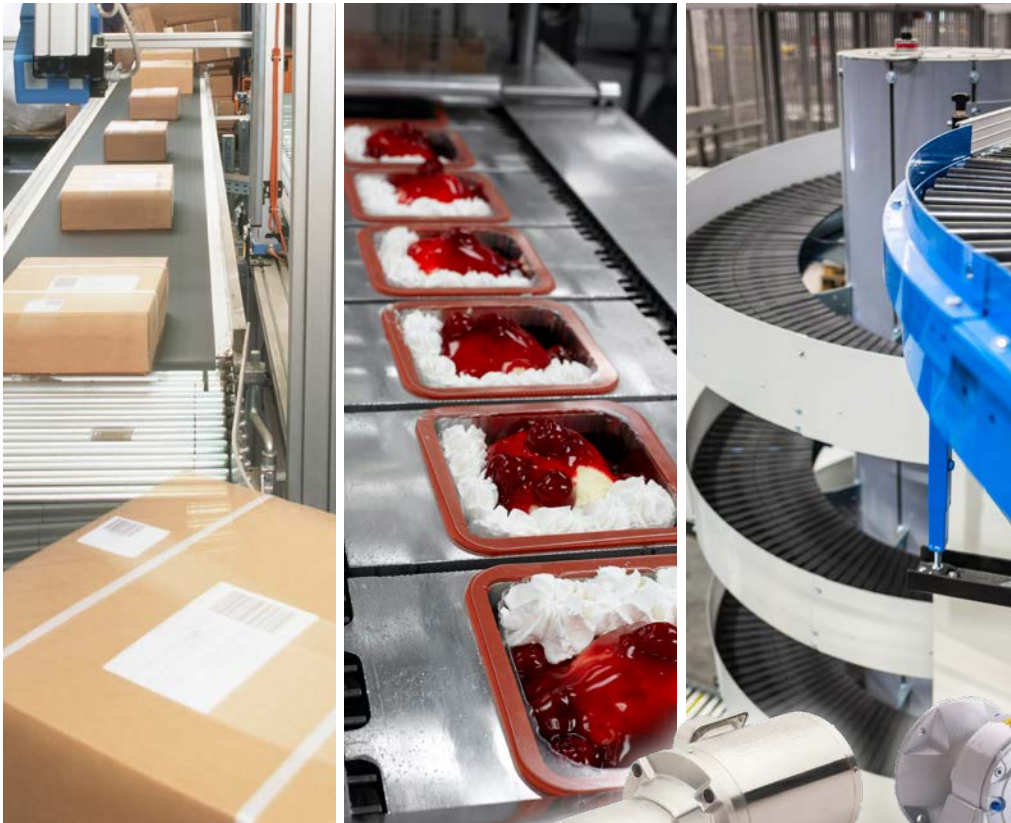


Worm, Helical and Bevel Gear Drives



Boston Gear

Boston Gear offers the industry's largest line up of reliable speed reducers, gearing and other quality drivetrain components.

With more than 125 years of frontline experience, Boston Gear is recognized globally as a premier resource for extremely reliable, high-performance power transmission components. Boston Gear offers the industry's most comprehensive product array featuring more than 30,000 standard products combined with the ability to custom engineer unique solutions when required. Product lines include standard enclosed gear drives, custom speed reducers, AC/DC motors, DC drives and Centric brand overload clutches and torque limiters.

VISIT US ON THE WEB AT
BOSTONGEAR.COM



Altra Industrial Motion

Altra is a leading global designer and manufacturer of quality power transmission and motion control products utilized on a wide variety of industrial drivetrain applications. Altra clutches and brakes, couplings, gearing and PT component product lines are marketed under the industries most well known manufacturing brands. Each brand is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction. Highly-engineered Altra solutions are sold in over 70 countries and utilized in a variety of major industrial markets, including food processing, material handling, packaging machinery, mining, energy, automotive, primary metals, turf and garden and many others.

Altra's leading brands include **Ameridrives**, **Bauer** Gear Motor, **Bibby** Turboflex, **Boston** Gear, **Delroyd** Worm Gear, **Formsprag** Clutch, **Guardian** Couplings, **Huco**, **Industrial** Clutch, **Inertia** Dynamics, **Kilian**, **Lamiflex** Couplings, **Marland** Clutch, **Matrix**, **Nuttall** Gear, **Stieber**, **Stromag**, **Svendborg** Brakes, **TB Wood's**, **Twiflex**, **Warner** Electric, **Warner** Linear and **Wichita** Clutch.

VISIT US ON THE WEB AT **ALTRAMOTION.COM**



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700 Series Features

- Precision ground worm threads maximize gearbox efficiency. At low ratio's efficiencies of 90 to 95% are common.
- The 700 Series' large oil reservoir provides efficient heat dissipation and lubrication for longer operating life.
- Its multi-position mounting flexibility allows for installation in virtually any position.
- Housings are straddle-milled, top and bottom, for precise alignment of horizontal and vertical bases.
- Internal baffles assure positive, leak-free venting.
- The 700 Series' rugged housing, fabricated of fine-grained, gear-quality cast iron, provides maximum strength for maximum durability, as well as greater precision during worm and gear alignment.
- Boston Gear's 700 Series high-strength bronze worm gear is straddle mounted between heavy-duty tapered roller bearings to increase thrust and overhung load capacities, sizes 713-760.
- Our 700 Series' high strength steel output shaft assures capacity for high torque and overhung loads.
- Pipe plugs allow easy fill, level, and drain in any mounting position
- The 700 Series' super-finished oil-seal diameters on both input and output shafts extend seal life.
- Both 2D and 3D CAD drawings are available from ECatalog/3D Drawings at www.bostongear.com
- Their availability via Reducer Express™, Boston Gear's innovative guaranteed delivery program, means never having to wait.

200 Series Optimount™ Features

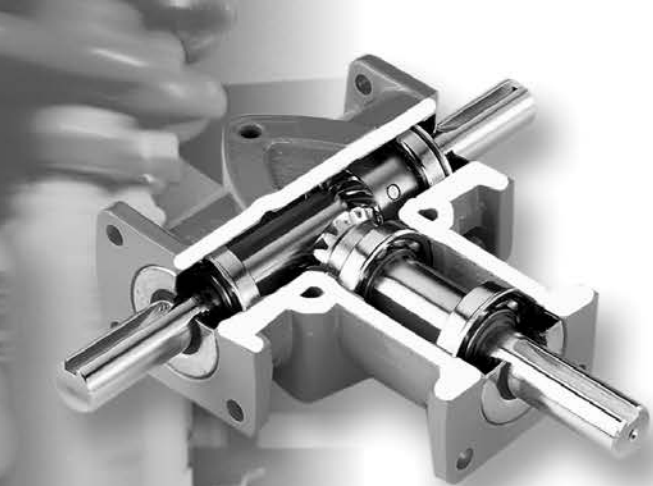
- Superior machining affords highly accurate alignment for exceptional performance - an especially important consideration when purchasing a speed reducer for use as an integral part in OEM equipment.
- Standard hollow output shafts allow gear drives to be connected directly to the drive train, increasing overall efficiency.
- Optional shaft and base kits allow conversion of the reducer to a stand-alone gear drive for greater flexibility.
- Washdown units are available in white or stainless steel epoxy coatings, both USDA certified and approved.
- Horizontal and vertical base mounted configurations make the Optimount™ series extremely versatile.
- Their availability via Reducer Express™, Boston Gear's innovative guaranteed delivery program, means never having to wait.
- CAD drawings are available from ECatalog/3D Drawings at www.bostongear.com

800 Series Features

- Because the 800 Series is dimensionally interchangeable with many U.S. and European in-line helical gear drives, it offers maximum flexibility.
- The standard NEMA C-face design will accept any standard NEMA motor, making it exceptionally versatile.
- Ratios up to 70:1 in just two stages means increased efficiency and reduced case size.
- Accessible oil seals simplify routine product maintenance.
- 800 Series drives come pre-filled with synthetic lubrication for your specific mounting position. Sizes 3 and 4 are lubricated for life which promotes trouble-free operation.
- An original Boston Gear design available from our ISO 9001:2015 certified speed reducer facility.
- Washdown duty units in white or stainless steel epoxy coatings make these gear drives ideal for the most severe washdown environments.
- CAD drawings are available from ECatalog/3D Drawings at www.bostongear.com
- Their availability via Reducer Express™, Boston Gear's innovative guaranteed delivery program, means never having to wait.

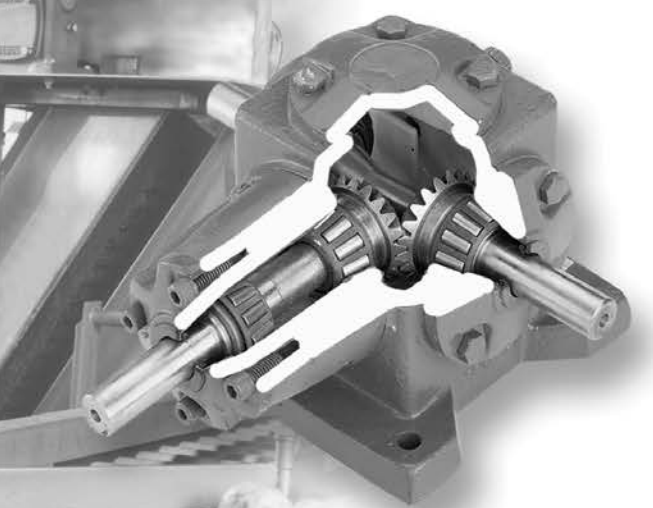
600 Series Features

- A selection comprising six common sizes permits use in many different applications.
- All Models are a more compact quill style
- Single, double, and triple reduction models provide a wide array of ratios for increased versatility.
- Base-mount and output-flange-mount models further increases versatility.
- The 600 Series is assembled in Boston Gear's ISO 9001:2015-certified facility to ensure precise quality control.
- Available in White BK and Stainless Steel Bost-Kleen™ options.



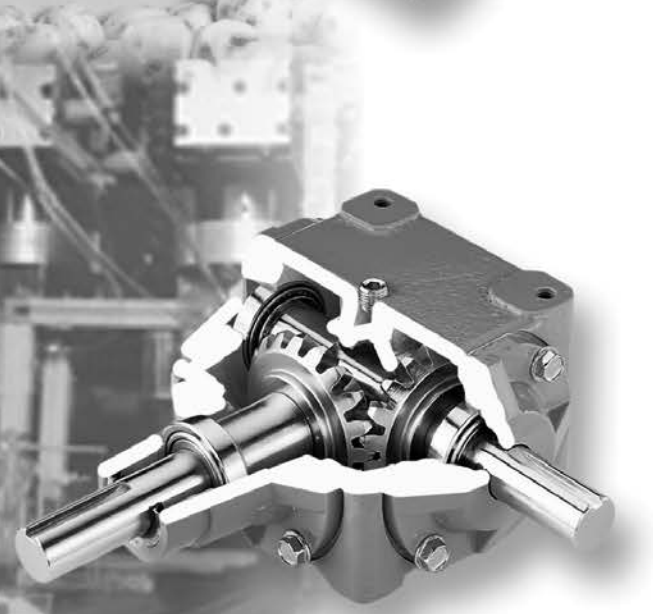
Right 90 Series Features

- Our spiral-bevel gear drives are designed for performance that's reliable, efficient, and as noise-free as possible.
- Input and output shaft flanges simplify mounting and installation.
- These gear drives can be used to either reduce or increase speed.
- Single and double-projecting output shafts for application flexibility.
- Ground alloy steel shafts are mounted on precision ball bearings for smooth operation.
- Pre-lubrication designed to last for the life of the drive improves performance and reduces maintenance.
- Boston Gear's Guaranteed Same Day Shipment Program ensures that you get what you need when you need it.



R100/R200 Series Features

- These spiral-bevel gear drives are designed for operation that's as reliable as it is quiet.
- Their shafts are heat treated and alloy-steel mounted on heavy-duty, tapered roller bearings for smoother operation.
- Their housings are made of precision-machined cast iron to ensure accurate, permanent alignment of the gears for superior performance.
- Double-bearing input support extends horsepower capacity and increases durability.
- Because the R-VR Series is available through Boston Gear's Guaranteed Same Day Shipment Program, it's the one you can count on to be there when you need it.



R1000 Series Features

- Straight-tooth bevel gears have teeth that are made from precision-forged alloy steel for maximum strength, as well a case hardened for increased durability.
- Input and output shafts are constructed from ground and polished heat-treated alloy steel to further enhance the overall toughness of these drives.
- Precision-machined, one-piece, quality cast-iron housings mean less maintenance and greater reliability.
- For greater support and rigidity, all shafts are supported by two tapered-roller bearings, while several models offer a straddle design with the gears supported on both sides.
- Flush-types vented-filler plugs with sintered-bronze breather inserts further reduce contamination.
- Boston Gear's Guaranteed Same Day Shipment Program ensures that you get what you need when you need it.

Our Quality Policy

Driven by the voice of the customer and total associate involvement, Boston Gear will strive, through continuous improvement, to provide products and services that meet or exceed customer expectations.

www.bostongear.com

Boston Gear's new, easy to navigate web site offers a variety of tools designed to simplify the selection and ordering process. Powered by advanced Internet XML technology, www.bostongear.com offers 24 hour access to the industry's premier source for power transmission information:

- **ECatalog/3D Drawings – Boston Gear's award winning open and enclosed gearing configurator. Based upon your applications requirements, select from over 84,000 parts, view specifications, even download CAD drawings**
- **Products – get the most current product information, features, benefits, or application data**
- **Literature – all of Boston Gear's catalogs, brochures, specification sheets, and installation manuals are available for immediate down loading**
- **Distributor Locator – find your local stocking Boston Gear distributor**

Whether you're looking to design a worm gear speed reducer to fit your application, get information on Boston Gear's newest products, or receive the latest news about the company, www.bostongear.com is your answer.

The Second Century of Service

Started in 1877 as a machine shop making gear cutting machines, Boston Gear has led the growth of the power transmission industry for more than a century. In its early years, Boston Gear introduced the concepts of gear standardization and stock gears – innovations of enormous benefit to power transmission system designers, specifiers and users.

Boston Gear was the early pioneer in enclosed drives, a category it still dominates with dependable, high-performance products like Worm, Helical and Bevel Gear Drives.

Today, Boston Gear provides the widest range of integrated motion control products from one source. The convenience of this single-source capability is yours when you deal with Boston Gear.

Engineering Services

The Boston Gear Engineering Group can satisfy your technical needs through skillful application of standard products or development of custom designs. Creating specials is an important aspect of customer service. It is supported by R & D personnel who use microprocessor-controlled equipment to collect and monitor data on materials and product performance.

Computer-Aided-Design (CAD) systems help Boston Gear engineers create new approaches to broad industrial challenges or specific customer needs. Computer simulation and testing at critical stages ensure that their designs are practical.

Manufacturing Excellence

Boston Gear manufactures more than 50,000 products in-house at our operations in Charlotte, North Carolina. Production is efficiently organized into manufacturing cells under group technology. For example, turning and grinding are combined under the control of a single operator in each cell. This approach encourages a sense of responsibility and pride of workmanship, to gain consistently high-quality output.

Computerized production control provides close supervision over scheduling and resource planning, coupled with the flexibility to fit your requirements smoothly into the master schedule. Other dedicated computer controls within the production department govern the ordering and delivery functions to keep operations lean and efficient.



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700 Series Single Reduction Flanged & Non-Flanged Reducers

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QC700 BASIC
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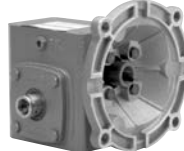
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HMF Helical Multiplier Series



HMF Series
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Optimount® F200 Series Hollow Shaft Helical Gear Flanged Input

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Basic Model
Hollow Output Shaft
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F200H Series Horizontal
Base Model Flange Input
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F200V Series Vertical
Base Model Flange Input
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Optimount® 200 Series Hollow Shaft Helical Gear Non-Flanged Input

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Basic Model
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F800B Series In-Line Helical Gear Flanged Input

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Triple Reduction
Foot Mounted, Flange Input
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Double Reduction
Output Flange Mount,
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Triple Reduction
Output Flange Mount,
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800B Series In-Line Helical Gear Non-Flanged Input

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**Triple Reduction
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**Double Reduction
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**Triple Reduction
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Triple Reduction Flange
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**Double Reduction
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**Triple Reduction
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F600B Series Helical Gear Flanged Input

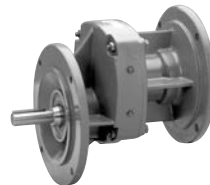
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**Double & Triple Reduction
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**Single Reduction
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600B Series Helical Gear Non-Flanged Input

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Right-90 Series Spiral Bevel



Right-90 Series
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R100/R200 VR100/VR200 Series Spiral Bevel



R100/R200 Series
Horizontal Base Model
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VR100/VR200 Series
Vertical Base Model
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R1000 Series Straight Bevel



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Motors and Brakes



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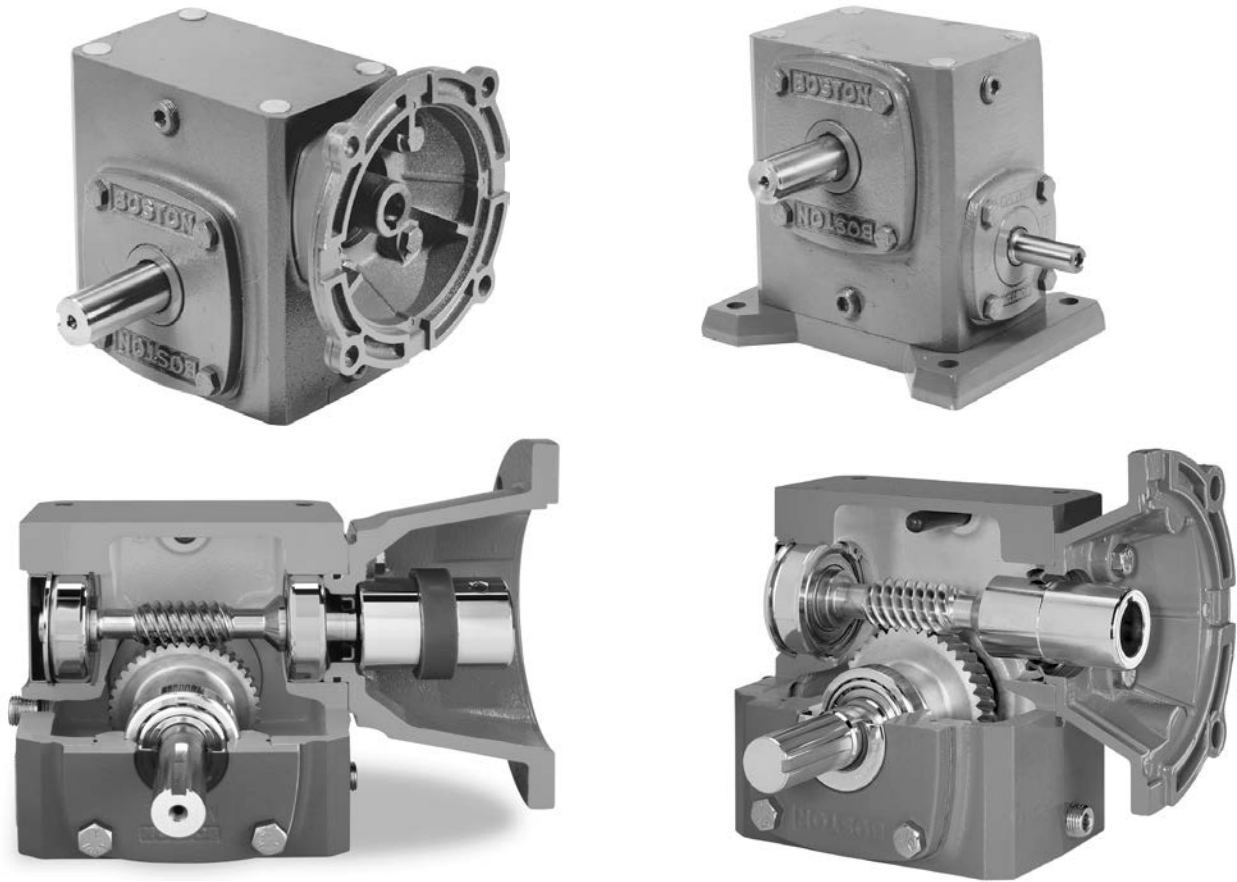
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700 Series Worm Gear Product Reference Guide

Single Reduction Flanged Reducers & Non-Flanged Reducers

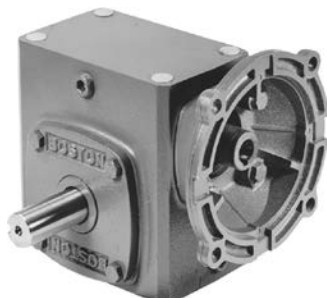
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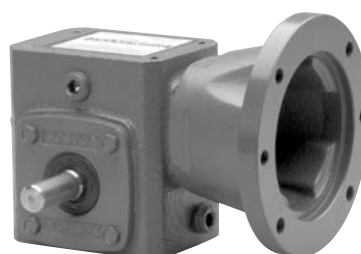
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HF/HQC-R/L + SF700V/W
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700 BASIC
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700 Series Worm Gear Speed Reducers

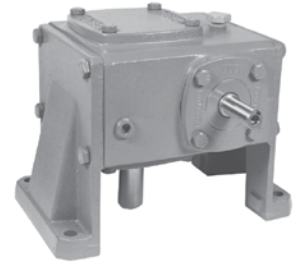
A



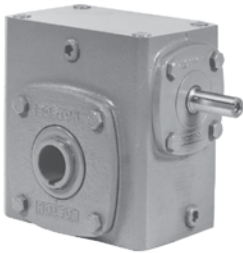
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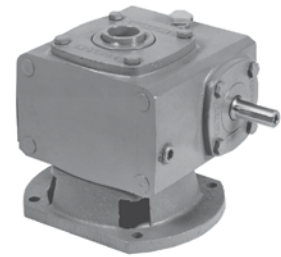
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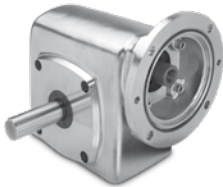
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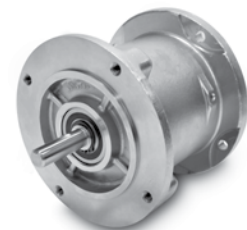
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SSH700WD
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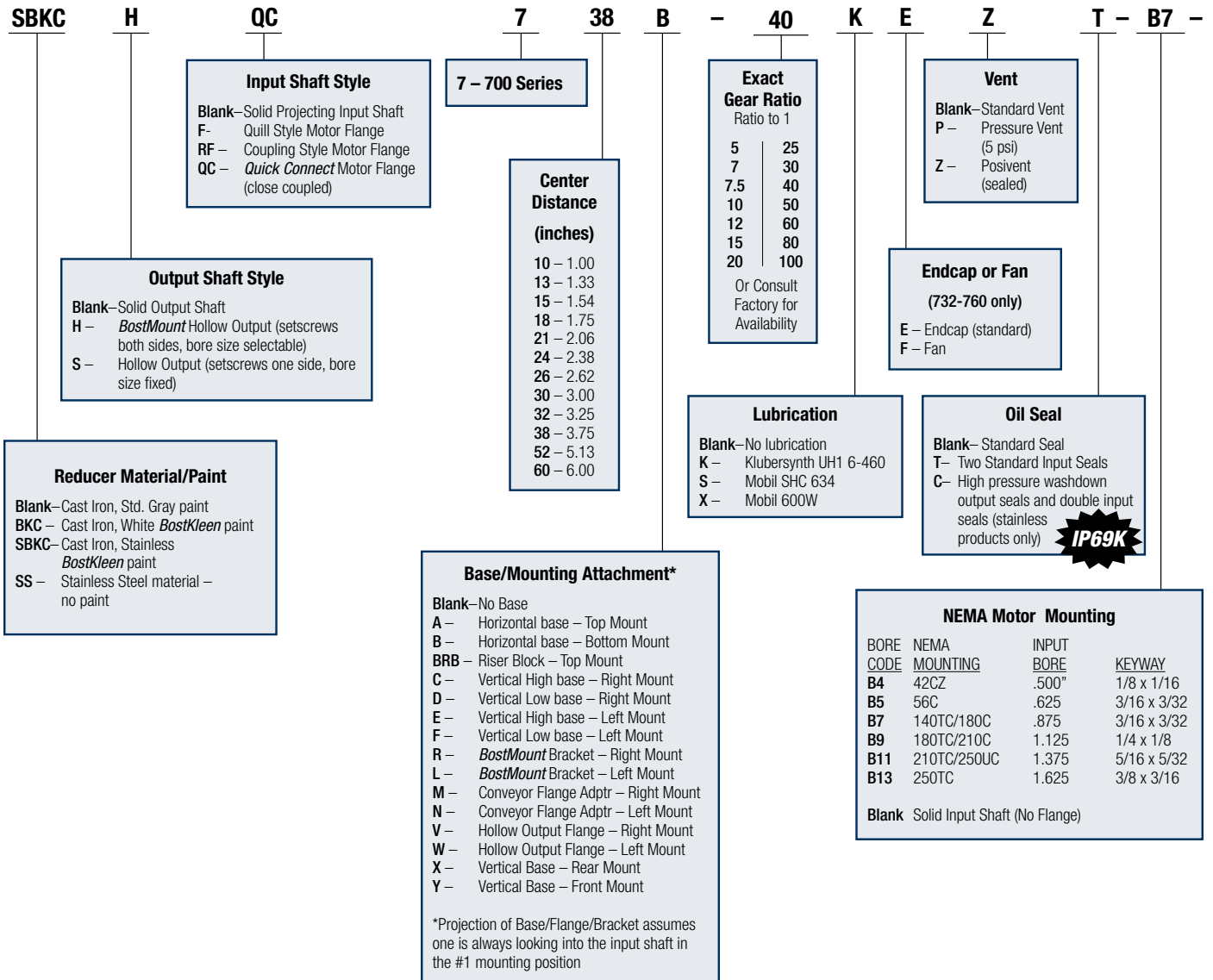


SSFSP5
Dimensions — Page 66

700 Series Single Reduction

700 Series Right Angle Worm Gearbox - Single Reduction

A



HS 1 - P24 -

BostMount Output Bore Code

For H Series Only Specified in 1/16" increments.

Example: 1 1/4" = P20

| | |
|--------------|---------------|
| 5/8 - P10 | 1-1/2 - P24 |
| 3/4 - P12 | 1-5/8 - P26 |
| 7/8 - P14 | 1-11/16 - P27 |
| 15/16 - P15 | 1-3/4 - P28 |
| 1 - P16 | 1-7/8 - P30 |
| 1-1/16 - P17 | 1-15/16 - P31 |
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| 1-3/8 - P22 | 2-7/16 - P39 |
| 1-7/16 - P23 | 3-7/16 - P55 |

See catalog page 128 for availability by center distance.
Consult Factory for Metric Bores

Mounting Positions

Blank - No Lubrication Supplied

For Factory Prelubrication Indicate Mounting Position

- 1 - Standard Mounting (Worm over)
- 2-6 - Refer to Mounting Positions in Catalog pages 18-19

Output Shaft

(When facing Input and worm on top)

- G - Carbon Steel Output Projection - Left
- H - Carbon Steel Double Output Projection
- J - Carbon Steel Output Projection - Right
- GS - Stainless Output Projection - Left
- HS - Stainless Double Output Projection
- JS - Stainless Output Projection - Right

Clutch/Brake

CMBA140TR-6 -

Common C-Face Brakes Installed

| 115/230 VAC 60hz | Ft-Lb | Bore Code |
|----------------------|-----------|-----------|
| CMBA56R-3 | 3 | B5 |
| CMBA56R-6 | 6 | B5 |
| CMBA140TR-6 | 6 | B7 |
| 208-230/460 VAC 60hz | | |
| Ft-Lb | Bore Code | |
| CMBA56U-3 | 3 | B5 |
| CMBA56U-6 | 6 | B5 |
| CMBA140TU-6 | 6 | B7 |

Other sizes available. See catalog page 343.

Motor

HUTF-IDB - 3

Motor Conduit box Orientation

(When looking at fan end of motor and gearbox is in mounting position #1)

- 0 - 12 O'clock
- 3 - 3 O'clock (standard for G & H shaft assemblies)
- 6 - 6 O'clock
- 9 - 9 O'clock (standard for J shaft assemblies)

Common C-Face Motors Installed

| HP Rating | Bore Code | AC Voltage | |
|-----------|-----------|------------------|------------------|
| | | 115/208-230-1-60 | 208-230/460-3-60 |
| 1/4 HP | B5 | DRTFB | DUTFB |
| 1/3 HP | B5 | ERTFB | EUTFB |
| 1/2 HP | B5 | FRTFB | FUTFB |
| | B5 | | FUT-SS |
| | B5 | | FUTF-IDB |
| 3/4 HP | B5 | GRTFB | GUTFB |
| | B5 | | GUT-SS |
| | B5 | | GUTF-IDB |
| 1 HP | B5 | HRTF-5/8B | HUTF5/8B |
| | B5 | | HUT5/8-SS |
| | B5 | | HUTF5/8-IDB |
| | B7 | | HUTFB |
| | B7 | | HUT-SS |
| | B7 | | HUTF-IDB |
| 1.5 HP | B7 | | JUTFB |
| | B7 | | JUTF-SS |
| | B7 | | JUTF-IDB |
| 2 HP | B5 | | KUTF5/8B |
| | B7 | | KUTFB |
| | B7 | | KUTF-SS |
| | B7 | | KUTF-IDB |
| 3 HP | B9 | | LUTFB |
| | B9 | | LUTF-SS |
| | B9 | | LUTF-IDB |
| 5 HP | B9 | | MUTFB |

Other motors available, please see catalog pages 333 to 342.

- T - Totally enclosed non-ventilated
- TF - Totally enclosed fan cooled
- SS - Stainless
- IDB - Inverter Duty (10:1 turn down constant torque)
- B5 - 56C
- B7 - 140TC
- B9 - 180TC

Single Reduction Numbering System / How to Order

A

| Style | Size | Base | Ratio | Lubrication | Fan | Vent | Oil Seals | NEMA Mounting | Shaft Assembly | Mounting Position | Output Bore Code |
|-------|------|------|-------|-------------|-----|------|-----------|---------------|----------------|-------------------|------------------|
|-------|------|------|-------|-------------|-----|------|-----------|---------------|----------------|-------------------|------------------|

Style Designates reducer or flanged reducer, projecting or hollow output shaft.

- C** – Designates cast iron flange and base. (Standard on motor flanges 3 HP (180TC) and up and all bases except horizontal (710-726).
- Blank** – Single reduction reducer with projecting input and output shafts. (No code letter required).
- H** – Single reduction reducer with projecting input and *BostMount* hollow output shaft. (No flange) (713-738)
- S** – Single reduction reducer with hollow output shaft. (Sizes 718, 721, 726 and 732).
- F** – Single reduction flanged reducer (Quill types) with projecting output shaft.
- HF** – Single reduction flanged reducer (Quill types) with *BostMount* hollow output shaft. (Sizes 713-738)
- SF** – Single reduction flanged reducer (Quill types) with hollow output shaft. (Sizes 718, 721, 726 and 732)
- QC** – Single reduction flanged reducer (Coupling types) with projecting output shaft.
- HQC** – Single reduction flanged reducer (Coupling types) with *BostMount* hollow output shaft. (Sizes 713-738)
- RF** – Single reduction flanged reducer (Coupling types) with Projecting output shaft. 752 - 760 Size Only
- BK** – Designates Cast Iron, White *BostKleen* paint
- SBK** – Designates Cast Iron, Stainless *BostKleen* paint
- SSF** – Stainless Steel Single reduction flanged reducer (Quill types) with projecting output shaft.
- SSHF** – Stainless steel single reduction flanged reducer with *BostMount* hollow output shaft.

Size Center distance, rounded off.

| | | |
|------------|------------|------------|
| 710 - 1.00 | 721 - 2.06 | 732 - 3.25 |
| 713 - 1.33 | 724 - 2.38 | 738 - 3.75 |
| 715 - 1.54 | 726 - 2.62 | 752 - 5.16 |
| 718 - 1.75 | 730 - 3.00 | 760 - 6.00 |

Base Base positions relative to output shaft. Shipped separately as Base Kits. See Page 129.

- Blank** – No base kit supplied
- A,B** – Horizontal bases
- C,D,E & F** – Vertical Bases*
- R/L** – BostMount Output Bracket
- X** – Input Vertical Up
- Y** – Input Vertical Down
- BRB** – Horizontal base with riser block
- V,W** – Flanged bases, available on “S” hollow shaft models only. Factory assembled.
- M/N** – Flanged bases, available on “CFA” hollow shaft models only.

*For E, F vertical base arrangements, see Pages 18, 19.

Ratio See Selection Tables for available ratios

Lubrication Optional Prelubrication.*

- Blank** – No Lubrication supplied.
 - K** – Klubersynth UH1 6-460
 - S** – Mobil SHC634 Synthetic Lubricant
 - X** – Mobil 600W
- *When specifying optional prelubrication, include mounting position after shaft assembly.

Fan Optional fan available on sizes 732-760 single reduction only. Shipped separately as Fan Kit. See Page 130.

- Blank** – No Fan Kit. **E** – End Cap (standard) **F** – Fan Kit

Vent Pressure Relief.

- Blank** – Standard Vent
- P** – 5 PSI Vent
- Z** – PosiVent® Pressure Compensating Bladder

Oil Seals

- Blank** – Standard Seal
- T** – Double Input Seals. Recommended for mounting positions 2, 3, 4, 6
- C** – High pressure/wash down configuration for stainless gearboxes. Contains double input seals and axial face seals on the output.

NEMA Mounting Designates flange size and input bore diameter. Flanged reducers only. Leave blank for projecting input reducers.

| Bore Code | NEMA Mounting | Input Bore | Keyway |
|------------|---------------|------------|-------------|
| B4 | 42CZ | .500" | 1/8 x 1/16 |
| B5 | 56C | .625 | 3/16 x 3/32 |
| B7 | 140TC/180C | .875 | 3/16 x 3/32 |
| B9 | 180TC/210C | 1.125 | 1/4 x 1/8 |
| B11 | 210TC/250UC | 1.375 | 5/16 x 5/32 |
| B13 | 250TC | 1.625 | 3/8 x 3/16 |

See page 98 for Mounting Dimensions.

Shaft Assembly Assembly shaft arrangements. See assemblies, pages 18 and 19.

- G** – Standard assembly (left)
- H** – Double output shaft projection
- J** – Opposite to standard (right)
- GS** – Stainless standard assembly (left)
- HS** – Stainless double output shaft projection
- JS** – Stainless opposite to standard (right)

Mounting Position Designates the position of oil and vent plugs with respect to mounting.

- Blank** – For units not supplied prelubricated.
- 1-6** – See pages 18 and 19.

Output Bore Code Specified in 1/16" increments. See page 128 for complete offering. Example 1 1/4" = P20 For H Series only.

How to Order

When ordering reducers please include code letters for Style, Size, Base (if required), Ratio, Fan (if required), Lubrication (if required), NEMA Mounting (if flanged reducer), Shaft Assembly and Motor (if required).

EXAMPLE: Required size, 721 Quill types flanged reducer, 30:1 ratio, 5/8" input bore, standard assembly, with horizontal base, no lubrication. Motor to be 3/4 HP, 1750 RPM, 230/460 Volt, 3 Phase, 60 cycle, open dripproof.

F **721** **B** – **30** – **B5** – **G** – **GUB3**

1. Reducer, Base and Motor Shipped separately:
ORDER: Reducer - **F721-30-B5-G**
Base Kit - **56587**
Motor - **GUB3**
2. Reducer, Base and Motor assembled:
ORDER: **F721B-30-B5-G-GUB3**

Single Reduction Speed Reducer Selection Procedure

To properly select a speed reducer, the following application information must be known:

- Input RPM (Ratio)
- Output Torque
- Input Horsepower
- Service Factor

Non-Motorized Speed Reducer

1. Determine service factor from table below.
2. Determine design horsepower.
Design Horsepower =
Application Load x Service Factor
3. Select a speed reducer size that satisfies output RPM, service class and/or output torque requirements.
4. Check overhung load capacity.

Motorized Speed Reducer

1. Determine service class from table below.
2. Select a reducer size that satisfies output RPM, service class and/or output torque requirements.
3. Check overhung load capacity.

Service Factor Table

| AGMA Class of Service | Service Factor | Operating Conditions |
|-----------------------|----------------|---|
| I | 1.00 | Moderate Shock-not more than 15 minutes in 2 hours. |
| | | Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. |
| | | Uniform Load-more than 10 hours per day. |
| | 1.50 | Heavy Shock-not more than 15 minutes in 2 hours. |
| | | Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day. |

For complete AGMA Service Factors and Load Classifications, see Engineering Section, Pages 348 and 349.

Single Reduction Selection Tables

Capacity Selection Tables on pages 22-29 list catalog numbers and ratios of both reducers and gearmotors. Output RPM, output torque and horsepower are all based on 1750 RPM input. Output torque and horsepower capacities at other input RPM's are listed on pages 30-33. For motorized reducer selection, select the desired output RPM and refer to the gearmotor ratings column. For non-motorized reducers, refer to the reducer gear capacity columns. For the desired HP, torque and service factor that satisfies your requirements, a 700 Series basic reducer number will be indicated. For complete catalog numbering system, descriptions and options, refer to Pages 14-15.

Overhung Load

If the output shaft of a speed reducer is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

- OHL = Overhung Load (LB.)
- T = Shaft Torque (LB.IN.)
- D = PD of Sprocket, Pinion or Pulley (IN.)
- K = Load Connection Factor

Load Connection Factor

| | |
|--------------------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive. | 1.50 |
| Pulley and Flat Belt Drive | 2.50 |

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley of a larger PD. Relocation of the load closer to the center of reducer will also increase OHL capacity.

Permissible Overhung Loads and Output Shaft Thrust Loads are listed for each reducer in the Tables on pages 30-33.

Maximum Input Speeds

| | |
|-----------------|----------|
| 710, 713 | 4500 RPM |
| 715 through 732 | 3600 RPM |
| 738, 752 | 2500 RPM |
| 760 | 1750 RPM |

NOTE: Horsepower ratings for 1750 RPM should not be exceeded when operating at higher input speeds.

Ratings shown reflect maximum gear capacity with Klubersynth UH1 6-460 lubricant. The use of other lubricants may reduce ratings by up to 15%.

Ratings are mechanical not thermal.



Flanged Reducer Assemblies and Mounting Positions

Assemblies - F/QC/RF 700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surface.

Types "A" and "B" are horizontal bases.

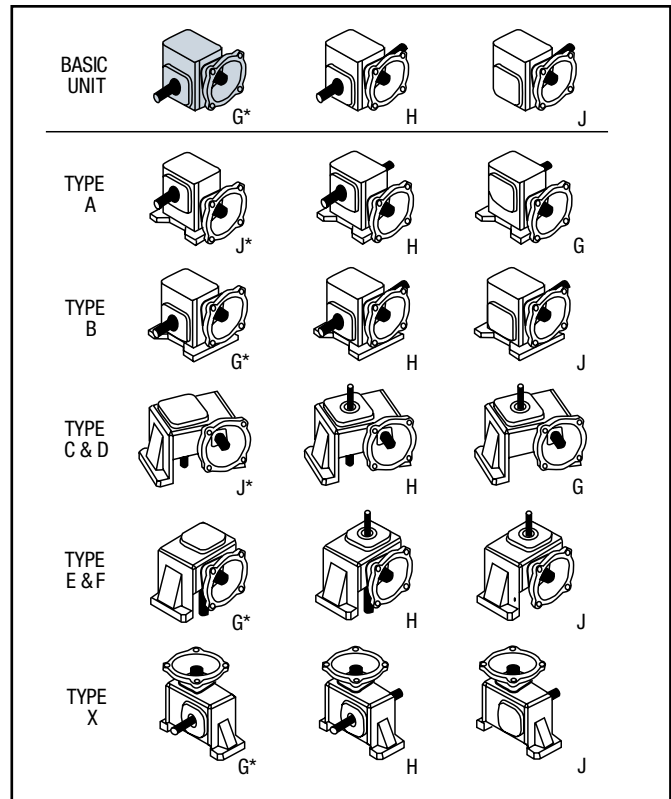
Types "C" and "E" are vertical high bases and Types "D" and "F" are vertical low bases. Types "X" is input vertical up.

Basic models and separate base kits are supplied unless otherwise specified. Assembly "H" is available at a slight additional charge.

See Pages 14-15 for complete ordering instructions.

Input may rotate clockwise or counter clockwise.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



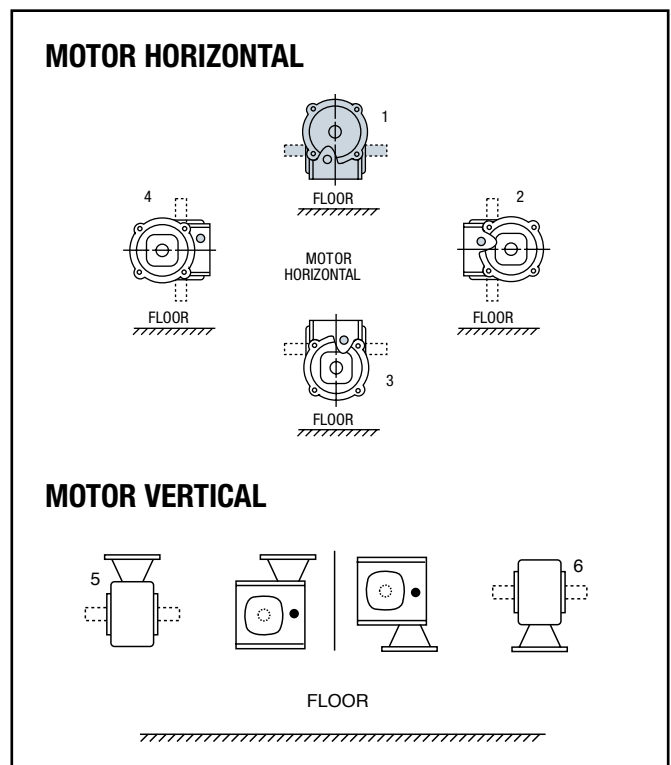
* Standard assemblies

Mounting Positions - F/QC/RF - SF - HF/HQC 700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plugs.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.



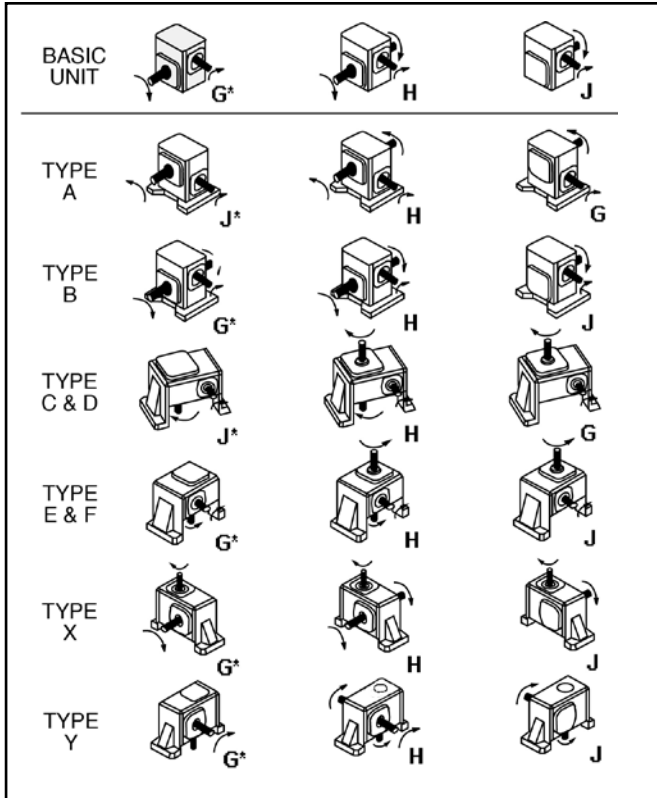
- Indicates proper oil level.
- When mounting gearboxes in positions 2, 3, 4, 6 Double Input Seals are required.

A

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level and seal configuration.

Non-Flanged Reducer Assemblies and Mounting Positions



* Standard assemblies

Assemblies - 700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) projection and mounting surface.

Types "A" and "B" are horizontal bases.

Types "C" and "E" are vertical high bases and Types "D" and "F" are vertical low bases. Type "X" is input vertical up. Type "Y" is input vertical down.

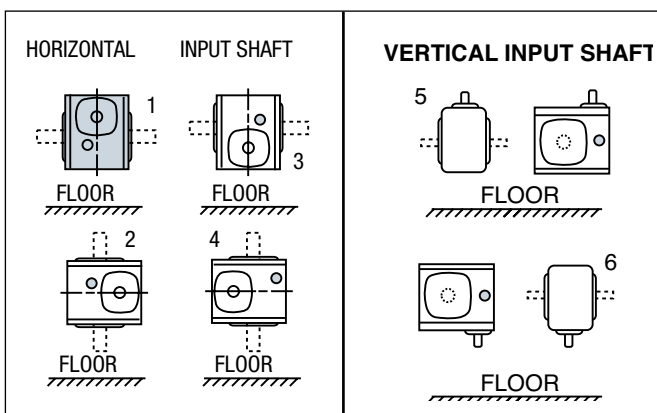
Basic models and separate base kits are supplied unless otherwise specified. Assembly "H" is available at a slight additional charge.

See Pages 14-15 for complete ordering instructions.

Input may rotate clockwise or counter clockwise. Arrows indicate relative rotation.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.

TYPICAL MOUNTING POSITIONS (Examples shown for single-reduction models only)



- Indicates proper oil level.
- When mounting gearboxes in positions 2, 3, 4, 6 Double Input Seals are required.

Example: F715-15T-B5-G6

Mounting Positions - 700 - S700 - H700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plugs.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level and seal configuration.



Recommended Lubricants & Capacities

The following table indicates the types and viscosity of lubricants suitable for reducers operating at various temperatures.

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the correct types of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris, since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil.

Under normal environmental conditions oil changes are suggested after the initial 250 hours of operation and thereafter at regular intervals of 2500 hours or every 6 months.

Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Single Reduction Worm Gear Reducers may reach approximately 225°F.

A

Enclosed Worm Gear Reducers

| Ambient (Room) Temperature | Recommended Oil (or equivalent) | Viscosity Range SUS @ 100°F | Oil Type | ISO Viscosity Grade No.+ |
|------------------------------------|--|-----------------------------|----------|--------------------------|
| -20° to 225°F** (-29° to 107°C) | Klubersynth* UH1 6-460 Synthetic | 1950/2500 | PAG | 460 |
| -30° to 225°F (-34° to 107°C) | Mobil SHC634 Synthetic | 1950/2500 | PAO | 320/460 |

Worm Gear Lubricant Available From Boston Gear

| Type | Klubersynth UH1 6-460 | Mobil SHC634 |
|-----------|-----------------------|--------------|
| Size | Qt. | Qt. |
| Item Code | 65159 | 51493 |

Available in quarts only

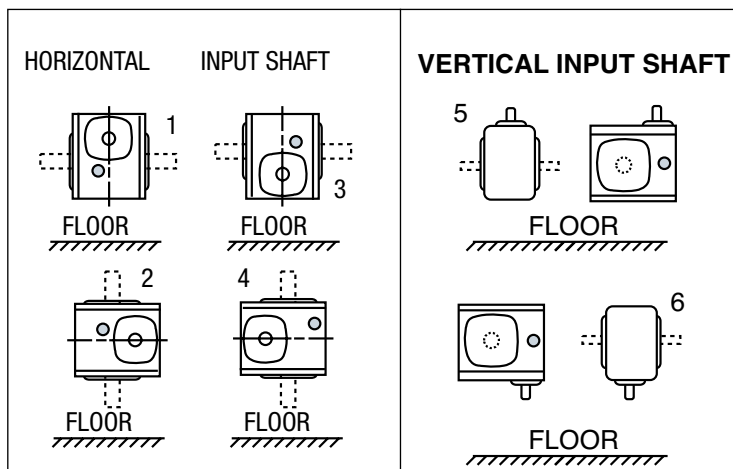
CAUTION: Relubricate more frequently if drive is operated in high ambient temperatures or unusually contaminated atmosphere. High loads and operating temperatures will also require the use of frequent lubrication.

- * Synthetic recommendation is Klubersynth UH1 6-460, other lubrications may reduce efficiency and torque capacity.
- + Other lubricants corresponding to AGMA/ISO numbers are available from all major oil companies. See Page 134 for lubricant interchange.
- ** The Klubersynth UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.

WARNING: Different oil types should not be mixed. For example Klubersynth UH1 6-460 is not compatible with Mobil SHC634.

FOR SINGLE REDUCTION ONLY: REFER TO LUBRICATION AND INSTALLATION INSTRUCTIONS.

Oil Levels for Typical Mounting Positions (Examples shown for single-reduction models only)



- Indicates proper oil level.
- When mounting gearboxes in positions 2, 3, 4, 6 Double Input Seals are required.

Oil capacity in fluid ounces for cast iron units*

| Unit Size | Positions | | | | |
|-----------|-----------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 & 6 |
| 710 | 2.2 | 3.3 | 3.3 | 3.3 | 3.3 |
| 713 | 5.5 | 7.0 | 7.0 | 7.0 | 7.0 |
| 715 | 10.0 | 15.0 | 15.0 | 13.5 | 13.5 |
| 718 | 12.0 | 16.0 | 18.5 | 16.0 | 16.0 |
| 721 | 15.0 | 20.5 | 20.5 | 19.0 | 19.0 |
| 724 | 18.0 | 24.5 | 28.5 | 24.5 | 24.5 |
| 726 | 28.0 | 36.0 | 43.0 | 36.0 | 36.0 |
| 730 | 43.0 | 60.0 | 66.0 | 58.0 | 58.0 |
| 732 | 58.0 | 84.0 | 90.0 | 80.0 | 80.0 |
| 738 | 85.0 | 120.0 | 130.0 | 120.0 | 107.0 |
| 752 | 204.0 | 240.0 | 245.0 | 240.0 | 215.0 |
| 760 | 330.0 | 400.0 | 415.0 | 400.0 | 370.0 |

*See page 56 for stainless steel units.

Quick Reference Model Selection Chart

Class I Service Single Reduction (1.0 Service Factor)

| Reducer Ratio | Output RPM | Input Horsepower @ 1750 rpm | | | | | | | | | | | | | |
|---------------|------------|-----------------------------|-----|-----|-----|-----|-----|-------|------|------|------|-------|------|------|------|
| | | 1/6 | 1/4 | 1/3 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
| 5 | 350 | 710 | 710 | 710 | 710 | 713 | 715 | 715 | 718 | 724 | 726 | — | — | — | — |
| 10 | 175 | 710 | 710 | 710 | 713 | 713 | 715 | 718 | 721 | 724 | 730 | 738 | 738F | 752 | 752F |
| 15 | 117 | 710 | 710 | 710 | 713 | 715 | 718 | 721 | 724 | 726 | 732F | 738F | 752 | 752F | 760F |
| 20 | 88 | 710 | 710 | 713 | 713 | 715 | 718 | 724 | 726 | 730 | 738 | 752 | 752 | 760F | — |
| 25 | 70 | 713 | 713 | 713 | 715 | 718 | 721 | 724 | 726 | 732 | — | — | — | — | — |
| 30 | 58 | 710 | 713 | 713 | 715 | 721 | 721 | 726 | 730 | 732F | 752 | 752F | 760F | — | — |
| 40 | 44 | 710 | 713 | 715 | 718 | 721 | 724 | 730 | 732 | 738F | 752 | 760 | — | — | — |
| 50 | 35 | 710 | 713 | 713 | 721 | 724 | 726 | 730 | 732F | 752 | 752F | 760F | — | — | — |
| 60 | 29 | 710 | 715 | 718 | 721 | 724 | 730 | 732 | 738F | 752 | 752F | — | — | — | — |

NOTE: This chart is meant only as a guide. For actual ratings, see Pages 20-33.

Class II Service Single Reduction (1.25 Service Factor)

| Reducer Ratio | Output RPM | Input Horsepower @ 1750 rpm | | | | | | | | | | | | | |
|---------------|------------|-----------------------------|-----|-----|-----|-----|-----|-------|------|------|------|-------|-----|------|------|
| | | 1/6 | 1/4 | 1/3 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
| 5 | 350 | 710 | 710 | 710 | 710 | 713 | 715 | 718 | 718 | 724 | 730 | — | — | — | — |
| 10 | 175 | 710 | 710 | 710 | 713 | 715 | 718 | 721 | 724 | 726 | 732 | 738F | 752 | 752F | 760F |
| 15 | 117 | 710 | 710 | 713 | 713 | 718 | 721 | 724 | 726 | 730 | 738 | 752 | 752 | 760 | — |
| 20 | 88 | 710 | 713 | 713 | 715 | 718 | 721 | 726 | 730 | 732 | 752 | 752F | 760 | — | — |
| 25 | 70 | 713 | 713 | 713 | 718 | 721 | 724 | 726 | 730 | 732F | — | — | — | — | — |
| 30 | 58 | 713 | 713 | 715 | 718 | 721 | 724 | 730 | 732 | 738F | 752 | 760 | — | — | — |
| 40 | 44 | 713 | 713 | 715 | 721 | 724 | 726 | 732 | 732F | 752 | 752F | 760F | — | — | — |
| 50 | 35 | 713 | 715 | 718 | 721 | 726 | 730 | 732F | 738F | 752 | 760F | — | — | — | — |
| 60 | 29 | 713 | 718 | 721 | 724 | 730 | 732 | 738 | 752 | 752F | — | — | — | — | — |

NOTE: This chart is meant only as a guide. For actual ratings, see Pages 20-33.

Class III Service Single Reduction (1.75 Service Factor)

| Reducer Ratio | Output RPM | Input Horsepower @ 1750 rpm | | | | | | | | | | | | | |
|---------------|------------|-----------------------------|-----|-----|-----|-----|------|-------|------|------|------|-------|------|----|----|
| | | 1/6 | 1/4 | 1/3 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
| 5 | 350 | 710 | 710 | 710 | 713 | 715 | 718 | 721 | 721 | 726 | — | — | — | — | — |
| 10 | 175 | 710 | 710 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 738F | 752 | 752F | — | — |
| 15 | 117 | 710 | 713 | 713 | 718 | 721 | 724 | 726 | 730 | 732F | 752 | 752F | 760 | — | — |
| 20 | 88 | 713 | 713 | 715 | 718 | 721 | 724 | 730 | 732 | 738F | 752 | 760 | 760F | — | — |
| 25 | 70 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 732F | — | — | — | — | — | — |
| 30 | 58 | 713 | 715 | 718 | 721 | 724 | 730 | 732 | 738 | 752 | 752F | — | — | — | — |
| 40 | 44 | 713 | 718 | 721 | 724 | 726 | 732 | 732F | 752 | 752F | 760F | — | — | — | — |
| 50 | 35 | 715 | 718 | 721 | 726 | 730 | 732F | 738F | 752 | 760 | — | — | — | — | — |
| 60 | 29 | 718 | 721 | 724 | 726 | 732 | 732F | 752 | 752 | — | — | — | — | — | — |

NOTE: This chart is meant only as a guide. For actual ratings, see Pages 20-33.



700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | |
|------------|-------|---------------------------|-------|--------|------------|--------|------------------------------|------------------------------|------------------|------------------|----|-----|----|----|-----|----|-----------|---|----------|-------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Style† | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | L | OC | FAN | HF | SF | HQC | RF | | | SS | |
| | | | Input | Output | | | | | | | | | | | | | | | | |
| 350 | 5 | 113 | 0.69 | 0.63 | 0.91 | 710-5 | 0.50 | 82 | II | | | | | | | | | B5 | FUTF | |
| | | | | | | | 0.33 | 55 | III | | | | | | | | | | B4 | AEUTF |
| | | | | | | | 0.33 | 55 | III | | | | | | | | | | B5 | EUTF |
| | | | | | | | 0.25 | 41 | III | | | | | | | | | | B4 | ADUTF |
| | | | | | | | 0.25 | 41 | III | | | | | | | | | | B5 | DUTF |
| | | | | | | | 0.17 | 27 | III | | | | | | | | | | B4 | ACUT |
| | | | | | | | 0.17 | 27 | III | | | | | | | | | | B5 | CUTF |
| | | 235 | 1.39 | 1.31 | 0.94 | 713-5 | 1 | 169 | II | | | | | | | | | B5 | HUTF-5/8 | |
| | | | | | | 0.75 | 127 | III | | | | | | | | | B5 | GUTF | | |
| | | | | | | 0.50 | 85 | III | | | | | | | | | B5 | FUTF | | |
| | | | | | | 1.5 | 254 | I | | | | | | | | | B7 | JUTF | | |
| | | | | | | 1 | 169 | II | | | | | | | | | B5 | HUTF-5/8 | | |
| | | | | | | 0.75 | 127 | III | | | | | | | | | B5 | GUTF | | |
| | | | | | | 2 | 338 | II | | | | | | | | | B7 | KUTF | | |
| | | | | | | 1.5 | 254 | II | | | | | | | | | B7 | JUTF | | |
| | | | | | | 1 | 169 | III | | | | | | | | | B5 | HUTF-5/8 | | |
| | | | | | | 2 | 338 | II | | | | | | | | | B7 | KUTF | | |
| | | | | | | 1.5 | 254 | III | | | | | | | | | B7 | JUTF | | |
| | | | | | | 5 | 838 | I | | | | | | | | | B9 | MUTF | | |
| | | | | | | 3 | 508 | II | | | | | | | | | B9 | LUTF | | |
| | | | | | | 5 | 846 | I | | | | | | | | | B9 | MUTF | | |
| | | | | | | 3 | 508 | III | | | | | | | | | B9 | LUTF | | |
| | | | | | | 5 | 846 | II | | | | | | | | | B9 | MUTF | | |
| | | | | | | 3 | 508 | III | | | | | | | | | B9 | LUTF | | |
| 250 | 7 | 644 | 2.80 | 2.56 | 0.91 | 721-7 | 2 | 460 | II | | | | | | | | B7 | KUTF | | |
| | | | | | | | 1.5 | 345 | III | | | | | | | | B7 | JUTF | | |
| 175 | 10 | 138 | 0.44 | 0.38 | 0.87 | 710-10 | 0.33 | 104 | II | | | | | | | | | B4 | AEUTF | |
| | | | | | | | 0.33 | 104 | II | | | | | | | | | | B5 | EUTF |
| | | | | | | | 0.25 | 78 | III | | | | | | | | | | B4 | ADUTF |
| | | | | | | | 0.25 | 78 | III | | | | | | | | | | B5 | DUTF |
| | | | | | | | | 0.75 | 245 | I | | | | | | | | B5 | GUTF | |
| | | | | | | | | 0.50 | 163 | II | | | | | | | | B5 | FUTF | |
| | | | | | | | | 0.33 | 109 | III | | | | | | | | B5 | EUTF | |
| | | | | | | 1 | 330 | I | | | | | | | | | B5 | HUTF-5/8 | | |
| | | | | | | 0.75 | 248 | II | | | | | | | | | B5 | GUTF | | |
| | | | | | | 0.50 | 165 | III | | | | | | | | | B5 | FUTF | | |
| | | | | | | 1.5 | 499 | I | | | | | | | | | B7 | JUTF | | |
| | | | | | | 1 | 333 | II | | | | | | | | | B5 | HUTF-5/8 | | |
| | | | | | | 0.75 | 249 | III | | | | | | | | | B5 | GUTF | | |
| | | | | | | 2 | 674 | I | | | | | | | | | B7 | KUTF | | |
| | | | | | | 1.5 | 505 | II | | | | | | | | | B7 | JUTF | | |
| | | | | | | 1 | 337 | III | | | | | | | | | B5 | HUTF-5/8 | | |
| | | | | | | 3 | 1008 | I | | | | | | | | | B9 | LUT | | |
| | | | | | | 2 | 672 | II | | | | | | | | | B7 | KUTF | | |
| | | | | | | 1.5 | 504 | III | | | | | | | | | B7 | JUTF | | |
| | | | | | | 3 | 1024 | II | | | | | | | | | B9 | LUTF | | |
| | | | | | | 2 | 683 | III | | | | | | | | | B7 | KUTF | | |
| | | | | | | 1.5 | 512 | III | | | | | | | | | B7 | JUTF | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.

