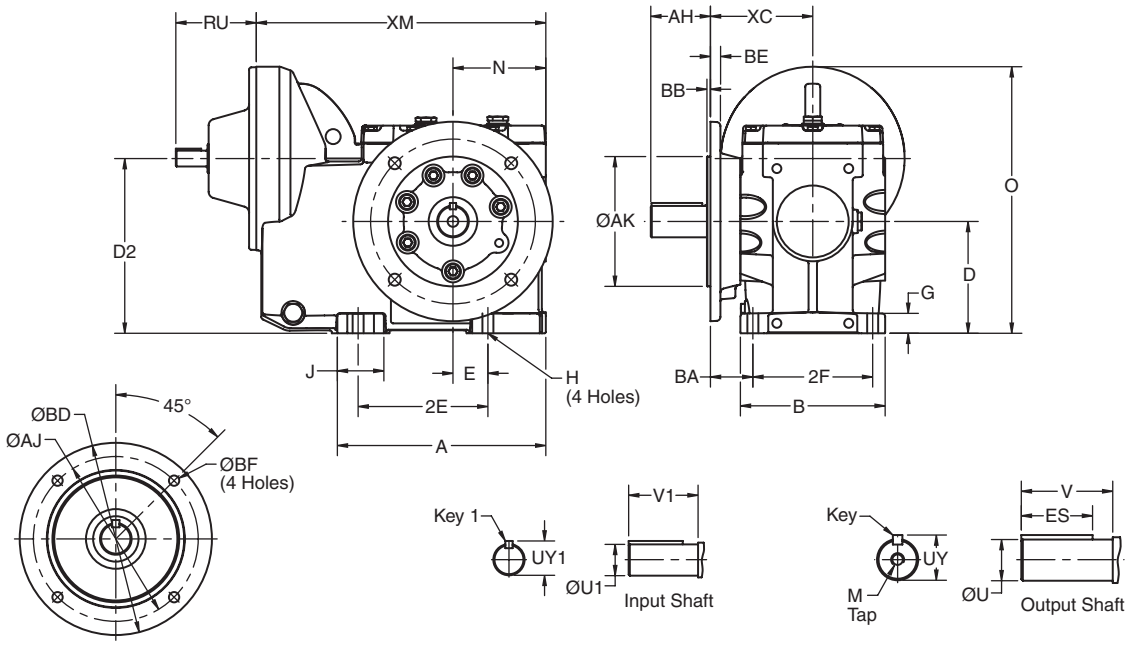
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

2-Stage Output Shafted Flange Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	4.04	12.36

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
3132	S2	1.000	1.10	1.97	1.97	1/4 Sq.	1.34	3/8-16 X .87
3242	S2	1.250	1.35	2.36	2.35	1/4 Sq.	2.03	1/2-13 X 1.13

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

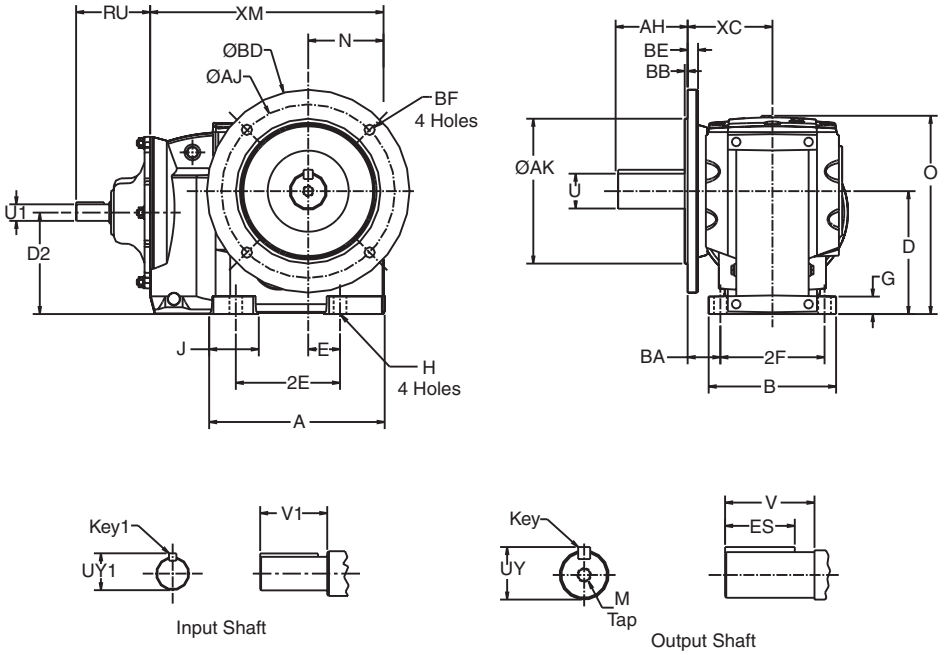
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

Browning

Input Shaft Reducer

OtN SERIES 3000

3-Stage Output Shafted Flange Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
32	S1, S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	10.04
33	S1, S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	11.97
34	S1, S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.76	15.95

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-11 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-11 X 1.61
35	S2	2.375	2.646	4.72	4.72	5/8 Sq.	3.81	3/4-11 X 1.61

Output Flange

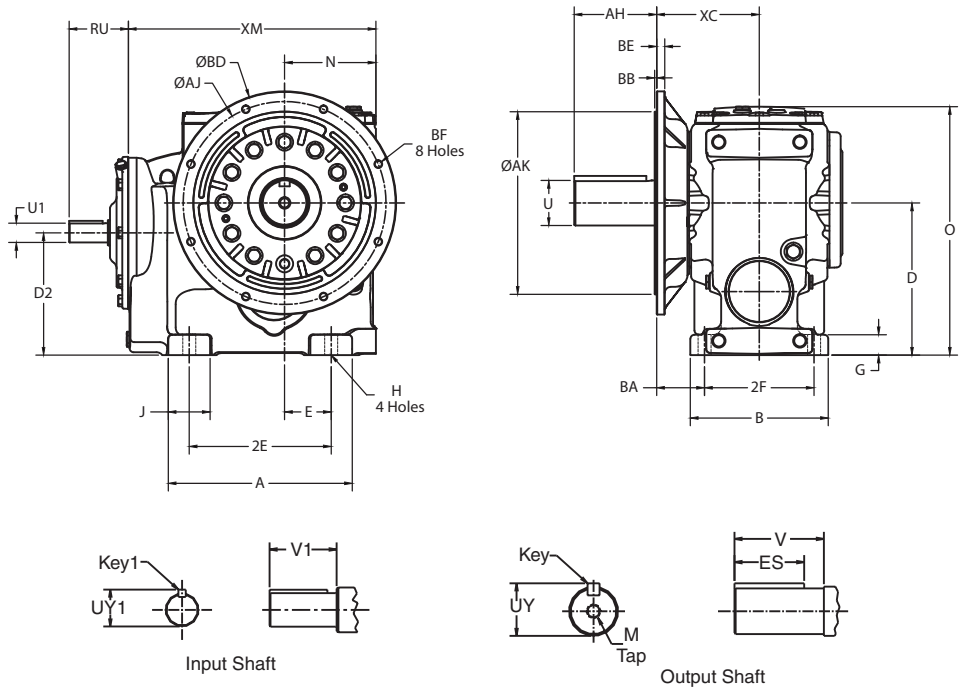
Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
32	S1,S2	3.17	.625	.705	1.25	3/16 Sq.
33	S1,S2	3.17	.625	.705	1.25	3/16 Sq.
34	S1,S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	24.02

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 Sq.	5.00	3/4 -10 x 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 Sq.	7.00	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S1	7.56	1.875	2.101	3.75	1/2 Sq.
37	S1	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

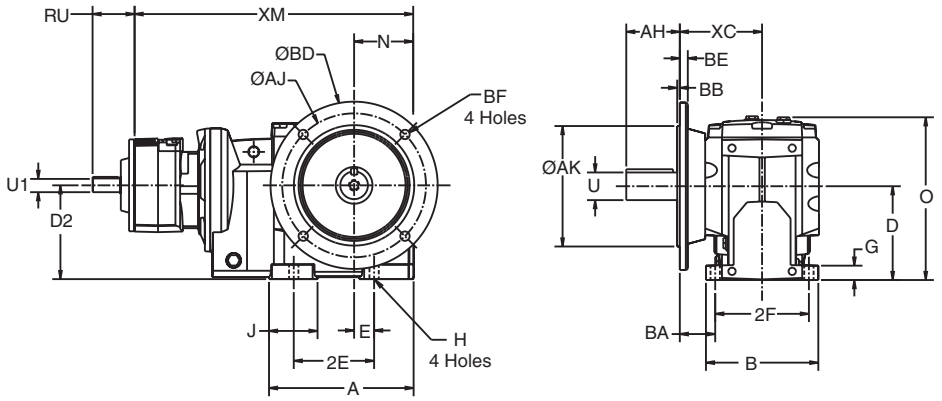
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

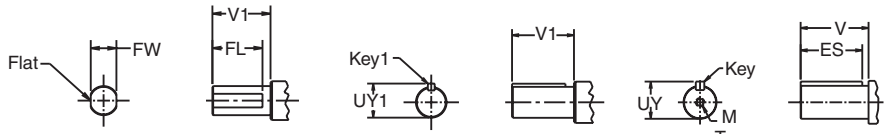
Browning

Input Shaft Reducer

OtN SERIES 3000

Combined Output Shafted Flange Mount
OtN32 - 35





Input Shaft
Frame 32 and 33A Only

Input Shaft
Frames 33, 34 and 35

Output Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
32	S1,S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	4.04	14.49
33	S1,S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	19.90
34	S1,S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.76	23.87

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
32	S2	1.250	1.354	2.38	2.36	1/4 Sq.	2.06	1/2-13 X 1.12
	S1	1.250	1.354	1.77	1.75	1/4 Sq.	1.45	1/2-13 X 1.12
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

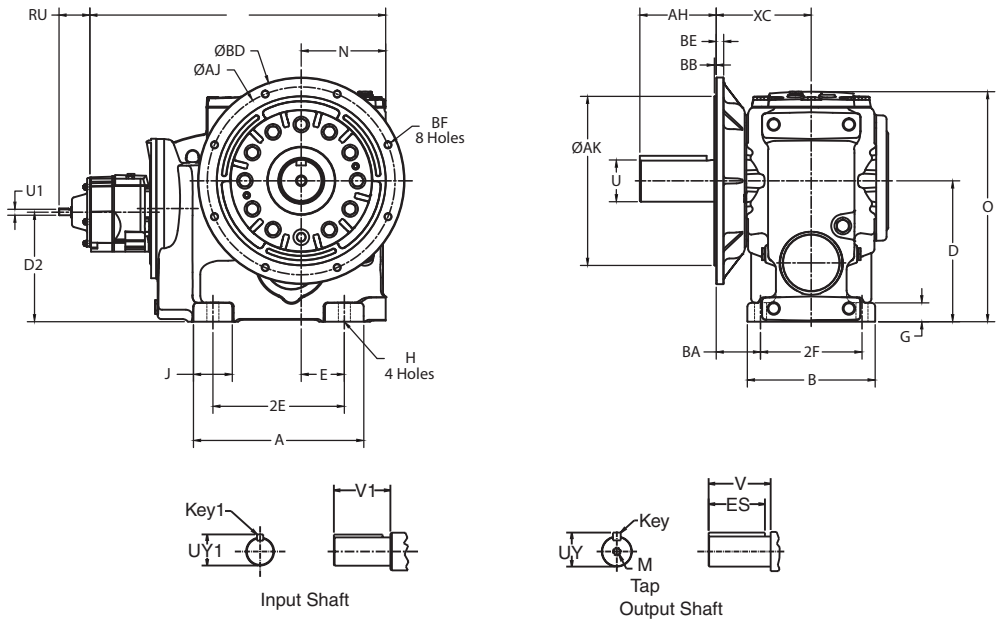
Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

Gear Frame	Version	RU	U1[5]	FL	FW	UY1	V1	Key1
32	S1,S2	3.60	.500	.86	.46	-	1.00	-
33	S1,S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S1,S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

Combined Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	31.00

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 Sq.	5.00	3/4 -10 x 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 Sq.	7.00	1-8 X 2.25

Output Flange

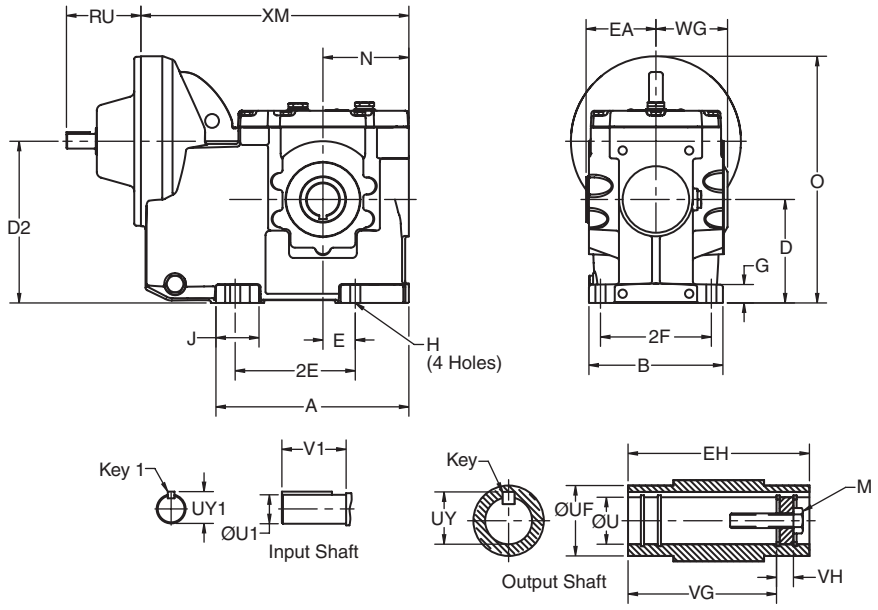
Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S1	3.17	.625	.714	1.25	3/16 Sq.
37	S1	3.17	.625	.714	1.25	3/16Sq.
38	S2	3.17	0.625	0.714	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".
[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

2-Stage Finished Bore Hollow Shaft
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

Output Shaft

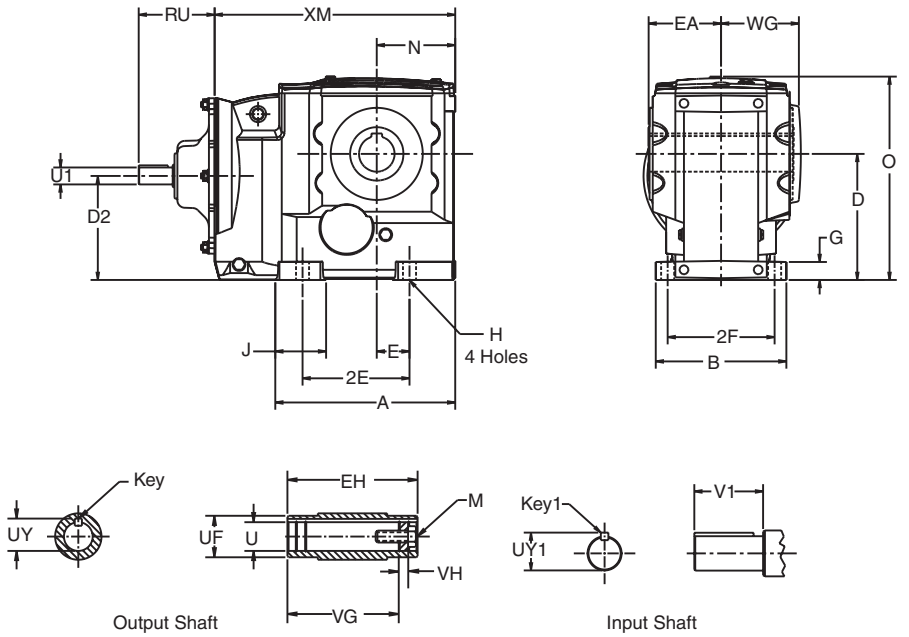
Gear Frame	Version	EA	EH	U[3,4,6]	UF	UY	VG	VH	Key[8]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[7] For details of the torque arm kit,refer to page F-115.
[8] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft Mount
OtN32 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	10.04
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.11
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.02

Output Shaft

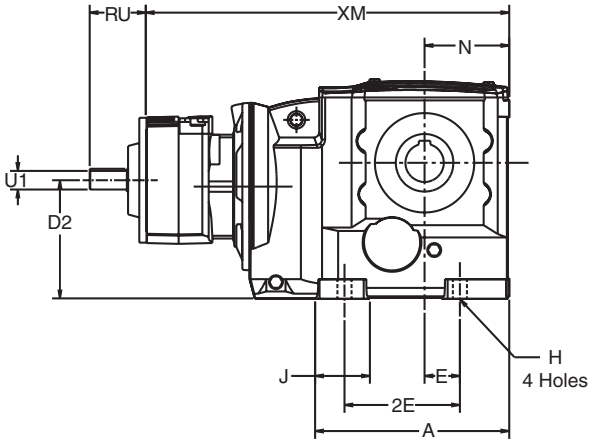
Gear Frame	Version	EA	EH	U[4, 7]	UF	UY	VG	VH	Key[5]	M
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 x 3/8 x 2 1/4	5/8-11 x 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 x 7/16 x 2 5/8	5/8-11 x 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 x 5/8 x 3 5/8	3/4-10 x 2.00
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

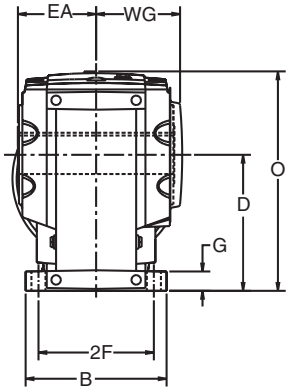
Input Shaft

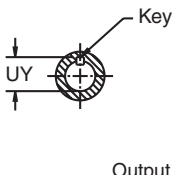
Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
32	S2	3.17	.625	.705	1.25	3/16 Sq.
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 in "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter.
Larger diameter "U1", +.000"; –.001".
[7] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above. (Frames 32 - 35 only).
[8] For details of the torque arm kit,refer to page F-117

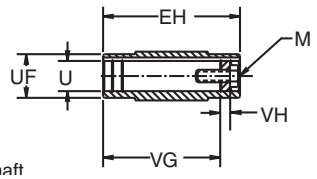
Combined Finished Bore Hollow Shaft
OtN32 - 38

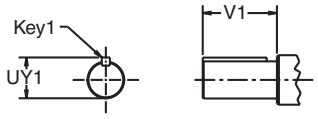




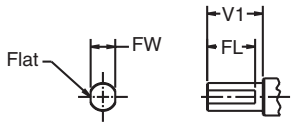


Output Shaft





Input Shaft
Frames 33 and 34-38



Input Shaft
Frame 32 and 33A Only

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.22	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.00

Output Shaft

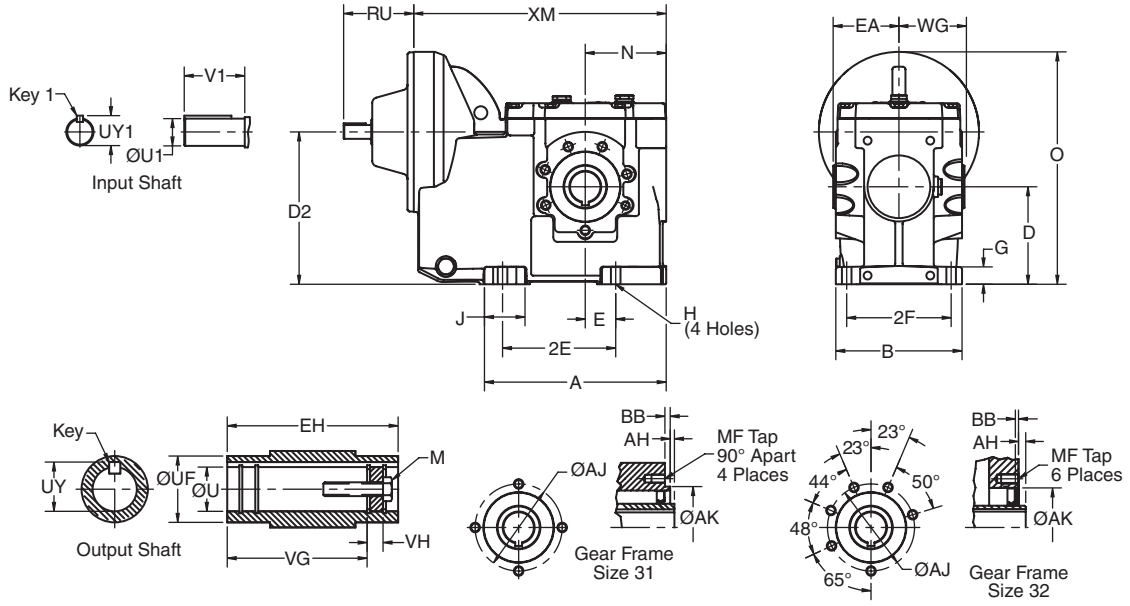
Gear Frame	Version	EA	EH	U[4, 8]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 x 5/16 x 1 13/16	1/2-13 x 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 x 3/8 x 2 1/4	5/8-11 x 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 x 7/16 x 2 5/8	5/8-11 x 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 x 5/8 x 3 5/8	3/4-10 x 2.00
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Input Shaft

Gear Frame	Version	RU	U1[6]	FL	FW	UY1	V1	Key1
32	S2	3.60	.500	.86	.46	-	1.00	-
33	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
36	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.
37	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.
38	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 in "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[8] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above. (Frames 32 - 37 only).
[9] For details of the torque arm kit,refer to pages F-115.

2-Stage Finished Bore Hollow Shaft Face Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	2.85	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[6]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Face Mount

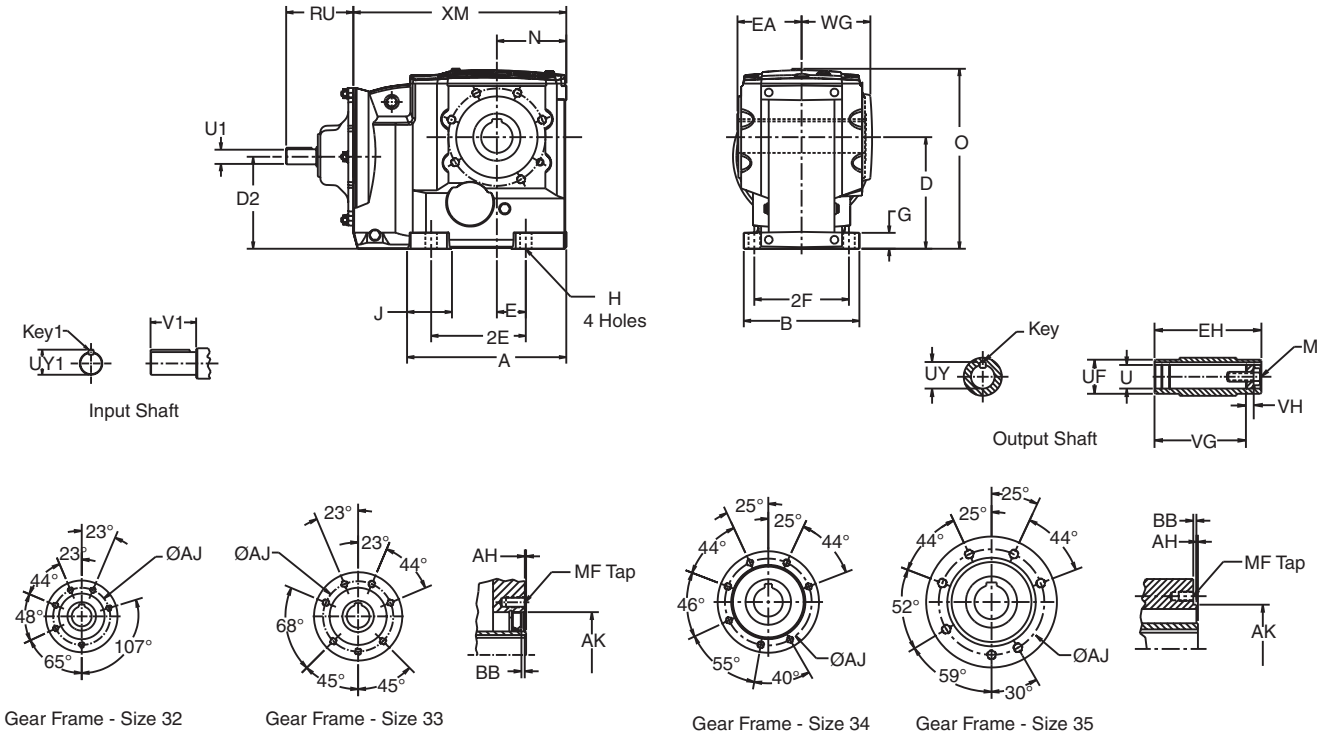
Gear Frame	Version	AH	AJ	AK	BB	MF
31	S2	.20	3.740	3.35	.14	M8-1.25 X12
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft Face Mount
OtN32 - 35



Gear Frame - Size 32 | Gear Frame - Size 33 | Gear Frame - Size 34 | Gear Frame - Size 35

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.15	10.04
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Output Shaft

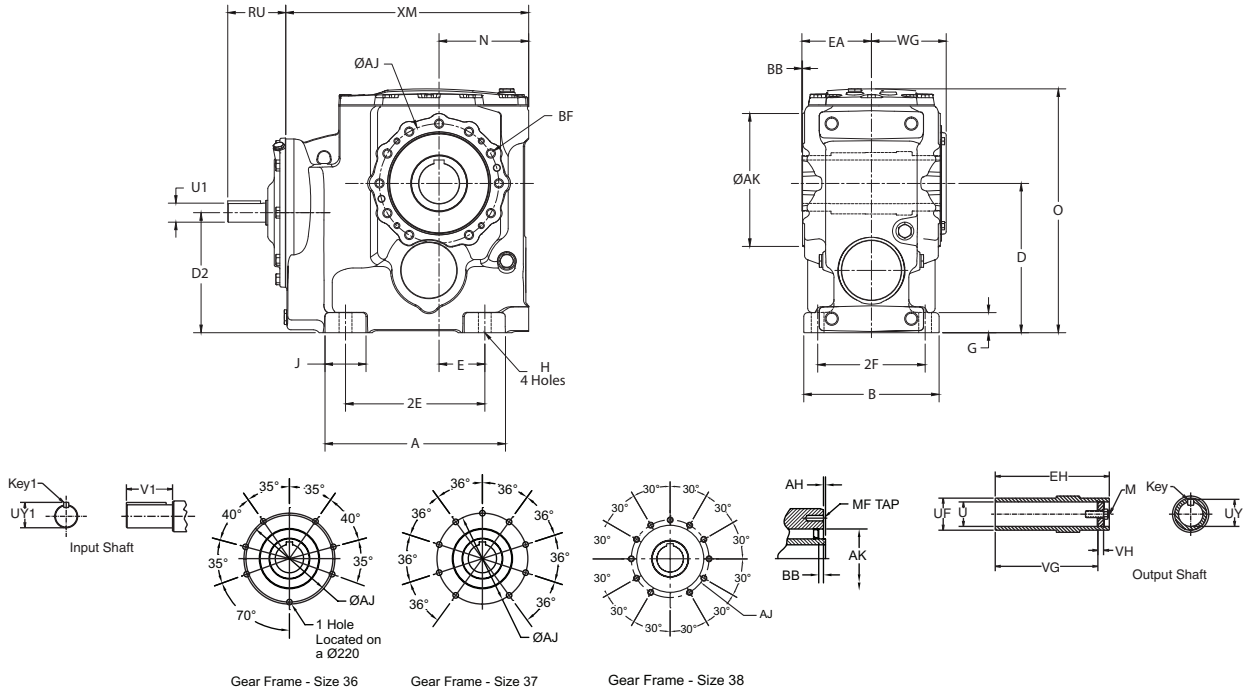
Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
32	S2	3.17	.625	.705	1.25	3/16 Sq.
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 in "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Finished Bore Hollow Shaft Face Mount
OtN36 - 38



Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.02

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
36	S2	.20	9.06	5.91	.28	M16-2.0 X 27
37	S2	.20	9.06	7.09	.28	M20-2.5 X 35
38	S2	.10	11.81	9.84	.20	M20-2.00 X 35

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

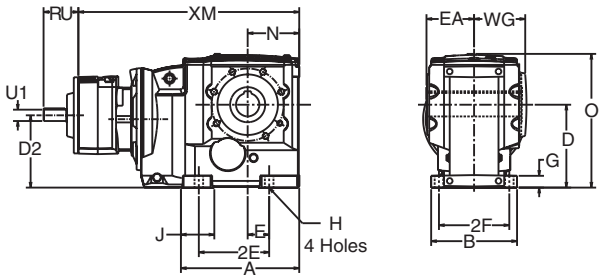
Browning

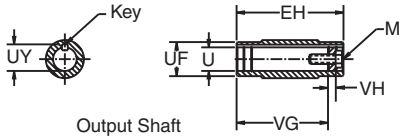
Input Shaft Reducer

OtN SERIES 3000

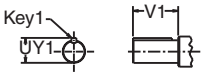
Combined Finished Bore Hollow Shaft Face Mount

OtN32 - 35

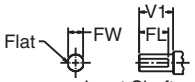




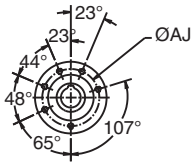
Output Shaft



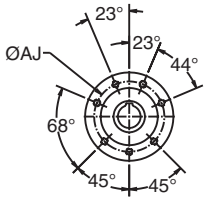
Input Shaft
Frames 33, 34 and 35



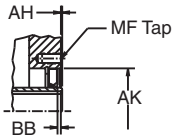
Input Shaft
Frame 32 and 33A Only

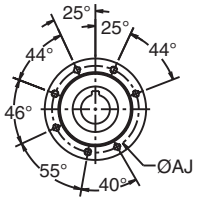


Gear Frame - Size 32

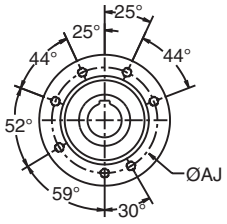


Gear Frame - Size 33

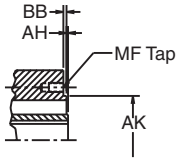




Gear Frame - Size 34



Gear Frame - Size 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	3.15	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	19.90[7]
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	23.87

Face Mount

Gear Frame	Version	AH	AJ	AK	BB	MF
32	S2	.12	3.94	3.15	.16	M10-1.50 X 22
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Output Shaft

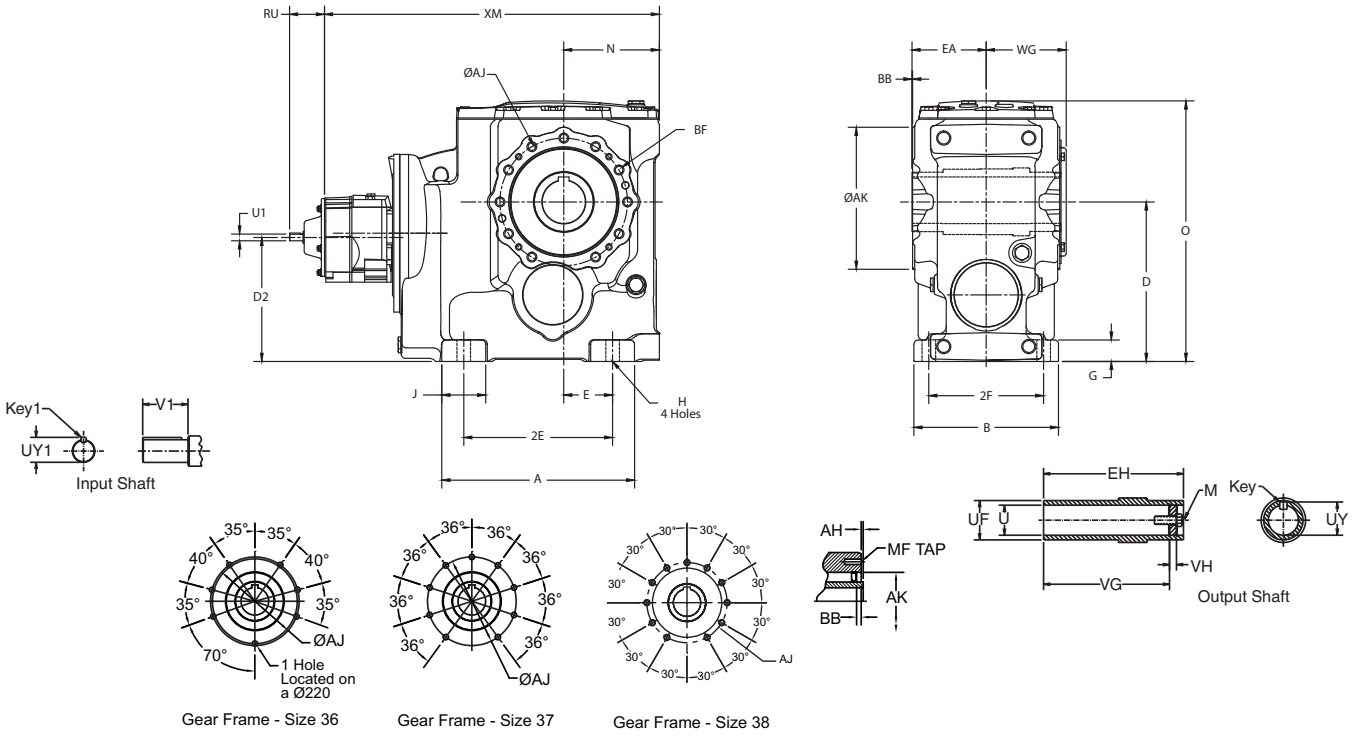
Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Input Shaft

Gear Frame	Version	RU	U1[6]	FL	FW	UY1	V1	Key1
32	S2	3.60	.500	.86	.46	-	1.00	-
33	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 in "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[7] XM dimension when gear frame 33A is used will be 16.42.

Combined Finished Bore Hollow Shaft Face Mount
OtN36 - 38



Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	37.49
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.00

Face Mount

Gear Frame	Version	AJ	AK	BB	MF
36	S2	9.06	5.91	.28	M16-2.00 X 27
37	S2	9.06	7.09	.28	M20-2.50 X 35
38	S2	11.81	9.84	.20	M20-2.00 X 35

Output Shaft

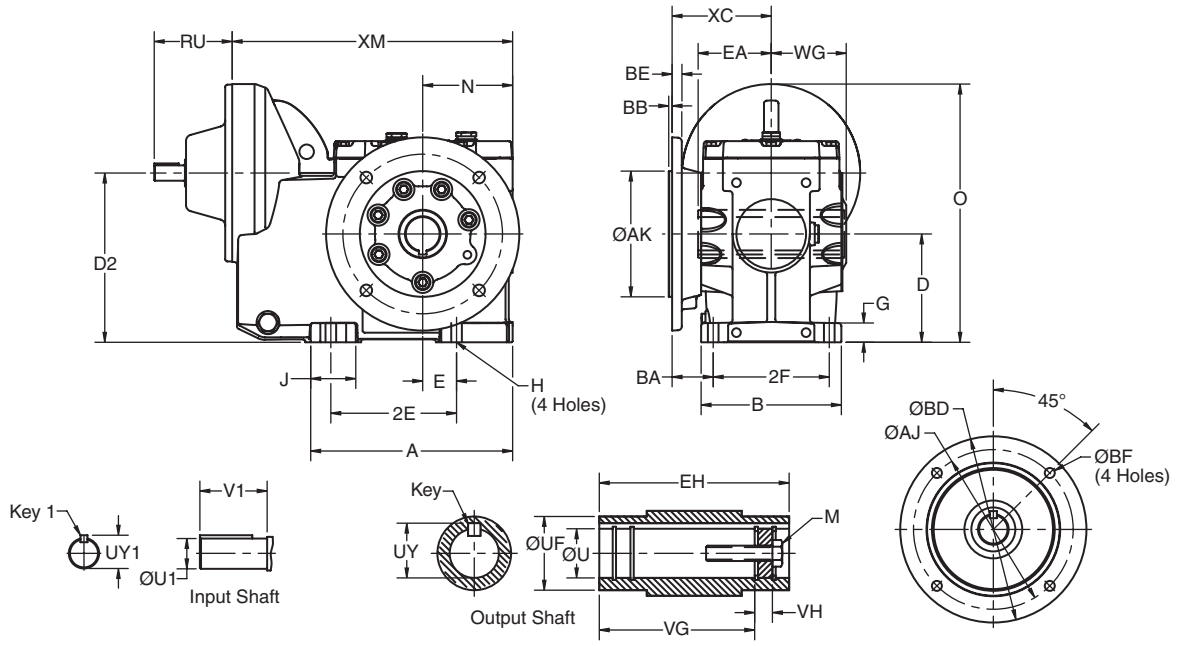
Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 X 6 1/2	1-8 X 2.25

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	.625	.714	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

2-Stage Finished Bore Hollow Shaft Flange Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	1.54	2.85	3.50	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	1.67	3.22	4.04	12.36

Output Shaft

Gear Frame	Version	EA	EH	U[3,4]	UF	UY	VG	VH	Key[6]	M
3132	S2	2.56	5.12	1.250	1.77	1.372	4.31	.37	1/4 X 1/4 X 1 1/2	7/16-14 X 1.00
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

Output Flange

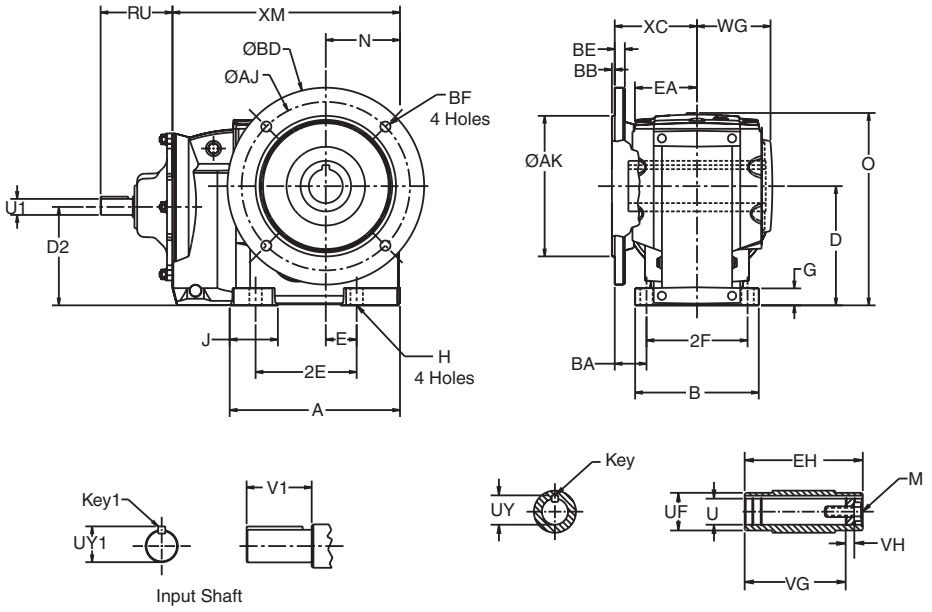
Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
3132	5	4.331	5.12	.14	6.50	.39	.35
3242	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

3-Stage Finished Bore Hollow Shaft Flange Mount
OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	10.04
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.77	15.95

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[5]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