700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | | | |
|------------|-------|---------------------------|-------|---------|------------|---------|------------------------------|---------------------------|---------------|-------------------|----|-----|----|----|-----|----|-----------|---|----------|----------|------|-------|------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | | | |
| | | | Input | Output | | | | | | | | | | | | | | | | | | | |
| 175 | 10 | 1787 | 5.28 | 4.96 | 0.94 | 730-10 | 5 | 1692 | I | | | | | | | | | | B9 | MUTF | | | |
| | | | | | | | 3 | 1015 | III | | | | | | | | | | | | B9 | LUTF | |
| | | | | | | | 2 | 677 | III | | | | | | | | | | | | B7 | KUTF | |
| | | 2106 | 6.22 | 5.85 | 0.94 | 732-10 | 5 | 1692 | II | | | | | | | | | | | | B9 | MUTF | |
| | | | | | | | 3 | 1015 | III | | | | | | | | | | | | B9 | LUTF | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2532 | 7.75 | 7.03 | 0.91 | 732-10F | 5 | 1633 | II | | | | | | | | | | | | B9 | MUTF | |
| | | | | | | | 3 | 980 | III | | | | | | | | | | | | | B9 | LUTF |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 2834 | 8.37 | 7.87 | 0.94 | 738-10 | 7.5 | 2538 | I | | | | | | | | | | | | B11 | NUTF | | | |
| | | | | | 5 | 1692 | II | | | | | | | | | | | | B9 | MUTF | | | |
| | | | | | 3 | 1015 | III | | | | | | | | | | | | B9 | LUTF | | | |
| 3221 | 9.96 | 8.94 | 0.90 | 738-10F | 10 | 3221 | I | | | | | | | | | | | | B11 | PUTF | | | |
| | | | | | 7.5 | 2425 | II | | | | | | | | | | | | B11 | NUTF | | | |
| | | | | | 5 | 1616 | III | | | | | | | | | | | | B9 | LUTF | | | |
| 5860 | 17.31 | 16.27 | 0.94 | 752-10 | 15 | 5076 | I | | | | | | | | | | | | B13 | RUTF | | | |
| | | | | | 10 | 3384 | II | | | | | | | | | | | | B11 | PUTF | | | |
| | | | | | 7.5 | 2538 | III | | | | | | | | | | | | B11 | SUTF | | | |
| 7182 | 21.63 | 19.94 | 0.92 | 752-10F | 20 | 6640 | I | | | | | | | | | | | | B13 | SUTF | | | |
| | | | | | 15 | 4979 | II | | | | | | | | | | | | B13 | RUTF | | | |
| | | | | | 10 | 3319 | III | | | | | | | | | | | | B11 | PUTF | | | |
| 8067 | 23.83 | 22.4 | 0.94 | 760-10 | 20 | 6768 | I | | | | | | | | | | | | B13 | SUTF | | | |
| | | | | | 15 | 5076 | II | | | | | | | | | | | | B13 | RUTF | | | |
| | | | | | 10 | 3384 | III | | | | | | | | | | | | B11 | PUTF | | | |
| 8658 | 26.13 | 24.04 | 0.92 | 760-10F | 20 | 6624 | II | | | | | | | | | | | | B13 | SUTF | | | |
| | | | | | 15 | 4968 | III | | | | | | | | | | | | B13 | RUTF | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 145.8 | 12 | 693 | 1.76 | 1.60 | 0.91 | 721-12 | 1.5 | 590 | I | | | | | | | | | | B7 | JUTF | | | |
| | | | | | | | 1 | 394 | III | | | | | | | | | | | | B7 | HUTF | |
| 984 | 2.50 | 2.28 | 0.91 | 724-12 | 0.91 | 724-12 | 2 | 787 | II | | | | | | | | | | B7 | KUTF | | | |
| | | | | | | | 1.5 | 590 | II | | | | | | | | | | | | B7 | JUTF | |
| | | | | | | | 1 | 394 | III | | | | | | | | | B5 | HUTF-5/8 | | | | |
| 116.7 | 15 | 146 | 0.33 | 0.27 | 0.82 | 710-15 | 0.33 | 146 | I | | | | | | | | | | B4 | AEUTF | | | |
| | | | | | | | 0.33 | 146 | I | | | | | | | | | | | | B5 | EUTF | |
| | | | | | | | 0.25 | 111 | II | | | | | | | | | | | | B4 | ADUTF | |
| | | | | | | | 0.25 | 111 | II | | | | | | | | | | | | B5 | DUTF | |
| | | | | | | | 0.17 | 74 | III | | | | | | | | | | | | B4 | ACUTF | |
| | | | | | | | 0.17 | 74 | III | | | | | | | | | | | | B5 | CUTF | |
| | | 305 | 0.66 | 0.56 | 0.86 | 713-15 | 0.50 | 231 | II | | | | | | | | | | | B5 | FUTF | | |
| | | | | | | | 0.33 | 154 | III | | | | | | | | | | | B5 | EUTF | | |
| | | 429 | 0.91 | 0.79 | 0.87 | 715-15 | 0.75 | 353 | I | | | | | | | | | | | | B5 | GUTF | |
| | | | | | | | 0.50 | 235 | II | | | | | | | | | | | | B5 | FUTF | |
| 0.33 | 157 | | | | | | III | | | | | | | | | | | | B5 | EUTF | | | |
| 552 | 1.13 | 1.02 | 0.90 | 718-15 | 1 | 489 | I | | | | | | | | | | | | B5 | HUTF-5/8 | | | |
| | | | | | 0.75 | 367 | II | | | | | | | | | | | | B5 | GUTF | | | |
| | | | | | 0.50 | 244 | III | | | | | | | | | | | B5 | FUTF | | | | |
| 841 | 1.72 | 1.56 | 0.90 | 721-15 | 1.5 | 733 | I | | | | | | | | | | | | B7 | JUTF | | | |
| | | | | | 1 | 489 | II | | | | | | | | | | | | B7 | HUTF | | | |
| | | | | | 0.75 | 367 | III | | | | | | | | | | | | B5 | GUTF | | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.



700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | | | | |
|------------|-------|---------------------------|-------|---------|------------|---------|------------------------------|---------------------------|---------------|-------------------|----|-----|----|----|-----|----|-----------|---|-----|----------|------|----------|------|-------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | | | | |
| | | | Input | Output | | | | | | | | | | | | | | | | | | | | |
| 116.7 | 15 | 1159 | 2.34 | 2.15 | 0.92 | 724-15 | 2 | 990 | I | | | | | | | | | | B7 | KUTF | | | | |
| | | | | | | | 1.5 | 743 | II | | | | | | | | | | | | | B7 | JUTF | |
| | | | | | | | 1 | 495 | III | | | | | | | | | | | | | | B7 | HUTF |
| | | 1466 | 2.95 | 2.71 | 0.92 | 726-15 | 3 | 1466 | I | | | | | | | | | | | | B9 | LUTF | | |
| | | | | | | | 2 | 994 | II | | | | | | | | | | | | | B7 | KUTF | |
| | | | | | | | 1.5 | 745 | III | | | | | | | | | | | | | | B7 | JUTF |
| | | 1969 | 3.97 | 3.64 | 0.92 | 730-15 | 3 | 1487 | II | | | | | | | | | | | | B9 | LUTF | | |
| | | | | | | | 2 | 991 | III | | | | | | | | | | | | | | B7 | KUTF |
| | | 2344 | 4.65 | 4.34 | 0.93 | 732-15 | 3 | 1511 | II | | | | | | | | | | | | B9 | LUTF | | |
| | | | | | | | 2 | 1008 | III | | | | | | | | | | | | | | B7 | KUTF |
| | | 2782 | 5.80 | 5.15 | 0.89 | 732-15F | 5 | 2519 | I | | | | | | | | | | | | B9 | MUTF | | |
| | | | | | | | 3 | 1511 | III | | | | | | | | | | | | | | B9 | LUTF |
| 3155 | 6.28 | 5.84 | 0.93 | 738-15 | 5 | 2511 | II | | | | | | | | | | | | B9 | MUTF | | | | |
| | | | | | 3 | 1507 | III | | | | | | | | | | | | | | B9 | LUTF | | |
| 3543 | 7.47 | 6.56 | 0.88 | 738-15F | 7.5 | 3556 | I | | | | | | | | | | | | B11 | NUTF | | | | |
| | | | | | 5 | 2371 | II | | | | | | | | | | | | | B9 | MUTF | | | |
| | | | | | 3 | 1422 | III | | | | | | | | | | | | | | B9 | LUTF | | |
| 6618 | 13.06 | 12.25 | 0.94 | 752-15 | 10 | 5065 | II | | | | | | | | | | | | B11 | PUTF | | | | |
| | | | | | 7.5 | 3799 | II | | | | | | | | | | | | | | B11 | NUTF | | |
| | | | | | 5 | 2533 | III | | | | | | | | | | | | | | B9 | MUTF | | |
| 7829 | 16.32 | 14.49 | 0.89 | 752-15F | 15 | 7193 | I | | | | | | | | | | | | B13 | RUTF | | | | |
| | | | | | 10 | 4795 | II | | | | | | | | | | | | | | B11 | PUTF | | |
| | | | | | 7.5 | 3596 | III | | | | | | | | | | | | | | | B11 | NUTF | |
| 9055 | 17.87 | 16.76 | 0.94 | 760-15 | 15 | 7598 | I | | | | | | | | | | | | B13 | RUTF | | | | |
| | | | | | 10 | 5065 | III | | | | | | | | | | | | | | | B11 | PUTF | |
| 10712 | 22.33 | 19.83 | 0.89 | 760-15F | 20 | 9590 | I | | | | | | | | | | | | B13 | SUTF | | | | |
| | | | | | 15 | 7193 | II | | | | | | | | | | | | | | B13 | RUTF | | |
| | | | | | 10 | 4795 | III | | | | | | | | | | | | | | | B11 | PUTF | |
| 87.5 | 20 | 149 | 0.27 | 0.21 | 0.77 | 710-20 | 0.25 | 138 | I | | | | | | | | | | B4 | ADUTF | | | | |
| | | | | | | | 0.25 | 138 | I | | | | | | | | | | | | | B5 | DUTF | |
| | | | | | | | 0.17 | 92 | II | | | | | | | | | | | | | | B4 | ACUTF |
| | | | | | | | 0.17 | 92 | II | | | | | | | | | | | | | | | B5 |
| | | 308 | 0.52 | 0.43 | 0.82 | 713-20 | 0.50 | 296 | I | | | | | | | | | | | | B5 | FUTF | | |
| | | | | | | | 0.33 | 197 | II | | | | | | | | | | | | | | B5 | EUTF |
| | | | | | | | 0.25 | 148 | III | | | | | | | | | | | | | | B5 | DUTF |
| 435 | 0.72 | 0.60 | 0.84 | 715-20 | 0.75 | 435 | I | | | | | | | | | | | | B5 | GUTF | | | | |
| | | | | | 0.50 | 302 | II | | | | | | | | | | | | | | B5 | FUTF | | |
| | | | | | 0.33 | 201 | III | | | | | | | | | | | | | | B5 | EUTF | | |
| 590 | 0.97 | 0.82 | 0.84 | 718-20 | 1 | 590 | I | | | | | | | | | | | | B5 | HUTF-5/8 | | | | |
| | | | | | 0.75 | 456 | II | | | | | | | | | | | | | | B5 | GUTF | | |
| 892 | 1.40 | 1.24 | 0.88 | 721-20 | 1 | 637 | II | | | | | | | | | | | | B5 | HUTF-5/8 | | | | |
| | | | | | 0.75 | 478 | III | | | | | | | | | | | | | | B5 | GUTF | | |
| 1233 | 1.95 | 1.71 | 0.88 | 724-20 | 2 | 1233 | I | | | | | | | | | | | | B7 | KUTF | | | | |
| | | | | | 1.5 | 948 | II | | | | | | | | | | | | | | B7 | JUTF | | |
| | | | | | 1 | 632 | III | | | | | | | | | | | | | | B5 | HUTF-5/8 | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.

700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | |
|------------|-------|---------------------------|-------|--------|------------|----------------|---|---------------------------|-----------------|-------------------|----|-----|----|----|-----|----|-----------|---|----------------|--------------------------|--------------------------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | |
| | | | Input | Output | | | | | | | | | | | | | | | | | |
| 87.5 | 20 | 1483 | 2.34 | 2.06 | 0.88 | 726-20 | 2 1.5 1 | 1267 950 634 | I II III | | | | | | | | | | B7 B7 B5 | KUTF JUTF HUTF-5/8 | |
| | | 2024 | 3.14 | 2.81 | 0.89 | 730-20 | 3 2 1.5 | 1933 1289 967 | I II III | | | | | | | | | | B9 B7 B7 | LUTF KUTF JUTF | |
| | | 2413 | 3.71 | 3.35 | 0.90 | 732-20 | 3 2 | 1950 1300 | II III | | | | | | | | | | | B9 B7 | LUTF KUTF |
| | | 2858 | 4.63 | 3.97 | 0.86 | 732-20F | 3 2 | 1851 1234 | II III | | | | | | | | | | | B9 B7 | LUTF KUTF |
| | | 3285 | 5.00 | 4.56 | 0.91 | 738-20 | 5 3 2 | 3283 1970 1313 | I II III | | | | | | | | | | | B9 B9 B7 | MUTF LUTF KUTF |
| | | 3707 | 5.95 | 5.15 | 0.86 | 738-20F | 5 3 | 3114 1868 | I III | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 6833 | 10.19 | 9.49 | 0.93 | 752-20 | 10 7.5 5 | 6703 5027 3352 | I II III | | | | | | | | | | | B11 B11 B9 | PUTF NUTF MUTF |
| | | 8075 | 12.74 | 11.21 | 0.88 | 752-20F | 10 7.5 5 | 6336 4752 3168 | II II III | | | | | | | | | | | B11 B11 B9 | PUTF NUTF MUTF |
| | | 9412 | 14.02 | 13.07 | 0.93 | 760-20 | 10 7.5 | 6710 5033 | II III | | | | | | | | | | | B11 B11 | PUTF NUTF |
| | | 11080 | 17.52 | 15.38 | 0.88 | 760-20F | 15 10 | 9482 6322 | I III | | | | | | | | | | | B13 B11 | RUTF PUTF |
| 70 | 25 | 307 | 0.43 | 0.34 | 0.79 | 713-25 | 0.33 0.25 0.17 | 238 178 119 | II II III | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF | |
| | | 437 | 0.60 | 0.49 | 0.81 | 715-25 | 0.50 0.33 0.25 | 364 243 182 | I II III | | | | | | | | | | B5 B5 B5 | FUTF EUTF DUTF | |
| | | 574 | 0.76 | 0.64 | 0.84 | 718-25 | 0.75 0.50 0.33 | 566 378 252 | I II III | | | | | | | | | | B5 B5 B5 | GUTF FUTF EUTF | |
| | | 875 | 1.16 | 0.97 | 0.84 | 721-25 | 1 0.75 0.50 | 754 566 377 | I II III | | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1199 | 1.55 | 1.33 | 0.86 | 724-25 | 1.5 1 0.75 | 1160 773 580 | I II III | | | | | | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF |
| | | 1514 | 1.94 | 1.68 | 0.87 | 726-25 | 2 1.5 1 | 1514 1170 780 | I II III | | | | | | | | | | | B7 B7 B7 | KUTF JUTF HUTF-5/8 |
| | | 2051 | 2.61 | 2.28 | 0.87 | 730-25 | 2 1.5 | 1571 1179 | II III | | | | | | | | | | | B7 B7 | KUTF JUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.



700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | | |
|------------|-------|---------------------------|-------|--------|------------|----------------|---|---------------------------|----------------------------|-------------------|--------|-----|----|----|-----|----|-----------|---|----------------|----------------------|--------------------------|--------------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | | |
| | | | Input | Output | | | | | | | | | | | | | | | | | | |
| 70 | 25 | 2443 | 3.08 | 2.71 | 0.88 | 732-25 | 3 2 1.5 | 2379 1586 1189 | I II III | | | | | | | | | | B9 B7 B7 | LUTF KUTF JUTF | | |
| | | 2891 | 3.85 | 3.21 | 0.84 | 732-25F | 3 2 | 2252 1501 | II III | | | | | | | | | | | B9 B7 | LUTF KUTF | |
| 58.3 | 30 | 150 | 0.20 | 0.14 | 0.69 | 710-30 | 0.17 0.17 | 125 125 | I I | | | | | | | | | | B4 B5 | ACUT CUTF | | |
| | | 311 | 0.39 | 0.29 | 0.74 | 713-30 | 0.33 0.25 0.17 | 265 199 133 | I II III | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF | | |
| | | 445 | 0.54 | 0.41 | 0.76 | 715-30 | 0.50 0.33 0.25 | 411 274 206 | I II III | | | | | | | | | | B5 B5 B5 | FUTF EUTF DUTF | | |
| | | 573 | 0.65 | 0.53 | 0.82 | 718-30 | 0.50 0.33 0.25 | 441 294 220 | II III III | | | | | | | | | | | B5 B5 B5 | FUTF EUTF DUTF | |
| | | 871 | 0.99 | 0.81 | 0.81 | 721-30 | 1 0.75 0.50 | 871 659 440 | I II III | | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF | |
| | | 1200 | 1.33 | 1.11 | 0.83 | 724-30 | 1 0.75 | 902 676 | II III | | | | | | | | | | | B5 B5 | HUTF-5/8 GUTF | |
| | | 1521 | 1.68 | 1.41 | 0.84 | 726-30 | 1.5 1 0.75 | 1358 905 679 | I II III | | | | | | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF | |
| | | 2045 | 2.27 | 1.89 | 0.83 | 730-30 | 2 1.5 1 | 1801 1351 901 | I II III | | | | | | | | | | | B7 B7 B5 | KUTF JUTF HUTF-5/8 | |
| | | 2456 | 2.64 | 2.27 | 0.86 | 732-30 | 2 1.5 | 1860 1395 | II III | | | | | | | | | | | B7 B7 | KUTF JUTF | |
| | | 2902 | 3.30 | 2.69 | 0.81 | 732-30F | 3 2 1.5 | 2637 1758 1319 | I II III | | | | | | | | | | | B9 B7 B7 | LUTF KUTF JUTF | |
| | | 3354 | 3.56 | 3.10 | 0.87 | 738-30 | 3 2 | 2825 1884 | I III | | | | | | | | | | | B9 B7 | LUTF KUTF | |
| | | 3757 | 4.23 | 3.48 | 0.82 | 738-30F | 3 2 | 2663 1776 | II III | | | | | | | | | | | B9 B7 | LUTF KUTF | |
| | | 6964 | 7.30 | 6.45 | 0.88 | 752-30 | 5 3 | 4768 2861 | II III | | | | | | | | | | | B9 B9 | PUTF NUTF | |
| | | 8336 | 9.12 | 7.72 | 0.85 | 752-30F | 7.5 5 | 6853 4568 | I III | | | | | | | | | | | B11 B9 | NUTF MUTF | |
| | | 9603 | 9.81 | 8.89 | 0.91 | 760-30 | 7.5 5 | 7339 4892 | II III | | | | | | | | | | | B11 B9 | NUTF MUTF | |
| | | 11219 | 12.26 | 10.38 | 0.85 | 760-30F | 10 7.5 5 | 9148 6861 4574 | I II III | | | | | | | | | | | B11 B11 B9 | PUTF NUTF MUTF | |
| | | 43.8 | 40 | 151 | 0.17 | 0.10 | 0.62 | 710-40 | 0.17 0.17 | 148 148 | I I | | | | | | | | | | B4 B5 | ACUT CUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.

700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | |
|------------|-------|---------------------------|-------|--------|------------|---------|------------------------------|---------------------------|-----------------|-------------------|--------|-----|----|----|-----|----|-----------|---|----------------|----------------------|--------------------------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | |
| | | | Input | Output | | | | | | | | | | | | | | | | | |
| 43.8 | 40 | 307 | 0.31 | 0.21 | 0.69 | 713-40 | 0.25 0.17 | 248 165 | II III | | | | | | | | | | B5 B5 | DUTF CUTF | |
| | | 442 | 0.43 | 0.31 | 0.71 | 715-40 | 0.33 0.25 0.17 | 342 257 171 | II II III | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF | |
| | | 609 | 0.57 | 0.42 | 0.74 | 718-40 | 0.50 0.33 0.25 | 534 356 267 | I II III | | | | | | | | | | B5 B5 B5 | FUTF EUTF DUTF | |
| | | 876 | 0.81 | 0.61 | 0.75 | 721-40 | 0.75 0.50 0.33 | 811 541 360 | I II III | | | | | | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| | | 1206 | 1.08 | 0.84 | 0.77 | 724-40 | 1 0.75 0.50 | 1116 837 558 | I II III | | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1512 | 1.33 | 1.05 | 0.79 | 726-40 | 1 0.75 | 1136 852 | II III | | | | | | | | | | | B5 B5 | HUTF-5/8 GUTF |
| | | 2041 | 1.78 | 1.42 | 0.80 | 730-40 | 1.5 1 0.75 | 1719 1146 860 | I II III | | | | | | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF |
| | | 2444 | 2.10 | 1.70 | 0.81 | 732-40 | 2 1.5 1 | 2327 1745 1164 | I II III | | | | | | | | | | | B7 B7 B5 | KUTF JUTF HUTF-5/8 |
| | | 2944 | 2.62 | 2.04 | 0.78 | 732-40F | 2 1.5 | 2246 1685 | II III | | | | | | | | | | | B7 B7 | KUTF JUTF |
| | | 3320 | 2.80 | 2.30 | 0.82 | 738-40 | 2 1.5 | 2370 1778 | II III | | | | | | | | | | | B7 B7 | KUTF JUTF |
| | | 3747 | 3.33 | 2.60 | 0.78 | 738-40F | 3 2 | 3374 2249 | I II | | | | | | | | | | | B9 B7 | LUTF KUTF |
| | | 6889 | 5.60 | 4.78 | 0.85 | 752-40 | 5 3 | 6149 3689 | I III | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 8178 | 7.00 | 5.68 | 0.81 | 752-40F | 5 3 | 5839 3504 | II III | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 9566 | 7.65 | 6.64 | 0.87 | 760-40 | 7.5 5 | 9374 6250 | I II | | | | | | | | | | | B11 B9 | NUTF MUTF |
| | | 11197 | 9.56 | 7.77 | 0.81 | 760-40F | 7.5 5 | 8780 5854 | II III | | | | | | | | | | | B11 B9 | NUTF MUTF |
| | | 35 | 50 | 153 | 0.15 | 0.09 | 0.57 | 710-50 | 0.17 0.17 | 153 153 | I I | | | | | | | | | | B4 B5 |
| 297 | 0.25 | | | 0.17 | 0.66 | 713-50 | 0.25 0.17 | 297 198 | I II | | | | | | | | | | B5 B5 | DUTF CUTF | |
| 429 | 0.35 | | | 0.24 | 0.68 | 715-50 | 0.33 0.25 0.17 | 409 306 204 | I II III | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF | |
| 573 | 0.44 | | | 0.32 | 0.72 | 718-50 | 0.33 0.25 | 434 325 | II III | | | | | | | | | | | B5 B5 | EUTF DUTF |
| 857 | 0.66 | | | 0.48 | 0.72 | 721-50 | 0.50 0.33 | 649 433 | II III | | | | | | | | | | | B5 B5 | FUTF EUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.

† Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.

752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.

RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.



700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33

A

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | |
|------------|-------|---------------------------|-------|--------|------------|---------|------------------------------|---------------------------|----------------|-------------------|--------|--------|--------|--------|--------|--------|-----------|---|----------------|--------------------------|--------------------------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Styles† | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | |
| | | | Input | Output | | | | | | Shaded | Shaded | Shaded | Shaded | Shaded | Shaded | Shaded | | | Shaded | | |
| 35 | 50 | 1177 | 0.87 | 0.65 | 0.75 | 724-50 | 0.75 0.50 0.33 | 1014 676 451 | I II III | | | | | | | | | | B5 B5 B5 | GUTF FUTF EUTF | |
| | | 1484 | 1.08 | 0.82 | 0.76 | 726-50 | 1 0.75 0.50 | 1373 1030 687 | I II III | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF | |
| | | 2016 | 1.45 | 1.12 | 0.77 | 730-50 | 1.5 1 0.75 | 2016 1390 1042 | I II III | | | | | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF | |
| | | 2403 | 1.70 | 1.33 | 0.78 | 732-50 | 1.5 1 0.75 | 2120 1413 1060 | I II III | | | | | | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF |
| | | 2791 | 2.12 | 1.55 | 0.73 | 732-50F | 2 1.5 1 | 2632 1974 1316 | I II III | | | | | | | | | | | B7 B7 B7 | KUTF JUTF HUTF |
| | | 3280 | 2.28 | 1.82 | 0.80 | 738-50 | 2 1.5 1 | 2876 2157 1438 | I II III | | | | | | | | | | | B7 B7 B7 | KUTF JUTF HUTF |
| | | 3626 | 2.71 | 2.01 | 0.74 | 738-50F | 2 1.5 | 2675 2006 | II III | | | | | | | | | | | B9 B7 | KUTF JUTF |
| | | 6751 | 4.49 | 3.75 | 0.83 | 752-50 | 3 | 4509 | II | | | | | | | | | | | B9 | LUTF |
| | | 7678 | 5.61 | 4.26 | 0.76 | 752-50F | 5 3 | 6840 4104 | I III | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 9378 | 6.12 | 5.21 | 0.85 | 760-50 | 5 3 | 7659 4595 | I III | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 9836 | 7.65 | 5.46 | 0.71 | 760-50F | 7.5 5 3 | 9639 6426 3856 | I II III | | | | | | | | | | | B11 B9 B9 | NUTF MUTF LUTF |
| | | 29.2 | 60 | 144 | 0.12 | 0.07 | 0.55 | 710-60 | 0.17 0.17 | 144 144 | I I | | | | | | | | | | B4 B5 |
| 271 | 0.22 | | | 0.13 | 0.57 | 713-60 | 0.17 | 201 | II | | | | | | | | | | B5 | CUTF | |
| 399 | 0.28 | | | 0.18 | 0.66 | 715-60 | 0.25 0.17 | 356 238 | I II | | | | | | | | | | B5 B5 | DUTF EUTF | |
| 527 | 0.35 | | | 0.24 | 0.70 | 718-60 | 0.33 0.25 0.17 | 502 376 251 | I II III | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF | |
| 826 | 0.55 | | | 0.38 | 0.69 | 721-60 | 0.50 0.33 0.25 | 751 500 375 | I II III | | | | | | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| 1128 | 0.73 | | | 0.52 | 0.71 | 724-60 | 0.75 0.50 0.33 | 1128 772 515 | I II III | | | | | | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| 1385 | 0.89 | | | 0.64 | 0.72 | 726-60 | 0.75 0.50 | 1166 778 | I III | | | | | | | | | | | B5 B5 | GUTF FUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.
 † Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.
 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.
 RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.

700 Series Single Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

For Ratings at Other Speeds, See Tables on Pages 30-33



| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotor) | | | | | | | | | | Bore Code | Motors* 230/460 VAC 3 Phase 60 Hz | | | |
|------------|-------|---------------------------|-------|--------|------------|----------------|---|---------------------------|----------------|------------------|--------|--------|--------|--------|--------|--------|-----------|---|----------------|--------------------------|--------------------------|
| | | Gear Capacity | | | Efficiency | Size | Ratings | | | Available Style† | | | | | | | | | | | |
| | | Output Torque (lb.in.) | HP | | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | FAN | HF | SF | HQC | RF | | | SS | | |
| | | | Input | Output | | | | | | Shaded | Shaded | Shaded | Shaded | Shaded | Shaded | Shaded | | | Shaded | | |
| 29.2 | 60 | 1921 | 1.20 | 0.89 | 0.74 | 730-60 | 1 0.75 0.50 | 1601 1200 800 | I II III | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF | |
| | | 2281 | 1.40 | 1.06 | 0.75 | 732-60 | 1.5 1 0.75 | 2281 1629 1221 | I II III | | | | | | | | | | B7 B7 B5 | JUTF HUTF GUTF | |
| | | 2549 | 1.75 | 1.18 | 0.67 | 732-60F | 1.5 1 | 2184 1446 | I III | | | | | | | | | | B7 B7 | JUTF HUTF | |
| | | 3128 | 1.88 | 1.45 | 0.77 | 738-60 | 1.5 1 | 2495 1633 | II III | | | | | | | | | | | B7 B7 | JUTF HUTF |
| | | 3277 | 2.24 | 1.52 | 0.68 | 738-60F | 2 1.5 | 2925 2193 | I II | | | | | | | | | | | B7 B7 | KUTF JUTF |
| | | 6416 | 3.67 | 2.97 | 0.81 | 752-60 | 3 | 5242 | I | | | | | | | | | | | B9 | LUTF |
| | | 6953 | 4.59 | 3.22 | 0.70 | 752-60F | 5 3 | 6953 4542 | I II | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 8934 | 5.03 | 4.13 | 0.82 | 760-60 | 5 3 | 8878 5327 | I II | | | | | | | | | | | B9 B9 | MUTF LUTF |
| | | 9528 | 6.29 | 4.41 | 0.70 | 760-60F | 5 | 7571 | II | | | | | | | | | | | B9 | MUTF |
| 21.9 | 80 | 222 | 0.15 | 0.08 | 0.53 | 713-80 | 0.17 | 222 | I | | | | | | | | | | B5 | CUTF | |
| | | 318 | 0.21 | 0.11 | 0.53 | 715-80 | 0.17 | 259 | II | | | | | | | | | | B5 | CUTF | |
| | | 387 | 0.22 | 0.13 | 0.61 | 718-80 | 0.25 0.17 | 387 298 | I II | | | | | | | | | | B5 B5 | DUTF CUTF | |
| | | 634 | 0.38 | 0.22 | 0.58 | 721-80 | 0.33 0.25 | 551 418 | I II | | | | | | | | | | B5 B5 | EUTF DUTF | |
| | | 1069 | 0.57 | 0.37 | 0.65 | 726-80 | 0.5 0.33 | 936 623 | I III | | | | | | | | | | | B5 B5 | FUTF EUTF |
| | | 1795 | 0.95 | 0.62 | 0.65 | 732-80 | 1 0.75 0.5 | 1795 1404 936 | I II III | | | | | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| 17.5 | 100 | 138 | 0.08 | 0.04 | 0.47 | 713-100 | 0.17 | 138 | I | | | | | | | | | | B5 | CUTF | |
| | | 251 | 0.15 | 0.07 | 0.47 | 715-100 | 0.17 | 251 | I | | | | | | | | | | B5 | CUTF | |
| | | 323 | 0.17 | 0.09 | 0.53 | 718-100 | 0.17 | 323 | I | | | | | | | | | | B5 | CUTF | |
| | | 503 | 0.27 | 0.14 | 0.52 | 721-100 | 0.25 0.17 | 468 318 | I II | | | | | | | | | | | B5 B5 | DUTF CUTF |
| | | 757 | 0.39 | 0.21 | 0.54 | 726-100 | 0.33 0.25 0.17 | 642 486 330 | I II III | | | | | | | | | | | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1414 | 0.65 | 0.39 | 0.6 | 732-100 | 0.5 0.33 | 1080 713 | II III | | | | | | | | | | | B5 B5 | FUTF EUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 342.
 † Shaded areas denote which styles are available for a given center distance and ratio. See Pages 14-15 for style descriptions.
 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPES.
 RATINGS SHOWN REFLECT THE USE OF KLUBERSYNTH UH1 6-460.

700 Series Single Reduction Ratio & Capacity Selection Tables

Horsepower and Torque Capacities at Listed RPM Inputs (Service Factor 1.0)

A

| Series Size | | | 710 | | | 713 | | | 715 | | | 718 | | |
|---------------------------------|-----------|------------|-----------------|--------|----------------|-----------------|--------|----------------|-----------------|--------|----------------|-----------------|--------|----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) |
| 5 | 1750 | 350 | 0.69 | 0.63 | 113 | 1.39 | 1.31 | 235 | 1.72 | 1.62 | 291 | 2.55 | 2.40 | 432 |
| | 1150 | 230 | 0.40 | 0.36 | 98 | 0.84 | 0.73 | 200 | 1.15 | 1.04 | 285 | 1.42 | 1.28 | 350 |
| | 690 | 138 | 0.26 | 0.23 | 105 | 0.50 | 0.45 | 205 | 0.80 | 0.72 | 330 | 0.97 | 0.87 | 400 |
| | 100 | 20 | 0.044 | 0.036 | 115 | 0.091 | 0.076 | 240 | 0.14 | 0.12 | 370 | 0.17 | 0.14 | 460 |
| 10 | 1750 | 175 | 0.44 | 0.38 | 138 | 0.86 | 0.78 | 281 | 1.20 | 1.10 | 397 | 1.61 | 1.49 | 536 |
| | 1150 | 115 | 0.23 | 0.21 | 118 | 0.51 | 0.44 | 243 | 0.73 | 0.64 | 350 | 0.98 | 0.87 | 480 |
| | 690 | 69 | 0.16 | 0.14 | 128 | 0.33 | 0.29 | 266 | 0.47 | 0.42 | 384 | 0.66 | 0.58 | 534 |
| | 100 | 10 | 0.03 | 0.022 | 140 | 0.06 | 0.047 | 296 | 0.086 | 0.068 | 432 | 0.12 | 0.097 | 610 |
| 15 | 1750 | 116.7 | 0.33 | 0.27 | 146 | 0.66 | 0.58 | 305 | 0.91 | 0.79 | 428 | 1.13 | 1.02 | 552 |
| | 1150 | 77.7 | 0.17 | 0.15 | 125 | 0.37 | 0.32 | 262 | 0.53 | 0.46 | 376 | 0.67 | 0.57 | 472 |
| | 690 | 46 | 0.12 | 0.10 | 134 | 0.26 | 0.21 | 288 | 0.36 | 0.30 | 415 | 0.46 | 0.39 | 534 |
| | 100 | 6.7 | 0.023 | 0.016 | 147 | 0.049 | 0.034 | 322 | 0.07 | 0.05 | 468 | 0.086 | 0.063 | 597 |
| 20 | 1750 | 87.5 | 0.27 | 0.21 | 149 | 0.52 | 0.43 | 308 | 0.72 | 0.60 | 435 | 0.97 | 0.82 | 590 |
| | 1150 | 57.5 | 0.14 | 0.12 | 129 | 0.29 | 0.24 | 265 | 0.43 | 0.35 | 380 | 0.58 | 0.48 | 525 |
| | 690 | 34.5 | 0.091 | 0.074 | 136 | 0.19 | 0.16 | 286 | 0.28 | 0.23 | 420 | 0.38 | 0.32 | 580 |
| | 100 | 5.0 | 0.017 | 0.012 | 150 | 0.04 | 0.026 | 330 | 0.056 | 0.038 | 485 | 0.08 | 0.055 | 690 |
| 25 | 1750 | 70 | — | — | — | 0.43 | 0.34 | 307 | 0.60 | 0.49 | 437 | 0.76 | 0.64 | 574 |
| | 1150 | 46 | — | — | — | 0.24 | 0.19 | 260 | 0.35 | 0.27 | 375 | 0.48 | 0.36 | 500 |
| | 690 | 27.6 | — | — | — | 0.15 | 0.12 | 280 | 0.22 | 0.18 | 410 | 0.30 | 0.24 | 540 |
| | 100 | 4.0 | — | — | — | 0.031 | 0.02 | 310 | 0.043 | 0.028 | 451 | 0.063 | 0.042 | 660 |
| 30 | 1750 | 58.3 | 0.20 | 0.14 | 150 | 0.39 | 0.29 | 311 | 0.54 | 0.41 | 446 | 0.65 | 0.53 | 573 |
| | 1150 | 38.3 | 0.10 | 0.081 | 133 | 0.21 | 0.16 | 270 | 0.31 | 0.23 | 388 | 0.40 | 0.32 | 530 |
| | 690 | 23 | 0.068 | 0.051 | 140 | 0.14 | 0.11 | 300 | 0.20 | 0.17 | 460 | 0.29 | 0.22 | 600 |
| | 100 | 3.3 | 0.013 | 0.008 | 155 | 0.029 | 0.018 | 340 | 0.04 | 0.026 | 496 | 0.057 | 0.037 | 710 |
| 40 | 1750 | 43.8 | 0.17 | 0.10 | 151 | 0.31 | 0.21 | 307 | 0.43 | 0.31 | 441 | 0.57 | 0.42 | 609 |
| | 1150 | 28.8 | 0.081 | 0.059 | 129 | 0.18 | 0.12 | 265 | 0.24 | 0.17 | 380 | 0.33 | 0.24 | 525 |
| | 690 | 17.3 | 0.051 | 0.037 | 130 | 0.10 | 0.078 | 286 | 0.15 | 0.11 | 420 | 0.22 | 0.16 | 580 |
| | 100 | 2.5 | 0.011 | 0.006 | 150 | 0.025 | 0.013 | 330 | 0.036 | 0.019 | 485 | 0.052 | 0.027 | 690 |
| 50 | 1750 | 35 | 0.15 | 0.09 | 153 | 0.25 | 0.17 | 297 | 0.35 | 0.24 | 429 | 0.44 | 0.32 | 573 |
| | 1150 | 23 | 0.06 | 0.042 | 114 | 0.12 | 0.09 | 248 | 0.18 | 0.13 | 360 | 0.24 | 0.17 | 470 |
| | 690 | 13.8 | 0.041 | 0.029 | 130 | 0.083 | 0.058 | 265 | 0.12 | 0.085 | 390 | 0.17 | 0.12 | 520 |
| | 100 | 2.0 | 0.008 | 0.004 | 140 | 0.018 | 0.009 | 300 | 0.027 | 0.014 | 440 | 0.038 | 0.019 | 590 |
| 60 | 1750 | 29.2 | 0.12 | 0.07 | 144 | 0.22 | 0.13 | 271 | 0.28 | 0.18 | 399 | 0.35 | 0.24 | 527 |
| | 1150 | 19.2 | 0.065 | 0.032 | 105 | 0.171 | 0.093 | 201 | 0.164 | 0.095 | 312 | 0.21 | 0.13 | 440 |
| | 690 | 11.5 | 0.044 | 0.02 | 112 | 0.101 | 0.046 | 253 | 0.114 | 0.061 | 338 | 0.14 | 0.084 | 480 |
| | 100 | 1.7 | 0.008 | 0.003 | 121 | 0.021 | 0.007 | 285 | 0.022 | 0.009 | 371 | 0.03 | 0.014 | 530 |
| 80 | 1750 | 21.9 | — | — | — | 0.15 | 0.08 | 222 | 0.21 | 0.11 | 318 | 0.23 | 0.13 | 375 |
| | 1150 | 14.4 | — | — | — | 0.12 | 0.06 | 246 | 0.17 | 0.018 | 358 | 0.16 | 0.089 | 390 |
| | 690 | 8.6 | — | — | — | 0.09 | 0.04 | 266 | 0.12 | 0.15 | 392 | 0.10 | 0.048 | 350 |
| | 100 | 1.3 | — | — | — | 0.02 | 0.01 | 293 | 0.03 | 0.01 | 440 | 0.02 | 0.009 | 470 |
| 100 | 1750 | 17.5 | — | — | — | 0.08 | 0.04 | 138 | 0.15 | 0.07 | 251 | 0.17 | 0.09 | 323 |
| | 1150 | 11.5 | — | — | — | 0.07 | 0.028 | 152 | 0.12 | 0.05 | 283 | 0.14 | 0.07 | 360 |
| | 690 | 6.9 | — | — | — | 0.05 | 0.018 | 164 | 0.09 | 0.03 | 309 | 0.10 | 0.04 | 391 |
| | 100 | 1.0 | — | — | — | 0.01 | 0.003 | 180 | 0.02 | 0.01 | 347 | 0.020 | 0.01 | 435 |
| Overhung Load* | | | 150 LBS. | | | 200 LBS. | | | 300 LBS. | | | 500 LBS. | | |
| Output Shaft Thrust Load | | | 200 LBS. | | | 300 LBS. | | | 400 LBS. | | | 500 LBS. | | |

RATINGS SHOWN REFLECT MAXIMUM GEAR CAPACITY WITH KLUBERSYNTH UH1 6-460.

*Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

Note: For input speeds above 1750 RPM. Do NOT exceed 1750 RPM input horsepower (See page 347).

700 Series Single Reduction Ratio & Capacity Selection Tables

Horsepower and Torque Capacities at Listed RPM Inputs (Service Factor 1.0)

| Series Size | | | 721 | | | 724 | | | 726 | | | 730 | | |
|---------------------------------|-----------|------------|-----------------|--------|----------------|-----------------|--------|----------------|------------------|--------|----------------|------------------|--------|----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) |
| 5 | 1750 | 350 | 3.66 | 3.44 | 620 | 4.94 | 4.65 | 838 | 6.11 | 5.74 | 1034 | 8.32 | 7.82 | 1408 |
| | 1150 | 230 | 2.33 | 2.10 | 575 | 3.05 | 2.74 | 750 | 4.05 | 3.64 | 1000 | 5.85 | 5.47 | 1500 |
| | 690 | 138 | 1.64 | 1.47 | 670 | 2.25 | 2.01 | 920 | 3.04 | 2.74 | 1250 | 5.25 | 4.83 | 2206 |
| | 100 | 20 | 0.30 | 0.26 | 820 | 0.43 | 0.38 | 1200 | 0.58 | 0.51 | 1600 | 1.06 | 0.91 | 2873 |
| 10 | 1750 | 175 | 2.34 | 2.19 | 789 | 3.18 | 2.97 | 1069 | 3.94 | 3.74 | 1345 | 5.28 | 4.96 | 1787 |
| | 1150 | 115 | 1.49 | 1.32 | 725 | 2.09 | 1.87 | 1025 | 2.82 | 2.54 | 1390 | 4.25 | 3.84 | 2107 |
| | 690 | 69 | 1.00 | 0.89 | 814 | 1.46 | 1.31 | 1200 | 1.97 | 1.75 | 1600 | 3.15 | 2.79 | 2548 |
| | 100 | 10 | 0.19 | 0.15 | 968 | 0.27 | 0.23 | 1430 | 0.37 | 0.31 | 1960 | 0.63 | 0.51 | 3234 |
| 15 | 1750 | 116.7 | 1.72 | 1.56 | 840 | 2.34 | 2.15 | 1159 | 2.95 | 2.71 | 1465 | 3.97 | 3.64 | 1969 |
| | 1150 | 77.7 | 1.06 | 0.91 | 752 | 1.51 | 1.29 | 1060 | 2.01 | 1.73 | 1425 | 3.41 | 2.95 | 2425 |
| | 690 | 46.0 | 0.72 | 0.61 | 832 | 1.05 | 0.90 | 1239 | 1.41 | 1.22 | 1675 | 2.55 | 2.14 | 2928 |
| | 100 | 6.7 | 0.13 | 0.10 | 968 | 0.19 | 0.15 | 1463 | 0.28 | 0.22 | 2057 | 0.51 | 0.38 | 3610 |
| 20 | 1750 | 87.5 | 1.40 | 1.24 | 892 | 1.95 | 1.71 | 1233 | 2.34 | 2.06 | 1483 | 3.14 | 2.81 | 2024 |
| | 1150 | 57.5 | 0.86 | 0.72 | 782 | 1.27 | 1.06 | 1160 | 1.63 | 1.36 | 1500 | 2.68 | 2.23 | 2470 |
| | 690 | 35.0 | 0.57 | 0.48 | 875 | 0.83 | 0.70 | 1280 | 1.11 | 0.94 | 1725 | 1.67 | 1.52 | 2739 |
| | 100 | 5.0 | 0.11 | 0.08 | 1018 | 0.17 | 0.12 | 1550 | 0.20 | 0.16 | 2050 | 0.41 | 0.38 | 3584 |
| 25 | 1750 | 70 | 1.16 | 0.97 | 875 | 1.55 | 1.33 | 1199 | 1.94 | 1.68 | 1514 | 2.61 | 2.28 | 2051 |
| | 1150 | 46 | 0.72 | 0.58 | 790 | 1.03 | 0.84 | 1150 | 1.31 | 1.11 | 1525 | 2.30 | 1.86 | 2560 |
| | 690 | 27.6 | 0.47 | 0.38 | 875 | 0.69 | 0.56 | 1280 | 0.93 | 0.77 | 1750 | 1.50 | 1.26 | 2830 |
| | 100 | 4.0 | 0.094 | 0.062 | 975 | 0.14 | 0.095 | 1500 | 0.18 | 0.13 | 2075 | 0.30 | 0.21 | 3400 |
| 30 | 1750 | 58.3 | 0.99 | 0.81 | 871 | 1.33 | 1.11 | 1200 | 1.68 | 1.41 | 1521 | 2.27 | 1.89 | 2045 |
| | 1150 | 38.3 | 0.62 | 0.48 | 795 | 0.89 | 0.70 | 1170 | 1.20 | 0.96 | 1575 | 1.99 | 1.53 | 2510 |
| | 690 | 23 | 0.41 | 0.32 | 880 | 0.60 | 0.47 | 1300 | 0.81 | 0.65 | 1790 | 1.51 | 1.09 | 3000 |
| | 100 | 3.3 | 0.086 | 0.055 | 1050 | 0.12 | 0.078 | 1500 | 0.16 | 0.11 | 2100 | 0.32 | 0.20 | 3702 |
| 40 | 1750 | 43.8 | 0.81 | 0.61 | 876 | 1.08 | 0.84 | 1206 | 1.33 | 1.05 | 1512 | 1.78 | 1.43 | 2041 |
| | 1150 | 28.8 | 0.49 | 0.36 | 785 | 0.70 | 0.53 | 1160 | 0.89 | 0.68 | 1500 | 1.46 | 1.14 | 2470 |
| | 690 | 17.3 | 0.33 | 0.24 | 875 | 0.46 | 0.35 | 1280 | 0.61 | 0.47 | 1725 | 0.99 | 0.78 | 2900 |
| | 100 | 2.5 | 0.074 | 0.04 | 1018 | 0.11 | 0.061 | 1550 | 0.14 | 0.081 | 2050 | 0.23 | 0.14 | 3600 |
| 50 | 1750 | 35 | 0.66 | 0.48 | 857 | 0.87 | 0.65 | 1177 | 1.08 | 0.82 | 1484 | 1.45 | 1.12 | 2016 |
| | 1150 | 23 | 0.38 | 0.27 | 750 | 0.56 | 0.40 | 1100 | 0.75 | 0.54 | 1482 | 1.20 | 0.87 | 2400 |
| | 690 | 13.8 | 0.26 | 0.18 | 840 | 0.37 | 0.26 | 1225 | 0.51 | 0.37 | 1675 | 0.87 | 0.61 | 2750 |
| | 100 | 2.0 | 0.057 | 0.031 | 970 | 0.084 | 0.045 | 1425 | 0.11 | 0.063 | 1975 | 0.19 | 0.10 | 3200 |
| 60 | 1750 | 29.2 | 0.55 | 0.38 | 826 | 0.73 | 0.52 | 1128 | 0.89 | 0.64 | 1385 | 1.20 | 0.89 | 1921 |
| | 1150 | 19.2 | 0.34 | 0.22 | 730 | 0.49 | 0.32 | 1040 | 0.64 | 0.42 | 1390 | 1.01 | 0.68 | 2285 |
| | 690 | 11.5 | 0.23 | 0.15 | 805 | 0.33 | 0.21 | 1154 | 0.44 | 0.29 | 1570 | 0.27 | 0.45 | 2580 |
| | 100 | 1.7 | 0.055 | 0.025 | 930 | 0.073 | 0.036 | 1330 | 0.10 | 0.05 | 1840 | 0.13 | 0.08 | 3080 |
| 80 | 1750 | 21.9 | 0.38 | 0.22 | 634 | — | — | — | 0.76 | 0.38 | 1100 | — | — | — |
| | 1150 | 14.4 | 0.31 | 0.17 | 734 | — | — | — | 0.47 | 0.29 | 1252 | — | — | — |
| | 690 | 8.6 | 0.23 | 0.11 | 819 | — | — | — | 0.35 | 0.18 | 1340 | — | — | — |
| | 100 | 1.3 | 0.05 | 0.02 | 942 | — | — | — | 0.07 | 0.03 | 1600 | — | — | — |
| 100 | 1750 | 17.5 | 0.27 | 0.14 | 503 | — | — | — | 0.39 | 0.21 | 757 | — | — | — |
| | 1150 | 11.5 | 0.22 | 0.11 | 580 | — | — | — | 0.34 | 0.17 | 913 | — | — | — |
| | 690 | 6.9 | 0.16 | 0.07 | 646 | — | — | — | 0.26 | 0.12 | 1054 | — | — | — |
| | 100 | 1.0 | 0.04 | 0.01 | 744 | — | — | — | 0.06 | 0.02 | 1267 | — | — | — |
| Overhung Load* | | | 700 LBS. | | | 900 LBS. | | | 1000 LBS. | | | 1250 LBS. | | |
| Output Shaft Thrust Load | | | 700 LBS. | | | 800 LBS. | | | 900 LBS. | | | 1000 LBS. | | |

RATINGS SHOWN REFLECT MAXIMUM GEAR CAPACITY WITH KLUBERSYNTH UH1 6-460.

*Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

Note: For input speeds above 1750 RPM. Do NOT exceed 1750 RPM input horsepower (See page 347).



700 Series Single Reduction Ratio & Capacity Selection Tables

Horsepower and Torque Capacities at Listed RPM Inputs (Service Factor 1.0)

A

| Series Size | | | 732 | | | 732F | | | 738 | | | 738F | | |
|--------------------------|-----------|------------|-----------|--------|----------------|-----------|--------|----------------|-----------|--------|----------------|-----------|--------|----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) |
| 5 | 1750 | 350 | 10.05 | 9.54 | 1716 | — | — | — | — | — | — | — | — | — |
| | 1150 | 230 | 8.43 | 7.91 | 2165 | — | — | — | — | — | — | — | — | — |
| | 690 | 138 | 6.53 | 6.02 | 2749 | — | — | — | — | — | — | — | — | — |
| | 100 | 20 | 1.38 | 1.19 | 3735 | — | — | — | — | — | — | — | — | — |
| 10 | 1750 | 175 | 6.22 | 5.85 | 2106 | 7.75 | 7.03 | 2532 | 8.37 | 7.87 | 2834 | 9.96 | 8.94 | 3221 |
| | 1150 | 115 | 4.41 | 3.92 | 2150 | 5.03 | 4.47 | 2450 | 6.19 | 5.56 | 3050 | 6.90 | 6.20 | 3400 |
| | 690 | 69 | 3.17 | 2.85 | 2600 | 3.40 | 3.06 | 2800 | 4.54 | 4.05 | 3700 | 4.79 | 4.27 | 3900 |
| | 100 | 10 | 0.62 | 0.52 | 3300 | 0.62 | 0.52 | 3300 | 0.87 | 0.47 | 4700 | 0.87 | 0.47 | 4700 |
| 15 | 1750 | 116.7 | 4.65 | 4.34 | 2344 | 5.80 | 5.15 | 2782 | 6.28 | 5.84 | 3154 | 7.47 | 6.56 | 3543 |
| | 1150 | 77.7 | 3.15 | 2.74 | 2250 | 3.63 | 3.16 | 2600 | 4.30 | 3.77 | 3100 | 4.99 | 4.38 | 3600 |
| | 690 | 46 | 2.35 | 2.04 | 2800 | 2.52 | 2.19 | 3000 | 3.25 | 2.85 | 3900 | 3.50 | 3.06 | 4200 |
| | 100 | 6.7 | 0.48 | 0.39 | 3700 | 0.48 | 0.39 | 3700 | 0.68 | 0.55 | 5200 | 0.68 | 0.55 | 5200 |
| 20 | 1750 | 87.5 | 3.71 | 3.35 | 2413 | 4.63 | 3.97 | 2858 | 5.00 | 4.56 | 3285 | 5.95 | 5.15 | 3707 |
| | 1150 | 57.5 | 2.77 | 2.37 | 2600 | 3.20 | 2.74 | 3000 | 4.10 | 3.56 | 3900 | 4.55 | 3.94 | 4325 |
| | 690 | 34.5 | 1.99 | 1.70 | 3100 | 2.15 | 1.83 | 3850 | 2.91 | 2.52 | 4600 | 3.10 | 2.68 | 4900 |
| | 100 | 5.0 | 0.41 | 0.30 | 3846 | 0.41 | 0.30 | 3846 | 0.61 | 0.46 | 5800 | 0.61 | 0.46 | 5800 |
| 25 | 1750 | 70 | 3.08 | 2.71 | 2443 | 3.85 | 3.21 | 2891 | — | — | — | — | — | — |
| | 1150 | 46 | 2.29 | 1.90 | 2600 | 2.65 | 2.19 | 3000 | — | — | — | — | — | — |
| | 690 | 27.6 | 1.51 | 1.27 | 2900 | 1.67 | 1.40 | 3200 | — | — | — | — | — | — |
| | 100 | 4.0 | 0.31 | 0.22 | 3500 | 0.31 | 0.22 | 3500 | — | — | — | — | — | — |
| 30 | 1750 | 58.3 | 2.64 | 2.27 | 2456 | 3.30 | 2.69 | 2902 | 3.56 | 3.10 | 3354 | 4.23 | 3.48 | 3757 |
| | 1150 | 38.3 | 2.8 | 2.23 | 2675 | 2.36 | 1.88 | 3100 | 2.87 | 2.37 | 3900 | 3.38 | 2.67 | 4400 |
| | 690 | 23 | 1.41 | 1.16 | 3200 | 1.55 | 1.28 | 3500 | 2.08 | 1.68 | 4600 | 2.22 | 1.79 | 4900 |
| | 100 | 3.3 | 0.30 | 0.21 | 4000 | 0.3 | 0.21 | 4000 | 0.42 | 0.29 | 5600 | 0.42 | 0.29 | 5600 |
| 40 | 1750 | 43.8 | 2.10 | 1.70 | 2444 | 2.62 | 2.04 | 2944 | 2.80 | 2.30 | 3320 | 3.33 | 2.60 | 3747 |
| | 1150 | 28.8 | 1.52 | 1.19 | 2600 | 1.75 | 1.37 | 3000 | 2.25 | 1.78 | 3900 | 2.49 | 1.98 | 4325 |
| | 690 | 17.3 | 1.08 | 0.85 | 3100 | 1.17 | 0.91 | 3350 | 1.58 | 1.25 | 4600 | 1.68 | 1.33 | 4900 |
| | 100 | 2.5 | 0.25 | 0.15 | 3846 | 0.25 | 0.15 | 3846 | 0.37 | 0.23 | 5800 | 0.37 | 0.23 | 5800 |
| 50 | 1750 | 35 | 1.70 | 1.33 | 2403 | 2.12 | 1.55 | 2791 | 2.28 | 1.82 | 3280 | 2.71 | 2.01 | 3626 |
| | 1150 | 23 | 1.21 | 0.89 | 2450 | 1.41 | 1.04 | 2850 | 1.67 | 1.24 | 3400 | 1.96 | 1.46 | 4000 |
| | 690 | 13.8 | 0.87 | 0.61 | 2800 | 0.95 | 0.67 | 3050 | 1.19 | 0.85 | 3900 | 1.28 | 0.92 | 4200 |
| | 100 | 2.0 | 0.19 | 0.10 | 3325 | 0.19 | 0.10 | 3325 | 0.25 | 0.14 | 4500 | 0.25 | 0.14 | 4500 |
| 60 | 1750 | 29.2 | 1.40 | 1.06 | 2281 | 1.75 | 1.18 | 2549 | 1.88 | 1.45 | 3128 | 2.24 | 1.52 | 3496 |
| | 1150 | 19.2 | 1.05 | 0.70 | 2300 | 1.23 | 0.82 | 2700 | 1.50 | 1.02 | 3350 | 1.72 | 1.17 | 3850 |
| | 690 | 11.5 | 0.71 | 0.48 | 2650 | 0.78 | 0.53 | 2900 | 1.02 | 0.69 | 3800 | 1.10 | 0.75 | 4100 |
| | 100 | 1.7 | 0.16 | 0.083 | 3100 | 0.16 | 0.083 | 3100 | 0.22 | 0.12 | 4400 | 0.22 | 0.12 | 4400 |
| 80 | 1750 | 21.9 | 0.95 | 0.62 | 1795 | — | — | — | — | — | — | — | — | — |
| | 1150 | 14.4 | 0.81 | 0.50 | 2171 | — | — | — | — | — | — | — | — | — |
| | 690 | 8.6 | 0.61 | 0.34 | 2512 | — | — | — | — | — | — | — | — | — |
| | 100 | 1.3 | 0.14 | 0.06 | 3030 | — | — | — | — | — | — | — | — | — |
| 100 | 1750 | 17.5 | 0.65 | 0.39 | 1414 | — | — | — | — | — | — | — | — | — |
| | 1150 | 11.5 | 0.56 | 0.31 | 1711 | — | — | — | — | — | — | — | — | — |
| | 690 | 6.9 | 0.43 | 0.22 | 1980 | — | — | — | — | — | — | — | — | — |
| | 100 | 1 | 0.10 | 0.04 | 2387 | — | — | — | — | — | — | — | — | — |
| Overhung Load* | | | 1300 LBS. | | | 1300 LBS. | | | 2000 LBS. | | | 2000 LBS. | | |
| Output Shaft Thrust Load | | | 1100 LBS. | | | 1100 LBS. | | | 1300 LBS. | | | 1300 LBS. | | |

RATINGS SHOWN REFLECT MAXIMUM GEAR CAPACITY WITH KLUBERSYNTH UH1 6-460.

*Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

Note: For input speeds above 1750 RPM. Do NOT exceed 1750 RPM input horsepower (See page 347).

700 Series Single Reduction Ratio & Capacity Selection Tables

Horsepower and Torque Capacities at Listed RPM Inputs (Service Factor 1.0)

| Series Size | | | 752 | | | 752F | | | 760 | | | 760F | | |
|---------------------------------|-----------|------------|------------------|--------|----------------|------------------|--------|----------------|------------------|--------|----------------|------------------|--------|----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) | | HP | Torque (lb-in) |
| 10 | 1750 | 175 | 17.31 | 16.27 | 5860 | 21.63 | 19.94 | 7182 | 23.83 | 22.40 | 8067 | 26.13 | 24.04 | 8658 |
| | 1150 | 115 | 12.27 | 11.31 | 6200 | 14.25 | 13.14 | 7200 | 18.60 | 17.15 | 9400 | 20.78 | 19.16 | 10500 |
| | 690 | 69 | 9.58 | 8.54 | 7800 | 10.55 | 9.41 | 8600 | 14.87 | 13.41 | 12250 | 16.09 | 14.51 | 13250 |
| | 100 | 10 | 1.93 | 1.67 | 10500 | 1.93 | 1.67 | 10500 | 3.19 | 2.79 | 17600 | 3.19 | 2.79 | 17600 |
| 15 | 1750 | 116.7 | 13.06 | 12.25 | 6618 | 16.32 | 14.49 | 7829 | 17.87 | 16.76 | 9055 | 22.33 | 19.83 | 10712 |
| | 1150 | 77.7 | 9.14 | 8.15 | 6700 | 10.50 | 9.37 | 7700 | 12.56 | 11.20 | 9200 | 14.73 | 13.14 | 10800 |
| | 690 | 46 | 7.19 | 6.42 | 8800 | 7.74 | 6.92 | 9475 | 9.20 | 8.21 | 11250 | 10.76 | 9.61 | 13184 |
| | 100 | 6.7 | 1.56 | 1.26 | 11900 | 1.56 | 1.26 | 11900 | 2.18 | 1.81 | 17000 | 2.18 | 1.81 | 17000 |
| 20 | 1750 | 87.5 | 10.19 | 9.49 | 6830 | 12.74 | 11.21 | 8075 | 14.02 | 13.07 | 9412 | 17.52 | 15.38 | 11080 |
| | 1150 | 57.5 | 7.57 | 6.66 | 7300 | 8.70 | 7.66 | 8400 | 10.63 | 9.35 | 10250 | 11.93 | 10.49 | 11500 |
| | 690 | 34.5 | 5.59 | 4.93 | 9000 | 5.97 | 5.25 | 9600 | 7.83 | 6.89 | 12600 | 8.54 | 7.53 | 13750 |
| | 100 | 5.0 | 1.18 | 0.92 | 11585 | 1.18 | 0.92 | 11585 | 1.63 | 1.34 | 17000 | 1.63 | 1.34 | 17000 |
| 30 | 1750 | 58.3 | 7.30 | 6.45 | 6964 | 9.12 | 7.72 | 8336 | 9.81 | 8.89 | 9603 | 12.26 | 10.38 | 11219 |
| | 1150 | 38.3 | 5.50 | 4.68 | 7700 | 6.29 | 5.34 | 8800 | 7.50 | 6.38 | 10500 | 8.39 | 7.14 | 11750 |
| | 690 | 23 | 4.03 | 3.43 | 9400 | 4.38 | 3.72 | 10200 | 5.48 | 4.67 | 12800 | 5.91 | 5.04 | 13800 |
| | 100 | 3.3 | 0.93 | 0.64 | 12250 | 0.93 | 0.64 | 12250 | 1.24 | 0.92 | 17500 | 1.24 | 0.92 | 17500 |
| 40 | 1750 | 43.8 | 5.60 | 4.78 | 6889 | 7.00 | 5.68 | 8178 | 7.65 | 6.64 | 9566 | 9.56 | 7.77 | 11197 |
| | 1150 | 28.8 | 4.06 | 3.33 | 7300 | 4.68 | 3.84 | 8400 | 5.74 | 4.68 | 10250 | 6.44 | 5.25 | 11500 |
| | 690 | 17.3 | 3.01 | 2.46 | 9000 | 3.21 | 2.62 | 9600 | 4.21 | 3.44 | 12600 | 4.60 | 3.75 | 13750 |
| | 100 | 2.5 | 0.71 | 0.46 | 11585 | 0.71 | 0.46 | 11585 | 1.00 | 0.67 | 17000 | 1.00 | 0.67 | 17000 |
| 50 | 1750 | 35 | 4.49 | 3.75 | 6751 | 5.61 | 4.26 | 7678 | 6.12 | 5.21 | 9378 | 7.65 | 5.46 | 9836 |
| | 1150 | 23 | 3.34 | 2.48 | 6800 | 3.93 | 2.92 | 8000 | 4.68 | 3.58 | 9800 | 5.25 | 4.01 | 11000 |
| | 690 | 13.8 | 2.32 | 1.77 | 8100 | 2.52 | 1.93 | 8800 | 3.52 | 2.68 | 12250 | 3.80 | 2.90 | 13250 |
| | 100 | 2.0 | 0.46 | 0.28 | 9000 | 0.46 | 0.28 | 9000 | 0.80 | 0.51 | 16000 | 0.80 | 0.51 | 16000 |
| 60 | 1750 | 29.2 | 3.67 | 2.97 | 6416 | 4.59 | 3.22 | 6953 | 5.03 | 4.13 | 8934 | 6.29 | 4.41 | 9528 |
| | 1150 | 19.2 | 2.89 | 2.04 | 6700 | 3.33 | 2.34 | 7700 | 4.31 | 2.98 | 9800 | 4.84 | 3.35 | 11000 |
| | 690 | 11.5 | 2.07 | 1.46 | 8000 | 2.25 | 1.59 | 8700 | 3.22 | 2.23 | 12200 | 3.48 | 2.41 | 13200 |
| | 100 | 1.7 | 0.43 | 0.24 | 9000 | 0.43 | 0.24 | 9000 | 0.74 | 0.43 | 16000 | 0.74 | 0.43 | 16000 |
| Overhung Load* | | | 2200 LBS. | | | 2200 LBS | | | 2400 LBS. | | | 2400 LBS. | | |
| Output Shaft Thrust Load | | | 1900 LBS. | | | 1900 LBS. | | | 2100 LBS. | | | 2100 LBS. | | |

RATINGS SHOWN REFLECT MAXIMUM GEAR CAPACITY WITH KLUBERSYNTH UH1 6-460.

*Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

Note: For input speeds above 1750 RPM. Do NOT exceed 1750 RPM input horsepower (See page 347).



700 Series Single Reduction Flanged Reducer Dimensions

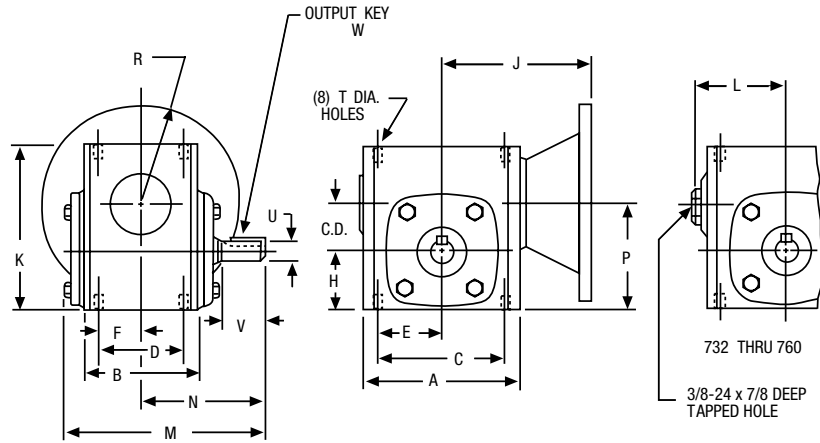
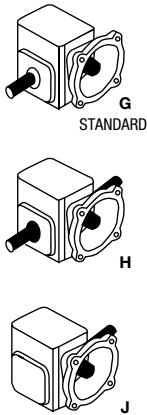
F700/QC700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base)

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | H | J-NEMA Mounting †† | | | | | | K | L | M |
|------|------|-------|------|-------|------|------|------|------|--------------------|---------------|--------------|-------------------------|-------|-------------------------|-------|------|-------|
| | | | | | | | | | F700 | | QC700 | | RF700 | | | | |
| | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC 250TC | 56C | 180TC 210TC 250TC | | | |
| 710 | 1.00 | 3.25 | 2.50 | 2.63 | 1.69 | 1.31 | 0.84 | 1.31 | 3.97 | — | 5.01 | — | 5.72 | — | 3.63 | — | 4.53 |
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 1.72 | 3.94 | — | 5.46 | — | 6.59 | — | 4.64 | — | 6.03 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 1.91 | 4.50 | — | 6.11 | — | 7.34 | — | 5.38 | — | 6.84 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 2.06 | 4.69 | — | 6.29 | — | 7.53 | — | 5.75 | — | 6.81 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 2.28 | 5.06 | — | 6.76 | — | 8.31 | — | 6.38 | — | 7.28 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 2.50 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 6.94 | — | 7.81 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 2.94 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.00 | — | 8.53 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 3.25 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 8.88 | — | 10.02 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3.50 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 9.38 | 4.94 | 10.81 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3.88 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 10.44 | 5.50 | 11.88 |
| 752 | 5.16 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 2.91 | 5.31 | — | — | — | — | — | 16.00 | 13.75 | 7.19 | 13.81 |
| 760 | 6.00 | 14.50 | 8.13 | 12.75 | 6.38 | 6.38 | 3.19 | 6.50 | — | — | — | — | — | 16.69 | 16.50 | 7.94 | 15.31 |

| Size | N | P | R-NEMA Mounting | | | T | | Low Speed Shaft | | | | Aprox. Weight (LBS.) | | Fan Kit No.** |
|------|-------|-------|-----------------|--------------|-------------------------|-------------|-------|---------------------|------|-------|---------|----------------------|-------|---------------|
| | | | 42CZ | 56C 140TC | 180TC 210TC 250TC | TAP Size | Depth | U +.000 -.001 | V | W-Key | | F700 | QC700 | |
| | | | | | | | | | | Sq. | Length | | | |
| 710 | 2.88 | 2.31 | 2.16 | 3.31 | — | 1/4-20 | .44 | .500 | 1.19 | 1/8 | 5/8 | 6 | 8 | — |
| 713 | 4.00 | 3.06 | — | 3.31 | — | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | 12 | 15 | — |
| 715 | 4.31 | 3.44 | — | 3.31 | — | 5/16-18 | .50 | .750 | 1.78 | 3/16 | 1 | 18 | 24 | — |
| 718 | 4.31 | 3.81 | — | 3.31 | — | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | 20 | 27 | — |
| 721 | 4.69 | 4.34 | — | 3.31 | — | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | 25 | 30 | — |
| 724 | 5.09 | 4.88 | — | 3.31 | 4.63 | 3/8-16 | .56 | 1.125 | 2.38 | 1/4 | 1-1/4 | 31 | 36 | — |
| 726 | 5.63 | 5.56 | — | 3.31 | 4.63 | 3/8-16 | .56 | 1.125 | 2.63 | 1/4 | 1-15/16 | 46 | 47 | — |
| 730 | 6.75 | 6.25 | — | 3.31 | 4.63 | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | 66 | 72 | — |
| 732 | 7.06 | 6.75 | — | 3.31 | 4.63 | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | 84 | 84 | 51450 |
| 738 | 7.75 | 7.63 | — | 3.31 | 4.63 | 1/2-13 | .81 | 1.625 | 3.50 | 3/8 | 2-1/4 | 117 | 119 | 51451 |
| 752 | 9.06 | 10.50 | — | — | 4.63 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 221 | 51452 |
| 760 | 10.00 | 12.50 | — | — | 4.63 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 270 | 51453 |

*See Assemblies and Mounting Positions, Page 18.

**For Fan Kits, see Page 130.

For Base Kits, see Page 129.

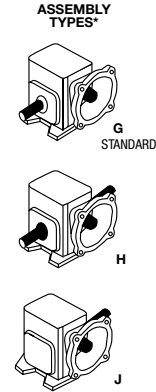
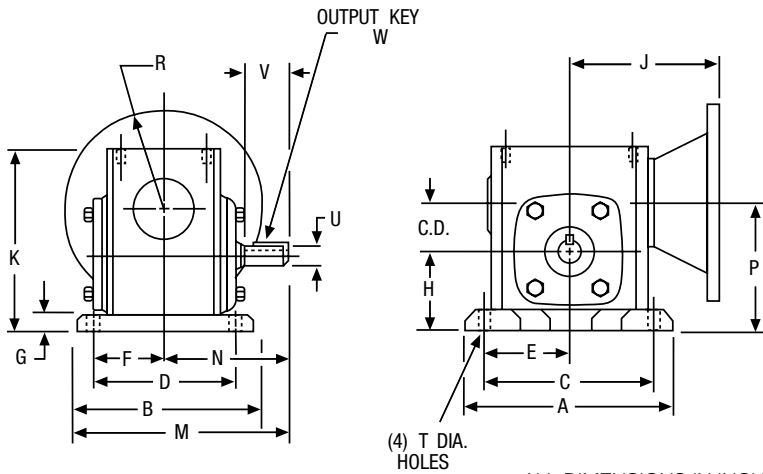
†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

700 Series Single Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types B Position Horizontal Base

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting †† | | | | | | K | M |
|------|------|-------|-------|-------|------|------|------|------|------|--------------------|---------------|--------------|-------------------------|-------|-------------------------|-------|-------|
| | | | | | | | | | | F700 | | QC700 | | RF700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC 250TC | 56C | 180TC 210TC 250TC | | |
| 710 | 1.00 | 4.63 | 3.69 | 3.75 | 2.88 | 1.88 | 1.44 | 0.44 | 1.75 | 3.97 | — | 5.01 | — | 5.72 | — | 4.06 | 4.72 |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | 0.53 | 2.25 | 3.94 | — | 5.46 | — | 6.59 | — | 5.19 | 6.09 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | 0.59 | 2.50 | 4.50 | — | 6.11 | — | 7.34 | — | 5.97 | 7.03 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | 0.69 | 2.75 | 4.69 | — | 6.29 | — | 7.53 | — | 6.44 | 7.16 |
| 721 | 2.06 | 7.75 | 5.94 | 6.38 | 4.69 | 3.19 | 2.34 | 0.72 | 3.00 | 5.06 | — | 6.76 | — | 8.31 | — | 7.09 | 7.66 |
| 724 | 2.38 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | 0.75 | 3.25 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 7.69 | 8.19 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.63 | 0.75 | 3.69 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.75 | 8.97 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | 0.75 | 4.00 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 9.63 | 10.50 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.13 | 4.75 | 3.06 | 0.88 | 4.38 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 10.25 | 10.94 |
| 738 | 3.75 | 12.13 | 8.66 | 10.38 | 7.00 | 5.19 | 3.50 | 0.94 | 4.81 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 11.38 | 12.09 |
| 752 | 5.16 | 16.38 | 10.63 | 14.13 | 8.38 | 7.06 | 4.19 | 1.13 | 6.44 | — | — | — | — | — | 16.00 | 14.88 | 14.38 |
| 760 | 6.00 | 19.00 | 12.00 | 16.50 | 9.50 | 8.25 | 4.75 | 1.25 | 7.75 | — | — | — | — | — | 16.69 | 17.75 | 16.00 |

| Size | N | P | R-NEMA Mounting | | | T | Low Speed Shaft | | | | Aprox. Weight (LBS.) | | Base Kit No.† | Fan Kit No.** |
|------|-------|-------|-----------------|--------------|-------------------------|-------|---------------------|------|-------|---------|----------------------|-------|---------------|---------------|
| | | | 42CZ | 56C 140TC | 180TC 210TC 250TC | | U +.000 -.001 | V | W-Key | | F700 | QC700 | | |
| | | | | | | | | | Sq. | Length | | | | |
| 710 | 2.88 | 2.75 | 2.16 | 3.31 | — | 11/32 | .500 | 1.19 | 1/8 | 5/8 | 7 | 8 | 56575 | — |
| 713 | 4.00 | 3.59 | — | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 16 | 56577 | — |
| 715 | 4.31 | 4.06 | — | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 19 | 25 | 56438 | — |
| 718 | 4.31 | 4.50 | — | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 21 | 28 | 56585 | — |
| 721 | 4.69 | 5.06 | — | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 26 | 31 | 56440 | — |
| 724 | 5.09 | 5.63 | — | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 32 | 37 | 56591 | — |
| 726 | 5.63 | 6.31 | — | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-15/16 | 49 | 49 | 56595 | — |
| 730 | 6.75 | 7.00 | — | 3.31 | 4.63 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 71 | 72 | 65544 | — |
| 732 | 7.06 | 7.63 | — | 3.31 | 4.63 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 93 | 94 | 56599 | 51450 |
| 738 | 7.75 | 8.56 | — | 3.31 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 131 | 140 | 56603 | 51451 |
| 752 | 9.06 | 11.63 | — | — | 4.63 | 25/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 242 | 56607 | 51452 |
| 760 | 10.00 | 13.75 | — | — | 4.63 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 300 | 56610 | 51453 |

*See Assemblies and Mounting Positions, Page 18.

**For Fan Kits, see Page 130.

For Base Kits, see Page 129.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

700 Series Single Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

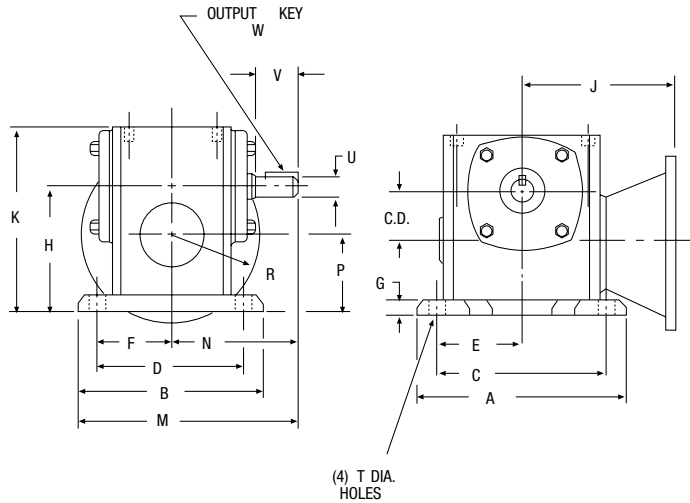
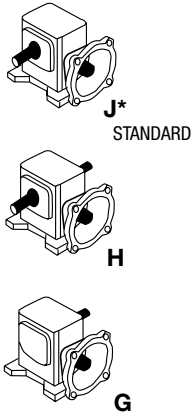
A Position Horizontal Base

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33

A

ASSEMBLY TYPES*



All DIMENSIONS IN INCHES

| NEMA Mounting | Input | |
|---------------|--------------------------|-------------|
| | Bore +.0015 -.0000 | Keyway |
| 42CZ | 0.5 | 1/8 x 1/16 |
| 56C | 0.625 | 3/16 x 3/32 |
| 140TC | 0.875 | 3/16 x 3/32 |
| 180TC | 1.125 | 1/4 x 1/8 |
| 210TC | 1.375 | 5/16 x 5/32 |

All DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting †† | | | | | | K | M |
|------|------|-------|------|-------|------|------|------|------|------|--------------------|---------------|--------------|-------------------------|-------|-------------------------|-------|-------|
| | | | | | | | | | | F700 | | QC700 | | RF700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC 250TC | 56C | 180TC 210TC 250TC | | |
| 710 | 1.00 | 4.62 | 3.69 | 3.75 | 2.88 | 1.88 | 1.44 | 0.44 | 2.75 | 3.97 | — | 5.01 | — | 5.72 | — | 4.06 | 4.72 |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | 0.53 | 3.47 | 3.94 | — | 5.46 | — | 6.59 | — | 5.19 | 6.09 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | 0.59 | 4.06 | 4.50 | — | 6.11 | — | 7.34 | — | 5.97 | 7.03 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | 0.69 | 4.38 | 4.69 | — | 6.29 | — | 7.53 | — | 6.44 | 7.16 |
| 721 | 2.06 | 7.75 | 5.94 | 6.37 | 4.69 | 3.19 | 2.34 | 0.72 | 4.81 | 5.06 | — | 6.76 | — | 8.31 | — | 7.09 | 7.66 |
| 724 | 2.37 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | 0.75 | 5.19 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 7.69 | 8.19 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.62 | 0.75 | 5.81 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.75 | 8.97 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | 0.75 | 6.38 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 9.63 | 10.50 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.12 | 4.75 | 3.06 | 0.88 | 6.75 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 10.25 | 10.89 |
| 738 | 3.75 | 12.13 | 8.66 | 10.37 | 7.00 | 5.19 | 3.50 | 0.94 | 7.50 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 11.38 | 12.09 |

| Size | N | P | R | | | | | T Holes | Low Speed Shaft | | | | Aprox. Wiegth (LBS.) | | Base Kit No.† | Fan Kit No.** |
|------|------|------|---------------|------|-------|-------|-------|------------|-------------------|------|-------|---------|-------------------------|-------|---------------------|---------------------|
| | | | NEMA Mounting | | | | | | U +.000/- .001 | V | W-Key | | F700 | QC700 | | |
| | | | 42CZ | 56C | 140TC | 180TC | 210TC | | | | Sq. | Length | | | | |
| 710 | 2.88 | 1.75 | 2.16 | 3.31 | — | — | — | 11/32 | .500 | 1.19 | 1/8 | 5/8 | 7 | 8 | 56575 | — |
| 713 | 4.00 | 2.13 | — | 3.31 | — | — | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 16 | 56577 | — |
| 715 | 4.31 | 2.50 | — | 3.31 | 3.31 | — | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 19 | 25 | 56438 | — |
| 718 | 4.31 | 2.63 | — | 3.31 | 3.31 | — | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 21 | 28 | 56585 | — |
| 721 | 4.69 | 2.75 | — | 3.31 | 3.31 | — | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 26 | 31 | 56440 | — |
| 724 | 5.09 | 2.81 | — | 3.31 | 3.31 | 4.63 | — | 15/32 | 1.125 | 2.37 | 1/4 | 1-1/4 | 32 | 37 | 56591 | — |
| 726 | 5.62 | 3.19 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.125 | 2.62 | 1/4 | 1-15/16 | 49 | 49 | 56595 | — |
| 730 | 6.75 | 3.38 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 71 | 72 | 65544 | — |
| 732 | 7.06 | 3.50 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 93 | 94 | 56599 | 51450 |
| 738 | 7.75 | 3.75 | — | — | 3.31 | 4.63 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 131 | 140 | 56603 | 51451 |

* See Assemblies and Mounting Positions, Page 18.

** For Fan Kits, see Page 130.

For Base Kits, see Page 129.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

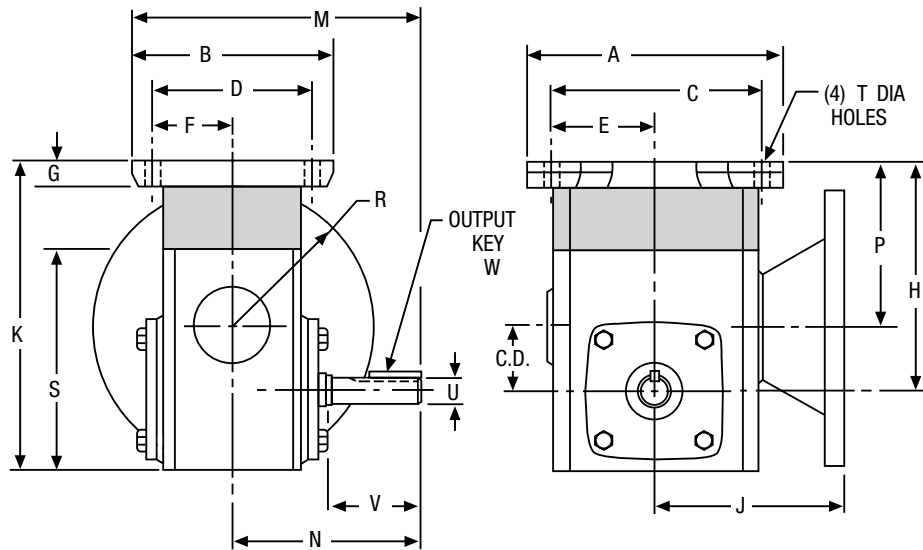
700 Series Single Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

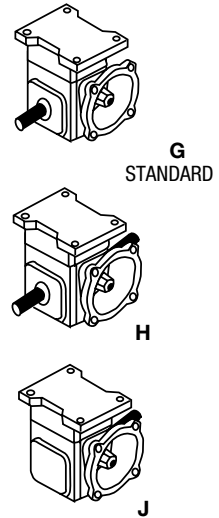
BRB Position Horizontal Base with Riser Block

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



ASSEMBLY TYPES*



| Size | C.D. | A | B | C | D | E | F | G | H | | | J-NEMA Mounting †† | | | | | | K | | |
|------|------|-------|------|------|------|------|------|-----|---------------|-----------|------------|--------------------|------------|-----------|------------|-----------|------------|------|-----------|------------|
| | | | | | | | | | NEMA Mounting | | | F700 | | QC700 | | RF700 | | 42CZ | 56C 140TC | 180TC 210C |
| | | | | | | | | | 42CZ | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210C | | | |
| 710 | 1.00 | 4.63 | 3.69 | 3.75 | 2.88 | 1.88 | 1.44 | .44 | 3.94 | 5.13 | — | 3.97 | — | 5.01 | — | 5.72 | — | 5.25 | 6.44 | — |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | .53 | — | 5.47 | — | 3.94 | — | 5.46 | — | 6.59 | — | — | 7.19 | — |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | .59 | — | 5.66 | — | 4.50 | — | 6.11 | — | 7.34 | — | — | 7.57 | — |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | .69 | — | 6.06 | — | 4.69 | — | 6.29 | — | 7.53 | — | — | 8.13 | — |
| 721 | 2.06 | 7.75 | 5.94 | 6.38 | 4.69 | 3.19 | 2.34 | .72 | — | 6.34 | — | 5.06 | — | 6.76 | — | 8.31 | — | — | 8.63 | — |
| 724 | 2.38 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | .75 | — | 6.69 | 8.19 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | — | 9.19 | 10.69 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.63 | .75 | — | 7.06 | 8.33 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | — | 10.00 | 11.27 |
| 730 | 3.00 | 10.00 | 7.5 | 8.44 | 5.88 | 4.22 | 2.94 | .75 | — | 7.44 | 8.51 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | — | 10.69 | 11.76 |
| 732 | 3.25 | 11.19 | 7.66 | 9.5 | 6.13 | 4.75 | 3.06 | .88 | — | 7.94 | 9.13 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | — | 11.44 | 12.63 |

| Size | M | N | P | | | R | | | S | T | Low Speed Shaft | | | | Aprox. Weight (LBS.) | | Base Kit No. † | Fan Kit No. ** |
|------|-------|------|---------------|-----------|------------|---------------|-----------|------------|------|-------|-----------------|------|-------|---------|----------------------|----|----------------|----------------|
| | | | NEMA Mounting | | | NEMA Mounting | | | | | U +.000 - .001 | V | W-Key | | F | QC | | |
| | | | 42CZ | 56C 140TC | 180TC 210C | 42CZ | 56C 140TC | 180TC 210C | | | | | Sq. | Length | | | | |
| 710 | 4.72 | 2.88 | 2.94 | 4.13 | — | 1.69 | 3.31 | — | 3.62 | 11/32 | .500 | 1.19 | 1/8 | 5/8 | 7 | 8 | 56575 | — |
| 713 | 6.09 | 4.00 | — | 4.13 | — | — | 3.31 | — | 4.66 | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 16 | 56577 | — |
| 715 | 7.03 | 4.31 | — | 4.10 | — | — | 3.31 | — | 5.38 | 13/32 | .750 | 1.78 | 3/16 | 1 | 19 | 24 | 56438 | — |
| 718 | 7.16 | 4.31 | — | 4.32 | — | — | 3.31 | — | 5.75 | 13/32 | .875 | 1.78 | 3/16 | 1 | 21 | 27 | 56585 | — |
| 721 | 7.66 | 4.69 | — | 4.29 | — | — | 3.31 | — | 6.38 | 15/32 | 1.000 | 2.09 | 1/4 | 1 1/4 | 26 | 31 | 56440 | — |
| 724 | 8.19 | 5.09 | — | 4.31 | 5.81 | — | 3.31 | 4.63 | 6.94 | 15/32 | 1.125 | 2.38 | 1/4 | 1 1/4 | 32 | 37 | 56591 | — |
| 726 | 8.97 | 5.63 | — | 4.45 | 5.71 | — | 3.31 | 4.63 | 8.00 | 17/32 | 1.125 | 2.63 | 1/4 | 1 15/16 | 49 | 49 | 56595 | — |
| 730 | 10.50 | 6.75 | — | 4.44 | 5.51 | — | 3.31 | 4.63 | 8.88 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 71 | 72 | 65544 | — |
| 732 | 10.94 | 7.06 | — | 4.69 | 5.88 | — | 3.31 | 4.63 | 9.38 | 17/32 | 1.375 | 3.25 | 5/16 | 2 7/16 | 93 | 94 | 56599 | 51450 |

* See Assemblies and Mounting Positions, Page 18.

** For Fan Kits, see Page 130.

For Base Kits, see Page 129.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

700 Series Single Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

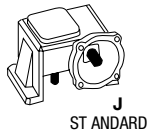
C/D Position Vertical Base; C/E High Base; D/F Low Base

FOR ORDERING INFORMATION, see Page 16

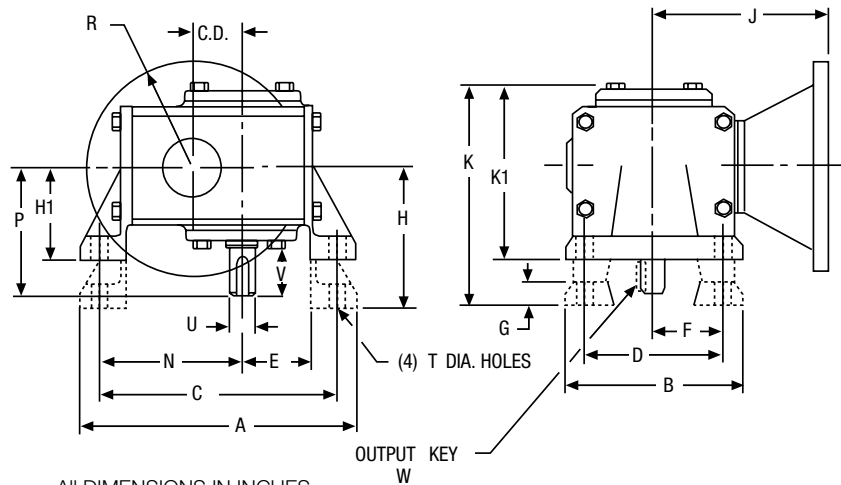
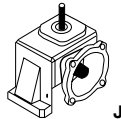
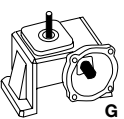
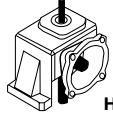
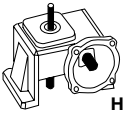
FOR RATING INFORMATION, See Pages 17, 22-33

ASSEMBLY TYPES*

C/D BASES



E/F BASES



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | H1 | J-NEMA Mounting †† | | | | | | K | K1 |
|------|------|-------|-------|-------|-------|------|------|------|------|------|--------------------|---------------|--------------|-------------------------|-------|----------------|-------|-------|
| | | | | | | | | | | | F700 | | QC700 | | RF700 | | | |
| | | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC 250TC | 56C | 180TC 210TC | | |
| 710 | 1.00 | 6.06 | 3.22 | 5.13 | 2.31 | 1.38 | 1.16 | 0.44 | 2.94 | — | 3.97 | — | 5.01 | — | 5.72 | — | 4.59 | — |
| 713 | 1.33 | 7.09 | 4.13 | 6.16 | 3.25 | 1.78 | 1.63 | 0.53 | 3.56 | 2.31 | 3.94 | — | 5.46 | — | 6.59 | — | 5.59 | 4.34 |
| 715 | 1.54 | 8.03 | 5.16 | 6.97 | 4.00 | 1.97 | 2.00 | 0.69 | 4.38 | 3.00 | 4.50 | — | 6.11 | — | 7.34 | — | 6.91 | 5.53 |
| 718 | 1.75 | 8.44 | 5.16 | 7.38 | 4.00 | 2.13 | 2.00 | 0.69 | 4.38 | 3.00 | 4.69 | — | 6.29 | — | 7.53 | — | 6.88 | 5.50 |
| 721 | 2.06 | 9.50 | 6.03 | 8.38 | 4.88 | 2.34 | 2.44 | 0.72 | 4.88 | 3.13 | 5.06 | — | 6.76 | — | 8.31 | — | 7.50 | 5.75 |
| 724 | 2.38 | 10.06 | 6.31 | 8.94 | 4.88 | 2.56 | 2.44 | 0.75 | 5.25 | 3.38 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 7.97 | 6.09 |
| 726 | 2.62 | 11.69 | 7.38 | 10.13 | 5.75 | 3.00 | 2.88 | 0.88 | 5.59 | 3.63 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.50 | 6.53 |
| 730 | 3.00 | 12.50 | 8.00 | 11.13 | 6.00 | 3.34 | 3.00 | 0.94 | 5.88 | 3.94 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 9.13 | 7.20 |
| 732 | 3.25 | 13.38 | 9.00 | 11.88 | 6.13 | 3.56 | 3.06 | 0.88 | 6.25 | 4.69 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 10.00 | 8.56 |
| 738 | 3.75 | 15.69 | 10.00 | 13.94 | 8.00 | 4.00 | 4.00 | 0.94 | 7.00 | 5.25 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 11.12 | 9.38 |
| 752 | 5.16 | 20.50 | 13.13 | 18.00 | 10.00 | 5.44 | 5.00 | 1.13 | 8.63 | 6.38 | — | — | — | — | — | 16.00 | 13.38 | 11.13 |
| 760 | 6.00 | 23.25 | 14.75 | 20.88 | 11.75 | 6.63 | 5.88 | 1.13 | 9.63 | 7.31 | — | — | — | — | — | 16.69 | 14.94 | 12.63 |

| Size | N | P | R | | | | Low Speed Shaft | | | | High Base | | | Low Base | | | Fan Kit No.** |
|------|-------|-------|---------------|-----------------------|----------------|---------|---------------------|------|-------|---------|--------------------------|----------------------|--------------------------|----------|----------------------|-------|---------------|
| | | | NEMA Mounting | | | T Holes | U +.000 -.001 | V | W-KEY | | Approx. Weight (LBS.) | Base Kit No. † | Approx. Weight (LBS.) | | Base Kit No. † | | |
| | | | 42CZ | 180TC 56C 140TC | 210TC 250TC | | | | Sq. | Length | | | F | QC | | F | |
| 710 | 3.06 | 2.88 | 2.16 | 3.31 | — | 11/32 | .500 | 1.19 | 1/8 | 5/8 | 7 | 10 | 56576 | — | — | — | — |
| 713 | 3.69 | 4.00 | — | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 19 | 56578 | 12 | 16 | 56579 | — |
| 715 | 4.25 | 4.31 | — | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 22 | 27 | 56582 | 21 | 26 | 56583 | — |
| 718 | 4.50 | 4.31 | — | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 24 | 30 | 56582 | 23 | 29 | 56583 | — |
| 721 | 5.09 | 4.69 | — | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 29 | 35 | 56588 | 28 | 32 | 56589 | — |
| 724 | 5.44 | 5.09 | — | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 39 | 44 | 56592 | 38 | 40 | 56593 | — |
| 726 | 6.13 | 5.63 | — | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-15/16 | 59 | 57 | 56596 | 51 | 53 | 56597 | — |
| 730 | 6.75 | 6.75 | — | 3.31 | 4.63 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 77 | 79 | 65545 | 73 | 76 | 65546 | — |
| 732 | 7.13 | 7.06 | — | 3.31 | 4.63 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 95 | 98 | 56600 | 90 | 93 | 56601 | 51450 |
| 738 | 8.31 | 7.75 | — | 3.31 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 153 | 147 | 56604 | 143 | 136 | 56605 | 51451 |
| 752 | 10.56 | 9.06 | — | — | 4.63 | 29/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 267†† | 56608 | — | 255 | 56609 | 51452 |
| 760 | 12.19 | 10.00 | — | — | 4.63 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 345†† | 56611 | — | 325 | 56612 | 51453 |

* See Assemblies and Mounting Positions, Page 18. ** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

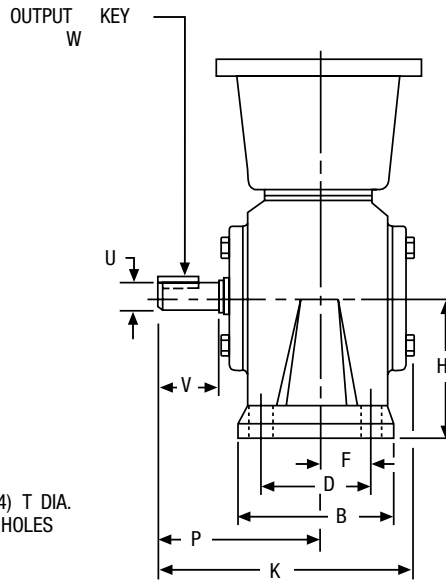
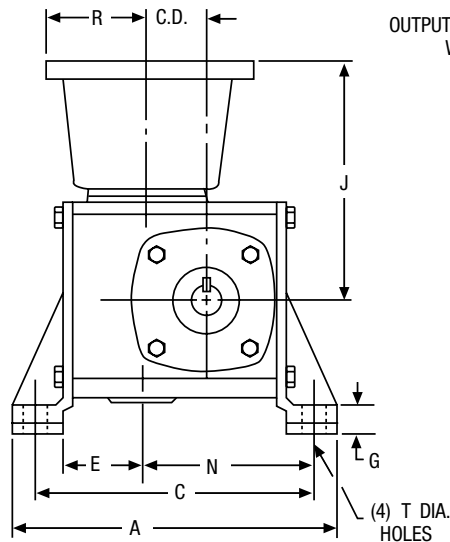
700 Series Single Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

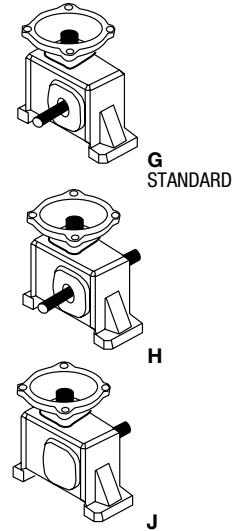
X Position Vertical Base; X = Input Vertical Up

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting †† | | | | | | K | N |
|------|------|-------|------|-------|------|------|------|------|------|--------------------|---------------|--------------|----------------|-------|-------------------------|------|------|
| | | | | | | | | | | F700 | | QC700 | | RF700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC | 56C | 180TC 210TC 250TC | | |
| 713 | 1.33 | 7.28 | 2.91 | 6.41 | 2.00 | 1.70 | 1.00 | 0.53 | 2.94 | 3.94 | — | 5.46 | — | 6.59 | — | 6.03 | 3.92 |
| 715 | 1.54 | 8.25 | 3.72 | 7.25 | 2.50 | 2.00 | 1.25 | 0.69 | 3.50 | 4.50 | — | 6.11 | — | 7.34 | — | 6.84 | 4.37 |
| 718 | 1.75 | 8.62 | 3.72 | 7.63 | 2.50 | 2.00 | 1.25 | 0.69 | 3.50 | 4.69 | — | 6.29 | — | 7.53 | — | 6.81 | 4.75 |
| 721 | 2.06 | 9.75 | 3.84 | 8.63 | 2.63 | 2.09 | 1.31 | 0.72 | 3.94 | 5.06 | — | 6.76 | — | 8.31 | — | 7.28 | 5.47 |
| 724 | 2.37 | 10.31 | 4.13 | 9.19 | 2.88 | 2.13 | 1.44 | 0.75 | 4.06 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 7.81 | 6.00 |
| 726 | 2.62 | 11.88 | 4.53 | 10.38 | 3.13 | 2.50 | 1.56 | 0.88 | 4.75 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.53 | 6.75 |

| Size | P | R-NEMA Mounting | | T Holes | Low Speed Shaft | | | | Approximate Weight (LBS.) | | Base Kit No. † |
|------|------|-----------------|-------|------------|---------------------|------|-------|--------|---------------------------------|----|----------------------|
| | | 56C 140TC | 180TC | | U +.000 -.001 | V | W-Key | | F | QC | |
| | | | | | | | Sq. | Length | | | |
| 713 | 4.00 | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 13 | 55196 |
| 715 | 4.31 | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 21 | 24 | 55349 |
| 718 | 4.30 | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 22 | 27 | 55349 |
| 721 | 4.69 | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 28 | 30 | 55644 |
| 724 | 5.09 | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 37 | 37 | 55678 |
| 726 | 5.63 | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-1/4 | 54 | 55 | 55769 |

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces. Input may be rotated clockwise or counterclockwise. See Assemblies and Mounting Positions, Page 18.

† For Base Kits, see Page 129.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

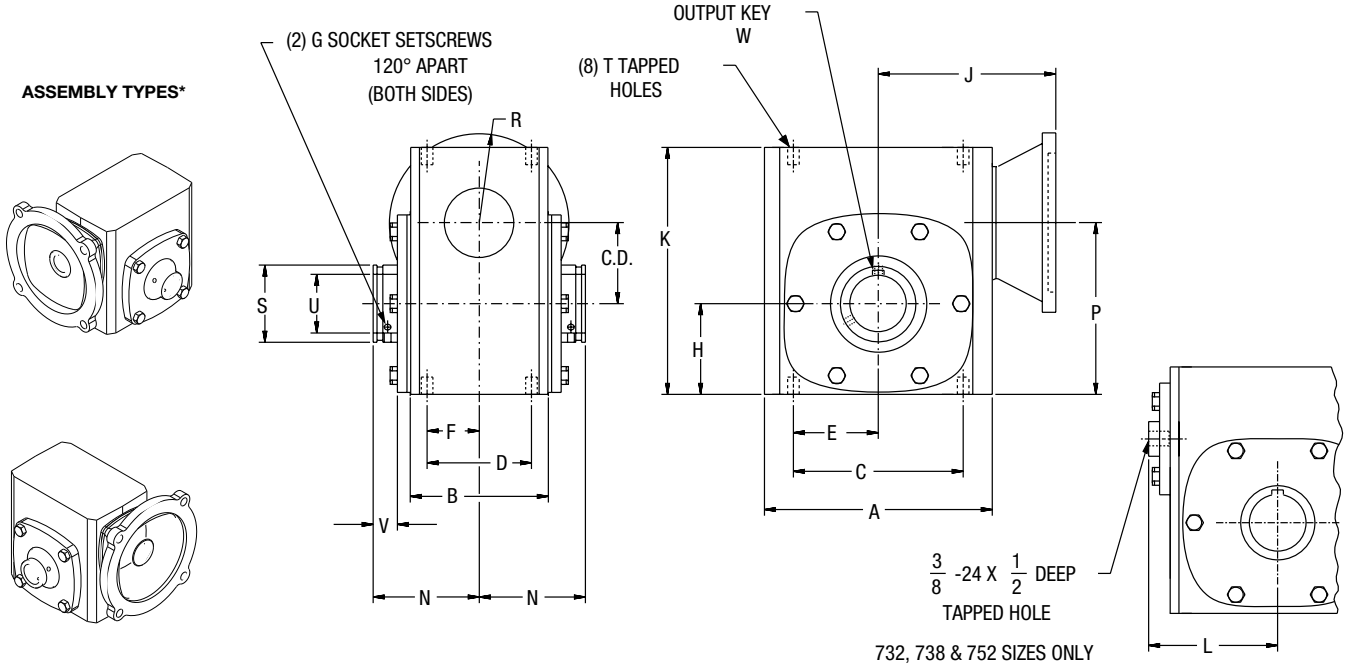
700 Series Single Reduction Flanged Reducer Dimensions

HF700/HQC700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base); Bored to Size, Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting †† | | | | | | K | L | N |
|------|------|-------|------|------|------|------|------|---------|------|--------------------|---------------|--------------|-------------------------|-------|-------------------------|-------|------|------|
| | | | | | | | | | | F700 | | QC700 | | RF700 | | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC 250TC | 56C | 180TC 210TC 250TC | | | |
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | #10-32 | 1.72 | 3.97 | — | 5.46 | — | 6.59 | — | 4.66 | — | 2.50 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 1.91 | 4.50 | — | 6.11 | — | 7.34 | — | 5.38 | — | 3.03 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 2.06 | 4.69 | — | 6.29 | — | 7.53 | — | 5.75 | — | 3.03 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 2.28 | 5.06 | — | 6.76 | — | 8.31 | — | 6.38 | — | 3.22 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 2.50 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 6.94 | — | 3.22 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5/16-24 | 2.94 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 8.00 | — | 3.44 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 5/16-24 | 3.25 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 8.88 | — | 4.19 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 3.50 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 9.38 | 4.94 | 4.31 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3/8-24 | 3.88 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 10.44 | 5.50 | 4.81 |
| 752 | 5.16 | 13.13 | 7.38 | 11.0 | 5.81 | 5.50 | 2.91 | 3/8-24 | 5.31 | — | — | — | — | — | 16.00 | 13.75 | 7.19 | 6.12 |

| Size | P | R-NEMA Mounting | | S | T | | Low Speed Shaft | | | Approx. Weight(LBS.) | | Fan Kit No.** | |
|------|-------|-----------------|---------------|------|----------|-------|-------------------------|------|-------|----------------------|-----|---------------|-------|
| | | 56C 140TC | 180TC 210C | | Tap Size | Depth | Max U +.0015/- .0000 | V | W-Key | | HF | | HQC |
| | | Size | Length | | | | | | | | | | |
| 713 | 3.06 | 3.31 | — | .88 | 5/16-18 | .50 | .625 | .68 | | | 7 | 9 | — |
| 715 | 3.44 | 3.31 | — | 1.38 | 5/16-18 | .50 | 1.000 | .84 | | | 21 | 21 | — |
| 718 | 3.81 | 3.31 | — | 1.38 | 5/16-18 | .50 | 1.000 | .74 | | | 23 | 24 | — |
| 721 | 4.34 | 3.31 | — | 2.00 | 3/8-16 | .56 | 1.4375 | .87 | | See Page | 27 | 27 | — |
| 724 | 4.88 | 3.31 | 4.63 | 2.00 | 3/8-16 | .56 | 1.4375 | .75 | | 128 For | 36 | 40 | — |
| 726 | 5.56 | 3.31 | 4.63 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | | Key Information | 49 | 49 | — |
| 730 | 6.25 | 3.31 | 4.63 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.10 | | | 70 | 74 | — |
| 732 | 6.75 | 3.31 | 4.63 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | | | 90 | 102 | 51450 |
| 738 | 7.63 | 3.31 | 4.63 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | | | 130 | 141 | 51451 |
| 752 | 10.50 | — | 4.63 | 4.25 | 5/8-11 | 1.00 | 3.4375 | 1.37 | | | — | 242 | 51457 |

* See Assemblies and Mounting Positions, Page 18. ** For Fan Kits, see Page 130. See Page 128 for available bore sizes.

Input may be rotated clockwise or counterclockwise. The "SF" style is recommended for direct replacement only.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

700 Series Single Reduction Flanged Reducer Dimensions

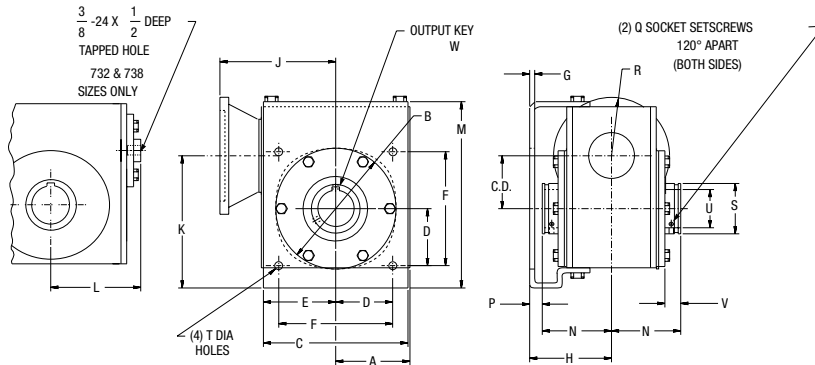
HF700/HQC700 Series Flanged Quill/Flanged Coupling Types

R/L Position Mounting Bracket; Bored to Size, Hollow Output Shaft

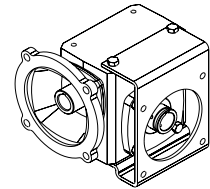
FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33

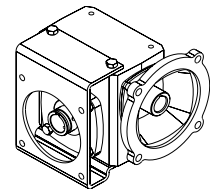
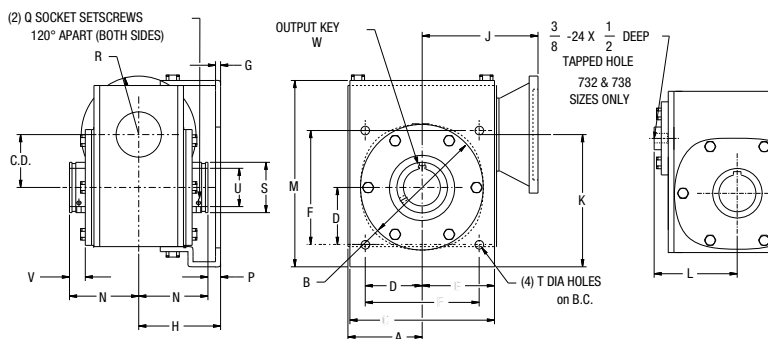
R Position



ASSEMBLY TYPES*



L Position



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting †† | | | | | K | L | |
|------|------|------|------|------|------|------|------|------|------|--------------------|---------------|--------------|----------------|--------------------------------|-------|------|------|
| | | | | | | | | | | HF700 | | HQC700 | | RF700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210TC | 56C 180TC 210TC 250TC | | | |
| 713 | 1.33 | 2.12 | 3.62 | 4.25 | 1.77 | 2.12 | 3.54 | 0.19 | 3.00 | 3.94 | — | 5.46 | — | 6.59 | — | 3.70 | — |
| 715 | 1.54 | 2.56 | 3.62 | 4.75 | 1.77 | 2.38 | 3.54 | 0.19 | 3.56 | 4.50 | — | 6.11 | — | 7.34 | — | 4.07 | — |
| 718 | 1.75 | 2.75 | 4.06 | 5.00 | 2.08 | 2.41 | 4.16 | 0.19 | 3.50 | 4.69 | — | 6.29 | — | 7.53 | — | 4.53 | — |
| 721 | 2.06 | 3.00 | 4.50 | 5.75 | 2.30 | 2.88 | 4.60 | 0.19 | 3.75 | 5.06 | — | 6.76 | — | 8.31 | — | 5.18 | — |
| 724 | 2.38 | 3.19 | 5.00 | 6.12 | 2.65 | 2.88 | 5.30 | 0.25 | 3.72 | 5.25 | 5.69 | 6.95 | 7.81 | 8.50 | 9.94 | 5.98 | — |
| 726 | 2.62 | 3.69 | 6.00 | 7.18 | 2.83 | 3.59 | 5.66 | 0.25 | 4.06 | 5.75 | 6.19 | 7.39 | 8.31 | 9.47 | 10.44 | 6.56 | — |
| 730 | 3.00 | 4.06 | 7.00 | 8.00 | 3.18 | 4.00 | 6.36 | 0.25 | 4.50 | 6.20 | 6.64 | 7.84 | 8.77 | 9.92 | 10.88 | 7.51 | — |
| 732 | 3.25 | 4.50 | 7.00 | 8.50 | 3.54 | 4.25 | 7.08 | 0.25 | 5.25 | 6.56 | 7.00 | 8.20 | 9.13 | 10.28 | 11.25 | 8.00 | 4.94 |
| 738 | 3.75 | 5.00 | 8.00 | 9.50 | 4.06 | 4.75 | 8.12 | 0.25 | 5.47 | 7.06 | 7.50 | 8.70 | 10.28 | 11.81 | 12.88 | 8.78 | 5.50 |

| Size | M | N | P | Q | R-NEMA Mounting | | S | T Holes | B.C. | Low Speed Shaft | | | Approx. Weight(LBS.) | | Fan Kit No.** | |
|------|-------|------|-----|---------|-----------------|---------------|------|------------|--------|-----------------|------|-------------|-------------------------|-----|---------------------|-----|
| | | | | | 56C 140TC | 180TC 210C | | | | +0015 -0000 | V | W-Key | | HF | | HQC |
| | | | | | Size | Length | | | | | | | | | | |
| 713 | 5.55 | 2.50 | .50 | #10-32 | 3.31 | — | .88 | 11/32 | 5.000 | .625 | .68 | | 16 | 20 | — | |
| 715 | 6.16 | 3.03 | .44 | #10-32 | 3.31 | — | 1.38 | 11/32 | 5.000 | 1.000 | .84 | | 22 | 28 | — | |
| 718 | 6.66 | 3.03 | .47 | #10-32 | 3.31 | — | 1.38 | 11/32 | 5.875 | 1.000 | .74 | See Page | 29 | 31 | — | |
| 721 | 7.47 | 3.22 | .53 | 1/4-28 | 3.31 | — | 1.94 | 13/32 | 6.500 | 1.4375 | .87 | 128 For | 36 | 36 | — | |
| 724 | 8.30 | 3.22 | .50 | 1/4-28 | 3.31 | 4.63 | 1.94 | 13/32 | 7.500 | 1.4375 | .75 | Key | 41 | 47 | — | |
| 726 | 9.25 | 3.44 | .62 | 5/16-24 | 3.31 | 4.63 | 2.50 | 13/32 | 8.000 | 1.9375 | .78 | Information | 52 | 52 | — | |
| 730 | 10.38 | 4.19 | .31 | 5/16-24 | 3.31 | 4.63 | 2.88 | 13/32 | 8.000 | 2.1875 | 1.12 | | 76 | 80 | — | |
| 732 | 10.91 | 4.31 | .94 | 5/16-24 | 3.31 | 4.63 | 2.88 | 9/16 | 10.000 | 2.1875 | .93 | | 95 | 107 | 51450 | |
| 738 | 11.84 | 4.81 | .66 | 3/8-24 | 3.31 | 4.63 | 3.25 | 9/16 | 11.500 | 2.4375 | 1.11 | | 147 | 150 | 51451 | |

* See Assemblies and Mounting Positions, Page 18. ** For Fan Kits, see Page 130. See Page 128 for available bore sizes.

Input may be rotated clockwise or counterclockwise. The "SF" style is recommended for direct replacement only.

†† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76

700 Series Single Reduction Flanged Reducer Dimensions

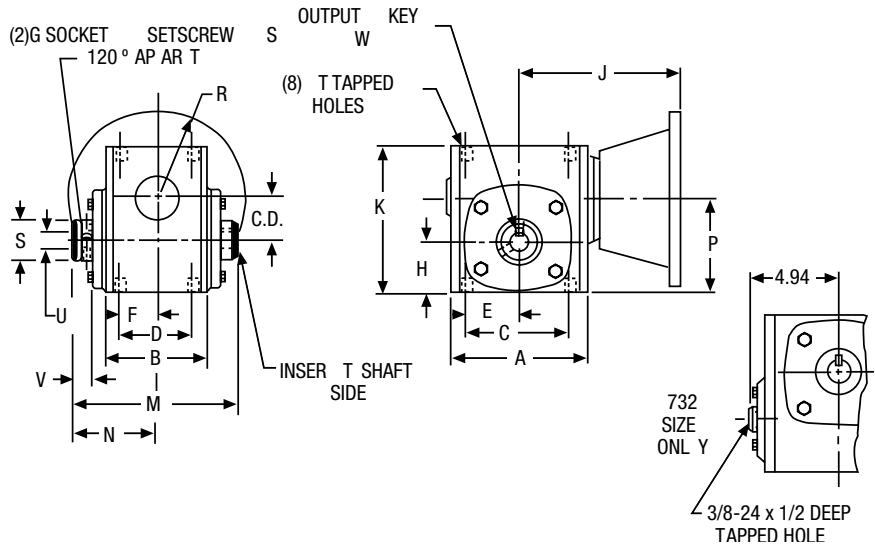
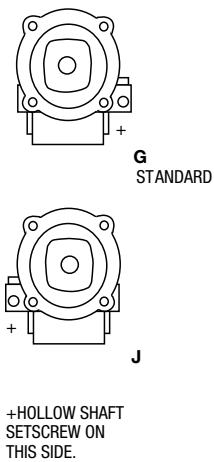
SF700 Series Flanged Quill Type

Basic Models (No Base), Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 16

FOR ADDITIONAL SIZES, See the H Series Page 40
FOR RATING INFORMATION, See Pages 17, 22-33

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting | | K | M | N |
|------|------|------|------|------|------|------|------|--------|------|-----------------|---------------|------|------|------|
| | | | | | | | | | | SF700 | | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | | | |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 2.06 | 4.69 | — | 5.75 | 5.69 | 3.09 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 2.28 | 5.06 | — | 6.38 | 5.88 | 3.22 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 1/4-28 | 2.94 | 5.75 | 6.19 | 8.00 | 6.47 | 3.50 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3/8-24 | 3.50 | 6.56 | 7.00 | 9.38 | 8.06 | 4.38 |

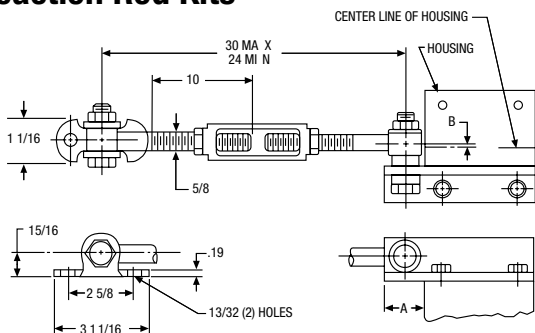
| Size | P | R-NEMA Mounting | | S | T | | Low Speed Shaft | | | Approx. Weight (LBS.) SF | Fan Kit No.** | |
|------|------|-----------------|---------------|------|----------|-------|-------------------------|------|-----------------|-----------------------------|---------------|--|
| | | 56C 140TC | 180TC 210C | | Tap Size | Depth | U †† +.0015 -.000 | V | W-Key | | | |
| | | Size | Length | | | | | | | | | |
| 718 | 3.81 | 3.31 | — | 1.38 | 5/16-18 | .50 | 1.000 | .78 | See Page | 23 | — | |
| 721 | 4.34 | 3.31 | — | 1.50 | 3/8-16 | .56 | 1.125 | .88 | 128 For | 27 | — | |
| 726 | 5.56 | 3.31 | 4.63 | 2.16 | 3/8-16 | .56 | 1.4375 | .84 | Key Information | 51 | — | |
| 732 | 6.75 | 3.31 | 4.63 | 2.56 | 7/16-14 | .66 | 1.9375 | 1.00 | | 90 | 51450 | |

** For Fan Kits, see Page 130.

†† For additional output bore diameters, refer to the H Series, Page 128.

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces. Input may be rotated clockwise or counterclockwise. See Assemblies and Mounting Positions, Page 18

Reaction Rod Kits



ALL DIMENSIONS IN INCHES

| Size | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

All hardware shown is included in the kits.

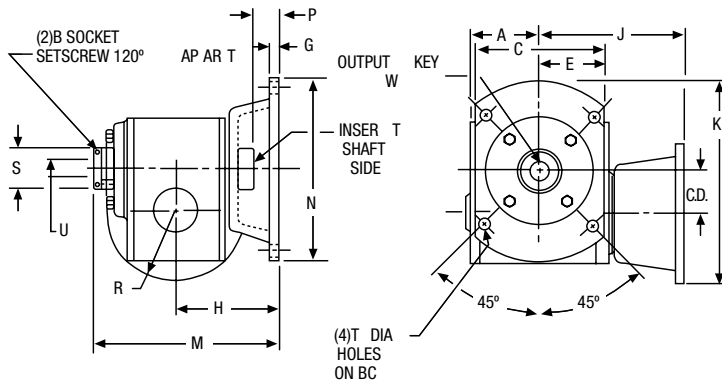
700 Series Single Reduction Flanged Reducer Dimensions

SF700 Series Flanged Quill Type V/W Position Mounting Flange, Hollow Output Shaft

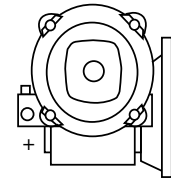
FOR ORDERING INFORMATION, see Page 16

FOR ADDITIONAL SIZES, See the H Series Page 41
FOR RATING INFORMATION, See Pages 17, 22-33

V Position



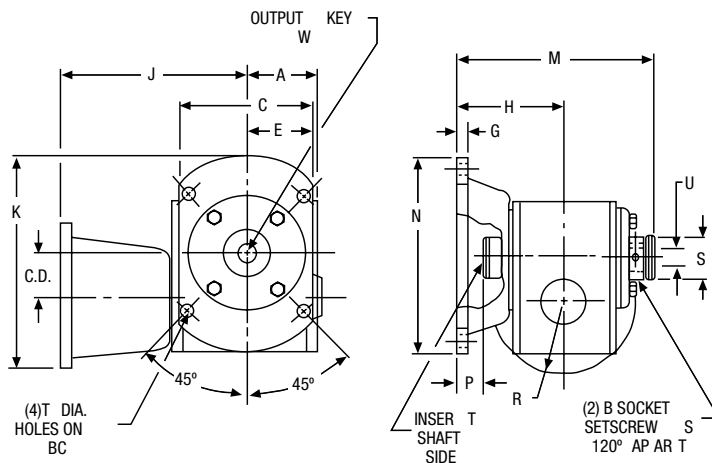
ASSEMBLY TYPES*



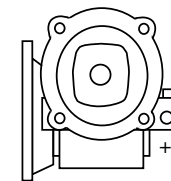
J
STANDARD

+HOLLOW SHAFT
SETSCREW ON
THIS SIDE.

W Position



ASSEMBLY TYPES*



G
STANDARD

+HOLLOW SHAFT
SETSCREW ON
THIS SIDE.

ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | BC | E | G | H | J-NEMA Mounting † | | K |
|------|------|------|--------|------|-------|------|-----|------|-------------------|---------------|-------|
| | | | | | | | | | SF700 | | |
| | | | | | | | | | 56C 140TC | 180TC 210C | |
| 718 | 1.75 | 2.75 | #10-32 | 4.88 | 5.88 | 2.44 | .38 | 3.50 | 4.69 | — | 8.03 |
| 721 | 2.06 | 3.00 | 1/4-28 | 5.75 | 6.50 | 2.88 | .38 | 3.75 | 5.06 | — | 8.66 |
| 726 | 2.62 | 3.69 | 1/4-28 | 7.75 | 8.00 | 3.88 | .38 | 4.06 | 5.75 | 6.19 | 11.69 |
| 732 | 3.25 | 4.50 | 3/8-24 | 9.00 | 10.00 | 4.50 | .50 | 5.25 | 6.56 | 7.00 | 13.38 |

| Size | M | N | P | R-NEMA Mounting | | S | T Holes | Low Speed Shaft | | Approx. Weight (LBS.) SF | Fan Kit No.** | |
|------|------|-------|------|-----------------|---------------|------|------------|----------------------|-----------------|-----------------------------------|---------------------|--|
| | | | | 56C 140TC | 180TC 210C | | | U +.0015 -.000 | W-Key | | | |
| | | | | Size | Length | | | | | | | |
| 718 | 6.59 | 6.75 | .91 | 3.31 | — | 1.38 | 11/32 | 1.000 | See Page | 28 | — | |
| 721 | 6.97 | 7.38 | 1.09 | 3.31 | — | 1.50 | 13/32 | 1.125 | 128 For | 35 | — | |
| 726 | 7.56 | 8.88 | 1.09 | 3.31 | 4.63 | 2.16 | 13/32 | 1.4375 | Key Information | 69 | — | |
| 732 | 9.63 | 11.00 | 1.56 | 3.31 | 4.63 | 2.56 | 9/16 | 1.9375 | | 119 | 51450 | |

** For Fan Kits, see Page 130.

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces.
Input may be rotated clockwise or counterclockwise. See Assemblies and Mounting Positions, Page 18.

† 42CZ Flange Dimensions: F700 J = 3.16 : QC700 J = 4.15 : RF700 J = 4.76



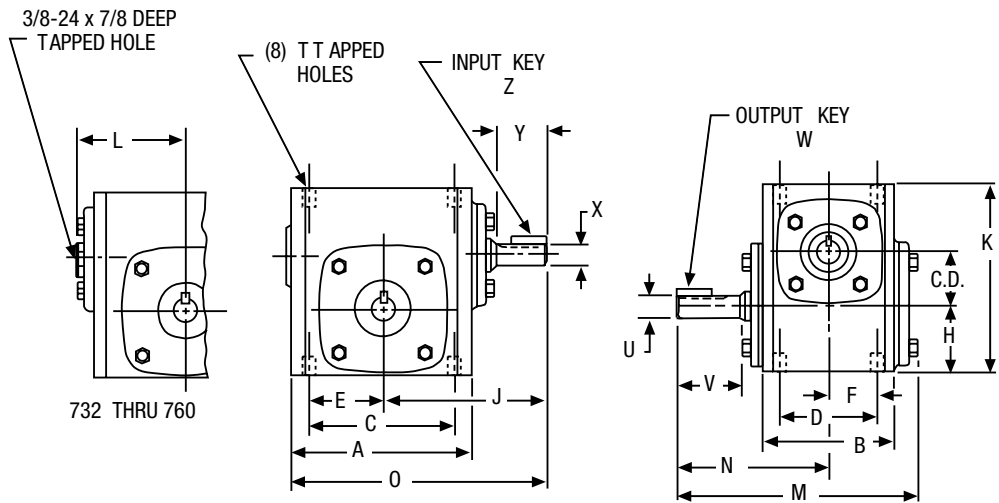
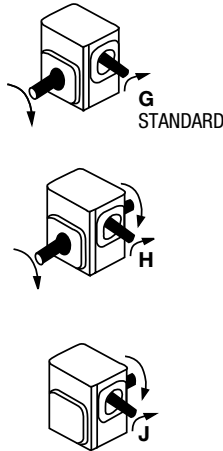
700 Series Single Reduction Non-Flanged Reducer Dimensions

700 Series Basic Models (No Base)

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | H | J | K | L | M | N | O |
|------|------|-------|------|-------|------|------|------|------|-------|-------|------|-------|-------|-------|
| 710 | 1.00 | 3.25 | 2.50 | 2.63 | 1.69 | 1.31 | .84 | 1.31 | 2.88 | 3.63 | — | 4.53 | 2.88 | 4.50 |
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 1.72 | 3.91 | 4.66 | — | 6.03 | 4.00 | 6.03 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 1.91 | 4.69 | 5.38 | — | 6.84 | 4.31 | 7.25 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 2.06 | 4.88 | 5.75 | — | 6.84 | 4.31 | 7.63 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 2.28 | 5.13 | 6.38 | — | 7.28 | 4.69 | 8.13 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 2.50 | 5.75 | 6.94 | — | 7.81 | 5.09 | 8.94 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 2.94 | 6.31 | 8.00 | — | 8.53 | 5.63 | 10.00 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 3.25 | 6.88 | 8.88 | — | 10.02 | 6.75 | 10.94 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3.50 | 7.44 | 9.38 | 4.94 | 10.81 | 7.06 | 11.94 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3.88 | 8.38 | 10.44 | 5.50 | 11.88 | 7.75 | 13.38 |
| 752 | 5.16 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 2.91 | 5.31 | 10.69 | 13.75 | 7.19 | 13.81 | 9.06 | 17.25 |
| 760 | 6.00 | 14.50 | 8.13 | 12.75 | 6.38 | 6.13 | 3.19 | 6.50 | 11.75 | 16.50 | 7.94 | 15.31 | 10.00 | 19.00 |

| Size | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Fan Kit No.** |
|------|----------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|---------------|
| | Tap Size | Depth | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | |
| | | | | | Sq. | Length | | | Sq. | Length | | |
| 710 | 1/4-20 | .44 | .500 | 1.19 | 1/8 | 5/8 | .3745 | .81 | 3/32 | 3/8 | 6 | — |
| 713 | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | .4995 | 1.31 | 1/8 | 5/8 | 11 | — |
| 715 | 5/16-18 | .50 | .750 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 18 | — |
| 718 | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 20 | — |
| 721 | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 25 | — |
| 724 | 3/8-16 | .56 | 1.125 | 2.37 | 1/4 | 1-1/4 | .7495 | 2.00 | 3/16 | 1 | 31 | — |
| 726 | 3/8-16 | .56 | 1.125 | 2.62 | 1/4 | 1-15/16 | .7495 | 2.00 | 3/16 | 1 | 43 | — |
| 730 | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | .8745 | 2.24 | 3/16 | 1 | 57 | — |
| 732 | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | .8745 | 2.34 | 3/16 | 1 | 72 | 51450 |
| 738 | 1/2-13 | .81 | 1.625 | 3.50 | 3/8 | 2-1/4 | .9995 | 2.75 | 1/4 | 1-1/4 | 105 | 51451 |
| 752 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | 1.2495 | 3.25 | 1/4 | 1-1/4 | 198 | 51452 |
| 760 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | 1.4995 | 3.88 | 3/8 | 3 | 240 | 51453 |

* See Assemblies and Mounting Positions, Page 19.

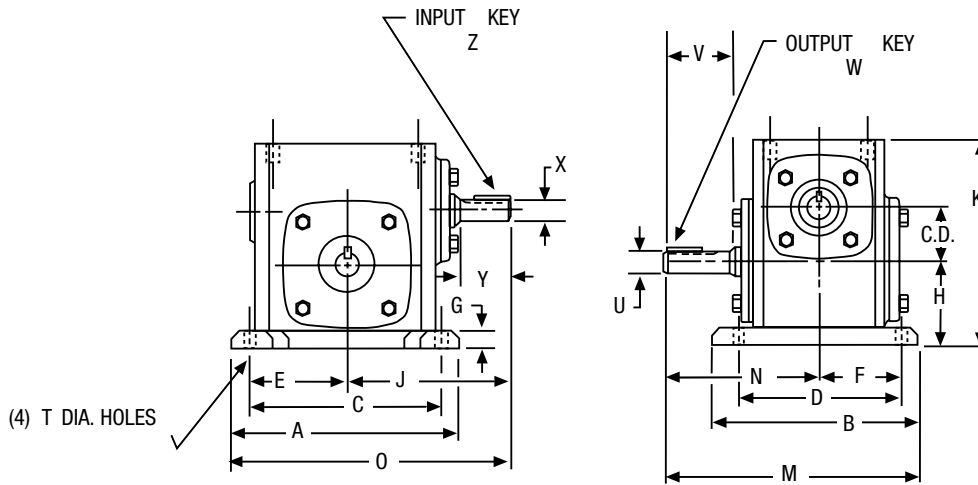
** For Fan Kits, see Page 130.

700 Series Single Reduction Non-Flanged Reducer Dimensions

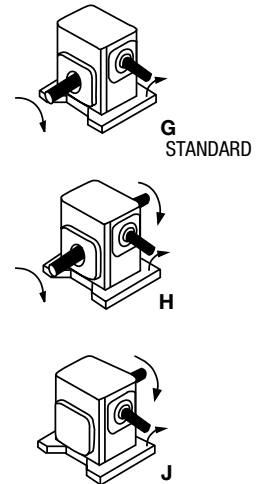
700 Series B Position Horizontal Base

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J | K | M | N | O |
|------|------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 710 | 1.00 | 4.63 | 3.69 | 3.75 | 2.88 | 1.88 | 1.44 | 0.44 | 1.75 | 2.88 | 4.06 | 4.72 | 2.88 | 5.19 |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | 0.53 | 2.25 | 3.91 | 5.19 | 6.09 | 4.00 | 6.59 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | 0.59 | 2.50 | 4.69 | 5.97 | 7.03 | 4.31 | 7.91 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | 0.69 | 2.75 | 4.88 | 6.44 | 7.16 | 4.31 | 8.38 |
| 721 | 2.06 | 7.75 | 5.94 | 6.38 | 4.69 | 3.19 | 2.34 | 0.72 | 3.00 | 5.13 | 7.09 | 7.66 | 4.69 | 9.00 |
| 724 | 2.38 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | 0.75 | 3.25 | 5.75 | 7.69 | 8.19 | 5.09 | 10.00 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.63 | 0.75 | 3.69 | 6.31 | 8.75 | 8.97 | 5.63 | 11.13 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | 0.75 | 4.00 | 6.81 | 9.63 | 10.50 | 6.75 | 11.88 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.13 | 4.75 | 3.06 | 0.88 | 4.38 | 7.44 | 10.25 | 10.94 | 7.06 | 13.03 |
| 738 | 3.75 | 12.13 | 8.66 | 10.38 | 7.00 | 5.19 | 3.50 | 0.94 | 4.81 | 8.38 | 11.38 | 12.09 | 7.75 | 14.44 |
| 752 | 5.16 | 16.38 | 10.63 | 14.13 | 8.38 | 7.06 | 4.19 | 1.13 | 6.44 | 10.69 | 14.88 | 14.38 | 9.06 | 18.88 |
| 760 | 6.00 | 19.00 | 12.00 | 16.50 | 9.50 | 8.25 | 4.75 | 1.25 | 7.75 | 11.75 | 17.75 | 16.00 | 10.00 | 21.25 |

| Size | T | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Base Kit No. † | Fan Kit No.** |
|------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|----------------|---------------|
| | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | | |
| | | | | Sq. | Length | | | Sq. | Length | | | |
| 710 | 11/32 | .500 | 1.19 | 1/8 | 5/8 | .3745 | .81 | 3/32 | 3/8 | 7 | 56575 | — |
| 713 | 11/32 | .625 | 2.00 | 3/16 | 1 | .4995 | 1.31 | 1/8 | 5/8 | 12 | 56577 | — |
| 715 | 13/32 | .750 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 19 | 56438 | — |
| 718 | 13/32 | .875 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 21 | 56585 | — |
| 721 | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 26 | 56440 | — |
| 724 | 15/32 | 1.125 | 2.37 | 1/4 | 1-1/4 | .7495 | 2.00 | 3/16 | 1 | 32 | 56591 | — |
| 726 | 17/32 | 1.125 | 2.62 | 1/4 | 1-15/16 | .7495 | 2.00 | 3/16 | 1 | 46 | 56595 | — |
| 730 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | .8745 | 2.24 | 3/16 | 1 | 64 | 65544 | — |
| 732 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | .8745 | 2.31 | 3/16 | 1 | 81 | 56599 | 51450 |
| 738 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | .9995 | 2.75 | 1/4 | 1-1/4 | 115 | 56603 | 51451 |
| 752 | 25/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | 1.2495 | 3.25 | 1/4 | 1-1/4 | 212 | 56607 | 51452 |
| 760 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | 1.4995 | 3.88 | 3/8 | 3 | 260 | 56610 | 51453 |

* See Assemblies and Mounting Positions, Page 19.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

700 Series Single Reduction Non-Flanged Reducer Dimensions

700 Series

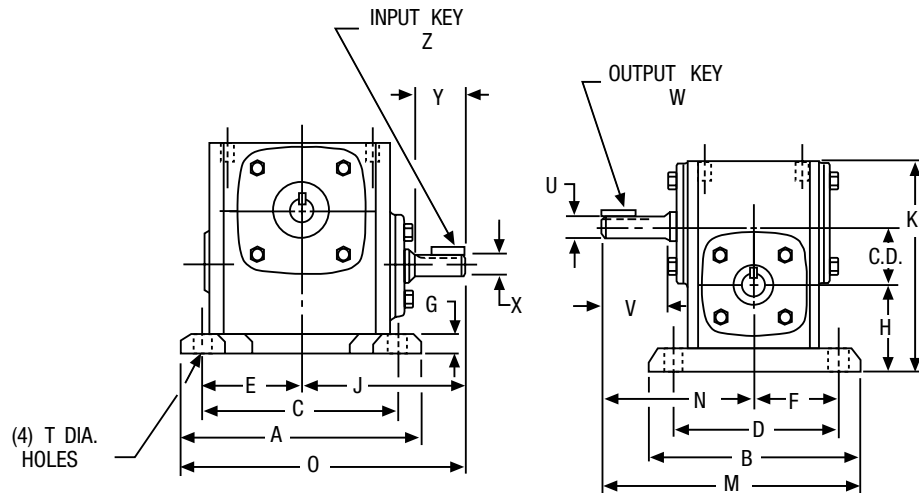
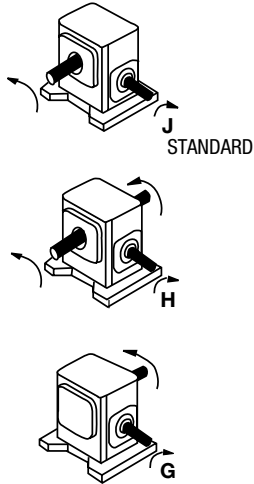
A Position Horizontal Base

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33

A

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J | K | M | N | O |
|------|------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 710 | 1.00 | 4.63 | 3.69 | 3.75 | 2.88 | 1.88 | 1.44 | .44 | 1.75 | 2.88 | 4.06 | 4.72 | 2.88 | 5.19 |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | .53 | 2.13 | 3.91 | 5.19 | 6.09 | 4.00 | 6.59 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | .59 | 2.50 | 4.69 | 5.97 | 7.03 | 4.31 | 7.91 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | .69 | 2.63 | 4.88 | 6.44 | 7.16 | 4.31 | 8.38 |
| 721 | 2.06 | 7.75 | 5.94 | 6.38 | 4.69 | 3.19 | 2.34 | .72 | 2.75 | 5.13 | 7.09 | 7.66 | 4.69 | 9.00 |
| 724 | 2.38 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | .75 | 2.81 | 5.75 | 7.69 | 8.19 | 5.09 | 10.00 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.63 | .75 | 3.19 | 6.31 | 8.75 | 8.97 | 5.63 | 11.13 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | .75 | 3.38 | 6.81 | 9.63 | 10.50 | 6.75 | 11.88 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.13 | 4.75 | 3.06 | .88 | 3.50 | 7.44 | 10.25 | 10.94 | 7.06 | 13.03 |
| 738 | 3.75 | 12.13 | 8.66 | 10.38 | 7.00 | 5.19 | 3.50 | .94 | 3.75 | 8.38 | 11.38 | 12.09 | 7.75 | 14.44 |
| 752 | 5.16 | 16.38 | 10.63 | 14.13 | 8.38 | 7.06 | 4.19 | 1.13 | 4.38 | 10.69 | 14.88 | 14.38 | 9.06 | 18.88 |
| 760 | 6.00 | 19.00 | 12.00 | 16.50 | 9.50 | 8.25 | 4.75 | 1.25 | 5.25 | 11.75 | 17.75 | 16.00 | 10.00 | 21.25 |

| Size | T | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Base Kit No. † | Fan Kit No.** |
|------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|----------------|---------------|
| | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | | |
| | | | | Sq. | Length | | | Sq. | Length | | | |
| 710 | 11/32 | .500 | 1.19 | 1/8 | 5/8 | .3745 | .81 | 3/32 | 3/8 | 7 | 56575 | — |
| 713 | 11/32 | .625 | 2.00 | 3/16 | 1 | .4995 | 1.31 | 1/8 | 5/8 | 12 | 56577 | — |
| 715 | 13/32 | .750 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 19 | 56438 | — |
| 718 | 13/32 | .875 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 21 | 56585 | — |
| 721 | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 26 | 56440 | — |
| 724 | 15/32 | 1.125 | 2.37 | 1/4 | 1-1/4 | .7495 | 2.00 | 3/16 | 1 | 32 | 56591 | — |
| 726 | 17/32 | 1.125 | 2.62 | 1/4 | 1-15/16 | .7495 | 2.00 | 3/16 | 1 | 46 | 56595 | — |
| 730 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | .8745 | 2.24 | 3/16 | 1 | 64 | 65544 | — |
| 732 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | .8745 | 2.31 | 3/16 | 1 | 81 | 56599 | 51450 |
| 738 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | .9995 | 2.75 | 1/4 | 1-1/4 | 115 | 56603 | 51451 |
| 752 | 25/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | 1.2495 | 3.25 | 1/4 | 1-1/4 | 212 | 56607 | 51452 |
| 760 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | 1.4995 | 3.88 | 3/8 | 3 | 260 | 56610 | 51453 |

* See Assemblies and Mounting Positions, Page 19.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

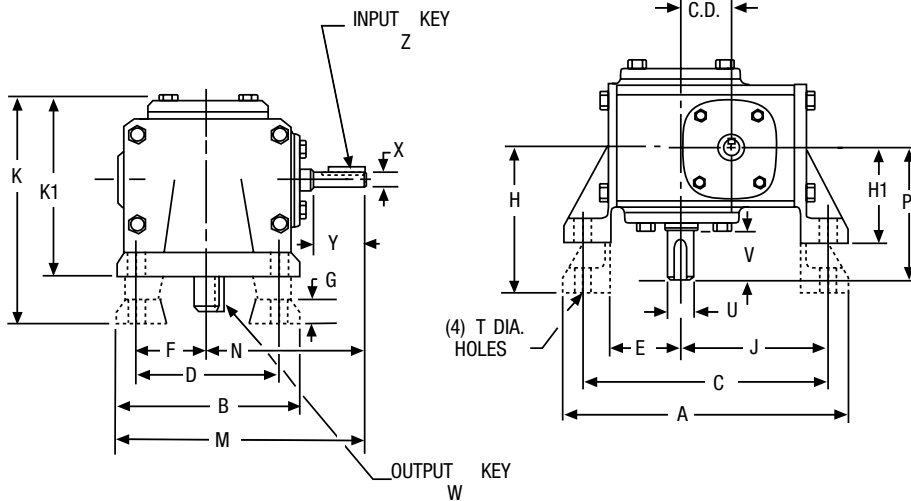
700 Series Single Reduction Non-Flanged Reducer Dimensions

700 Series

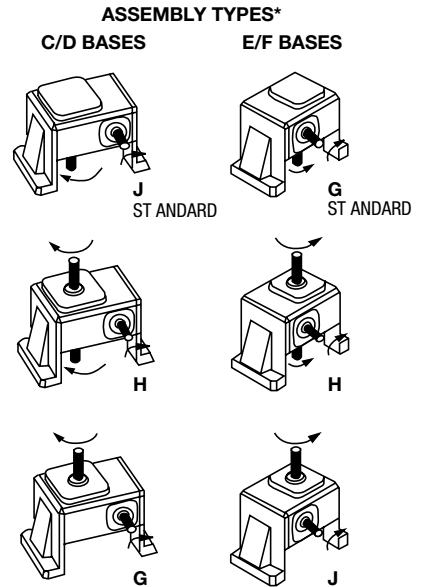
C/D Position Vertical Base; C/E High Base; D/F Low Base

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 17, 22-33



ALL DIMENSIONS IN INCHES



| Size | C.D. | A | B | C | D | E | F | G | H | H1 | J | K | K1 | M | N | P |
|------|------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 710 | 1.00 | 6.06 | 3.22 | 5.13 | 2.31 | 1.38 | 1.16 | .44 | 2.94 | — | 3.06 | 4.59 | — | 4.50 | 2.88 | 2.88 |
| 713 | 1.33 | 7.09 | 4.13 | 6.16 | 3.25 | 1.78 | 1.63 | .53 | 3.56 | 2.31 | 3.69 | 5.59 | 4.34 | 6.03 | 3.91 | 4.00 |
| 715 | 1.54 | 8.03 | 5.16 | 6.97 | 4.00 | 1.97 | 2.00 | .69 | 4.38 | 3.00 | 4.25 | 6.88 | 5.50 | 7.28 | 4.69 | 4.31 |
| 718 | 1.75 | 8.44 | 5.16 | 7.38 | 4.00 | 2.13 | 2.00 | .69 | 4.38 | 3.00 | 4.50 | 6.88 | 5.53 | 7.63 | 4.88 | 4.31 |
| 721 | 2.06 | 9.50 | 6.03 | 8.38 | 4.88 | 2.34 | 2.44 | .72 | 4.88 | 3.13 | 5.09 | 7.50 | 5.75 | 8.16 | 5.13 | 4.69 |
| 724 | 2.38 | 10.06 | 6.31 | 8.94 | 4.88 | 2.56 | 2.44 | .75 | 5.25 | 3.38 | 5.44 | 7.97 | 6.09 | 8.94 | 5.75 | 5.09 |
| 726 | 2.62 | 11.69 | 7.38 | 10.13 | 5.75 | 3.00 | 2.88 | .88 | 5.59 | 3.63 | 6.13 | 8.50 | 6.53 | 10.00 | 6.31 | 5.63 |
| 730 | 3.00 | 12.52 | 8.00 | 11.13 | 6.00 | 3.34 | 3.00 | .94 | 5.88 | 3.94 | 6.75 | 9.15 | 7.18 | 10.88 | 6.88 | 6.75 |
| 732 | 3.25 | 13.38 | 9.00 | 11.88 | 6.13 | 3.56 | 3.06 | .88 | 6.25 | 4.69 | 7.13 | 10.00 | 8.44 | 11.94 | 7.44 | 7.06 |
| 738 | 3.75 | 15.69 | 10.00 | 13.94 | 8.00 | 4.00 | 4.00 | .94 | 7.00 | 5.25 | 8.31 | 11.12 | 9.38 | 13.38 | 8.38 | 7.75 |
| 752 | 5.16 | 20.56 | 13.13 | 18.00 | 10.00 | 5.44 | 5.00 | 1.13 | 8.63 | 6.38 | 10.56 | 13.38 | 11.13 | 17.25 | 10.69 | 9.06 |
| 760 | 6.00 | 23.25 | 14.75 | 20.88 | 11.75 | 6.63 | 5.88 | 1.13 | 9.63 | 7.31 | 12.19 | 14.94 | 12.62 | 19.13 | 11.75 | 10.00 |

| Size | T | Low Speed Shaft | | | | High Speed Shaft | | | | High Base | | Low Base | | Fan Kit No.** |
|------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|----------------|-----------------------|----------------|---------------|
| | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | Approx. Weight (LBS.) | Base Kit No. † | Approx. Weight (LBS.) | Base Kit No. † | |
| | | | | Sq. | Length | | | Sq. | Length | | | | | |
| 710 | 11/32 | .500 | 1.19 | 1/8 | 5/8 | .3745 | .81 | 3/32 | 3/8 | 7 | 56576 | — | — | — |
| 713 | 11/32 | .625 | 2.00 | 3/16 | 1 | .4995 | 1.31 | 1/8 | 5/8 | 13 | 56578 | 12 | 56579 | — |
| 715 | 13/32 | .750 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 21 | 56582 | 20 | 56583 | — |
| 718 | 13/32 | .875 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 23 | 56582 | 22 | 56583 | — |
| 721 | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 28 | 56588 | 25 | 56589 | — |
| 724 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | .7495 | 2.00 | 3/16 | 1 | 37 | 56592 | 35 | 56593 | — |
| 726 | 17/32 | 1.125 | 2.63 | 1/4 | 1-15/16 | .7495 | 2.00 | 3/16 | 1 | 51 | 56596 | 49 | 56597 | — |
| 730 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | .8745 | 2.24 | 3/16 | 1 | 67 | 65545 | 65 | 65546 | — |
| 732 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | .8745 | 2.31 | 3/16 | 1 | 83 | 56600 | 81 | 56601 | 51450 |
| 738 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | .9995 | 2.75 | 1/4 | 1-1/4 | 143 | 56604 | 133 | 56605 | 51451 |
| 752 | 25/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | 1.2495 | 3.25 | 1/4 | 1-1/4 | 238 | 56608 | 226 | 56609 | 51452 |
| 760 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | 1.4995 | 3.88 | 3/8 | 3 | 259 | 56611 | 275 | 56612 | 51453 |

* See Assemblies and Mounting Positions, Page 19.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

700 Series Single Reduction Non-Flanged Reducer Dimensions

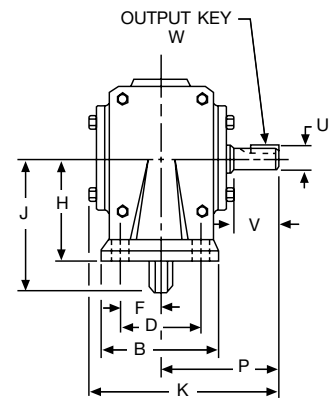
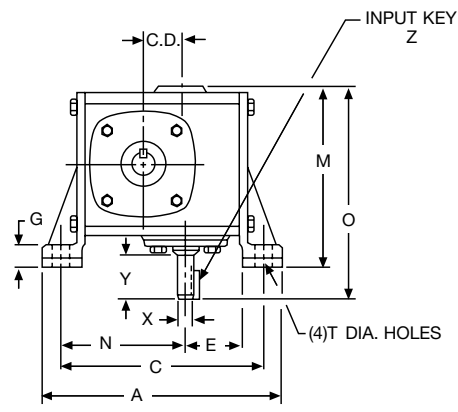
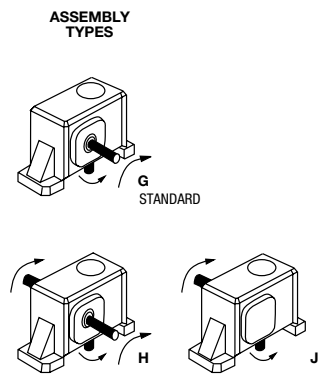
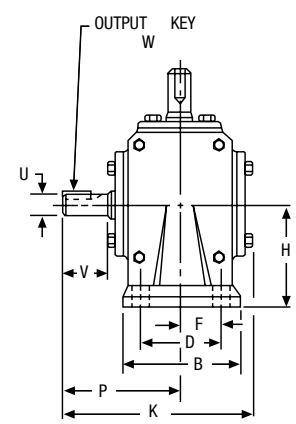
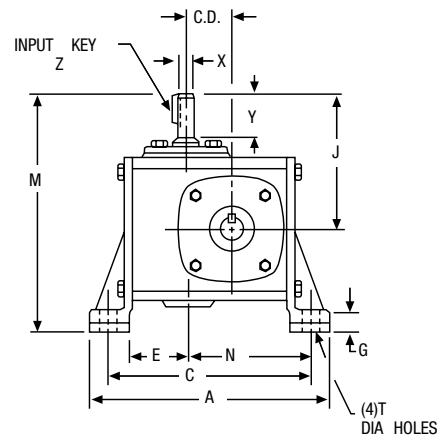
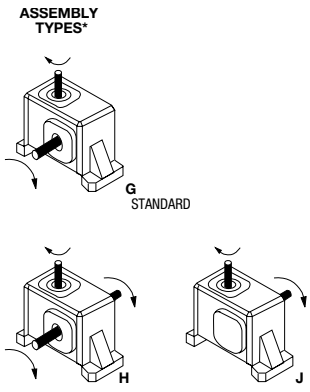
700 Series

X/Y Position Vertical Base; X = Input Vertical Up, Y = Input Vertical Down

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 15, 20-31

A



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J | K | M | | N |
|------|------|-------|------|-------|------|------|------|-----|------|------|------|----------|----------|------|
| | | | | | | | | | | | | X Models | Y Models | |
| 713 | 1.33 | 7.28 | 2.91 | 6.41 | 2.00 | 1.70 | 1.00 | .53 | 2.94 | 3.91 | 6.03 | 6.84 | 5.06 | 3.92 |
| 715 | 1.54 | 8.25 | 3.72 | 7.25 | 2.50 | 2.00 | 1.25 | .69 | 3.50 | 4.69 | 6.84 | 8.19 | 6.06 | 4.38 |
| 718 | 1.75 | 8.62 | 3.72 | 7.62 | 2.50 | 2.00 | 1.25 | .69 | 3.50 | 4.87 | 6.81 | 8.37 | 6.25 | 4.75 |
| 721 | 2.06 | 9.75 | 3.84 | 8.62 | 2.62 | 2.09 | 1.31 | .72 | 3.94 | 5.12 | 7.28 | 9.06 | 6.94 | 5.47 |
| 724 | 2.38 | 10.31 | 4.12 | 9.19 | 2.87 | 2.12 | 1.44 | .75 | 4.06 | 5.75 | 7.81 | 9.81 | 7.25 | 6.00 |
| 726 | 2.62 | 11.88 | 4.53 | 10.37 | 3.12 | 2.50 | 1.56 | .87 | 4.75 | 6.31 | 8.53 | 11.06 | 8.44 | 6.75 |

| Size | O | P | T | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Base Kit No.† |
|------|-------|------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|---------------|
| | | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | |
| | | | | | | Sq. | Length | | | Sq. | Length | | |
| 713 | 6.03 | 4.00 | 11/32 | .625 | 2.00 | 3/16 | 1 | .4995 | 1.31 | 1/8 | 5/8 | 14 | 55196 |
| 715 | 7.25 | 4.31 | 13/32 | .750 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 21 | 55349 |
| 718 | 7.63 | 4.31 | 13/32 | .875 | 1.78 | 3/16 | 1 | .6245 | 1.56 | 3/16 | 13/16 | 23 | 55349 |
| 721 | 8.13 | 4.69 | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 28 | 55644 |
| 724 | 8.94 | 5.09 | 15/32 | 1.125 | 2.37 | 1/4 | 1-1/4 | .7495 | 2.00 | 3/16 | 1 | 37 | 55768 |
| 726 | 10.00 | 5.62 | 17/32 | 1.125 | 2.62 | 1/4 | 1-15/16 | .7495 | 2.00 | 3/16 | 1 | 51 | 55769 |

* See Assemblies and Mounting Positions, Page 19.
 † For Base Kits, see Page 129.

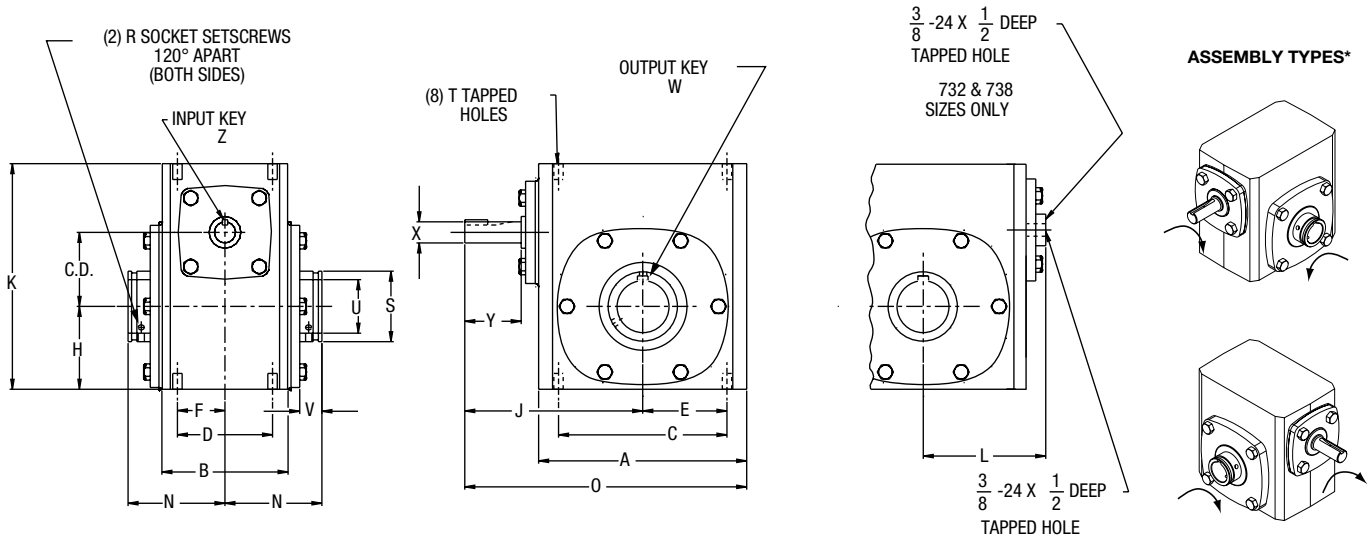
700 Series Single Reduction Non-Flanged Reducer Dimensions

H700 Series

Basic Models (No Base); Bored to Size, Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 16

FOR RATING INFORMATION, See Pages 15, 20-31



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | H | J | K | L | N | O | R | S |
|------|------|-------|------|------|------|------|------|------|-------|-------|------|------|-------|---------|------|
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 1.72 | 3.91 | 4.66 | — | 2.50 | 6.03 | #10-32 | .88 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 1.91 | 4.69 | 5.38 | — | 3.03 | 7.25 | #10-32 | 1.38 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 2.06 | 4.88 | 5.75 | — | 3.03 | 7.63 | #10-32 | 1.38 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 2.28 | 5.13 | 6.38 | — | 3.22 | 8.13 | 1/4-28 | 1.94 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 2.50 | 5.75 | 6.94 | — | 3.22 | 8.94 | 1/4-28 | 1.94 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 2.94 | 6.31 | 8.00 | — | 3.44 | 10.00 | 5/16-24 | 2.50 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 3.25 | 6.88 | 8.88 | — | 4.19 | 10.94 | 5/16-24 | 2.88 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3.50 | 7.44 | 9.38 | 4.94 | 4.31 | 11.94 | 5/16-24 | 2.88 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3.88 | 8.38 | 10.44 | 5.50 | 4.81 | 13.38 | 5/16-24 | 3.25 |
| 752 | 5.16 | 13.13 | 7.38 | 11 | 5.81 | 5.5 | 2.91 | 5.31 | 10.69 | 13.75 | 7.19 | 6.12 | 17.25 | 3/1-24 | 4.25 |

| Size | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Fan Kit No.** |
|------|----------|-------|----------------------|------|---------|--------|------------------|------|---------|--------|-----------------------|---------------|
| | Tap Size | Depth | Max U +.0015 - .0000 | V | W - Key | | X +.000 - .001 | Y | Z - Key | | | |
| | | | | | Sq. | Length | | | Sq. | Length | | |
| 713 | 5/16-18 | .50 | .625 | .68 | | | .4995 | 1.31 | 1/8 | 5/8 | 12 | — |
| 715 | 5/16-18 | .50 | 1.000 | .74 | | | .6245 | 1.56 | 3/16 | 13/16 | 19 | — |
| 718 | 5/16-18 | .50 | 1.000 | .74 | | | .6245 | 1.56 | 3/16 | 13/16 | 21 | — |
| 721 | 3/8-16 | .56 | 1.4375 | .87 | | | .6245 | 1.56 | 3/16 | 13/16 | 26 | — |
| 724 | 3/8-16 | .56 | 1.4375 | .75 | | | .7495 | 2.00 | 3/16 | 1 | 33 | — |
| 726 | 3/8-16 | .56 | 1.9375 | .78 | | | .7495 | 2.00 | 3/16 | 1 | 45 | — |
| 730 | 7/16-14 | .88 | 2.1875 | 1.10 | | | .8745 | 2.24 | 3/16 | 1 | 60 | — |
| 732 | 7/16-14 | .66 | 2.1875 | .93 | | | .8745 | 2.31 | 3/16 | 1 | 76 | 51450 |
| 738 | 1/2-13 | .81 | 2.4375 | 1.11 | | | .9995 | 2.75 | 1/4 | 1-1/4 | 110 | 51451 |
| 752 | 5/8-11 | 1 | 3.4375 | 1.37 | | | 1.2495 | 3.25 | 4-Jan | 1-1/4 | 198 | 51452 |

* See Assemblies and Mounting Positions, Page 19.

** For Fan Kits, see Page 130.

See Page 128 for available bore sizes.

Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

700 Series Single Reduction Non-Flanged Reducer Dimensions

H700 Series

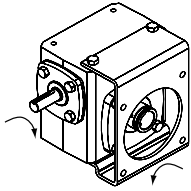
R/L Position Mounting Bracket; Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 16

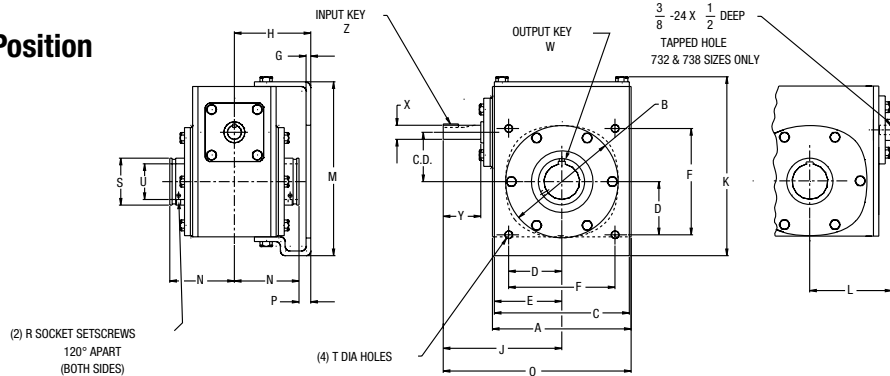
FOR RATING INFORMATION, See Pages 17, 22-33

A

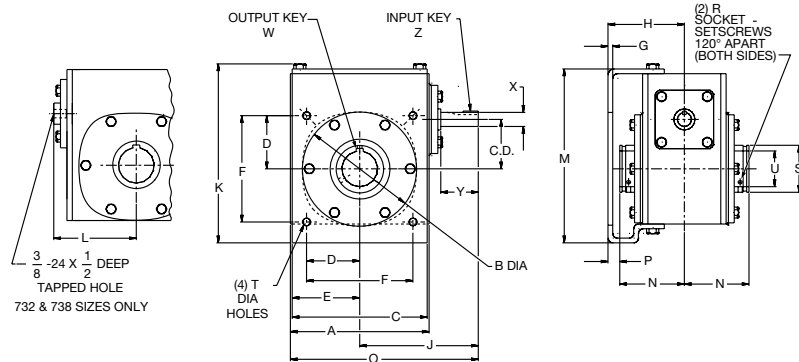
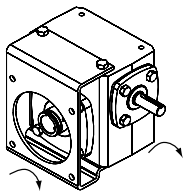
ASSEMBLY TYPES*



R Position



L Position



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J | K | L | M | N | O | P |
|------|------|-------|------|------|------|------|------|-----|------|------|-------|------|-------|------|-------|-----|
| 713 | 1.33 | 4.25 | 3.62 | 4.25 | 1.77 | 2.12 | 3.54 | .19 | 3.00 | 3.91 | 5.72 | — | 5.55 | 2.50 | 6.03 | .50 |
| 715 | 1.54 | 5.13 | 3.62 | 4.75 | 1.77 | 2.38 | 3.54 | .19 | 3.56 | 4.69 | 6.40 | — | 6.16 | 3.03 | 7.25 | .44 |
| 718 | 1.75 | 5.50 | 4.06 | 5.00 | 2.08 | 2.41 | 4.16 | .19 | 3.50 | 4.88 | 6.89 | — | 6.66 | 3.03 | 7.63 | .47 |
| 721 | 2.06 | 6.00 | 4.50 | 5.92 | 2.30 | 2.96 | 4.60 | .25 | 3.75 | 5.13 | 7.74 | — | 7.47 | 3.22 | 8.13 | .53 |
| 724 | 2.38 | 6.38 | 5.00 | 5.75 | 2.65 | 2.88 | 5.30 | .25 | 3.72 | 5.75 | 8.57 | — | 8.30 | 3.22 | 8.94 | .50 |
| 726 | 2.62 | 7.38 | 6.00 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 4.06 | 6.31 | 9.52 | — | 9.25 | 3.44 | 10.00 | .62 |
| 730 | 3.00 | 8.12 | 7.00 | 8.00 | 3.18 | 4.00 | 6.36 | .25 | 4.50 | 6.88 | 10.75 | — | 10.38 | 4.19 | 10.94 | .31 |
| 732 | 3.25 | 9.00 | 7.00 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 5.25 | 7.44 | 11.22 | 4.94 | 10.91 | 4.31 | 11.94 | .94 |
| 738 | 3.75 | 10.00 | 8.00 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 5.47 | 8.38 | 12.21 | 5.50 | 11.84 | 4.81 | 13.38 | .66 |

| Size | R | S | T Holes | Low Speed Shaft | | High Speed Shaft | | | | Approx. Weight (LBS.) | Fan Kit No.** | |
|------|---------|------|---------|---------------------------|------------------|------------------|---------------------|------|-------|-----------------------|---------------|--------|
| | | | | Max U +.0015 -.0000 | W-Key | | X +.000 -.001 | Y | Z-Key | | | |
| | | | | | Sq. | LENGTH | | | Sq. | | | Length |
| 713 | #10-32 | .88 | 11/32 | .625 | | | .4995 | 1.31 | 1/8 | 5/8 | 14 | — |
| 715 | #10-32 | 1.38 | 11/32 | 1.000 | | | .6245 | 1.56 | 3/16 | 13/16 | 22 | — |
| 718 | #10-32 | 1.38 | 11/32 | 1.000 | | | .6245 | 1.56 | 3/16 | 13/16 | 25 | — |
| 721 | 1/4-28 | 1.94 | 13/32 | 1.4375 | See Page 128 For | | .6245 | 1.56 | 3/16 | 13/16 | 29 | — |
| 724 | 1/4-28 | 1.94 | 13/32 | 1.4375 | Key Information | | .7495 | 2.00 | 3/16 | 1 | 40 | — |
| 726 | 5/16-24 | 2.50 | 13/32 | 1.9375 | Key Information | | .7495 | 2.00 | 3/16 | 1 | 54 | — |
| 730 | 5/16-24 | 2.88 | 13/32 | 2.1875 | Key Information | | .8745 | 2.24 | 3/16 | 1 | 67 | — |
| 732 | 5/16-24 | 2.88 | 9/16 | 2.1875 | Key Information | | .8745 | 2.31 | 3/16 | 1 | 89 | 51450 |
| 738 | 3/8-24 | 3.25 | 9/16 | 2.4375 | Key Information | | .9995 | 2.75 | 1/4 | 1-1/4 | 132 | 51451 |

* See Assemblies and Mounting Positions, Page 19.

** For Fan Kits, see Page 130. See Page 128 for available bore sizes.

Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

700 Series Single Reduction Non-Flanged Reducer Dimensions

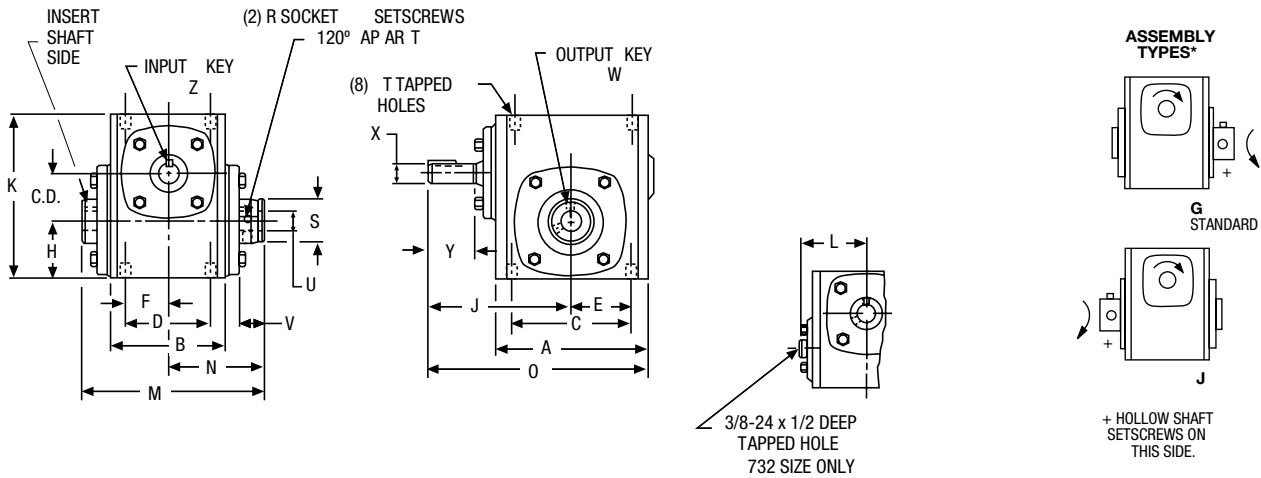
S700 Series

Basic Models (No Base); Hollow Output Shaft

FOR ADDITIONAL SIZES, See the H Series Page 49

FOR RATING INFORMATION, See Pages 17, 22-33

FOR ORDERING INFORMATION, see Page 16



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | H | J | K | M | N | O | R | S |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|---------|------|
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 2.06 | 4.88 | 5.75 | 5.69 | 3.09 | 7.63 | #10-32 | 1.38 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 2.28 | 5.13 | 6.38 | 5.88 | 3.22 | 8.13 | 1/4-28 | 1.50 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 2.94 | 6.31 | 8.00 | 6.47 | 3.50 | 10.00 | 1/4-28 | 2.16 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3.50 | 7.44 | 9.38 | 8.06 | 4.38 | 11.94 | 5/16-24 | 2.56 |

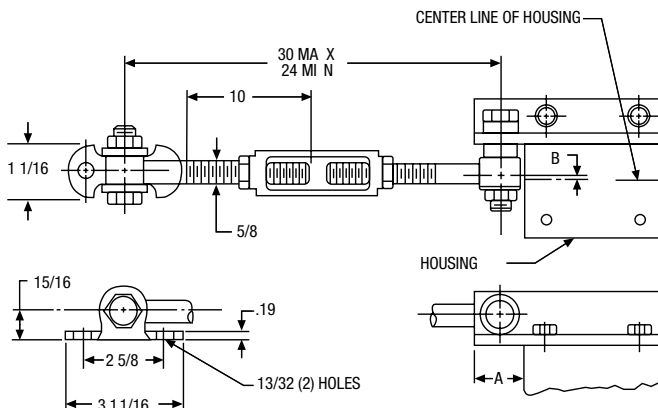
| Size | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Fan Kit No.** |
|------|----------|-------|-------------------------|------|-----------------|--------|---------------------|------|---------|--------|-----------------------|---------------|
| | Tap Size | Depth | U †† +.0015 -.001 | V | W - Key | | X +.000 -.001 | Y | Z - Key | | | |
| | | | | | Sq. | Length | | | Sq. | Length | | |
| 718 | 5/16-18 | .50 | 1.000 | .78 | See Page | | .6245 | 1.56 | 3/16 | 13/16 | 19 | — |
| 721 | 3/8-16 | .56 | 1.125 | .88 | 128 For | | .6245 | 1.56 | 3/16 | 13/16 | 23 | — |
| 726 | 3/8-16 | .56 | 1.4375 | .84 | Key Information | | .7495 | 2.00 | 3/16 | 1 | 40 | — |
| 732 | 7/16-14 | .66 | 1.9375 | 1.00 | | | .8745 | 2.31 | 3/16 | 1 | 72 | 51450 |

* See Assemblies and mounting Positions, Page 19. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

** For Fan Kits, see Page 130.

†† For additional Output Bore Diameters, refer to the H Series, Page 128.

Reaction Rod Kits



ALL DIMENSIONS IN INCHES

| Size | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| S718 | 1.09 | .09 | X718-76K | 69692 |
| S721 | 1.25 | .03 | X721-76K | 69693 |
| S726 | 1.25 | .22 | X726-76K | 69694 |
| S732 | 1.50 | .53 | X732-76K | 69695 |

All hardware shown is included in the kits.

700 Series Single Reduction Non-Flanged Reducer Dimensions

S700 Series

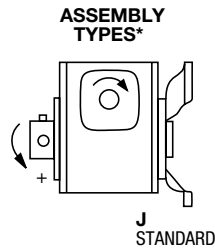
V/W Position Mounting Flange; Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 16

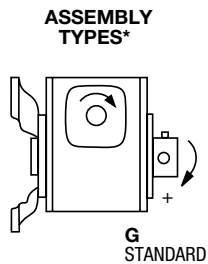
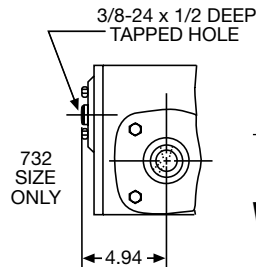
FOR ADDITIONAL SIZES, See the H Series Page 49

FOR RATING INFORMATION, See Pages 17, 22-33

A

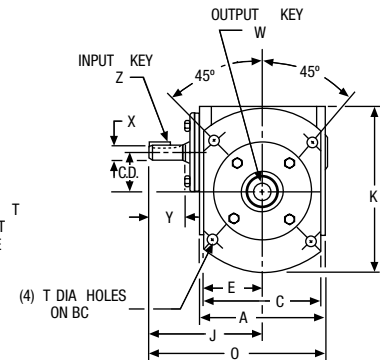
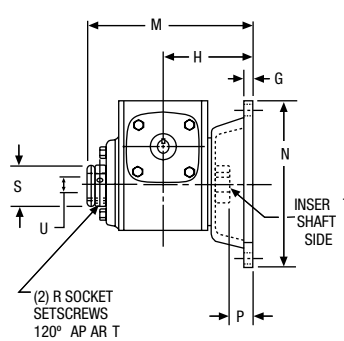


+ HOLLOW SHAFT SETSCREWS ON THIS SIDE.

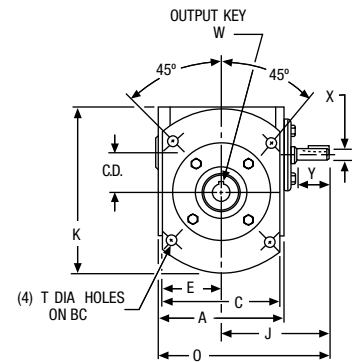
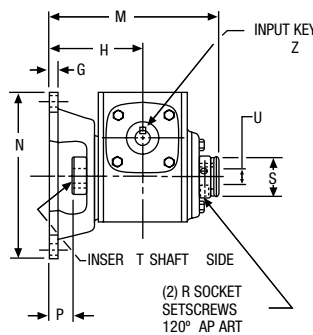


+ HOLLOW SHAFT SETSCREWS ON THIS SIDE

V Position



W Position



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | BC | C | E | G | H | J | K | M | N | O | P |
|------|------|------|-------|------|------|-----|------|------|-------|------|-------|-------|------|
| 718 | 1.75 | 5.50 | 5.88 | 4.88 | 2.44 | .38 | 3.50 | 4.88 | 7.06 | 6.59 | 6.75 | 7.63 | .91 |
| 721 | 2.06 | 6.00 | 6.50 | 5.75 | 2.88 | .38 | 3.75 | 5.13 | 7.28 | 6.97 | 7.38 | 8.13 | 1.09 |
| 726 | 2.62 | 7.38 | 8.00 | 7.75 | 3.88 | .38 | 4.06 | 6.31 | 9.50 | 7.56 | 8.88 | 10.19 | 1.09 |
| 732 | 3.25 | 9.00 | 10.00 | 9.00 | 4.50 | .50 | 5.25 | 7.44 | 11.38 | 9.63 | 11.00 | 11.94 | 1.56 |

| Size | R | S | T Holes | Low Speed Shaft | | High Speed Shaft | | Approx. Weight (LBS.) | Fan Kit No.** | | | |
|------|---------|------|---------|-----------------------|-----------------|------------------|---------------------|-----------------------|---------------|-------|-------|--------|
| | | | | U +.0015 -.0000 | W-Key | | X +.000 -.001 | | | Y | Z-Key | |
| | | | | | Sq. | LENGTH | | | | | Sq. | Length |
| 718 | #10-32 | 1.38 | 11/32 | 1.000 | See Page | | .6245 | 1.56 | 3/16 | 13/16 | 24 | — |
| 721 | 1/4-28 | 1.50 | 13/32 | 1.125 | 128 For | | .6245 | 1.56 | 3/16 | 13/16 | 28 | — |
| 726 | 1/4-28 | 2.16 | 13/32 | 1.4375 | Key Information | | .7495 | 2.00 | 3/16 | 1 | 51 | — |
| 732 | 5/16-24 | 2.56 | 9/16 | 1.9375 | | | .8745 | 2.31 | 3/16 | 1 | 85 | 51450 |

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation. See Assemblies and Mounting Positions, Page 19.

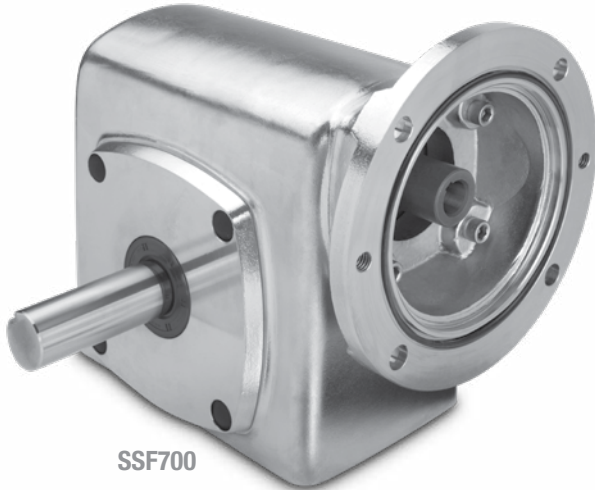
** For Fan Kits, see Page 130.