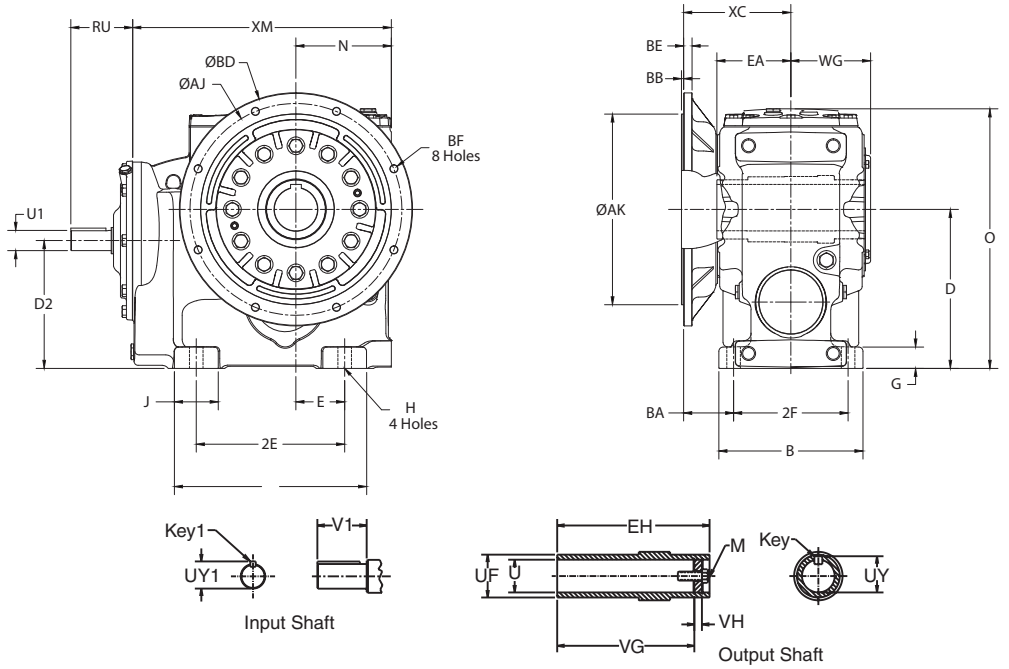
Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
32	S2	3.17	.625	.705	1.25	3/16 Sq.
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 in "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Finished Bore Hollow Shaft Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 in "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

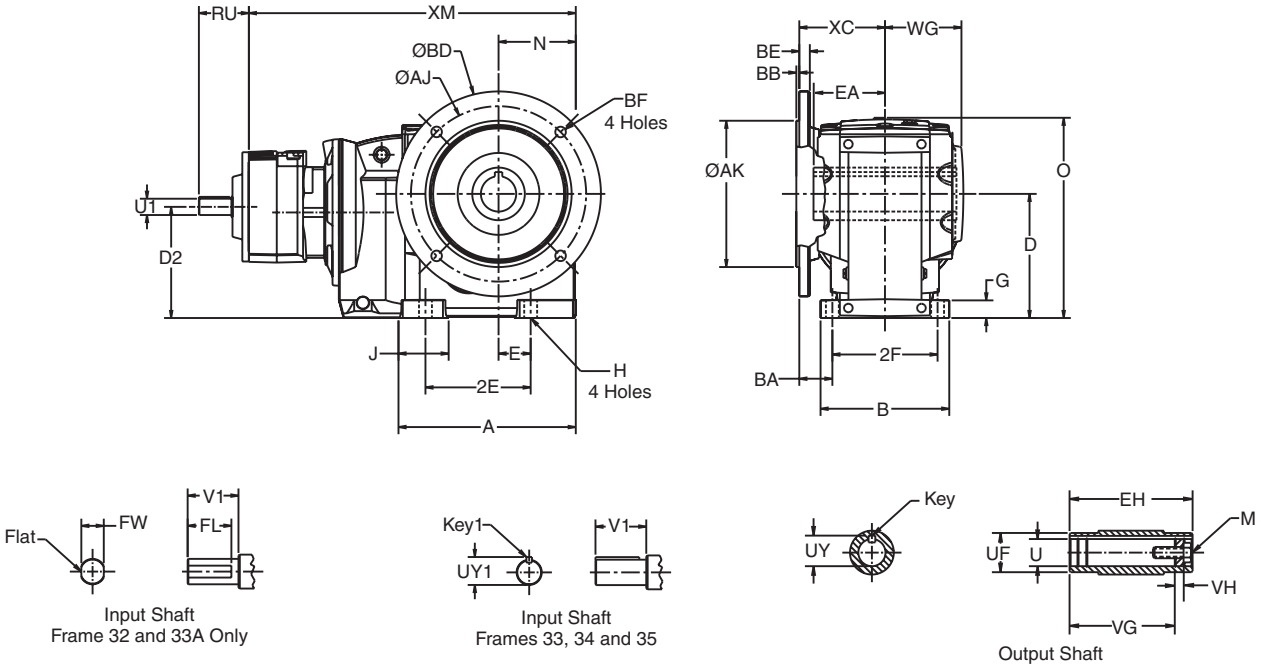
Browning®

Input Shaft Reducer

OtN SERIES 3000

Combined Finished Bore Hollow Shaft Flange Mount

OtN32 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	1.81	3.22	4.04	14.49
33	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	19.90
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.77	23.87

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
32	S2	2.98	5.95	1.375	1.96	1.523	5.20	.55	5/16 X 5/16 X 1 13/16	1/2-13 X 1.00
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

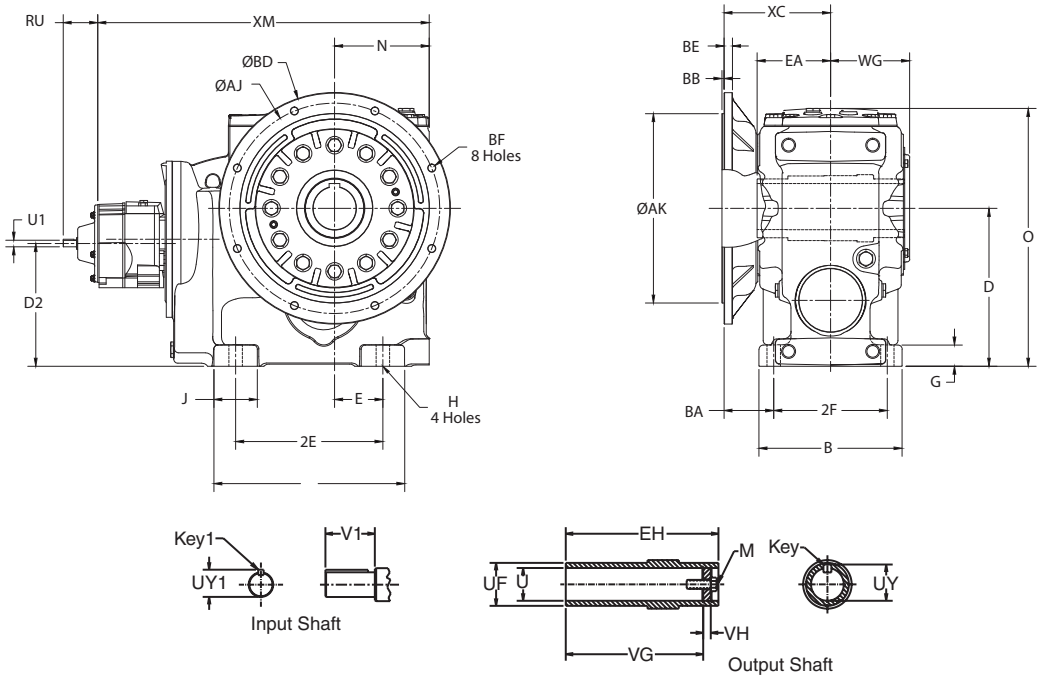
Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
32	5	5.118	6.50	.14	7.87	.39	.47
	6	7.087	8.46	.16	9.84	.47	.55
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

Gear Frame	Version	RU	U1[6]	FL	FW	UY1	V1	Key1
32	S2	3.60	.500	.86	.46	-	1.00	-
33	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 in "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter.
Larger diameter "U1", +.000"; –.001".

Combined Finished Bore Hollow Shaft Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	31.00

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Flange

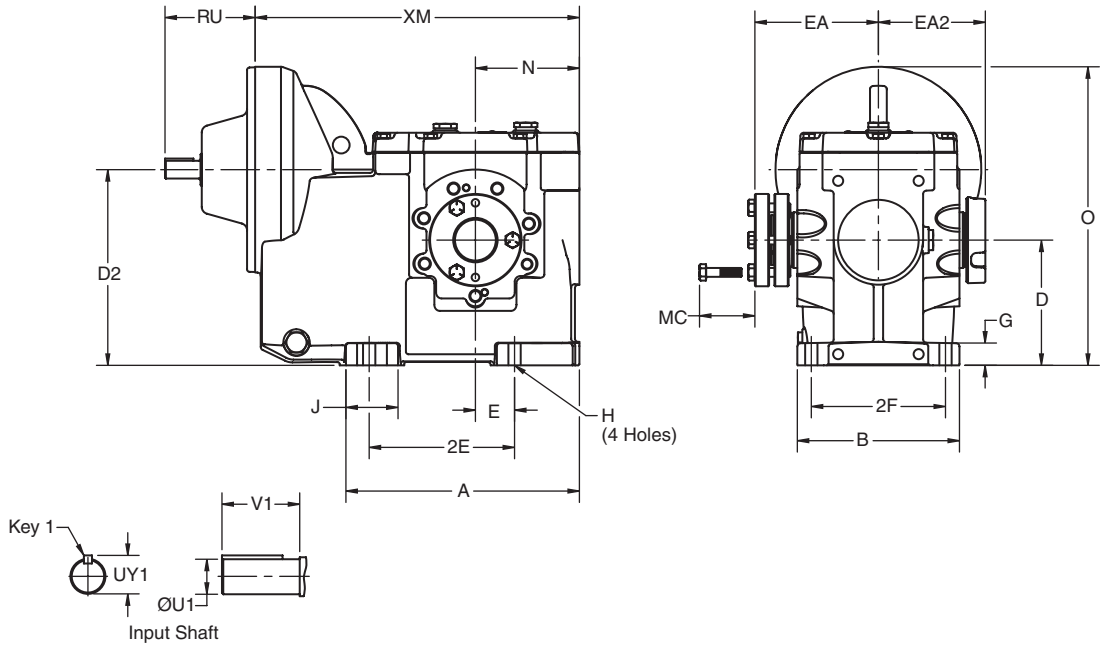
Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	.625	.714	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 in "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

2-Stage Bushed Shaft Mount
OtN31 - 32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
3132	S2	5.88	4.65	3.15	4.98	1.97	3.94	3.94	.56	.35	1.53	8.01	3.15	10.59
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36

Output Shaft

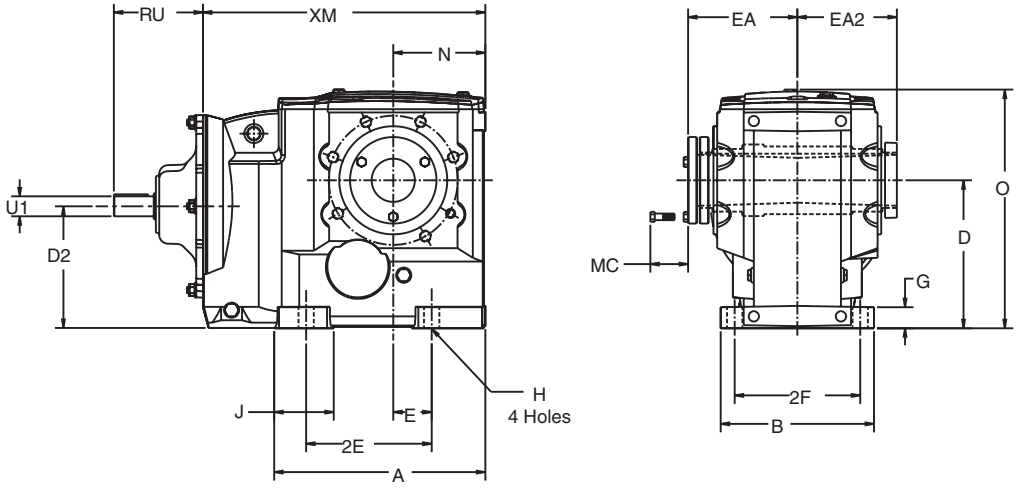
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
3132	S2	4.25	3.80	1.50	1	1 5/16
3242	S2	4.85	4.27	1.75	3/4	1 7/16

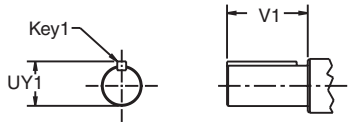
Input Shaft

Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
31	S2	3.17	.625	.705	1.25	3/16 Sq.
32	S2	3.17	.625	.705	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Taper Bushed Shaft Mount
OtN32 - 38





Input Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	3.78	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	10.04
33A	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.99
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	15.95
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

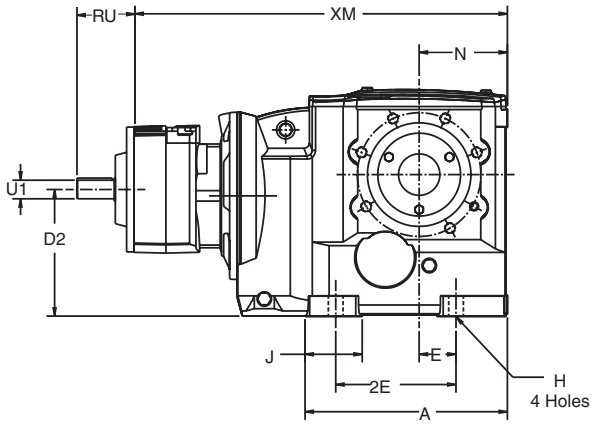
Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
32	S2	4.85	4.27	1.75	3/4	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	15/16	1 15/16
35	S2	6.17	5.620	1.88	1 3/8	2 7/16
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

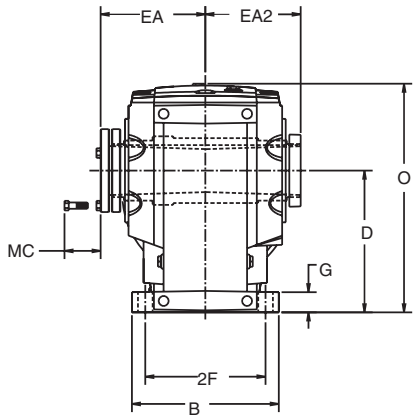
Input Shaft

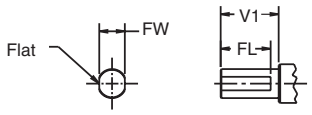
Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
32, 33A	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

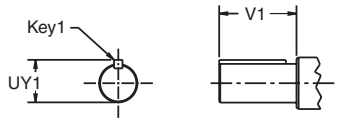
Combined Taper Bushed Shaft Mount
OtN32 - 38







Input Shaft
Frame 32 and 33A Only



Input Shaft
Frames 33 and 34-38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
32	S2	7.81	5.71	4.41	4.06	1.38	5.12	4.71	.73	.43	2.34	8.09	3.03	14.49
33A	S2	8.50	6.61	5.51	4.91	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	19.99
34	S2	10.13	7.87	7.09	5.57	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	21.55
35	S2	11.92	8.66	8.35	6.56	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	23.87
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.00

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
32	S2	4.85	4.27	1.75	1 5/16	1 7/16
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	15/16	1 15/16
35	S2	6.17	5.620	1.88	1 3/8	2 7/16
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Input Shaft

Gear Frame	Version	RU	U1[3]	FL	FW	UY1	V1	Key1
32	S2	3.60	.500	.86	.46	-	1.00	-
33A	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
34	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
35	S2	3.17	.625	-	-	.705	1.25	3/16 Sq.
36	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.
37	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.
38	S2	3.17	.625	-	-	.714	1.25	3/16 Sq.

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

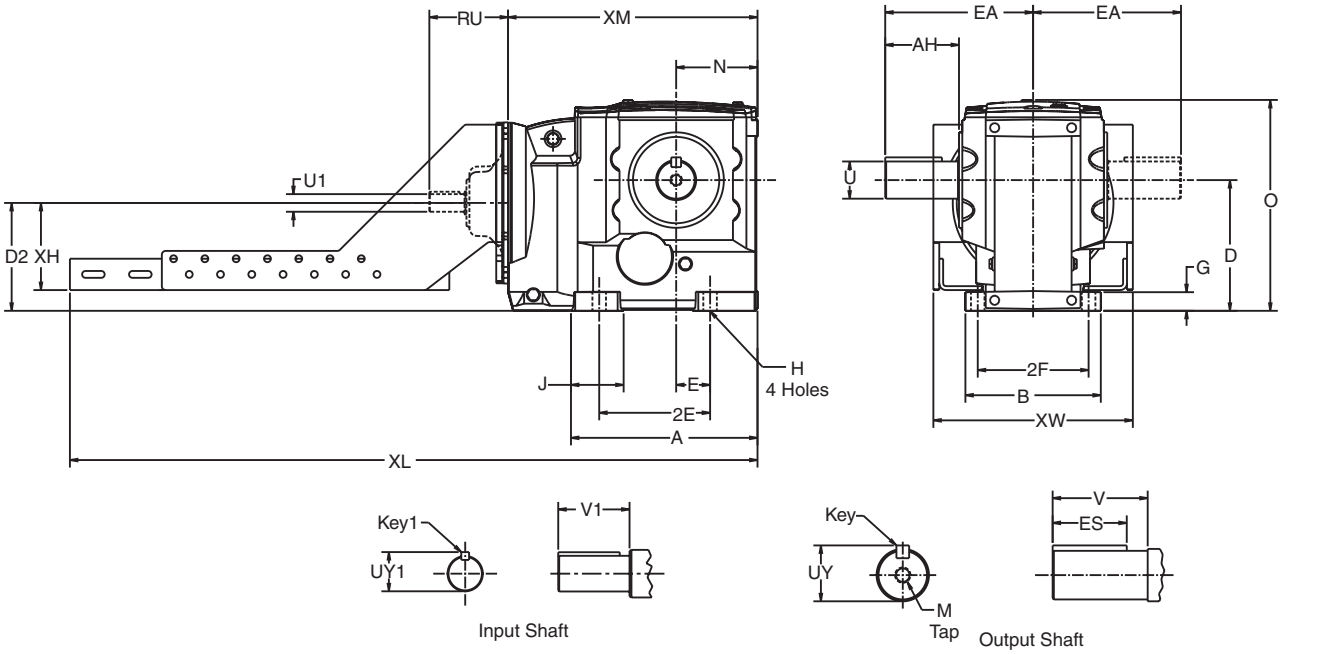
Browning

Scoop Mount Reducer

OtN SERIES 3000

3-Stage Output Shafted Foot Mount

OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	11.97
	S1	8.08	8.58	4.92	5.20	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78
	S1	10.69	9.60	6.30	7.49	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	15.95
	S1	13.07	10.98	7.87	9.33	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	15.95

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 X 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
33	S1,S2	3.17	.625	.71	1.25	3/16 Sq.
34	S1,S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S1,S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame

Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

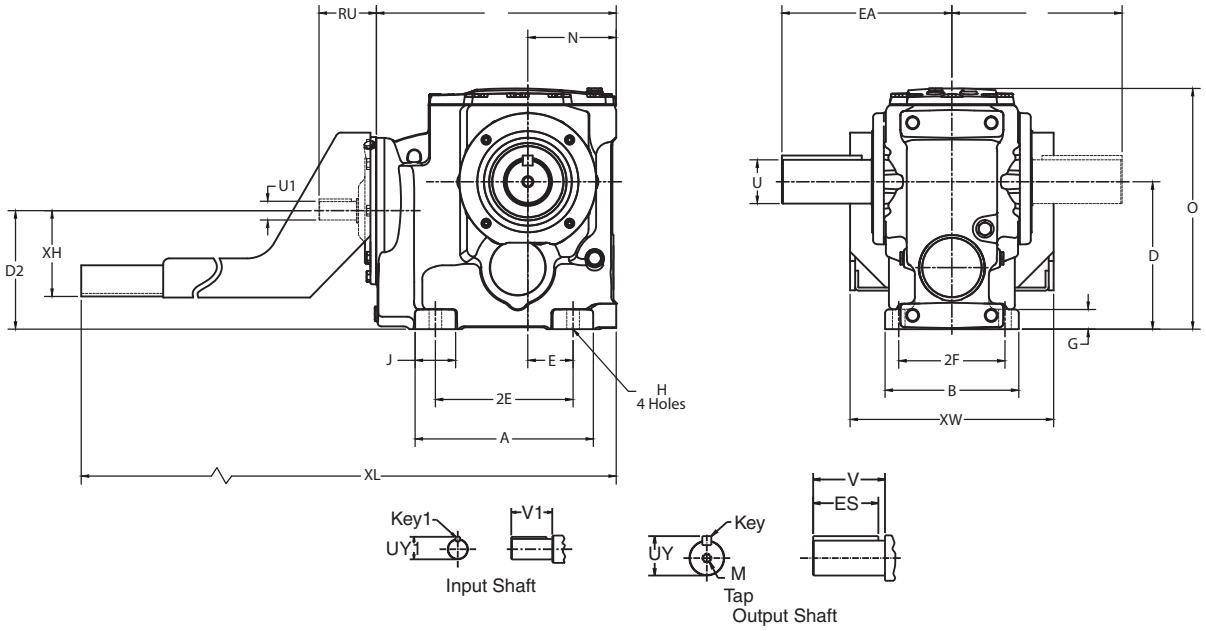
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Output Shafted Foot Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S1	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.12
37	S1	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	KEY	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 Sq.	5.00	3/4-10 x 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 Sq.	7.00	1-8 x 2.25

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S1	7.56	1.875	2.101	3.75	1/2 Sq.
37	S1	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182-184T			213-215T			254-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.4	15.00	6.63	60.4	15.00	6.63	60.4	15.00	8.50	64.4	19.06	8.50	64.4	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

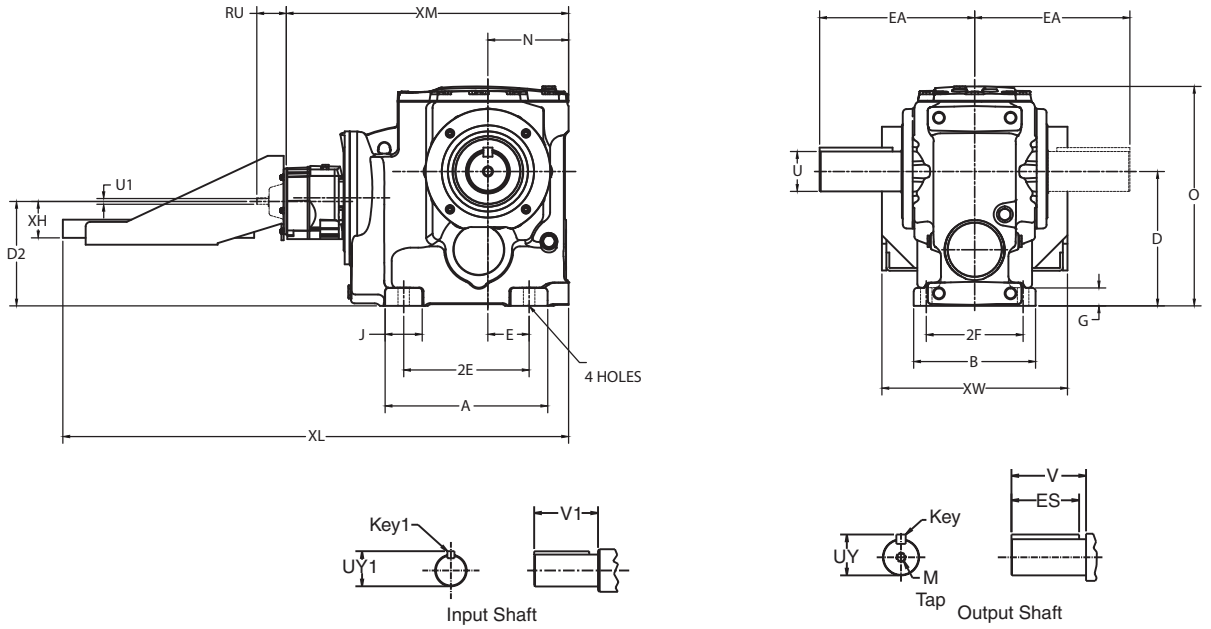
Browning®

Scoop Mount Reducer

OtN SERIES 3000

Combined Output Shafted Foot Mount

OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S1	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	30.10
37	S1	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	31.00

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	KEY	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 Sq.	5.00	3/4-10 x 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 Sq.	7.00	1-8 x 2.25

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S1	3.17	.625	.714	1.25	3//4 Sq.
37	S1	3.17	.625	.714	1.25	3//4 Sq.
38	S2	3.17	0.625	0.714	1.25	3/16 Sq.

Motor Frame

Gear Frame	143T-145T		
	XH	XL	XW
36	3.75	48.39	11.38
37	3.75	53.72	11.38
38	5.56	56.29	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

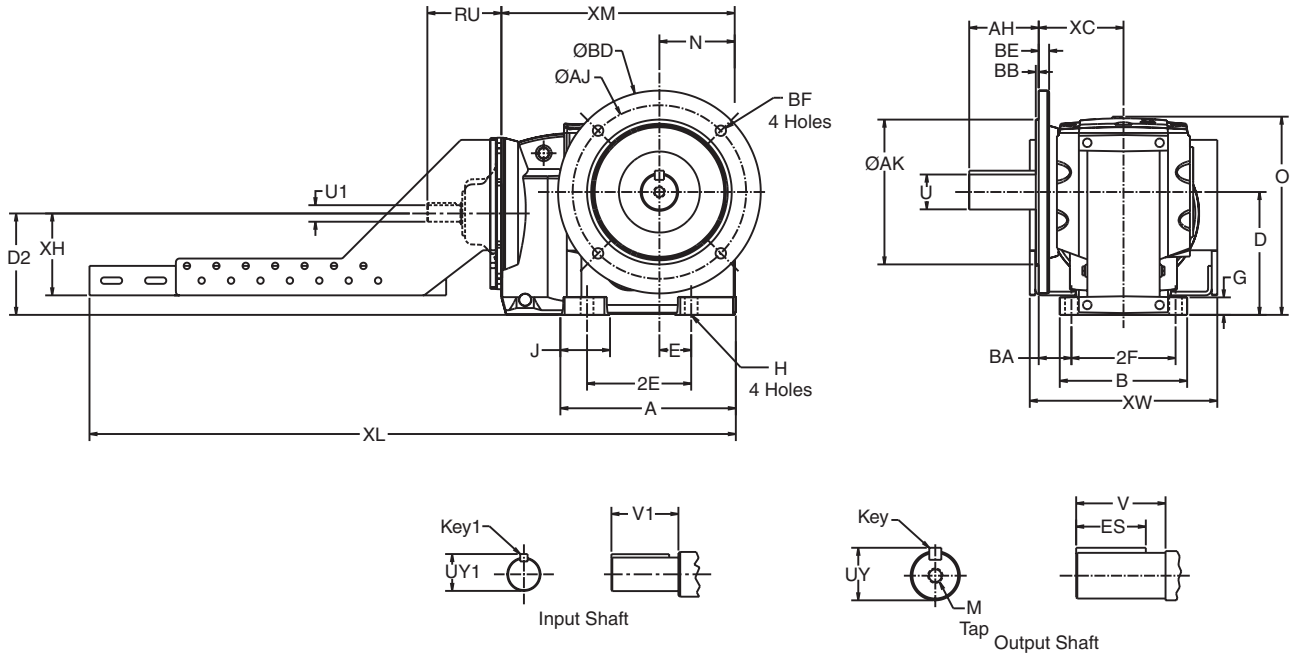
[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

Browning®

Scoop Mount Reducer

OtN SERIES 3000

3-Stage Output Shafted Flange Mount
OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
33	S1,S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.24	4.84	11.97
34	S1,S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	5.18	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.76	15.95

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	Key	ES	M
33	S2	1.625	1.783	3.25	3.15	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	2.28	3/8 Sq.	2.19	5/8-11 X 1.38
34	S2	2.000	2.210	3.94	3.94	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.28	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.72	4.72	5/8 Sq.	3.81	3/4-10 X 1.61

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
33	S1,S2	3.17	.625	.705	1.25	3/16 Sq.
34	S1,S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame

Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

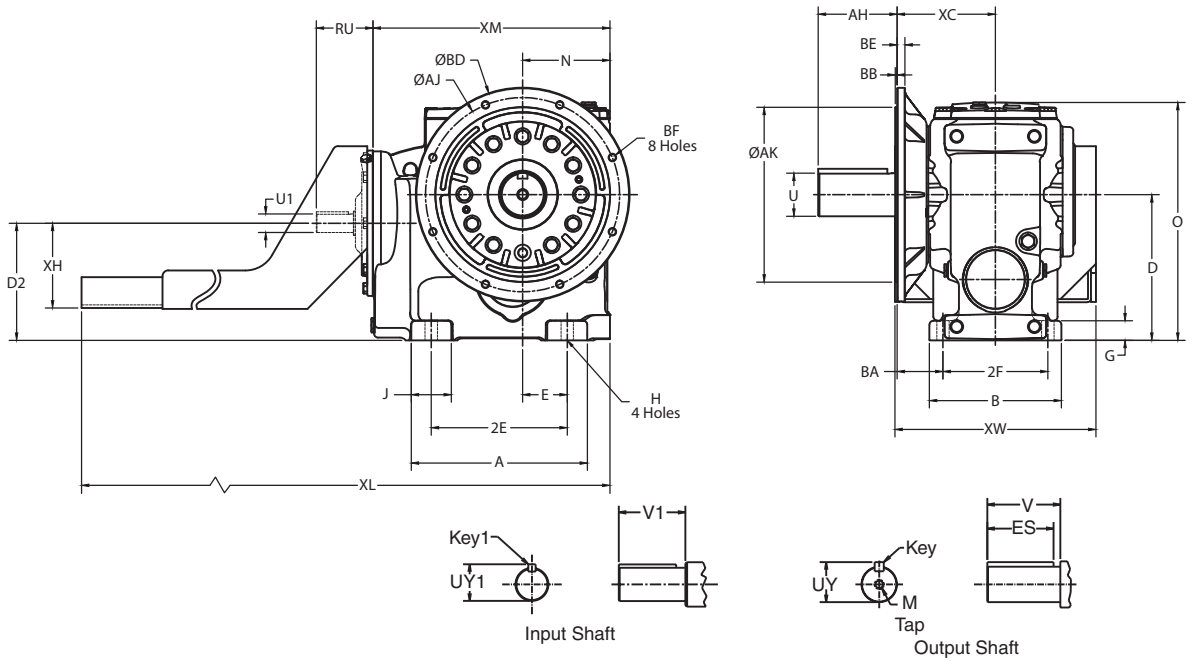
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	30.10
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	35.43
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	24.02

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	KEY	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 Sq.	5.00	3/4-10 x 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 Sq.	7.00	1-8 X 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182-184T			213-215T			254-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.40	15.00	6.63	60.40	15.00	6.63	60.40	15.00	8.50	64.40	19.06	8.50	64.40	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

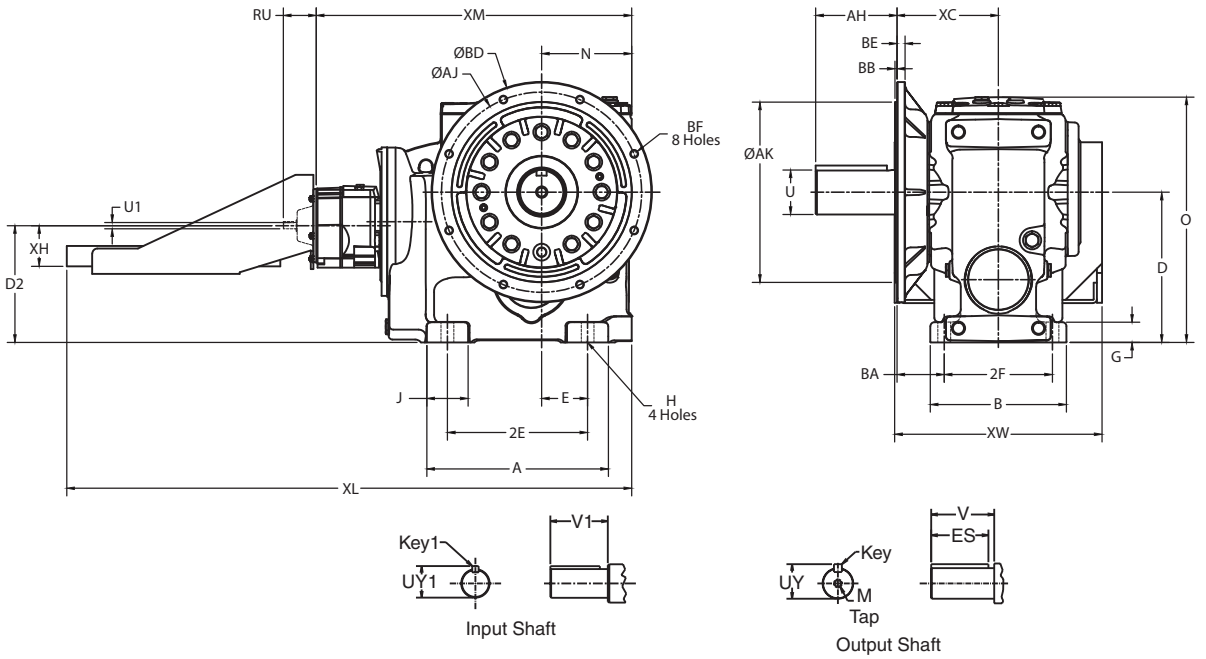
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

Combined Output Shafted Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	XC	XM
36	S2	17.06	11.41	8.86	S2	8.46	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	9.17	30.10
37	S2	20.58	12.99	9.84	S2	10.57	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	9.76	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	9.96	31.00

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	KEY	ES	M
36	S2	2.875	3.20	7.68	5.51	3/4 Sq.	5.00	3/4-10 x 1.61
37	S2	3.625	4.01	8.88	6.69	7/8 Sq.	6.00	1-8 x 2.13
38	S2	4.375	4.809	8.99	9.97	1.00 Sq.	7.00	1-8 x 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	13.78	15.75	.236	17.70	.79	.71
	6	17.72	19.68	.236	21.65	.63	.87
38	5	17.72	19.69	.200	21.65	.79	.69
	6	21.65	23.62	.236	25.98	.63	.87

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	0.625	0.714	1.25	3/16 Sq.

Motor Frame

Gear Frame	143T-145T		
	XH	XL	XW
36	3.75	48.39	11.38
37	3.75	53.72	11.38
38	5.56	56.29	12.75

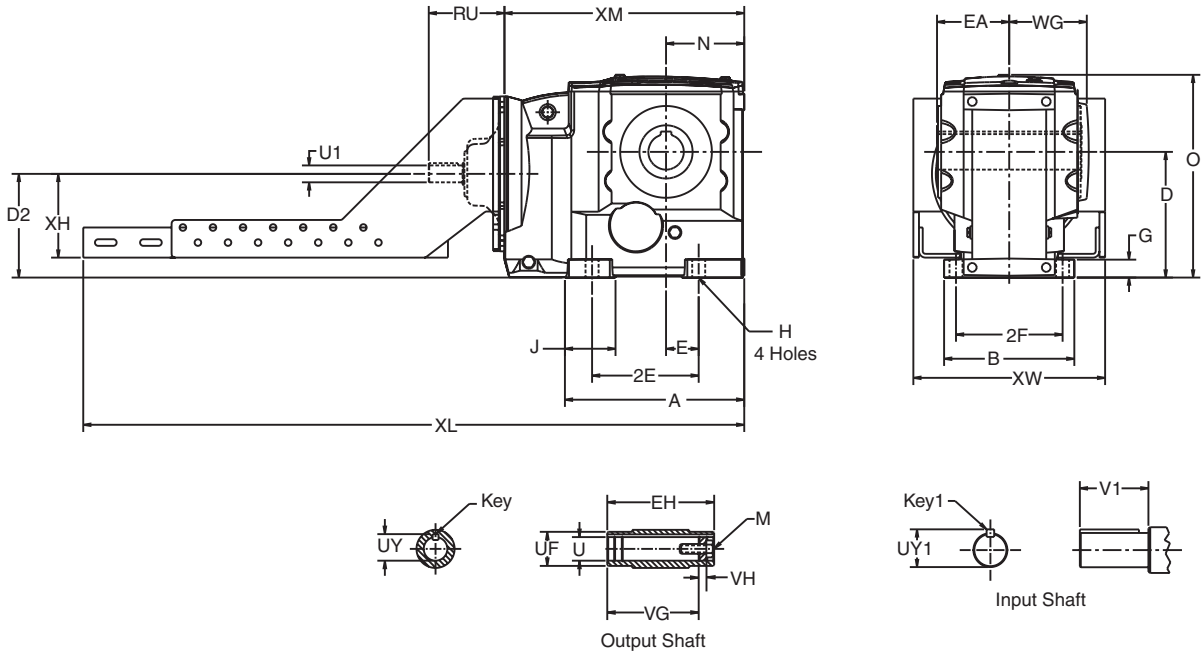
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Finished Bore Hollow Shaft
OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95

Output Shaft

Gear Frame	Version	EH	U[4,7]	UY	EA	UF	VG	VH	Key[5]	M
33	S2	6.94	1.500	1.674	3.47	2.16	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	8.97	2.000	2.210	4.49	2.56	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	9.66	2.375	2.656	4.83	3.54	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Input Shaft

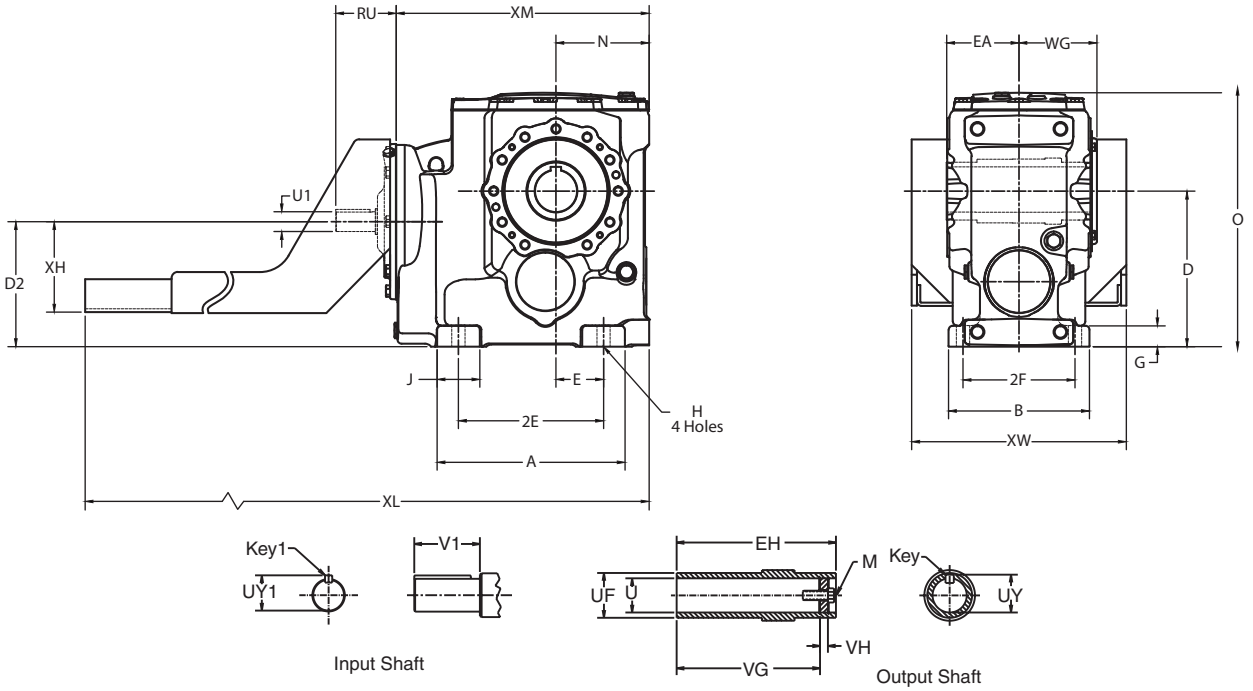
Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame

Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 “S2” version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[7] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Finished Bore Hollow Shaft
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[7]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.22	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Input Shaft

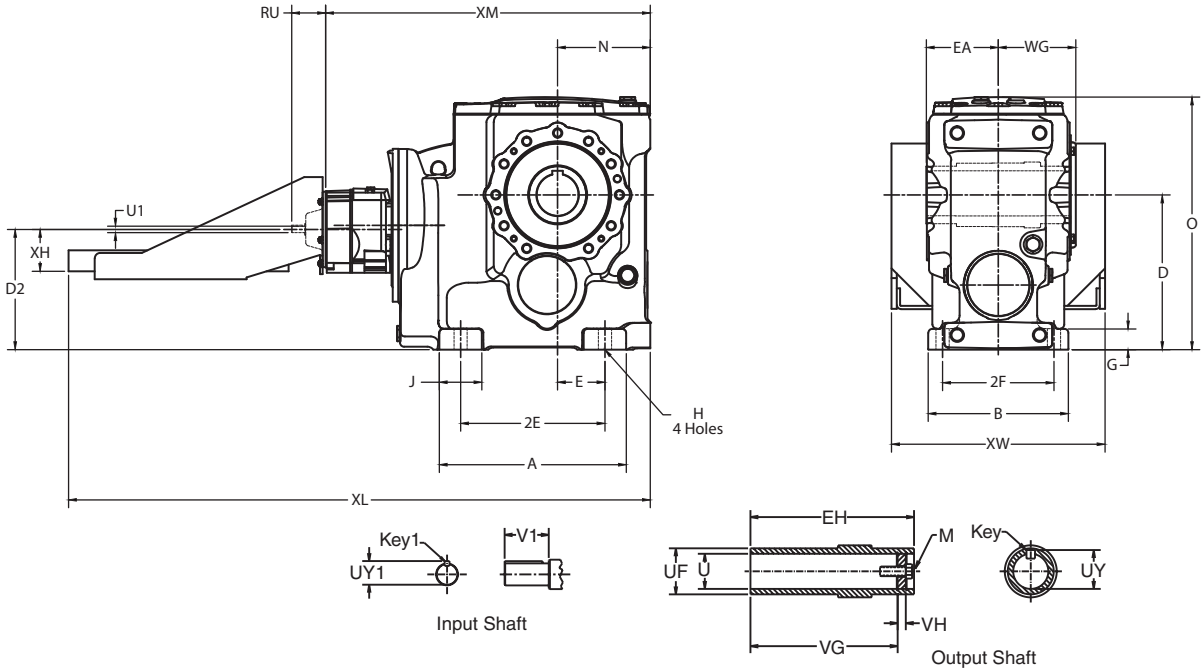
Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182-184T			213-215T			254-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.4	15.00	6.63	60.4	15.00	6.63	60.4	15.00	8.50	64.4	19.06	8.50	64.4	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] For details of the torque arm kit,refer to page F-115.
[7] Key not supplied with reducer.