700 Series Stainless Steel Washdown Duty Reducers

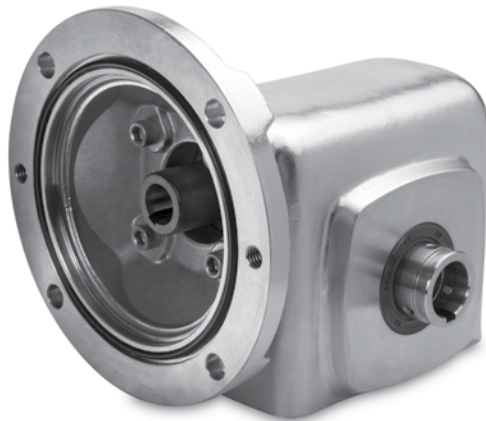
SSF700/SSQC/SSHF700 Series Basic Models (No Base)

FOR ORDERING INFORMATION, see Page 16
FOR RATING INFORMATION, See Pages 17, 22-33

A



SSF700



SSHF700



SSHQC700

APPLICATIONS:

- Washdown
- Food Processing
- Chemical Processing
- Pharmaceutical Industry

STANDARD FEATURES:

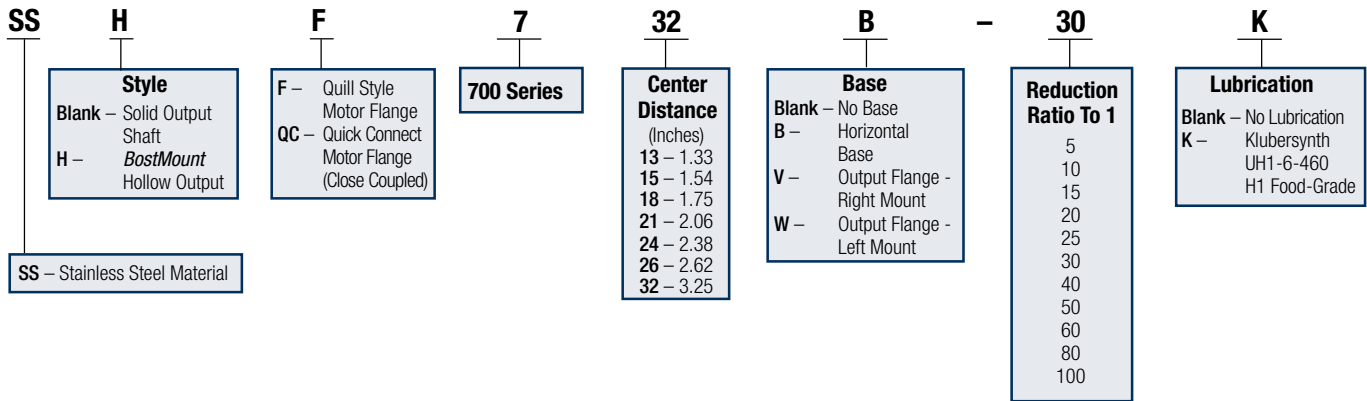
- The original Domed Crown™ Design
- NSF International certified
- Housings, bearing carriers, and flanges are made from 316 cast stainless steel to withstand hostile environments
- 303 stainless steel output shaft
- All stainless steel hardware
- Motor Flange "O" ring sealed
- Flange features two jack screw holes for easy motor removal
- Double lip shaft seals for superior performance in hostile environments
- This is a specially designed internal pressure equalization system which allows the gearbox to operate in all environments without the use of conventional pressure vents
- Lubricated for life with Klubersynth UH1 6-460 synthetic oil for wide temperature ranges, maximum efficiency and long maintenance-free operation
- Oil filled for all mounting positions
- Laser marked nameplate
- Optional high pressure/wash down seals available

SS700 Series Worm Gear Speed Reducers

Ordering Information

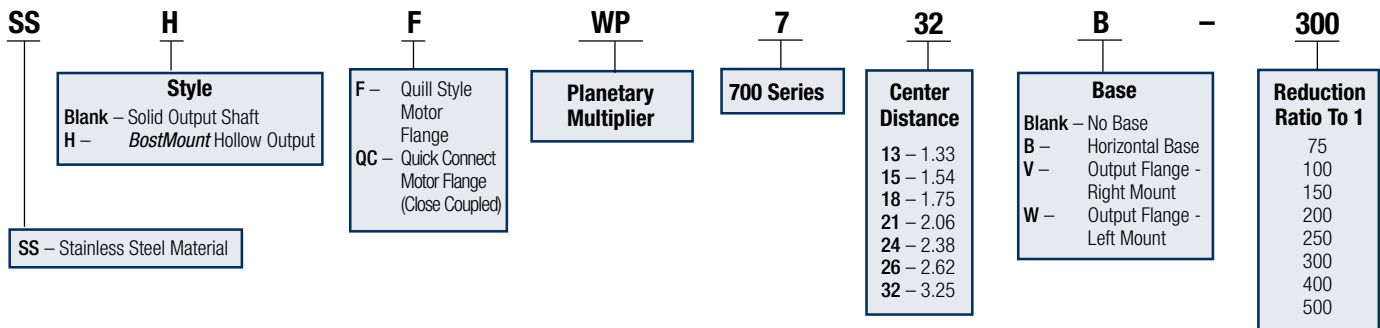
Single Reduction Worm Speed Reducer

Example: **SSHF732B-30KT-B7-HS1-P20-KUTFSS-3**



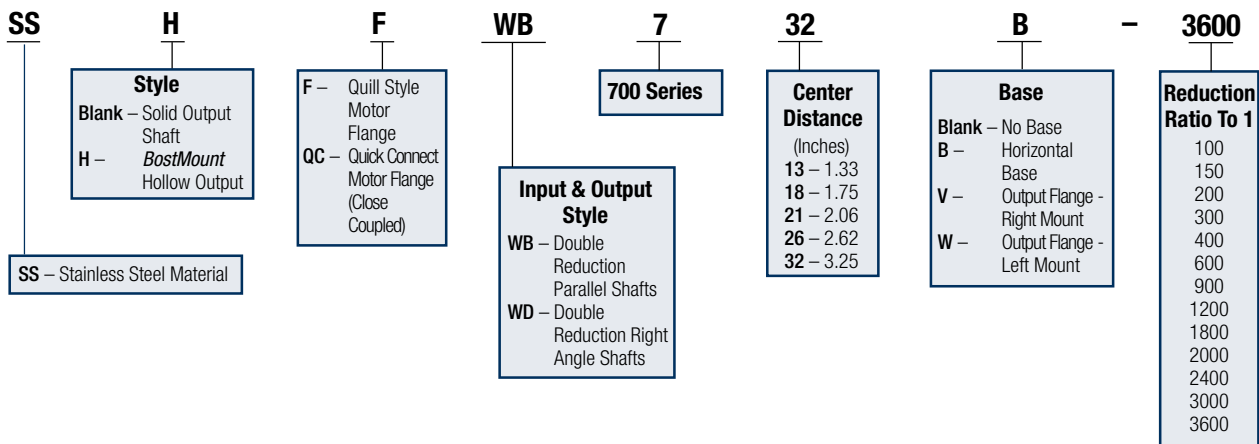
Double Reduction Worm - Planetary Speed Reducer

Example: **SSHFWP732B-300KT-B5-HS1-P20**



Double Reduction Worm - Worm Speed Reducer

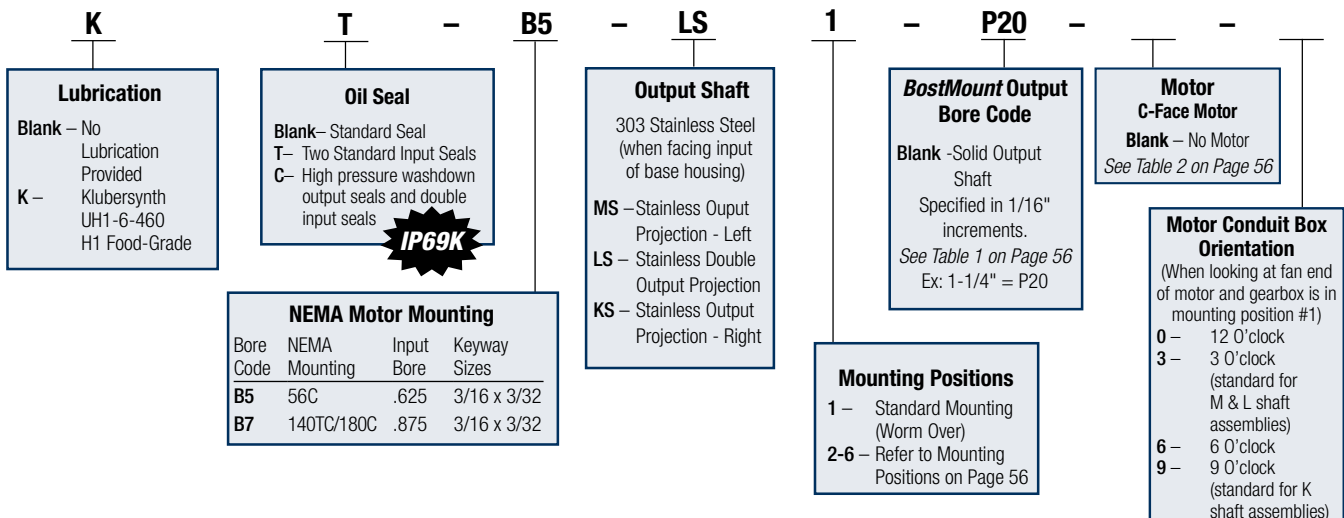
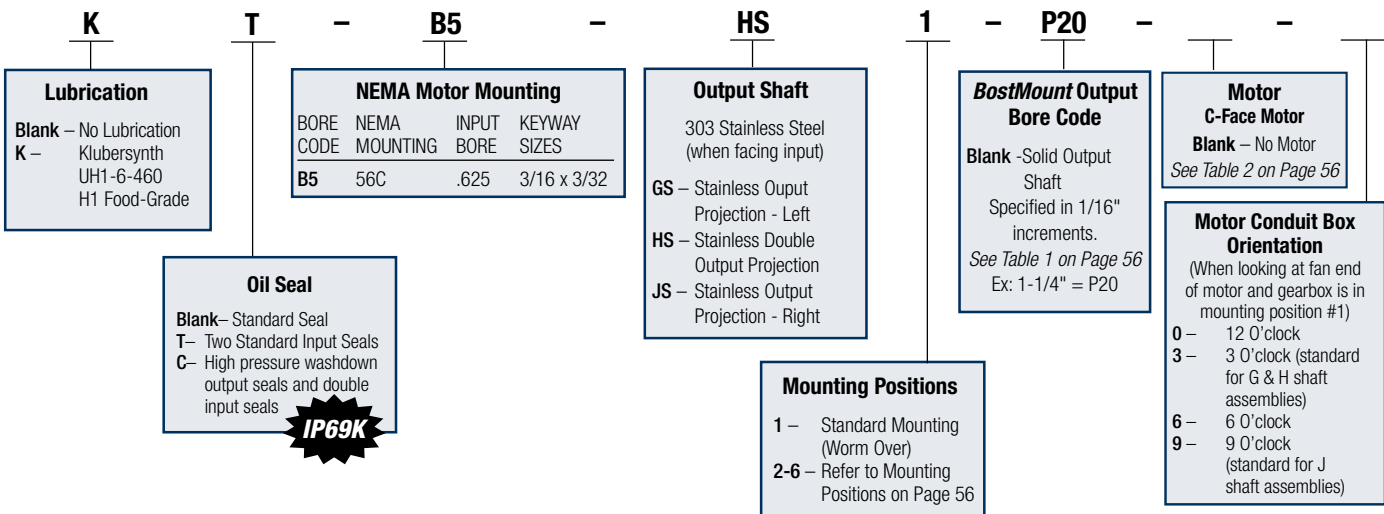
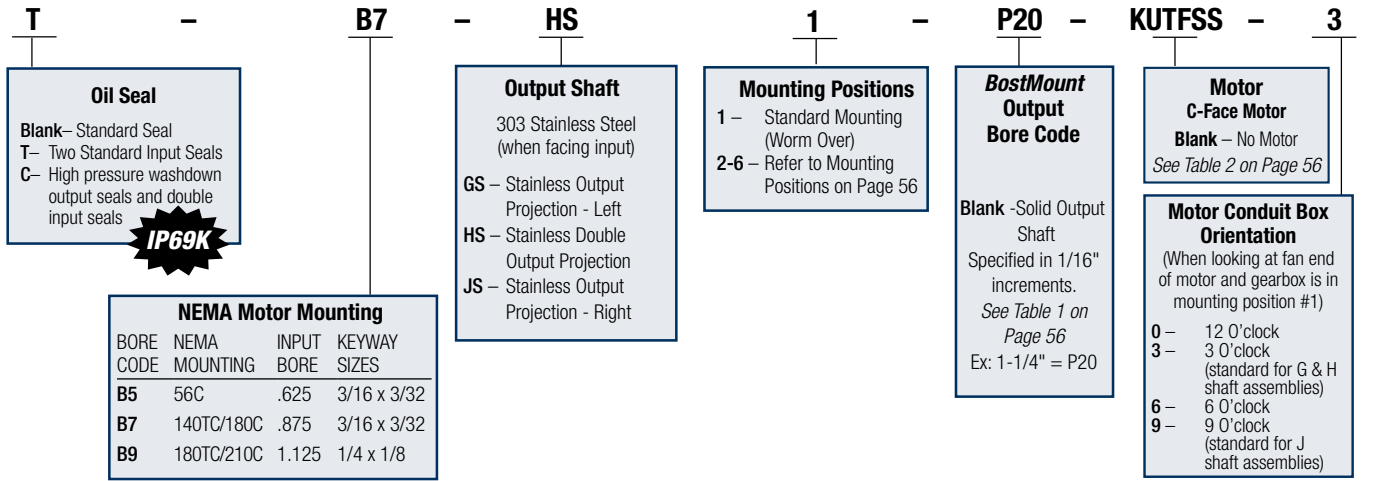
Example: **SSHFWB732B-3600KT-B5-LS1-P20**



SS700 Series Worm Gear Speed Reducers

Ordering Information

A



SS700 Series Worm Gear Speed Reducers

Ordering Information

Horizontal Base Kits for SS700 Series

(If ordered separately)

| Size | Kit | |
|------|--------|---------------|
| 713 | J00877 | XSS713-11H-BK |
| 715 | J00878 | XSS715-11H-BK |
| 718 | J00304 | XSS718-11H-BK |
| 721 | J00305 | XSS721-11H-BK |
| 724 | J00879 | XSS724-11H-BK |
| 726 | J00306 | XSS726-11H-BK |
| 732 | J00307 | XSS732-11H-BK |

Kit includes (2) feet, (4) attaching bolts and (4) hardware covers.

Table 1: Hollow Output Shaft Bore Codes

| Fraction Size | Output Bore Code | 713 | 715 | 718 | 721 | 724 | 726 | 732 | Decimal Size* | Key Size† |
|---------------|------------------|-----|-----|-----|-----|-----|-----|-----|---------------|--------------------|
| 5/8 | P10 | S | | | | | | | .6250 | .187 x .125 x 1.00 |
| 3/4 | P12 | • | • | • | • | • | | | .7500 | .187 x .156 x 1.00 |
| 7/8 | P14 | • | • | • | • | • | | | .8750 | .187 x .156 x 1.00 |
| 15/16 | P15 | • | • | • | • | • | • | | .9375 | .25 x .218 x 1.37 |
| 1 | P16 | S | S | S | S | S | • | | 1.0000 | .25 x .218 x 1.37 |
| 1-1/8 | P18 | | | | • | • | • | | 1.1250 | .25 x .218 x 1.37 |
| 1-3/16 | P19 | | | | S | S | • | | 1.1875 | .25 x .218 x 1.37 |
| 1-1/4 | P20 | | | | S | S | S | • | 1.2500 | .25 x .218 x 1.37 |
| 1-7/16 | P23 | | | | S | S | S | S | 1.4375 | .375 x .312 x 1.75 |
| 1-1/2 | P24 | | | | | | S | S | 1.5000 | .375 x .312 x 1.75 |
| 1-15/16 | P31 | | | | | | • | S | 1.9375 | .50 x .375 x 2.00 |
| 2 | P32 | | | | | | | • | 2.0000 | .50 x .375 x 2.00 |
| 2 3/16 | P35 | | | | | | | • | 2.1875 | .50 x .375 x 2.00 |

*Bore tolerance +.0015 / - .0000

S Standard Bore – Included in Express Program

• Optional Bore

† Rectangular key is provided with reducer to fit hollow shaft. Drive shaft requires standard width and depth keyway.

Note: For all other bore sizes, contact factory.

Replacement Hardware Covers

| Size | Housing Oil Plugs | Bearing Carrier | Mounting Feet | Output Flange | Motor Flange B5/B7 (56C/140TC) | Motor Flange B9 (180TC) |
|------|-------------------|-----------------|---------------|---------------|--------------------------------|-------------------------|
| 713 | J00195 | N/A | N/A | J00195 | J00195 | J00195 & J00196 |
| 715 | J00195 | J00195 | J00196 | J00195 | J00195 | J00195 & J00196 |
| 718 | J00195 | J00195 | J00196 | J00195 | J00195 | J00195 & J00196 |
| 721 | J00195 | J00195 | J00196 | J00195 | J00195 | J00195 & J00196 |
| 724 | J00195 | J00195 | J00196 | J00195 | J00195 | J00195 & J00196 |
| 726 | J00195 | J00195 | J00196 | J00195 | J00195 | J00195 & J00196 |
| 732 | J00195 | J00195 | J00196 | J00196 | J00195 | J00195 & J00196 |

J00195 has nominal O.D. of 0.605"

J00196 has nominal O.D. of 0.812"

Material: Stainless Steel disk (metal detectable) with over-molded rubber

Table 2: Stainless Steel AC Motors

| Part # | HP | Type | Frame Size |
|------------|------|------|------------|
| FUT-SS | 0.5 | TENV | 56C |
| GUT-SS | 0.75 | TENV | 56C |
| HUT5/8-SS | 1.0 | TENV | 56C |
| HUTF5/8-SS | 1.0 | TEFC | 56C |
| HUT-SS | 1.0 | TENV | 140TC |
| HUTF-SS | 1.0 | TEFC | 140TC |
| JUTF-SS | 1.5 | TEFC | 140TC |
| KUTF-SS | 2.0 | TEFC | 140TC |
| LUTF-SS | 3.0 | TEFC | 180TC |
| MUTF-SS | 5.0 | TEFC | 180TC |

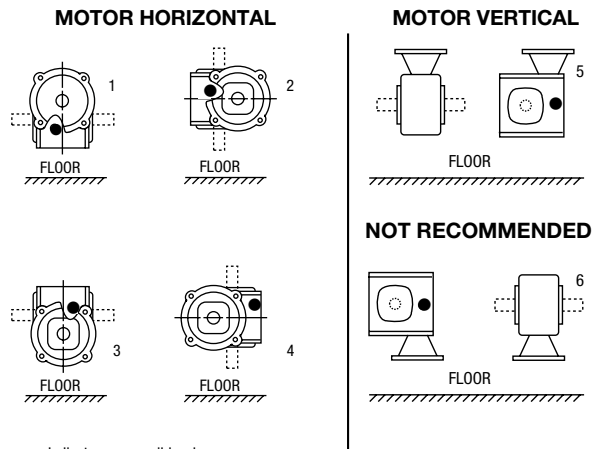
TENV = Totally enclosed, non-ventilated

TEFC = Totally enclosed, fan-cooled

Mounting Positions & Lubrication

Oil Levels For Typical Mounting Positions

(Examples shown for single-reduction models only)



NOTE: Double input seals are required for all positions except #1 and #5.

Enclosed Worm Gear Reducers Lubricant Available from Boston Gear

| Ambient (Room) Temp. | Recommended Oil (or equivalent) | Viscosity Range SUS @ 100°F | ISO Viscosity Grade No. | Klubersynth UH1 6-460 Qt. Part No. |
|---------------------------------|--|-----------------------------|-------------------------|------------------------------------|
| -20° to 225°F** (-29° to 107°C) | Klubersynth* UH1 6-460 Synthetic H1 Food Grade Oil | 1950/2500 | 460 | 65159 |

* Synthetic recommendation is exclusively Klubersynth UH1 6-460, other lubricants will reduce performance ratings.

** The Klubersynth UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.

Oil Capacity in Fluid Ounces

(SS700 Units Only)

| Unit Size | Positions | | | | |
|-----------|-----------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 & 6 |
| 713 | 3.2 | 3.2 | 4.8 | 3.2 | 3.2 |
| 715 | 11.2 | 13.6 | 17.6 | 13.6 | 13.6 |
| 718 | 14.4 | 17.6 | 20.8 | 17.6 | 17.6 |
| 721 | 17.6 | 20.8 | 22.4 | 20.8 | 20.8 |
| 724 | 21.0 | 22.5 | 25.5 | 22.5 | 22.5 |
| 726 | 37.0 | 37.0 | 41.5 | 37.0 | 37.0 |
| 732 | 81.5 | 85.0 | 93.0 | 85.0 | 85.0 |

Double reduction stainless gearboxes require the primary and secondary boxes to be filled independently to their respective mounting position.

SS700 Series Single Reduction

Ratios and Performance

Single Reduction

| Series Size | | | 713 | | | 715 | | | 718 | | | 721 | | | 724 | | | 726 | | | 732 | | |
|--------------------------|-----------|------------|----------|---------------|----------|----------|---------------|----------|----------|---------------|----------|----------|---------------|----------|----------|---------------|----------|----------|---------------|----------|----------|---------------|----------|
| Ratio | Input RPM | Output RPM | Input HP | Output Torque | | Input HP | Output Torque | | Input HP | Output Torque | | Input HP | Output Torque | | Input HP | Output Torque | | Input HP | Output Torque | | Input HP | Output Torque | |
| | | | | HP | (in-lbs) | | HP | (in-lbs) | | HP | (in-lbs) | | HP | (in-lbs) | | HP | (in-lbs) | | HP | (in-lbs) | | HP | (in-lbs) |
| 5 | 1750 | 350 | 1.39 | 1.31 | 235 | 1.72 | 1.62 | 291 | 2.55 | 2.40 | 432 | 3.66 | 3.44 | 620 | 4.94 | 4.65 | 838 | 6.11 | 5.74 | 1034 | 10.05 | 9.54 | 1716 |
| | 1150 | 230 | 0.84 | 0.73 | 200 | 1.15 | 1.04 | 285 | 1.42 | 1.28 | 350 | 2.33 | 2.10 | 575 | 3.05 | 2.74 | 750 | 4.05 | 3.64 | 1000 | 8.43 | 7.91 | 2165 |
| | 690 | 138 | 0.50 | 0.45 | 205 | 0.80 | 0.72 | 330 | 0.97 | 0.87 | 400 | 1.64 | 1.47 | 670 | 2.25 | 2.01 | 920 | 3.04 | 2.74 | 1250 | 6.53 | 6.02 | 2749 |
| | 100 | 20 | 0.09 | 0.08 | 240 | 0.14 | 0.12 | 370 | 0.17 | 0.14 | 460 | 0.30 | 0.26 | 820 | 0.43 | 0.38 | 1200 | 0.58 | 0.51 | 1600 | 1.38 | 1.19 | 3735 |
| 10 | 1750 | 175 | 0.86 | 0.78 | 281 | 1.20 | 1.10 | 397 | 1.61 | 1.49 | 536 | 2.34 | 2.19 | 789 | 3.18 | 2.97 | 1069 | 3.94 | 3.74 | 1345 | 6.22 | 5.85 | 2106 |
| | 1150 | 115 | 0.51 | 0.44 | 243 | 0.73 | 0.64 | 350 | 0.98 | 0.87 | 480 | 1.49 | 1.32 | 725 | 2.09 | 1.87 | 1025 | 2.82 | 2.54 | 1390 | 4.41 | 3.92 | 2150 |
| | 690 | 69 | 0.33 | 0.29 | 266 | 0.47 | 0.42 | 384 | 0.66 | 0.58 | 534 | 1.00 | 0.89 | 814 | 1.46 | 1.31 | 1200 | 1.97 | 1.75 | 1600 | 3.17 | 2.85 | 2600 |
| | 100 | 10 | 0.06 | 0.05 | 296 | 0.09 | 0.07 | 432 | 0.12 | 0.10 | 610 | 0.19 | 0.15 | 968 | 0.27 | 0.23 | 1430 | 0.37 | 0.31 | 1960 | 0.62 | 0.52 | 3300 |
| 15 | 1750 | 116.7 | 0.66 | 0.58 | 305 | 0.91 | 0.79 | 428 | 1.13 | 1.02 | 552 | 1.72 | 1.56 | 840 | 2.34 | 2.15 | 1159 | 2.95 | 2.71 | 1465 | 4.65 | 4.34 | 2344 |
| | 1150 | 76.7 | 0.37 | 0.32 | 262 | 0.53 | 0.46 | 376 | 0.67 | 0.57 | 472 | 1.06 | 0.91 | 752 | 1.51 | 1.29 | 1060 | 2.01 | 1.73 | 1425 | 3.15 | 2.74 | 2250 |
| | 690 | 46 | 0.26 | 0.21 | 288 | 0.36 | 0.30 | 415 | 0.46 | 0.39 | 534 | 0.72 | 0.61 | 832 | 1.05 | 0.90 | 1239 | 1.41 | 1.22 | 1675 | 2.35 | 2.04 | 2800 |
| | 100 | 6.7 | 0.05 | 0.03 | 322 | 0.07 | 0.05 | 468 | 0.09 | 0.06 | 597 | 0.13 | 0.10 | 968 | 0.19 | 0.15 | 1463 | 0.28 | 0.22 | 2057 | 0.48 | 0.39 | 3700 |
| 20 | 1750 | 87.5 | 0.52 | 0.43 | 308 | 0.72 | 0.60 | 435 | 0.97 | 0.82 | 590 | 1.40 | 1.24 | 892 | 1.95 | 1.71 | 1233 | 2.34 | 2.06 | 1483 | 3.71 | 3.35 | 2413 |
| | 1150 | 57.5 | 0.29 | 0.24 | 265 | 0.43 | 0.35 | 380 | 0.58 | 0.48 | 525 | 0.86 | 0.72 | 782 | 1.27 | 1.06 | 1160 | 1.63 | 1.36 | 1500 | 2.77 | 2.37 | 2600 |
| | 690 | 34.5 | 0.19 | 0.16 | 286 | 0.28 | 0.23 | 420 | 0.38 | 0.32 | 580 | 0.57 | 0.48 | 875 | 0.83 | 0.70 | 1280 | 1.11 | 0.94 | 1725 | 1.99 | 1.70 | 3100 |
| | 100 | 5 | 0.04 | 0.03 | 330 | 0.06 | 0.04 | 485 | 0.08 | 0.06 | 690 | 0.11 | 0.08 | 1018 | 0.17 | 0.12 | 1550 | 0.20 | 0.16 | 2050 | 0.41 | 0.30 | 3846 |
| 25 | 1750 | 70 | 0.43 | 0.34 | 307 | 0.60 | 0.49 | 437 | 0.76 | 0.64 | 574 | 1.16 | 0.97 | 875 | 1.55 | 1.33 | 1199 | 1.94 | 1.68 | 1514 | 3.08 | 2.71 | 2443 |
| | 1150 | 46 | 0.24 | 0.19 | 260 | 0.35 | 0.27 | 375 | 0.48 | 0.36 | 500 | 0.72 | 0.58 | 790 | 1.03 | 0.84 | 1150 | 1.31 | 1.11 | 1525 | 2.29 | 1.90 | 2600 |
| | 690 | 27.6 | 0.15 | 0.12 | 280 | 0.22 | 0.18 | 410 | 0.30 | 0.24 | 540 | 0.47 | 0.38 | 875 | 0.69 | 0.56 | 1280 | 0.93 | 0.77 | 1750 | 1.51 | 1.27 | 2900 |
| | 100 | 4 | 0.03 | 0.02 | 310 | 0.04 | 0.03 | 451 | 0.06 | 0.04 | 660 | 0.10 | 0.07 | 975 | 0.14 | 0.10 | 1500 | 0.18 | 0.13 | 2075 | 0.31 | 0.22 | 3500 |
| 30 | 1750 | 58.3 | 0.39 | 0.29 | 311 | 0.54 | 0.41 | 446 | 0.65 | 0.53 | 573 | 0.99 | 0.81 | 871 | 1.33 | 1.11 | 1200 | 1.68 | 1.41 | 1521 | 2.64 | 2.27 | 2456 |
| | 1150 | 38.3 | 0.21 | 0.16 | 270 | 0.31 | 0.23 | 388 | 0.40 | 0.32 | 530 | 0.62 | 0.48 | 795 | 0.89 | 0.70 | 1170 | 1.20 | 0.96 | 1575 | 2.80 | 2.23 | 2675 |
| | 690 | 23 | 0.14 | 0.11 | 300 | 0.20 | 0.17 | 460 | 0.29 | 0.22 | 600 | 0.41 | 0.32 | 880 | 0.60 | 0.47 | 1300 | 0.81 | 0.65 | 1790 | 1.41 | 1.16 | 3200 |
| | 100 | 3.3 | 0.03 | 0.02 | 340 | 0.04 | 0.03 | 496 | 0.06 | 0.04 | 710 | 0.09 | 0.06 | 1050 | 0.12 | 0.08 | 1500 | 0.16 | 0.11 | 2100 | 0.30 | 0.21 | 4000 |
| 40 | 1750 | 43.8 | 0.31 | 0.21 | 307 | 0.43 | 0.31 | 441 | 0.57 | 0.42 | 609 | 0.81 | 0.61 | 876 | 1.08 | 0.84 | 1206 | 1.33 | 1.05 | 1512 | 2.10 | 1.70 | 2444 |
| | 1150 | 28.8 | 0.18 | 0.12 | 265 | 0.24 | 0.17 | 380 | 0.33 | 0.24 | 525 | 0.49 | 0.36 | 785 | 0.70 | 0.53 | 1160 | 0.89 | 0.68 | 1500 | 1.52 | 1.19 | 2600 |
| | 690 | 17.3 | 0.10 | 0.08 | 286 | 0.15 | 0.11 | 420 | 0.22 | 0.16 | 580 | 0.33 | 0.24 | 875 | 0.46 | 0.35 | 1280 | 0.61 | 0.47 | 1725 | 1.08 | 0.85 | 3100 |
| | 100 | 2.5 | 0.03 | 0.01 | 330 | 0.04 | 0.02 | 485 | 0.05 | 0.03 | 690 | 0.07 | 0.04 | 1018 | 0.11 | 0.06 | 1550 | 0.14 | 0.08 | 2050 | 0.25 | 0.15 | 3846 |
| 50 | 1750 | 35 | 0.25 | 0.17 | 297 | 0.35 | 0.24 | 429 | 0.44 | 0.32 | 573 | 0.66 | 0.48 | 857 | 0.87 | 0.65 | 1177 | 1.08 | 0.82 | 1484 | 1.70 | 1.33 | 2403 |
| | 1150 | 23 | 0.12 | 0.09 | 248 | 0.18 | 0.13 | 360 | 0.24 | 0.17 | 470 | 0.38 | 0.27 | 750 | 0.56 | 0.40 | 1100 | 0.75 | 0.54 | 1482 | 1.21 | 0.89 | 2450 |
| | 690 | 13.8 | 0.08 | 0.06 | 265 | 0.12 | 0.09 | 390 | 0.17 | 0.12 | 520 | 0.26 | 0.18 | 840 | 0.37 | 0.26 | 1225 | 0.51 | 0.37 | 1675 | 0.87 | 0.61 | 2800 |
| | 100 | 2 | 0.02 | 0.01 | 300 | 0.03 | 0.01 | 440 | 0.04 | 0.02 | 590 | 0.06 | 0.03 | 970 | 0.08 | 0.05 | 1425 | 0.11 | 0.06 | 1975 | 0.19 | 0.10 | 3325 |
| 60 | 1750 | 29.2 | 0.22 | 0.13 | 271 | 0.28 | 0.18 | 399 | 0.35 | 0.24 | 527 | 0.55 | 0.38 | 826 | 0.73 | 0.52 | 1128 | 0.89 | 0.64 | 1385 | 1.40 | 1.06 | 2281 |
| | 1150 | 19.2 | 0.17 | 0.09 | 201 | 0.16 | 0.10 | 312 | 0.21 | 0.13 | 440 | 0.34 | 0.22 | 730 | 0.49 | 0.32 | 1040 | 0.64 | 0.42 | 1390 | 1.05 | 0.70 | 2300 |
| | 690 | 11.5 | 0.10 | 0.05 | 253 | 0.11 | 0.06 | 338 | 0.14 | 0.08 | 480 | 0.23 | 0.15 | 805 | 0.33 | 0.21 | 1154 | 0.44 | 0.29 | 1570 | 0.71 | 0.48 | 2650 |
| | 100 | 1.7 | 0.02 | 0.01 | 285 | 0.022 | 0.01 | 371 | 0.03 | 0.01 | 530 | 0.06 | 0.03 | 930 | 0.07 | 0.04 | 1330 | 0.10 | 0.05 | 1840 | 0.16 | 0.08 | 3100 |
| 80 | 1750 | 21.9 | 0.15 | 0.08 | 222 | 0.21 | 0.11 | 318 | 0.23 | 0.13 | 375 | 0.38 | 0.22 | 634 | - | - | - | 0.76 | 0.38 | 1100 | 0.95 | 0.62 | 1795 |
| | 1150 | 14.4 | 0.12 | 0.06 | 246 | 0.17 | 0.08 | 358 | 0.16 | 0.09 | 390 | 0.31 | 0.17 | 734 | - | - | - | 0.47 | 0.29 | 1252 | 0.81 | 0.50 | 2171 |
| | 690 | 8.6 | 0.09 | 0.04 | 266 | 0.12 | 0.05 | 392 | 0.10 | 0.05 | 350 | 0.23 | 0.11 | 819 | - | - | - | 0.35 | 0.18 | 1340 | 0.61 | 0.34 | 2512 |
| | 100 | 1.3 | 0.02 | 0.01 | 293 | 0.03 | 0.01 | 440 | 0.02 | 0.01 | 470 | 0.05 | 0.02 | 942 | - | - | - | 0.07 | 0.03 | 1600 | 0.14 | 0.06 | 3030 |
| 100 | 1750 | 17.5 | 0.08 | 0.04 | 138 | 0.15 | 0.07 | 251 | 0.17 | 0.09 | 323 | 0.27 | 0.14 | 503 | - | - | - | 0.39 | 0.21 | 757 | 0.65 | 0.39 | 1414 |
| | 1150 | 11.5 | 0.07 | 0.028 | 152 | 0.12 | 0.05 | 283 | 0.14 | 0.07 | 360 | 0.22 | 0.11 | 580 | - | - | - | 0.34 | 0.17 | 913 | 0.56 | 0.31 | 1711 |
| | 690 | 6.9 | 0.05 | 0.02 | 164 | 0.09 | 0.03 | 309 | 0.10 | 0.04 | 391 | 0.16 | 0.07 | 646 | - | - | - | 0.26 | 0.12 | 1054 | 0.43 | 0.22 | 1980 |
| | 100 | 1 | 0.01 | 0.00 | 180 | 0.02 | 0.01 | 347 | 0.02 | 0.01 | 435 | 0.04 | 0.01 | 744 | - | - | - | 0.06 | 0.02 | 1267 | 0.10 | 0.04 | 2387 |
| Overhung Load* | | | 200 lbs | | | 300 lbs | | | 500 lbs | | | 700 lbs. | | | 900 lbs | | | 1000 lbs | | | 1300 lbs | | |
| Output Shaft Thrust Load | | | 300 lbs | | | 400 lbs | | | 500 lbs | | | 700 lbs | | | 800 lbs | | | 900 lbs | | | 1100 lbs | | |



Ratings shown reflect maximum gear capacity based on AGMA standards (Service Factor = 1.0) with Klubersynth UH1 6-460.
 *Overhung Load is at centerline of output shaft projection and with NO THRUST Load.
 Note: For input speeds above 1750 RPM, do NOT exceed maximum listed input horsepower.

SS700 Series Double Reduction

Ratios and Performance

Worm-Planetary Double Reduction (WP)

| Series Size | | | SS_WP713 | | | SS_WP715 | | | SS_WP718 | | | SS_WP721 | | | SS_WP724 | | | SS_WP726 | | | SS_WP732 | | |
|--------------------------|-----------|------------|----------|--------|-----------------|----------|--------|-----------------|----------|--------|-----------------|----------|--------|-----------------|----------|--------|-----------------|----------|--------|-----------------|----------|--------|-----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) |
| 75 | 1750 | 23.3 | 0.15 | 0.11 | 293 | 0.24 | 0.16 | 446 | 0.27 | 0.21 | 570 | 0.44 | 0.34 | 910 | 0.66 | 0.51 | 1367 | 0.75 | 0.57 | 1542 | 0.75 | 0.57 | 1542 |
| 100 | 1750 | 17.5 | 0.13 | 0.09 | 311 | 0.19 | 0.13 | 457 | 0.25 | 0.18 | 643 | 0.38 | 0.27 | 957 | 0.56 | 0.40 | 1435 | 0.74 | 0.53 | 1912 | 0.75 | 0.54 | 2072 |
| 150 | 1750 | 11.7 | 0.10 | 0.06 | 300 | 0.16 | 0.09 | 509 | 0.18 | 0.12 | 663 | 0.26 | 0.18 | 978 | 0.40 | 0.26 | 1415 | 0.53 | 0.36 | 1969 | 0.75 | 0.51 | 2747 |
| 200 | 1750 | 8.8 | 0.08 | 0.04 | 309 | 0.13 | 0.07 | 520 | 0.14 | 0.09 | 643 | 0.20 | 0.13 | 957 | 0.35 | 0.20 | 1435 | 0.42 | 0.27 | 1912 | 0.75 | 0.49 | 3509 |
| 250 | 1750 | 7 | 0.07 | 0.03 | 312 | 0.11 | 0.06 | 505 | 0.10 | 0.06 | 560 | 0.16 | 0.10 | 915 | 0.27 | 0.15 | 1340 | 0.33 | 0.21 | 1848 | 0.54 | 0.34 | 3103 |
| 300 | 1750 | 5.8 | 0.06 | 0.03 | 273 | 0.09 | 0.04 | 477 | 0.09 | 0.05 | 510 | 0.15 | 0.08 | 877 | 0.24 | 0.12 | 1255 | 0.30 | 0.16 | 1726 | 0.50 | 0.27 | 2909 |
| 400 | 1750 | 4.4 | 0.05 | 0.02 | 251 | 0.08 | 0.03 | 419 | 0.07 | 0.03 | 413 | 0.13 | 0.06 | 890 | - | - | - | 0.22 | 0.10 | 1490 | 0.44 | 0.20 | 2811 |
| 500 | 1750 | 3.5 | 0.03 | 0.01 | 197 | 0.05 | 0.02 | 330 | 0.05 | 0.02 | 416 | 0.09 | 0.04 | 702 | - | - | - | 0.16 | 0.07 | 1177 | 0.28 | 0.12 | 2215 |
| Overhung Load* | | | 200 lbs | | | 300 lbs | | | 500 lbs | | | 700 lbs | | | 900 lbs | | | 1000 lbs | | | 1300 lbs | | |
| Output Shaft Thrust Load | | | 300 lbs | | | 400 lbs | | | 500 lbs | | | 700 lbs | | | 800 lbs | | | 900 lbs | | | 1100 lbs | | |

| Stand-Alone Planetary | | | SSFSP5 and SSFSP5A | | |
|-----------------------|-----------|------------|--------------------|--------|-----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | |
| | | | | HP | Torque (in-lbs) |
| 5 | 1750 | 350 | 0.75 | 0.69 | 124 |

Ratings shown reflect maximum gear capacity based on AGMA standards (Service Factor = 1.0) with Klubersynth UH1 6-460. Worm-Planetary and Stand-Alone Planetary gearing is not recommended for use in applications with repetitive vibrational or impact loading. *Overhung Load is at centerline of output shaft projection and with NO THRUST Load. Note: For input speeds above 1750 RPM, do NOT exceed maximum listed input horsepower.

Worm-Worm Double Reduction (WB & WD)

| Series Size | | | SS_WB/WD713 | | | SS_WB/WD718 | | | SS_WB/WD721 | | | SS_WB/WD726 | | | SS_WB/WD732 | | |
|--------------------------|-----------|------------|-------------|--------|-----------------|-------------|--------|-----------------|-------------|--------|-----------------|-------------|--------|-----------------|-------------|--------|-----------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) | | HP | Torque (in-lbs) |
| 100 | 1750 | 17.5 | 0.16 | 0.08 | 275 | 0.23 | 0.16 | 570 | 0.41 | 0.25 | 910 | 0.75 | 0.50 | 1785 | 1.33 | 0.96 | 3450 |
| 150 | 1750 | 11.7 | 0.13 | 0.05 | 280 | 0.23 | 0.11 | 580 | 0.30 | 0.17 | 940 | 0.56 | 0.34 | 1840 | 1.00 | 0.67 | 3600 |
| 200 | 1750 | 8.8 | 0.12 | 0.05 | 320 | 0.19 | 0.09 | 660 | 0.25 | 0.14 | 990 | 0.47 | 0.26 | 1875 | 0.81 | 0.53 | 3800 |
| 300 | 1750 | 5.8 | 0.10 | 0.03 | 335 | 0.16 | 0.06 | 690 | 0.20 | 0.09 | 1025 | 0.37 | 0.18 | 1950 | 0.61 | 0.36 | 3950 |
| 400 | 1750 | 4.4 | 0.09 | 0.02 | 330 | 0.12 | 0.05 | 690 | 0.17 | 0.02 | 1025 | 0.31 | 0.14 | 1950 | 0.48 | 0.27 | 3900 |
| 600 | 1750 | 2.9 | 0.08 | 0.02 | 340 | 0.10 | 0.03 | 710 | 0.13 | 0.05 | 1025 | 0.25 | 0.09 | 2000 | 0.36 | 0.18 | 4025 |
| 900 | 1750 | 1.9 | 0.07 | 0.01 | 340 | 0.08 | 0.02 | 710 | 0.11 | 0.03 | 1050 | 0.21 | 0.06 | 2000 | 0.28 | 0.12 | 4025 |
| 1200 | 1750 | 1.5 | 0.07 | 0.01 | 330 | 0.07 | 0.02 | 690 | 0.10 | 0.02 | 1025 | 0.19 | 0.05 | 1950 | 0.23 | 0.09 | 3900 |
| 1800 | 1750 | 1 | - | - | - | - | - | - | 0.08 | 0.01 | 900 | 0.16 | 0.03 | 1775 | 0.19 | 0.06 | 3750 |
| 2000 | 1750 | 0.9 | - | - | - | 0.052 | 0.008 | 590 | - | - | - | 0.16 | 0.03 | 1940 | 0.22 | 0.05 | 3880 |
| 2400 | 1750 | 0.7 | - | - | - | - | - | - | 0.05 | 0.01 | 900 | 0.15 | 0.02 | 1864 | 0.17 | 0.04 | 3143 |
| 3000 | 1750 | 0.6 | - | - | - | - | - | - | - | - | - | 0.14 | 0.02 | 1800 | 0.15 | 0.04 | 3750 |
| 3600 | 1750 | 0.5 | - | - | - | - | - | - | - | - | - | 0.13 | 0.01 | 1865 | 0.14 | 0.02 | 3154 |
| Overhung Load* | | | 200 lbs. | | | 500 lbs. | | | 700 lbs. | | | 1000 lbs. | | | 1300 lbs. | | |
| Output Shaft Thrust Load | | | 300 lbs. | | | 500 lbs. | | | 700 lbs. | | | 900 lbs. | | | 1100 lbs. | | |

Ratings shown reflect maximum gear capacity based on AGMA standards (Service Factor = 1.0) with Klubersynth UH1 6-460. *Overhung Load is at centerline of output shaft projection and with NO THRUST Load. Note: For input speeds above 1750 RPM, do NOT exceed maximum listed input horsepower.

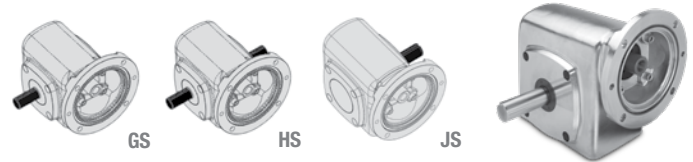
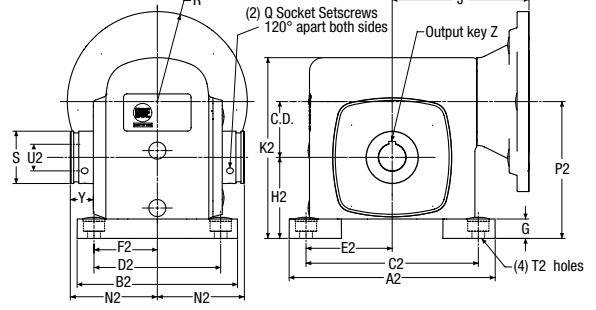
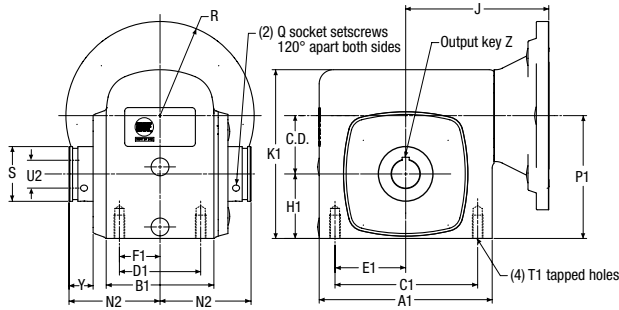
SS700 Series Single Reduction, With and Without Base

Dimensions



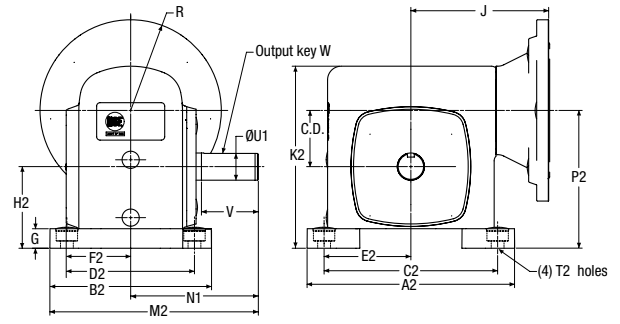
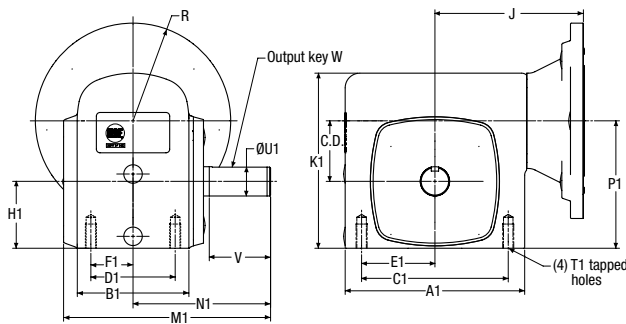
SSHF700 & SSHQC700 Hollow Shaft without Base

SSHF700 & SSHQC700 Hollow Shaft with Base



SSF700 & SSQC700 GS Solid Shaft without Base

SSF700 & SSQC700 GS Solid Shaft with Base



| Size | C.D. | A1 | A2 | B1 | B2 | C1 | C2 | D1 | D2 | E1 | E2 | F1 | F2 |
|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 713 | 1.33 | 4.35 | 5.25 | 2.87 | 4.19 | 3.25 | 4.38 | 2.00 | 3.31 | 1.63 | 2.19 | 1.00 | 1.66 |
| 715 | 1.54 | 5.26 | 6.46 | 3.69 | 5.5 | 4.19 | 5.25 | 2.75 | 4.31 | 2.09 | 2.63 | 1.38 | 2.16 |
| 718 | 1.75 | 5.63 | 7.00 | 3.69 | 5.75 | 4.19 | 5.75 | 2.75 | 4.50 | 2.09 | 2.88 | 1.38 | 2.25 |
| 721 | 2.06 | 6.12 | 7.62 | 3.81 | 5.94 | 5.00 | 6.38 | 2.88 | 4.69 | 2.50 | 3.19 | 1.44 | 2.34 |
| 724 | 2.38 | 6.52 | 8.37 | 4.06 | 6.18 | 5.00 | 7.06 | 2.88 | 4.88 | 2.5 | 3.53 | 1.44 | 2.44 |
| 726 | 2.62 | 7.58 | 9.25 | 4.44 | 6.50 | 6.38 | 8.00 | 3.38 | 5.25 | 3.19 | 4.00 | 1.69 | 2.63 |
| 732 | 3.25 | 9.20 | 11.00 | 5.88 | 7.62 | 7.50 | 9.50 | 4.00 | 6.13 | 3.75 | 4.75 | 2.00 | 3.06 |

| Size | G | H1 | H2 | J | | | | K1 | K2 | M1 | M2 | N1 | N2 | P1 | P2 | Q |
|------|------|------|------|-----------|-------|--------------------------|-------|------|-------|-------|-------|------|------|------|------|---------|
| | | | | F700 | | QC700 <small>NEW</small> | | | | | | | | | | |
| | | | | 56C/140TC | 180TC | 56C/140TC | 180TC | | | | | | | | | |
| 713 | 0.53 | 1.72 | 2.25 | 3.94 | - | 5.46 | - | 4.27 | 4.8 | 5.88 | 6.10 | 4.00 | 2.50 | 3.06 | 3.59 | #10-32 |
| 715 | 0.59 | 1.91 | 2.5 | 4.50 | - | 6.11 | - | 5.48 | 6.08 | 6.71 | 7.06 | 4.31 | 3.03 | 3.44 | 4.06 | #10-32 |
| 718 | 0.69 | 2.06 | 2.75 | 4.69 | - | 6.29 | - | 5.31 | 6.00 | 6.74 | 7.19 | 4.31 | 3.03 | 3.81 | 4.50 | #10-32 |
| 721 | 0.72 | 2.28 | 3.00 | 5.06 | - | 6.76 | - | 5.97 | 6.69 | 7.09 | 7.66 | 4.69 | 3.22 | 4.34 | 5.06 | 1/4-28 |
| 724 | 0.75 | 2.5 | 3.25 | 5.25 | 5.69 | 6.95 | 7.81 | 7.04 | 7.79 | 7.61 | 8.18 | 5.09 | 3.22 | 4.88 | 5.63 | 1/4-28 |
| 726 | 0.75 | 2.94 | 3.69 | 5.75 | 6.19 | 7.39 | 7.81 | 7.50 | 8.25 | 8.33 | 8.87 | 5.63 | 3.44 | 5.56 | 6.31 | 5/16-24 |
| 732 | 0.88 | 3.50 | 4.38 | 6.56 | 7.00 | 8.20 | 8.77 | 9.25 | 10.13 | 10.49 | 10.99 | 7.06 | 4.31 | 6.75 | 7.63 | 5/16-24 |

| Size | R | | S | T1 | T2 C'Bore/ Hole Dias. | U1 +.000 -.001 | Max U2* | V | W | Y | Z | Approx. Weight (lbs.) | | | |
|------|-----------|-------------|------|---------|-----------------------------|----------------------|------------|------|---------------|------|---|-----------------------|---------|---------|----------|
| | 56C/140TC | 180TC/210TC | | | | | | | | | | SSF700 | SSHF700 | SSF700B | SSHF700B |
| 713 | 3.33 | - | 1.38 | 5/16-18 | - | 0.625 | 1.0000 | 2.00 | 3/16 x 1 | 0.63 | * | 13 | 15 | 15 | 17 |
| 715 | 3.33 | - | 1.38 | 5/16-18 | .60 / .41 | 0.750 | 1.0000 | 1.78 | 3/16 x 1 | 0.63 | * | 21 | 24 | 23 | 26 |
| 718 | 3.33 | - | 1.38 | 5/16-18 | .60 / .41 | 0.875 | 1.0000 | 1.78 | 3/16 x 1 | 0.60 | * | 22 | 25 | 25 | 28 |
| 721 | 3.33 | - | 2.00 | 3/8-16 | .78 / .47 | 1.000 | 1.4375 | 2.09 | 1/4 x 1-1/4 | 0.82 | * | 27 | 30 | 30 | 33 |
| 724 | 3.33 | 4.63 | 2.00 | 3/8-16 | .78 / .47 | 1.125 | 1.4375 | 2.38 | 1/4 x 1-1/4 | 0.70 | * | 37 | 42 | 41 | 46 |
| 726 | 3.33 | 4.63 | 2.50 | 3/8-16 | .78 / .53 | 1.125 | 1.9375 | 2.63 | 1/4 x 1-15/16 | 0.73 | * | 40 | 47 | 44 | 51 |
| 732 | 3.33 | 4.63 | 2.88 | 7/16-14 | .78 / .53 | 1.375 | 2.1875 | 3.25 | 5/16 x 2-7/16 | 0.89 | * | 63 | 76 | 70 | 83 |

* Refer to Table 1 on page 56.

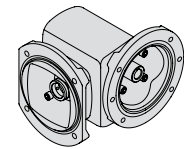
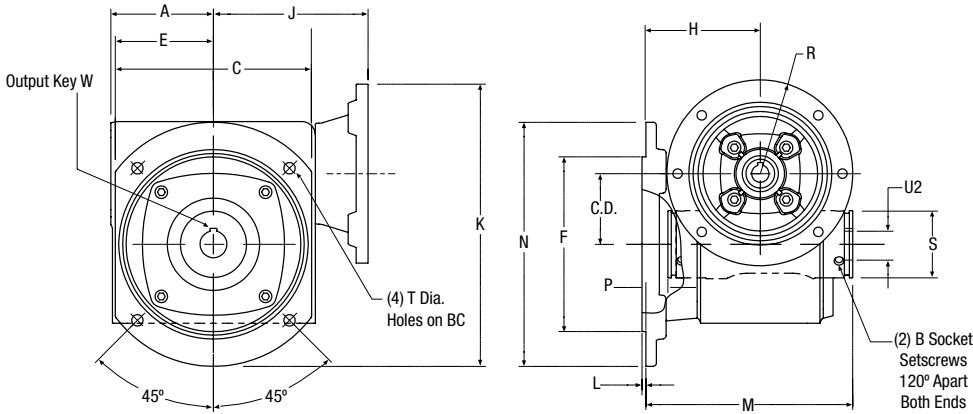
SS700 Series Single Reduction, With Output Flange

Dimensions



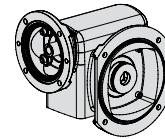
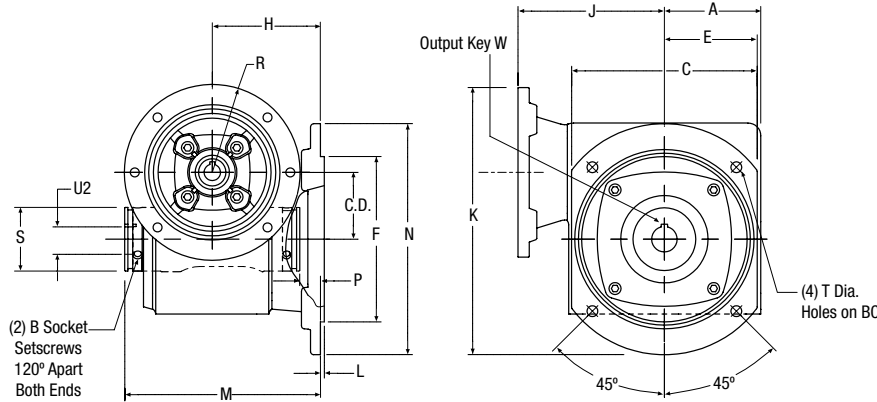
A

SSHF700W & SSHQC700W Hollow Output Shaft, W Position



W Output Flange
(Available for all sizes)

SSHF700V & SSHQC700V Hollow Output Shaft, V Position



V Output Flange
(Not available for sizes 718 & 721)

| Size | C.D. | A | B | C | B.C. | E | F | H | J | | | | K | L |
|------|------|------|---------|------|-------|------|-------|------|-----------|-------|------------------|-------|-------|------|
| | | | | | | | | | F700 | | QC700 NEW | | | |
| | | | | | | | | | 56C/140TC | 180TC | 56C/140TC | 180TC | | |
| 713 | 1.33 | 2.18 | #10-32 | 4.75 | 5.00 | 2.38 | 4.125 | 3.18 | 3.94 | - | 5.46 | - | 7.55 | 0.15 |
| 715 | 1.54 | 2.63 | #10-32 | 5.54 | 5.88 | 2.77 | 4.750 | 4.08 | 4.50 | - | 6.11 | - | 8.34 | 0.15 |
| 718 | 1.75 | 2.82 | #10-32 | 5.53 | 5.88 | 2.77 | 4.750 | 3.62 | 4.69 | - | 6.29 | - | 8.55 | 0.15 |
| 721 | 2.06 | 3.06 | 1/4-28 | 6.03 | 6.50 | 3.02 | 5.250 | 3.94 | 5.06 | - | 6.76 | - | 9.17 | 0.15 |
| 724 | 2.38 | 3.25 | 1/4-28 | 6.80 | 7.50 | 3.40 | 5.500 | 4.22 | 5.25 | 5.69 | 6.95 | 7.81 | 9.94 | 0.15 |
| 726 | 2.62 | 3.80 | 5/16-24 | 7.29 | 8.00 | 3.65 | 6.500 | 4.45 | 5.75 | 6.19 | 7.39 | 7.81 | 10.50 | 0.15 |
| 732 | 3.25 | 4.60 | 5/16-24 | 8.79 | 10.00 | 4.40 | 8.000 | 5.50 | 6.56 | 7.00 | 8.20 | 8.77 | 12.22 | 0.15 |

| Size | M | N | P | R | | S | T** | | Low Speed Shaft | | | Approx Weight (lbs.) |
|------|------|-------|------|-----------|-------------|------|----------|------------|--------------------|---------|--------|----------------------|
| | | | | 56C/140TC | 180TC/210TC | | Hole Dia | C-Bore Dia | Hollow Bore Output | | | |
| | | | | | | | | | Max U2* | W - Key | | |
| | | | | | | | | | | Sq. | Length | |
| 713 | 5.68 | 5.80 | 0.68 | 3.33 | - | 1.38 | 0.362 | 0.600 | 1.0000 | * | * | 16 |
| 715 | 7.11 | 6.94 | 1.05 | 3.33 | - | 1.38 | 0.362 | 0.600 | 1.0000 | * | * | 26 |
| 718 | 0.65 | 6.94 | 0.59 | 3.33 | - | 1.38 | 0.362 | 0.600 | 1.0000 | * | * | 29 |
| 721 | 7.16 | 7.56 | 0.72 | 3.33 | - | 2.00 | 0.425 | 0.600 | 1.4375 | * | * | 34 |
| 724 | 7.44 | 8.60 | 1.00 | 3.33 | 4.63 | 2.00 | 0.425 | 0.600 | 1.4375 | * | * | 48 |
| 726 | 7.89 | 9.08 | 1.01 | 3.33 | 4.63 | 2.50 | 0.425 | 0.600 | 1.9375 | * | * | 51 |
| 732 | 9.81 | 11.28 | 1.19 | 3.33 | 4.63 | 2.88 | 0.535 | 0.808 | 2.1875 | * | * | 80 |

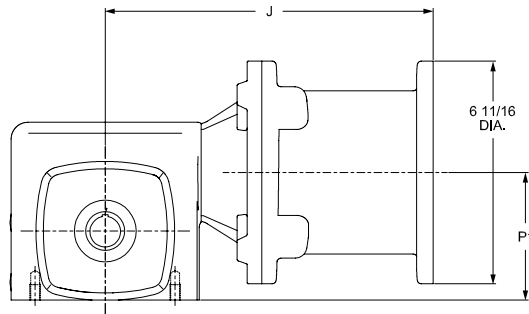
* Refer to Table 1 on page 56.

** Designed for use with socket head capscrews.

SS700 WP Series Double Reduction

Dimensions

SSHFWP700 & SSHQCW700 Hollow Output Shaft



| Size | C.D. | J | | P1 |
|------|------|-----------|--------------------------|-------|
| | | F700 | QC700 <small>NEW</small> | |
| | | 56C/140TC | 56C/140TC | |
| 713 | 1.33 | 9.07 | 10.59 | 3.06* |
| 715 | 1.54 | 9.63 | 11.24 | 3.44 |
| 718 | 1.75 | 9.82 | 11.42 | 3.81 |
| 721 | 2.06 | 10.19 | 11.89 | 4.34 |
| 724 | 2.38 | 10.38 | 12.08 | 4.88 |
| 726 | 2.62 | 10.88 | 12.52 | 5.56 |
| 732 | 3.25 | 11.69 | 13.33 | 6.75 |

*Motor flange will drop below the bottom of the speed reducer.

Same dimensions for SSHFWP700 & SSQCWP700 Solid Output Shaft Models.

A

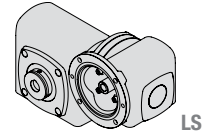
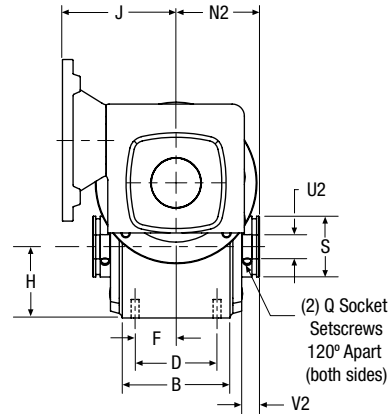
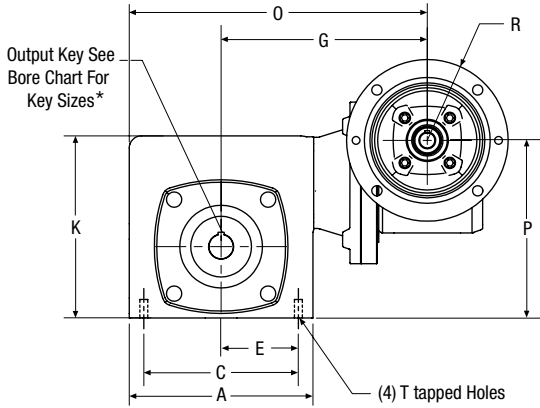
SS700 WB Series Double Reduction, Parallel Shafts

Dimensions

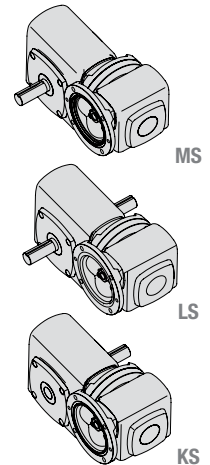
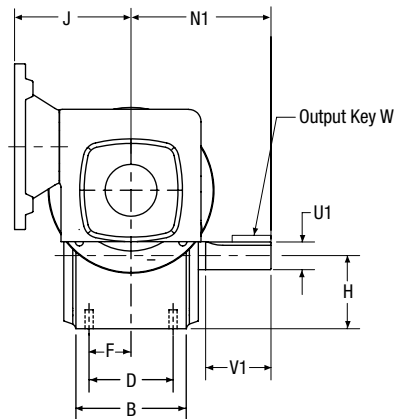
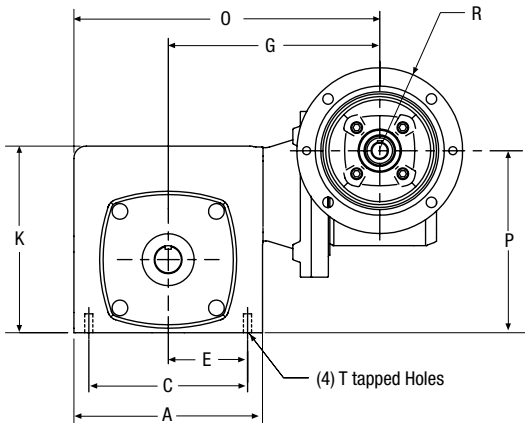


A

SSHFWB700 & SSHQCWB700 Hollow Output Shaft



SSFWB700 & SSQCWB700 Solid Output Shaft



| Size | A | B | C | D | E | F | G | H | J | | K | N1 | N2 | O | P |
|------|------|------|------|------|------|------|------|------|-----------|--------------------------|------|------|------|-------|------|
| | | | | | | | | | F700 | QC700 <small>NEW</small> | | | | | |
| | | | | | | | | | 56C/140TC | 56C/140TC | | | | | |
| 713 | 4.35 | 2.87 | 3.25 | 2.00 | 1.63 | 1.00 | 7.00 | 1.72 | 3.94 | 5.46 | 4.27 | 4.00 | 2.50 | 9.18 | 4.39 |
| 718 | 5.63 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 7.75 | 2.06 | 3.94 | 5.46 | 5.31 | 4.31 | 3.03 | 10.57 | 5.14 |
| 721 | 6.12 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 8.12 | 2.28 | 3.94 | 5.46 | 5.97 | 4.69 | 3.22 | 11.18 | 5.67 |
| 726 | 7.58 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 8.56 | 2.94 | 4.68 | 6.29 | 7.50 | 5.63 | 3.44 | 12.35 | 7.32 |
| 732 | 9.20 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 9.37 | 3.50 | 4.68 | 6.29 | 9.25 | 7.06 | 4.31 | 13.97 | 8.50 |

| Size | Q | R 56C/140TC | S | T | | Low Speed Shaft | | | | | | Approx Weight (lbs.) | |
|------|---------|----------------|------|-------------|----------------------|--------------------|---------|---------|--------------------|------|-------|-------------------------|--|
| | | | | Tap Size | U1 +.000 -.001 | Solid Output Shaft | | | Hollow Bore Output | | | | |
| | | | | | | V1 | W - Key | | Max U2* | V2 | | | |
| | | | | | | | Sq. | Length | | | SSFWB | SSHFWB | |
| 713 | #10-32 | 3.33 | 1.38 | 5/16-18 | 0.625 | 2.13 | 3/16 | 1 | 1.0000 | 0.63 | 28 | 30 | |
| 718 | #10-32 | 3.33 | 1.38 | 5/16-18 | 0.875 | 1.78 | 3/16 | 1 | 1.0000 | 0.60 | 37 | 40 | |
| 721 | 1/4-28 | 3.33 | 2.00 | 3/8-16 | 1.000 | 2.09 | 1/4 | 1-1/4 | 1.4375 | 0.82 | 42 | 45 | |
| 726 | 5/16-24 | 3.33 | 2.50 | 3/8-16 | 1.125 | 2.63 | 1/4 | 1-15/16 | 1.9375 | 0.73 | 62 | 69 | |
| 732 | 5/16-24 | 3.33 | 2.88 | 7/16-14 | 1.375 | 3.25 | 5/16 | 2-7/16 | 2.1875 | 0.88 | 85 | 98 | |

* Refer to Table 1 on page 56.