Combined Finished Bore Hollow Shaft
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.00

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[7]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	.625	.714	1.25	3/16 Sq.

Motor Frame

Gear Frame	143T-145T		
	XH	XL	XW
36	3.75	48.39	11.38
37	3.75	53.72	11.38
38	5.56	56.29	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] For details of the torque arm kit,refer to page F-115.
[7] Key not supplied with reducer.

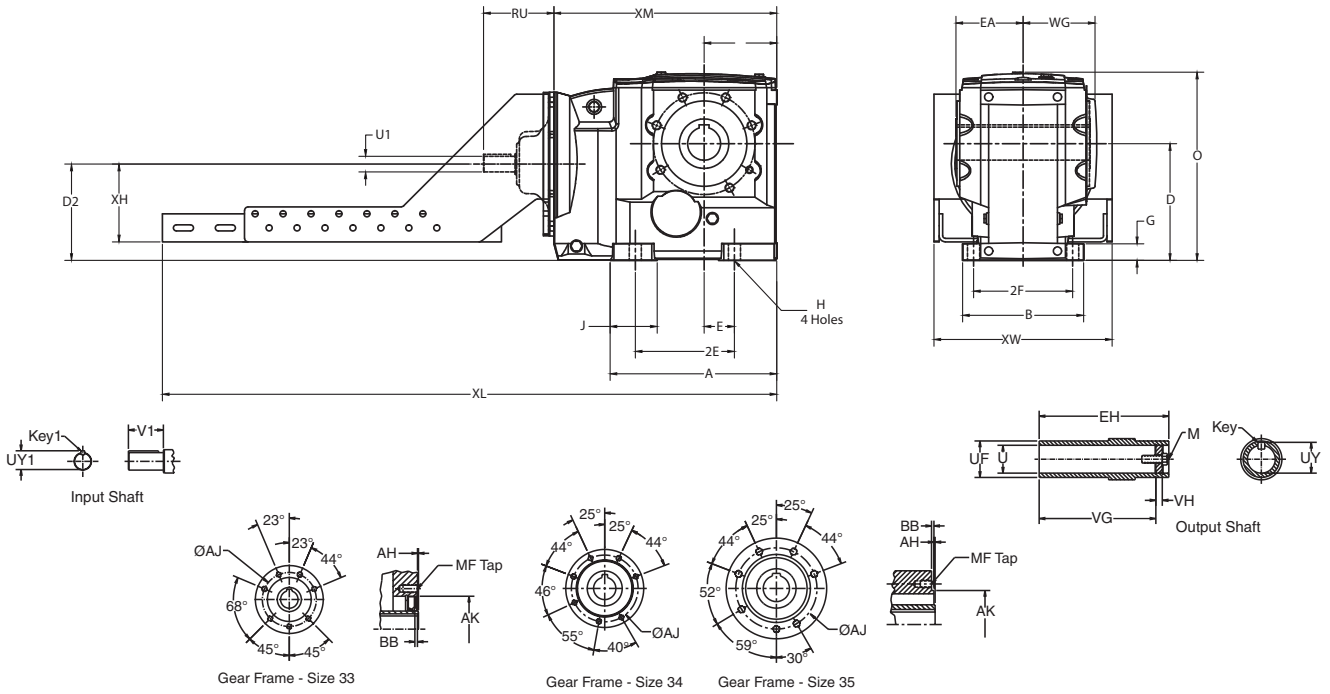
Browning®

Scoop Mount Reducer

OtN SERIES 3000

3-Stage Finished Bore Hollow Shaft Face Mount

OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Face

Gear Frame	Version	AH	AJ	AK	BB	MF
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Input Shaft

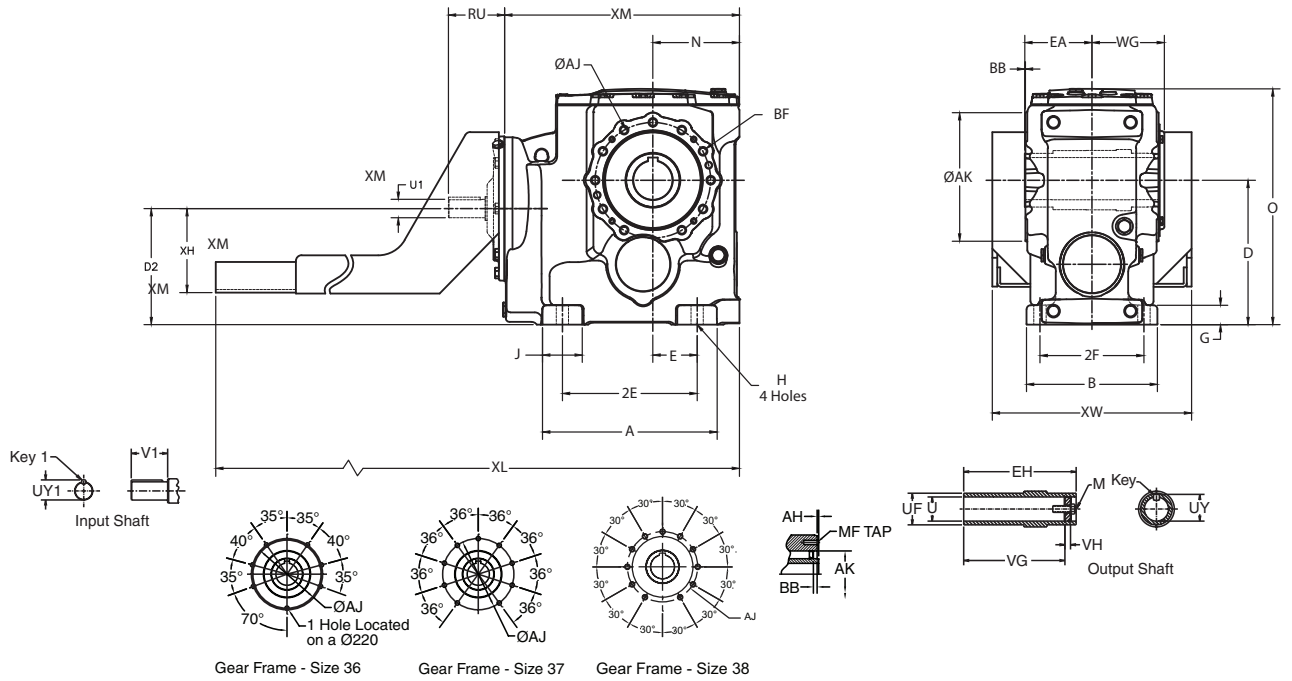
Gear Frame	Version	RU	U1[6]	UY1	V1	KEY[1]
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame

Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Finished Bore Hollow Shaft Face Mount
OtN36 - 38



Gear Frame - Size 36 | Gear Frame - Size 37 | Gear Frame - Size 38

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Face

Gear Frame	Version	AH	AJ	AK	BB	BF
36	S2	-	9.06	5.91	.28	M16-2.0 x 27
37	S2	-	9.06	7.09	.28	M20-2.5 x 35
38	S2	.10	11.81	9.84	.20	M20-2.00 x 35

Input Shaft

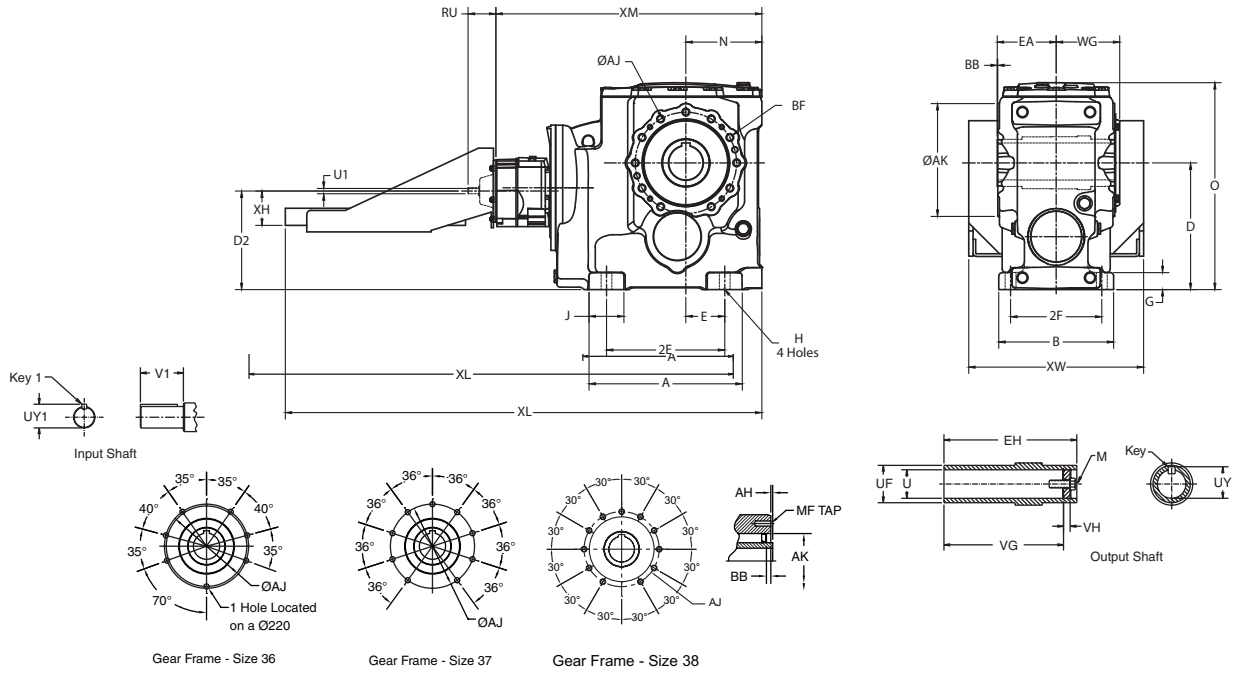
Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182-184T			213-215T			254-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.4	15.00	6.63	60.4	15.00	6.63	60.4	15.00	8.50	64.4	19.06	8.50	64.4	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

Combined Finished Bore Hollow Shaft Face Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	31.00

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 X 1 x 6 1/2	1-8 x 2.25

Output Face

Gear Frame	Version	AH	AJ	AK	BB	BF
36	S2	-	9.06	5.91	.28	M16-2.0 x 27
37	S2	-	9.06	7.09	.28	M20-2.5 x 35
38	S2	.10	11.81	9.84	.20	M20-2.0 X 35

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	.63	.71	1.25	3/16 Sq.

Motor Frame

Gear Frame	143T-145T		
	XH	XL	XW
36	3.75	48.39	11.38
37	3.75	53.72	11.38
38	5.56	56.29	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

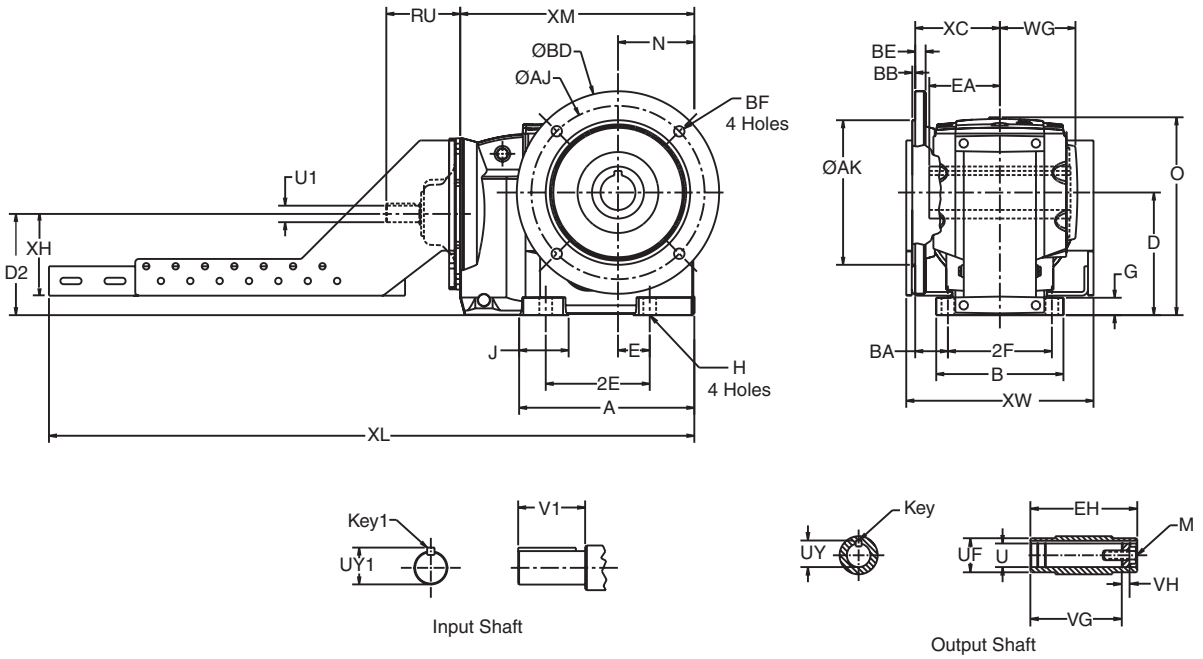
Browning®

Scoop Mount Reducer

OtN SERIES 3000

3-Stage Finished Bore Hollow Shaft Flange Mount

OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	2.08	3.73	4.84	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	1.93	4.66	5.18	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	2.22	5.15	5.77	15.95

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Flange

Gear Frame	Flange Code	AK	AJ	BB	BD	BE	BF
33	5	7.087	8.46	.16	9.84	.47	.55
	6	9.055	10.43	.16	11.81	.47	.55
34	5	9.055	10.43	.16	11.81	.59	.55
	6	9.842	11.80	.16	13.77	.59	.71
35	5	9.842	11.80	.20	13.77	.71	.71
	6	11.810	13.77	.20	15.75	.71	.71

Input Shaft

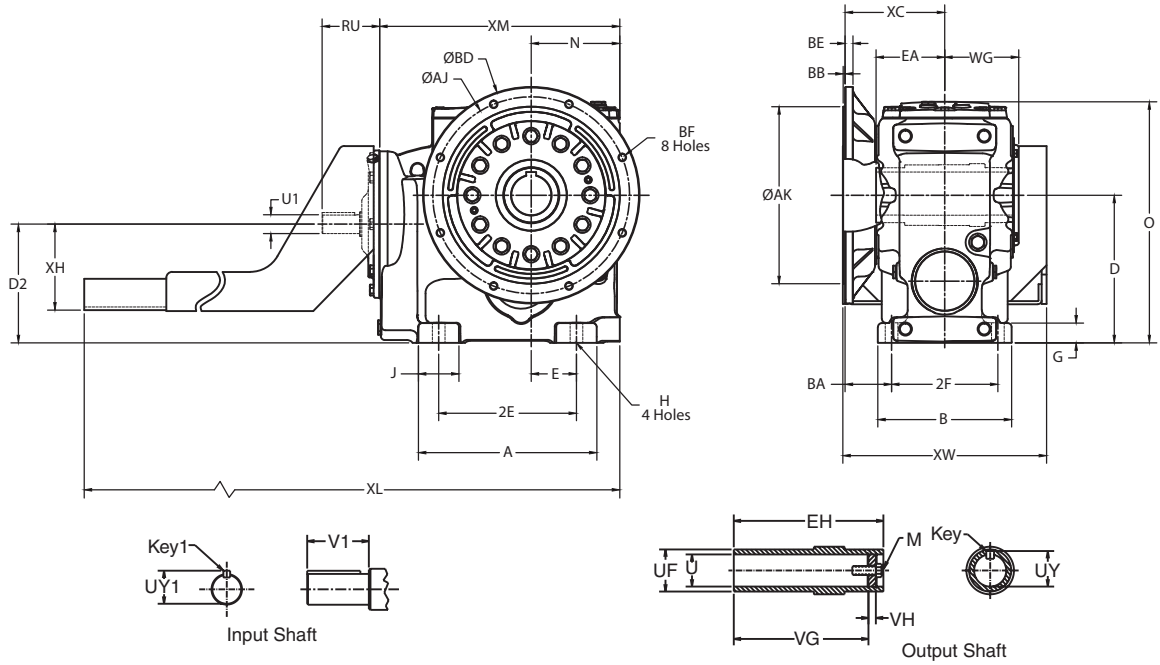
Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame

Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Finished Bore Hollow Shaft Flange Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	15.75	13.780	.236	17.70	.79	.71
	6	19.68	17.72	.236	21.65	.63	.87
38	5	19.69	17.72	.20	21.65	.79	.69

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182-184T			213-215T			254-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.4	15.00	6.63	60.4	15.00	6.63	60.4	15.00	8.50	64.4	19.06	8.50	64.4	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

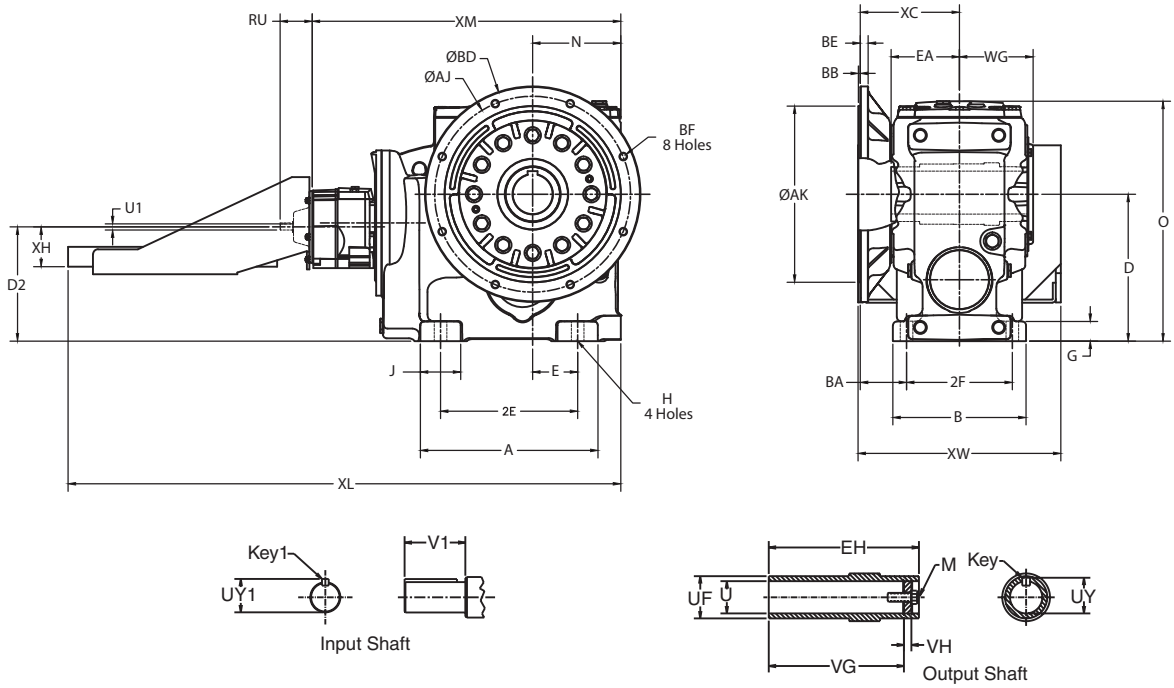
Browning®

Scoop Mount Reducer

OtN SERIES 3000

Combined Finished Bore Hollow Shaft Flange Mount

OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	BA	WG	XC	XM
36	S2	17.06	11.41	8.86	8.46	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	4.45	6.78	9.17	30.10
37	S2	20.58	12.99	9.84	10.57	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	4.45	7.44	9.76	35.43
38	S2	20.13	13.39	14.76	11.48	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	4.65	7.40	9.96	31.00

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Flange

Gear Frame	Flange Code	AJ	AK	BB	BD	BE	BF
36 & 37	5	15.75	13.780	.236	17.70	.79	.71
	6	19.68	17.72	.236	21.65	.63	.87
38	5	19.69	17.72	.20	21.65	.79	.69

Input Shaft

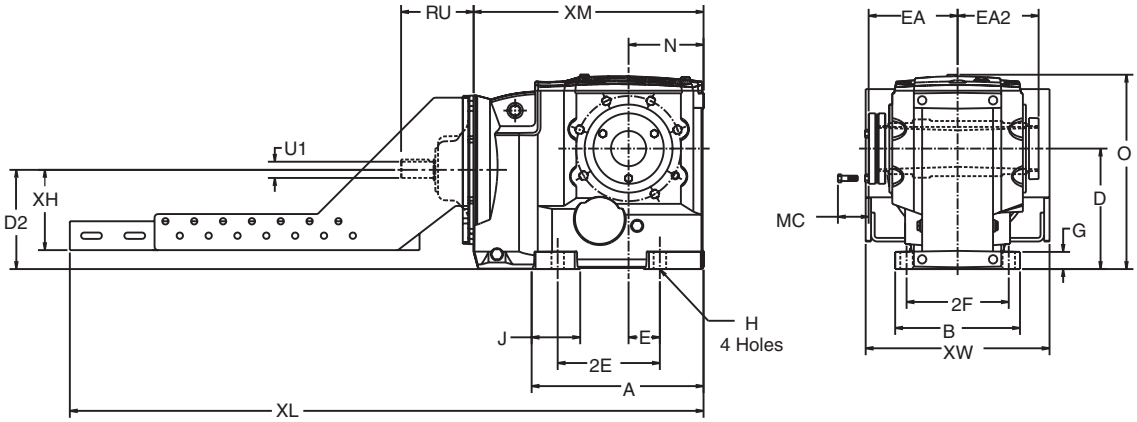
Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	3.17	.625	.714	1.25	3/16 Sq.
37	S2	3.17	.625	.714	1.25	3/16 Sq.
38	S2	3.17	.63	.71	1.25	3/16 Sq.

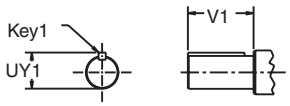
Motor Frame

Gear Frame	143T-145T		
	XH	XL	XW
36	3.75	48.39	11.38
37	3.75	53.72	11.38
38	5.56	56.29	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[6] Key not supplied with reducer.

3-Stage Taper Bushed Shaft Mount
OtN33 - 35





Input Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
33A	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	11.97
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.2	15.95

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	15/16	1 15/16
35	S2	6.17	5.620	1.88	1 3/8	2 7/16

Input Shaft

Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
33A	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

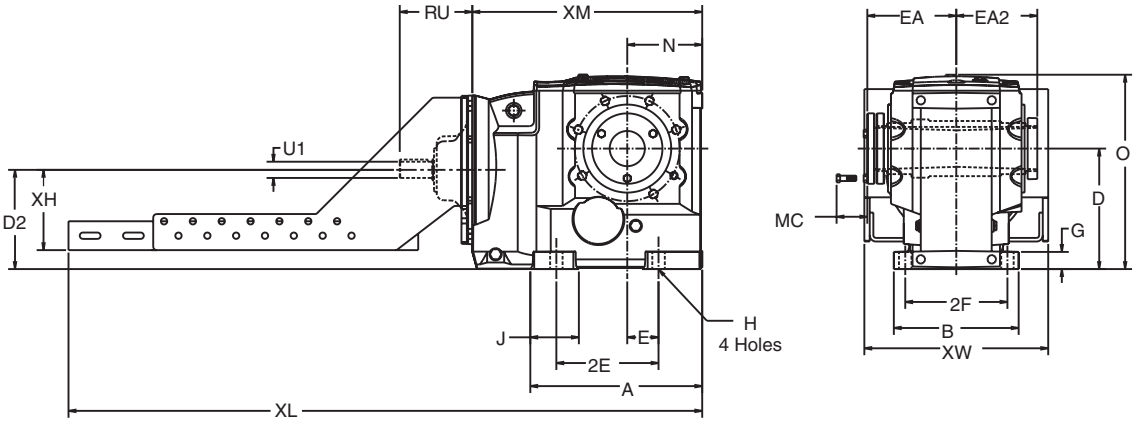
Motor Frame

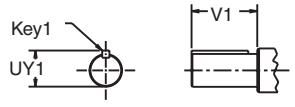
Gear Frame	143T-145T			182T-184T			213T-215T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW
33A	3.75	30.25	11.38	-	-	-	-	-	-
34	4.74	39.25	12.38	4.74	39.25	12.38	-	-	-
35	5.50	42.61	12.75	5.50	41.61	12.75	5.50	42.01	12.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Taper Bushed Shaft Mount

OtN36 - 38





Input Shaft

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Input Shaft

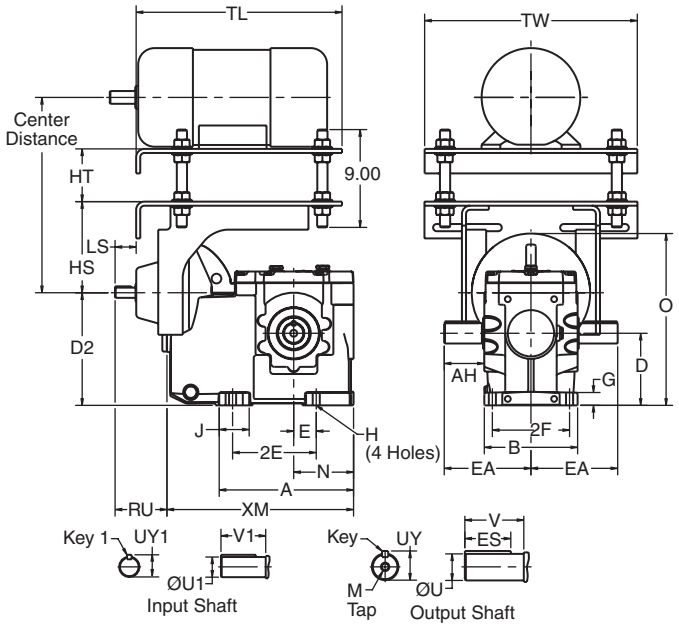
Gear Frame	RU	U1[3]	UY1	V1	Key1
36	7.56	1.875	2.101	3.75	1/2 Sq.
37	7.56	1.875	2.101	3.75	1/2 Sq.
38	7.56	1.875	2.101	3.75	1/2 Sq.

Motor Frame

Gear Frame	182T-184T			213T-215T			254T-256T			284T-286T			324T-326T		
	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW	XH	XL	XW
36	6.63	55.06	15.00	6.63	55.06	15.00	6.63	55.06	15.00	8.50	59.06	19.06	8.50	59.06	19.06
37	6.63	60.4	15.00	6.63	60.4	15.00	6.63	60.4	15.00	8.50	64.4	19.06	8.50	64.4	19.06
38	-	-	-	-	-	-	8.50	59.93	19.06	8.50	58.93	19.06	9.50	60.93	21.31

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

2-Stage Output Shafted Foot Mount
OtN32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	LS	HS	HT	TL	TW
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	12.36	1.29	7.14	6.00	15.5	16.5

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
3242	S2	1.250	1.35	2.38	2.45	5.31	1/4 Sq.	2.03	1/2-13 X 1.12

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
3242	S2	3.17	.625	.705	1.25	3/16 Sq.

Motor Frame	Center Distance	
	Min.	Max.
56	12.28	18.25
B56	12.28	18.25
182T/184T	13.28	19.25

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

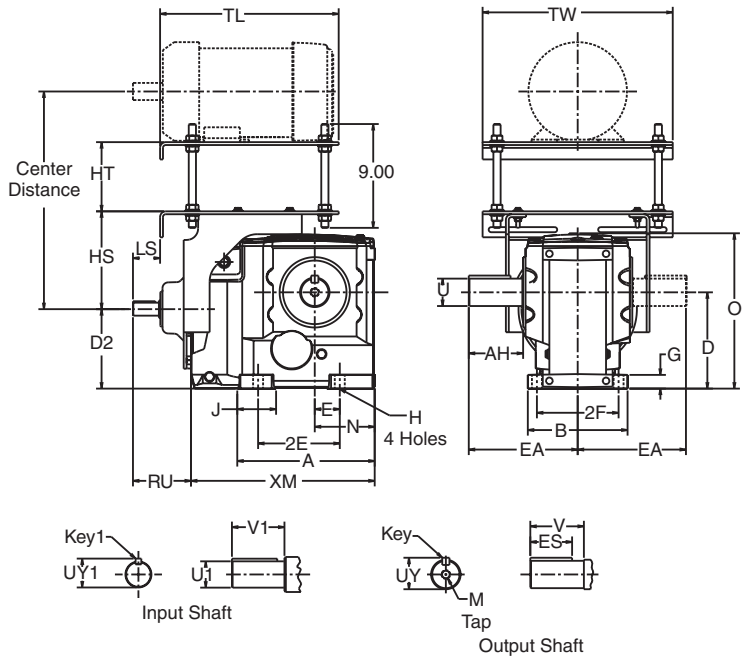
Browning

Top Mount Reducer

OtN SERIES 3000

3-Stage Output Shafted Foot Mount

OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	LS	HS	HT	TL	TW
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	11.97	1.29	7.14	6.00	15.50	16.50
	S1	8.08	8.58	4.92	5.20	3.35	6.69	6.10	.79	.55	2.27	10.43	3.54	11.97					
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78	2.31	7.17	6.00	15.50	16.50
	S1	10.69	9.60	6.30	7.49	4.53	9.06	7.68	1.18	.71	3.19	13.39	4.49	13.78					
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.37	13.58	5.20	15.95	2.35	8.48	6.00	15.50	16.50
	S1	13.07	10.98	7.87	9.33	5.51	11.02	9.06	1.40	.87	4.05	16.22	5.20	15.95					

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
33	S2	1.625	1.783	3.25	3.39	6.73	3/8 Sq.	2.78	5/8-11 X 1.38
	S1	1.500	1.657	3.18	3.19	7.12	3/8 Sq.	2.78	5/8-11 X 1.38
34	S2	2.000	2.210	3.63	3.76	8.11	1/2 Sq.	3.06	3/4-10 X 1.61
	S1	1.750	1.909	3.56	3.66	8.46	3/8 Sq.	3.56	3/4-10 X 1.61
35	S2	2.375	2.638	4.61	4.74	9.45	5/8 Sq.	3.81	3/4-10 X 1.61
	S1	2.375	2.638	5.73	5.27	10.57	5/8 Sq.	4.81	3/4-10 X 1.61

Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
33	S1,S2	3.17	.625	.70	1.25	3/16 Sq.
34	S1,S2	4.75	1.125	1.24	2.25	1/4 Sq.
35	S1,S2	5.03	1.125	1.24	2.25	1/4 Sq.

Motor Frame	33		34		35	
	Center Distance		Center Distance		Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28	-	-
143T/145T	12.28	18.25	12.31	18.28	13.87	19.34
182T/184T	13.28	19.25	13.31	19.28	14.87	20.34
213T/215T	-	-	14.06	20.03	15.62	21.09
254T/256T	-	-	-	-	16.62	22.09

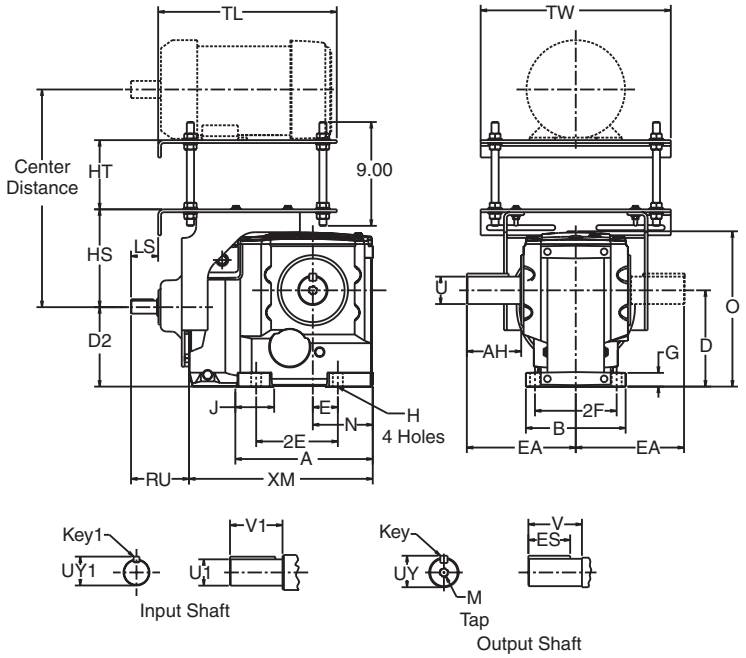
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

3-Stage Output Shafted Foot Mount
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S1	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S1	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	20.13	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	U[3]	UY	V	AH	EA	Key	ES	M
36	S1	2.875	3.20	5.75	5.92	11.94	3/4 SQ.	5.00	3/4-10 X 1.61
37	S1	3.625	4.01	6.86	7.04	13.66	7/8 SQ.	6.00	1-8 X 2.13
38	S2	4.375	4.809	8.99	9.97	17.03	1.00 SQ.	7.00	1-8 X 2.25

Input Shaft

Gear Frame	RU	U1[4]	UY1	V1	Key1
36	7.56	1.875	2.101	3.75	1/2 Sq.
37	7.56	1.875	2.101	3.75	1/2 Sq.
38	7.56	1.875	2.101	3.75	1/2 Sq.

Top Mount

Gear Frame	LS	HS	HT		TL	TW
			Min.	Max.		
36	3.76	10.48	1.89	7.36	20.25	24.00
37	3.76	10.48	1.89	7.36	20.25	24.00
38	4.71	19.38	1.89	7.36	19.38	24.00

Motor Frame	36 Center Distance		37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	20.23	26.23	29.28	34.75

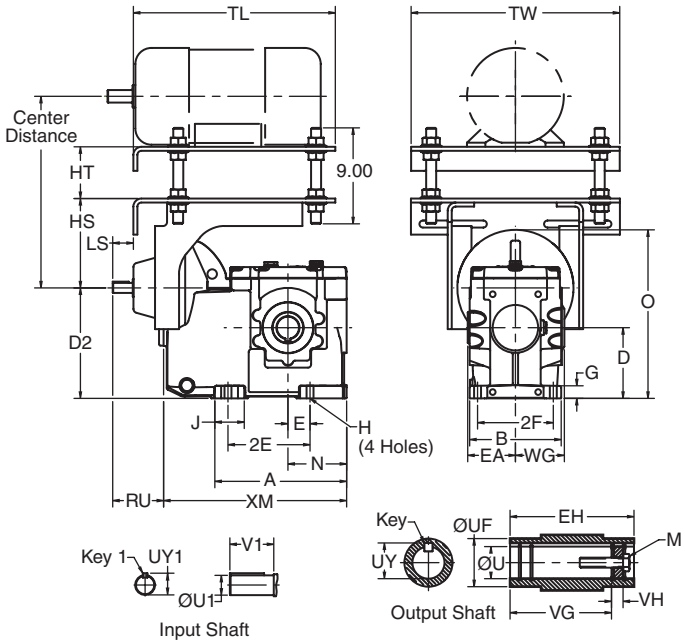
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000"; –.001".

[4] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

2-Stage Finished Bore Hollow Shaft
OtN32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	LS	HS	HT	TL	TW
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	3.22	12.36	1.29	7.14	6.00	15.5	16.5

Output Shaft

Gear Frame	Version	EA	EH	U[3 7]	UF	UY	VG	VH	Key[5]	M
3242	S2	2.97	5.94	1.375	1.96	1.523	5.06	.37	5/16 X 5/16 1 13/16	1/2-13 X 1.00

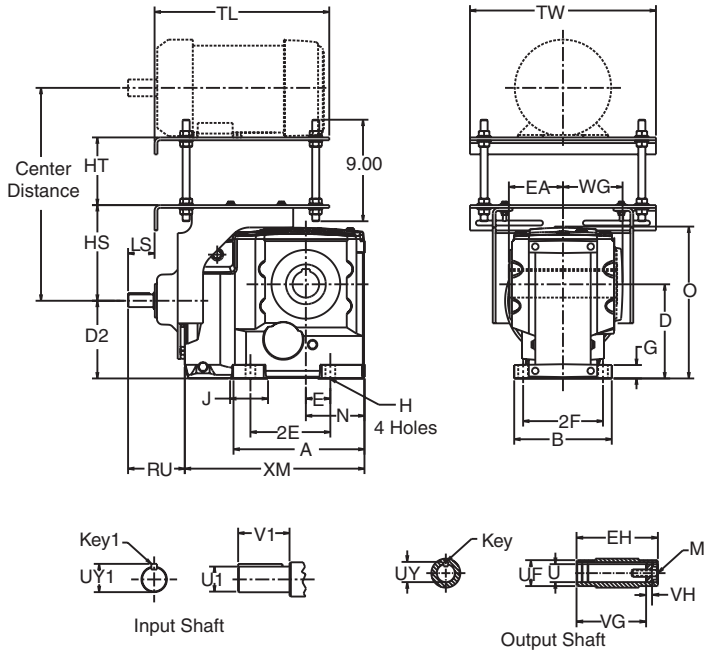
Input Shaft

Gear Frame	Version	RU	U1[4]	UY1	V1	Key1
3242	S2	3.17	.625	.705	1.25	3/16 Sq.

Motor Frame	Center Distance	
	Min.	Max.
56	12.28	18.25
B56	12.28	18.25
182T/184T	13.28	19.25

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 “S2” version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[7] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Finished Bore Hollow Shaft
OtN33 - 35



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	LS	HS	HT	TL	TW
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.73	11.97	1.29	7.14	6.00	15.50	16.50
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78	2.31	7.17	6.00	15.50	16.50
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95	2.35	8.48	6.00	15.50	16.50

Output Shaft

Gear Frame	Version	EA	EH	U[4, 7]	UF	UY	VG	VH	Key[5]	M
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.656	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

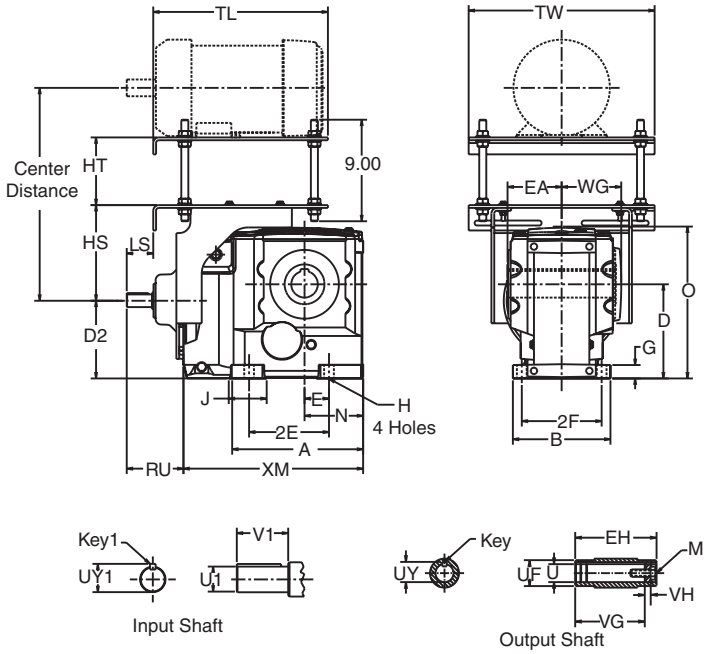
Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
33	S2	3.17	.625	.70	1.25	3/16 Sq.
34	S2	4.75	1.125	1.24	2.25	1/4 Sq.
35	S2	5.03	1.125	1.24	2.25	1/4 Sq.

Motor Frame	33		34		35	
	Center Distance		Center Distance		Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28	-	-
143T/145T	12.28	18.25	12.31	18.28	13.87	19.34
182T/184T	13.28	19.25	13.31	19.28	14.87	20.34
213T/215T	-	-	14.06	20.03	15.62	21.09
254T/256T	-	-	-	-	16.62	22.09

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Output key supplied only on frame 34 "S2" version.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[7] Refer to Tapered Bushed designs if driven shaft varies from "U" dimensions offered above.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Finished Bore Hollow Shaft
OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	17.85	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[4,7]	UF	UY	VG	VH	Key[5]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4 - 10 x 2.00
37	S2	6.22	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4 - 10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1 -8 x 2.25

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Top Mount

Gear Frame	LS	HS	HT		TL	TW
			Min.	Max.		
36	3.76	10.48	1.89	7.36	20.25	24.00
37	3.76	10.48	1.89	7.36	20.25	24.00
38	4.71	19.38	1.89	7.36	19.38	24.00

Motor Frame	36		37		38	
	Center Distance		Center Distance		Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	20.23	26.23	29.28	34.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.

[2] All rough casting dimensions may vary by .25" due to casting variations.

[3] Output shaft extension tolerances: +.0000";-.0005" for shafts up to 1.5" diameter "U". Larger diameter "U", +.000";-.001".

[4] Input shaft extension tolerances: +.0000";-.0005" up to 1.5" diameter. Larger diameter "U1", +.000";-.001".

[5] Output key not supplied with the reducer.

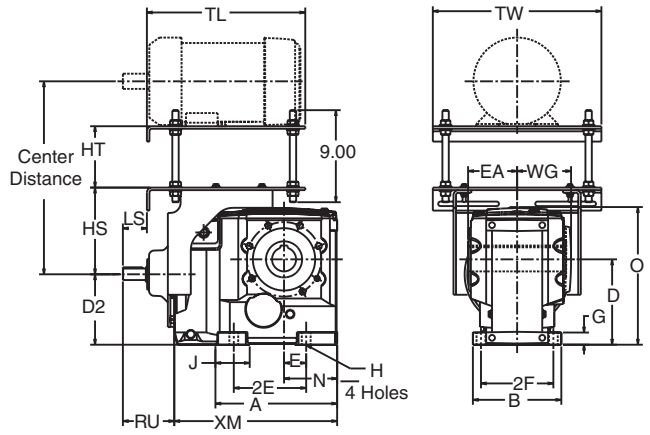
Browning®

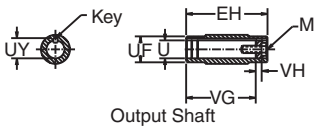
Top Mount Reducer

OtN SERIES 3000

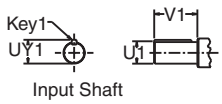
3-Stage Finished Bore Hollow Shaft Face Mount

OtN33 - 35

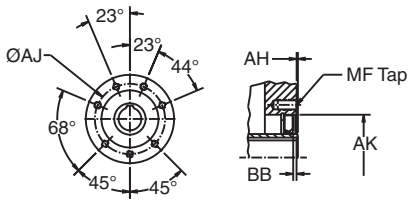




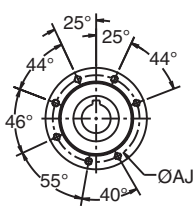
Output Shaft



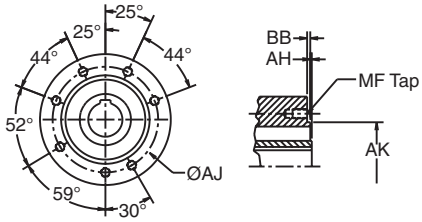
Input Shaft



Gear Frame - Size 33



Gear Frame - Size 34



Gear Frame - Size 35

Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM	LS	HS	HT	TL	TW
33	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	3.63	11.97	1.29	7.14	6.00	15.50	16.50
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	4.66	13.78	2.31	7.17	6.00	15.50	16.50
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	5.15	15.95	2.35	8.48	6.00	15.50	16.50

Output Shaft

Gear Frame	Version	EA	EH	U[5]	UF	UY	VG	VH	Key[4]	M
33	S2	3.47	6.94	1.500	2.16	1.674	5.96	.55	3/8 X 3/8 X 2 1/4	5/8-11 X 1.75
34	S2	4.49	8.97	2.000	2.56	2.210	7.44	.79	1/2 X 7/16 X 2 5/8	5/8-11 X 1.75
35	S2	4.83	9.66	2.375	3.54	2.638	8.15	.94	5/8 X 5/8 X 3 5/8	3/4-10 X 2.00

Output Face

Gear Frame	Version	AH	AJ	AK	BB	MF
33	S2	.12	4.84	3.94	.16	M12-1.75 X 22
34	S2	.14	5.98	5.12	.28	M12-1.75 X 22
35	S2	.13	7.48	6.10	.28	M16-2.00 X 27

Input Shaft

Gear Frame	Version	RU	U1[6]	UY1	V1	Key1
33	S2	3.17	.625	.705	1.25	3/16 Sq.
34	S2	4.75	1.125	1.236	2.25	1/4 Sq.
35	S2	5.03	1.125	1.236	2.25	1/4 Sq.

Motor Frame	33		34		35	
	Center Distance		Center Distance		Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28	-	-
143T/145T	12.28	18.25	12.31	18.28	13.87	19.34
182T/184T	13.28	19.25	13.31	19.28	14.87	20.34
213T/215T	-	-	14.06	20.03	15.62	21.09
254T/256T	-	-	-	-	16.62	22.09

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output key supplied only on frame 34 "S2" version.
[5] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[6] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".

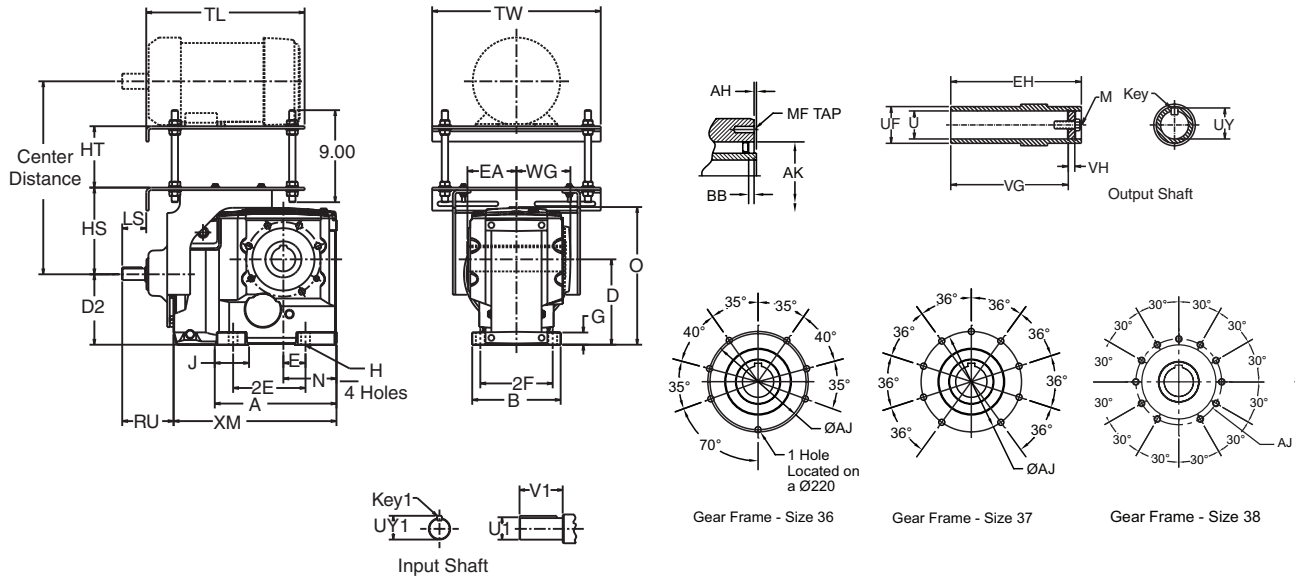
Browning

Top Mount Reducer

OtN SERIES 3000

3-Stage Finished Bore Hollow Shaft Face Mount

OtN36 - 38



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	WG	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	6.78	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	7.44	28.44
38	S2	17.85	13.39	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	7.40	24.02

Output Shaft

Gear Frame	Version	EA	EH	U[4]	UF	UY	VG	VH	Key[6]	M
36	S2	6.22	12.44	2.750	3.93	3.037	10.89	1.23	5/8 x 5/8 x 5 1/2	3/4-10 x 2.00
37	S2	6.80	13.59	3.625	4.72	4.019	11.90	1.23	7/8 x 7/8 x 5 1/2	3/4-10 x 2.00
38	S2	6.81	13.74	4.000	5.50	4.316	11.86	.92	1 x 1 x 6 1/2	1-8 x 2.25

Output Face

Gear Frame	Version	AH	AJ	AK	BB	BF
36	S2	-	9.06	5.91	.28	M16-2.0 x 27
37	S2	-	9.06	7.09	.28	M20-2.5 x 35
38	S2	.10	11.81	9.84	.20	M20-2.00 x 25

Input Shaft

Gear Frame	Version	RU	U1[5]	UY1	V1	Key
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

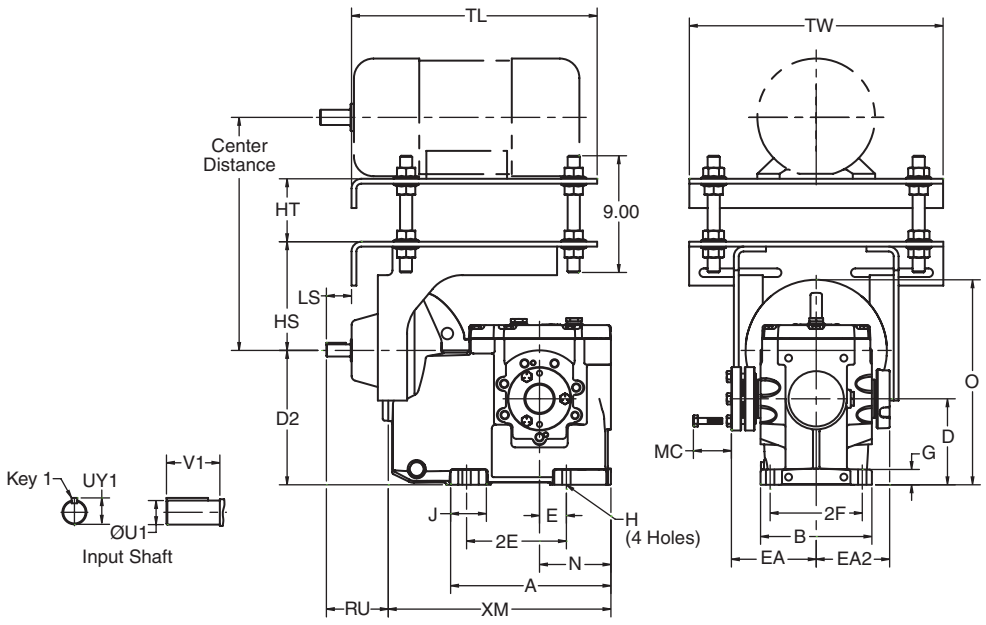
Top Mount

Gear Frame	LS	HS	HT		TL	TW
			Min.	Max.		
36	3.76	10.48	1.89	7.36	20.25	24.00
37	3.76	10.48	1.89	7.36	20.25	24.00
38	4.71	19.38	1.89	7.36	19.38	24.00

Motor Frame	36 Center Distance		37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	20.23	26.23	29.28	34.75

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Driven shaft entry can be from either side of the gear reducer housing by reversing positioning of the snap rings and washer illustrated.
[4] Output finished bore tolerance: +.0020",-.0000 for all diameters.
[5] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001"
[6] Key not supplied with reducer.

2-Stage Bushed Shaft Mount
OtN32



Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	EA	XC	XM	LS	HS	HT	TL	TW
3242	S2	8.22	5.71	4.41	6.89	1.38	5.12	4.72	.79	.43	1.83	10.51	3.66	2.85	7.35	12.36	1.29	7.14	6.00	15.5	16.5

Output Shaft

Gear Frame	Screw Dia.	JJ	L	U	S	T	T2	AH	AH2	BB
3242	6-10	.53	4.00	1.50	2.13	3.00	6.00	6.00	9.00	5.13
	9-12	.66	5.13	2.00	2.13	3.00	6.00	6.00	9.00	5.13
	12-14	.66	5.63	2.44	2.75	3.00	6.00	6.00	9.69	5.13
	12-20	.78	6.00	3.00	2.88	3.00	6.00	6.88	9.88	5.13

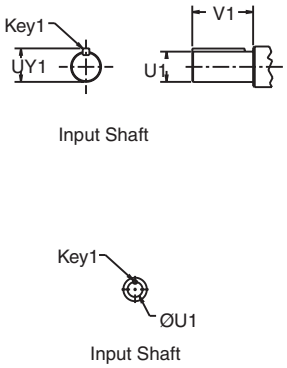
Input Shaft

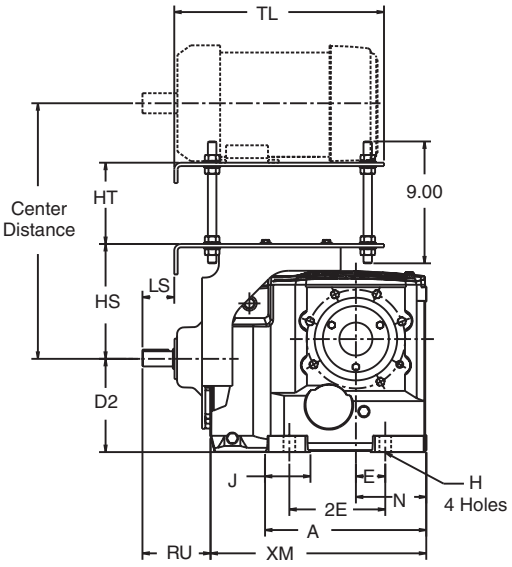
Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
3242	S2	3.17	.625	.705	1.25	3/16 Sq.

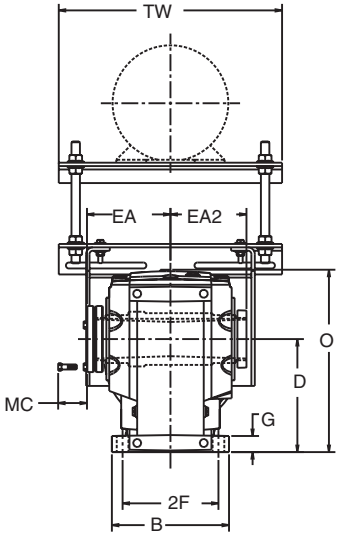
Motor Frame	Center Distance	
	Min.	Max.
56	12.28	18.25
B56	12.28	18.25
182T/184T	13.28	19.25

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" up to 1.5" diameter. Larger diameter "U1", +.000"; –.001"
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit, refer to page F-115.

3-Stage Taper Bushed Shaft Mount
OtN33 - 35







Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM	LS	HS	HT	TL	TW
33A	S2	8.50	6.61	5.51	5.24	1.18	4.72	5.51	.85	.55	2.86	9.69	3.54	11.97	1.29	7.14	6.00	15.50	16.50
34	S2	10.13	7.87	7.09	5.90	1.57	5.91	6.50	1.07	.71	2.67	12.05	4.49	13.78	2.31	7.17	6.00	15.50	16.50
35	S2	11.92	8.66	8.35	6.89	2.17	7.09	7.09	1.18	.87	3.45	13.58	5.20	15.95	2.35	8.48	6.00	15.50	16.50

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
33A	S2	5.76	5.18	1.88	1 7/16	1 15/16
34	S2	5.84	5.27	1.88	1 11/16	1 15/16
35	S2	6.17	5.620	1.88	2	2 7/16

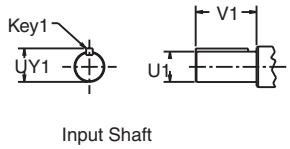
Input Shaft

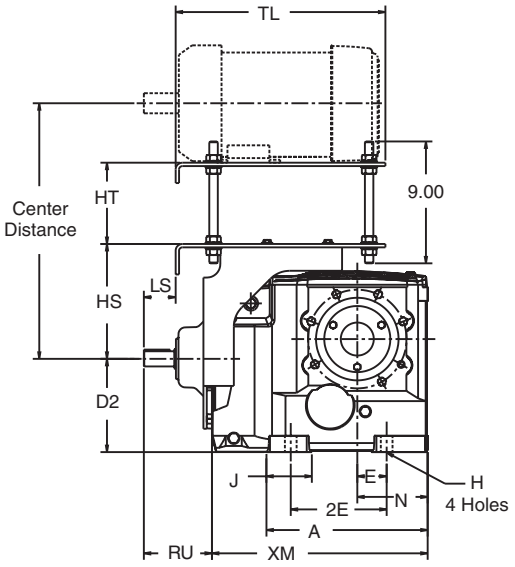
Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
33A	S2	3.17	.625	.70	1.25	3/16 Sq.
34	S2	4.75	1.125	1.24	2.25	1/4 Sq.
35	S2	5.03	1.125	1.24	2.25	1/4 Sq.

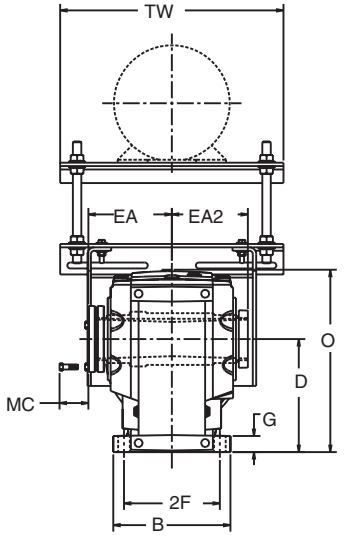
Motor Frame	33A		34		35	
	Center Distance		Center Distance		Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
56	12.28	18.25	12.31	18.28	-	-
B56	12.28	18.25	12.31	18.28	13.87	19.34
182T/184T	13.28	19.26	13.31	19.28	14.87	20.34
213T/215T	-	-	14.06	20.03	15.62	21.09
254T/256T	-	-	-	-	16.62	22.09

[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

3-Stage Taper Bushed Shaft Mount
OtN36 - 38







Gear Frame	Version	A	B	D[1]	D2	E	2E	2F	G	H	J	O	N	XM
36	S2	17.06	11.41	8.86	8.86	6.99	13.98	9.45	1.57	.87	3.87	16.26	8.74	23.11
37	S2	20.58	12.99	9.84	10.98	8.27	16.54	10.63	1.93	.94	4.78	18.29	10.04	28.44
38	S2	17.85	13.99	14.76	11.87	4.53	13.78	10.63	1.98	1.26	4.06	24.11	8.86	24.02

Output Shaft

Gear Frame	Version	EA	EA2	MC[5]	Bushing Bores[4]	
					Min.	Max.
36	S2	6.81	7.83	1.88	2 7/16	2 15/16
37	S2	9.50	8.86	2.25	2 7/8	3 7/16
38	S2	8.66	8.08	2.75	2 15/16	3 15/16

Input Shaft

Gear Frame	Version	RU	U1[3]	UY1	V1	Key1
36	S2	7.56	1.875	2.101	3.75	1/2 Sq.
37	S2	7.56	1.875	2.101	3.75	1/2 Sq.
38	S2	7.56	1.875	2.101	3.75	1/2 Sq.

Top Mount

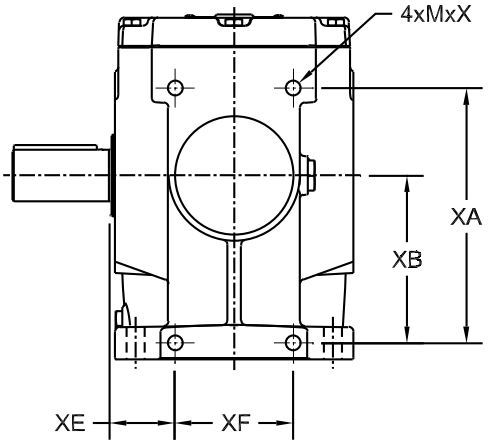
Gear Frame	LS	HS	HT		TL	TW
			Min.	Max.		
36	3.76	10.48	1.89	7.36	20.25	24.00
37	3.76	10.48	1.89	7.36	20.25	24.00
38	4.71	19.38	1.89	7.36	19.38	24.00

Motor Frame	36 Center Distance		37 Center Distance		38 Center Distance	
	Min.	Max.	Min.	Max.	Min.	Max.
182T/184T	16.73	22.73	16.73	22.73	25.78	31.25
213T/215T	17.48	23.48	17.48	23.48	26.53	32.00
254T/256T	18.48	24.48	18.48	24.48	27.53	33.00
284T/286T	19.23	25.23	19.23	25.23	28.28	33.75
324T/326T	20.23	26.23	20.23	26.23	29.28	34.75

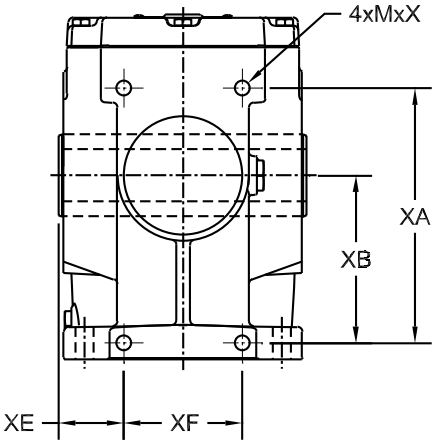
[1] Dimension "D" will never be exceeded, but may vary from values shown. When exact dimensions are required, shims up to .03" may be necessary.
[2] All rough casting dimensions may vary by .25" due to casting variations.
[3] Input shaft extension tolerances: +.0000"; –.0005" for shafts up to 1.5" diameter. Larger diameter "U1", +.000"; –.001".
[4] Refer to page F-116 by gear frame for listing of all inch and metric bushing bore sizes available.
[5] The MC dimension shows spacing required to install or remove the bushing from the reducer.
[6] Bushing and dust cap can be installed opposite of how they are shown above.
[7] Driven shaft entry can be from either side of the gear reducer housing. Refer to installation manual for requirements.
[8] For details of the torque arm kit,refer to page F-115.

Optional Foot Mount Dimensions

"V" Mounting Position Only[1]



SOLID OUTPUT SHAFT

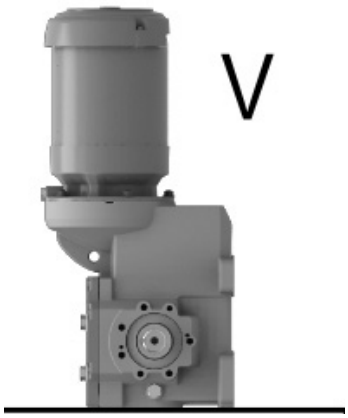


HOLLOW OUTPUT SHAFT

Option Mounting Surface

Gear Frame	Version	M x X	XA	XB	XE	XF
31	S2	9 +	3.94	1.97	0.59	3.94
32	S2	M10 x 22	6.10	4.02	1.52	2.83
33	S2	M12 x 22	7.24	5.00	1.63	3.54
34	S2	M12 x 22	9.37	6.46	2.46	3.94
35	S2	M16 x 27	11.02	7.72	2.34	4.92
36	S1 & S2	M20 x 40	11.61	7.87	3.07	6.06
37	S1 & S2	M24 x 40	13.58	8.82	3.35	6.69
38	S2	M30 x 45	19.29	13.39	2.95	7.87

+ These holes are through the feet and not tapped
[1] Operation only in "V" mounting position is required except frame 31



C-Face Reducers

Gear Frame	Reduction Stages	Input Size							
		56C	140TC	180TC	210TC	250TC	280TC	320TC	360TC
31	2	44	44	-	-	-	-	-	-
32	2	49	49	55	-	-	-	-	-
	3	56	56	62	-	-	-	-	-
	5	64	64	-	-	-	-	-	-
33 (A)	3	68	68	77	77	-	-	-	-
	5,6	98	98	-	-	-	-	-	-
34	3	118	118	127	127	-	-	-	-
	5,6	147	147	-	-	-	-	-	-
35	3	190	190	199	199	204	206	-	-
	5,6	210	210	219	-	-	-	-	-
36	3	-	351	360	360	365	367	-	-
	5,6	401	401	419	419	-	-	-	-
37	3	-	-	540	540	545	547	575	575
	5,6	576	576	585	585	-	-	-	-
38	3	-	-	-	850	855	857	885	-
	5,6	860	860	869	869	-	-	-	-

Input Shaft Reducers

Gear Frame	Reduction Stages	Style		
		AP/AD	Scoop	Top Mt.
31	2	40	-	-
32	2	45	-	100
	3	52	-	-
	5	60	-	-
33 (A)	3	74	99	121
	5,6	104	-	-
34	3	123	156	170
	5,6	151	-	-
35	3	195	247	266
	5,6	215	-	-
36	3	363	405	RO
	5,6	415	448	462
37	3	558	578	RO
	5,6	602	635	649
38	3	770	863	RO
	5,6	789	841	859

Gear Options

Gear Frame	Std Flange Mount	Footed S1
31	3	-
32	4	-
33	5	2
34	7	3
35	8	5
36	10	-
37	12	-
38	15	-

Lubrication

Series 3000 OtN gearing are shipped with one of the following synthetic lubricants per the table below and fitted with a magnetic drain. Each reducer is filled according to the mounting position specified when ordered. Refer to unit nameplate and the chart on page F-16 or F-121 for mounting position arrangement for your unit.

In the case of synthetic oil, the lubricant does not require changing but it is recommended that proper oil level be checked periodically.

Standard Synthetic Gear Oil (Non-Food Grade)

No Backstop

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Fuchs*	Sintogear* 125
Mobil*	Mobilgear* SHC 150
Shell*	Omala* Fluids HD 150

With Backstop (1)

Manufacturer	-25° F to 125° F (-30° C to 50° C)
Shell*	Omala* RL 100
Mobil*	SHC 629

Standard Synthetic Gear Oil (H1 Rated Food Grade Requirements)

No Backstop

Manufacturer	22° F to 125° F (-20° C to 50° C)
Mobil*	SHC Cibus 150

⚠ CAUTION

- Never mix synthetic oil and mineral oil.
- Never use extreme pressure (EP) oil in a reducer with a backstop.
- Refer to installation and maintenance manual for mineral oil selection.

Foot Mounted Triple Reduction Designs - US Quarts (Litre = Quart x .946)

Gear Frame Size	Mounting Config.	Mounting Position					
		B	P	H	T	V	W
3132	S2	0.95	1.06	0.95	0.80	1.64	1.11
3242	S2	1.96	2.06	1.74	2.06	3.12	2.48
3243	S1, S2	0.55	1.82	1.50	1.50	2.00	1.40
3363	S2	1.16	3.70	3.49	2.96	3.96	2.75
	S1	3.70	1.16	2.96	3.49	3.96	2.75
3473	S2	1.37	6.45	4.76	4.65	6.76	3.91
	S1	6.45	1.37	4.65	4.76	6.76	3.91
3583	S2	2.85	8.88	5.39	7.72	11.42	6.61
	S1	8.88	2.85	7.72	5.39	11.42	6.61
3693	S1, S2	6.08	19.24	14.28	12.90	23.36	13.95
3703	S1, S2	10.58	25.00	20.30	17.97	35.94	25.05
3823	S2	10.57	34.87	29.06	22.19	43.32	25.36

Face, Flange[1] or Shaft Mounted Triple Reduction Designs - US Quarts (Litre = Quart x .946)

Gear Frame Size	Mounting Config.	Mounting Position					
		B	P	H	T	V	W
3132	S2	0.95	1.06	0.95	0.80	1.64	1.11
3242	S2	1.96	2.06	1.74	2.06	3.12	2.48
3243	S2, S1	0.55	1.82	1.50	1.50	2.00	1.40
3363	S2, S1	1.16	3.70	3.49	2.96	3.96	2.75
3363A	S2	1.16	3.70	3.49	2.96	3.96	2.75
3473	S2, S1	1.37	6.45	4.76	4.65	6.76	3.91
3583	S2, S1	2.85	8.88	5.39	7.72	11.42	6.61
3693	S2	6.08	19.24	14.28	12.90	23.36	13.95
3703	S2	10.58	25.00	20.30	17.97	35.94	25.05
3823	S2	10.57	34.87	29.06	22.19	43.32	25.36

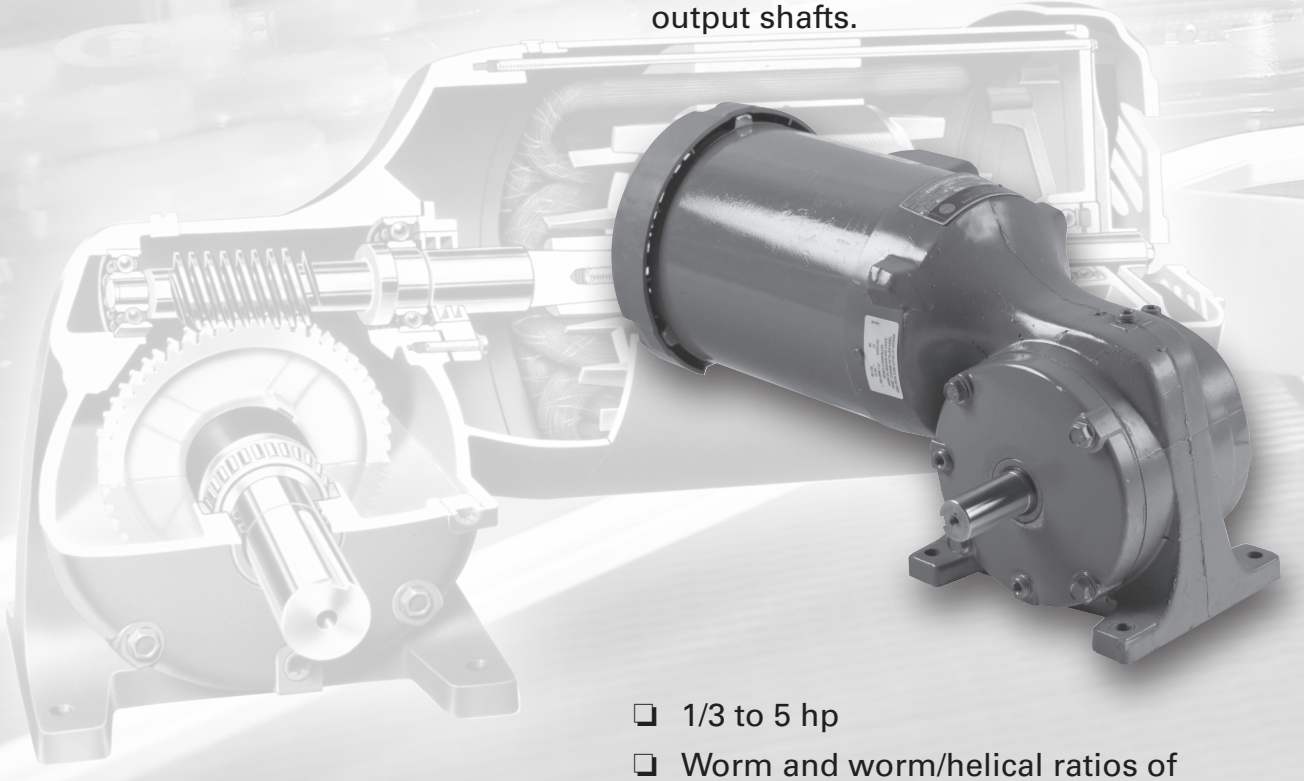
[1] This table defines oil volumes for types "5" or "6" flange design.

*The following are believed to be the trademarks and/or trade names of their respective owners and are not owned or controlled by Regal Beloit Corporation or any of its affiliates.. Fuchs and Sintogear: Fuchs Petrolube AG; Mobil and Mobilgear: Exxon Mobil Corporation; Shell and Omala: Shell Oil Company.

Browning®

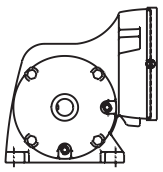
IRA Gearmotors

- ❏ Innovative self-locking taper shaft connection (motor to gear) allows on-site replacement without removing oil, primary pinion, or disconnecting the load. This helps ensure precision alignment and eliminates fretting to expedite motor removal.
- ❏ Forged "LMS" bronze worm wheel provides extra strength and life.
- ❏ Roller bearings on output shaft provide ample rating for high overhung load.
- ❏ Factory filled with oil.
- ❏ Two double lipped oil seals at input and output shafts.

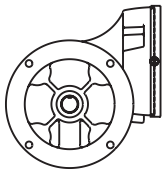


- ❏ 1/3 to 5 hp
- ❏ Worm and worm/helical ratios of 7:1 to 354:1
- ❏ Compact rugged physical envelope
- ❏ Three and single phase motors

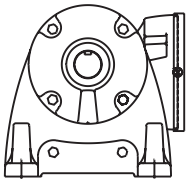
Type



Foot Mount Worm
Frames 1, 6, 20
Max. 4,900 in. lbs.

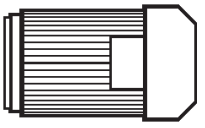


Flange Mount Worm
Frames 6, 20
Max. 4,900 in. lbs.



Foot Mount Worm Helical
Frame 6
Max. 2,800 in. lbs.

NEMA C - Face Adapter
Frames 6, 20



Motors
1/3 – 5 HP

Type IRA

General
IRA worm and worm-helical speed reducers and gearmotors adapt the speed of an electric motor to the driven machine. Selection depends on motor power (*P*) expressed in hp and on the required speed (*n*) expressed in rpm. Output torque of the driven system can be calculated using the following formulas, based on reducer efficiency:

$$T\ (\text{in.lbs.}) = \frac{P \times 63025 \times \text{eff.}}{n}$$

The overall ratio (i) of the drive system =

$$\frac{\text{motor speed (n)}}{\text{reducer output speed (n)}}$$

Design
Housing manufactured of high strength die-cast aluminum.
Roller bearings on output shaft provide greater overhung load.
Forged "LMS" bronze worm wheel provides extra strength.
Excellent reversibility.

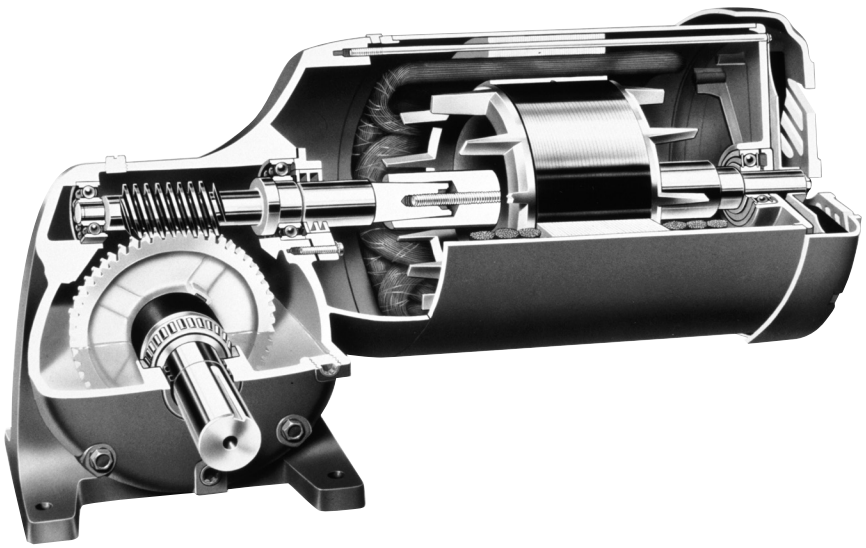
Performances
Size 6 offers optional "worm-first" worm/helical double reduction design

- Higher efficiency than competitors worm only reducers
- Reduction ratios up to 350:1 as standard

Range of center distances in frames 1,6 and 20
Low noise level
Output torques up to 4,900 in. lbs.

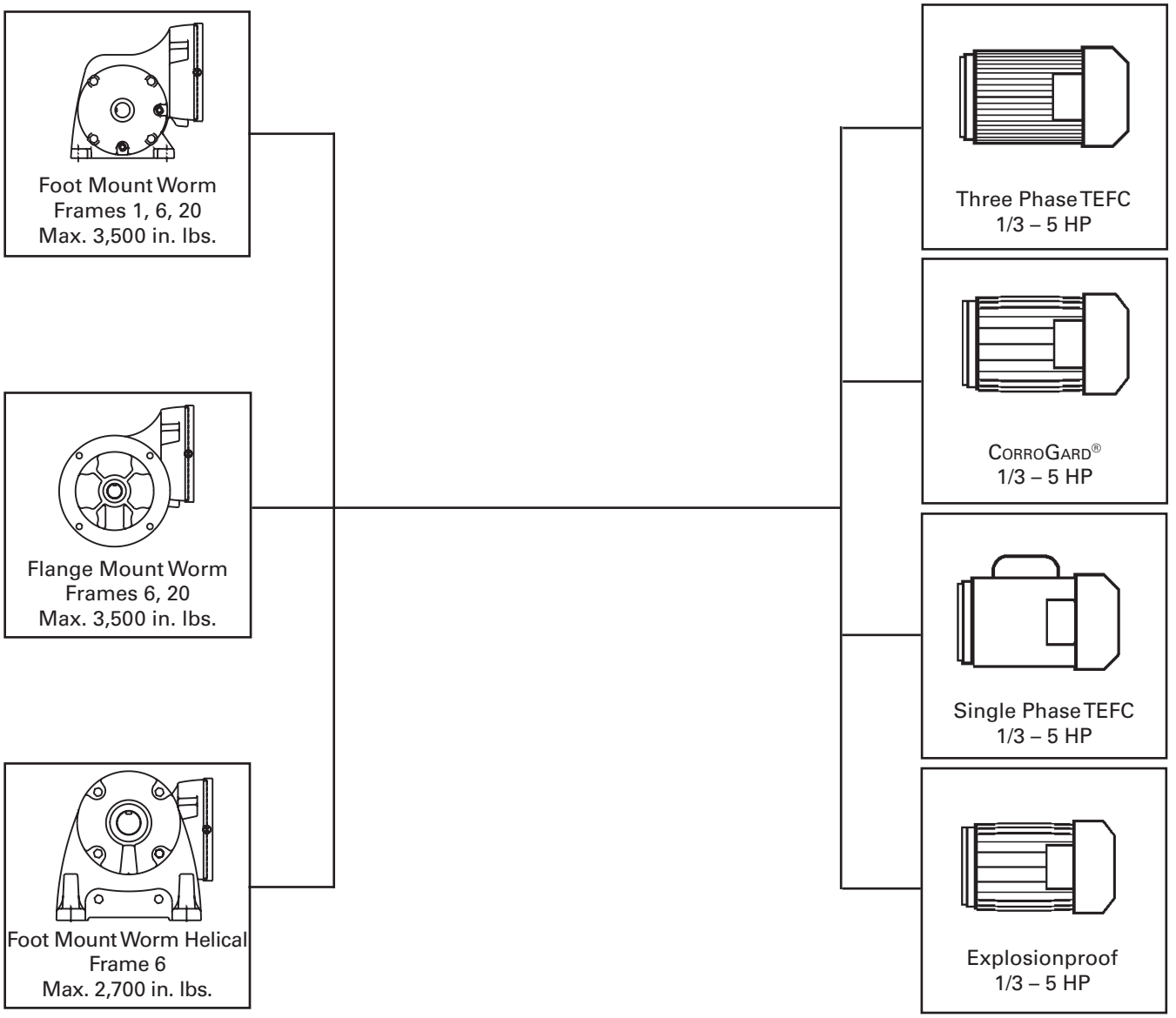
Exceptional flexibility
Speed Reducers
- C-face input
- Output flange
- Multiple mounting positions available.