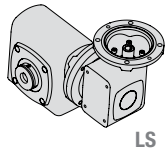
SS700 WD Series Double Reduction, Right Angle Shafts

Dimensions

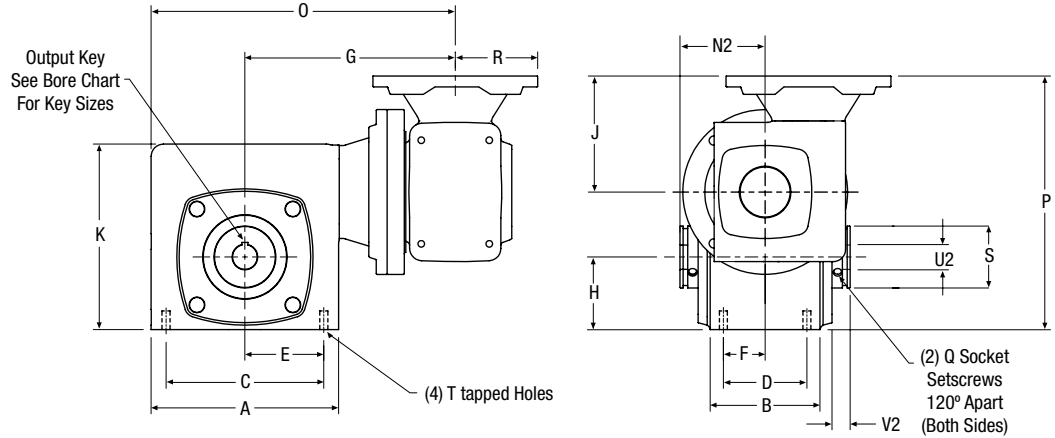


A

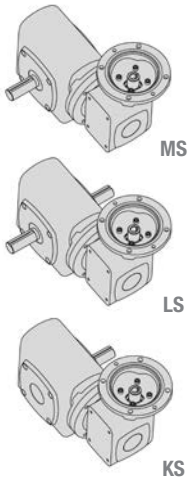
SSHFWD700 & SSHQCWD700 Hollow Output Shaft



LS



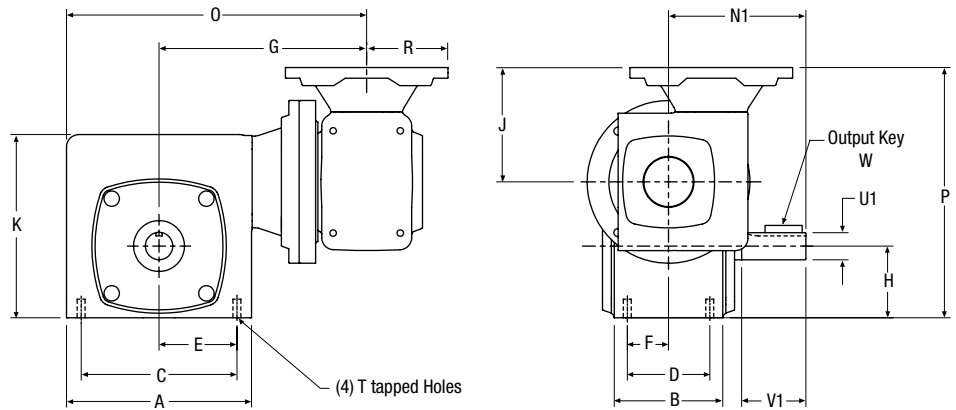
SSFWD700 & SSQCWD700 Solid Output Shaft



MS

LS

KS



| Size | A | B | C | D | E | F | G | H | J | | K | N1 | N2 | O | P | |
|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|-------|-----------|----------------------|
| | | | | | | | | | F700 | QC700 ^{NEW} | | | | | F700 | QC700 ^{NEW} |
| | | | | | | | | | 56C/140TC | 56C/140TC | | | | | 56C/140TC | 56C/140TC |
| 713 | 4.35 | 2.87 | 3.25 | 2.00 | 1.63 | 1.00 | 7.00 | 1.72 | 3.94 | 5.46 | 4.27 | 4.00 | 2.50 | 9.18 | 4.39 | 5.91 |
| 718 | 5.63 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 7.75 | 2.06 | 3.94 | 5.46 | 5.31 | 4.31 | 3.03 | 10.57 | 5.14 | 6.66 |
| 721 | 6.12 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 8.12 | 2.28 | 3.94 | 5.46 | 5.97 | 4.69 | 3.22 | 11.18 | 5.67 | 7.19 |
| 726 | 7.58 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 8.56 | 2.94 | 4.68 | 6.29 | 7.50 | 5.63 | 3.44 | 12.35 | 10.25 | 11.86 |
| 732 | 9.20 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 9.37 | 3.50 | 4.68 | 6.29 | 9.25 | 7.06 | 4.31 | 13.97 | 11.44 | 13.05 |

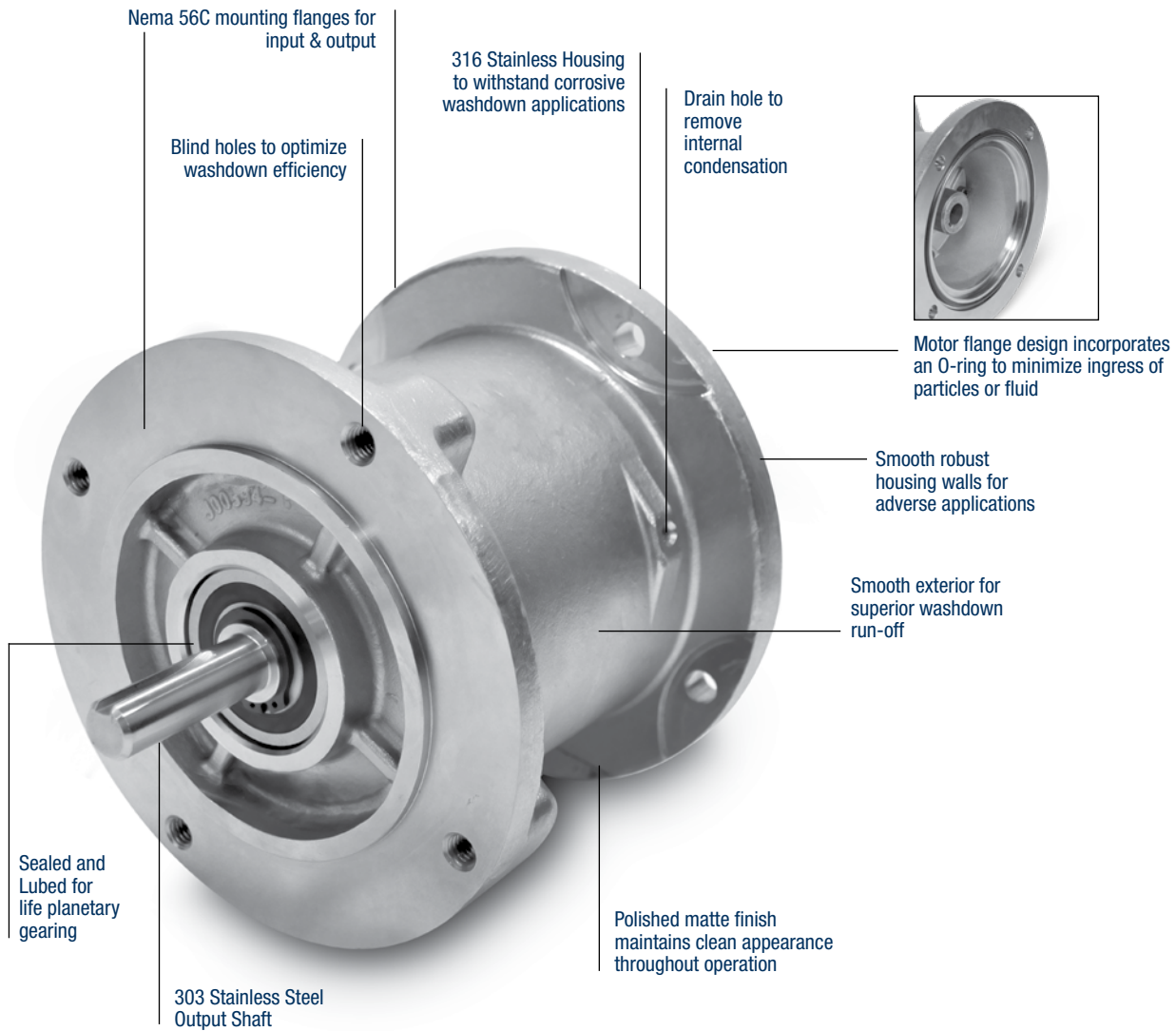
| Size | Q | R 56C/140TC | S | T | | Low Speed Shaft | | | | | | Approx Weight (lbs.) | |
|------|---------|----------------|------|-------------|----------------------|--------------------|---------|---------|--------------------|------|-------|-------------------------|--|
| | | | | Tap Size | U1 +.000 -.001 | Solid Output Shaft | | | Hollow Bore Output | | | | |
| | | | | | | V1 | W - Key | | Max U2* | V2 | | | |
| | | | | | | | Sq. | Length | | | SSFWD | SSHFW | |
| 713 | #10-32 | 3.33 | 1.38 | 5/16-18 | 0.625 | 2.13 | 3/16 | 1 | 1.0000 | 0.63 | 28 | 30 | |
| 718 | #10-32 | 3.33 | 1.38 | 5/16-18 | 0.875 | 1.78 | 3/16 | 1 | 1.0000 | 0.60 | 37 | 40 | |
| 721 | 1/4-28 | 3.33 | 2.00 | 3/8-16 | 1.000 | 2.09 | 1/4 | 1-1/4 | 1.4375 | 0.82 | 42 | 45 | |
| 726 | 5/16-24 | 3.33 | 2.50 | 3/8-16 | 1.125 | 2.63 | 1/4 | 1-15/16 | 1.9375 | .73 | 62 | 69 | |
| 732 | 5/16-24 | 3.33 | 2.88 | 7/16-14 | 1.375 | 3.25 | 5/16 | 2-7/16 | 2.1875 | .88 | 85 | 98 | |

* Refer to Table 1 on page 56.

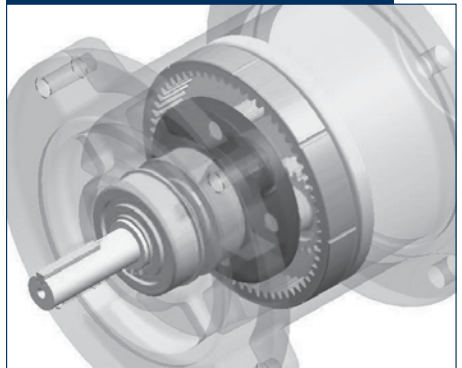
SSFSP Series Planetary Multiplier

Expanded Speed Reduction while Maintaining Operating Efficiency

A



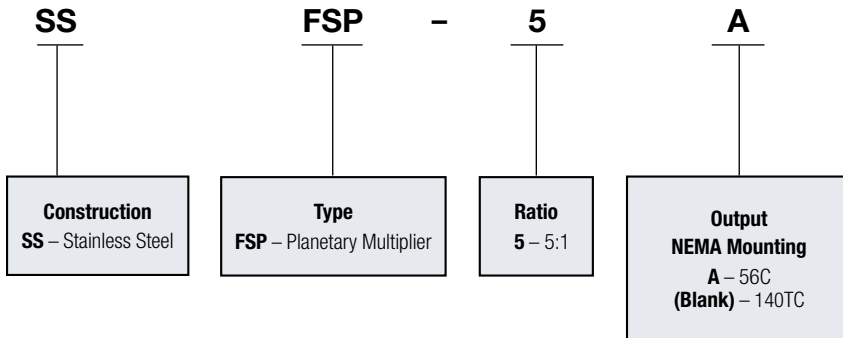
High Efficiency, Quiet Operation Planetary Gearing



SSFSP Series Planetary Multiplier

Ordering Information

Stainless Steel Stand - Alone Planetary Multiplier Example: **SSFSP-5A**



A

Lubrication

All SSFSP Series Planetary Multipliers are supplied as Lubricated-for-Life for maximum efficiency, maintenance-free operation. The inherent design of planetary gearing is conducive to the use of grease as a lubricant, because the rotation of the sun and planet gears inside of the internal ring gear promotes even distribution of the lubricant and consistent recirculation. The lubricant we apply at the time of assembly is Klubersynth UH1 14-222 grease which has the characteristics shown below.

| LUBRICANT | Type | Operating Temperature Range | Certifications | Comments |
|-------------------------------|-------------------------|-------------------------------|---|---------------|
| Klubersynth UH1 14-222 | Synthetic Grease, NLGI2 | -15F to +225F (-25C to +107C) | FDA 21CFR178.3570 compliant, NSF registered | H1 Food-Grade |

Notes: Temperature limit is dictated by multiplier components and not the lubricant.

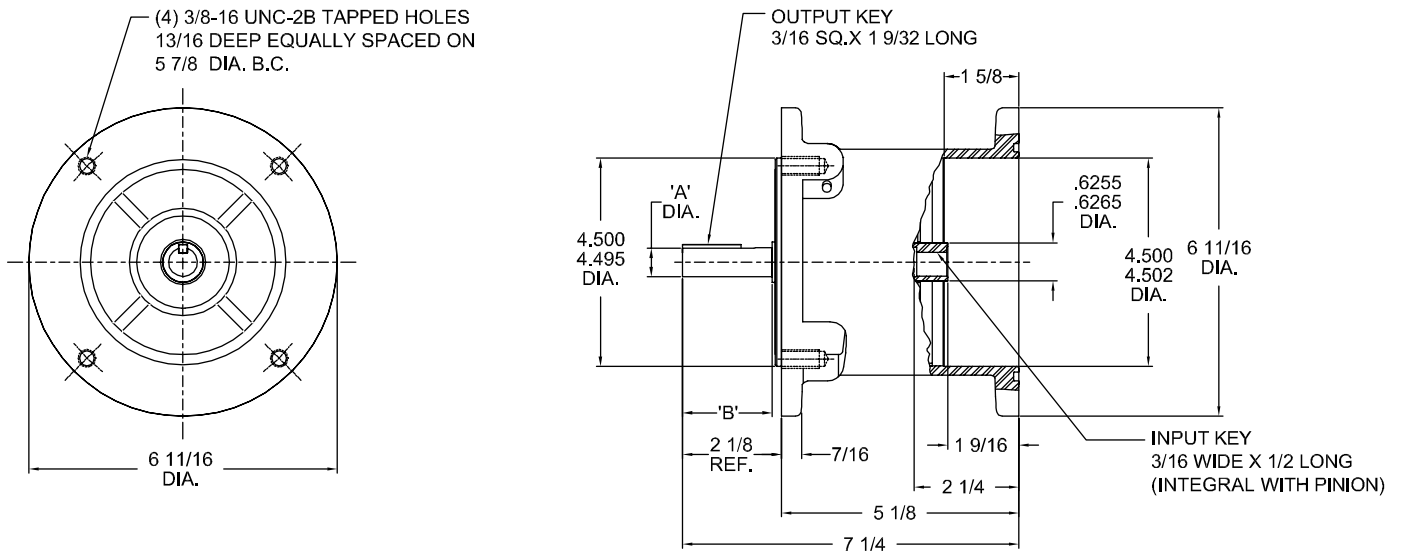
SSFSP Series Planetary Multiplier

Performance Data

A

| Output RPM | Ratio | Motor HP (1750 RPM Input) | Output | | Multiplier Catalog Number |
|------------|-------|---------------------------|--------|-----------------|---------------------------|
| | | | HP | Torque (lb.ins) | |
| 350 | 5 | 1/6 | .14 | 25 | SSFSP-5 OR SSFSP-5A |
| | | 1/4 | .21 | 38 | |
| | | 1/3 | .29 | 56 | |
| | | 1/2 | .45 | 81 | |
| | | 3/4 | .69 | 124 | |

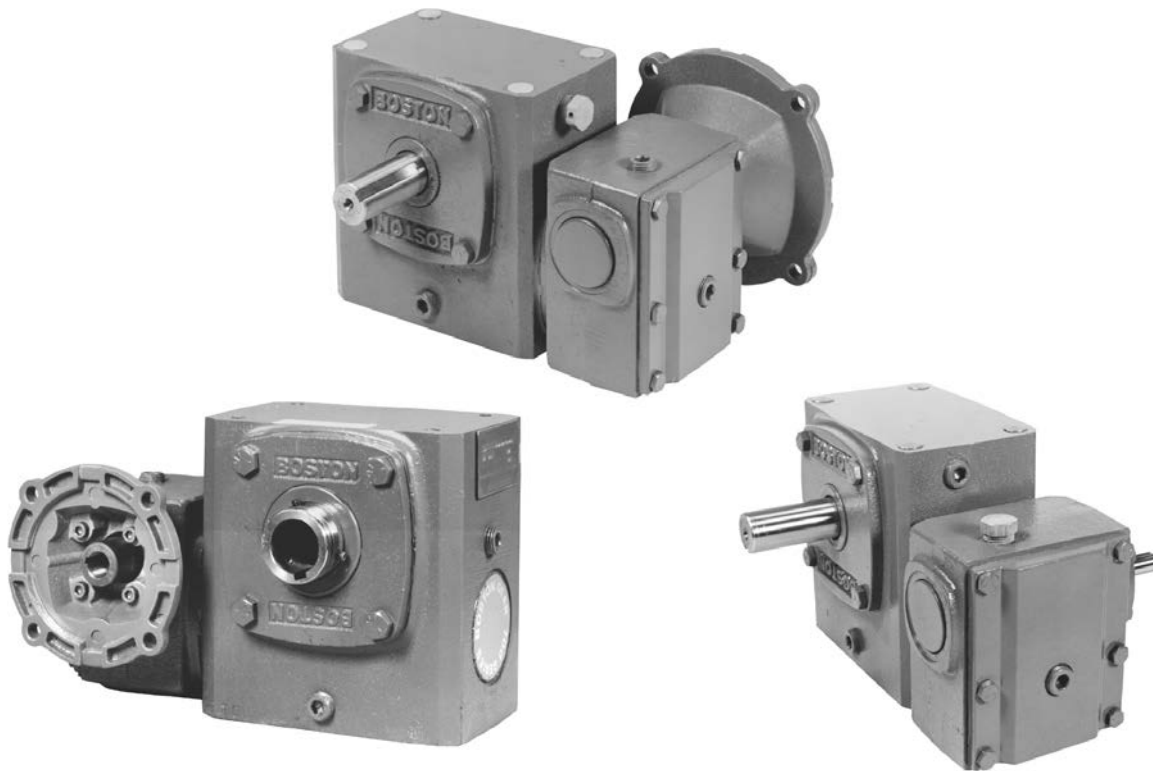
Dimensions



Dimensions in Inches

| Catalog Number | A Shaft Dia. | B Shaft Length | Output NEMA Frame Size | Input NEMA Frame Size |
|----------------|---------------|----------------|------------------------|-----------------------|
| SSFSP-5A | .6245 / .6240 | 1-15/16 | 56C | 56C |
| SSFSP-5 | .8745 / .8740 | 2 | 140TC | 56C |

700 Series Double Reduction Worm Gear Reducers



B

Section Contents

| | |
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| Assemblies and Mounting Positions | 72-75 |
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For Other Boston Gear Reducers, Contact Factory.

700 Series Double Reduction Catalog Number & Reference Guide

700 Series Right Angle Worm Gearbox - Double Reduction

SBKC H QC HMA 7 38 B - 300 K E Z T - B5 -

Input Shaft Style

Blank - Solid Projecting Input Shaft
 F - Quill Style Motor Flange
 RF - Coupling Style Motor Flange
 QC - Quick Connect Motor Flange (close coupled)

Output Shaft Style

Blank - Solid Output Shaft
 H - *BostMount* Hollow Output (setscrews both sides, bore size selectable)
 S - Hollow Output (setscrews one side, bore size fixed)

Reducer Material/Paint

Blank - Cast Iron, Std. Gray paint
 BKC - Cast Iron, White *BostKleen* paint
 SBKC - Cast Iron, Stainless *BostKleen* paint
 SS - Stainless Steel material - no paint

Reduction Type

WA - Double Reduction Parallel Shafts
 WB - Double Reduction Parallel Shafts
 WC - Double Reduction Right Angle Shafts
 WD - Double Reduction Right Angle Shafts
 HMA - Helical Multiplier 12 O'clock
 HMB - Helical Multiplier 6 O'clock
 HMC - Helical Multiplier 3 O'clock
 HMD - Helical Multiplier 9 O'clock
 WP - Planetary Torque Multiplier

Center Distance (inches)

13 - 1.33
 18 - 1.75
 21 - 2.06
 26 - 2.62
 30 - 3.00
 32 - 3.25
 38 - 3.75
 52 - 5.13
 60 - 6.00

Exact Gear Ratio
Ratio to 1

| | |
|-----|------|
| 100 | 1200 |
| 150 | 1800 |
| 200 | 2000 |
| 300 | 2400 |
| 400 | 3000 |
| 600 | 3600 |
| 900 | |

Check Catalog - Or consult factory for availability

Lubrication

Blank - No lubrication
 K - Klubersynth UH1 6-460
 S - Mobil SHC 634
 X - Mobil 600W

Vent

Blank - Standard Vent
 P - Pressure Vent (5 psi)
 Z - Posivent (sealed)

Endcap (732-760 only)

E - Endcap (standard)

Oil Seal

Blank - Standard Seal
 T - Two Standard Input Seals
 C - High pressure washdown output seals and double input seals (stainless products only) **IP69K**

Base/Mounting Attachment*

Blank - No base kit required
 A & B - Horizontal bases
 C & E - Vertical High bases
 D & F - Vertical Low bases
 R/L - *BostMount* Output Bracket
 X - Input Vertical Up
 Y - Input Vertical Down
 V/W - Hollow O/P with base
 M/N - Hollow O/P with CFA

*See catalog for mounting configurations

NEMA Motor Mounting

| BORE CODE | NEMA MOUNTING | INPUT BORE | KEYWAY |
|-----------|---------------|------------|-------------|
| B4 | 42CZ | .500" | 1/8 x 1/16 |
| B5 | 56C | .625 | 3/16 x 3/32 |
| B7 | 140TC/180C | .875 | 3/16 x 3/32 |
| B9 | 180TC/210C | 1.125 | 1/4 x 1/8 |
| B11 | 210TC/250UC | 1.375 | 5/16 x 5/32 |
| B13 | 250TC | 1.625 | 3/8 x 3/16 |

Blank Solid Input Shaft (No Flange)

700 Series Double Reduction Flanged & Non-Flanged Reducers

Ordering Information - Page 70
 Selection/Rating Information - Pages 71, 77-81
 Lubrication - Page 76
 Motor Selection - Pages 335 and 336



FWA/QCWA700 BASIC
Dimensions - Page 82



FWC/QCWC700 BASIC
Dimensions - Page 87



WA700 BASIC
Dimensions - Page 92



WC700 BASIC
Dimensions - Page 97



HFWA/HQCWA700 BASIC
Dimensions:
 HFWA/QCWA700 - Page 83
 HFWA/QCWA700R/L - Page 84
 HFWC/QCWC700 - Page 87
 HFWC/QCWC700R/L - Page 89



SFWA700 BASIC
Dimensions:
 SFWA700 - Page 85
 SFWA700V - Page 86
 SFWC700 - Page 90
 SFWC700V/W - Page 91



HWA/HWC700 BASIC
Dimensions:
 HWA700 - Page 92
 HWA700R - Page 94
 HWC700 - Page 98
 HWC700R/L - Page 99



SWA/SWC700 BASIC
Dimensions:
 SWA700 - Page 95
 SWA700V - Page 96
 SWC700 - Page 100
 SWC700V/W - Page 101

700 Series Worm Gear Speed Reducers

HS 1 - P24 -

BestMount Output Bore Code

For H Series Only Specified in 1/16" increments.

Example: 1 1/4" = P20

| | |
|--------------|---------------|
| 5/8 - P10 | 1-1/2 - P24 |
| 3/4 - P12 | 1-5/8 - P26 |
| 7/8 - P14 | 1-11/16 - P27 |
| 15/16 - P15 | 1-3/4 - P28 |
| 1 - P16 | 1-7/8 - P30 |
| 1-1/16 - P17 | 1-15/16 - P31 |
| 1-1/8 - P18 | 2 - P32 |
| 1-3/16 - P19 | 2-1/8 - P34 |
| 1-1/4 - P20 | 2-3/16 - P35 |
| 1-5/16 - P21 | 2-1/4 - P36 |
| 1-3/8 - P22 | 2-7/16 - P39 |
| 1-7/16 - P23 | 3-7/16 - P55 |

See catalog page 128 for availability by center distance. Consult factory for metric bores

Mounting Positions

Blank -No Lubrication Supplied

For Factory Prelubrication Indicate Mounting Position

- 1 - Standard Mounting(Worm over)
- 2-6 - Refer to Mounting Positions on catalog page 72 and 73.

Output Shaft Assembly

Double Reduction WA and WB

| | |
|-----------|--|
| G | Output Projection Opposite Input |
| H | Double Output Projection |
| J | Output Projection Same Side as Input |
| GS | Stainless Output Projection Opposite Input |
| HS | Stainless Double Output Projection |
| JS | Stainless Output Projection Same Side as Input |

Double Reduction WA and WB Mirrored Design

| | |
|-----------|--|
| K | Output Projection Opposite Input |
| L | Double Output Projection |
| M | Output Projection Same Side as Input |
| KS | Stainless Output Projection Opposite Input |
| LS | Stainless Double Output Projection |
| MS | Stainless Output Projection Same Side as Input |

Double Reduction WC and WD (When facing Input)

| | |
|-----------|------------------------------------|
| G | Output Projection Down |
| H | Double Output Projection |
| J | Output Projection Upward |
| GS | Stainless Output Projection Down |
| HS | Stainless Double Output Projection |
| JS | Stainless Output Projection Upward |

Double Reduction WC and WD (When facing Input) Mirrored Design

| | |
|-----------|------------------------------------|
| K | Output Projection Down |
| L | Double Output Projection |
| M | Output Projection Upward |
| KS | Stainless Output Projection Down |
| LS | Stainless Double Output Projection |
| MS | Stainless Output Projection Upward |

Clutch/Brake

CMBA56U-6 -

Common C-Face Brakes Installed

| 115/230 VAC 60hz | Ft-Lb | Bore Code |
|----------------------|-------|-----------|
| CMBA56R-3 | 3 | B5 |
| CMBA56R-6 | 6 | B5 |
| CMBA140TR-6 | 6 | B7 |
| | | |
| 208-230/460 VAC 60hz | Ft-Lb | Bore Code |
| CMBA56U-3 | 3 | B5 |
| CMBA56U-6 | 6 | B5 |
| CMBA140TU-6 | 6 | B7 |

Other sizes available. See catalog page 343.

Motor

HUTF5/8-IDB - 3

Motor Conduit box Orientation

(When looking at fan end of motor and gearbox is in mounting position #1)

- 0 - 12 O'clock
- 3 - 3 O'clock(standard for G & H shaft assemblies)
- 6 - 6 O'clock
- 9 - 9 O'clock (standard for J shaft assemblies)

Common C-Face Motors Installed

| HP Rating | Bore Code | AC Voltage | |
|-----------|-----------|------------------|------------------|
| | | 115/208-230-1-60 | 208-230/460-3-60 |
| 1/4 HP | B5 | DRTFB | DUTFB |
| 1/3 HP | B5 | ERTFB | EUTFB |
| 1/2 HP | B5 | FRTFB | FUTFB |
| | B5 | | FUT-SS |
| | B5 | | FUTF-IDB |
| 3/4 HP | B5 | GRTFB | GUTFB |
| | B5 | | GUT-SS |
| | B5 | | GUTF-IDB |
| 1 HP | B5 | HRTF-5/8B | HUTF5/8B |
| | B5 | | HUT5/8-SS |
| | B5 | | HUTF5/8-IDB |
| | B7 | | HUTFB |
| | B7 | | HUT-SS |
| 1.5 HP | B7 | | HUTF-IDB |
| | B7 | | JUTFB |
| | B7 | | JUTF-SS |
| 2 HP | B7 | | JUTF-IDB |
| | B7 | | KUTF5/8B |
| | B7 | | KUTFB |
| | B7 | | KUTF-SS |
| 3 HP | B9 | | KUTF-IDB |
| | B9 | | LUTFB |
| | B9 | | LUTF-SS |
| 5 HP | B9 | | LUTF-IDB |
| 5 HP | B9 | | MUTFB |

Other motors available, please see catalog pages 333 to 343.

- T** - Totally enclosed non-ventilated
- TF** - Totally enclosed fan cooled
- SS** - Stainless
- IDB** - Inverter Duty (10:1 turn down constant torque)
- B5** - 56C
- B7** - 140TC
- B9** - 180TC

B

Double Reduction Numbering System / How to Order

| Style | Size | Base | Ratio | Lubrication | Vent | Input Seal | NEMA Mounting | Shaft Assembly | Mounting Position | Output Bore Code |
|-------|------|------|-------|-------------|------|------------|---------------|----------------|-------------------|------------------|
|-------|------|------|-------|-------------|------|------------|---------------|----------------|-------------------|------------------|

Style Designates reducer or flanged reducer, projecting or hollow output shaft.

- C-** Designates cast iron flange and base. Standard on motor flanges 3 HP (180TC) and up and all bases except horizontal (710-726).
- WA-** Double reduction, parallel shaft reducer with projecting output shaft.
- HWA-** Double reduction, parallel shaft reducer with BostMount hollow output shaft.
- SWA-** Double reduction, parallel shaft reducer with hollow output shaft.
- WC-** Double reduction, right angle shaft reducer with projecting output shaft.
- HWC-** Double reduction, right angle shaft reducer with BostMount hollow output shaft.
- SWC-** Double reduction, right angle shaft reducer with hollow output shaft.
- FWA-** Double reduction, parallel shaft flanged reducer (Quill types) with projecting output shaft.
- HFWA-** Double reduction, parallel shaft flanged reducer (Quill types) with BostMount hollow output shaft.
- SFWA-** Double reduction, parallel shaft flanged reducer (Quill types) with hollow output shaft.
- FWC-** Double reduction, right angle shaft flanged reducer (Quill types) with projecting output shaft.
- HFWC-** Double reduction, right angle shaft flanged reducer (Quill types) with BostMount hollow output shaft.
- SFWC-** Double reduction, right angle shaft flanged reducer (Quill types) with hollow output shaft.
- QCWA-** Double reduction, parallel shaft flanged reducer (Coupling types) with projecting output shaft.
- HQCWA-** Double reduction, parallel shaft flanged reducer (Coupling types) with BostMount hollow output shaft.
- QCWC-** Double reduction, right angle shaft flanged reducer (Coupling types) with projecting output shaft.
- HQCWC-** Double reduction, right angle shaft flanged reducer (Coupling types) with projecting output shaft.
- SSFWB/SSFWD-** Stainless steel double reduction with solid output shaft.
- SSHFWB/SSHFWD-** Stainless steel double reduction with hollow output shaft.

Size Center distance, rounded off. On double reduction models this is the Center Distance of the second reduction.

| | | |
|------------|------------|------------|
| 713 - 1.33 | 726 - 2.62 | 738 - 3.75 |
| 718 - 1.75 | 730 - 3.00 | 752 - 5.16 |
| 721 - 2.06 | 732 - 3.25 | 760 - 6.00 |

Base Base positions relative to output shaft. Shipped separately as Base Kits. See Page 129.

- Blank -** No Base Kit
- A,B -** Horizontal Bases
- C,D,E,F -** Vertical Bases
- R/L -** BostMount Output Bracket
- X -** Input Vertical Up
- Y -** Input Vertical Down
- V,W -** Flanged bases, available on "S" hollow shaft models only. Factory assembled.
- M,N-** Hollow Output with CFA

Ratio See Selection Tables for available ratios

Lubrication Optional prelubrication.

- Blank -** No lubrication supplied.
- K -** Klubersynth UH1 6-460
- S -** Mobil SHC 634
- X -** Mobil 600W

When specifying optional prelubrication, include mounting position after shaft assembly.

Vent Pressure Relief.

- Blank -** Standard Vent
 - P -** 5 PSI Vent
 - Z -** PosiVent® Pressure Compensating Bladder
- When specifying optional prelubrication, include mounting position after shaft assembly.

Input Oil Seal

- Blank -** Standard Seal
- T -** Double Input Seals. Recommended for mounting positions 2, 3, 4, 6

NEMA Mounting Designates flange size and input bore diameter. Flanged reducers only. Leave blank for projecting input reducers.

| Bore Code | NEMA Mounting | Input Bore | Keyway |
|-----------|---------------|------------|-------------|
| B4 | 42CZ | .500" | 1/8 x 1/16 |
| B5 | 56C | .625 | 3/16 x 3/32 |
| B7 | 140TC/180C | .875 | 3/16 x 3/32 |
| B9 | 180TC/210C | 1.125 | 1/4 x 1/8 |

See page 252 for Mounting Dimensions.

Shaft Assembly Assembly shaft arrangements. See Assemblies, Pages 72-75.

- G*** - Standard assembly
- H*** - Double output shaft projection.
- J*** - Opposite to standard.

* Add "S" after letter for Stainless Steel Shaft (ex. GS, HS, JS)

Mounting Position Designates the position of oil and vent plugs with respect to mounting.

- Blank -** For units not supplied prelubricated.
- 1-6 -** See Pages 58-61.

Output Bore Code Specified in 1/16" increments. See Page 114 for complete offering. Example: 1 1/4" = P20 Required for H Series only.

How to Order

When ordering reducers please include code letters for Style, Size, Base (if required), Ratio, Lubrication (if required), NEMA Mounting (if flanged reducer), Shaft Assembly and Motor (if required).

EXAMPLE: Required size, 726 Quill types flanged double reduction reducer, 100 to 1 ratio, 5/8" input bore, parallel shafts, standard assembly, no base.

Motor to be 3/4 HP, 1750 RPM, 230/460 Volt, 3 Phase, 60 cycle, Open Dripproof.

FWA 726 - 100 - B5 - G - GUB3

ORDER: FWA726-100-B5-G-GUB3

NOTE: For other assembly configurations, contact factory.

Double Reduction Speed Reducer Selection Procedure

To properly select a speed reducer, the following application information must be known:

- Input RPM (Ratio)
- Output Torque
- Input Horsepower
- Service Factor

Non-Motorized Speed Reducer

1. Determine service factor from table below.
2. Determine design horsepower.
Design Horsepower =
Application Load x Service Factor
3. Select a speed reducer size that satisfies output RPM, service class and/or output torque requirements.
4. Check overhung load capacity.

Motorized Speed Reducer

1. Determine service class from table below
2. Select a reducer size that satisfies output RPM, service class and/or output torque requirements.
3. Check overhung load capacity.

Service Factor Table

| AGMA Class of Service | Service Factor | Operating Conditions |
|-----------------------|----------------|---|
| I | 1.00 | Moderate Shock-not more than 15 minutes in 2 hours. |
| | | Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. |
| | | Uniform Load-more than 10 hours per day. |
| | 1.50 | Heavy Shock-not more than 15 minutes in 2 hours. |
| | | Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day. |

For complete AGMA Service Factors and Load Classifications, see Engineering Section, Pages 349 and 350.

Double Reduction Selection Tables

Capacity selection tables on Pages 77-81 list catalog numbers and ratios of both reducers and gearmotors. Output RPM, output torque and horsepower are all based on 1750 RPM input. For motorized reducer selection, select the desired output RPM and refer to the gearmotor ratings column. For non-motorized reducers, refer to the reducer gear capacity columns. For the desired HP, torque and service factor that satisfies your requirements, a 700 Series basic reducer number will be indicated. For complete catalog part number, descriptions and options, refer to Page 70.

Overhung Load

If the output shaft of a speed reducer is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

OHL = Overhung Load (LB.)

T = Shaft Torque (LB.IN.)

D = PD of Sprocket, Pinion or Pulley (IN.)

K = Load Connection Factor

Load Connection Factor

| | |
|--------------------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive | 1.50 |
| Pulley and Flat Belt Drive | 2.50 |

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley or a larger PD. Relocation of the load closer to the center of reducer will also increase OHL capacity.

Permissible overhung loads and output shaft thrust loads are listed for each reducer in the tables on Pages 30-33.

Maximum Input Speeds

W713, W718, W721, W7264500 RPM

W730 through W7603600 RPM

NOTE: Horsepower ratings for 1750 RPM should NOT be exceeded when operating at higher input speeds.

Ratings shown reflect maximum gear capacity with Klubersynth UH1 6-460 lubricant. The use of other lubricants may reduce ratings by up to 15%.

Ratings are mechanical not thermal.

B

Flanged Reducer Assemblies and Mounting Positions

Assemblies—FWA/QCWA700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surface.

Types “A” and “B” are horizontal bases.

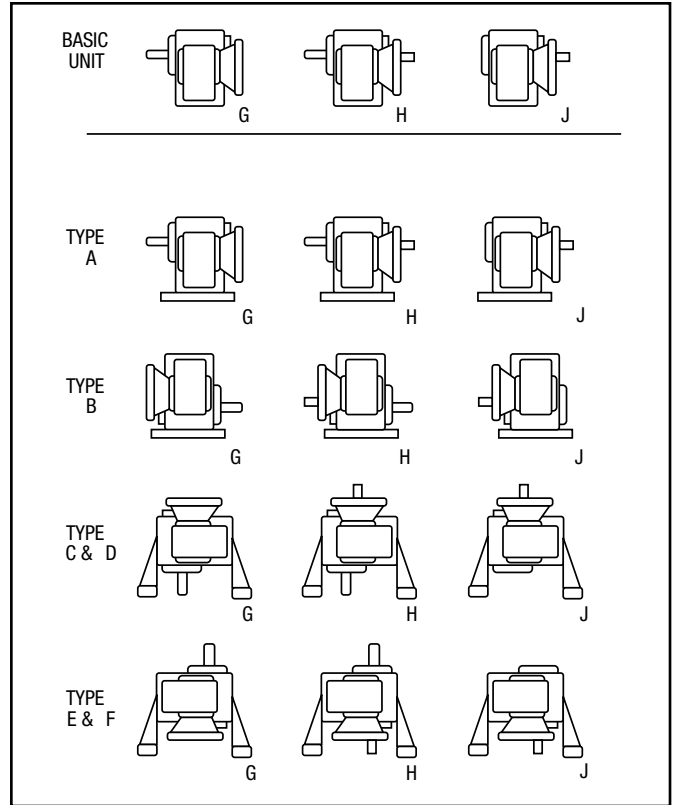
Types “C” and “E” are vertical high bases and Types “D” and “F” are vertical low bases.

Basic models and separate base kits are supplied unless otherwise specified. Assembly “H” available at a slight additional charge.

See Page 70 for complete ordering instructions.

Input may rotate clockwise or counter clockwise.

For other configurations not shown, contact factory.



Mounting Positions – FWA/QCWA – HFWA/HQCWA – SFWA700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plugs.

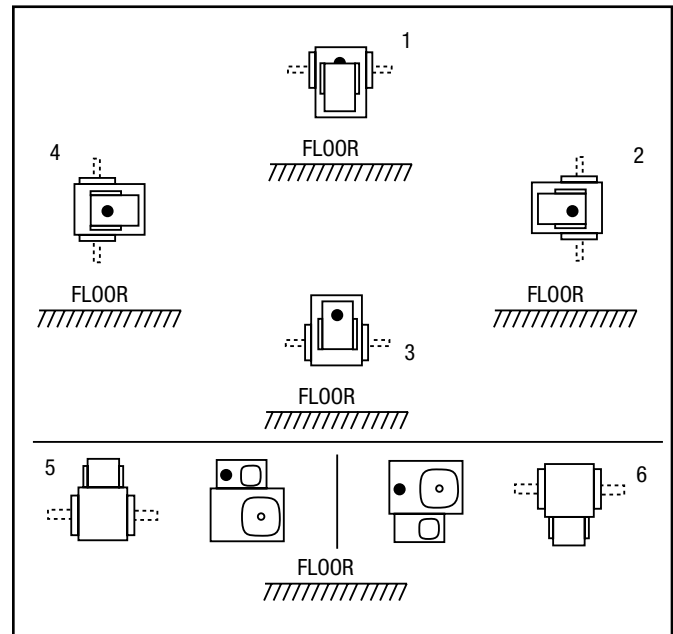
Vented oil filler plug must be located in the uppermost position.

For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.

For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must point toward center of housing.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

WARNING: The lubricant will flow between the large gearbox and the small gearbox. When filling with oil, make sure both gearboxes are full to the correct/same level. It is strongly recommended the oil level in each gearbox is verified after a short run.



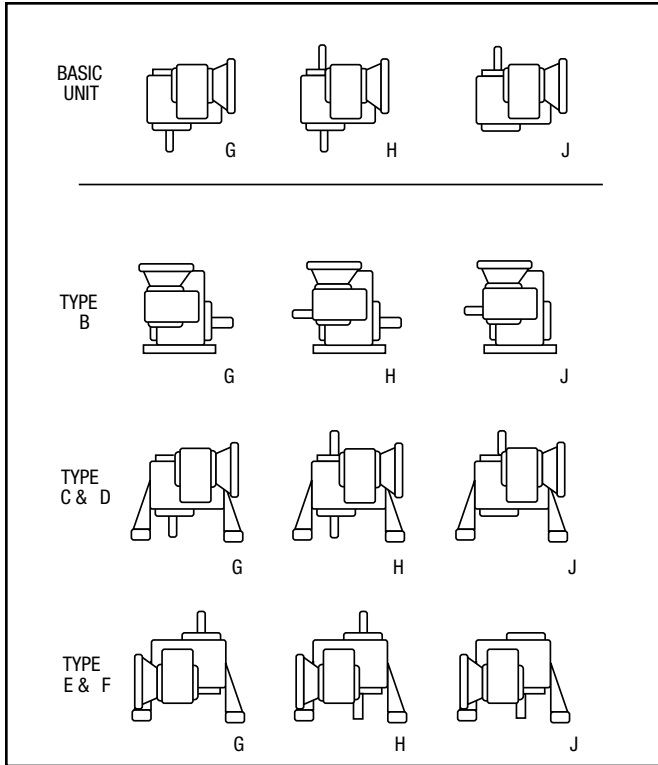
• Indicates proper oil level.

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level.

B

Flanged Reducer Assemblies and Mounting Positions



Assemblies—FWC/QCWC700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surfaces.

Types “B” is a horizontal base.

Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

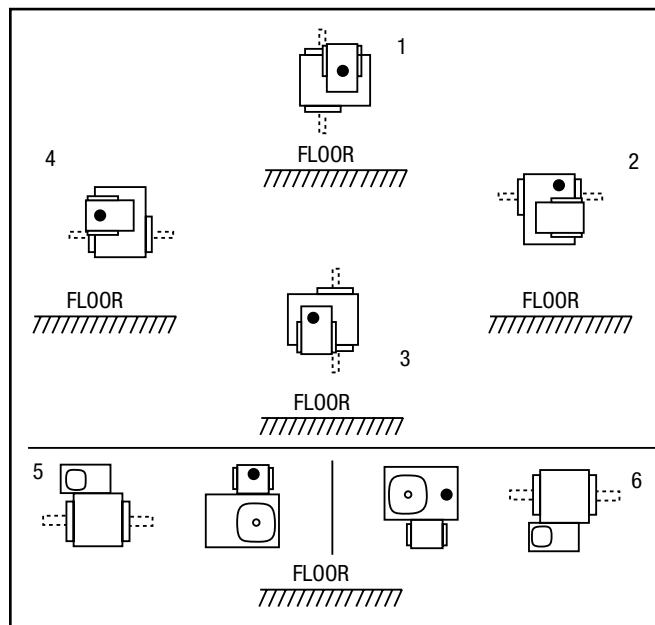
Basic models and separate base kits are supplied unless otherwise specified. Assembly “H” available at a slight additional charge.

See Page 70 for complete ordering instructions.

Input may rotate clockwise or counter clockwise.

For other configurations not shown, contact factory.

B



• Indicates proper oil level.

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level.

Mounting Positions – FWC/QCWC – HFWC/HQCWC – SFWC700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

Vented oil filler plug must be located in the uppermost position.

For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.

For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must point toward center of housing.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

WARNING: The lubricant will flow between the large gearbox and the small gearbox. When filling with oil, make sure both gearboxes are full to the correct/same level. It is strongly recommended the oil level in each gearbox is verified after a short run.

Non-Flanged Reducer Assemblies and Mounting Positions

Assemblies—WA700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surfaces.

Types “A” and “B” are horizontal bases.

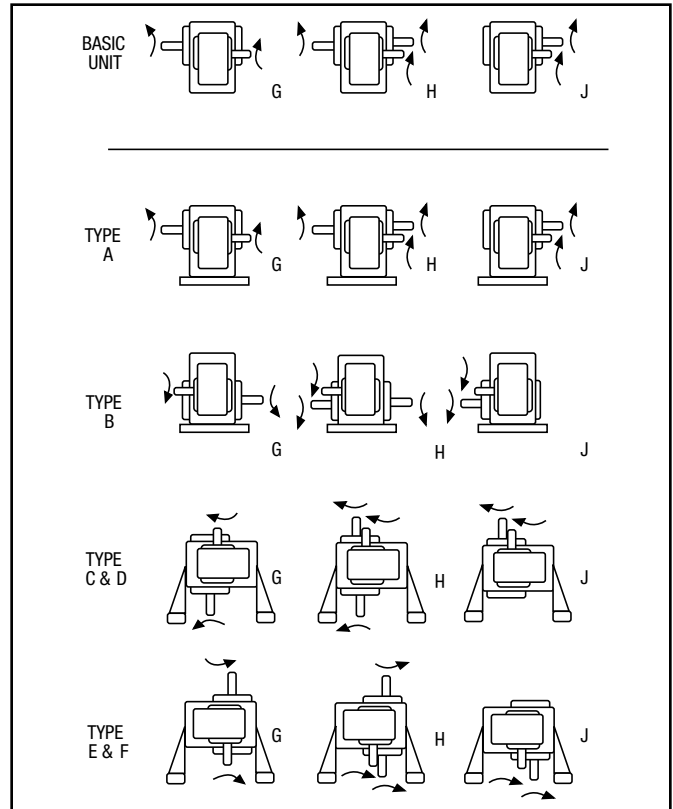
Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

Basic models and separate base kits are supplied unless otherwise specified. Assembly “H” available at a slight additional charge.

See Page 70 for complete ordering instructions.

Input may rotate clockwise or counter clockwise. Arrows indicate relative rotation.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



Mounting Positions – WA – HWA – SWA 700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

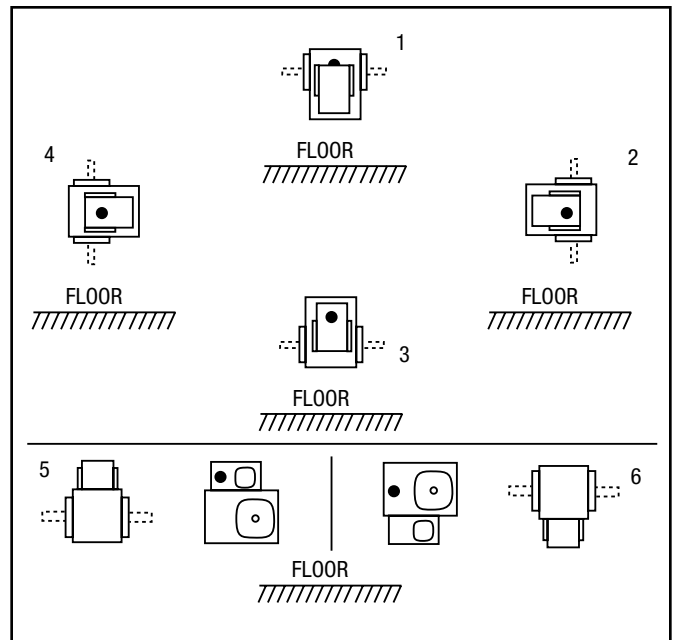
Vented oil filler plug must be located in the uppermost position.

For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.

For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must point toward center of housing.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

WARNING: The lubricant will flow between the large gearbox and the small gearbox. When filling with oil, make sure both gearboxes are full to the correct/same level. It is strongly recommended the oil level in each gearbox is verified after a short run.



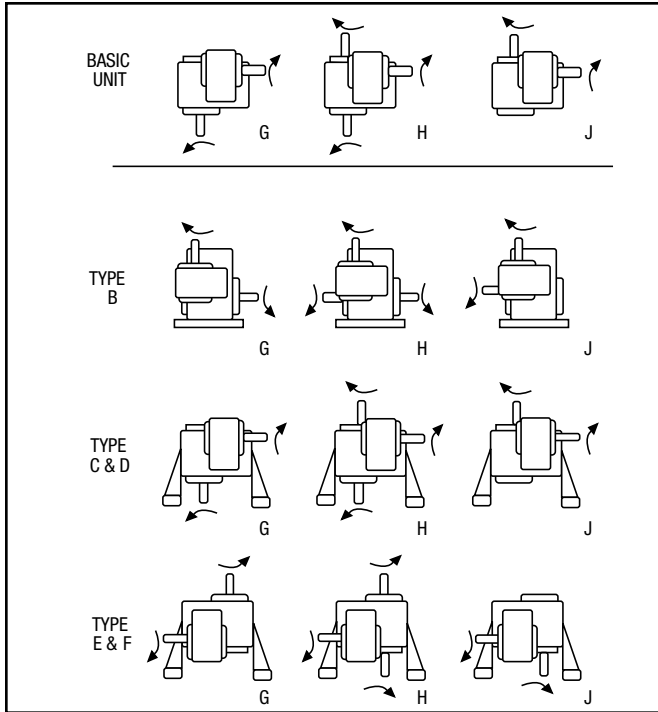
• Indicates proper oil level.

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level.

B

Non-Flanged Reducer Assemblies and Mounting Positions



Assemblies—WC700 Series

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surfaces.

Types “B” is a horizontal base.

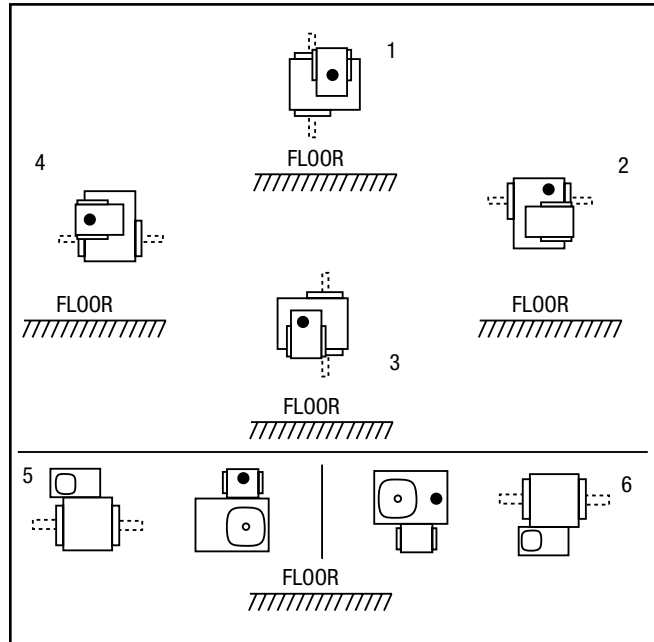
Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

Basic models and separate base kits are supplied unless otherwise specified. Assembly “H” available at a slight additional charge.

See Page 70 for complete ordering instructions.

Input may rotate clockwise or counter clockwise. Arrows indicate relative rotation.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



• Indicates proper oil level.

CAUTION

When ordering speed reducers pre-lubricated, the Mounting Position must be indicated to ensure proper oil level.

Mounting Positions – WC – HWC – SWC 700 Series

Standard assemblies are for Position 1. The design permits any types of assembly to be mounted in any position shown by the proper location of the vented oil filler, level and drain plugs, at the time of installation.

For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

Vented oil filler plug must be located in the uppermost position.

For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.

For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must point toward center of housing.

For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

WARNING: The lubricant will flow between the large gearbox and the small gearbox. When filling with oil, make sure both gearboxes are full to the correct/same level. It is strongly recommended the oil level in each gearbox is verified after a short run.

700 Series Recommended Lubricants

The following table indicates the types and viscosity of lubricants suitable for reducers operating at various temperatures.

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the correct types of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris, since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil.

Under normal environmental conditions oil changes are suggested after the initial 250 hours of operation and thereafter at regular intervals of 2500 hours or every 6 months.

Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Single Reduction Worm Gear Reducers may reach approximately 225°F.

ENCLOSED WORM GEAR REDUCERS

| Ambient (Room) Temperature | Recommended Oil (or equivalent) | Viscosity Range SUS @ 100°F | Oil Type | ISO Viscosity Grade No.† |
|------------------------------------|-------------------------------------|-----------------------------|----------|--------------------------|
| -20° to 225°F** (-29° to 107°C) | Klubersynth UH1 6-460* Synthetic | 1950/2500 | PAG | 460 |
| -30° to 225°F** (-34° to 107°C) | "Mobil SHC634 Synthetic" | 1950/2500 | PAO | 320/460 |

WORM GEAR LUBRICANT AVAILABLE FROM BOSTON GEAR

| TYPES | Klubersynth UH1 6-460 | Mobil SHC634 |
|-----------|-----------------------|--------------|
| SIZE | QUART | QUART |
| ITEM CODE | 65159 | 51493 |

CAUTION: Relubricate more frequently if drive is operated in high ambient temperatures or unusually contaminated atmosphere. High loads and operating temperatures will also require more frequent lubrication.

* Synthetic recommendation is exclusively for Klubersynth UH1 6-460.

† Other lubricants corresponding to AGMA/ISO numbers are available from all major oil companies. See Page 135 for lubricant interchange.

** The Klubersynth UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures as damage may occur to oil seals and other components.

Mounting Positions For Double Reduction Models Only

The variety of mounting possibilities for double-reduction drives makes it impractical to illustrate positions for these models. In general, the vent filler is at the uppermost plug position, and the drain plug at the lowest possible position. The oil level must be at the approximate centerline of the uppermost gear, with the lower box completely full.

The first and second reduction housings are open to one another allowing free flow of lubricant. Levels should be checked frequently on new installation to assure proper levels are maintained.

WARNING: The lubricant will flow between the large gearbox and the small gearbox. When filling with oil, make sure both gearboxes are full to the correct/same level. It is strongly recommended the oil level in each gearbox is verified after a short run.

WARNING: Different oil types should not be mixed. For example Klubersynth UH1 6-460 is not compatible with Mobil SHC634.

B

700 Series Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio# | Non-Flanged Reducers | | | | Gearmotor | | | | | | | Bore Code | Motors** | |
|------------|----------|------------------------|-------|--------|-----------------|--|-----------------------------|----------------------|------------------|----|----|----|-----------|----------------------|---------------------------------|
| | | Gear Capacity | | | Size* | Ratings | | | Available Style† | | | | | Cat. Nos. | |
| | | Output Torque (lb.in.) | HP | | | Motor HP | Output Torque (lb.in.) | Service Class | F | OC | HF | SF | | HQC | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | | | | | | | | | | | |
| 17.5 | 100 TO 1 | 275 | .16 | .076 | W713-100 | 1/6 1/6 | 275 275 | I I | | | | | | B4 B5 | |
| | | 570 | .23 | .16 | W718-100 | 1/4 1/4 1/6 1/6 | 570 570 414 414 | I I II II | | | | | | B4 B5 B4 B5 | ADUTF DUTF ACUT CUTF |
| | | 910 | .41 | .25 | W721-100 | 1/2 1/3 1/4 1/6 | 910 750 585 390 | I II II III | | | | | | B5 B5 B5 B5 | FUTF EUTF DUTF CUTF |
| | | 1785 | .75 | .50 | W726-100 | 3/4 1/2 1/3 | 1785 1206 804 | I II III | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| | | 3250 | 1.24 | .90 | W730-100 | 1 3/4 1/2 | 2844 2138 1426 | I II III | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3450 | 1.33 | .96 | W732-100 | 1-1/2 1 3/4 | 3450 2592 1944 | I II III | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF |
| | | 4910 | 1.84 | 1.36 | W738-100 | 2 1-1/2 1 | 4910 3995 2664 | I II III | | | | | | B7 B7 B7 | KUTF JUTF HUTF |
| | | 8000 | 2.97 | 2.22 | W752-100 | 3 2 1-1/2 | 8000 5400 4050 | I II III | | | | | | B9 B7 B7 | LUTF KUTF JUTF |
| | | 16500 | 5.75 | 4.58 | W760-100 | 5 3 | 14200 8500 | I III | | | | | | B9 B9 | MUTF LUTF |
| 11.7 | 150 TO 1 | 280 | .13 | .052 | W713-150 | 1/6 1/6 | 280 280 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 580 | .23 | .11 | W718-150 | 1/4 1/4 1/6 1/6 | 580 580 433 433 | I I II II | | | | | | B4 B5 B4 B5 | ADUTF DUTF ACUT CUTF |
| | | 940 | .30 | .17 | W721-150 | 1/3 1/4 1/6 | 940 770 513 | I II III | | | | | | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1840 | .56 | .34 | W726-150 | 3/4 1/2 1/3 1/4 | 1840 1647 1095 823 | I I II III | | | | | | B5 B5 B5 B5 | GUTF FUTF EUTF DUTF |
| | | 3523 | .98 | .65 | W730-150 | 3/4 1/2 | 2592 1728 | II III | | | | | | B5 B5 | GUTF FUTF |
| | | 3600 | 1.00 | .67 | W732-150 | 1 3/4 1/2 | 3600 2713 1800 | I II III | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 70.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 340.

† Shaded areas denote which styles are available for a given center distance and ratio.

Other ratios available. Contact factory for information.