Gearmotors
- TEFC - three phase
- TEFC - single phase
- CorroGard® motor
- Explosionproof
- Brakemotor
- Inverter duty

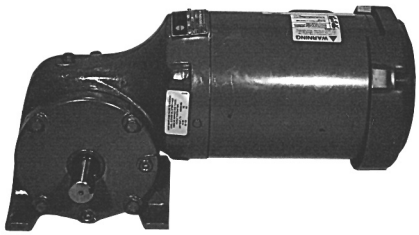


IRA Worm Drive

IRA Gearmotors



Motor Options

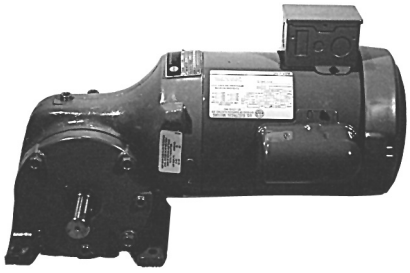


TEFC - Three Phase

- Premium efficiency/Inverter Duty PE Gearmotors standard (6 and 20)
  - o .33 to 5 HP for 60 Hz
  - o 10:1 (60-6 Hz) and 15:1 (90-6 Hz) on all HPs
  - o Three year motor warranty
- IE3 at 50 Hz optional to meet Jan. 2017 UE standards up to 4 HP
- High Efficiency (lower cost) option in FHP ratings (size 6)
- Brake option standard for all above motor types (IP23 brake enclosure)

CorroGard®

- Designed for wet, outdoor and/or corrosive operating conditions in industries including waste treatment, mining, lumber and chemical processing.
- All cast iron construction (note: that 56/140T frames are rolled steel)
- Premium efficiency/inverter duty designs standard
  - o Three year motor warranty
  - o 10:1 (60-6 Hz) and 15:1 (90-6 Hz) on all HP's
- Full Class F insulation system
- 1.25 service factor through 5 HP on line power
- 40°C ambient, NEMA B design, continuous duty
- High Efficiency option in FHP ratings



TEFC - Single Phase

- For agricultural, material handling, textile and pumping applications
- 1.25 service factor up to 1.5 HP
  - o (1.0 service factor @ 2 HP)
  - o (1.15 service factor, 3 and 5 HP)
- Capacitor start/Induction Run (capacitor run above 2 HP)
- Class B insulation, continuous duty, reversible
- Brakemotor optional up to 5HP

Explosionproof

- Designed for most petrochemical, grain, mining and chemical applications
- Class I, group D and Class II, groups F & G, T3B
- Premium Efficiency is standard ≥ 1 HP
- Cast iron construction
- Class F insulation, Class B rise and winding thermostats standard
- 40°C ambient, NEMA B design, continuous duty

* UL is believed to be a trade name and/or trademark of Underwriters Laboratories, Inc., and is NOT owned or controlled by Regal Beloit Corporation.

Selection Information

1. Input hp
   - Based on application data.

2. Speed / Ratio
   - Obtain either desired output speed (rpm) or gearbox ratio based on application.

3. Service Factor
   - The tables on pages G12 to G14 are based on past operating experience within the industries listed and information gathered by AGMA. If the user has data reflecting greater severity than normal industry usage, then service factor should be increased.

   - Choose the AGMA class for your given application based on this criteria. If your application cannot be found, use the following table to determine service factor.

Prime Mover	Duration Of Service	Nature of Load From Driven Machine		
		Uniform	Mod. Shock	Heavy Shock
Electric Motor	Occasional 1/2 hour per day	0.80	0.90	1.00
	Intermittent 2 hours per day	0.90	1.00	1.25
	10 hours per day	1.00	1.25	1.50
	24 hours per day	1.25	1.50	1.75

The following service factors apply to applications involving frequent starts and stops.

Electric Motor	Occasional 1/2 hour per day	0.90	1.00	1.25
	Intermittent 2 hours per day	1.00	1.25	1.50
	10 hours per day	1.25	1.50	1.75
	24 hours per day	1.50	1.75	2.00

Size Selection

Step 1 -Locate appropriate gearmotor selection table (pages G16 to G22) based on input hp.

Step 2 -Choose the appropriate nominal speed required.

Step 3 -Select the correct gearmotor based on service factordetermined in selection information.

Step 4 - Verify overhung load ratings where required (see below).

Overhung Load

When a sprocket, sheave, pulley, or pinion is mounted on the output shaft of a gearmotor, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times hp \times K \times LLF}{rpm \times r}$$

Where:

OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
hp = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
Gearbelt	1.25
V-Belt	1.50
Flat Belt	2.50

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Example

A right angle, foot mounted gearmotor is required to operate a uniformly loaded conveyor at 68 rpm, 24 hours per day. An 8" diameter sprocket is mounted at the end of the shaft and drives the conveyor with a chain. The load is .80 hp and customer requests a premium efficiency 3/60 230/460 volt TEFC motor end. Shaft extension is to be on the right, viewed opposite the input. The gearmotor will be mounted on the floor.

Step 1 – AGMA service classification tables on page G-12 indicate that this is a 1.25 service factor application.

Step 2 – Page G-19 IRA gearmotor table indicates that a frame 143T-6 with 1 HP motor will do the job.

Output RPM	Service Factor	Output Torque in-lb	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
68	1.5	796	0.86	980	25	6	143T	T,C,S,X

Step 3 – To check overhung load for the example:

$$r = \frac{\text{Sprocket Diameter}}{2} = \frac{8}{2} = 4$$

K = 1.0 (chain drive)

LLF = 1.2 (sprocket on end of shaft)

HP = 1

Torque formula:

$$OHL = \frac{63025 \times HP \times K \times LLF}{RPM \times r}$$

$$OHL = \frac{63025 \times 1 \times 1.0 \times 1.2}{68 \times 4} = 278 \text{ lbs.}$$

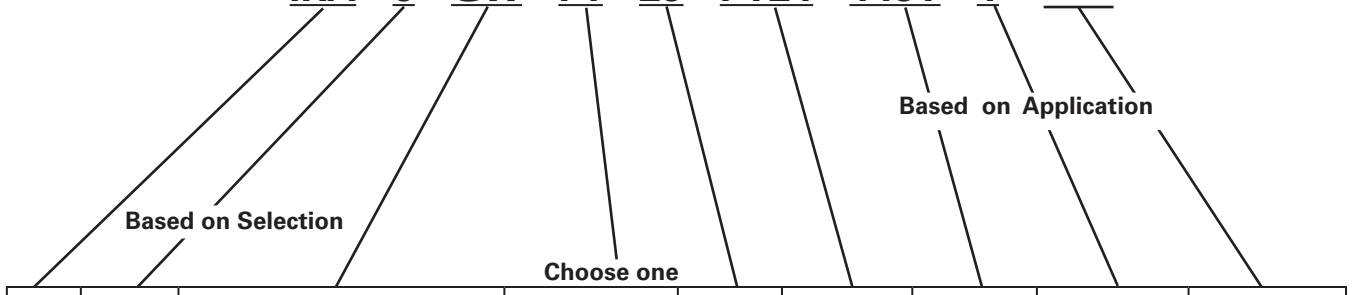
Overhung load capacity of 980 lbs. listed is greater than the calculated value of 278 lbs.

Step 4 – Catalog designation (see "Ordering" page G-8):

IRA - 6 - GW - F1 - 25 - PT24 - 143T - 1

Catalog Designation

IRA • 6 • GW • F1 • 25 • PT24 • 143T • 1 • ____



Type	Gear Frame	Mounting Configuration	Mounting Positions	Ratio	Input	Motor Frame	Horsepower	Modification Code(s)
IRA	1 6 20	GW = Footed Worm GWV = Flanged Worm GWB = Footed Worm-Helical (Frame 6 only)	**See page G-9**	Use Nominal Ratio Selected	See legend on page G-10	48 56 143T 145T 145TY 182T 184T	1/3 1/2 3/4 1 1.5 2 3 5	Number of Modification(s) from pages G-23 and G-24

Availability

Gear Frame	Footed		Flanged
	Universal #1	Universal #2	Universal #1
1 GW (worm)	●	◊	-
6 GW (worm)	●	◊	●
6 GWB (worm helical)	●	●	✱
20 GW (worm)	●	◊	●

● Normally Stocked

◊ Available thru conversion of stock unit

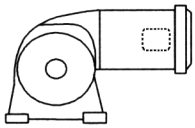
✱ Refer application to Type OtN Product

Mounting Positions
Type IRA

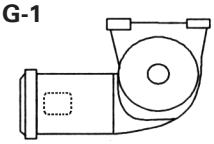
Foot Mount Worm and Worm Helical

Universal No. 1

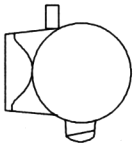
F-1 STANDARD



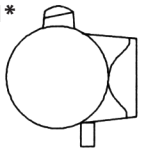
G-1



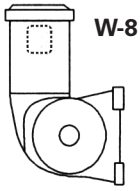
U-3*



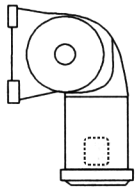
D-1*



W-8

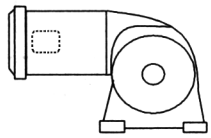


W-1

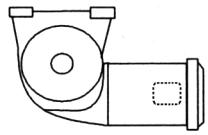


Universal No. 2

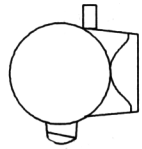
F-2



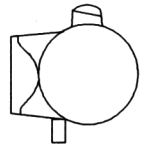
G-4



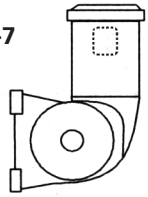
U-1*



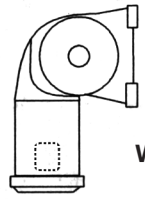
D-3*



W-7



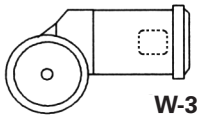
W-2



* Viewed from fan end of motor.

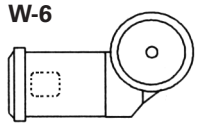
Flange Mount Worm

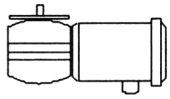
Universal No. 1



W-3 STANDARD

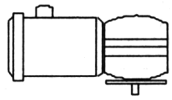
W-6

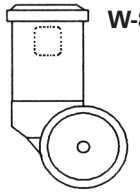




U-1

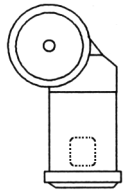
D-1





W-8

W-1



IRA Gearmotor Inputs

Example: Premium Efficiency, TEFC, 3 phase 60 Hz, 575V, with Fail-safe Brake

P T 5 B

1 2 3 4

1 Efficiency
- **Blank** Normal
- **H** High
- **P** Premium

2 Enclosure, pole
- **T** TEFC, 4 pole
- **C** CorroGard®, 4 pole
- **X** Explosionproof, 4 pole

3 Phase, Hz, Voltage
- **S12** 1 Phase, 60, 115/230V
- **S2** 1 Phase, 60, 230V
- **24** 3 Phase, 60, 230/460V
- **53** 3 Phase, 50, 380V
- **54** 3 Phase, 50, 400/415V
- **5** 3 Phase, 60, 575V

4 Accessories
- No Brake
- **B** Fail-safe Brake

Gear Frame	Base Design	Design	Input Code(s)	Motor HP		
				0.33	0.5	0.75
1	S	Single Phase TEFC	TS12	Y	Y	Y
	T	Three Phase TEFC	T24	Y	Y	Y
			T5	Y	Y	Y

Gear Frames	Base Design	Design	Input Code(s)	Motor HP								
				0.33	0.5	0.75	1	1.5	2	3	4	5
6 and 20	S	Single Phase TEFC	TS12	Y	Y	Y	Y	Y	Y	-	-	-
			TS12B	Y	Y	Y	Y	Y	Y	-	-	-
			TS2	-	-	-	-	-	-	Y	-	Y
			TS2B	-	-	-	-	-	-	Y	-	Y
	T	Three Phase TEFC	HT24 *	Y	Y	Y	-	-	-	-	-	-
			HT24B	Y	Y	Y	-	-	-	-	-	-
			HT5	Y	Y	Y	-	-	-	-	-	-
			HT5B	Y	Y	Y	-	-	-	-	-	-
			PT24 ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
			PT24B ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
			PT5 ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
			PT5B ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
			HT53 •	Y	Y	Y	-	-	-	-	-	-
			PT53 •♦	-	-	-	Y	Y	Y	Y	Y	RO
			HT54 •	Y	Y	Y	-	-	-	-	-	-
			PT54 •♦	-	-	-	Y	Y	Y	Y	-	RO
	C	Three Phase CorroGard	HC24*	Y	Y	Y	-	-	-	-	-	-
			HC5	Y	Y	Y	-	-	-	-	-	-
			PC24 ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
			PC5 ▲	Y	Y	Y	Y	Y	Y	Y	-	Y
	X	Three Phase Explosionproof	X24	Y	Y	Y	-	-	-	-	-	-
			X5	Y	Y	Y	-	-	-	-	-	-
			PX24	-	-	-	Y	Y	Y	Y	-	Y
			PX5	-	-	-	Y	Y	Y	Y	-	Y

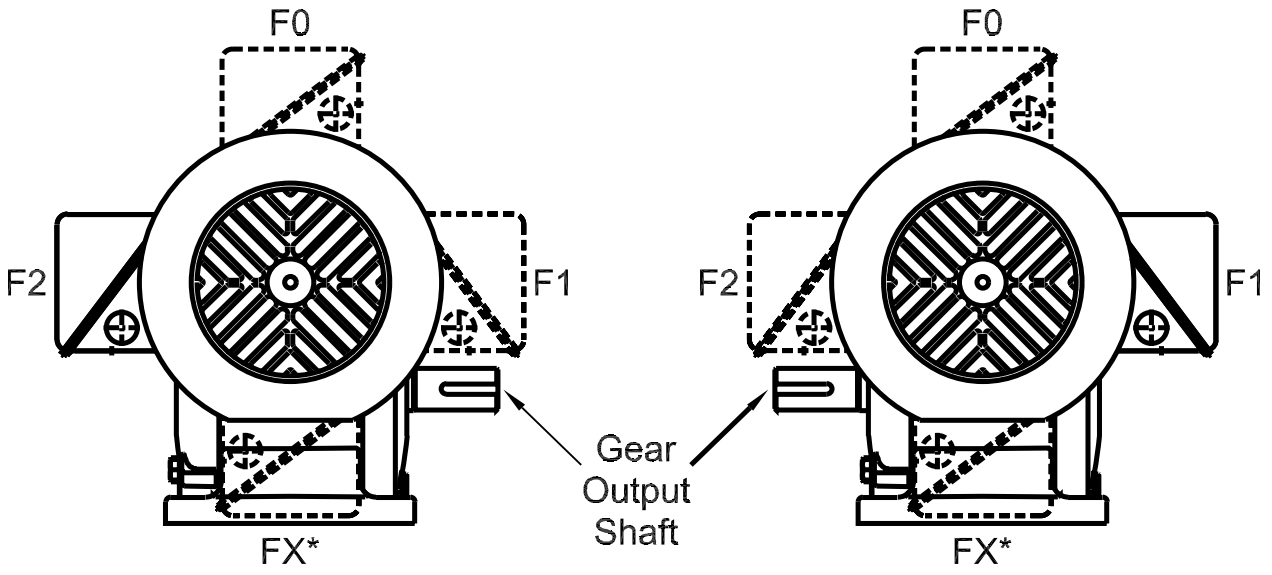
Y Available From Stock
- Not Available
***** This input code is rated 208-230/460V on nameplate
RO Refer To Company For Availability

▲ Motor Is NEMA Premium® Efficiency and NEMA MG-1 Part 31 Inverter Duty (PE GEARMOTOR with 3 year motor warranty)*
• Motor Bears CE certification of sale into EU. Designed for X-Line starting
♦ Motor Efficiency Meets EU Requirements for IE3 effective Jan. 2017

*NEMA is believed to be the trademark and/or trade name of National Electrical Manufacturers Association and is not owned or controlled by Regal Beloit Corporation.

Electrical Connections
Conduit Box Locations:

Shaft Orientation	Conduit Box Location	
	Std.	Optional
Universal #2	F2	F1 or F0 or FX
Universal #1	F1	F2 or F0 or FX



Universal #2 **Universal #1**

* Some IRA Gearmotors ordered with "FX" conduit box locations will have conduit box below reducer feet.

AGMA Application Classification

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
AGITATORS (Mixers)			
Pure Liquids	- - -	1.00	1.25
Liquids & Solids	1.00	1.25	1.50
Liquids - Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	- - -
Lobe	1.00	1.25	1.50
Vane	- - -	1.00	1.25
BREWING & DISTILLING			
Bottling Machinery	- - -	1.00	1.25
Brew Kettles (Continuous Duty)	- - -	1.00	1.25
Cookers (Continuous Duty)	- - -	1.00	1.25
Mush Tubs (Continuous Duty)	- - -	1.00	1.25
Scale Hopper (Frequent Starts)	1.00	1.25	1.50
CAN FILLING MACHINES	- - -	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	- - -	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	- - -	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi - Cylinder	1.00	1.25	1.50
Reciprocating, Single - Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly loaded or fed	- - -	1.00	1.25
Not uniformly fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary Hoist	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	◆	◆	◆
Boom Hoist	◆	◆	◆
Trolley Travel			
Gantry Drive	◆	◆	◆
Traction Drive	◆	◆	◆
Mill Duty			
Main Hoist	◆	◆	◆
Auxiliary	◆	◆	◆
Bridge and Trolley Travel	◆	◆	◆

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
CRANES (cont.)			
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	◆	◆	◆
Bridge and Trolley Travel	◆	◆	◆
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	- - -	1.00	1.25
Escalators	◆	◆	◆
Freight	◆	◆	◆
Gravity Discharge	- - -	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75
FANS			
Centrifugal	- - -	1.00	1.25
Cooling Towers	◆	◆	◆
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	- - -	1.25	1.50
Belt	1.00	1.25	1.50
Disc	- - -	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	- - -	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS & EXCITERS	- - -	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50

◆ **Refer to Application Engineering (1 800 626 2093)**

AGMA Application Classification

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers - Spindle Feed	1.25	1.25	1.50
- Main Drive	1.50	1.50	1.50
Conveyors - Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.75
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
-Transfer	1.25	1.25	1.50
Chains - Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws - Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds - Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
-Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline - Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoist	1.50	1.50	1.50
Rolls - Live, Off Brg., Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers - Chain	1.50	1.50	1.50
- Craneway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	◆	◆	◆
METAL MILLS			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Run Out Tables			
Non-Reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
MILLS, ROTARY TYPE			
Bell & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
PAPER MILLS			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barker Drums	1.75	1.75	1.75
Barker - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
Calender			
(Anti-Friction Bearings Only)	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinders Molds	1.25	1.25	1.25
Dryers (Anti-Friction Bearings Only)			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes			
Lump Breaker, Dandy Roll,			
Wire Turning & Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Rolls	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Pressers - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender	1.25	1.25	1.25
Thickener (AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer (AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind & Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
Yankee Dryers (Anti-Friction			
Bearings Only)	1.25	1.25	1.25
PLASTICS INDUSTRY-PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding &			
Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25

◆ **Refer to Application Engineering (1 800 626 2093).**

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
PLASTICS INDUSTRY - SECONDARY PROCESSING (Cont.)			
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheets	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	- - -	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary - Gear Type	- - -	1.00	1.50
- Lobe Type	- - -	1.00	1.25
- Vane	- - -	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls (if corrugated rolls are used, than the same service factors that are used for a Cracker Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Rolls; 1 corrugated roll	1.75	1.75	1.75
Cracker - 2 corrugated rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
SEWAGE DISPOSAL EQUIPMENT			
Bar Screens	- - -	1.00	1.25
Chemical Feeders	- - -	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	- - -	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	- - -	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

Applications not listed in this table or where the user has data indicating the severity of intended usage to be greater than average should be referred to Application Engineering (1 800 626 2093).

Type IRA

The IRA gearbox is filled at the factory with oil according to the mounting position specified when ordered.The oil used depends on the order description at entry. Non¬washdown units are filled with an AGMA 8 mineral oil. In the event that a gearbox needs to be refilled, see the appropriate maintenance manual for the proper procedure and correct quantity of oil. If synthetic oil is used, the gearbox must be refilled with the same lubricant or must be completely drained and flushed.

Mineral Oils

Ambient Temperature	15 to 60 F	50 to 125 F
ISO Grade	460	680
AGMA	7	8

*Synthetic Oils

Ambient Temperature	-30 to 200 F	-30 to 200 F
ISO Grade	460	680
AGMA	7	8

* Gear sumps will be filled with a synthetic 460 series lubricant classified as a Polyglycol (PAG) oil when food grade lubricant is specified on your order.

1/3 HP

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	3.0+	76	0.28	670	7.1	1	48	T,S
230	3.0+	83	0.30	696	7.1	6	56	T,C,S,X
190	3.0+	91	0.27	670	9	1	48	T,S
190	3.0+	100	0.30	738	9	6	56	T,C,S,X
155	3.0+	111	0.27	670	11.2	1	48	T,S
155	3.0+	121	0.30	804	11.2	6	56	T,C,S,X
125	3.0+	134	0.27	670	14	1	48	T,S
125	3.0+	144	0.29	832	14	6	56	T,C,S,X
100	3.0+	163	0.26	670	18	1	48	T,S
100	3.0+	179	0.28	942	18	6	56	T,C,S,X
84	2.8	189	0.25	670	20	1	48	T,S
84	3.0+	210	0.28	980	20	6	56	T,C,S,X
68	2.5	222	0.24	670	25	1	48	T,S
68	3.0+	250	0.27	980	25	6	56	T,C,S,X
56	2.1	254	0.23	670	31.5	1	48	T,S
56	3.0+	292	0.26	980	31.5	6	56	T,C,S,X
45	1.9	299	0.21	670	40	1	48	T,S
45	3.0+	350	0.25	980	40	6	56	T,C,S,X
37	1.5	337	0.20	670	45	1	48	T,S
37	2.8	405	0.24	980	45	6	56	T,C,S,X
30	1.3	381	0.18	670	56	1	48	T,S
30	2.3	475	0.23	980	56	6	56	T,C,S,X
25	1.1	427	0.17	670	71	1	48	T,S
25	1.9	401	0.16	980	71	6	56	T,C,S,X
20	1.5	461	0.15	980	90	6	56	T,C,S,X
17	2.5	763	0.21	1234	100	6*	56	T,C,S,X
13	2.2	881	0.18	1231	125	6*	56	T,C,S,X
11	2.0	1058	0.18	1140	160	6*	56	T,C,S,X
9	1.7	1213	0.17	1216	200	6*	56	T,C,S,X
7.5	1.5	1416	0.17	1220	224	6*	56	T,C,S,X
6	1.5	1599	0.15	1064	280	6*	56	T,C,S,X
5	1.2	1837	0.15	1229	355	6*	56	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

1/2 hp

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	3.0+	119	0.43	670	7.1	1	48	T,S
230	3.0+	125	0.46	696	7.1	6	56	T,C,S,X
190	3.0+	141	0.43	670	9	1	48	T,S
190	3.0+	147	0.44	738	9	6	56	T,C,S,X
155	3.0+	173	0.43	670	11.2	1	48	T,S
155	3.0+	180	0.44	804	11.2	6	56	T,C,S,X
125	2.6	210	0.42	670	14	1	48	T,S
125	3.0+	219	0.43	832	14	6	56	T,C,S,X
100	2.2	254	0.40	670	18	1	48	T,S
100	3.0+	265	0.42	942	18	6	56	T,C,S,X
84	1.7	292	0.39	670	20	1	48	T,S
84	3.0+	308	0.41	980	20	6	56	T,C,S,X
68	1.6	344	0.37	670	25	1	48	T,S
68	3.0+	367	0.40	980	25	6	56	T,C,S,X
56	1.4	390	0.35	670	31.5	1	48	T,S
56	2.6	428	0.38	980	31.5	6	56	T,C,S,X
45	1.2	456	0.33	670	40	1	48	T,S
45	2.2	507	0.36	980	40	6	56	T,C,S,X
37	1.9	405	0.24	980	45	6	56	T,C,S,X
37	3.0+	601	0.35	913	45	6*	56	T,C,S,X
30	1.6	680	0.32	980	56	6	56	T,C,S,X
30	2.8	738	0.35	883	56	6*	56	T,C,S,X
25	1.2	668	0.26	980	71	6	56	T,C,S,X
25	2.3	911	0.36	1228	71	6*	56	T,C,S,X
20	1.0	726	0.23	980	90	6	56	T,C,S,X
20	2.0	1062	0.34	1228	90	6*	56	T,C,S,X
16.5	1.7	1276	0.33	1234	112	6*	56	T,C,S,X
13.5	1.6	1472	0.32	1231	125	6*	56	T,C,S,X
11.0	1.3	1768	0.31	1140	160	6*	56	T,C,S,X
9.0	1.1	2029	0.29	1216	200	6*	56	T,C,S,X
7.5	1.0	2357	0.28	1220	250	6*	56	T,C,S,X
6.0	1.0	2666	0.25	1064	280	6*	56	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

3/4 hp

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	2.6	177	0.65	670	7.1	1	48	T,S
230	3.0+	186	0.68	696	7.1	6	56	T,C,S,X
190	2.3	210	0.63	670	9	1	48	T,S
190	3.0+	223	0.67	738	9	6	56	T,C,S,X
155	2.1	253	0.62	670	11.2	1	48	T,S
155	3.0+	269	0.66	804	11.2	6	56	T,C,S,X
125	1.7	315	0.62	670	14	1	48	T,S
125	3.0+	324	0.64	832	14	6	56	T,C,S,X
100	1.5	394	0.63	670	18	1	48	T,S
100	2.7	394	0.63	942	18	6	56	T,C,S,X
84	1.2	444	0.59	670	20	1	48	T,S
84	2.4	456	0.61	980	20	6	56	T,C,S,X
68	2.0	537	0.58	980	25	6	56	T,C,S,X
56	1.7	633	0.56	980	31.5	6	56	T,C,S,X
56	3.0+	666	0.59	816	31.5	6*	56	T,C,S,X
45	1.5	743	0.53	980	40	6	56	T,C,S,X
45	2.6	784	0.56	894	40	6*	56	T,C,S,X
37	1.3	944	0.55	980	45	6	56	T,C,S,X
37	2.2	968	0.57	913	45	6*	56	T,C,S,X
30	1.0	1120	0.56	980	56	6	56	T,C,S,X
30	1.8	1187	0.57	883	56	6*	56	T,C,S,X
25	1.5	1464	0.58	1097	71	6*	56	T,C,S,X
20	1.3	1705	0.54	1228	90	6*	56	T,C,S,X
16.5	1.1	2046	0.54	1234	112	6*	56	T,C,S,X
13.5	1.0	2357	0.50	1231	125	6*	56	T,C,S,X
11	1.0	2828	0.49	1140	160	6*	56	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 208-230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

1 hp

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	3.0+	248	0.91	696	7.1	6	143T	T,C,S,X
190	3.0+	297	0.90	738	9	6	143T	T,C,S,X
155	2.8	357	0.88	804	11.2	6	143T	T,C,S,X
125	2.4	430	0.85	832	14	6	143T	T,C,S,X
100	2.0	522	0.83	942	18	6	143T	T,C,S,X
84	1.8	605	0.81	980	20	6	143T	T,C,S,X
84	3.0+	600	0.80	753	20	6*	143T	T,C,S,X
68	1.5	796	0.86	980	25	6	143T	T,C,S,X
68	2.8	740	0.80	827	25	6*	143T	T,C,S,X
56	1.3	835	0.74	980	31.5	6	143T	T,C,S,X
56	2.4	921	0.82	816	31.5	6*	143T	T,C,S,X
45	1.1	966	0.69	980	40	6	143T	T,C,S,X
45	2.0	1082	0.77	894	40	6*	143T	T,C,S,X
37	1.7	1455	0.85	913	45	6*	143T	T,C,S,X
30	1.4	1670	0.83	883	56	6*	143T	T,C,S,X
25	1.1	2015	0.80	1097	71	6*	143T	T,C,S,X
20	1.0	2345	0.74	1228	90	6*	143T	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

1 1/2 hp

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	2.4	372	1.36	696	7.1	6	145T	T,C,S,X
190	2.3	444	1.34	738	9	6	145T	T,C,S,X
155	1.9	534	1.31	804	11.2	6	145T	T,C,S,X
125	1.6	644	1.28	832	14	6	145T	T,C,S,X
100	1.3	779	1.24	942	18	6	145T	T,C,S,X
100	2.4	785	1.25	720	18	6*	145T	T,C,S,X
84	1.2	900	1.20	980	20	6	145T	T,C,S,X
84	2.3	931	1.24	753	20	6*	145T	T,C,S,X
68	1.0	1021	1.10	980	25	6	145T	T,C,S,X
68	1.9	1148	1.24	827	25	6*	145T	T,C,S,X
56	1.6	1480	1.32	816	31.5	6*	145T	T,C,S,X
56	2.6	1194	1.06	2850	31.5	20	145T	T,C,S,X
45	1.3	1820	1.30	894	40	6*	145T	T,C,S,X
45	2.0	1523	1.09	2850	40	20	145T	T,C,S,X
37	1.1	2160	1.27	913	45	6*	145T	T,C,S,X
37	1.7	1815	1.07	2850	45	20	145T	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

2 hp

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
230	1.8	495	1.81	696	7.1	6	145T	T,C,S,X
190	1.7	591	1.78	738	9	6	145T	T,C,S,X
155	1.4	711	1.75	804	11.2	6	145T	T,C,S,X
125	1.2	852	1.69	832	14	6	145T	T,C,S,X
100	1.8	1100	1.75	720	18	6*	145T	T,C,S,X
84	1.7	1300	1.73	753	20	6*	145T	T,C,S,X
68	1.4	1570	1.69	827	25	6*	145T	T,C,S,X
68	2.3	1439	1.55	2850	25	20	145T	T,C,S,X
56	1.2	1965	1.75	815	31.5	6*	145T	T,C,S,X
56	2.0	1670	1.48	2850	31.5	20	145T	T,C,S,X
45	1.0	2410	1.72	894	40	6*	145T	T,C,S,X
37	1.2	2547	1.50	2850	45	20	145T	T,C,S,X

Refer to OtN Product for higher ratios and/or capacities.

* Worm-helical reducer (GWB)

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 115/230 volts, 145TY
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

3 hp

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
175	3.0+	938	2.60	2743	9	20	182T	T,C,X,S
117	2.3	1374	2.55	2850	14	20	182T	T,C,X,S
100	2.0	1663	2.64	2850	18	20	182T	T,C,X,S
88	1.9	1784	2.49	2850	20	20	182T	T,C,X,S
68	1.5	2122	2.29	2850	25	20	182T	T,C,X,S
58	1.3	2550	2.35	2850	31.5	20	182T	T,C,X,S

General Specifications: Totally enclosed, 60 hertz, 40°C ambient, continuous duty.

5 hp

Output rpm	Service Factor	Output Torque in-lbs	Output Horsepower	OHL Δ lb	Nominal Ratio	Frame Size Gear	Frame Size Motor	Std. Motor Types ◊
175	1.9	1613	4.48	2743	9	20	184T	T,C,X,S
117	1.4	2358	4.38	2850	14	20	184T	T,C,X,S
100	1.2	2819	4.47	2850	18	20	184T	T,C,X,S
88	1.2	2950	4.12	2850	20	20	184T	T,C,X,S

Refer to OtN Product for higher ratios and/or capacities.

◊ **Standard Motor Types** (see page G-10 for product codes)
- T TEFC, three phase, 230/460 or 575 volts
- C CorroGard®, three phase, 230/460 or 575 volts
- S TEFC, single phase, 230 volts, 184T frame for 3 HP
- X Explosionproof, Cls I Grp D, Cls II Grps F&G, three phase 230/460 or 575 volts

Δ Overhung loads are at shaft midpoint

Modifications

Inverter Duty Gearmotors

All standard three phase 60 Hz non-explosionproof Browning® IRA PE gearmotors utilize motors that are not only Premium Efficiency but are designed and nameplated for full Inverter Duty. Our commitment is to deliver the highest quality motor for the broadest spectrum of applications in one design. Below is a table showing the constant torque performance of these gearmotors:

Motor Type	Motor Input Codes	C/T Freq. Range	Motor HP @ Max. Hz of Range
			1/3 to 5 HP
T and C	PT24, PT24B, PT5, PT5B, PC24, PC5	10:1 60-6 Hz	Yes
		15:1 90-6 Hz	Yes

These inverter duty motors incorporate superior design features including but not limited to

- Three-year motor warranty
- Precision balanced rotors (to 1/2 NEMA Std.) for smooth operation above 60 Hz
- Winding thermostats (one per phase) with leads brought out to main conduit box
- Brakemotor design available

Motor Modifications

M1 Brakes

Design

These mounted brakes have a direct acting, spring set, electromagnetically released disc design. When power to the brake is interrupted, the brake will immediately set and hold. When power is restored, the brake will automatically release. All brakes will have a manual release included.

Enclosures For Brakes

IP23 - suitable for indoor, relatively dry, clean and non-hazardous applications.

Standard Enclosures For Brake

Non-Hazardous Motor Type	Motor Frame Size
	56 and Larger
S	IP23
T	IP23

Motor Modifications (Continued)

Operating Voltage

Brakemotors for fixed frequency operation will be arranged for powering brake from the motor. If another voltage is to be supplied to brake, state that voltage on the order.

Brakes for inverter controlled motors require a separate fixed frequency AC power source, but interlocked with the starting of the motor. Options are single phase 115V or 230VAC.

Mounting

Brakes for IRA gearmotors are suitable for the mounting positions specified for the gear.

M2 Premium Efficiency Motor

NEMA premium efficiency motor designs are standard for all non-explosionproof 60 Hz "T" and "C" enclosed designs starting at 1/3 HP. Explosionproof motors (type "X") ≥ 1HP are NEMA premium efficiency as well. These designs meet or exceed government standards required in the USA for 2016 and new standard effective in June 2017 for Canada.

For 50 Hz 380V destinations, three phase motor designs up 4 HP are available TODAY to meet the IE3 premium efficiency requirements effective in January 2017 in Europe.

Regal does offer an alternative High Efficiency motor option for its Fractional HP three phase gearmotors in all motor enclosures.

M4 Canopy Cap / Drip Cover

This cover provides optional protection from dripping liquids when a gearmotor is ordered for either V1 or V5 mounting. These can be selected for most motor "T" or "S" designs up to 5 HP excluding units supplied with brakes.

M5 Frequency - 50 Hz

Motors for operation from 50 Hz power supplies are available using HT53 or PT53 if 380V. Other power options include HT54 or PT54 if 415V. All motors are designed for X-Line starting. Gearmotor selection and rating tables reflect performance from 60 Hz power. To select a gearmotor for 50Hz at the motor HP shown, use the following "conversion" rules:

- Reduce published "Output RPM" by (60 Hz value x 5/6) to get 50 Hz Output rpm
- Reduce published "gear service factor" by (60 Hz value x 5/6) to get 50 Hz gear service factor
- Ensure the final selection yields a suitable gear service factor for the application intended

M6 Voltage (3 Phase Only)

Standard voltages available are listed in the table below. Other voltages are available and must be specified at order entry and require special voltage adder.

Frequency	3 Phase Voltages Thru 5 hp
60 Hz	200, 230, 230/460, 460, 575
50 Hz	200, 220, 230, 220/380, 220/440, 380, 415, 460, 500, 575

3/50/380V is available from stock on "T" and "C" motor types with CE certification.

Modifications

Motor Modifications (Continued)

M7 Insulation

Standard 3 phase TEFC and CorroGard® motor ends have premium class F insulation standard. Single phase TEFC and explosionproof motor ends have class B insulation as standard.

M8 Space Heaters

Space heaters are recommended for gearmotors installed in damp locations to prevent condensation on the motor windings when the motor is not operating. Leads are brought to the standard motor conduit box. Space heater voltage (115, 230, 460 volts) must be specified when order is entered. Available in gearmotors > 3/4 hp.

M9 Thermal Protection - Thermostats

Three N/C winding thermostats (one per phase) are standard and pre-wired to the main motor conduit box for the following input codes:

- Motor Type "T" – PT24, PT24B, PT5, PT5B
- Motor Type "C" – PC24, PC5
- Motor Type "X" – all types

Motor Options

Certification or Approvals For Gearmotors

Hertz	Phase	Motor Voltage	Approvals [1] Standard
60 Hz	1	115/230V	UL, CSA
	3	230/460	UL, CSA
		575	UL, CSA
50 Hz	3	380	CE
		415	CE

[1] Corresponding logo(s) will be displayed on motor nameplate

Gear Modifications

G1 Food Grade Lubricant

When this modification is specified, the IRA gear sump will be filled with the required volume of a synthetic lubricant classified as a Polyglycol (PAG), 460 series that is approved for USDA H-1 food grade use.

G2 Normally Closed Breather

For applications involving very dusty environments specify this breather design. The breather has a protected spring loaded valve construction opening only to relieve any pressure built up greater than 3 PSI and then closing.

G3 Double Extended Output Shafts

Double end output shafts are available on single reduction type GW worm-only units.

G5 Special Nameplates

Units can be provided with limited additional special information on the standard product nameplate. When requested, a special nameplate may be provided, stamped with custom markings.

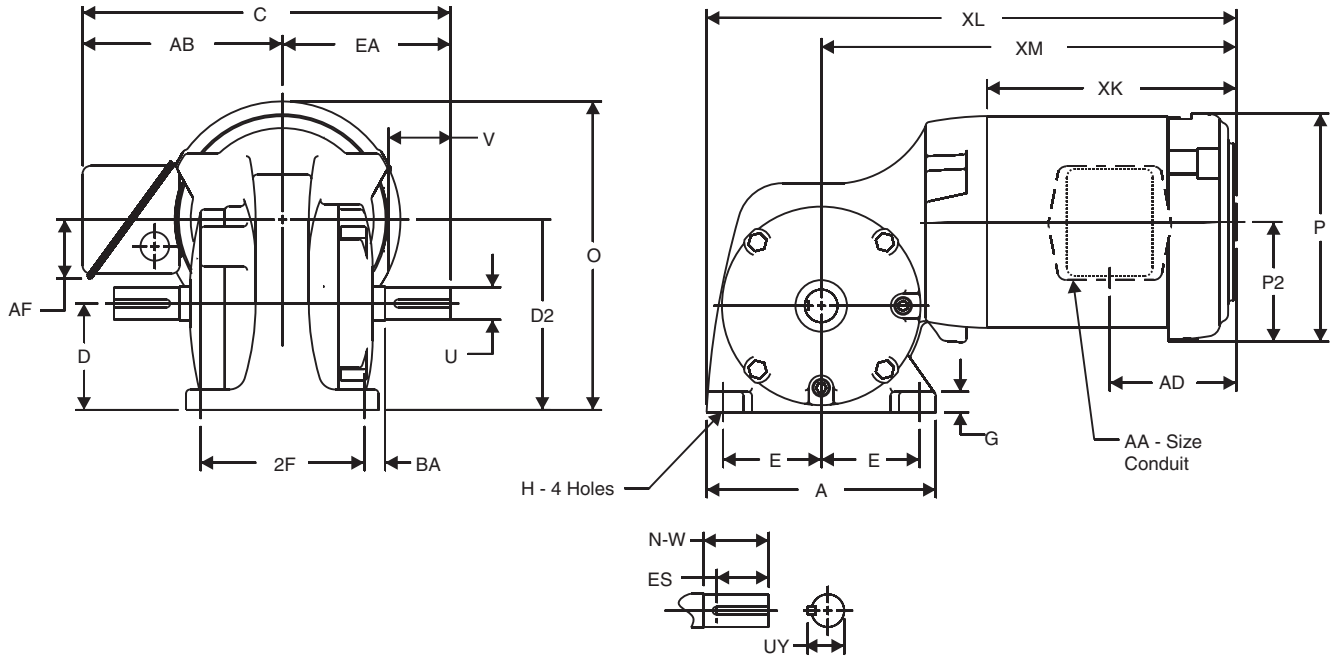
G6 Low Ambient Temperature

Gearmotors can be supplied for low ambient down to -20F. Refer complete details of the applications to the Applications Department for review

GM2 Export Boxing

Export boxing can be provided for "underdeck" transport. When the quantity of IRA gearmotors exceeds five(5) units, refer to the International Sales department for most economical accommodations.

Foot Mounted - GW Single Worm Reduction



Gear Frame	A	D	D2	E	2F	G	H	N-W	U[2]	V Min.	BA	ES	UY	AH	Key
1	5.63	2.50	4.50	2.375	4.75	0.50	0.343	1.63	0.750	1.406	0.406	1.25	0.837	1.88	3/16 Sq.
6	7.00	3.25	5.81	3	5.00	0.63	0.406	2.00	1.000	1.940	0.438	1.25	1.114	2.18	1/4 Sq.
20	10.25	4.50	8.25	4.375	8.00	1.00	0.688	3.25	1.625	2.938	0.906	2.38	1.796	3.38	3/8 Sq.

Frame Motor-Gear	Motor Type[1]	HP	C	XL	XM	XK	P	P2	AB	EA	AA	O	AD	AF
48 - 1	T	1/3 , 1/2	8.66	15.79	12.98	9.03	6.72	2.79	4.34	4.32	0.50	8.00	4.43	1.16
48 - 1	T	3/4	8.66	16.79	13.98	10.03	6.72	2.79	4.34	4.32	0.50	8.00	4.43	1.16
56 - 6	T	any	11.04	16.30	12.80	7.72	7.22	3.31	6.10	4.94	0.75	9.47	3.30	0.94
143T-6	T	1	11.04	17.77	14.27	9.19	7.22	3.31	6.10	4.94	3/4	9.47	3.30	0.94
145T-6	T	1 1/2, 2	11.04	18.55	15.05	9.97	7.22	3.31	6.10	4.94	3/4	9.47	3.30	0.94
143T-20	T	1	11.04	20.50	15.37	9.19	7.22	3.31	6.10	4.94	3/4	9.47	3.30	0.94
145T-20	T	1 1/2, 2	11.04	21.28	16.15	9.97	7.22	3.31	6.10	8.13	3/4	11.91	3.30	0.94
182T,184T-20	T	3, 5	14.45	23.44	19.94	13.76	9.50	4.56	7.74	8.13	3/4 [6]	13.03	7.81	1.78

Dimension "D" will never be exceeded, but may be less than values shown. When exact dimensions are required, shims up to 1/16" may be necessary.

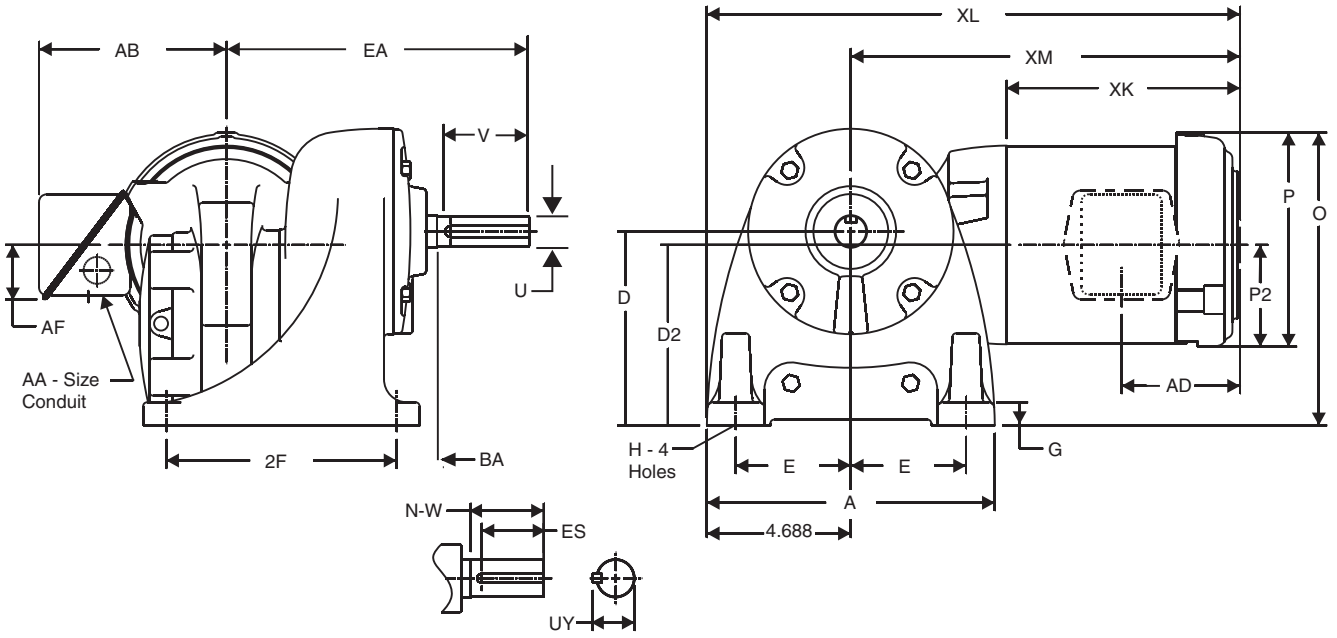
All rough casting dimensions may vary by 1/4" due to casting variations.

[1] See page G-28-G-30 for alternate motor enclosures and brakes.

[2] Shaft diameter tolerances: +.0000"; -.0005" up to 1 1/2" diameter inclusive. Larger diameters: +.000"; -.001".

[6] There are 2 opening in conduit box

Foot Mounted - GWB Worm-Helical Double Reduction



Gear Frame	A	D	D2	E	2F	G	H	N-W	U[2]	V Min.	BA	ES	UY	AH	Key
6	9.38	6.31	5.88	3.75	7.50	0.75	0.562	3.00	1.500	2.906	1.375	2.50	1.656	3/8 Sq.	1/4 Sq.

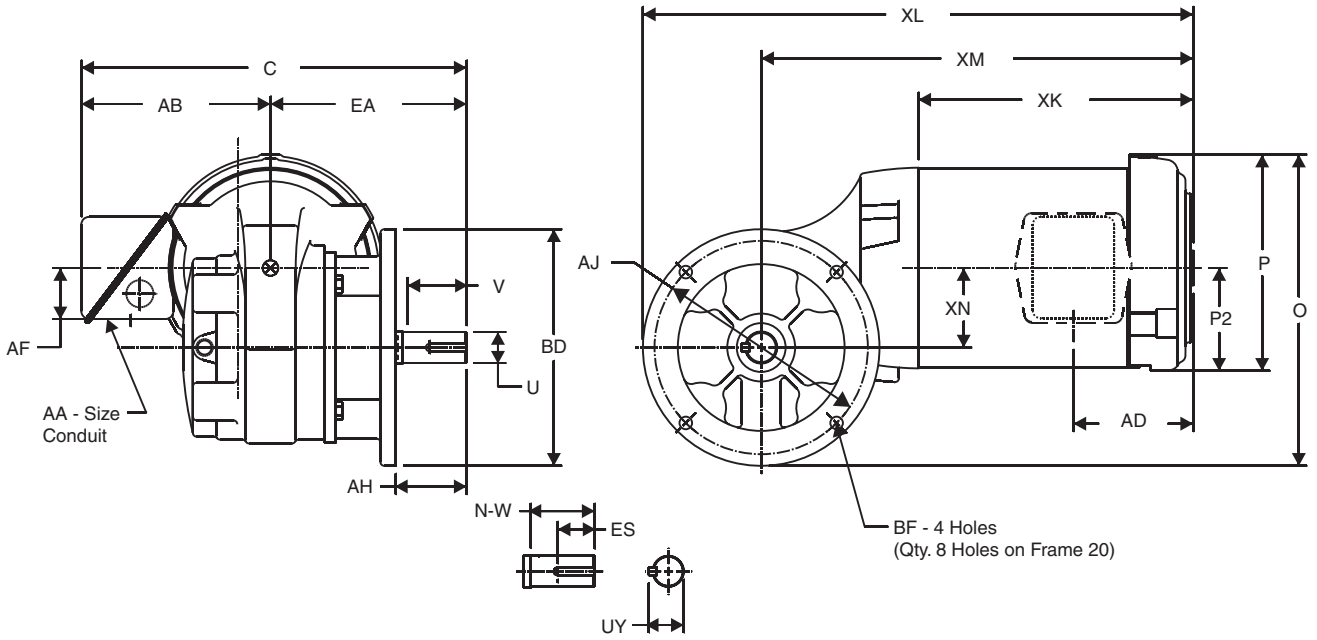
Frame Motor-Gear	Motor Type[1]	HP	C	XL	XM	XK	P	P2	AB	EA	AA	O	AD	AF
56 - 6	T	any	15.96	17.20	12.51	7.72	7.22	3.31	6.10	10.03	0.75	9.79	3.30	0.94
143T - 6	T	1	16.13	18.67	13.98	9.19	7.22	3.31	6.10	10.03	3/4	9.79	3.30	0.94
145T - 6	T	1 1/2, 2	16.13	19.45	14.76	9.97	7.22	3.31	6.10	10.03	3/4	9.79	3.30	0.94

Dimension "D" is the maximum value, but may be less than values shown. When exact dimensions are required, shims up to 1/16" may be necessary.

[1] See page G-28 to G-30 for alternate motor enclosures and brakes.
[2] Shaft diameter tolerances: +.0000"; -.0005" up to 1-1/2" diameter inclusive. Larger diameters: +.000"; -.001".

All rough casting dimensions may vary by 1/4" due to casting variations.

Flanged Mounted - GWV Single Worm Reduction



Gear Frame	A	BD	AH	XN	BF	N-W	U[2]	V Min.	ES	UY	Key
6	6.875	7.63	2.00	2.56	0.406	2.08	1.000	2.00	1.19	1.114	1/4 Sq.
20		10.00	3.06	3.75	0.560	3.25	1.625	2.94	2.34	1.796	3/8 Sq.

Frame Motor-Gear	Motor Type[1]	HP	C	XL	XM	XK	P	P2	AB	EA	AA	O	AD	AF
56 - 6	T	any	12.11	15.83	12.80	7.72	7.22	3.31	6.10	6.01	0.75	9.98	3.30	0.94
143T - 6	T	1	12.11	17.30	14.27	9.19	7.22	3.31	6.10	6.01	3/4	9.98	3.30	0.94
145T - 6	T	1 1/2, 2	12.11	18.08	15.05	9.97	7.22	3.31	6.10	6.01	3/4	9.98	3.30	0.94
143T - 20	T	1	15.59	20.37	15.37	9.19	7.22	3.31	6.10	9.49	3/4	12.36	3.30	0.94
145T - 20	T	1 1/2, 2	15.59	21.15	16.15	9.97	7.22	3.31	6.10	9.49	3/4	12.36	3.30	0.94
182T,184T-20	T	3, 5	17.23	24.94	19.94	13.76	9.50	4.56	7.74	9.49	3/4 [6]	13.53	7.81	1.78

All rough casting dimensions may vary by 1/4" due to casting variations.

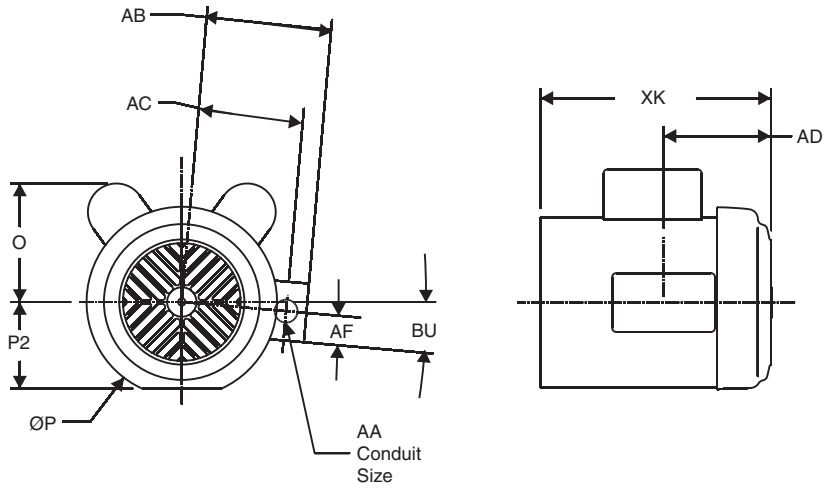
[1] See page G-28 to G-30 for alternate motor enclosures and brakes.

[2] Shaft diameter tolerances: +.0000"; -.0005" up to 1 1/2" diameter inclusive. Larger diameters: +.000"; -.001".

[6] There are 2 opening in conduit box

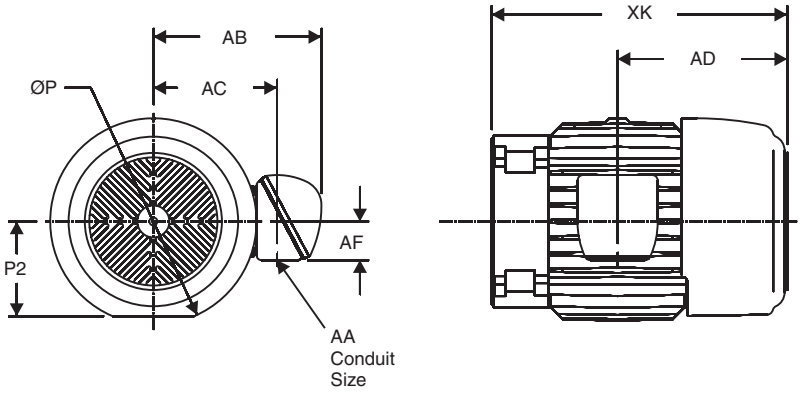
Alternate Motor Dimensions

Single Phase*



Motor Frame	HP	O	P	P2	AA	AB	AC	AD	AF	BU	XK
48	1/3, 1/2	4.40	6.72	2.79	1/2	4.72	3.79	5.29	1.13	N/A	8.03
	3/4, 1	3.87	6.72	2.79	1/2	4.34	3.55	5.29	1.16	10*	9.03
56	1/3, 1/2	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	7.34
	3/4	4.78	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	9.06
143T	1	5.09	7.28	3.31	3/4	4.78	4.00	4.14	1.13	N/A	9.06
145TY	1 1/2, 2	4.53	7.28	3.31	3/4	4.78	3.83	4.14	1.13	5*	11.09
184T	3, 5	5.11	9.56	4.39	3/4	8.58	6.45	7.14	3.09	N/A	14.33

CorroGard® Motor



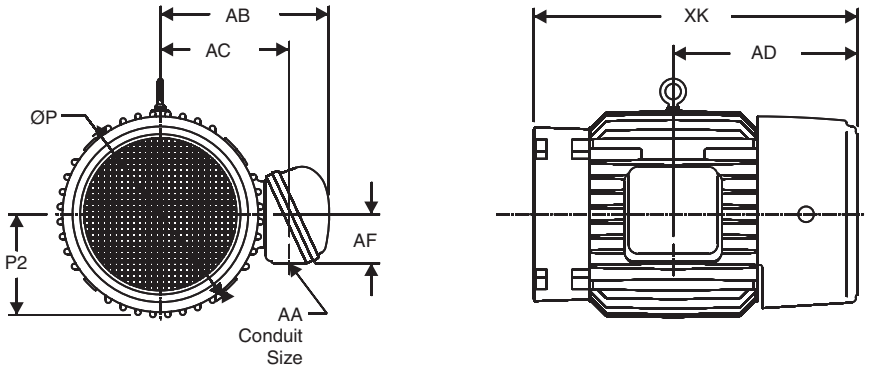
Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.41	3.44	3/4	6.50	4.59	3.72	1.25	8.03
143T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	9.25
145T	7.41	3.44	3/4	6.50	4.59	3.72	1.25	10.03
182T, 184T	9.50	4.56	3/4 [6]	7.74	5.69	7.81	1.78	13.76

* See bottom of page G-30 for added dimension if a brake is required

[6]There are 2 opening in conduit box

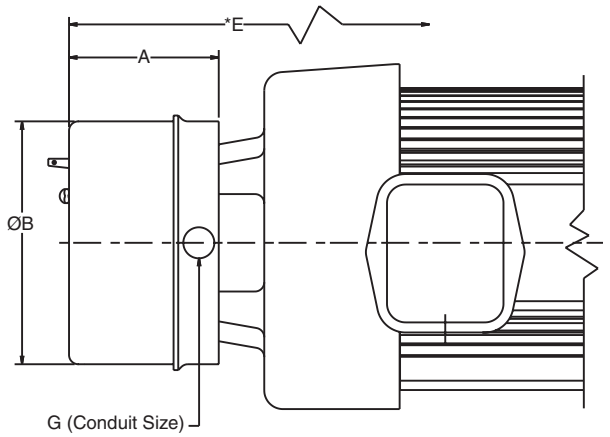
Alternate Motor Dimensions

Explosion Proof



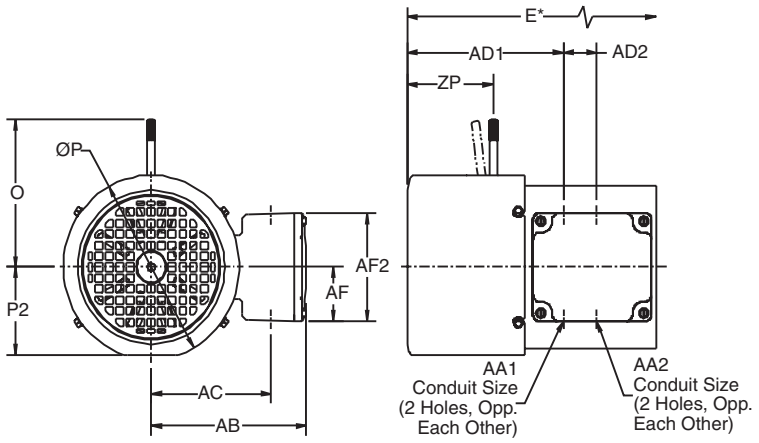
Motor Frame	P	P2	AA	AB	AC	AD	AF	XK
56	7.88	3.38	3/4	6.79	5.31	4.37	1.78	10.97
143T, 145T	7.88	3.38	3/4	6.79	5.31	4.37	1.78	11.72
182T, 184T	9.50	4.56	3/4	7.70	5.79	7.75	2.25	13.69

Dimensional Supplement



AC Brake with Type "T" and "S" Motor

Motor Type	Motor Frame	Brake Torque (ft. lbs.)	A	B	E*	G
T & S	56	1.5	4.01	6.54	4.56	1/2
		3	4.01	6.54	4.56	1/2
	143T	3	4.01	6.54	4.56	1/2
T	145T	6	4.01	6.54	4.56	1/2
S	145TY	6	4.01	6.54	4.56	1/2
T	182T	p	4.01	6.54	4.56	1/2
T & S	184T	15	4.01	6.54	4.56	1/2



DC FCR Brake with Type "T" Motor

Motor Frame	E*	O	P	AA1	
				Size	Qty
56-143/145T	2.63	5.80	7.24	3/4 NPT	2
182/184T	1.95	7.3	9.23	3/4 NPT	1

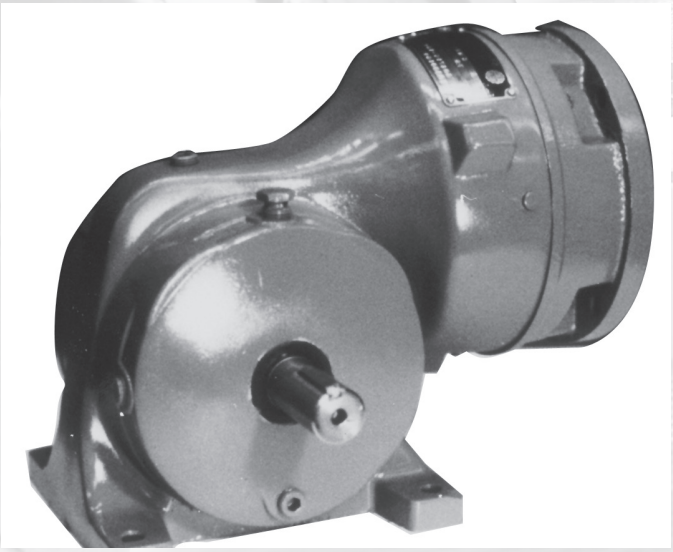
Motor Frame	AA2		AB	AC	AD1
	Size	Qty			
56-143/145T	1/2 NPT	2	6.38	4.94	6.43
182/184T	3/4 NPT	1	7.8	6.14	8.84

Motor Frame	AD2	AF	AF2	P2	ZP
56-143/145T	1.38	2.13	4.25	3.46	3.54
182/184T	1.81	2.32	4.65	N/A	4.41

*Add "E" to XK of equivalent three phase frame motor.

IRA Worm and Helical Reducers

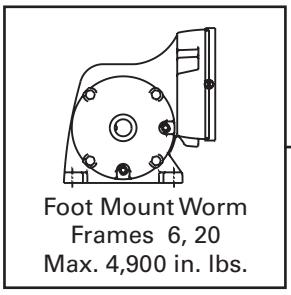
These right-angle gear reducers offer a standard NEMA® C-Face alternative to the IRA gearmotor products. Where an application requires a DC or another type motor not available as an IRA gearmotor, this C-Face reducer may be used with the same mounting. The flexible IRA gear reducers are available in a foot mount configuration with worm or worm-helical gearing or as a flange mount worm gear.*

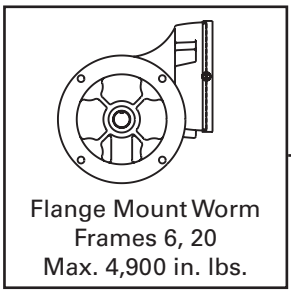


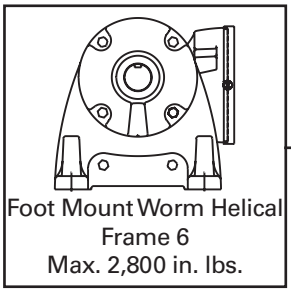
- ❏ Forged "LMS" bronze worm wheel provides extra strength and life.
- ❏ Roller bearings on output shaft provide ample rating for high overhung load.
- ❏ Factory filled with oil.
- ❏ Two double lipped oil seals at input and output shafts.

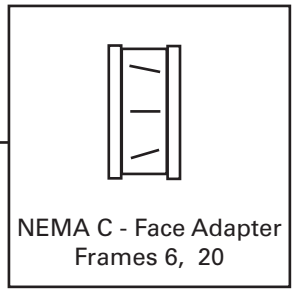
*NEMA is believed to be the trademark and/or trade name of National Electrical Manufacturers Association and is not owned or controlled by Regal Beloit Corporation.

IRA Reducers





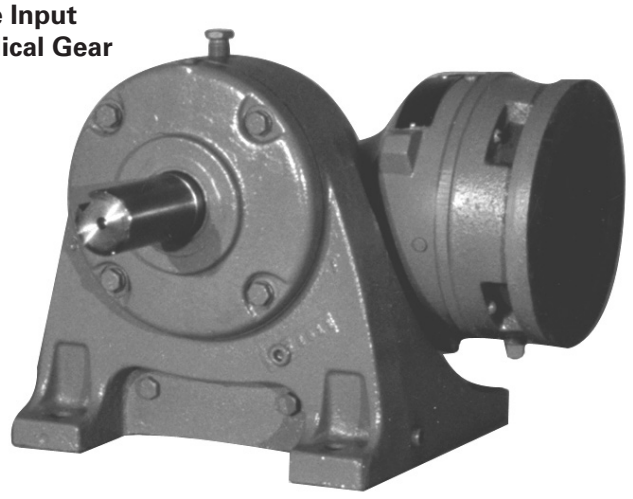




Type IRA

"C" Face Input Worm Gear

"C" Face Input
Worm - Helical Gear



Selection Information

1. Required Output Torque
- Based on application data.

2. Speed / Ratio
- Obtain either desired output speed (rpm) or gearbox ratio based on application.

3. Service Factor
- Determine the required service factor using either the AGMA Application Classification chart (pages G-38 to G-40), or the duration of operation, load type, and motor type with the table below.

Prime Mover	Duration Of Service	Nature of Load From Driven Machine		
		Uniform	Mod. Shock	Heavy Shock
Electric Motor	Occasional 1/2 hour per day	0.80	0.90	1.00
	Intermittent 2 hours per day	0.90	1.00	1.25
	10 hours per day	1.00	1.25	1.50
	24 hours per day	1.25	1.50	1.75

The following service factors apply to applications involving frequent starts and stops.

Electric Motor	Occasional 1/2 hour per day	0.90	1.00	1.25
	Intermittent 2 hours per day	1.00	1.25	1.50
	10 hours per day	1.25	1.50	1.75
	24 hours per day	1.50	1.75	2.00

Size Selection

Step 1
- Locate speed reducer selection tables (pages G-42 to G-45) based on input speed to gearbox.

Step 2
- Choose the nominal ratio appropriate for the speeds required.

Step 3 Calculate Equivalent Load
- Determine the service factored horsepower or output torque needed to drive the load. (equivalent brake horsepower)

Brake Horsepower x service factor = Equivalent BHP (Horsepower at load)

Output torque x service factor = Equivalent output torque

Step 4 Size Reducer from Rating Tables
- Size reducer or gearmotor from rating tables using the equivalent BHP or output torque and output speed.

Step 5 Selecting the Motor
- To select the proper motor horsepower, the reducer efficiency needs to be calculated for the reducer at the rating selected.

$$\text{HP motor} = \frac{\text{Torque output x rpm output}}{\text{63025 x efficiency}}$$

$$\text{or HP motor} = \frac{\text{hp output}}{\text{efficiency}}$$

$$\text{Efficiency} = \frac{\text{Max. Output Torque x Output rpm x100\%}}{\text{Max. Input hp x 63025}}$$

Step 6
- Verify thermal limitations.

Step 7
- Verify overhung load ratings where required (G-35).

Example

1. Application Data:

Uniformly loaded conveyor, 24 hrs./day operation. Right angle solid shaft, foot mounted speed reducer directly coupled to head pulley. Customer prefers C-Face motors.

Motor Rating: TEFC, 230/460V 1 hp, 1750 rpm, 143TC frame footless

Output Speed: 56 rpm

2. Size Selection

56 RPM REQUIRED OUTPUT

EQUALS 31.5:1 RATIO

PM • SF = P

1 HP • 1.25 = 1.25 HP

6 GW (1.3 HP) > 1.25

SELECT IRA 6 GW (1.3 HP) > 1.25

31.0	**6 GW(V)**
EXAMPLE	
1.3	1244

3. Catalog Designation (see "Ordering" page G-36)

IRA • 6 • GW • F1 • 25 • U • 143TC

Overhung Load

Type IRA

Overhung Load

When a sprocket, sheave, pulley, or pinion is mounted on the output shaft of a reducer, it is necessary to calculate the overhung load. This calculated load must be compared with the gearbox capacity listed to make sure the gearbox will not be overloaded. To calculate the overhung load you need to know the torque or horsepower at the output shaft and the location along the shaft at which the load is applied.

A. If torque is known:

$$OHL = \frac{T \times K \times LLF}{r}$$

B. If horsepower is known:

$$OHL = \frac{63025 \times hp \times K \times LLF}{rpm \times r}$$

Where:
OHL = Overhung load (pounds)
T = Torque (in. lbs.)
r = Radius of driving member (in.)
hp = Horsepower
K = Drive type factor
LLF = Load location factor

Driving Member	Value of K
Chain Drive	1.00
Pinion	1.25
Gearbelt	1.25
V-Belt	1.50
Flat Belt	2.50

Load Location	Value of LLF
End of shaft extension	1.20
Center of shaft extension	1.00
Shaft extension shoulder	0.80

Output Speed rpm	Overhung Load (In Pounds) by Frame and Type		
	6 GW, GWV	6 GWB	20 GW, GWV
230	696	-	-
190	738	-	2743
155	804	-	2800
125	832	-	2850
100	942	745	2850
84	980	753	2850
68	980	827	2850
56	980	816	2850
45	980	894	2850
37	980	913	2850
30	980	883	2850
25	980	1097	2850
20	980	1228	2850
16.5	980	1234	2850
11	980	1234	2850
9	980	1234	2850
7.5	980	1234	2850

Catalog Designation

IRA • 6 • GW • F1 • 25 • U • 143TC • ____

Based on Selection — Choose one of each — Based on Application

Type	Gear Frame	Mounting Configuration	Mounting Positions	Ratio	Input	Motor Frame	Modification Code(s)
IRA	6 20	GW = Foot Mounted GWV = Flanged Worm GWB = Footed Worm-Helical (Frame 6 Only)	See page G-37	Use Nominal Ratio Selected	U* = C-Face *Must specify NEMA Frame Size	Req'd on U	Number of Modification(s) From Page G-47

Availability

Gear Frame	Footed		Flanged
	Universal #1	Universal #2	Universal #1
6 GW (worm)	●	◊	●
6 GWB (worm helical)	●	●	✶
20 GW (worm)	●	◊	●

- ● Normally Stocked
- ◊ Available thru conversion of stock unit
- ✶ Refer application to type OtN product

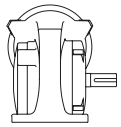
Mounting Positions

Type IRA

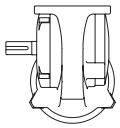
Foot Mount Worm and Worm - Helical

Universal No. 1

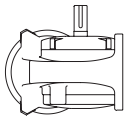
F1



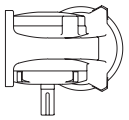
C1



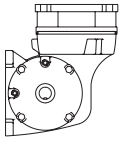
U3



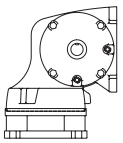
D1



W8

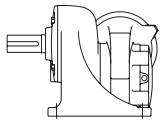


W1

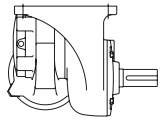


Universal No. 2

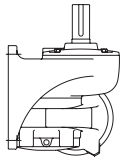
F2



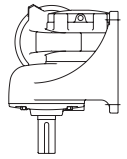
C4



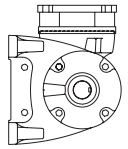
U1



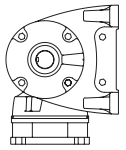
D3



W7



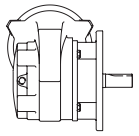
W2



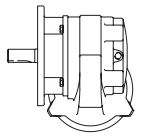
Flange Mount Worm

Universal No. 1

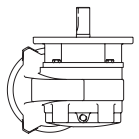
W3



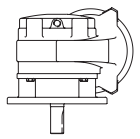
W6



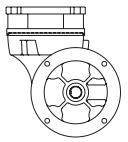
U1



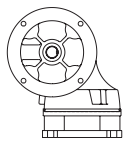
D1



W8



W1



AGMA Application Classification

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
AGITATORS (Mixers)			
Pure Liquids	- - -	1.00	1.25
Liquids & Solids	1.00	1.25	1.50
Liquids - Variable Density	1.00	1.25	1.50
BLOWERS			
Centrifugal	1.00	1.25	- - -
Lobe	1.00	1.25	1.50
Vane	- - -	1.00	1.25
BREWING & DISTILLING			
Bottling Machinery	- - -	1.00	1.25
Brew Kettles (Continuous Duty)	- - -	1.00	1.25
Cookers (Continuous Duty)	- - -	1.00	1.25
Mush Tubs (Continuous Duty)	- - -	1.00	1.25
Scale Hopper (Frequent Starts)	1.00	1.25	1.50
CAN FILLING MACHINES	- - -	1.00	1.25
CAR DUMPERS	1.25	1.50	1.75
CAR PULLERS	1.00	1.25	1.50
CLARIFIERS	- - -	1.00	1.25
CLASSIFIERS	1.00	1.25	1.50
CLAY WORKING MACHINERY			
Brick Press	1.25	1.50	1.75
Briquette Machine	1.25	1.50	1.75
Pug Mill	1.00	1.25	1.50
COMPACTORS	1.50	1.75	2.00
COMPRESSORS			
Centrifugal	- - -	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, Multi - Cylinder	1.00	1.25	1.50
Reciprocating, Single - Cylinder	1.25	1.50	1.75
CONVEYORS - GENERAL PURPOSE			
Uniformly loaded or fed	- - -	1.00	1.25
Not uniformly fed	1.00	1.25	1.50
Reciprocating or Shaker	1.25	1.50	1.75
CRANES			
Dry Dock			
Main Hoist	1.25	1.50	1.75
Auxiliary Hoist	1.25	1.50	1.75
Boom Hoist	1.25	1.50	1.75
Slewing Drive	1.25	1.50	1.75
Traction Drive	1.50	1.50	1.50
Container			
Main Hoist	◆	◆	◆
Boom Hoist	◆	◆	◆
Trolley Travel			
Gantry Drive	◆	◆	◆
Traction Drive	◆	◆	◆
Mill Duty			
Main Hoist	◆	◆	◆
Auxiliary	◆	◆	◆
Bridge and Trolley Travel	◆	◆	◆

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
CRANES (cont.)			
Industrial Duty			
Main	1.00	1.25	1.50
Auxiliary	◆	◆	◆
Bridge and Trolley Travel	◆	◆	◆
CRUSHER			
Stone or Ore	1.50	1.75	2.00
DREDGES			
Cable Reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter Head Drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen Drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
ELEVATORS			
Bucket	1.00	1.25	1.50
Centrifugal Discharge	- - -	1.00	1.25
Escalators	◆	◆	◆
Freight	◆	◆	◆
Gravity Discharge	- - -	1.00	1.25
EXTRUDERS			
General	1.25	1.25	1.25
Plastics			
(a) Variable Speed Drive	1.50	1.50	1.50
(b) Fixed Speed Drive	1.75	1.75	1.75
Rubber			
(a) Continuous Screw Operation	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75
FANS			
Centrifugal	- - -	1.00	1.25
Cooling Towers	◆	◆	◆
Forced Draft	1.25	1.25	1.25
Induced Draft	1.00	1.25	1.50
Industrial & Mine	1.00	1.25	1.50
FEEDERS			
Apron	- - -	1.25	1.50
Belt	1.00	1.25	1.50
Disc	- - -	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
FOOD INDUSTRY			
Cereal Cooker	- - -	1.00	1.25
Dough Mixer	1.00	1.25	1.50
Meat Grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
GENERATORS & EXCITERS	- - -	1.00	1.25
HAMMER MILLS	1.50	1.50	1.75
HOISTS			
Heavy Duty	1.25	1.50	1.75
Medium Duty	1.00	1.25	1.50
Skip Hoist	1.00	1.25	1.50

◆ Refer to Application Engineering (1 800 626 2093).

AGMA Application Classification

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
LAUNDRY TUMBLERS	1.00	1.25	1.50
LAUNDRY WASHERS	1.25	1.25	1.50
LUMBER INDUSTRY			
Barkers - Spindle Feed	1.25	1.25	1.50
- Main Drive	1.50	1.50	1.50
Conveyors - Burner	1.25	1.25	1.50
- Main or Heavy Duty	1.50	1.50	1.50
- Main Log	1.50	1.50	1.75
- Re-Saw, Merry-Go-Round	1.25	1.25	1.50
- Slab	1.50	1.50	1.75
- Transfer	1.25	1.25	1.50
Chains - Floor	1.50	1.50	1.50
- Green	1.50	1.50	1.50
Cut-Off Saws - Chain	1.50	1.50	1.50
- Drag	1.50	1.50	1.50
Debarking Drums	1.50	1.50	1.75
Feeds - Edger	1.25	1.25	1.50
- Gang	1.50	1.50	1.50
- Trimmer	1.25	1.25	1.50
Log Deck	1.50	1.50	1.50
Log Hauls - Incline - Well Type	1.50	1.50	1.50
Log Turning Devices	1.50	1.50	1.50
Planer Feed	1.25	1.25	1.50
Planer Tilting Hoist	1.50	1.50	1.50
Rolls - Live, Off Brg., Roll Cases	1.50	1.50	1.50
Sorting Table	1.25	1.25	1.50
Tipple Hoist	1.25	1.25	1.50
Transfers - Chain	1.50	1.50	1.50
- Craneway	1.50	1.50	1.50
Tray Drives	1.25	1.25	1.50
Veneer Lathe Drives	◆	◆	◆
METAL MILLS			
Draw Bench Carriage & Main Drive	1.00	1.25	1.50
Run Out Tables			
Non-Reversing			
Group Drives	1.00	1.25	1.50
Individual Drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab Pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire Drawing	1.00	1.25	1.50
Wire Winding Machine	1.00	1.25	1.50
METAL STRIP PROCESSING MACHINERY			
Bridles	1.25	1.25	1.50
Coilers & Uncoilers	1.00	1.00	1.25
Edge Trimmers	1.00	1.25	1.50
Flatteners	1.00	1.25	1.50
Loopers (Accumulators)	1.00	1.00	1.00
Pinch Rolls	1.00	1.25	1.50
Scrap Choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
MILLS, ROTARY TYPE			
Bell & Rod			
Spur Ring Gear	1.50	1.50	1.75
Helical Ring Gear	1.50	1.50	1.50
Direct Connected	1.50	1.50	1.75
Cement Kilns	1.50	1.50	1.50
Dryers & Coolers	1.50	1.50	1.50
MIXERS, CONCRETE	1.00	1.25	1.50

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
PAPER MILLS			
Agitator (Mixer)	1.50	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	1.25
Barker Drums	1.75	1.75	1.75
Barker - Mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker Stack	1.25	1.25	1.25
Calender (Anti-Friction Bearings Only)	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip Feeder	1.50	1.50	1.50
Coating Rolls	1.25	1.25	1.25
Conveyors			
Chip, Bark, Chemical	1.25	1.25	1.25
Log (Including Slab)	1.75	1.75	1.75
Couch Rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinders Molds	1.25	1.25	1.25
Dryers (Anti-Friction Bearings Only)			
Paper Machine	1.25	1.25	1.25
Conveyor Type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier Rolls (Includes			
Lump Breaker, Dandy Roll,			
Wire Turning & Return Rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln Drive	1.50	1.50	1.50
Mt. Hope Rolls	1.25	1.25	1.25
Paper Rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Pressers - Felt & Suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - Vacuum	1.50	1.50	1.50
Reel (Surface Type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size Press	1.25	1.25	1.25
Super Calender	1.25	1.25	1.25
Thickener (AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Washer (AC Motor)	1.50	1.50	1.50
(DC Motor)	1.25	1.25	1.25
Wind & Unwind Stand	1.00	1.00	1.00
Winders (Surface Type)	1.25	1.25	1.25
Yankee Dryers (Anti-Friction			
Bearings Only)	1.25	1.25	1.25
PLASTICS INDUSTRY-PRIMARY PROCESSING			
Intensive Internal Mixers			
(a) Batch Mixers	1.75	1.75	1.75
(b) continuous Mixers	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.25	1.25	1.25
Continuous Feed, Holding &			
Blend Mill	1.25	1.25	1.25
Compounding Mills	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
PLASTICS INDUSTRY - SECONDARY PROCESSING			
Blow Molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25

◆ Refer to Application Engineering (1 800 626 2093).