700 Series Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio# | Non-Flanged Reducers | | | | Gearmotor | | | | | | Bore Code | Motors** | | | |
|------------|----------|------------------------|-------|-------|-----------------|------------------------|---------------------------------|---------------------|----|----|----|-----------|-----------|---------------------------------|----------------------|------------------------------|
| | | Gear Capacity | | Size* | Ratings | | | Available Styles† | | | | | Cat. Nos. | | | |
| | | Output Torque (lb.in.) | HP | | Motor HP | Output Torque (lb.in.) | Service Class | L | OC | HF | SF | | HQC | 230/460 VAC 3 Phase 60 Hz | | |
| | | | Input | | | | | | | | | | | | Output | |
| 11.7 | 150 TO 1 | 5100 | 1.35 | .94 | W738-150 | 1-1/2 1 3/4 | 5100 3725 2974 | I II III | | | | | | | | B7 B7 B5 |
| | | 11750 | 2.99 | 2.18 | W752-150 | 3 2 1-1/2 | 11750 7884 5913 | I II III | | | | | | | B9 B7 B7 | LUTF KUTF JUTF |
| | | 17000 | 4.22 | 3.15 | W760-150 | 5 3 2 | 17000 11200 7992 | I II III | | | | | | | B9 B9 B9 | MUTF LUTF KUTF |
| 8.8 | 200 TO 1 | 320 | .12 | .045 | W713-200 | 1/6 1/6 | 320 320 | I I | | | | | | | B4 B5 | ACUT CUTF |
| | | 660 | .19 | .09 | W718-200 | 1/4 1/4 | 660 660 | I I | | | | | | | B4 B5 | ADUTF DUTF |
| | | 990 | .25 | .14 | W721-200 | 1/4 1/6 | 990 720 | I II | | | | | | | B5 B5 | DUTF CUTF |
| | | 1875 | .47 | .26 | W726-200 | 1/2 1/3 1/4 | 1875 1440 1080 | I II III | | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 3477 | .76 | .48 | W730-200 | 3/4 1/2 1/4 | 3402 2268 1134 | I III III | | | | | | | B5 B5 B5 | GUTF FUTF DUTF |
| | | 3800 | .81 | .53 | W732-200 | 3/4 1/2 1/3 | 3510 2340 1560 | I II III | | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| | | 5500 | 1.14 | .77 | W738-200 | 1 3/4 1/2 | 4824 3618 2412 | I II III | | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 12250 | 2.40 | 1.70 | W752-200 | 3 2 1 | 12250 10080 5040 | I II III | | | | | | | B9 B7 B5 | LUTF KUTF HUTF-5/8 |
| | | 18000 | 3.43 | 2.50 | W760-200 | 5 3 2 1-1/2 | 18000 15768 10512 7884 | I I II III | | | | | | | B9 B9 B7 B7 | MUTF LUTF KUTF JUTF |
| 5.8 | 300 TO 1 | 335 | .10 | .031 | W713-300 | 1/6 1/6 | 335 335 | I I | | | | | | | B4 B5 | ACUT CUTF |
| | | 690 | .16 | .063 | W718-300 | 1/6 1/6 | 690 690 | I I | | | | | | | B4 B5 | ACUT CUTF |
| | | 1025 | .20 | .094 | W721-300 | 1/4 1/6 | 1025 900 | I I | | | | | | | B5 B5 | DUTF CUTF |
| | | 1950 | .37 | .18 | W726-300 | 1/3 1/4 1/6 | 1800 1350 900 | I II III | | | | | | | B5 B5 B5 | EUTF DUTF CUTF |
| | | 3612 | .57 | .33 | W730-300 | 1/2 1/3 1/4 | 3132 2088 1566 | I II III | | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 3950 | .61 | .36 | W732-300 | 3/4 1/2 1/3 | 3950 2700 1800 | I II III | | | | | | | B5 B5 B5 | GUTF FUTF EUTF |

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 70.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 340.

† Shaded areas denote which styles are available for a given center distance and ratio.

Other ratios available. Contact factory for information.

700 Series Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio# | Non-Flanged Reducers | | | | Gearmotor | | | | | | Bore Code | Motors** | | |
|------------|----------|------------------------|-------|--------|-----------------|----------------------|---------------------------------|----------------------|-------------------|----|----|-----------|-----------|----------------------|---------------------------------|
| | | Gear Capacity | | | Size* | Ratings | | | Available Styles† | | | | Cat. Nos. | | |
| | | Output Torque (lb.in.) | HP | | | Motor HP | Output Torque (lb.in.) | Service Class | F | OC | HF | | SF | HQC | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | | | | | | | | | | | |
| 5.8 | 300 TO 1 | 5800 | .84 | .53 | W738-300 | 1 3/4 1/2 | 5800 4050 2700 | I II III | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 12500 | 1.72 | 1.15 | W752-300 | 2 1-1/2 1 | 12500 10850 7236 | I II III | | | | | | B7 B7 B5 | KUTF JUTF HUTF-5/8 |
| | | 18500 | 2.45 | 1.70 | W760-300 | 3 2 1-1/2 1 | 18500 14904 11180 7452 | I II II III | | | | | | B9 B7 B7 B5 | LUTF KUTF JUTF HUTF |
| 4.4 | 400 TO 1 | 330 | .089 | .023 | W713-400 | 1/6 1/6 | 330 330 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 690 | .12 | .048 | W718-400 | 1/6 1/6 | 360 360 | II II | | | | | | B4 B5 | ACUT CUTF |
| | | 1025 | .17 | .071 | W721-400 | 1/6 | 984 | I | | | | | | B5 | CUTF |
| | | 1950 | .31 | .14 | W726-400 | 1/4 1/6 | 1620 1080 | I III | | | | | | B5 B5 | DUTF CUTF |
| | | 3602 | .40 | .25 | W730-400 | 1/3 1/4 1/6 | 2856 2142 1428 | I II III | | | | | | B5 B5 B5 | EUTF DUTF CUTF |
| | | 3900 | .48 | .27 | W732-400 | 1/2 1/3 1/4 | 3900 2688 2016 | I II III | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 5700 | .66 | .40 | W738-400 | 3/4 1/2 1/3 | 5700 4320 2880 | I II III | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| | | 12600 | 1.39 | .88 | W752-400 | 1-1/2 1 3/4 | 12610 9072 6804 | I II III | | | | | | B7 B5 B5 | JUTF HUTF-5/8 GUTF |
| | | 18430 | 1.94 | 1.29 | W760-400 | 2 1-1/2 1 | 18430 13824 9216 | I II II | | | | | | B7 B7 B7 | KUTF JUTF HUTF |
| 2.9 | 600 TO 1 | 340 | .081 | .016 | W713-600 | 1/6 1/6 | 340 340 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 710 | .095 | .032 | W718-600 | 1/6 1/6 | 710 710 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 1025 | .13 | .047 | W721-600 | 1/6 | 1025 | I | | | | | | B5 | CUTF |
| | | 2000 | .25 | .092 | W726-600 | 1/4 1/6 | 2000 1332 | I II | | | | | | B5 B5 | DUTF CUTF |
| | | 3717 | .32 | .17 | W730-600 | 1/4 1/6 | 2862 1908 | II III | | | | | | B5 B5 | DUTF EUTF |
| | | 4025 | .36 | .18 | W732-600 | 1/3 1/4 1/6 | 3600 2700 1800 | I II III | | | | | | B5 B5 B5 | EUTF DUTF CUTF |

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 70.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 340.

† Shaded areas denote which styles are available for a given center distance and ratio.

Other ratios available. Contact factory for information.



700 Series Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio# | Non-Flanged Reducers | | | | Gearmotor | | | | | | Bore Code | Motors** | | |
|------------|-----------|------------------------|-------|-------|------------------|--------------------------|------------------------------|---------------------|----|----|-----------|-----------|----------|---------------------------------|------------------------------|
| | | Gear Capacity | | Size* | Ratings | | | Available Styles† | | | Cat. Nos. | | | | |
| | | Output Torque (lb.in.) | HP | | Motor HP | Output Torque (lb.in.) | Service Class | F | OC | HF | SF | | HQC | 230/460 VAC 3 Phase 60 Hz | |
| | | | Input | | | | | | | | | | | | Output |
| 2.9 | 600 TO 1 | 5900 | .49 | .27 | W738-600 | 1/2 1/3 1/4 | 5900 3960 2970 | I II III | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 13000 | 1.00 | .60 | W752-600 | 1 3/4 1/2 | 13000 9720 6480 | I II III | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 19000 | 1.40 | .88 | W760-600 | 1-1/2 1 3/4 | 19000 13608 10206 | I II III | | | | | | B7 B7 B7 | JUTF HUTF GUTF |
| 1.9 | 900 TO 1 | 340 | .071 | .010 | W713-900 | 1/6 1/6 | 340 340 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 710 | .079 | .021 | W718-900 | 1/6 1/6 | 710 710 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 1050 | .11 | .032 | W721-900 | 1/6 | 1050 | I | | | | | | B5 | CUTF |
| | | 2000 | .21 | .06 | W726-900 | 1/6 | 2000 | I | | | | | | B5 | CUTF |
| | | 3752 | .23 | .11 | W730-900 | 1/6 | 2700 | II | | | | | | B5 | CUTF |
| | | 4025 | .28 | .12 | W732-900 | 1/4 1/6 | 3483 2322 | I III | | | | | | B5 B5 | DUTF CUTF |
| | | 5900 | .37 | .18 | W738-900 | 1/2 1/3 1/4 1/6 | 5900 5292 3969 2646 | I I II III | | | | | | B5 B5 B5 B5 | FUTF EUTF DUTF CUTF |
| | | 13000 | .74 | .40 | W752-900 | 3/4 1/2 1/3 | 13000 8748 5832 | I II III | | | | | | B5 B5 B5 | GUTF FUTF EUTF |
| | | 19000 | 1.00 | .59 | W760-900 | 1 3/4 1/2 | 19000 14337 9558 | I II III | | | | | | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| 1.5 | 1200 TO 1 | 330 | .068 | .008 | W713-1200 | 1/6 1/6 | 330 330 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 690 | .071 | .016 | W718-1200 | 1/6 1/6 | 690 690 | I I | | | | | | B4 B5 | ACUT CUTF |
| | | 1025 | .10 | .024 | W721-1200 | 1/6 | 1025 | I | | | | | | B5 | CUTF |
| | | 1950 | .19 | .045 | W726-1200 | 1/6 | 1728 | I | | | | | | B5 | CUTF |
| | | 3650 | .19 | .084 | W730-1200 | 1/6 | 3168 | I | | | | | | B5 | CUTF |
| | | 3900 | .23 | .092 | W732-1200 | 1/4 1/6 | 3900 2880 | I II | | | | | | B5 B5 | DUTF CUTF |
| | | 5700 | .31 | .13 | W738-1200 | 1/3 1/4 1/6 | 5700 4536 3024 | I II III | | | | | | B5 B5 B5 | EUT DUTF CUTF |
| | | 12610 | .62 | .29 | W752-1200 | 3/4 1/2 1/3 | 12610 10152 6768 | I II III | | | | | | B5 B5 B5 | GUTF FUTF EUTF |

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 70.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 340.

† Shaded areas denote which styles are available for a given center distance and ratio.

Other ratios available. Contact factory for information.

700 Series Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio# | Non-Flanged Reducers | | | | Gearmotor | | | | | | Bore Code | Motors** | | |
|------------|-----------|------------------------|-----------|-----------|-----------|------------------------|---------------------------------|----------------------|-------------------|------|----|-----------|-----------|----------------------|----------------------------------|
| | | Gear Capacity | | | Size* | Ratings | | | Available Styles† | | | | Cat. Nos. | | |
| | | Output Torque (lb.in.) | HP | | | Motor HP | Output Torque (lb.in.) | Service Class | F | QC | HF | | SF | HQC | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | | | | | | | | | | | |
| 1.5 | 1200 TO 1 | 18430 | .81 | .43 | W760-1200 | 1 3/4 1/2 1/3 | 18430 17172 11448 7632 | I II II III | | | | | | B5 B5 B5 B5 | HUTF-5/8 GUTF FUTF EUTF |
| .97 | 1800 to 1 | 900 | .082 | .013 | W721-1800 | 1/6 | 900 | I | | | | | | B5 | CUTF |
| | | 1775 | .16 | .027 | W726-1800 | 1/6 | 1775 | I | | | | | | B5 | CUTF |
| | | 3650 | .14 | .056 | W730-1800 | 1/6 | 2880 | II | | | | | | B5 | CUTF |
| | | 3750 | .19 | .058 | W732-1800 | 1/6 | 3240 | I | | | | | | B5 | CUTF |
| | | 5400 | .24 | .083 | W738-1800 | 1/4 1/6 | 5400 3672 | I II | | | | | | B5 B5 | DUTF CUTF |
| | | 11760 | .47 | .18 | W752-1800 | 1/2 1/3 1/4 | 11760 8208 6156 | I II III | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 17280 | .59 | .27 | W760-1800 | 1/2 1/3 | 14900 9936 | I III | | | | | | B5 B5 | FUTF EUTF |
| .88 | 2000 TO 1 | 590 | .052 | .008 | W718-2000 | 1/6 | 590 | I | | | | | | B4 B5 | ACUT CUTF |
| | | 1940 | .16 | .027 | W726-2000 | 1/6 | 1940 | I | | | | | | B5 | CUTF |
| | | 3600 | .13 | .055 | W730-2000 | 1/6 | 3243 | I | | | | | | B5 | CUTF |
| | | 3880 | .22 | .054 | W732-2000 | 1/6 | 3600 | I | | | | | | B5 | CUTF |
| | | 12610 | .50 | .18 | W752-2000 | 1/2 1/3 1/4 | 12610 8810 5985 | I II III | | | | | | B5 B5 B5 | FUTF EUTF DUTF |
| | | 18430 | .66 | .26 | W760-2000 | 1/2 | 14400 | II | | | | | | B5 | FUTF |
| .73 | 2400 TO 1 | 900 | .053 | .010 | W721-2400 | 1/6 | 900 | I | | | | | | B5 | CUTF |
| | | 3600 | .11 | .042 | W730-2400 | 1/6 | 3128 | I | | | | | | B5 | CUTF |
| | | 5725 | .22 | .066 | W738-2400 | 1/4 1/6 | 5725 4320 | I II | | | | | | B5 B5 | DUTF CUTF |
| .58 | 3000 TO 1 | 1868 | .05 | .017 | W726-3000 | 1/6 | 1800 | I | | | | | | B5 | CUTF |
| | | 3500 | .092 | .033 | W730-3000 | 1/6 | 3135 | I | | | | | | B5 | CUTF |
| | | 3750 | .14 | .035 | W732-3000 | 1/6 | 3750 | I | | | | | | B5 | CUTF |
| | 11760 | .34 | .11 | W752-3000 | 1/3 | 11760 | I | | | | | | | B5 | EUTF |
| | | | | | 1/4 | 8640 | II | | | | | | B5 | DUTF | |
| 1/6 | 5760 | III | | | | | | | B5 | CUTF | | | | | |
| 17280 | .41 | .16 | W760-3000 | 1/2 | 17280 | I | | | | | | | B5 | FUTF | |
| | | | | 1/3 | 12270 | II | | | | | B5 | EUTF | | | |
| | | | | 1/4 | 8640 | III | | | | | B5 | DUTF | | | |
| .49 | 3600 TO 1 | 3400 | .082 | .026 | W730-3600 | 1/6 | 3140 | I | | | | | B5 | CUTF | |
| | | 5400 | .17 | .041 | W738-3600 | 1/6 | 5400 | I | | | | | | B5 | CUTF |

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 70.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 337 and 340.

† Shaded areas denote which styles are available for a given center distance and ratio.

Other ratios available. Contact factory for information.



700 Series Double Reduction Flanged Reducer Dimensions

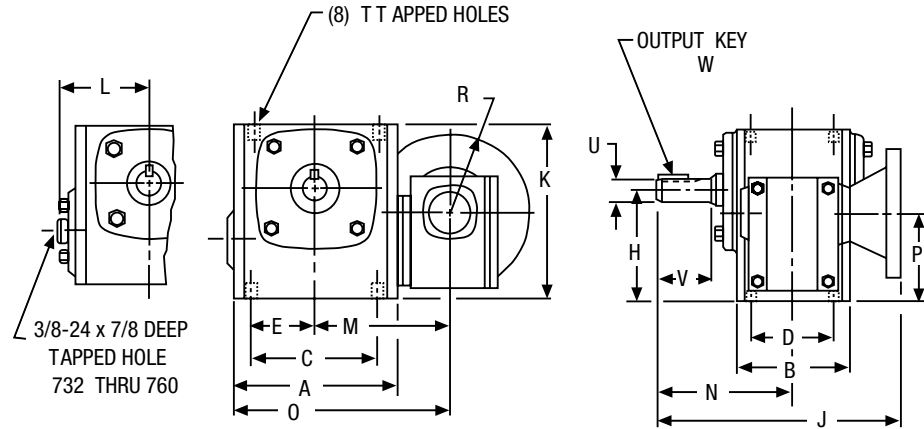
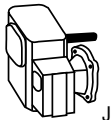
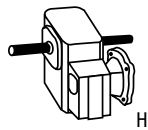
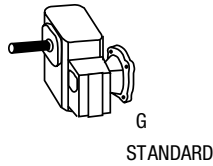
FWA700/QCWA700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base); Parallel Shafts

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.

ASSEMBLY
TYPES*



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | H | J-NEMA Mounting | | | | | | K | L | M | N | O |
|------|-------|------|-------|------|------|-------|-----------------|--------------|---------------|---------|--------------|---------------|-------|------|------|-------|-------|
| | | | | | | | FWA700 | | | QCWA700 | | | | | | | |
| | | | | | | | 42CZ | 56C 140TC | 180TC 210C | 42CZ | 56C 140TC | 180TC 210C | | | | | |
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 2.94 | 7.16 | 7.97 | — | 7.63 | 8.59 | — | 4.66 | — | 3.75 | 4.00 | 5.88 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 3.69 | 7.47 | 8.28 | — | 7.83 | 8.79 | — | 5.75 | — | 4.44 | 4.31 | 7.19 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 4.09 | — | 8.66 | — | — | 10.73 | — | 6.38 | — | 4.94 | 4.69 | 7.94 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 5.06 | — | 9.60 | — | — | 10.14 | — | 8.00 | — | 5.66 | 5.63 | 9.35 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 5.63 | — | 11.44 | — | — | 12.20 | — | 8.88 | — | 6.12 | 6.75 | 10.18 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 5.88 | — | 11.75 | — | — | 12.51 | — | 9.38 | 4.94 | 6.48 | 7.06 | 11.00 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 6.56 | — | 12.81 | — | — | 13.48 | — | 10.44 | 5.50 | 7.27 | 7.75 | 12.27 |
| 752 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 8.44 | — | 14.81 | 15.25 | — | 16.45 | 17.37 | 13.75 | 7.19 | 9.28 | 9.06 | 15.84 |
| 760 | 14.50 | 8.13 | 12.75 | 6.38 | 6.38 | 10.00 | — | — | — | — | 18.20 | 19.13 | 16.50 | 7.94 | 9.56 | 10.00 | 16.81 |

| Size | P | R-NEMA Mounting | | | T | | Low Speed Shaft | | | | Approx. Weight (Lbs.) | | Horizontal Base Kit No. † |
|------|------|-----------------|--------------|-------|----------|-------|---------------------|------|-------|---------|-----------------------|------|---------------------------|
| | | 42CZ | 56C 140TC | 180TC | Tap Size | Depth | U +.000 -.001 | V | W-Key | | FWA | QCWA | |
| | | | | | | | | | Sq. | Length | | | |
| 713 | 2.59 | 2.16 | 3.31 | — | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | 16 | 18 | 56577 |
| 718 | 2.94 | 2.16 | 3.31 | — | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | 27 | 30 | 56585 |
| 721 | 3.38 | — | 3.31 | — | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | 37 | 39 | 56440 |
| 726 | 3.78 | — | 3.31 | — | 3/8-16 | .56 | 1.125 | 2.62 | 1/4 | 1-15/16 | 62 | 62 | 56595 |
| 730 | 4.38 | — | 3.31 | — | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | 85 | 91 | 65544 |
| 732 | 4.38 | — | 3.31 | — | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | 104 | 119 | 56599 |
| 738 | 4.88 | — | 3.31 | — | 1/2-13 | .75 | 1.625 | 3.50 | 3/8 | 2-1/4 | 142 | 158 | 56603 |
| 752 | 5.88 | — | 3.31 | 4.63 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | 247 | 267 | 56607 |
| 760 | 7.25 | — | 3.31 | 4.63 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 340 | 56610 |

* See Assemblies and Mounting Positions, Page 72.

† For Base Kits, see Page 129.

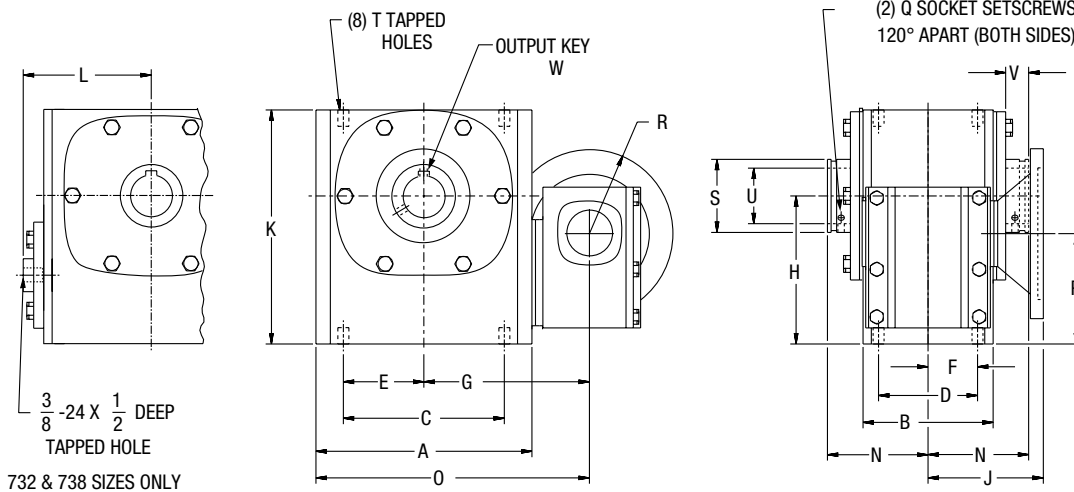
Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages.

700 Series Double Reduction Flanged Reducer Dimensions

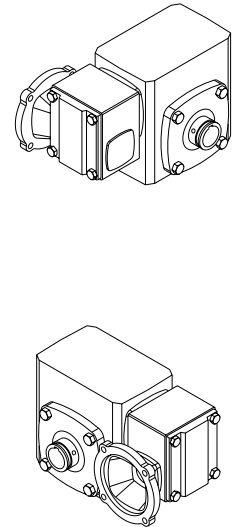
HFWA700/HQCWA700 Series Flanged Quill/Flanged Coupling Types Basic Models (No Base); Parallel Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.



ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | K | L | N |
|------|-------|------|------|------|------|------|------|------|-----------------|-----------|---------|-----------|-------|------|------|
| | | | | | | | | | FWA700 | | QCWA700 | | | | |
| | | | | | | | | | 42CZ | 56C 140TC | 42CZ | 56C 140TC | | | |
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 3.75 | 2.94 | 3.16 | 3.94 | 4.15 | 5.01 | 4.66 | — | 2.50 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 4.44 | 3.69 | 3.16 | 3.94 | 4.15 | 5.01 | 5.75 | — | 3.03 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 4.94 | 4.09 | — | 3.94 | — | 5.46 | 6.38 | — | 3.22 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5.66 | 5.06 | — | 3.94 | — | 5.46 | 8.00 | — | 3.44 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 6.12 | 5.63 | — | 4.69 | — | 6.29 | 8.88 | — | 4.19 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 6.48 | 5.88 | — | 4.69 | — | 6.29 | 9.38 | 4.94 | 4.31 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 7.27 | 6.56 | — | 5.06 | — | 6.76 | 10.44 | 5.50 | 4.81 |

| Size | O | P | Q | R-NEMA Mounting | | | T | | Low Speed Shaft | | | Approx. Weight (LBS.) | | |
|------|-------|------|---------|-----------------|-----------|------|----------|-------|---------------------|------|-----------------|-----------------------|------|-------|
| | | | | 42CZ | 56C 140TC | S | Tap Size | Depth | Max U +.0015 -0.000 | V | W-Key | | HFWA | HQCWA |
| | | | | | | | | | | | Sq. | Length | | |
| 713 | 5.88 | 2.59 | #10-32 | 2.16 | 3.31 | .88 | 5/16-18 | .50 | .625 | .68 | | 17 | 19 | |
| 718 | 7.19 | 2.94 | #10-32 | 2.16 | 3.31 | 1.38 | 5/16-18 | .50 | 1.000 | .74 | | 27 | 31 | |
| 721 | 7.94 | 3.38 | 1/4-28 | — | 3.31 | 1.94 | 3/8-16 | .56 | 1.4375 | .87 | See Page | 37 | 39 | |
| 726 | 9.35 | 3.78 | 5/16-24 | — | 3.31 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | 128 For | 60 | 67 | |
| 730 | 10.18 | 4.38 | 5/16-24 | — | 3.31 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.11 | Key Information | 82 | 95 | |
| 732 | 11.00 | 4.38 | 5/16-24 | — | 3.31 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | | 104 | 121 | |
| 738 | 12.27 | 4.88 | 5/16-24 | — | 3.31 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | | 149 | 166 | |

* See Assemblies and Mounting Positions, Page 72.

Input may be rotated clockwise or counterclockwise.

Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages. See Page 128 for available bore sizes.

700 Series Double Reduction Flanged Reducer Dimensions

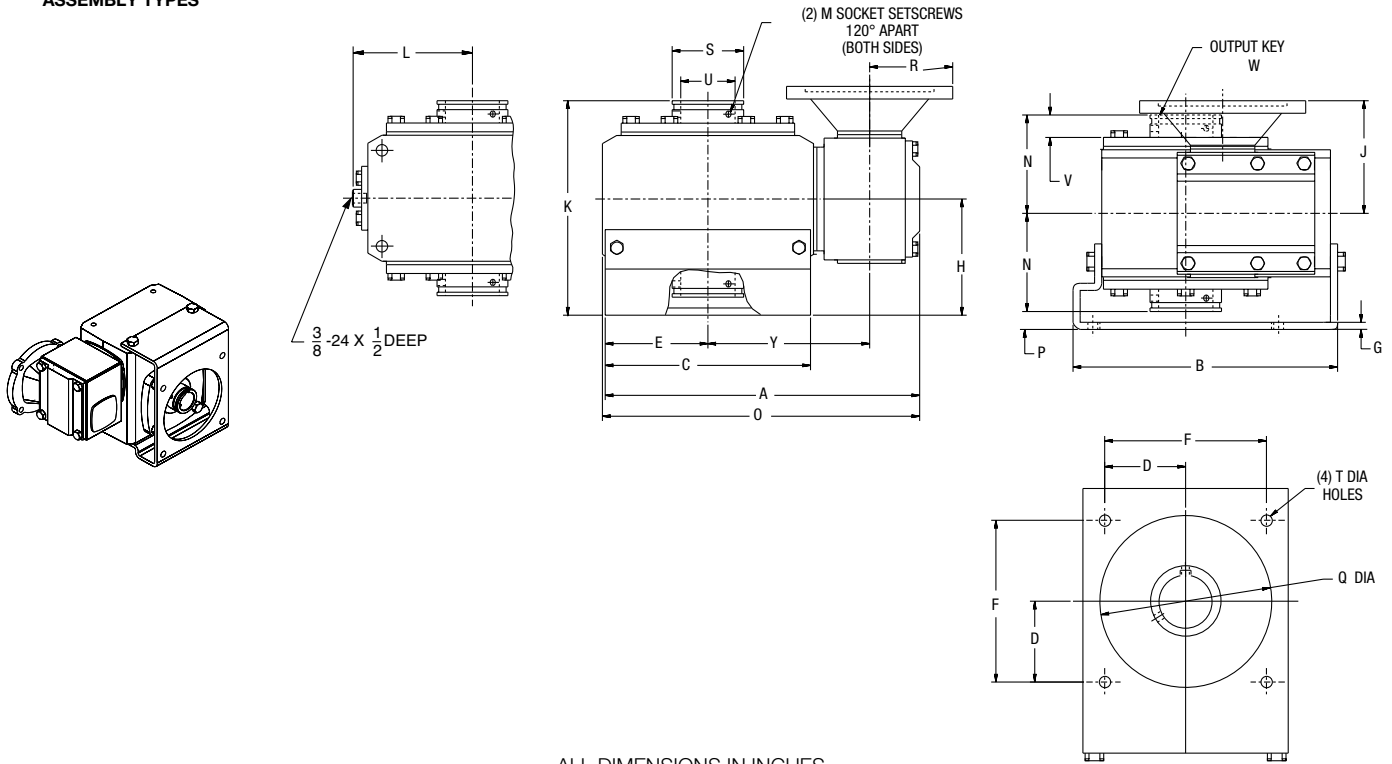
HFWA700/HQCWA700 Series Flanged Quill/Flanged Coupling Types

R Position Mounting Bracket; Parallel Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | K | L | M | N |
|------|-------|-------|------|------|------|------|-----|------|-----------------|-----------|----------|-----------|-------|------|---------|------|
| | | | | | | | | | HFWA700 | | HQCWA700 | | | | | |
| | | | | | | | | | 42CZ | 56C 140TC | 42CZ | 56C 140TC | | | | |
| 713 | 7.40 | 5.55 | 4.25 | 1.77 | 2.12 | 3.54 | .19 | 3.00 | 3.16 | 3.94 | 4.15 | 5.01 | 5.50 | — | #10-32 | 2.50 |
| 718 | 8.38 | 6.66 | 4.81 | 2.08 | 2.41 | 4.16 | .19 | 3.50 | 3.16 | 3.94 | 4.15 | 5.01 | 6.53 | — | #10-32 | 3.03 |
| 721 | 9.57 | 7.47 | 5.75 | 2.30 | 2.88 | 4.60 | .19 | 3.75 | — | 3.94 | — | 5.46 | 6.97 | — | 1/4-28 | 3.22 |
| 726 | 11.00 | 9.25 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 4.06 | — | 3.94 | — | 5.46 | 7.50 | — | 5/16-24 | 3.44 |
| 730 | 12.39 | 10.38 | 8.00 | 3.18 | 4.00 | 6.36 | .25 | 4.50 | — | 4.69 | — | 6.29 | 8.69 | — | 5/16-24 | 4.19 |
| 732 | 13.44 | 10.91 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 5.25 | — | 4.69 | — | 6.29 | 9.56 | 4.94 | 5/16-24 | 4.31 |
| 738 | 14.91 | 11.84 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 5.47 | — | 5.06 | — | 6.76 | 10.28 | 5.50 | 5/16-24 | 4.81 |

| Size | O | P | Q | R-NEMA Mounting | | S | T Holes | Low Speed Shaft | | | | Y | Approx. Weight (LBS.) | |
|------|-------|-----|------|-----------------|-----------|------|---------|----------------------|------|-----------------|--------|------|-----------------------|-------|
| | | | | 42CZ | 56C 140TC | | | Max U +.0015 -0.0000 | V | W-Key | | | HFWA | HQCWA |
| | | | | | | | | | | Size | Length | | | |
| 713 | 7.41 | .50 | 3.62 | 2.16 | 3.31 | .88 | 11/32 | .625 | .68 | | | 3.75 | 18 | 20 |
| 718 | 8.72 | .47 | 4.06 | 2.16 | 3.31 | 1.38 | 11/32 | 1.000 | .74 | | | 4.44 | 30 | 36 |
| 721 | 9.69 | .53 | 4.50 | — | 3.31 | 1.94 | 13/32 | 1.4375 | .87 | See Page | | 4.94 | 42 | 47 |
| 726 | 11.09 | .62 | 6.00 | — | 3.31 | 2.50 | 13/32 | 1.9375 | .78 | 128 For | | 5.66 | 56 | 80 |
| 730 | 12.45 | .31 | 7.00 | — | 3.31 | 2.88 | 13/32 | 2.1875 | 1.10 | Key Information | | 6.12 | 95 | 116 |
| 732 | 13.69 | .94 | 7.00 | — | 3.31 | 2.88 | 9/16 | 2.1875 | .93 | | | 6.48 | 134 | 151 |
| 738 | 15.16 | .66 | 8.00 | — | 3.31 | 3.25 | 9/16 | 2.4375 | 1.11 | | | 7.27 | 178 | 200 |

* See Assemblies and Mounting Positions, Page 72.

See Page 128 for available bore sizes.

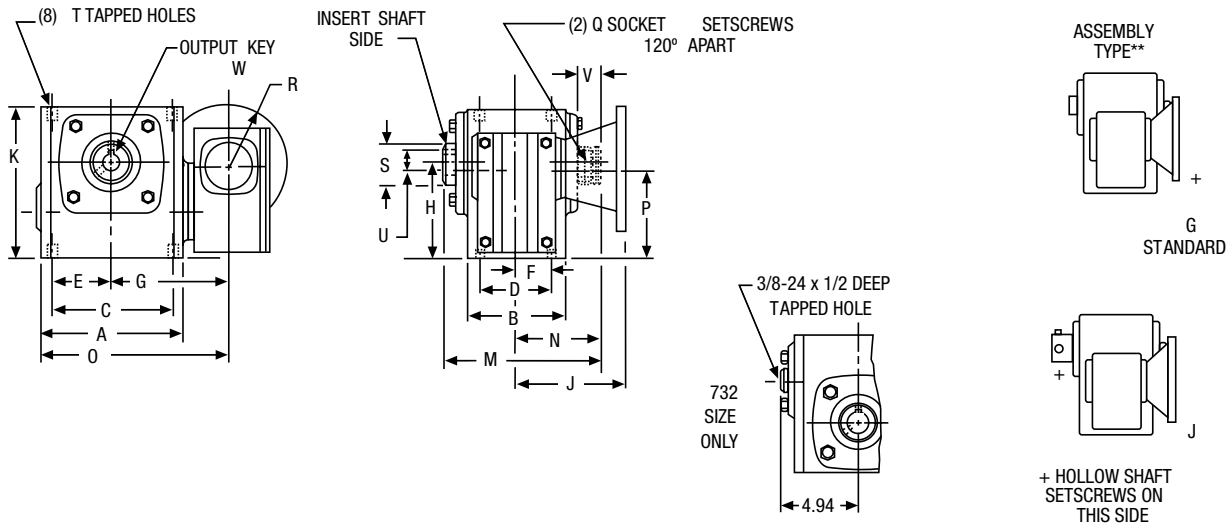
Input may be rotated clockwise or counterclockwise.

700 Series Double Reduction Flanged Reducer Dimensions

SFWA700 Series Flanged Quill Type Basic Models (No Base); Parallel Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Pages 88-89.
FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J-NEMA Mounting | | K | M | N |
|------|------|------|------|------|------|------|------|------|-----------------|-----------|------|------|------|
| | | | | | | | | | SFWA | | | | |
| | | | | | | | | | 42CZ | 56C 140TC | | | |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 4.44 | 3.69 | 3.16 | 3.94 | 5.75 | 5.47 | 3.09 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 4.94 | 4.09 | — | 3.94 | 6.38 | 5.69 | 3.22 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5.66 | 5.06 | — | 3.94 | 8.00 | 6.28 | 3.50 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 6.48 | 5.88 | — | 4.69 | 9.38 | 7.88 | 4.38 |

| Size | O | P | Q | R-NEMA Mounting | | S | T | | Low Speed Shaft | | | Approx. Weight (LBS.) |
|------|-------|------|---------|-----------------|-----------|------|----------|-------|-----------------|------|-----------------|-----------------------|
| | | | | 42CZ | 56C 140TC | | Tap Size | Depth | U +.0015 -.000 | V | W-Key | |
| | | | | Sq. | Length | | | | | | SFWA | |
| 718 | 7.19 | 2.94 | #10-32 | 2.16 | 3.31 | 1.38 | 5/16-18 | .50 | 1.000 | .78 | See Page | 26 |
| 721 | 7.94 | 3.38 | 1/4-28 | — | 3.31 | 1.50 | 3/8-16 | .56 | 1.125 | .88 | 128 For | 35 |
| 726 | 9.34 | 3.78 | 1/4-28 | — | 3.31 | 2.16 | 3/8-16 | .56 | 1.4375 | .84 | Key Information | 57 |
| 732 | 11.00 | 4.38 | 5/16-24 | — | 3.31 | 2.56 | 7/16-14 | .66 | 1.9375 | 1.00 | | 99 |

** Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces. Input may be rotated clockwise or counterclockwise.

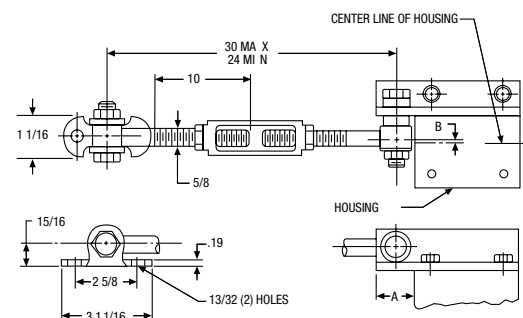
Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages. See Assemblies and Mounting Positions, Page 72.

Reaction Rod Kits

ALL DIMENSIONS IN INCHES

| Size | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

All hardware shown is included in the kits.



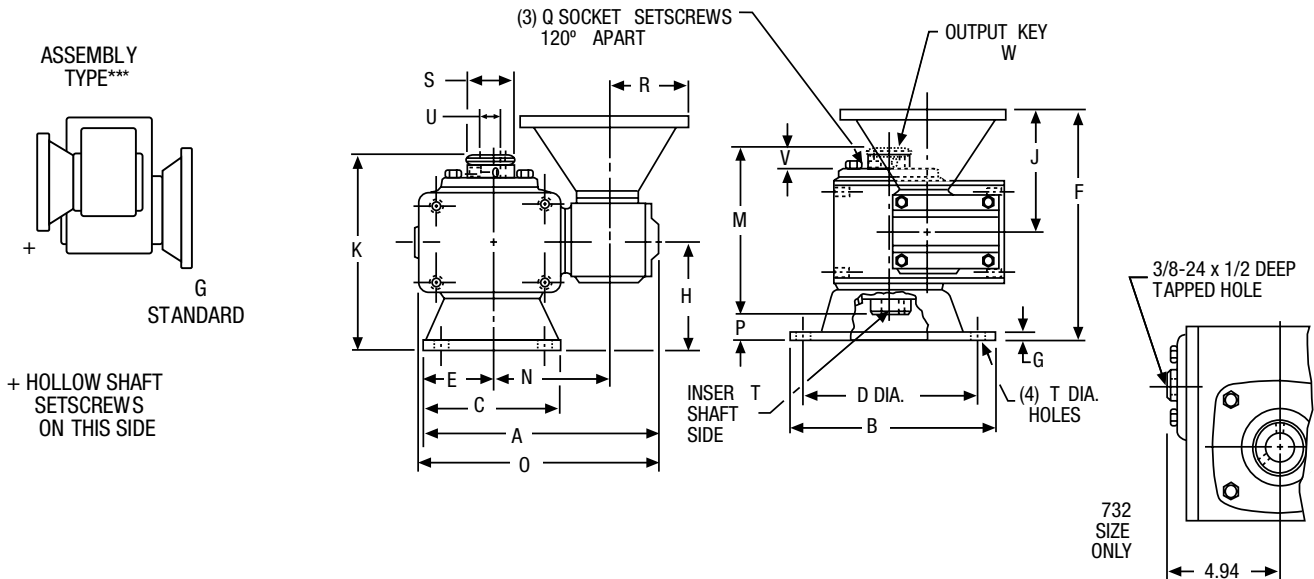
700 Series Double Reduction Flanged Reducer Dimensions

SFWA700 Series Flanged Quill Type

V Position Mounting Flange; Parallel Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Pages 88-89.
FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D DIA. | E | G | H | J-NEMA Mounting | | K | M | N |
|------|-------|-------|------|--------|------|-----|------|-----------------|-----------|------|------|------|
| | | | | | | | | SFWA | | | | |
| | | | | | | | | 42CZ | 56C 140TC | | | |
| 718 | 8.41 | 6.75 | 4.88 | 5.88 | 2.44 | .38 | 3.50 | 3.16 | 3.94 | 6.59 | 5.69 | 4.44 |
| 721 | 9.56 | 7.38 | 5.75 | 6.50 | 2.88 | .38 | 3.75 | — | 3.94 | 6.97 | 5.88 | 4.94 |
| 726 | 11.28 | 8.88 | 7.75 | 8.00 | 3.88 | .38 | 4.06 | — | 3.94 | 7.56 | 6.47 | 5.66 |
| 732 | 13.25 | 11.00 | 9.00 | 10.00 | 4.50 | .50 | 5.25 | — | 4.69 | 9.63 | 8.06 | 6.48 |

| Size | O | P | Q | R-NEMA Mounting | | S | T Holes | Low Speed Shaft | | | Approx. Weight (LBS.) | |
|------|-------|------|---------|-----------------|-----------|------|---------|-----------------|------|-----------------|-----------------------|------|
| | | | | 42CZ | 56C 140TC | | | U +.0015 -.000 | V | W-Key | | SFWA |
| | | | | | | | | | | Size | Length | |
| 718 | 8.72 | .91 | #10-32 | 2.16 | 3.31 | 1.38 | 11/32 | 1.000 | .78 | See Page | 29 | |
| 721 | 9.69 | 1.09 | 1/4-28 | — | 3.31 | 1.50 | 13/32 | 1.125 | .88 | 128 For | 40 | |
| 726 | 11.09 | 1.09 | 1/4-28 | — | 3.31 | 2.16 | 13/32 | 1.4375 | .84 | Key Information | 53 | |
| 732 | 13.25 | 1.56 | 5/16-24 | — | 3.31 | 2.56 | 9/16 | 1.9375 | 1.00 | | 128 | |

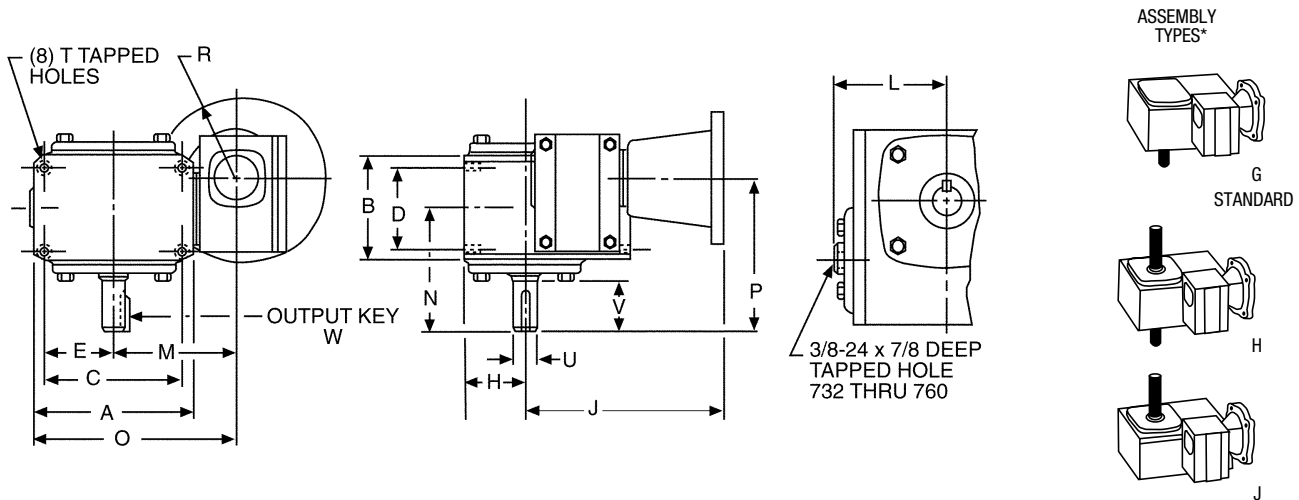
*Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft. See Assemblies and Mounting Positions, Page 72.

700 Series Double Reduction Flanged Reducer Dimensions

FWC700/QCWC700 Series Flanged Quill/Flanged Coupling Types Basic Models (No Base); Right Angle Shafts

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | H | J-NEMA Mounting | | | | | | L | M | N | O |
|------|-------|------|-------|------|------|------|-----------------|--------------|---------------|---------|--------------|---------------|------|------|-------|-------|
| | | | | | | | FWC700 | | | QCWC700 | | | | | | |
| | | | | | | | 42CZ | 56C 140TC | 180TC 210C | 42CZ | 56C 140TC | 180TC 210C | | | | |
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.72 | 4.49 | 5.30 | — | 5.48 | 6.35 | — | — | 3.75 | 4.00 | 5.88 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 2.06 | 4.91 | 5.72 | — | 5.90 | 6.76 | — | — | 4.44 | 4.31 | 7.19 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 2.28 | — | 6.00 | — | — | 7.52 | — | — | 4.94 | 4.69 | 7.94 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 2.94 | — | 6.56 | — | — | 9.22 | — | — | 5.66 | 5.63 | 9.35 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 3.25 | — | 7.69 | — | — | 9.29 | — | — | 6.12 | 6.75 | 10.18 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 3.50 | — | 7.94 | — | — | 9.54 | — | 4.94 | 6.48 | 7.06 | 10.98 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 3.88 | — | 8.81 | — | — | 10.51 | — | 5.50 | 7.27 | 7.75 | 12.27 |
| 752 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 5.31 | — | 11.00 | 11.34 | — | 12.64 | 13.55 | 7.19 | 9.28 | 9.06 | 15.84 |
| 760 | 14.50 | 8.12 | 12.75 | 6.38 | 6.38 | 6.50 | — | — | — | — | 14.70 | 15.12 | 7.94 | 9.56 | 10.00 | 16.81 |

| Size | P | R-NEMA Mounting | | | T | | Low Speed Shaft | | | | Approx. Weight (LBS.) | | Vertical Base Kit No. † | |
|------|-------|-----------------|--------------|---------------|----------|-------|---------------------|------|-------|---------|-----------------------|------|-------------------------|-------|
| | | 42CZ | 56C 140TC | 180TC 210C | Tap Size | Depth | U +.000 -.001 | V | W-Key | | FWA | QCWC | High | Low |
| | | | | | | | | | Sq. | Length | | | | |
| 713 | 5.00 | 2.16 | 3.31 | — | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | 16 | 18 | 56578 | 56579 |
| 718 | 5.31 | 2.16 | 3.31 | — | 5-16-18 | .50 | .875 | 1.78 | 3/16 | 1 | 27 | 30 | 56582 | 56583 |
| 721 | 6.03 | — | 3.31 | — | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | 37 | 39 | 56588 | 56589 |
| 726 | 6.97 | — | 3.31 | — | 3/8-16 | .56 | 1.125 | 2.62 | 1/4 | 1-15/16 | 62 | 62 | 56596 | 56597 |
| 730 | 8.50 | — | 3.31 | — | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | 83 | 91 | 65545 | 65546 |
| 732 | 8.81 | — | 3.31 | — | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | 103 | 119 | 56600 | 56601 |
| 738 | 9.81 | — | 3.31 | — | 1/2-13 | .75 | 1.625 | 3.50 | 3/8 | 2-1/4 | 142 | 158 | 56604 | 56605 |
| 752 | 11.69 | — | 3.31 | 4.63 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | 247 | 267 | 56608 | 56609 |
| 760 | 13.25 | — | 3.31 | 4.63 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 340 | 56611 | 56612 |

* See Assemblies and Mounting Positions, Page 73.

† For Base Kits, see Page 129.

700 Series Double Reduction Flanged Reducer Dimensions

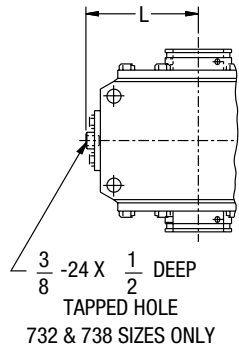
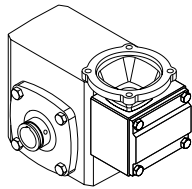
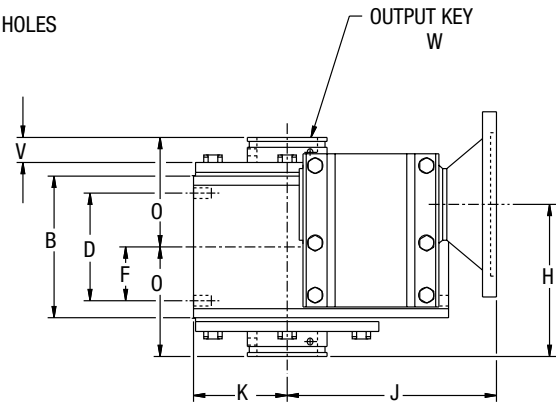
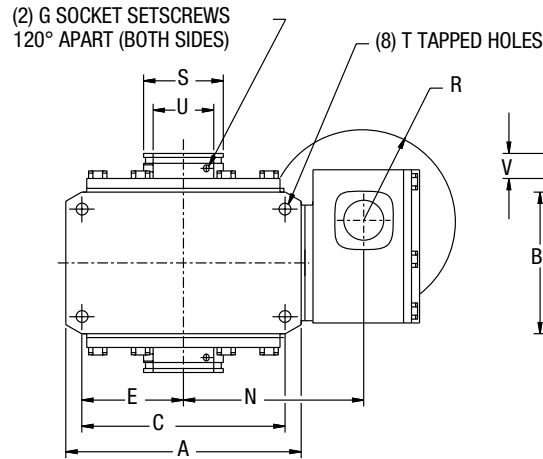
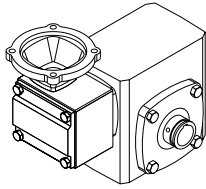
HFWC700/HQCWC700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base); Right Angle Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | K | L |
|------|-------|------|------|------|------|------|---------|------|-----------------|-----------|-------|-----------|------|------|
| | | | | | | | | | HFWC | | HQCWC | | | |
| | | | | | | | | | 42CZ | 56C 140TC | 42CZ | 56C 140TC | | |
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | #10-32 | 3.50 | 4.49 | 5.30 | 5.48 | 6.35 | 1.72 | — |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 4.03 | 4.91 | 5.72 | 5.90 | 6.76 | 2.06 | — |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 4.55 | — | 6.00 | — | 7.52 | 2.28 | — |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5/16-24 | 4.77 | — | 6.56 | — | 9.22 | 2.94 | — |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 5/16-24 | 5.94 | — | 7.69 | — | 9.29 | 3.25 | — |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 6.06 | — | 7.94 | — | 9.54 | 3.50 | 4.94 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 5/16-24 | 6.87 | — | 8.81 | — | 10.51 | 3.88 | 5.50 |

| Size | N | O | R-NEMA Mounting | | S | T | | Low Speed Shaft | | | Approx. Weight (LBS.) | | |
|------|------|------|-----------------|-----------|------|----------|-------|---------------------|------|----------------------------------|-----------------------|------|-------|
| | | | 42CZ | 56C 140TC | | Tap Size | Depth | Max U +.0015 -.0000 | V | W-Key | | HFWC | HQCWC |
| | | | | | | | | | | Size | Length | | |
| 713 | 3.75 | 2.50 | 2.16 | 3.31 | .88 | 5/16-18 | .50 | .625 | .68 | | 17 | 19 | |
| 718 | 4.44 | 3.03 | 2.16 | 3.31 | 1.38 | 5/16-18 | .50 | 1.000 | .74 | | 27 | 31 | |
| 721 | 4.94 | 3.22 | — | 3.31 | 1.94 | 3/8-16 | .56 | 1.4375 | .87 | See Page 128 For Key Information | 37 | 39 | |
| 726 | 5.66 | 3.44 | — | 3.31 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | | 60 | 67 | |
| 730 | 6.12 | 4.19 | — | 3.31 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.10 | | 82 | 95 | |
| 732 | 6.48 | 4.31 | — | 3.31 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | | 104 | 121 | |
| 738 | 7.27 | 4.81 | — | 3.31 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | 149 | 166 | | |

* See Assemblies and Mounting Positions, Page 73.

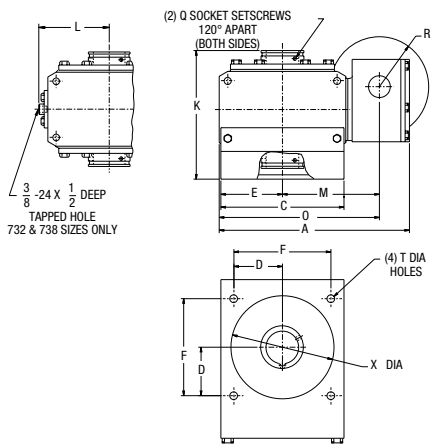
Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages. See Page 128 for available bore sizes.

700 Series Double Reduction Flanged Reducer Dimensions

HFWC700/HQCWC700 Series Flanged Quill/Flanged Coupling Types R/L Position Mounting Bracket; Right Angle Shafts; Bored to Size Hollow Output

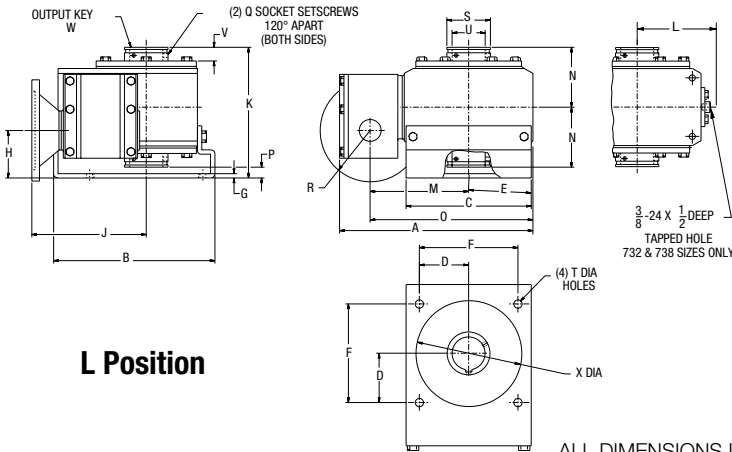
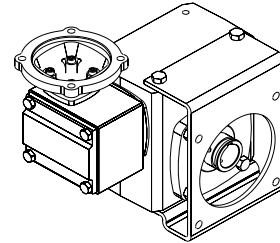
FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.

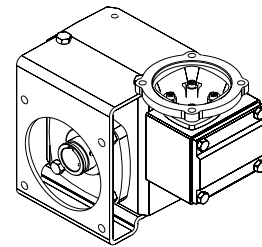


R Position

ASSEMBLY TYPES*



L Position



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | | J-NEMA Mounting | | | | K | L | M |
|------|-------|-------|------|------|------|------|-----|---------|---------|-----------------|-----------|-------|-----------|-------|------|------|
| | | | | | | | | R Model | L Model | HFWC | | HQCWC | | | | |
| | | | | | | | | | | 42CZ | 56C 140TC | 42CZ | 56C 140TC | | | |
| 713 | 7.41 | 5.55 | 4.24 | 1.77 | 2.12 | 3.54 | .19 | 4.00 | 2.00 | 4.49 | 5.30 | 5.48 | 6.35 | 5.50 | — | 3.75 |
| 718 | 8.72 | 6.66 | 5.00 | 2.08 | 2.41 | 4.16 | .19 | 4.50 | 2.50 | 4.91 | 5.72 | 5.90 | 6.76 | 6.53 | — | 4.44 |
| 721 | 9.69 | 7.47 | 5.76 | 2.30 | 2.88 | 4.60 | .19 | 5.08 | 2.42 | — | 6.00 | — | 7.52 | 6.97 | — | 4.94 |
| 726 | 11.09 | 9.25 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 5.39 | 2.73 | — | 6.56 | — | 9.22 | 7.50 | — | 5.66 |
| 730 | 12.45 | 10.38 | 8.00 | 3.18 | 4.00 | 6.36 | .25 | 6.25 | 2.75 | — | 7.69 | — | 9.29 | 8.69 | — | 6.12 |
| 732 | 13.69 | 10.91 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 7.00 | 3.50 | — | 7.94 | — | 9.54 | 9.56 | 4.94 | 6.48 |
| 738 | 15.16 | 11.84 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 7.53 | 3.41 | — | 8.81 | — | 10.51 | 10.28 | 5.50 | 7.27 |

| Size | N | O | P | Q | R-NEMA Mounting | | S | T Holes | Low Speed Shaft | | | X | Approx. Weight (LBS.) | | |
|------|------|-------|-----|---------|-----------------|-----------|------|---------|----------------------|------|----------------------------------|------|-----------------------|-------|--------|
| | | | | | 42CZ | 56C 140TC | | | Max U +.0015 -0.0000 | V | W-Key | | HFWC | HQCWC | |
| | | | | | | | | | | | Size | | | | Length |
| 713 | 2.50 | 5.87 | .50 | #10-32 | 2.16 | 3.31 | .88 | 11/32 | .625 | .68 | | 3.62 | 18 | 20 | |
| 718 | 3.03 | 7.19 | .47 | #10-32 | 2.16 | 3.31 | 1.38 | 11/32 | 1.000 | .74 | | 4.06 | 30 | 36 | |
| 721 | 3.22 | 7.94 | .53 | 1/4-28 | — | 3.31 | 1.94 | 13/32 | 1.4375 | .87 | See Page 128 For Key Information | 4.50 | 42 | 47 | |
| 726 | 3.44 | 9.35 | .62 | 5/16-24 | — | 3.31 | 2.50 | 13/32 | 1.9375 | .78 | | 6.00 | 56 | 80 | |
| 730 | 4.19 | 10.18 | .31 | 5/16-24 | — | 3.31 | 2.88 | 13/32 | 2.1875 | 1.10 | 7.00 | 95 | 116 | | |
| 732 | 4.31 | 10.98 | .94 | 5/16-24 | — | 3.31 | 2.88 | 9/16 | 2.1875 | .93 | 7.00 | 134 | 151 | | |
| 738 | 4.81 | 12.27 | .66 | 5/16-24 | — | 3.31 | 3.25 | 9/16 | 2.4375 | 1.11 | 8.00 | 178 | 200 | | |

* See Assemblies and Mounting Positions, Page 73. See Page 128 for available bore sizes.

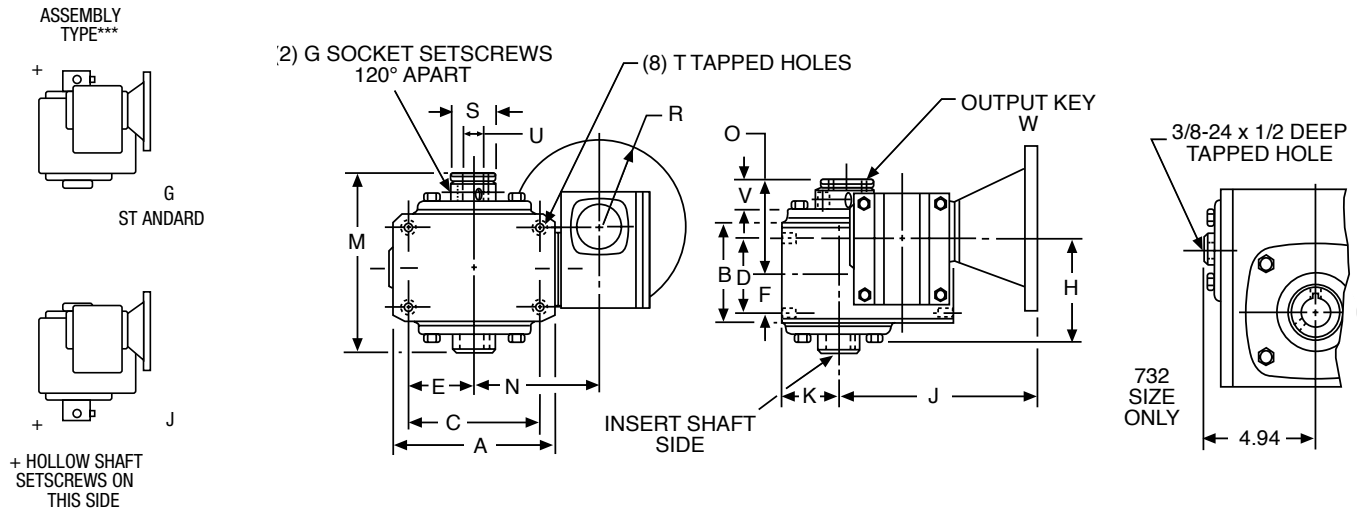
700 Series Double Reduction Flanged Reducer Dimensions

SFWC700 Series Flanged Quill Type

Basic Models (No Base); Right Angle Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Pages 88-89.
FOR RATING INFORMATION, See Pages 71, 77-81.