Application	Recommended Service Factors		
	Up to 3 hrs/day	3-10 hrs/day	Over 10 hrs/day
PLASTICS INDUSTRY - SECONDARY PROCESSING (Cont.)			
Pre-Plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheets	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
PULLERS - BARGE HAUL	1.00	1.50	1.75
PUMPS			
Centrifugal	- - -	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single Acting, 3 or more cylinders	1.00	1.25	1.50
Double Acting, 2 or more cylinders	1.00	1.25	1.50
Rotary - Gear Type	- - -	1.00	1.50
- Lobe Type	- - -	1.00	1.25
- Vane	- - -	1.00	1.25
RUBBER INDUSTRY			
Intensive Internal Mixers			
(a) Batch Mixers	1.50	1.75	1.75
(b) Continuous Mixers	1.25	1.50	1.50
Mixing Mill - 2 Smooth Rolls (if corrugated rolls are used, than the same service factors that are used for a Cracker Warmer)	1.50	1.50	1.50
Batch Drop Mill - 2 Smooth Rolls	1.50	1.50	1.50
Cracker Warmer - 2 Rolls; 1 corrugated roll	1.75	1.75	1.75
Cracker - 2 corrugated rolls	1.75	1.75	1.75
Holding, Feed & Blend Mill - 2 Rolls	1.25	1.25	1.25
Refiner - 2 Rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
SAND MILLER	1.00	1.25	1.50
SEWAGE DISPOSAL			
EQUIPMENT			
Bar Screens	- - -	1.00	1.25
Chemical Feeders	- - -	1.00	1.25
Dewatering Screens	1.00	1.25	1.50
Scum Breakers	1.00	1.25	1.50
Slow or Rapid Mixers	1.00	1.25	1.50
Sludge Collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum Filters	1.00	1.25	1.50
SCREENS			
Air Washing	- - -	1.00	1.25
Rotary - Stone or Gravel	1.00	1.25	1.50
Traveling Water Intake	- - -	1.00	1.25
SUGAR INDUSTRY			
Beet Slicer	1.50	1.50	1.75
Cane Knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (Low Speed End)	1.50	1.50	1.50
TEXTILE INDUSTRY			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry Cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing Machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter Frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

Applications not listed in this table or where the user has data indicating the severity of intended usage to be greater than average should be referred to Application Engineering (1 800 626 2093).

Type IRA

The IRA gearbox is filled at the factory with oil according to the mounting position specified when ordered. The oil used depends on the order description at entry. Non¬washdown units are filled with an AGMA 8 mineral oil.

In the event that a gearbox needs to be refilled, see the appropriate maintenance manual for the proper procedure and correct quantity of oil. If synthetic oil is used, the gearbox must be refilled with the same lubricant or must be completely drained and flushed.

Mineral Oils

Ambient Temperature	15 to 60 F	50 to 125 F
ISO Grade	460	680
AGMA	7	8

Synthetic Oils*

Ambient Temperature	-30 to 200 F	-30 to 200 F
ISO Grade	460	680
AGMA	7	8

* Gear sumps units will be filled with a synthetic 460 series lubricant classified as a Polyglycol (PAG) oil when food grade lubricant is specified on the order.

Type IRA

Motor rpm 1750

Exact ratio rpm, hp and Torque: IRA reducers

Output speed (rpm)	Reduction ratio	6 GW(V)		6 GWB		20 GW(V)	
230	**7.1**	7.5	**6 GW(V)**				
		3.63	888				
190	**9**	9.0	**6 GW(V)**			10.0	**20 GW(V)**
		3.42	996			9.4	3082
155	**11.2**	11.25	**6 GW(V)**				
		2.79	994				
125	**14**	14.0	**6 GW(V)**			15.0	**20 GW(V)**
		2.37	1026			7.0	3316
100	**18**	17.6	**6 GW(V)**	17.0	**6 GWB**	18.0	**20 GW(V)**
		1.99	1056	3.63	1969	6.0	3418
84	**20**	21.0	**6 GW(V)**	20.3	**6 GWB**	20.0	**20 GW(V)**
		1.77	1083	3.42	2212	5.6	3459
68	**25**	26.0	**6 GW(V)**	25.4	**6 GWB**	25.0	**20 GW(V)**
		1.50	1076	2.79	2199	4.6	3411
56	**31.5**	31.0	**6 GW(V)**	31.0	**6 GWB**	30.0	**20 GW(V)**
		1.30	1244	2.36	2317	4.0	3469
45	**40**	39.0	**6 GW(V)**	36.6	**6 GWB**	40.0	**20 GW(V)**
		1.09	1067	2.01	2332	3.1	3368
37	**45**	47.0	**6 GW(V)**	45.8	**6 GWB**	50.0	**20 GW(V)**
		0.94	1041	1.65	2297	2.5	3232
30	**56**	58.0	**6 GW(V)**	57.0	**6 GWB**	60.0	**20 GW(V)**
		0.78	981	1.38	2307	2.1	3112
25	**71**	70.0	**6 GW(V)**	71.9	**6 GWB**		
		0.64	889	1.14	2316		
20	**90**	87.0	**6 GW(V)**	85.5	**6 GWB**		
		0.50	726	1.00	2365		
16.5	**112**			106.0	**6 GWB**		
				0.84	2360		
13.5	**125**			126.0	**6 GWB**		
				0.74	2358		
11.0	**160**			159.0	**6 GWB**		
				0.64	2342		
9.0	**200**			191.0	**6 GWB**		
				0.57	2407		
7.5	**250**			236.0	**6 GWB**		
				0.50	2378		
6.0	**280**			285.0	**6 GWB**		
				0.50	2684		
5.0	**355**			354.0	**6 GWB**		
				0.41	2416		

If shaded, mechanical hp may exceed thermal hp limit.
Refer to page G-46.

Exact Ratio	Size/Type
Max Input (hp)	Max. Output (in.lbs.)

Type IRA

Motor rpm 1450

Exact ratio rpm, hp and Torque: IRA reducers

Output speed (rpm)	Reduction ratio	6 GW(V)		6 GWB		20 GW(V)	
193	**7.1**	7.5	**6 GW(V)**				
		3.33	979				
161	**9**	9.0	**6 GW(V)**			10.0	**20 GW(V)**
		3.14	1098			8.68	3414
132	**11.2**	11.25	**6 GW(V)**				
		2.56	1093				
104	**14**	14.0	**6 GW(V)**			15.0	**20 GW(V)**
		2.17	1128			6.44	3674
81	**18**	17.6	**6 GW(V)**	17.0	**6 GWB**	18.0	**20 GW(V)**
		1.83	1156	3.33	2168	5.63	3781
69	**20**	21.0	**6 GW(V)**	20.3	**6 GWB**	20.0	**20 GW(V)**
		1.63	1190	3.14	2431	5.22	3832
56	**25**	26.0	**6 GW(V)**	25.4	**6 GWB**	25.0	**20 GW(V)**
		1.36	1182	2.56	2422	4.25	3773
47	**31.5**	31.0	**6 GW(V)**	31.0	**6 GWB**	30.0	**20 GW(V)**
		1.20	1184	2.00	2327	3.72	3838
37	**40**	39.0	**6 GW(V)**	36.6	**6 GWB**	40.0	**20 GW(V)**
		1.00	1173	1.74	2338	2.88	3723
31	**45**	47.0	**6 GW(V)**	45.8	**6 GWB**	50.0	**20 GW(V)**
		0.87	1144	1.39	2305	2.43	3710
25	**56**	58 .0	**6 GW(V)**	57.0	**6 GWB**	60.0	**20 GW(V)**
		0.72	1079	1.16	2314	1.98	3439
21	**71**	70.0	**6 GW(V)**	71.9	**6 GWB**		
		0.59	993	0.96	2323		
17	**90**	87.0	**6 GW(V)**	85.5	**6 GWB**		
		0.44	798	0.85	2365		
14	**112**			106.0	**6 GWB**		
				0.73	2386		
12	**125**			126.0	**6 GWB**		
				0.66	2378		
9	**160**			159.0	**6 GWB**		
				0.54	2347		
8	**200**			191.0	**6 GWB**		
				0.49	2396		
6	**250**			236.0	**6 GWB**		
				0.43	2405		
5	**280**			285.0	**6 GWB**		
				0.38	2359		
4	**355**			354.0	**6 GWB**		
				0.37	2457		

If shaded, mechanical hp may exceed thermal hp limit.
Refer to page G-46.

Exact Ratio	Size/Type
Max Input (hp)	Max. Output (in.lbs.)

Type IRA

Motor rpm 1160

Exact ratio rpm, hp and Torque: IRA reducers

Output speed (rpm)	Reduction ratio	6 GW(V)		6 GWB		20 GW(V)	
155	**7.1**	7.5	**6 GW(V)**				
		2.98	1090				
129	**9**	9.0	**6 GW(V)**			10.0	**20 GW(V)**
		2.81	1220			7.9	3845
105	**11.2**	11.25	**6 GW(V)**				
		2.29	1212				
83	**14**	14.0	**6 GW(V)**			15.0	**20 GW(V)**
		1.94	1249			5.8	4128
64	**18**	17.6	**6 GW(V)**	17.0	**6 GWB**	18.0	**20 GW(V)**
		1.64	1283	2.98	2420	5.0	4244
55	**20**	21.0	**6 GW(V)**	20.3	**6 GWB**	20.0	**20 GW(V)**
		1.46	1315	2.81	2698	4.7	4302
45	**25**	26.0	**6 GW(V)**	25.4	**6 GWB**	25.0	**20 GW(V)**
		1.22	1306	2.29	2681	3.9	4228
37	**31.5**	31.0	**6 GW(V)**	31.0	**6 GWB**	30.0	**20 GW(V)**
		1.07	1308	1.60	2336	3.4	4301
30	**40**	39.0	**6 GW(V)**	36.6	**6 GWB**	40.0	**20 GW(V)**
		0.90	1294	1.36	2344	2.6	4165
25	**45**	47.0	**6 GW(V)**	45.8	**6 GWB**	50.0	**20 GW(V)**
		0.78	1263	1.13	2315	2.2	4006
20	**56**	58.0	**6 GW(V)**	57.0	**6 GWB**	60.0	**20 GW(V)**
		0.65	1190	0.94	2323	1.8	3848
17	**71**	70.0	**6 GW(V)**	71.9	**6 GWB**		
		0.53	1078	0.78	2330		
13	**90**	87.0	**6 GW(V)**	85.5	**6 GWB**		
		0.40	880	0.68	2364		
11	**112**			106.0	**6 GWB**		
				0.59	2411		
9	**125**			126.0	**6 GWB**		
				0.51	2397		
7	**160**			159.0	**6 GWB**		
				0.44	2352		
6	**200**			191.0	**6 GWB**		
				0.40	2385		
5	**250**			236.0	**6 GWB**		
				0.35	2431		
4	**280**			285.0	**6 GWB**		
				0.32	2363		
3.2	**355**			354.0	**6 GWB**		
				0.30	2497		

If shaded, mechanical hp may exceed thermal hp limit.
Refer to page G-46.

Exact Ratio	Size/Type
Max Input (hp)	Max. Output (in.lbs.)

Type IRA

Motor rpm 870

Exact ratio rpm, hp and Torque: IRA reducers

Output speed (rpm)	Reduction ratio	6 GW(V)		6 GWB		20 GW(V)	
117	**7.1**	7.5	**6 GW(V)**				
		2.52	1212				
97	**9**	9.0	**6 GW(V)**			10.0	**20 GW(V)**
		2.37	1352			6.9	4413
80	**11.2**	11.25	**6 GW(V)**				
		1.92	1337				
62	**14**	14.0	**6 GW(V)**			15.0	**20 GW(V)**
		1.63	1374			5.1	4725
49	**18**	17.6	**6 GW(V)**	17.0	**6 GWB**	18.0	**20 GW(V)**
		.38	1409	2.52	2693	4.4	4842
42	**20**	21.0	**6 GW(V)**	20.3	**6 GWB**	20.0	**20 GW(V)**
		1.23	1433	2.17	2793	4.2	4919
34	**25**	26.0	**6 GW(V)**	25.4	**6 GWB**	25.0	**20 GW(V)**
		1.03	1432	1.79	2805	3.4	4808
28	**31.5**	31.0	**6 GW(V)**	31.0	**6 GWB**	30.0	**20 GW(V)**
		0.91	1433	1.23	2351	3.0	4893
22	**40**	39.0	**6 GW(V)**	36.6	**6 GWB**	40.0	**20 GW(V)**
		0.77	1418	1.05	2370	2.3	4714
19	**45**	47.0	**6 GW(V)**	45.8	**6 GWB**	50.0	**20 GW(V)**
		0.67	1382	0.87	2325	1.9	4554
15	**56**	58.0	**6 GW(V)**	57.0	**6 GWB**	60.0	**20 GW0I)**
		0.56	1303	0.72	2332	1.6	4352
12	**71**	70.0	**6 GW(V)**	71.9	**6 GWB**		
		0.46	1180	0.60	2339		
10	**90**	87.0	**6 GW(V)**	85.5	**6 GWB**		
		0.34	964	0.53	2394		
8	**112**			106.0	**6 GWB**		
				0.44	2364		
7	**125**			126.0	**6 GWB**		
				0.39	2359		
6	**160**			159.0	**6 GWB**		
				0.34	2358		
5	**200**			191.0	**6 GWB**		
				0.32	2478		
4	**250**			236.0	**6 GWB**		
				0.27	2374		
3	**280**			285.0	**6 GWB**		
				0.25	2367		
2.4	**355**			354.0	**6 GWB**		
				0.22	2295		

If shaded, mechanical hp may exceed thermal hp limit.
Refer to page G-46.

Exact Ratio	Size/Type
Max Input (hp)	Max. Output (in.lbs.)

Type IRA

Thermal Power Ratings (hp)

Motor rpm 1750

Output (RPM)	Reduction Ratio	6 GW(V)	6 GWB	20 GW(V)
230	7.1	2.67	-	-
190	9	2.46	-	9.0
155	11.2	2.08	-	-
125	14	2.00	-	6.7
100	18	1.51	2.67	5.0
84	20	1.50	2.46	5.0
68	25	1.50	2.08	3.1
56	31.5	1.00	-	-
45	40	1.00	-	2.1
37	45	0.76	-	-
30	56	1.68	-	-
25	71	0.61	-	-
20	90	-	-	-

Motor rpm 1450

Output (RPM)	Reduction Ratio	6 GW(V)	6 GWB	20 GW(V)
193	7.1	2.66	-	-
161	9	2.45	-	8.68
132	11.2	2.07	-	-
104	14	1.78	-	-
81	18	1.50	2.66	-
69	20	1.32	2.45	-
56	25	1.13	2.07	-
47	31.5	1.00	-	-
37	40	0.85	-	-
31	45	0.76	-	-
25	56	0.67	-	-

Motor rpm 1160

Output (RPM)	Reduction Ratio	6 GW(V)	6 GWB	20 GW(V)
155	7.1	2.61	-	-
129	9	2.39	-	-
105	11.2	2.02	-	-
83	14	1.90	-	-
64	18	1.46	2.61	-
55	20	1.40	2.39	-
45	25	-	2.02	-
37	31.5	0.97	-	-
30	40	-	-	-
25	45	0.74	-	-

Motor rpm 870

Output (RPM)	Reduction Ratio	6 GW(V)	6 GWB	20 GW(V)
117	7.1	2.49	-	-
97	9	2.28	-	-
80	11.2	1.93	-	-
49	18	-	2.49	-

Modifications

Gear Modifications

G1 Food Grade Lubricant

When this modification is specified, the IRA gear sump will be filled with the required volume of a synthetic lubricant classified as a Polyglycol (PAG), 460 series that is approved for USDA H-1 food grade use.

G2 Normally Closed Breather

For applications involving very dusty environments specify this breather design. The breather has a protected spring loaded valve construction opening only to relieve any pressure build up greater than 3 PSI and then closing.

G3 Double Extended Output Shafts

Double extended output shafts are available on single reduction type GW worm-only units.

G5 Special Nameplates

Units can be provided with limited additional special information on the standard product nameplate. When requested, a special nameplate may be provided, stamped with custom markings.

G6 Low Ambient Temperature

Gearmotors can be supplied for ambient temperatures as low as -20°F. Refer complete details of the applications to the Applications Department for review.

G7 Washdown Duty Reducer

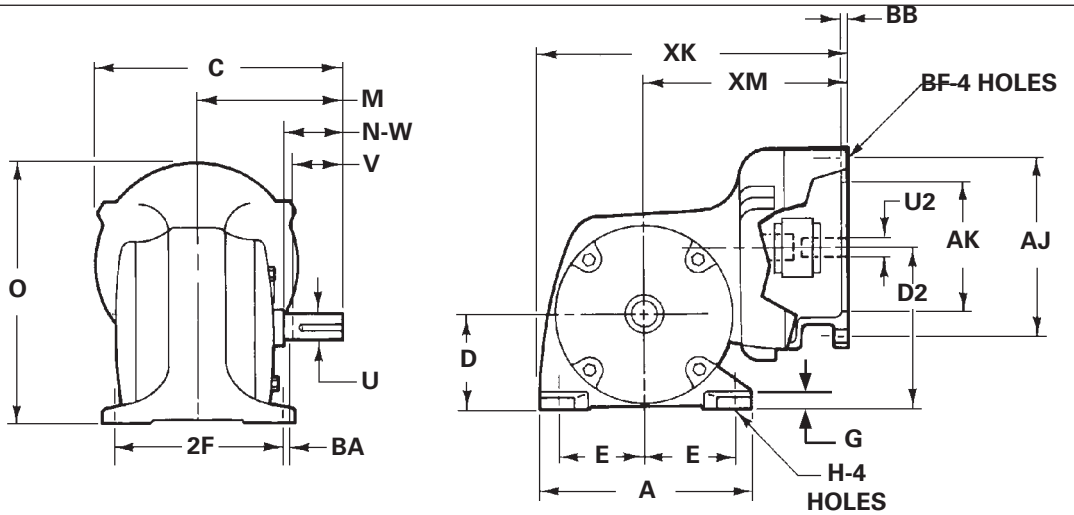
This modification combines special features required for washdown applications. These include: special "protected" gearcase breather design, tandem double lipped oil seals at all shaft extensions, exterior reducer surfaces receive CorroGard™ Stainless Steel paint (option for epoxy white at same cost).

If it is required that food grade lubricant be supplied, specify G1

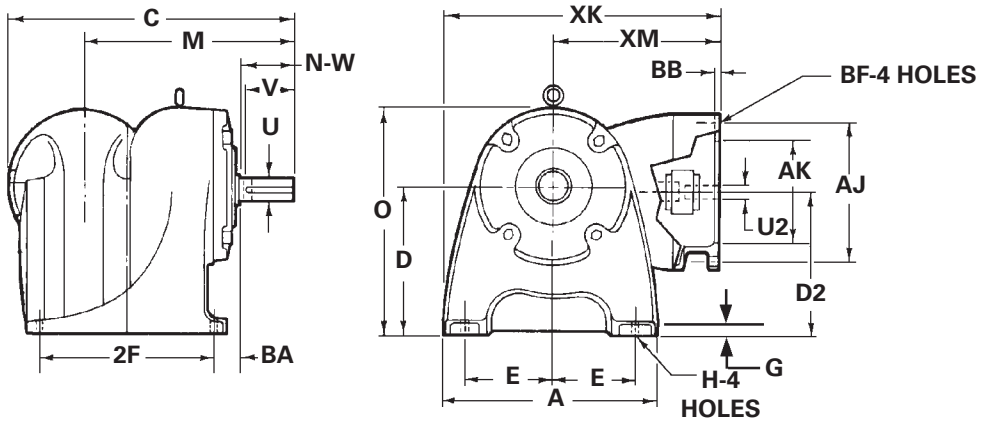
G8 Export Boxing

Export boxing can be provided for "underdeck" transport. When the quantity of IRA gearmotors exceeds five (5) units, refer to the International Sales department for most economical accommodations.

Foot Mounted



Worm-Helical (GWB)



Gear Frame	Gear Type	A	C	D	D2	E	2F	G	H	M	N-W	O	U[1]	V Min.	BA	Key
6	GW	7	8.22	3.25	5.406	3	5	0.625	0.406	5	2	9.094	1.000	1.938	0.438	0.25
6	GWB	9.375	13.313	6.313	5.875	3.75	7.5	0.75	0.563	10.31	3	9.688	1.500	2.876	1.375	0.375
20	GW	10.50	12.875	4.50	8.25	4.375	8	1	0.688	8.125	3.25	12.75	1.625	2.938	0.875	0.375

Gear Frame	Gear Type	Motor Frame	XK	XM
6	GW	56C	12.813	9.313
		143TC , 145TC	12.813	9.313
6	GWB	56C	14	9.313
		143TC , 145TC	14	9.313
20	GW	182TC, 184TC	17.459	12.219

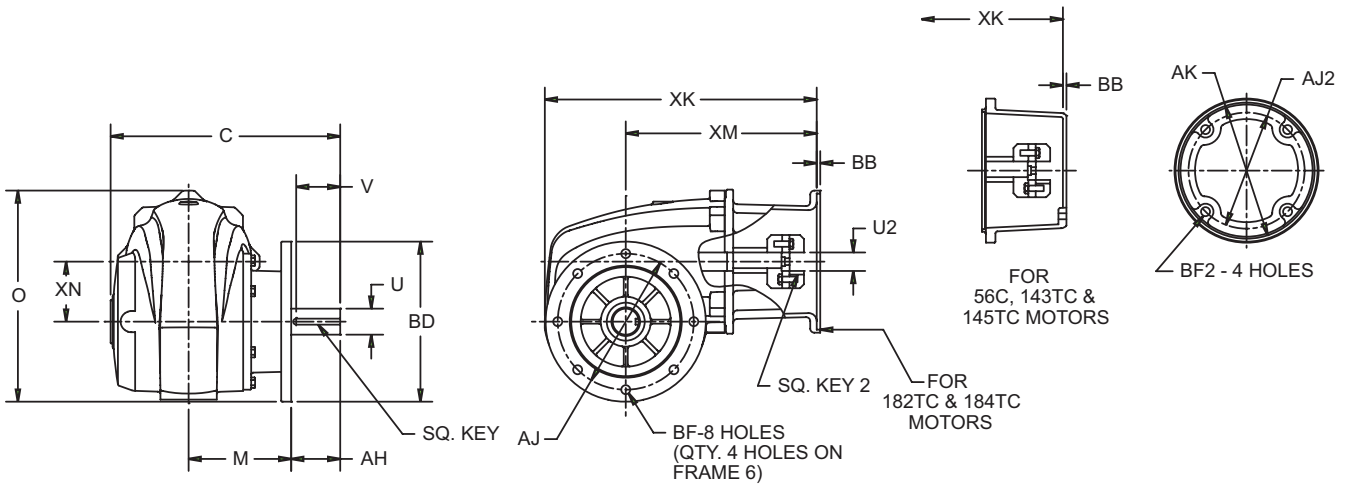
Motor Frame	U2 +.001	AJ	AK	BB	BF	Key
56C	0.625	5.875	4.5	0.219	0.438	0.1875
143TC , 145TC	0.875	8.875	4.5	0.219	0.438	0.1875
182TC, 184TC	1.125	7.25	8.5	0.219	0.438	0.25

Dimension "D" is the maximum value, but may be less than values shown. When exact dimensions are required, shims up to 1/16" may be necessary.

All rough casting dimensions may vary by 1/4" due to casting variations.

[1] Shaft diameter tolerances: .0000"; -.0005" up to 1-1/2" diameter inclusive. Larger diameters: +.000"; -.001.

Flange Mounted



Gear Frame	Gear Type	C	M	U[1]	V Min.	AH	AJ	BB	BD ■	BF	Key
6	GWV	9.281	4	1.000	2	2	6.875	0.219	7.625	0.406	0.25
20	GWV	14.375	6.438	1.625	2.938	3.063	8.500	0.219	10	0.563	0.375

Gear Frame	Gear Type	Motor Frame	O	XK	XM	XN
6	GWV	56C	9.688	12.813	9.313	2.563
		143TC , 145TC	9.688	12.813	9.313	2.563
20	GWV	182TC, 184TC	13.281	17.459	12.219	3.75

Gear Frame	U2 +.001	AJ2	AK	BB	BF2	Key 2
56C	0.625	5.875	4.5	0.219	0.438	3/16 Sq.
143TC , 145TC	0.875	8.875	4.5	0.219	0.438	3/16 Sq.
182TC, 184TC	1.125	7.25	8.5	0.219	0.438	1/4 Sq.

■ "BD" diameter is not machined.

[1] Shaft diameter tolerances: +.0000"; -.0005" up to 1-1/2" diameter inclusive. Larger diameters: +.000"; -.001".

All rough casting dimensions may vary by 1/4" due to casting variations.

Notes:

Typical Motor Performance Data

Motor Input Codes T24
Standard Efficiency TEFC Three Phase 230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load	Power Factor	Torque			KVA Code	NEMA Design	Note(s)
						Full Load	% Full Load				
				NEMA Nom.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	48	1741	0.86	58.2	62.6	1	383	465	M	B	1
0.50	48	1744	1.12	68.4	61.6	1.54	394	463	M	B	1
0.75	48	1745	1.36	73.4	70.3	2.28	350	405	M	B	1

Motor Input Codes T5
Standard Efficiency TEFC Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps @ 575V	Efficiency @4/4 Load	Power Factor	Torque			KVA Code	NEMA Design	Note(s)
						Full Load	% Full Load				
				NEMA Nom.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	48	1740	0.76	62	56	1	383	465	M	B	1
0.50	48	1735	0.96	68	60	1.54	394	463	K	B	1
0.75	48	1730	1.2	72	63	2.28	350	405	M	B	1

Motor Input Codes HT24, HT24B, and HC24
High Efficiency TEFC Three Phase 208-230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				NEMA Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1746	0.64	75.5	74.0	64.7	1	339	462	M	B	2
0.50	56	1745	0.88	80.0	78.5	66.7	1.5	344	437	L	B	2
0.75	56	1735	1.21	80.0	78.5	72.3	2.25	326	444	K	B	2

Motor Input Codes HT5, HT5B and HC5
High Efficiency TEFC Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps @ 575V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				NEMA Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1740	0.53	75.5	74.0	64.7	1	334	470	M	B	
0.50	56	1725	0.73	80.0	78.5	66.7	1.5	315	424	L	B	
0.75	56	1736	0.95	80.0	78.5	72.3	2.25	313	379	J	B	

Note(s)
1 — This motor is only used with IRA frame 1 GW gearing
2 — Performance data (other than amperage) applies to motor operating from a 230 or 460V line supply
— Amperage shown is at 460V. For 230V amperage, multiply amperage shown x 2

Typical Motor Performance Data

Motor Input Codes PT24 and PT24B
Premium Efficiency / Inverter Duty TEFC Three Phase 230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				NEMA Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1746	0.64	75.5	74.0	64.7	1	339	462	M	B	1,3,6
0.50	56	1745	0.88	80.0	78.5	66.7	1.5	344	437	L	B	1,3,6
0.75	56	1735	1.21	80.0	78.5	72.3	2.25	326	444	K	B	1,3,6
1	143T	1759	1.41	87.5	85.5	75.0	3	352	430	N	B	1,2,3,6
1.5	145T	1751	1.97	87.5	85.5	76.0	4.5	380	470	M	B	1,2,3,6
2	145T	1738	2.62	87.5	85.5	77.0	6	315	400	M	B	1,2,3,6
3	182T	1757	3.83	89.5	87.5	81.4	9	276	425	K	B	1,3,6
5	184T	1756	6.2	89.5	87.5	83.9	15	229	353	J	B	1,3,6
7.5	213T	1765	9.3	91.7	90.2	82.8	22.5	247	324	H	B	1,3,6
10	215T	1760	12	91.7	90.2	85.3	30	235	301	H	B	1,4,6
15	254T	1775	18.4	92.4	91.0	82.7	45	231	247	G	B	1,5,6
20	256T	1770	23.7	93.0	91.7	85.0	60	229	232	F	B	1,5,6
25	284T	1775	28.9	93.6	92.4	86.6	75	203	270	G	B	1,5,6
30	286T	1775	35	93.6	92.4	86.9	90	195	257	G	B	1,5,6
40	324T	1780	45	94.1	93.0	88.0	120	193	251	G	B	1,5,6
50	326T	1780	56	94.5	93.6	88.3	150	209	264	G	B	1,5,6

Motor Input Codes PT5 and PT5B
Premium Efficiency / Inverter Duty TEFC Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps 575V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				NEMA Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1740	0.53	75.5	74.0	64.7	1	334	470	M	B	1,3,6
0.50	56	1725	0.73	80.0	78.5	66.7	1.5	315	424	L	B	1,3,6
0.75	56	1736	0.95	80.0	78.5	72.3	2.25	313	379	J	B	1,3,6
1	143T	1758	1.2	87.5	85.5	75.0	3	403	510	N	B	1,2,3,6
1.5	145T	1751	1.64	87.5	85.5	76.0	4.5	375	470	M	B	1,2,3,6
2	145T	1739	2.19	87.5	85.5	77.0	6	355	410	K	B	1,2,3,6
3	182T	1772	2.93	89.5	87.5	84.2	9	270	355	K	B	1,3,6
5	184T	1758	4.92	89.5	87.5	84.8	15	244	300	J	B	1,3,6
7.5	213T	1765	7.5	91.7	90.2	82.4	22.5	251	330	H	B	1,3,6
10	215T	1760	9.6	91.7	90.2	85.4	30	234	299	H	B	1,4,6
15	254T	1775	14.6	92.4	91.0	83.4	45	231	247	G	B	1,5,6
20	256T	1770	19	93.0	91.7	84.9	60	229	231	G	B	1,5,6
25	284T	1775	23	93.6	92.4	86.9	75	194	259	G	B	1,5,6
30	286T	1775	27.6	93.6	92.4	87.0	90	194	256	G	B	1,5,6
40	324T	1780	36	94.1	93.0	88.0	120	189	245	G	B	1,5,6
50	326T	1780	45	94.5	93.6	88.3	150	210	264	G	B	1,5,6

Note(s)

1 — Performance data shown is with motor on line power supply
2 — The Nominal Efficiency for this motor exceeds NEMA Premium Efficiency standards required by law
3 — This motor is tested and nameplated for full load constant torque output from 60-6Hz, 10:1 speed range
4 — This motor is tested and nameplated for full load constant torque output from 60-10Hz, 6:1 speed range
5 — This motor is tested and nameplated for full load constant torque output from 60-12Hz, 5:1 speed range
6 — Motor comes with three (3) normally closed thermostats in winding and terminated in motor conduit box
— Amperage shown is at 460V. For 230V amperage, multiply amperage shown x 2

Typical Motor Performance Data

Motor Input Code PC24
Premium Efficiency / Inverter Duty CorroGard® Three Phase 230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1746	0.64	75.5	74.0	64.7	1	339	462	M	B	1,3,6
0.50	56	1745	0.88	80.0	78.5	66.7	1.5	344	437	L	B	1,3,6
0.75	56	1735	1.21	80.0	78.5	72.3	2.25	326	444	K	B	1,3,6
1	143T	1759	1.41	87.5	85.5	75.0	3	352	430	N	B	1,2,3,6
1.5	145T	1751	1.97	87.5	85.5	76.0	4.5	380	470	M	B	1,2,3,6
2	145T	1738	2.62	87.5	85.5	77.0	6	315	400	M	B	1,2,3,6
3	182T	1757	3.83	89.5	87.5	81.4	9	276	425	K	B	1,3,6
5	184T	1756	6.2	89.5	87.5	83.9	15	229	353	J	B	1,3,6
7.5	213T	1765	9.3	91.7	90.2	82.8	22.5	247	324	H	B	1,3,6
10	215T	1760	12	91.7	90.2	85.3	30	235	301	H	B	1,4,6
15	254T	1775	18.4	92.4	91.0	82.8	45	231	247	G	B	1,5,6
20	256T	1770	23.7	93.0	91.7	84.9	60	229	232	G	B	1,5,6
25	284T	1775	28.9	93.6	92.4	86.6	75	203	270	G	B	1,5,6
30	286T	1775	35	93.6	92.4	86.9	90	195	257	G	B	1,5,6
40	324T	1780	45	94.1	93.0	88.0	120	193	251	G	B	1,5,6
50	326T	1780	56	94.5	93.6	88.3	150	209	264	G	B	1,5,6

Motor Input Code PC5
Premium Efficiency / Inverter Duty CorroGard® Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps @ 575V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1740	0.53	75.5	74.0	64.7	1	334	470	M	B	1,3,6
0.50	56	1725	0.73	80.0	78.5	66.7	1.5	315	424	L	B	1,3,6
0.75	56	1736	0.95	80.0	78.5	72.3	2.25	313	379	J	B	1,3,6
1	143T	1758	1.2	87.5	85.5	0.75	3	403	510	N	B	1,2,3,6
1.5	145T	1751	1.64	87.5	85.5	0.76	4.5	375	470	M	B	1,2,3,6
2	145T	1739	2.19	87.5	85.5	0.77	6	355	410	K	B	1,2,3,6
3	182T	1772	2.93	89.5	87.5	84.2	9	270	355	K	B	1,3,6
5	184T	1758	4.92	89.5	87.5	84.8	15	244	300	J	B	1,3,6
7.5	213T	1765	7.5	91.7	90.2	85.4	22.5	251	330	H	B	1,3,6
10	215T	1760	9.6	91.7	90.2	83.2	30	234	299	H	B	1,4,6
15	254T	1775	14.6	92.4	91.0	85.0	45	224	239	G	B	1,5,6
20	256T	1770	19	93.0	91.7	86.9	60	226	230	F	B	1,5,6
25	284T	1775	23	93.6	92.4	86.9	75	194	259	G	B	1,5,6
30	286T	1775	27.6	93.6	92.4	87.0	90	194	256	G	B	1,5,6
40	324T	1780	36	94.1	93.0	88.0	120	189	245	G	B	1,5,6
50	326T	1780	45	94.5	93.6	88.3	150	210	264	G	B	1,5,6

Note(s)
1 — Performance data shown is with motor on line power supply
2 — The Nominal Efficiency for this motor exceeds NEMA Premium Efficiency standards required by law
3 — This motor is tested and nameplated for full load constant torque output from 60-6Hz, 10:1 speed range
4 — This motor is tested and nameplated for full load constant torque output from 60-10Hz, 6:1 speed range
5 — This motor is tested and nameplated for full load constant torque output from 60-12Hz, 5:1 speed range
6 — Motor comes with three (3) normally closed thermostats in winding and terminated in motor conduit box
— Amperage shown is at 460V. For 230V amperage, multiply amperage shown x 2

Typical Motor Performance Data

Motor Input Code X24
Standard Efficiency Explosionproof Three Phase 230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1765	0.77	74	70	57	1	373	542	P	B	1, 2
0.50	56	1745	0.9	77	74	70.7	1.5	240	350	K	B	1, 2
0.75	56	1750	1.4	78.8	75.5	66.7	2.25	300	420	L	B	1, 2

Motor Input Code X5
Standard Efficiency Explosionproof Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps @ 575V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
0.33	56	1770	0.6	74	70	53.6	1	420	600	R	B	1, 2
0.50	56	1750	0.8	77	74	67.5	1.5	280	390	L	B	1, 2
0.75	56	1750	1.1	78.8	75.5	66.8	2.25	300	420	L	B	1, 2

Motor Input Code PX24
Premium Efficiency Explosionproof Three Phase 230/460V

HP	Frame Size	Full Load RPM	FL Amps# @ 460V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
1	143T	1760	1.5	85.5	82.5	74.1	3	388	526	M	B	1, 2
1.5	145T	1755	2.1	86.5	84.0	76.2	4.5	377	495	M	B	1, 2
2	145T	1745	2.6	86.5	84.0	83.1	6	351	456	L	B	1, 2
3	182T	1765	3.8	89.5	87.5	81.6	9	262	391	K	B	1, 2
5	184T	1750	6.2	89.5	87.5	83.9	15	250	354	J	B	1, 2

Motor Input Code PX5
Premium Efficiency Explosionproof Three Phase 575V

HP	Frame Size	Full Load RPM	FL Amps @ 575V	Efficiency @4/4 Load		Power Factor	Torque			KVA Code	NEMA Design	Note(s)
							Full Load	% Full Load				
				Nom.	Guar.	4/4 Load	(Ft. Lbs.)	Locked	Breakdown			
1	143T	1760	1.2	85.5	82.5	74.1	3	385	523	M	B	1, 2
1.5	145T	1755	1.7	86.5	84.0	76.5	4.5	372	489	M	B	1, 2
2	145T	1745	2.1	86.5	84.0	82.8	6	353	459	L	B	1, 2
3	182T	1760	3.1	89.5	87.5	82.0	9	256	383	K	B	1, 2
5	184T	1750	5	89.5	87.5	84.4	15	244	345	J	B	1, 2

Note(s)
1 — Motor comes with three (3) normally closed thermostats in winding and terminated in motor conduit box
2 — Motor is nameplated for hazardous environment rated T3B Div. 1
- Amperage shown is at 460V. For 230V amperage, multiply amperage shown x 2

Typical Motor Performance Data

Motor Input Code HT53 - 50 Hertz
High Efficiency TEFC Three Phase 190/380V

HP	kW	Frame Size	Full Load RPM	S.F.	FL Amps @ 380V	Efficiency @4/4 Load	Power Factor	Torque Full Load	KVA Code	NEMA Design	Note(s)
						Min. Nom.	4/4 Load	(Nm)			
0.33	0.25	56	1433	1.0	0.69	75.5	71.9	1.63	M	B	1,3
0.50	0.37	56	1430	1.0	0.96	80.0	74.1	2.44	L	B	1,3
0.75	0.55	56	1415	1.0	1.37	78.5	79.1	3.66	K	B	1,3

Motor Input Code PT53 - 50 Hertz
IE3 Premium Efficiency TEFC Three Phase 190/380V

HP	kW	Frame Size	Full Load RPM	S.F.	FL Amps @ 380V	Efficiency @4/4 Load	Power Factor	Torque Full Load	KVA Code	NEMA Design	Note(s)
						Min. Nom.	4/4 Load	(Nm)			
1	0.746	143T	1446	1.0	1.67	86	80.1	4.88	E	B	1, 2, 3
1.5	1.1	145T	1438	1.0	2.32	87	82.4	7.32	H	B	1, 2, 3
2	1.5	145T	1412	1.0	3.1	86	82.7	9.76	J	B	1, 2, 3
3	2.2	182T	1449	1.0	4.46	87.5	86.2	14.64	C	B	1, 2, 3
4	3	184T	1445	1.0	6.19	87.7	86.6	24.4	J	B	1, 2, 3
5	4	213T	1475	1.0	7.5	88.6	82.2	24.6	J	B	1, 2, 3
7.5	5.5	213T	1455	1.0	11	89.6	86.2	36.6	F	B	1, 2, 3

Motor Input Code HT54 - 50 Hertz
High Efficiency TEFC Three Phase 208/415V

HP	kW	Frame Size	Full Load RPM	S.F.	FL Amps @ 415V	Efficiency @4/4 Load	Power Factor	Torque Full Load	KVA Code	NEMA Design	Note(s)
						Min. Nom.	4/4 Load	(Nm)			
0.33	0.25	56	1435	1.0	0.68	72.0	69.7	1.63	K	B	1,3
0.50	0.37	56	1433	1.0	0.94	80.0	74.1	2.44	J	B	1,3
0.75	0.55	56	1428	1.0	1.3	78.5	74.6	3.66	J	B	1,3

Motor Input Code PT54 - 50 Hertz
IE3 Premium Efficiency TEFC Three Phase 208/415V

HP	kW	Frame Size	Full Load RPM	S.F.	FL Amps @ 415V	Efficiency @4/4 Load	Power Factor	Torque Full Load	KVA Code	NEMA Design	Note(s)
						Min. Nom.	4/4 Load	(Nm)			
1	0.746	143T	1455	1.0	1.74	84	71	4.88	E	B	1, 2, 3
1.5	1.1	145T	1451	1.0	2.35	86	75	7.32	E	B	1, 2, 3
2	1.5	145T	1424	1.0	3.02	85.7	80.3	9.76	J	B	1, 2, 3
3	2.2	182T	1458	1.0	4.05	87.5	85.4	14.64	H	B	1, 2, 3

Note(s)
1 — Motor is designed for X-Line starting
2 — Design meets or exceeds IE3 premium efficiency requirements for the EU/Europe
3 — Regal® assembled gearmotors are self-certified and will bear the CE logo on the motor nameplate

Typical Motor Performance Data

Motor Input Code TS12 and TS12B
TEFC Single Phase 115/230V Ø

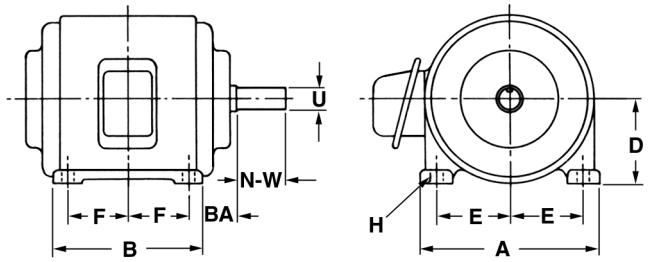
HP	Frame	Full Load RPM	FL Amps# @ 230V	Efficiency	Torque			Design	Brake Option		
					Full Load	% Full Load			Type/Encl	Std. Rating (Ft. Lbs.)	Manual Release
				4/4 Load	(FT. Lbs.)	Locked	Breakdown	Start/Run			
0.33	56	1730	3.2	58.7	1	366	262	Cap Start/Ind. Run	AC/IP21	1.5	Yes
	48	1744	2.5	61.4	1	279	229	Cap Start/Ind. Run			
0.5	56	1751	3.8	67.5	1.5	300	240	Cap Start/Ind. Run	AC/IP21	1.5	Yes
	48	1740	3.6	69.0	1.5	302	245	Cap Start/Ind. Run			
0.75	56	1744	4.9	71.7	2.3	325	255	Cap. Start/Cap. Run	AC/IP21	3	Yes
	48	1750	3.7	79.8	2.3	338	298	Cap. Start/Cap. Run			
1	143T	1739	6.7	72.9	3	315	250	Cap. Start/Cap. Run	AC/IP21	3	Yes
1.5	145TY	1750	6.5	81.7	4.5	288	290	Cap. Start/Cap. Run	AC/IP21	6	Yes
2	145TY	1755	8.1	89.7	6	247	320	Cap. Start/Cap. Run	AC/IP21	6	Yes

Motor Input Code TS2 and TS2B
TEFC Single Phase 230V

HP	Frame	Full Load RPM	FL Amps @ 230V	Efficiency	Torque			Design	Brake Option		
					Full Load	% Full Load			Type/ Encl	Std. Rating (Ft. Lbs.)	Manual Release
				4/4 Load	(FT. Lbs.)	Locked	Breakdown	Start/Run			
3	184T	1760	17	78.1	9	453	330	Cap. Start/Cap. Run	AC/IP21	10	Yes
5	184T	1740	24	79.4	15	404	275	Cap. Start/Cap. Run	AC/IP21	15	Yes

Note(s)
— Amperage shown is at 230V. For 115V amperage, multiply amperage shown x 2
Ø — Fractional ratings in 48 frames are nameplated suitable for 115/208-230V

A Guide to NEMA Motor Frames and Shaft Dimensions



Motor ratings and dimensions shown in Table No. 1, below, are for general purpose motors as indicated. Frames for the 1952 - 1953 and the 1964 rerates are shown. All dimensions are subject to change without notice. Those shown are intended as a guide only. Certified dimension drawings from the motor manufacturer should be used.

Table No. 1 **Specifications**

Frame No.	Dimensions									Keyseat		Key Length	HP for Various Motor RPM			
	A Max.	B Max.	D	E	F	H	BA	N-W	U	Width	Depth		3600	1800	1200	900
Fractional Horsepower Motors																
48	5 3/8"	3 1/2"	3"	2 1/8"	1 3/8"	11/32 "s •	2 1/2"	1 1/2"	1/2"	Flat	3/64"	-	1/8-1/2	1/8-1/3	1/6	-
56	6 1/2	4 1/2	3 1/2	2 7/16	1 1/2	11/32 •	2 3/4	17/8	5/8	3/16"	3/32	1 3/8"	3/4-1	1/3-1	1/8-1/2	-
1952-53 Rerate -- Designs A, B and C -- Open Type -- Squirrel Cage -- Integral H.P. Motors																
182	9	6 1/2	4 1/2	3 3/4	2 1/4	13/32	2 3/4	2 1/4	7/8	3/16	3/32	1 3/8	1 1/2	1	3/4	1/2
184	9	7 1/2	4 1/2	3 3/4	2 3/4	13/32	2 3/4	2 1/4	7/8	3/16	3/32	1 3/8	3,2	2,1 1/2	1 1/2,1	3/4
213	10 1/2	7 1/2	5 1/4	4 1/4	2 3/4	13/32	3 1/2	3	1 1/8	1/4	1/8	2	5	3	2	1 1/2,1
215	10 1/2	9	5 1/4	4 1/4	3 1/2	13/32	3 1/2	3	1 1/8	1/4	1/8	2	7 1/2	5	3	2
254U	12 1/2	10 3/4	6 1/4	5	4 1/8	17/32	4 1/4	3 3/4	1 3/8	5/16	5/32	2 3/4	10	7 1/2	5	3
256U	12 1/2	12 1/2	6 1/4	5	5	17/32	4 1/4	3 3/4	1 3/8	5/16	5/32	2 3/4	15	10	7 1/2	5
284U	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	4 7/8	1 5/8	3/8	3/16	3 3/4	20	15	10	7 1/2
286U	14	14	7	5 1/2	5 1/2	17/32	4 3/4	4 7/8	1 5/8	3/8	3/16	3 3/4	25	20	-	10
324U	16	14	8	6 1/4	5 1/4	21/32	5 1/4	5 5/8	1 7/8	1/2	1/4	4 1/4	-	25	15	-
324S*	16	14	8	6 1/4	5 1/4	21/32	5 1/4	3 1/4	1 5/8	3/8	3/16	1 7/8	30	-	-	-
326U	16	15 1/2	8	6 1/4	6	21/32	5 1/4	5 5/8	1 7/8	1/2	1/4	4 1/4	-	30	20	15
326S*	16	15 1/2	8	6 1/4	6	21/32	5 1/4	3 1/4	1 5/8	3/8	3/16	1 7/8	40	-	-	-
364U	18	15 1/4	9	7	5 5/8	21/32	5 7/8	6 3/8	2 1/8	1/2	1/4	5	-	40	25	20
364US*	18	15 1/4	9	7	5 5/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	50	-	-	-
365U	18	16 1/4	9	7	6 1/8	21/32	5 7/8	6 3/8	2 1/8	1/2	1/4	5	-	-	30	25
365US*	18	16 1/4	9	7	6 1/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	60	50	-	-
404U	20	16 1/4	10	8	6 1/8	13/16	6 5/8	7 1/8	2 3/8	5/8	5/16	5 1/2	-	-	40	30
404US*	20	16 1/4	10	8	6 1/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	75	60	-	-
405U	20	17 3/4	10	8	6 7/8	13/16	6 5/8	7 1/8	2 3/8	5/8	5/16	5 1/2	-	-	50	40
405US*	20	17 3/4	10	8	6 7/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	100	75	-	-
444U	22	1	11	9	7 1/4	13/16	7 1/2	8 5/8	2 3/8	3/4	3/8	7	-	-	60	50
444US*	22	18 1/2	11	9	7 1/4	13/16	7 1/2	4 1/4	2 1/8	1/2	1/4	2 3/4	125	100	-	-
445U	22	20 1/2	11	9	8 1/4	13/16	7 1/2	8 5/8	2 3/8	3/4	3/8	7	-	-	75	60
445US*	22	20 1/2	11	9	8 1/4	13/16	7 1/2	4 1/4	2 1/8	1/2	1/4	2 3/4	150	125	-	-
1964 Rerate -- Designs A, B and C -- Open Type -- Squirrel Cage -- Integral H.P. Motors																
H143T	7	6	3 1/2	2 3/4	2	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	1 1/2	1	3/4	1/2
H145T	7	6	3 1/2	2 3/4	2 1/4	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	-	1 1/2	1	3/4
K145T	7	6	3 1/2	2 3/4	2 1/2	11/32	2 1/4	2 1/4	7/8	3/16	3/32	1 3/8	3,2	2	-	-
182T	9	6 1/2	4 1/2	3 3/4	2 1/4	13/32	2 3/4	2 3/4	1 1/8	1/4	1/8	1 3/4	5	3	1 1/2	1
184T	9	7 1/2	4 1/2	3 3/4	2 3/4	13/32	2 3/4	2 3/4	1 1/8	1/4	1/8	1 3/4	7 1/2	5	2	1 1/2
213T	10 1/2	7 1/2	5 1/4	4 1/4	2 3/4	13/32	3 1/2	33/8	1 3/8	5/16	5/32	2 3/8	10	7 1/2	3	2
215T	10 1/2	9	5 1/4	4 1/4	3 1/2	13/32	3 1/2	33/8	1 3/8	5/16	5/32	2 3/8	15	10	5	3
254T	12 1/2	10 3/4	6 1/4	5	41/8	17/32	4 1/4	4	1 5/8	3/8	3/16	2 7/8	20	15	7 1/2	5
256T	12 1/2	12 1/2	6 1/4	5	5	17/32	4 1/4	4	1 5/8	3/8	3/16	2 7/8	25	20	10	7 1/2
284T	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	4 5/8	1 7/8	1/2	1/4	3 1/4	-	25	15	10
284TS*	14	12 1/2	7	5 1/2	4 3/4	17/32	4 3/4	3 1/4	1 5/8	3/8	3/16	1 7/8	30	-	-	-
286T	14	14	7	5 1/2	5 1/2	17/32	4 3/4	4 5/8	1 7/8	1/2	1/4	3 1/4	-	30	20	15
286TS*	14	14	7	5 1/2	5 1/2	17/32	4 3/4	3 1/4	1 5/8	3/8	3/16	1 7/8	40	-	-	-
324T	16	14	8	6 1/4	5 1/4	21/32	5 1/4	5 1/4	2 1/8	1/2	1/4	3 7/8	-	40	25	20
324TS*	16	14	8	6 1/4	5 1/4	21/32	5 1/4	3 3/4	1 7/8	1/2	1/4	2	50	-	-	-
326T	16	15 1/2	8	6 1/4	6	21/32	5 1/4	5 1/4	2 1/8	1/2	1/4	3 7/8	-	50	30	25
326TS*	16	15 1/2	8	6 1/4	6	21/32	5 1/4	3 3/4	1 7/8	1/2	1/4	2	60	-	-	-
364T	18	15 1/4	9	7	5 5/8	21/32	5 7/8	5 7/8	2 3/8	5/8	5/16	4 1/4	-	60	40	30
364TS*	18	15 1/4	9	7	5 5/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	75	-	-	-
365T	18	16 1/4	9	7	6 1/8	21/32	5 7/8	5 7/8	2 3/8	5/8	5/16	4 1/4	-	75	50	40
365TS*	18	16 1/4	9	7	6 1/8	21/32	5 7/8	3 3/4	1 7/8	1/2	1/4	2	100	-	-	-
404T	20	16 1/4	10	8	6 1/8	13/16	6 5/8	7 1/4	2 7/8	3/4	3/8	5 5/8	-	100	60	50
404TS*	20	16 1/4	10	8	6 1/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	125	-	-	-
405T	20	17 3/4	10	8	6 7/8	13/16	6 5/8	7 1/4	2 7/8	3/4	3/8	5 5/8	-	125	75	60
405TS*	20	17 3/4	10	8	6 7/8	13/16	6 5/8	4 1/4	2 1/8	1/2	1/4	2 3/4	150	-	-	-
444T	22	18 1/2	11	9	7 1/4	13/16	7 1/2	8 1/2	3 3/8	7/8	7/16	6 7/8	-	-	100	75
444TS*	22	18 1/2	11	9	7 1/4	13/16	7 1/2	4 3/4	2 3/8	5/8	5/16	3	200	150	-	-
445T	22	20 1/2	11	9	8 1/4	13/16	7 1/2	8 1/2	3 3/8	7/8	7/16	6 7/8	-	-	125	100
445TS*	22	20 1/2	11	9	8 1/4	13/16	7 1/2	4 3/4	2 3/8	5/8	5/16	3	250	200	-	-

* These motors are for direct coupled service only.

• Slots.

Decimal - Millimeter Equivalents

Fractional	Decimal	M.M.	Fractional	Decimal	M. M.
1/64	.015625	.397	33/64	.515625	13.097
1/32	.03125	.794	17/32	.53125	13.494
3/64	.046875	1.191	35/64	.546875	13.891
1/16	.0625	1.588	9/16	.5625	14.288
5/64	.078125	1.985	37/64	.578125	14.684
3/32	.09375	2.381	19/32	.59375	15.081
7/64	.109375	2.778	39/64	.609375	15.478
1/8	.125	3.175	5/8	.625	15.875
9/64	.140625	3.572	41/64	.640625	16.272
5/32	.15625	3.969	21/32	.65625	16.669
11/64	.171875	4.366	43/64	.671875	17.066
3/16	.1875	4.763	11/16	.6875	17.463
13/64	.203125	5.159	45/64	.703125	17.859
7/32	.21875	5.556	23/32	.71875	18.256
15/64	.234375	5.953	47/64	.734375	18.653
1/4	.250	6.350	3/4	.750	19.050
17/64	.265625	6.747	49/64	.765625	19.447
9/32	.28125	7.144	25/32	.78125	19.844
19/64	.296875	7.541	51/64	.796875	20.241
5/16	.3125	7.938	13/16	.8125	20.638
21/64	.328125	8.334	53/64	.828125	21.034
11/32	.34375	8.731	27/32	.84375	21.431
23/64	.359375	9.128	55/64	.859375	21.828
3/8	.375	9.525	7/8	.875	22.225
25/64	.390625	9.922	57/64	.890625	22.622
13/32	.40625	10.319	29/32	.90625	23.019
27/64	.421875	10.716	59/64	.921875	23.416
7/16	.4375	11.113	15/16	.9375	23.813
29/64	.453125	11.509	61/64	.953125	24.209
15/32	.46875	11.906	31/32	.96875	24.606
31/64	.484375	12.303	63/34	.984375	25.003
1/2	.500	12.700	1	1.000	25.400

HP and Torque

HP is the common unit of mechanical power.

$$HP = \frac{\text{Force x Feet per Minute}}{33000}$$

$$HP = \frac{\text{Torque in In.-Lbs. x rpm}}{63025}$$

One HP = .746 kilowatt

One kilowatt = 1.34 HP

Torque is a twisting moment or turning effort.

Torque in inch-pounds = Force x Lever Arm (Inches)

$$\text{Torque in inch-pounds} = \frac{63025 \times HP}{rpm}$$

The following table gives the torque in Inch-Pounds for one HP at various speeds.

Torque at One HP

R.P.M.	In.-Lbs.	R.P.M.	In.-Lbs.	R.P.M.	In.-Lbs.	R.P.M.	In.-Lbs.
3500	18	580	109	90	700	14	4502
3000	21	500	126	80	788	12	5252
2400	26	400	158	70	900	10	6300
2000	32	300	210	60	1050	8	7878
1750	36	200	315	50	1260	6	10504
1600	39	180	350	40	1576	5	12605
1200	53	160	394	30	2101	4	15756
1160	54	140	450	20	3151	3	21008
1000	63	120	525	18	3501	2	31513
870	72	100	630	16	3939	1	63025

Minimum Sheave Sizes NEMA Standards

The National Electrical Manufacturers Association recommends certain limitations on sheave diameter and width for satisfactory motor operation. The selected sheave diameter should not be smaller nor the width greater than the dimensions below. These dimensions are from NEMA Standard MG1-14.42.

Frame	Horsepower at Sync. Speed, RPM				V-Belt Sheave (Inches)			
					Conventional		358	
					A, B, C, D, and E Sections		3V, 5V and 8V Sections	
	3600	1800	1200	900	Min. Pitch Dia.	Max. Width	Min. Outside Dia.	Max Width
143T	1 1/2	1	3/4	1/2	2.2	4 1/4	2.2	2 1/4
145T	2-3	1 1/2-2	1	3/4	2.4	4 1/4	2.4	2 1/4
182T	3	3	1 1/2	1	2.4	5 1/4	2.4	2 3/4
182T	5	-	-	-	2.6	5 1/4	2.4	2 3/4
184T	-	-	2	1 1/2	2.4	5 1/4	2.4	2 3/4
184T	5	-	-	-	2.6	5 1/4	2.4	2 3/4
184T	7 1/2	5	-	-	3.0	5 1/4	3.0	2 3/4
213T	7 1/2-10	7 1/2	3	2	3.0	6 1/2	3.0	3 3/8
215T	10	-	5	3	3.0	6 1/2	3.0	3 3/8
215T	15	10	-	-	3.8	6 1/2	3.8	3 3/8
254T	15	-	7 1/2	5	3.8	6 1/2	3.8	4
254T	20	15	-	-	4.4	6 1/2	4.4	4
256T	20-25	-	10	7 1/2	4.4	6 1/2	4.4	4
256T	-	20	-	-	4.6	6 1/2	4.4	4
284T	-	-	15	10	4.6	9	4.4	4 5/8
284T	-	25	-	-	5.0	9	4.4	4 5/8
286T	-	30	20	15	5.4	9	5.2	4 5/8
324T	-	40	25	20	6.0	10 1/4	6.0	5 1/4
326T	-	50	30	25	6.8	10 1/4	6.8	5 1/4
364T	-	-	40	30	6.8	11 1/2	6.8	5 7/8
364T	-	60	-	-	7.4	11 1/2	7.4	5 7/8
365T	-	-	50	40	8.2	11 1/2	8.2	5 7/8
365T	-	75	-	-	9.0	11 1/2	8.6	5 7/8
404T	-	-	60	-	9.0	14 1/4	8.0	7 1/4
404T	-	-	-	50	9.0	14 1/4	8.4	7 1/4
404T	-	100	-	-	10.0	14 1/4	8.6	7 1/4
405T	-	-	75	60	10.0	14 1/4	10.0	7 1/4
405T	-	100	-	-	10.0	14 1/4	8.6	7 1/4
405T	-	125	-	-	11.5	14 1/4	10.5	7 1/4
444T	-	-	100	-	11.0	16 3/4	10.0	8 1/2
444T	-	-	-	75	10.5	16 3/4	9.5	8 1/2
444T	-	125	-	-	11.0	16 3/4	9.5	8 1/2
444T	-	150	-	-	-	-	10.5	8 1/2
445T	-	-	125	-	12.5	16 3/4	12.0	8 1/2
445T	-	-	-	100	10.5	16 3/4	12.0	8 1/2
445T	-	150	-	-	-	-	10.5	8 1/2
445T	-	200	-	-	-	-	13.2	8 1/2

To obtain the minimum pitch diameters for flat belt, Gearbelt®, Poly-V*, chain or gear drives, multiply the 358 sheave pitch diameters in the table above by the following factors:

Drive	Factor
Chain	0.7
Flat Belt (Single Ply)	1.33
Gearbelt	0.9
Helical Gear	0.85
Poly-V	1.00
Spur Gear	0.75

* Poly-V is believed to be the trademark and/or trade name of Veyance Technologies, Inc., and is not owned or controlled by Regal Beloit Corporation.

All sales are made on our STANDARD TERMS AND CONDITIONS OF SALE in effect at the time a customer's order is accepted. The current Terms and Conditions are set forth below:

STANDARD TERMS AND CONDITIONS OF SALE (February 2015)

These Terms and Conditions, the attendant quotation or acknowledgment and all documents incorporated by specific reference therein, will be the complete and exclusive statement of the terms of the agreement governing the sale of goods ("Goods") by Regal Beloit America Inc. and its divisions and subsidiaries ("Seller") to Customer ("Buyer"). Buyer's acceptance of the Goods will manifest Buyer's assent to these Terms and Conditions. If these Terms and Conditions differ in any way from the terms and conditions of Buyer's order, or other documentation, this document will be construed as a counteroffer and will not be deemed an acceptance of Buyer's terms and conditions which conflict herewith.

1. PRICES: Unless otherwise specified in writing by Seller, Seller's price for the goods shall remain in effect for thirty (30) days after the date of Seller's quotation or acknowledgment of Buyer's order for the Goods, whichever occurs first, provided an unconditional, complete authorization for the immediate shipment of the Goods is received and accepted by Seller within such time period. If such authorization is not received by Seller within such thirty (30) day period, Seller shall have the right to change the price for the Good to Seller's price for the Goods at the time of shipment.
2. TAXES: Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the Goods/provision of Services or of procuring material used therein, and any tax now in effect or increase in same payable by the Seller because of the manufacture, sale or delivery of the Goods/provision of Services, may at Seller's option, be added to the price.
3. TERMS OF PAYMENT: Subject to the approval of Seller's Credit Department, terms are net thirty (30) days from date of Seller's invoice in U.S. currency. If any payment owed to Seller is not paid when due, it shall bear interest, at a rate to be determined by Seller, which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is paid. Seller shall have the right, among other remedies, either to terminate the Agreement or to suspend further performance under this and/or other agreements with Buyer in the event Buyer fails to make any payment when due. Buyer shall be liable for all expenses, including attorneys' fees, relating to the collection of past due amounts.
4. SHIPMENT AND DELIVERY: Shipments are made F.O.B. Seller's shipping point. Any claims for shortages or damages suffered in transit shall be submitted by the Buyer directly to the carrier. While Seller will use all reasonable commercial efforts to maintain the delivery date for the Goods or the date of provision of Services acknowledged or quoted by Seller, all such dates are approximate. Seller reserves the right to make partial shipments and to segregate "specials" and made-to-order Goods from normal stock Goods. Seller shall not be bound to tender delivery of any Goods for which Buyer has not provided shipping instructions.
5. QUANTITY: Buyer agrees to accept overruns of up to ten percent (10%) of the order on "made-to-order" Goods, including parts. Any such additional items shall be priced at the price per item charged for the specific quantity ordered.
6. LIMITED WARRANTY: Subject to the limitations of Section 7, Seller warrants that the Goods will be free from defects in material and workmanship under normal use, service and maintenance and Services will be performed by trained personnel using proper equipment and instrumentation for the particular Service provided. Any licensed firmware embodied in the Goods will execute the programming instructions provided by Seller. The foregoing warranties will apply until the expiration of the applicable warranty period. Except as specified below, Goods are warranted for twelve (12) months (unless otherwise specified by Seller in writing) from the date of shipment of the Goods by Seller. Consumablesand Services (except as specified below) are warranted for a period of 90 days from the date of shipment or completion of the Services. Products purchased by Seller from a third party for resale to Buyer ("Resale Products") shall carry only the warranty extended by the original manufacturer. Buyer agrees that Seller has no liability for Resale Products beyond making a reasonable commercial effort to arrange for procurement and shipping of the Resale Products.**THIS IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER WITH RESPECT TO THE GOODS/SERVICES AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO SELLER IN SPECIFICATIONS, DRAWINGS OR OTHERWISE, AND WHETHER OR NOT SELLER'S PRODUCTS ARE SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY SELLER FOR BUYER'S USE OR PURPOSE.**
This warranty does not extend to any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, unauthorized modification or alteration, use beyond rated capacity, or improper installation, maintenance or application. To the extent that Buyer or its agents has supplied specifications, information, representation of operating conditions or other data to Seller in the selection or design of the Goods or provision of Services and the preparation of Seller's quotation, and in the event that actual operating conditions or other conditions differ from those represented by Buyer, any warranties or other provisions contained herein which are affected by such conditions shall be null and void. If within thirty (30) days after Buyer's discovery of any warranty defects within the warranty period, Buyer notifies Seller thereof in writing, Seller shall, at its option, repair, correct, or replace F.O.B. point of manufacture, or refund the purchase price for, that portion of the goods found by Seller to be defective. Failure by Buyer to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects. Goods repaired or replaced during the warranty period shall be covered by the foregoing warranty for the remainder of the original warranty period or ninety (90) days, whichever is longer. Buyer assumes all other responsibility for any loss, damage, or injury to persons or property arising out of, connected with, or resulting from the use of Goods, either alone or in combination with other products/components.
SECTIONS 6 AND 7 APPLY TO ANY ENTITY OR PERSON WHO MAY BUY, ACQUIRE OR USE SELLER'S GOODS, INCLUDING ANY ENTITY OR PERSON WHO BUYS THE GOODS FROM SELLER'S DISTRIBUTOR AND SUCH ENTITY OR PERSON SHALL BE BOUND BY THE LIMITATIONS THEREIN.
7. LIMITATION OF REMEDY AND LIABILITY: **THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY HEREUNDER (OTHER THAN THE WARRANTY PROVIDED UNDER SECTION 13) SHALL BE LIMITED TO REPAIR, CORRECTION, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE UNDER SECTION 6. SELLER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXCEED THE PRICE TO BUYER OF THE SPECIFIC GOODS OR SERVICES PROVIDED BY SELLER GIVING RISE TO THE CLAIM OR CAUSE OF ACTION. BUYER AGREES THAT IN NO EVENT SHALL SELLER'S LIABILITY TO BUYER AND/OR ITS CUSTOMERS EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. THE TERM "CONSEQUENTIAL DAMAGES" SHALL INCLUDE, BUT NOT BE LIMITED TO, LOSS OF ANTICIPATED PROFITS, LOSS OF USE, LOSS OF REVENUE, COST OF CAPITAL AND DAMAGE OR LOSS OF OTHER PROPERTY OR EQUIPMENT AND COSTS INCURRED INCLUDING WITHOUT LIMITATION FOR CAPITAL, FUEL AND POWER, AND CLAIMS OF BUYER'S CUSTOMERS. GOODS AND/OR SERVICES SOLD HEREUNDER ARE NOT FOR USE IN ANY NUCLEAR AND RELATED APPLICATIONS.**
Buyer accepts goods and/or services with the foregoing understanding, agrees to communicate the same in writing to any subsequent purchaser or users and to defend, indemnify and hold harmless Seller from any claims, losses, suits, judgments and damages, including incidental and consequential damages, arising from such use, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.
8. BUYER RESPONSIBILITIES: Buyer shall provide Seller ready access to the site where services are to be performed and adequate workspace and facilities to perform same as provided in these terms and conditions. Buyer shall not require Seller or its employees, as a condition to site access or otherwise, to further agree or enter into any agreement, which waives, releases, indemnifies or otherwise limits or expands any rights or obligations whatsoever. Any such agreements shall be null and void. Buyer shall inform Seller, in writing, at the time of order placement, of any known hazardous substance or condition at the site, including, but not limited to, the presence of asbestos or asbestos containing materials, and shall provide Seller with any applicable Material Data Safety Sheets regarding same. Buyer shall appoint a representative familiar with the site and the nature of the services to be performed by Seller to be present at all times that Seller personnel are at the site. Seller shall not be liable for any expenses incurred by Buyer in removing, replacing or refurbishing any Buyer equipment or any part of Buyer's building structure that restricts Seller access. Buyer personnel shall cooperate with and provide all necessary assistance to Seller. Seller shall not be liable or responsible for any work performed by Buyer.
9. BUYER SUPPLIED DATA: To the extent that Seller has relied upon any data or information supplied by Buyer to Seller ("Data") in the selection or design of the Goods and/or provision of the Services and the preparation of Seller's quotation, and the Data is inadequate or inaccurate, any warranties or other provisions contained herein which are affected by such conditions shall be null and void.
10. TECHNICAL ADVICE: It is expressly understood that the Seller assumes no obligation or liability for any technical advice given without charge and furnished by the Seller with respect to the use of the Goods. All such technical advice, or results obtained, is given and accepted at Buyer's risk.
11. EXCUSE OF PERFORMANCE: Seller shall not be liable for delays in performance or for nonperformance due to acts of God, acts of Buyer, war, riot, fire, flood, other severe weather, sabotage, or epidemics; strikes or labor disturbances; governmental requests, restrictions, laws, regulations, orders or actions; unavailability of or delays in transportation; default of suppliers; or unforeseen circumstances or any events or causes beyond Seller's reasonable control. Deliveries of Goods or provision of Services may be suspended for an appropriate period of time as a result of the foregoing. If Seller determines that its ability to supply the total demand for the Goods, or to obtain material used directly or indirectly in the manufacture of the Goods, is hindered, limited or made impracticable due to causes addressed in this Section 8, Seller may allocate its available supply of the Goods or such material (without obligation to acquire other supplies of any such Goods or material) among itself and its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result there from. Deliveries suspended or not made by reason of this section may be canceled by Seller upon notice to Buyer without liability, but the balance of the agreement shall otherwise remain unaffected.
12. CANCELLATIONS AND DELAYS: The Buyer may cancel orders only upon written notice and upon payment to Seller of cancellation charges which include, among other things, all costs and expenses incurred and commitments made by the Seller and a reasonable profit thereon. Any request by Buyer to extend the delivery schedule must be agreed to in writing by the Seller. If agreement cannot be reached, Seller may deliver product or provide services to the last known ship to address and invoice the Buyer upon completion of the product or services or prior delivery date, whichever is later.
13. CHANGES: Buyer may request changes or additions to the Goods/Services consistent with Seller's specifications and criteria. In the event such changes or additions are accepted by Seller, Seller may revise the price and delivery schedule. Seller reserves the right to change designs and specifications for the Goods or Services without prior notice to Buyer, except with respect to Goods being made-to-order for Buyer. Seller may cancel any order or terminate any agreement without liability to Buyer if Buyer fails To meet the conditions specified herein.
14. TOOLING: Tool, die, and pattern charges, if any, are in addition to the price of the Goods/Services and are due and payable upon completion of the tooling. All such tools, dies and patterns shall be and remain the property of Seller. Charges for tools, dies, and patterns do not convey to Buyer, title, ownership interests in, or rights to possession or removal, nor prevent their use by Seller for other purchasers, except as otherwise expressly provided by Seller and Buyer in writing with reference to this provision.
15. SOFTWARE AND FIRMWARE: Notwithstanding any other provision herein to the contrary, Seller or applicable third party owner shall retain all rights of ownership and title in its respective firmware and software, including all copyrights relating to such firmware and software and all copies of such firmware and software. Except as otherwise provided herein, Buyer is hereby granted a nonexclusive, royalty free license to use firmware and software, and copies of firmware and software, incorporated into the Goods only in conjunction with such Goods and only at the Buyer's plant site where the Goods are first used. Buyer's use of certain firmware (as specified by Seller) and all other software shall be governed exclusively by Seller's and/or third party owner's applicable license terms.
16. ASSIGNMENT: Buyer shall not assign its rights or delegate its duties hereunder or any interest therein or any rights hereunder without the prior written consent of the Seller, and any such assignment, without such consent, shall be void.
17. PATENTS AND COPYRIGHTS: Subject to Section 7, Seller warrants that the Goods and/or Services sold, except as are made specifically for Buyer according to Buyer's specifications, do not infringe any valid U.S. patent or copyright in existence as of the date of delivery. This warranty is given upon the condition that Buyer promptly notify Seller of any claim or suit involving Buyer in which such infringement is alleged, and, that Buyer cooperate fully with Seller and permit Seller to control completely the defense or compromise of any such allegation of infringement. Seller's warranty as to use only applies to infringements arising solely out of the inherent operation (i) of such Goods, or (ii) of any combination of Goods in a system designed by Seller. In the event such Goods and/or Services, singularly or in combination, are held to infringe a U.S. patent or copyright in such suit, and the use of such Goods and/or Services is enjoined, or in the case of a compromise by Seller, Seller shall have the right, at its option and expense, to procure for Buyer the right to continue using such Goods or providing such Services, or replace them with non-infringing Goods or Services; or modify same to become non-infringing; or grant Buyer a credit for the depreciated value of such Goods and accept return of them or grant Buyer a credit for such provided Services.
18. EXPORT/IMPORT: Buyer agrees that all applicable import and export control laws, regulations, orders, and requirements, including without limitation those of the United States and the European Union, and the jurisdictions in which the Seller and the Buyer are established or from which Goods may be supplied, will apply to their receipt and use. In no event shall Buyer use, transfer, release, import, or export Goods in violation of such applicable laws, regulations, orders or requirements.
19. HIRING/EMPLOYEES: Buyer agrees that during the execution of Services by Seller and for a period of twelve (12) months after the performance of Services, it will not hire any employee(s) of Seller and will not entice or counsel any such employee(s) to leave Seller's employ. Buyer agrees that this covenant shall extend to its agents and affiliates. In the event that an employee of Seller is hired or leaves the employ of Seller in such circumstances, Buyer shall pay Seller, as compensation for the cost incurred by Seller in recruiting and training the employee, the sum equivalent to six (6) months pay for each employee hired from or leaving the employment of Seller.
20. EMPLOYEE SAFETY AND SUSPENSION OF SERVICES: Seller may suspend or terminate Services, at its sole discretion, without liability to Buyer if Buyer fails to meet its obligations hereunder or becomes bankrupt or insolvent or if Seller determines that continuing to provide Services represents a hazardous condition for its employees.
21. MISCELLANEOUS: These terms and conditions set forth the entire understanding and agreement between Seller and Buyer, and supersede all other communications, negotiations and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions of Sale shall be binding upon the Seller unless made in writing and signed on its behalf by an officer of the Seller. No conditions, usage or trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, or supplement these Terms and Conditions shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification shall be affected by the acceptance of purchase orders or shipping instruction forms containing terms at variance with or in addition to those set forth herein. Any such modifications or additional terms are specifically rejected by Seller. No waiver by Seller with respect to any breach or default or any right or remedy and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver be expressed in writing and signed by the party to be bound. Seller is not responsible for typographical or clerical errors made in any quotation, orders or publications. All such errors are subject to correction. The validity, performance, and all other matters relating to the interpretation and effect of this contract shall be governed by the law of the state of New York. The United Nations Convention on the International Sale of Goods shall not apply to any transaction hereunder.

Experience the power of EDGE Online

EDGE Online is our online technical support center.

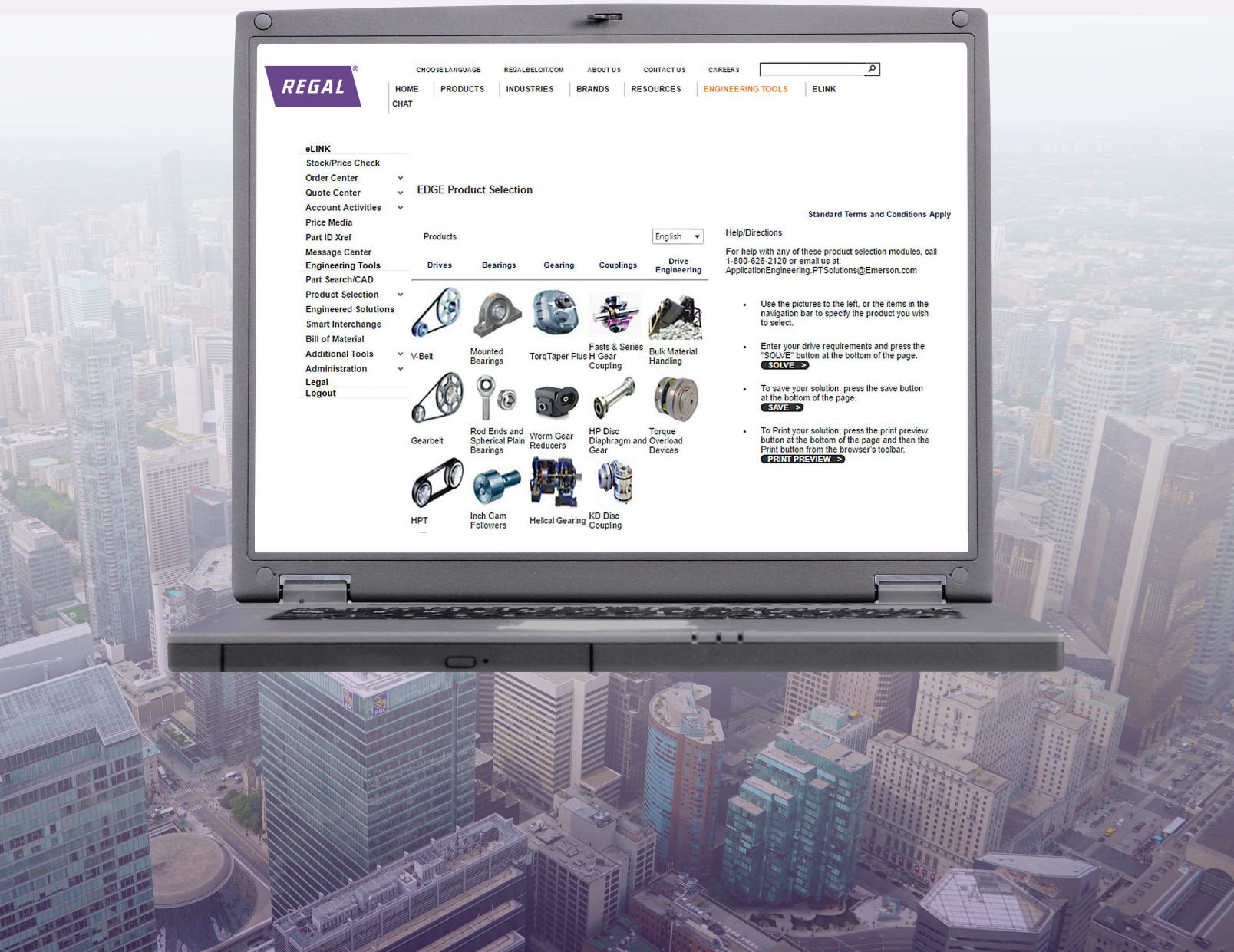
Our EDGE Online industry-leading consultative website (www.RegalPTS.com) offers quick, concise and complete access to a wide range of support services, including:

- eCatalog
- Product selection
- Engineered solutions
- Smart interchange
- Product literature
- CAD templates

- EDGE JIT – a seamless, web-based program that selects drives at the lowest transactional costs

- eLINK – a transaction tool that lets you instantly contact us for messages and updates on:
  - Stock/price checks
  - Order status
  - Shipment tracking
  - Order entry
  - Quote center
  - Shopping list (favorites)

www.RegalBeloit.com



Regal Beloit America, Inc.
7120 New Buffington Road
Florence, KY 41042
Customer Service: 800-626-2120
Fax: 800-262-3292
Technical Service: 800-626-2093

www.regalbeloit.com

APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and/or its affiliates ("Regal") with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

For a copy of our Standard Terms and Conditions of Sale, please visit http://www.regalbeloit.com (please see link at bottom of page to "Standard Terms and Conditions of Sale"). These terms and conditions of sale, disclaimers and limitations of liability apply to any person who may buy, acquire or use a Regal product referred to herein, including any person who buys from a licensed distributor of these branded products.

Morse is a registered trademark of Borg-Warner Corporation, used herein under exclusive license.

Regal, B5V, Browning, CorroGard, Edge, Gripnotch, MVP, Powergear, Q-D, Raider, SplitTaper, TorqTaper Plus and Vortex, are trademarks of Regal Beloit Corporation or one of its affiliated companies.
©2018 Regal Beloit Corporation, All Rights Reserved. MC17008E • Form# MB0029E • Printed in USA