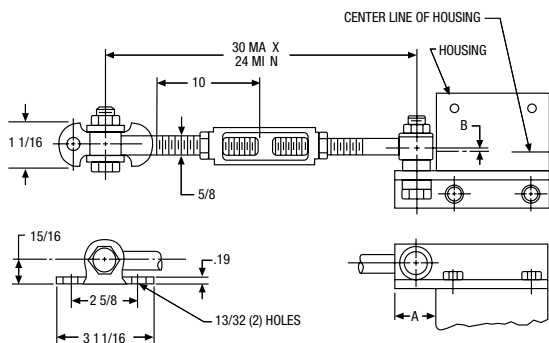
ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J-NEMA Mounting | | K | M |
|------|------|------|------|------|------|------|---------|------|-----------------|-----------|------|------|
| | | | | | | | | | SFWC | | | |
| | | | | | | | | | 42CZ | 56C 140TC | | |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 3.50 | 4.91 | 5.69 | 2.06 | 5.69 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 3.94 | — | 6.00 | 2.28 | 5.88 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 1/4-28 | 4.25 | — | 6.56 | 2.94 | 6.47 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 5.34 | — | 7.94 | 3.50 | 8.06 |

| Size | N | O | R-NEMA Mounting | | S | T | | Low Speed Shaft | | | Approx. Weight (LBS.) SFWC | |
|------|------|------|-----------------|-----------|------|----------|-------|----------------------|------|-----------------|----------------------------|--|
| | | | 42CZ | 56C 140TC | | Tap Size | Depth | U +.0015 -.000 | V | W-Key | | |
| | | | Size | Length | | | | | | | | |
| 718 | 4.44 | 3.09 | 2.16 | 3.31 | 1.38 | 5/16-18 | .50 | 1.000 | .78 | See Page | 24 | |
| 721 | 4.94 | 3.22 | — | 3.31 | 1.50 | 3/8-16 | .56 | 1.125 | .88 | 128 For | 32 | |
| 726 | 5.66 | 3.50 | — | 3.31 | 2.16 | 3/8-16 | .56 | 1.4375 | .84 | Key Information | 51 | |
| 732 | 6.48 | 4.38 | — | 3.31 | 2.56 | 7/16-14 | .66 | 1.9375 | 1.00 | | 99 | |

*See Assemblies and Mounting Positions, Page 73. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft.

Reaction Rod Kits



ALL DIMENSIONS IN INCHES

| Size | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

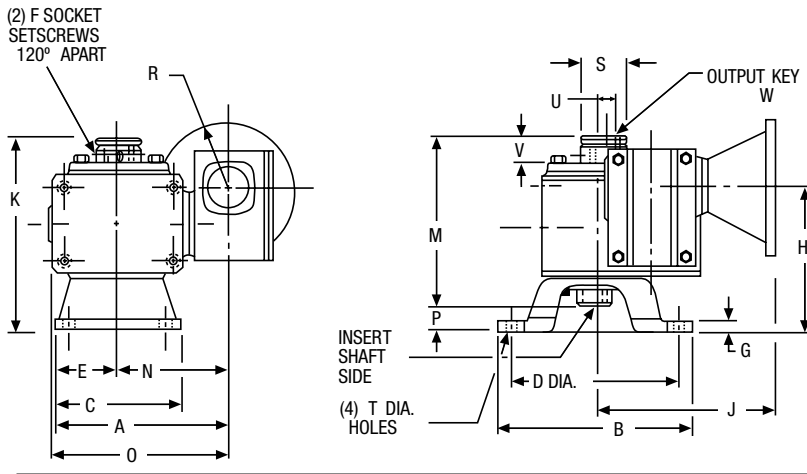
All hardware shown is included in the kits.

700 Series Double Reduction Flanged Reducer Dimensions

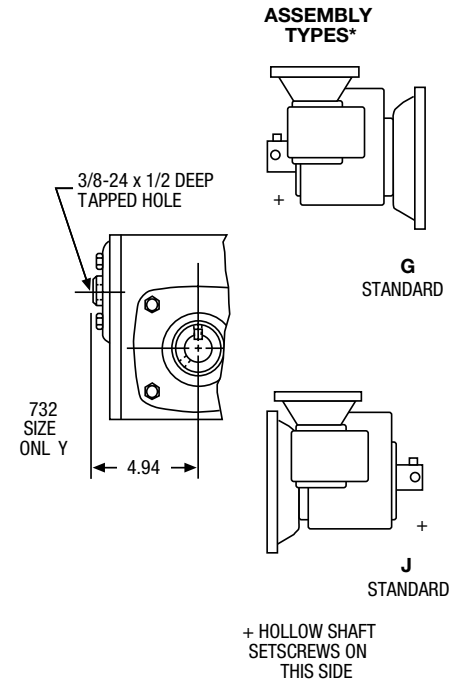
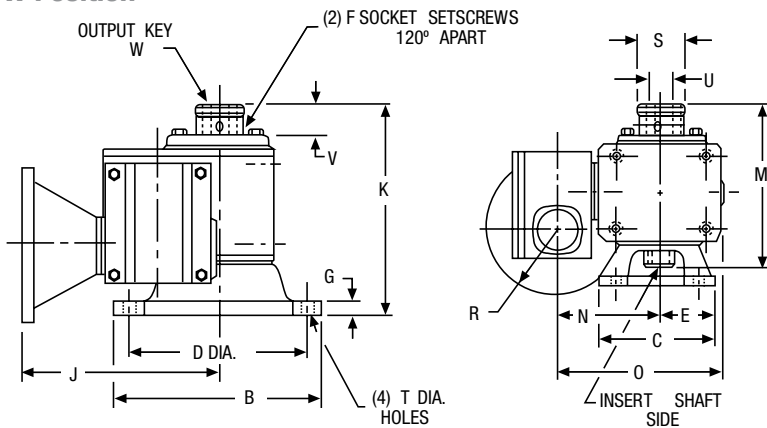
SFWC700 Series Flanged Quill Type V/W Position Mounting Flange; Right Angle Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.
FOR ADDITIONAL SIZES, See the H Series Page 88-89.
FOR RATING INFORMATION, See Pages 71, 77-81.

V Position



W Position



ALL DIMENSIONS IN INCHES

| SIZE | A | B | C | D DIA | E | F | G | H | J-NEMA Mounting | | K | M |
|------|-------|-------|------|-------|------|---------|-----|------|-----------------|-----------|------|------|
| | | | | | | | | | SFWC | | | |
| | | | | | | | | | 42CZ | 56C 140TC | | |
| 718 | 6.88 | 6.75 | 4.88 | 5.88 | 2.44 | #10-32 | .38 | 4.50 | 4.91 | 5.69 | 6.59 | 5.69 |
| 721 | 7.81 | 7.38 | 5.75 | 6.50 | 2.88 | 1/4-28 | .38 | 5.09 | — | 6.00 | 6.97 | 5.88 |
| 726 | 9.54 | 8.88 | 7.75 | 8.00 | 3.88 | 5/16-24 | .38 | 5.41 | — | 6.56 | 7.56 | 6.47 |
| 732 | 11.00 | 11.00 | 9.00 | 10.00 | 4.50 | 5/16-24 | .50 | 7.00 | — | 7.94 | 9.63 | 8.06 |

| SIZE | N | O | P | R-NEMA Mounting | | | T Hole | Low Speed Shaft | | | Approx. Weight (LBS.) |
|------|------|-------|------|-----------------|-----------|------|--------|-----------------|------|-----------------|-----------------------|
| | | | | 42CZ | 56C 140TC | S | | U +.0015 -.000 | V | W-KEY | |
| | | | | | | | | | | Size | Length |
| 718 | 4.44 | 7.19 | 0.91 | 2.16 | 3.31 | 1.38 | 11/32 | 1.000 | 0.78 | | 29 |
| 721 | 4.94 | 7.94 | 1.09 | — | 3.31 | 1.50 | 13/32 | 1.125 | 0.88 | See Page | 40 |
| 726 | 5.66 | 9.34 | 1.09 | — | 3.31 | 2.16 | 13/32 | 1.4375 | 0.84 | 128 For | 53 |
| 732 | 6.48 | 11.00 | 1.56 | — | 3.31 | 2.56 | 9/16 | 1.9375 | 1.00 | Key Information | 128 |

* See Assemblies and Mounting Positions, Page 73. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft.

700 Series Double Reduction Non-Flanged Reducer Dimensions

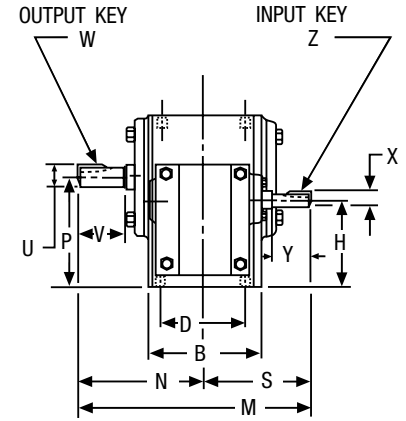
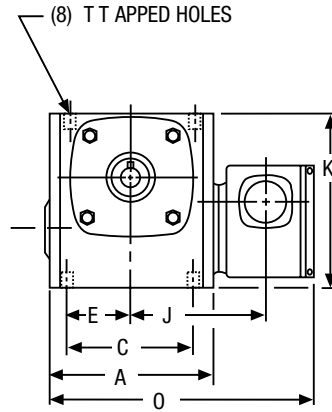
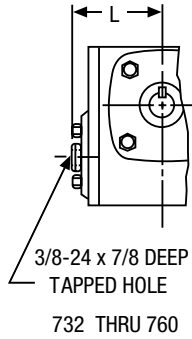
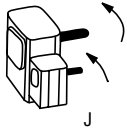
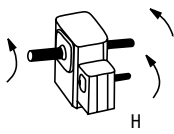
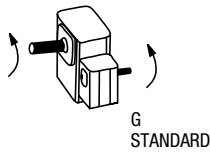
WA700 Series

Basic Models (No Base); Parallel Shafts

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.

ASSEMBLY
TYPES*



ALL DIMENSIONS IN INCHES

| SIZE | A | B | C | D | E | H | J | K | L | M | N | O | P |
|------|-------|------|-------|------|------|------|------|-------|------|-------|-------|-------|-------|
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 2.63 | 3.75 | 4.66 | — | 6.88 | 4.00 | 7.41 | 2.94 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 2.94 | 4.44 | 5.75 | — | 7.19 | 4.31 | 8.72 | 3.69 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 3.38 | 4.94 | 6.38 | — | 8.59 | 4.69 | 9.69 | 4.09 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 3.78 | 5.66 | 8.00 | — | 9.53 | 5.63 | 11.09 | 5.06 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 4.38 | 6.12 | 8.88 | — | 11.59 | 6.75 | 12.45 | 5.63 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 4.38 | 6.48 | 9.38 | 4.94 | 11.90 | 7.06 | 13.69 | 5.88 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 4.88 | 7.27 | 10.44 | 5.50 | 12.88 | 7.75 | 15.16 | 6.56 |
| 752 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 5.88 | 9.28 | 13.75 | 7.19 | 15.38 | 9.06 | 19.34 | 8.41 |
| 760 | 14.50 | 8.13 | 12.75 | 6.38 | 6.38 | 7.25 | 9.56 | 16.50 | 7.94 | 17.44 | 10.00 | 21.13 | 10.00 |

| Size | S | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) | Horizontal Base Kit No. |
|------|------|----------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|-------------------------|
| | | | | U +.000 -.001 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | | |
| | | Tap Size | Depth | | | Sq | Length | | | Sq | Length | | |
| 713 | 2.88 | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | .3745 | .81 | 3/32 | 3/8 | 15 | 56577 |
| 718 | 2.88 | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | .3745 | .81 | 3/32 | 3/8 | 28 | 56585 |
| 721 | 3.91 | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | .4995 | 1.31 | 1/8 | 5/8 | 37 | 56587 |
| 726 | 3.91 | 3/8-16 | .56 | 1.125 | 2.63 | 1/4 | 1-5/16 | .4995 | 1.31 | 1/8 | 5/8 | 55 | 56595 |
| 730 | 4.84 | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 73 | 65544 |
| 732 | 4.84 | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | .6245 | 1.56 | 3/16 | 13/16 | 93 | 56599 |
| 738 | 5.13 | 1/2-13 | .75 | 1.625 | 3.50 | 3/8 | 2-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 132 | 56603 |
| 752 | 6.31 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | .7495 | 2.38 | 3/16 | 1 | 235 | 56607 |
| 760 | 7.44 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | .8745 | 2.31 | 3/16 | 1 | 298 | 56610 |

* See Assemblies and Mounting Positions, Page 74.

† For Base Kits, see Page 129.

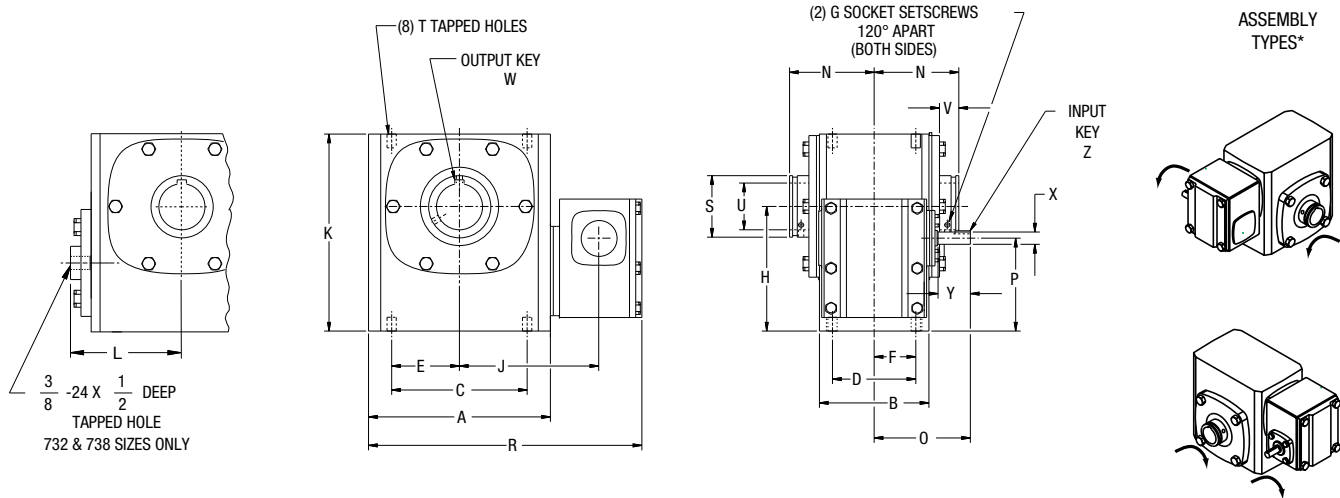
Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages.

700 Series Double Reduction Non-Flanged Reducer Dimensions

HWA700 Series

Basic Models (No Base); Parallel Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.
FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| SIZE | A | B | C | D | E | F | G | H | J | K | L | N | O | P |
|------|-------|------|------|------|------|------|---------|------|------|-------|------|------|------|------|
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | #10-32 | 2.94 | 3.75 | 4.66 | — | 2.50 | 2.88 | 2.63 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 3.69 | 4.44 | 5.75 | — | 3.03 | 2.88 | 2.94 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 4.09 | 4.94 | 6.38 | — | 3.22 | 3.91 | 3.38 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5/16-24 | 5.06 | 5.66 | 8.00 | — | 3.44 | 3.91 | 3.78 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 5/16-24 | 5.63 | 6.12 | 8.88 | — | 4.19 | 4.84 | 4.38 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 5.88 | 6.48 | 9.38 | 4.94 | 4.31 | 4.88 | 4.38 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 5/16-24 | 6.56 | 7.27 | 10.44 | 5.50 | 4.81 | 5.13 | 4.88 |

| Size | R | S | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|-------|------|----------|-------|---------------------------|------|----------------------------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | | | Max U +.0015 -.0000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | Tap Size | Depth | | | Sq | Length | | | Sq | Length | |
| 713 | 7.41 | .88 | 5/16-18 | .50 | .625 | .68 | | | .3745 | .81 | 3/32 | 3/8 | 17 |
| 718 | 8.72 | 1.38 | 5/16-18 | .50 | 1.000 | .84 | | | .3745 | .81 | 3/32 | 3/8 | 28 |
| 721 | 9.69 | 1.94 | 3/8-16 | .56 | 1.4375 | .87 | See Page 128 For Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 37 |
| 726 | 11.09 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | | | .4995 | 1.31 | 1/8 | 5/8 | 55 |
| 730 | 12.45 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.10 | | | .6245 | 1.56 | 3/16 | 13/16 | 76 |
| 732 | 13.69 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | | | .6245 | 1.56 | 3/16 | 13/16 | 96 |
| 738 | 15.16 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | | | .6245 | 1.56 | 3/16 | 13/16 | 166 |

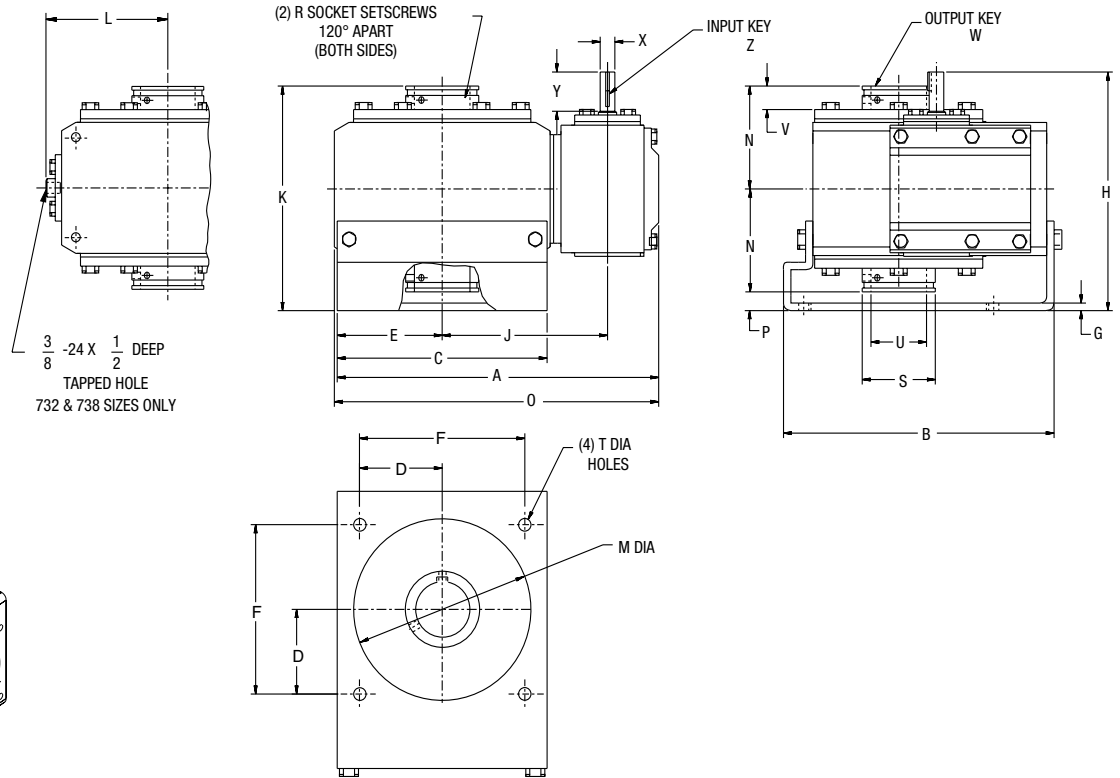
* See Assemblies and Mounting Positions, Page 74.
Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.
See Page 128 for available bore sizes.

700 Series Double Reduction Non-Flanged Reducer Dimensions

HWA700 Series

R Position Mounting Bracket; Parallel Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.
FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J | K | L | M | N | O | P |
|------|-------|-------|------|------|------|------|-----|-------|------|-------|------|------|------|-------|-----|
| 713 | 7.40 | 5.55 | 4.25 | 1.77 | 2.12 | 3.54 | .19 | 5.88 | 3.75 | 5.50 | — | 3.62 | 2.50 | 7.41 | .50 |
| 718 | 8.38 | 6.66 | 4.81 | 2.08 | 2.41 | 4.16 | .19 | 6.38 | 4.44 | 6.53 | — | 4.06 | 3.03 | 8.72 | .47 |
| 721 | 9.57 | 7.47 | 5.75 | 2.30 | 2.88 | 4.60 | .19 | 7.66 | 4.94 | 6.97 | — | 4.50 | 3.22 | 9.69 | .53 |
| 726 | 11.00 | 9.25 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 7.97 | 5.66 | 7.50 | — | 6.00 | 3.44 | 11.09 | .62 |
| 730 | 12.39 | 10.38 | 8.00 | 3.18 | 4.00 | 6.36 | .25 | 4.46 | 6.12 | 8.69 | — | 7.00 | 4.19 | 12.45 | .31 |
| 732 | 13.44 | 10.91 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 10.13 | 6.48 | 9.56 | 4.94 | 7.00 | 4.31 | 13.69 | .94 |
| 738 | 14.91 | 11.84 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 10.60 | 7.27 | 10.28 | 5.50 | 8.00 | 4.81 | 15.16 | .66 |

| Size | R | S | T DIA | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|---------|------|-------|---------------------------|------|------------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | | Max U +.0015 -.0000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | | Sq | Length | | | Sq | Length | |
| 713 | #10-32 | .88 | 11/32 | .625 | .68 | | | .3745 | .81 | 3/32 | 3/8 | 17 |
| 718 | #10-32 | 1.38 | 11/32 | 1.000 | .74 | | | .3745 | .81 | 3/32 | 3/8 | 34 |
| 721 | 1/4-28 | 1.94 | 13/32 | 1.4375 | .87 | See Page 128 For | | .4995 | 1.31 | 1/8 | 5/8 | 42 |
| 726 | 5/16-24 | 2.50 | 13/32 | 1.9375 | .78 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 66 |
| 730 | 5/16-24 | 2.88 | 13/33 | 2.1875 | 1.10 | | | .6245 | 1.56 | 3/16 | 13/16 | 86 |
| 732 | 5/16-24 | 2.88 | 9/16 | 2.1875 | .93 | | | .6245 | 1.56 | 3/16 | 13/16 | 126 |
| 738 | 5/16-24 | 3.25 | 9/16 | 2.4375 | 1.11 | | | .6245 | 1.56 | 3/16 | 13/16 | 148 |

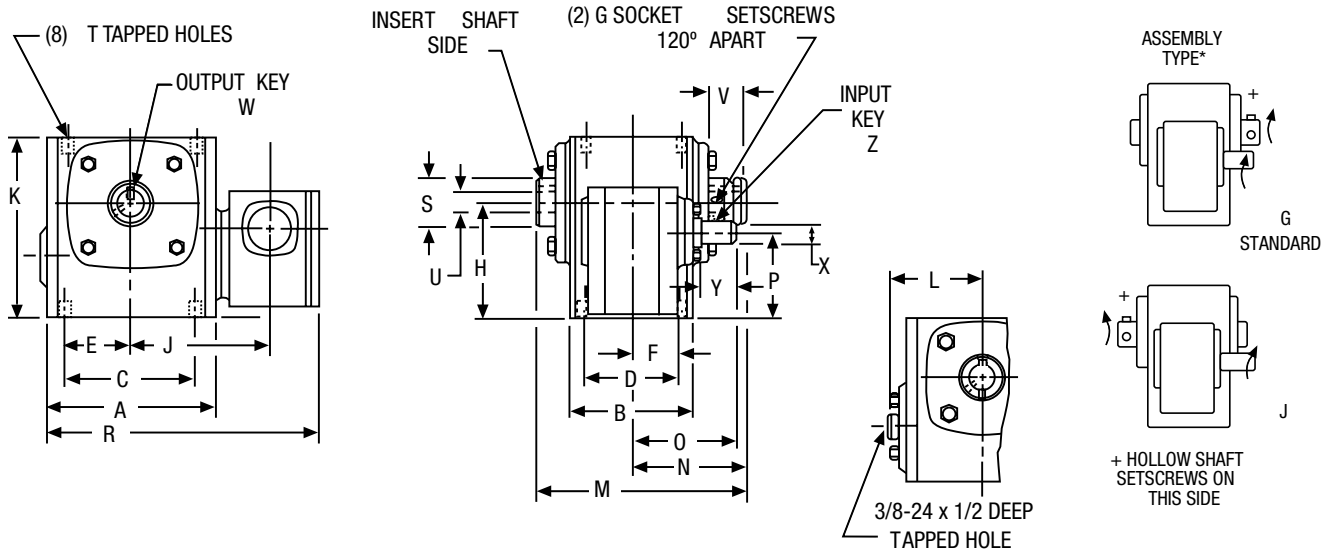
* See Assemblies and Mounting Position, Page 74
Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.
See Page 128 for available bore sizes.

700 Series Double Reduction Non-Flanged Reducer Dimensions

SWA700 Series

Basic Models (No Base); Parallel Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.
 FOR ADDITIONAL SIZES, See the H Series Page 88-89.
 FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J | K | M | N | O | P |
|------|------|------|------|------|------|------|---------|------|------|------|------|------|------|------|
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 3.69 | 4.44 | 5.75 | 5.69 | 3.09 | 2.88 | 2.94 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 4.09 | 4.94 | 6.38 | 5.88 | 3.22 | 3.91 | 3.38 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 1/4-28 | 5.06 | 5.66 | 8.00 | 6.47 | 3.50 | 3.91 | 3.78 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 5.88 | 6.48 | 9.38 | 8.06 | 4.38 | 4.88 | 4.38 |

| Size | R | S | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|-------|------|----------|-------|----------------------|------|-----------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | Tap Size | Depth | U +.0015 -.000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | | | Sq | Length | | | Sq | Length | |
| 718 | 8.72 | 1.38 | 5/16-18 | .50 | 1.000 | .78 | See Page | | .3745 | .81 | 3/32 | 3/8 | 27 |
| 721 | 9.69 | 1.50 | 3/8-16 | .56 | 1.125 | .88 | 128 For | | .4995 | 1.31 | 1/8 | 5/8 | 35 |
| 726 | 11.09 | 2.16 | 3/8-16 | .56 | 1.4375 | .84 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 52 |
| 732 | 13.69 | 2.56 | 7/16-14 | .66 | 1.9375 | 1.00 | | | .6245 | 1.56 | 3/16 | 13/16 | 91 |

* See Assemblies and Mounting Positions, Page 74. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

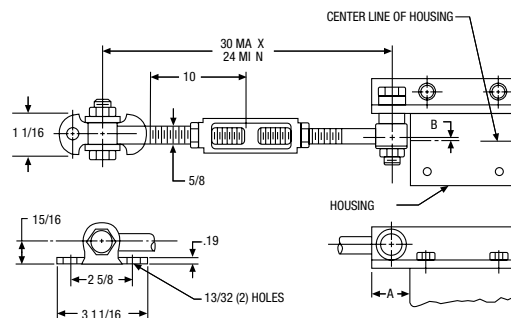
Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages.

Reaction Rod Kits

ALL DIMENSIONS IN INCHES

| SIZE | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

All hardware shown is included in the kits.

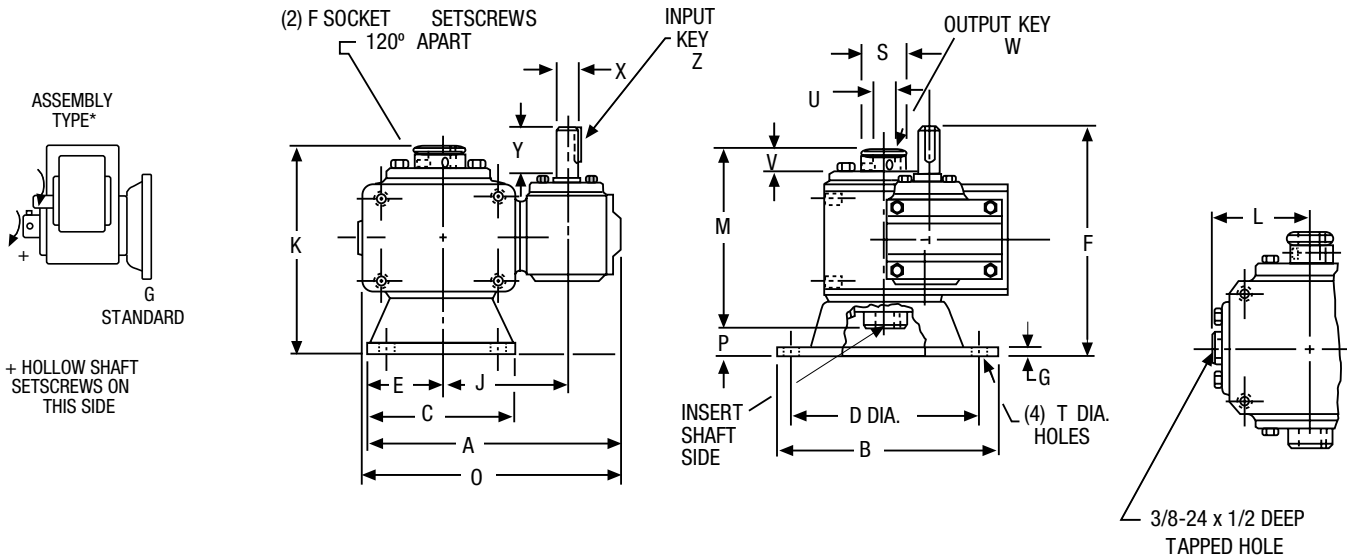


700 Series Double Reduction Non-Flanged Reducer Dimensions

SWA700 Series

V Position Mounting Flange; Parallel Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.
 FOR ADDITIONAL SIZES, See the H Series Page 88-89.
 FOR RATING INFORMATION, See Pages 71, 77-81.



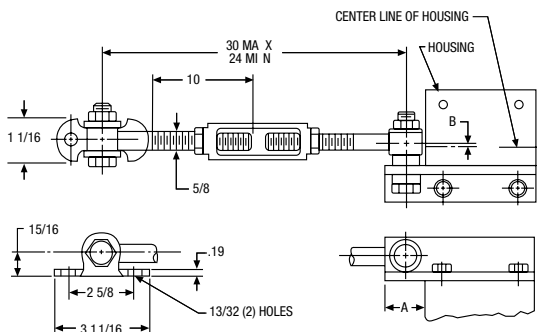
ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | J | K | M | O | P |
|------|-------|-------|------|-------|------|---------|-----|------|------|------|-------|------|
| 718 | 8.41 | 6.75 | 4.88 | 5.88 | 2.44 | #10-32 | .38 | 4.44 | 6.59 | 5.69 | 8.72 | .91 |
| 721 | 9.56 | 7.38 | 5.75 | 6.50 | 2.88 | 1/4-28 | .38 | 4.94 | 6.97 | 5.88 | 9.69 | 1.09 |
| 726 | 11.28 | 8.88 | 7.75 | 8.00 | 3.88 | 1/4-28 | .38 | 5.66 | 7.56 | 6.47 | 11.28 | 1.09 |
| 732 | 13.25 | 11.00 | 9.00 | 10.00 | 4.50 | 5/16-24 | .50 | 6.48 | 9.63 | 8.06 | 13.69 | 1.56 |

| Size | S | T Dia | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|------|-------|----------------------|------|----------------------------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | U +.0015 -.000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | Sq | Length | | | Sq | Length | |
| 718 | 1.38 | 11/32 | 1.000 | .78 | See Page 128 For Key Information | | .3745 | .81 | 3/32 | 3/8 | 32 |
| 721 | 1.50 | 13/32 | 1.125 | .88 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 40 |
| 726 | 2.16 | 13/32 | 1.4375 | .84 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 63 |
| 732 | 2.56 | 9/16 | 1.9375 | 1.00 | Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 120 |

* See Assemblies and Mounting Position, Page 74. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft.
 Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

Reaction Rod Kits



ALL DIMENSIONS IN INCHES

| Size | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

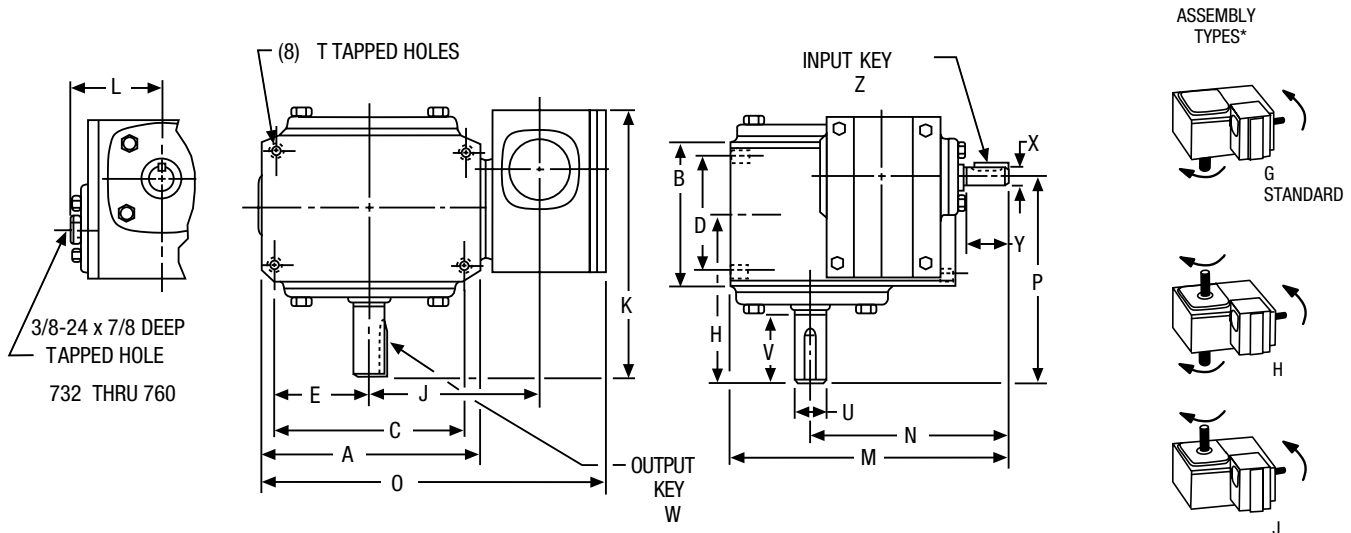
All hardware shown is included in the kits.

700 Series Double Reduction Non-Flanged Reducer Dimensions

WC700 Series

Basic Models (No Base); Right Angle Shafts

FOR ORDERING INFORMATION, see Page 56.
FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| SIZE | A | B | C | D | E | H | J | K | L | M | N | O | P |
|------|-------|------|-------|------|------|-------|------|-------|------|-------|-------|-------|-------|
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 4.00 | 3.75 | 6.19 | — | 5.94 | 4.22 | 7.41 | 5.00 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 4.31 | 4.44 | 6.50 | — | 6.69 | 4.63 | 8.72 | 5.31 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 4.69 | 4.94 | 7.63 | — | 8.25 | 5.97 | 9.69 | 6.03 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 5.63 | 5.66 | 8.56 | — | 9.47 | 6.53 | 11.09 | 6.97 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 6.75 | 6.12 | 10.44 | — | 11.09 | 7.84 | 12.45 | 8.50 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 7.06 | 6.48 | 10.75 | 4.94 | 11.63 | 8.13 | 13.69 | 8.81 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 7.75 | 7.27 | 11.84 | 5.50 | 12.75 | 8.88 | 15.16 | 9.81 |
| 752 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 9.06 | 9.28 | 14.00 | 7.19 | 16.81 | 11.50 | 19.34 | 11.69 |
| 760 | 14.50 | 8.13 | 12.75 | 6.38 | 6.38 | 10.00 | 9.56 | 15.88 | 7.94 | 19.94 | 13.44 | 21.13 | 13.25 |

| Size | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (LBS.) | Vertical Base Kit No. † | |
|------|----------|-------|---------------------|------|-------|---------|---------------------|------|-------|--------|-----------------------|-------------------------|-------|
| | Tap Size | Depth | U +.000 -.001 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | | High | Low |
| | | | | | Sq | Length | | | Sq | Length | | | |
| 713 | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | .3745 | .81 | 3/32 | 3/8 | 15 | 56578 | 56579 |
| 718 | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | .3745 | .81 | 3/32 | 3/8 | 28 | 56582 | 56583 |
| 721 | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | .4995 | 1.31 | 1/8 | 5/8 | 37 | 56588 | 56589 |
| 726 | 3/8-16 | .56 | 1.125 | 2.63 | 1/4 | 1-15/16 | .4995 | 1.31 | 1/8 | 5/8 | 55 | 56596 | 56597 |
| 730 | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 73 | 65545 | 65546 |
| 732 | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | .6245 | 1.56 | 3/16 | 13/16 | 93 | 56600 | 56601 |
| 738 | 1/2-13 | .75 | 1.625 | 3.50 | 3/8 | 2-1/4 | .6245 | 1.56 | 3/16 | 13/16 | 132 | 56604 | 56605 |
| 752 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | .7495 | 2.38 | 3/16 | 1 | 235 | 56608 | 56609 |
| 760 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | .8745 | 2.31 | 3/16 | 1 | 298 | 56611 | 56612 |

* See Assemblies and Mounting Positions, Page 75.

† For Base Kits, see Page 129.

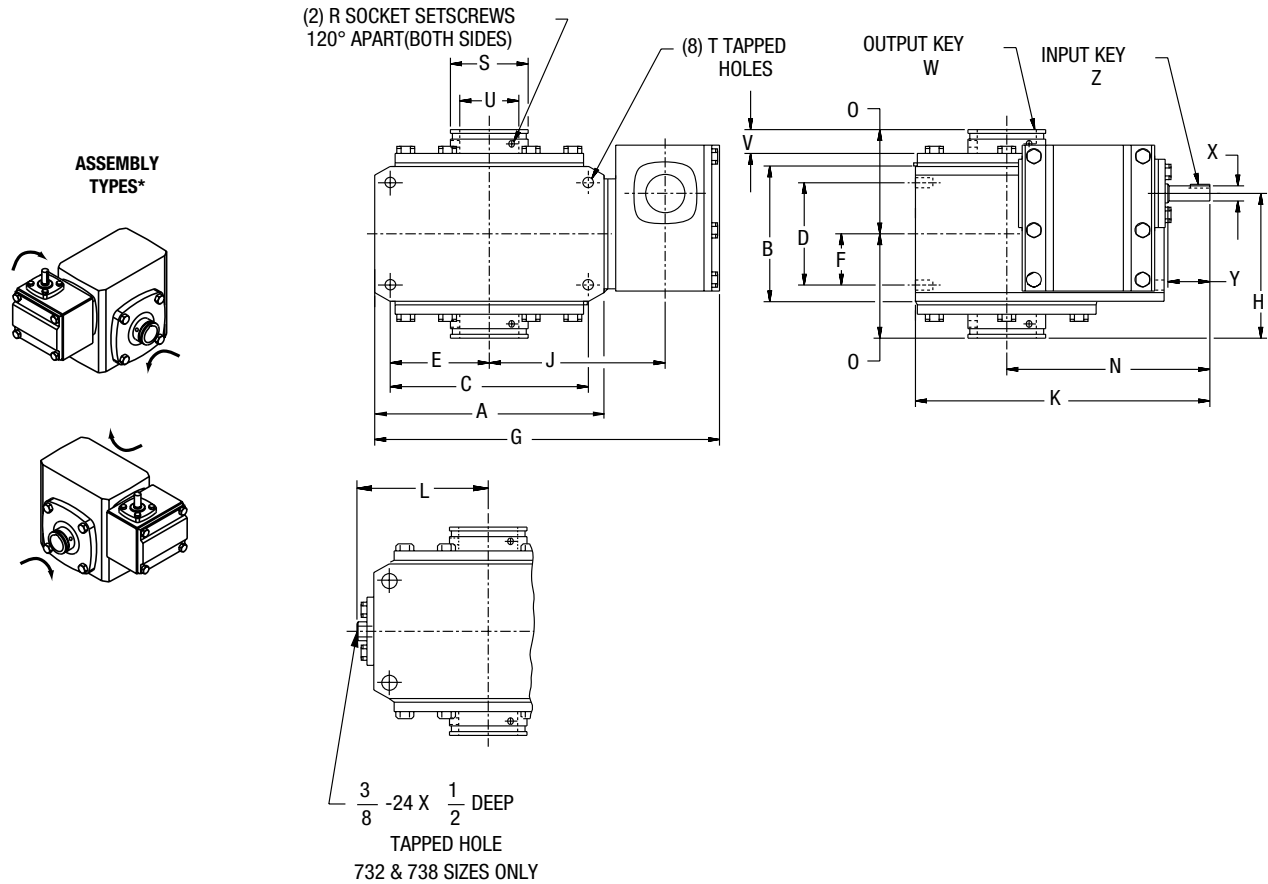
700 Series Double Reduction Non-Flanged Reducer Dimensions

HWC700 Series

Basic Models (No Base); Right Angle Shafts; Bored to Size Hollow Output

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | J | K | L | N | O | R |
|------|-------|------|------|------|------|------|-------|------|------|-------|------|------|------|---------|
| 713 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 7.41 | 3.50 | 3.75 | 5.94 | — | 4.22 | 2.50 | #10-32 |
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 8.72 | 4.03 | 4.44 | 6.69 | — | 4.63 | 3.03 | #10-32 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 9.69 | 4.55 | 4.94 | 8.25 | — | 5.97 | 3.22 | 1/4-28 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 11.09 | 4.77 | 5.66 | 9.47 | — | 6.53 | 3.44 | 5/16-24 |
| 730 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 12.45 | 5.94 | 6.12 | 11.09 | — | 7.84 | 4.19 | 5/16-24 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 13.69 | 6.06 | 6.48 | 11.63 | 4.94 | 8.13 | 4.31 | 5/16-24 |
| 738 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 15.16 | 6.87 | 7.27 | 12.75 | 5.50 | 8.88 | 4.81 | 5/16-24 |

| Size | S | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|------|----------|-------|--------------------------|------|-----------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | | Max U +.0015 -.000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | Tap Size | Depth | | | Sq | Length | | | Sq | Length | |
| 718 | .88 | 5/16-18 | .50 | .625 | .68 | | | .3745 | .81 | 3/32 | 3/8 | 17 |
| 721 | 1.38 | 5/16-18 | .50 | 1.000 | .74 | | | .3745 | .81 | 3/32 | 3/8 | 28 |
| 726 | 1.94 | 3/8-16 | .56 | 1.4375 | .87 | See Page | | .4995 | 1.31 | 1/8 | 5/8 | 37 |
| 732 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | 128 For | | .4995 | 1.31 | 1/8 | 5/8 | 55 |
| 730 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.10 | Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 76 |
| 732 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | | | .6245 | 1.56 | 3/16 | 13/16 | 96 |
| 738 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | | | .6245 | 1.56 | 3/16 | 13/16 | 166 |

* See Assemblies and Mounting Positions, Page 75.

Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

See Page 128 for available bore sizes.

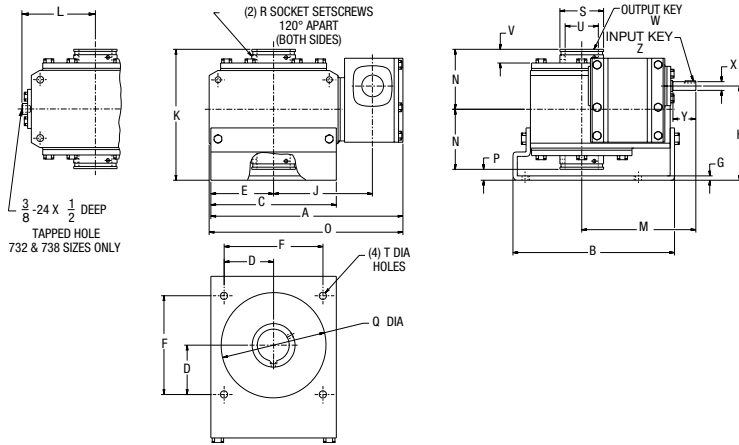
700 Series Double Reduction Non-Flanged Reducer Dimensions

HWC700 Series

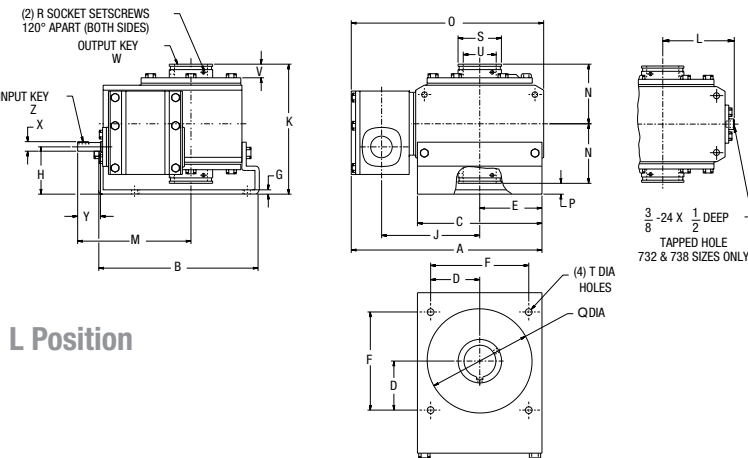
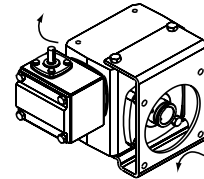
R/L Position Mounting Bracket; Right Angle Shafts; Bored to Size Hollow Output

R Position

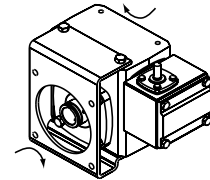
FOR ORDERING INFORMATION, see Page 56.
FOR RATING INFORMATION, See Pages 71, 77-81.



ASSEMBLY TYPES*



L Position



ALL DIMENSIONS IN INCHES

| Size | A | B | C | D | E | F | G | H | | J | K | L | M | N | O | P |
|------|-------|-------|------|------|------|------|-----|---------|---------|------|-------|------|------|------|-------|-----|
| | | | | | | | | R Model | L Model | | | | | | | |
| 713 | 7.40 | 5.55 | 4.24 | 1.77 | 2.12 | 3.54 | .19 | 4.00 | 2.00 | 3.75 | 5.50 | — | 4.22 | 2.50 | 7.41 | .50 |
| 718 | 8.38 | 6.66 | 4.82 | 2.08 | 2.41 | 4.16 | .19 | 4.50 | 2.50 | 4.44 | 6.53 | — | 4.63 | 3.03 | 8.72 | .47 |
| 721 | 9.57 | 7.47 | 5.76 | 2.30 | 2.88 | 4.60 | .19 | 5.08 | 2.42 | 4.94 | 6.97 | — | 5.97 | 3.22 | 9.69 | .53 |
| 726 | 11.00 | 9.25 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 5.39 | 2.73 | 5.66 | 7.50 | — | 6.53 | 3.44 | 11.09 | .62 |
| 730 | 12.39 | 10.38 | 8.00 | 3.18 | 4.00 | 6.38 | .25 | 6.25 | 2.75 | 6.12 | 8.69 | — | 7.84 | 4.19 | 12.45 | .31 |
| 732 | 13.44 | 10.91 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 7.00 | 3.50 | 6.48 | 9.56 | 4.94 | 8.13 | 4.31 | 13.69 | .94 |
| 738 | 14.91 | 11.84 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 7.53 | 3.41 | 7.27 | 10.28 | 5.50 | 8.88 | 4.81 | 15.16 | .66 |

| Size | Q | R | S | T Dia. | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|------|---------|------|--------|---------------------------|------|------------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | | | Max U +.0015 -.0000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | | | Sq | Length | | | Sq | Length | |
| 713 | 3.62 | #10-32 | .88 | 11/32 | .625 | .68 | | | .3745 | .81 | 3/32 | 3/8 | 17 |
| 718 | 4.06 | #10-32 | 1.38 | 11/32 | 1.000 | .74 | | | .3745 | .81 | 3/32 | 3/8 | 34 |
| 721 | 4.50 | 1/4-28 | 1.94 | 13/32 | 1.4375 | .87 | See Page 128 For | | .4995 | 1.31 | 1/8 | 5/8 | 42 |
| 726 | 6.00 | 5/16-24 | 2.50 | 13/32 | 1.9375 | .78 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 66 |
| 730 | 7.00 | 5/16-24 | 2.88 | 13/32 | 2.1875 | 1.10 | Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 86 |
| 732 | 7.00 | 5/16-24 | 2.88 | 9/16 | 2.1875 | .93 | Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 126 |
| 738 | 8.00 | 5/16-24 | 3.25 | 9/16 | 2.4375 | 1.11 | Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 148 |

* See Assemblies and Mounting Positions, Page 75.

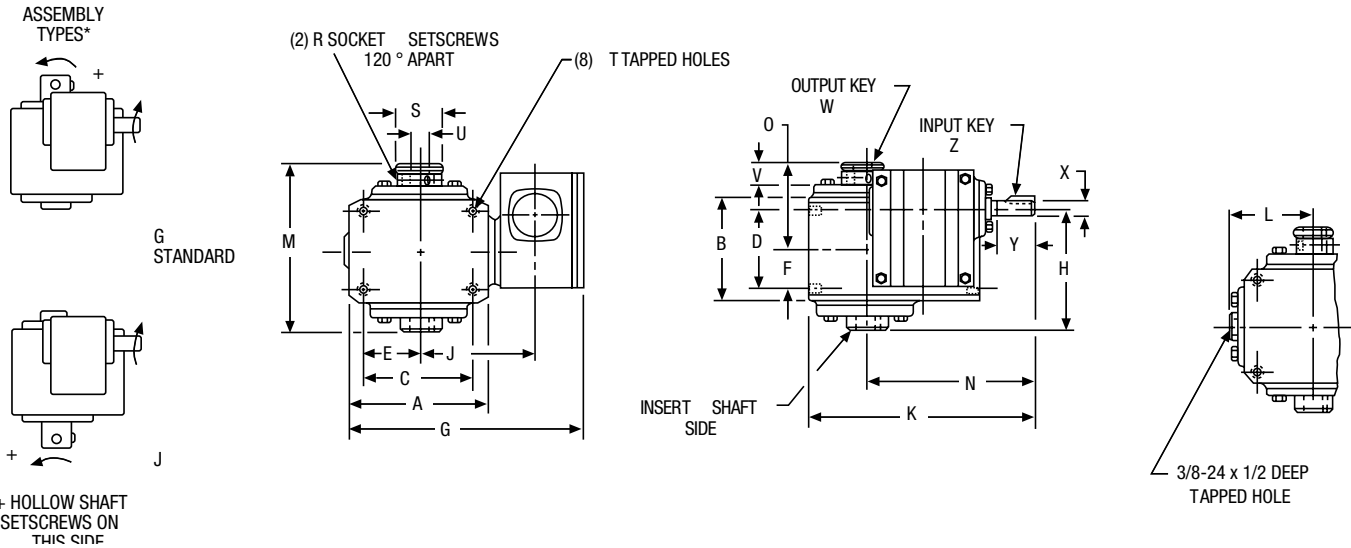
Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation. See Page 128 for available bore sizes.

700 Series Double Reduction Non-Flanged Reducer Dimensions

SWC700 Series

Basic Models (No Base); Right Angle Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.
 FOR ADDITIONAL SIZES, See the H Series Page 88-89.
 FOR RATING INFORMATION, See Pages 71, 77-81.



ALL DIMENSIONS IN INCHES

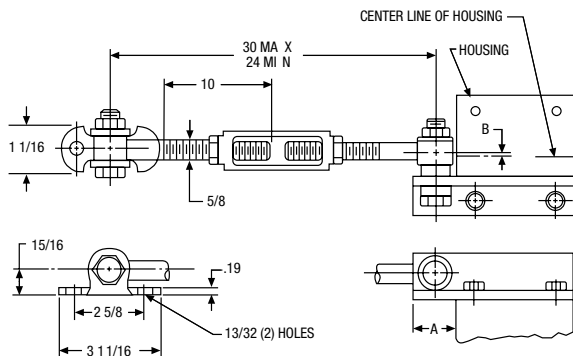
| Size | A | B | C | D | E | F | G | H | J | K | M | N | O | R |
|------|------|------|------|------|------|------|-------|------|------|-------|------|------|------|---------|
| 718 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 8.72 | 3.59 | 4.44 | 6.69 | 5.69 | 4.63 | 3.09 | #10-32 |
| 721 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 9.69 | 4.00 | 4.94 | 8.25 | 5.88 | 5.97 | 3.22 | 1/4-28 |
| 726 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 11.09 | 4.31 | 5.66 | 9.47 | 6.47 | 6.53 | 3.50 | 1/4-28 |
| 732 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 13.69 | 5.44 | 6.48 | 11.63 | 8.06 | 8.13 | 4.38 | 5/16-24 |

| Size | S | T | | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|------|----------|-------|----------------------|------|----------------------------------|--------|---------------------|------|-------|--------|-----------------------|
| | | Tap Size | Depth | U +.0015 -.000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | | Sq | Length | | | Sq | Length | |
| 718 | 1.38 | 5/16-18 | .50 | 1.000 | .78 | See Page 128 For Key Information | | .3745 | .81 | 3/32 | 3/8 | 27 |
| 721 | 1.50 | 3/8-16 | .56 | 1.125 | .88 | See Page 128 For Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 35 |
| 726 | 2.16 | 3/8-16 | .56 | 1.4375 | .84 | See Page 128 For Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 52 |
| 732 | 2.56 | 7/16-14 | .66 | 1.9375 | 1.00 | See Page 128 For Key Information | | .6245 | 1.56 | 3/16 | 13/16 | 91 |

* See Assemblies and Mounting Positions, Page 75. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.

Reaction Rod Kits

ALL DIMENSIONS IN INCHES



| SIZE | A | B | Catalog Number | Kit No. |
|------|------|-----|----------------|---------|
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 732 | 1.50 | .53 | X732-76K | 69695 |

All hardware shown is included in the kits.

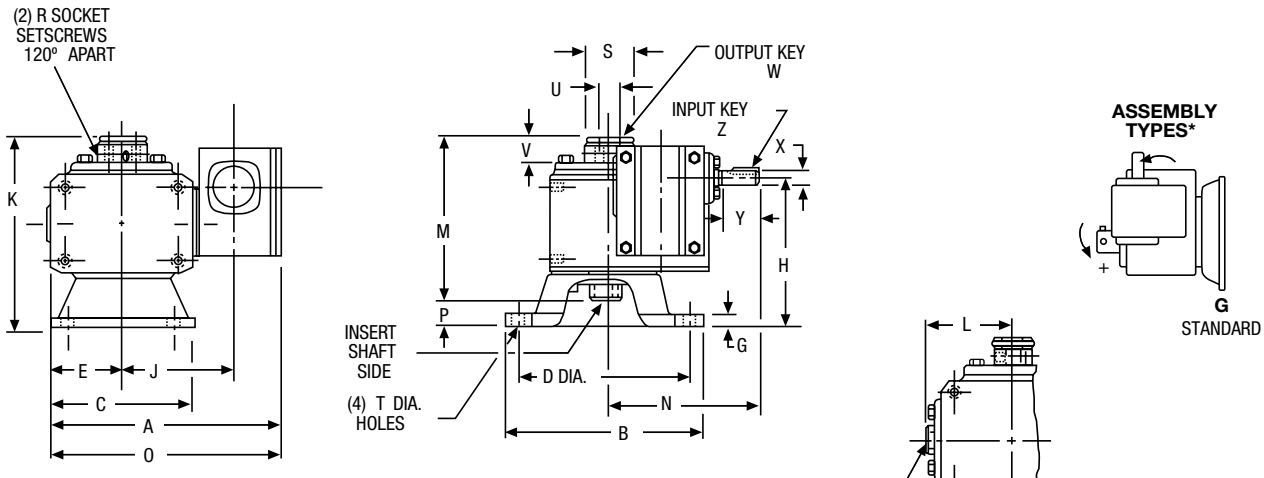
700 Series Double Reduction Non-Flanged Reducer Dimensions

SWC700 Series

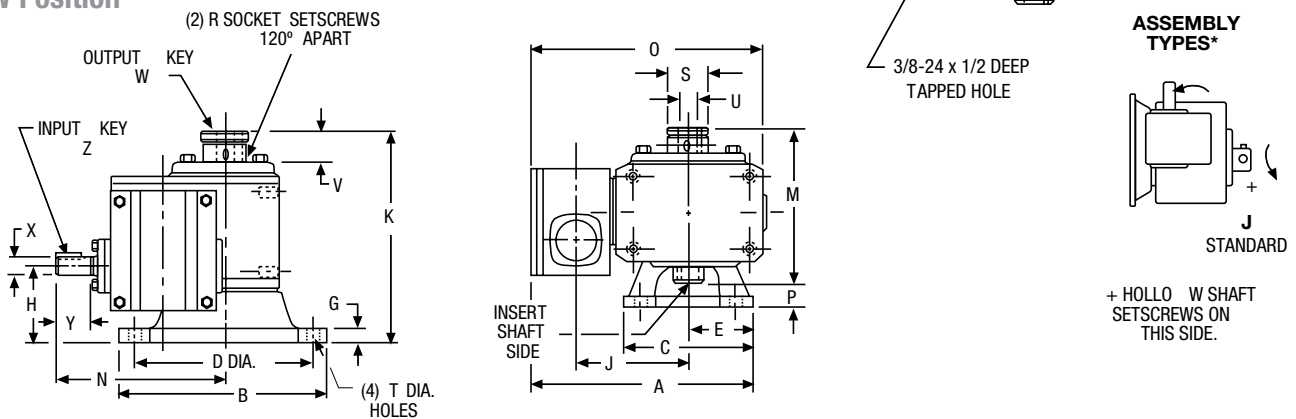
V/W Position Mounting Flange; Right Angle Shafts; Hollow Output

FOR ORDERING INFORMATION, see Page 56.
 FOR ADDITIONAL SIZES, See the H Series Page 88-89.
 FOR RATING INFORMATION, See Pages 71, 77-81.

V Position



W Position

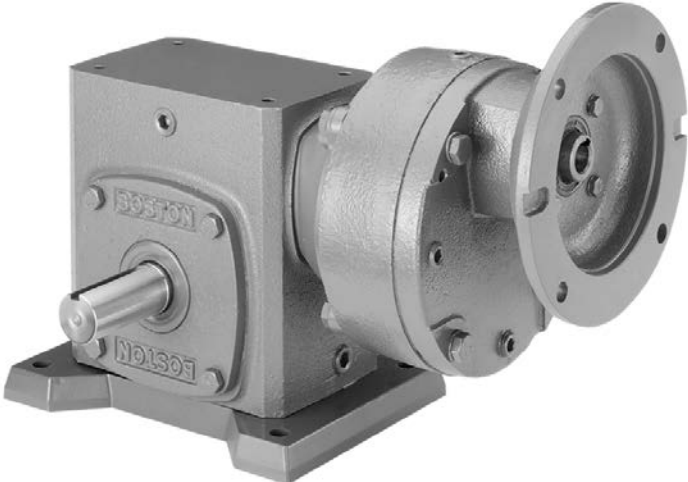


ALL DIMENSIONS IN INCHES

| SIZE | A | B | C | D | E | G | H | | K | L | M | N | O | P |
|------|-------|-------|------|-------|------|-----|---------|---------|------|------|------|------|-------|------|
| | | | | | | | V Model | W Model | | | | | | |
| 718 | 8.41 | 6.75 | 4.88 | 5.88 | 2.44 | .38 | 4.50 | 3.50 | 4.44 | 6.59 | 5.69 | 4.63 | 8.72 | .91 |
| 721 | 9.56 | 7.38 | 5.75 | 6.50 | 2.88 | .38 | 5.09 | 3.75 | 4.94 | 6.97 | 5.88 | 5.97 | 9.69 | 1.09 |
| 726 | 11.28 | 8.88 | 7.75 | 8.00 | 3.88 | .38 | 5.41 | 4.08 | 5.66 | 7.56 | 6.47 | 6.53 | 11.28 | 1.09 |
| 732 | 13.25 | 11.00 | 9.00 | 10.00 | 4.50 | .50 | 7.00 | 5.25 | 6.48 | 9.63 | 8.06 | 8.13 | 13.69 | 1.56 |

| Size | R | S | T Dia. | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) |
|------|---------|------|--------|----------------------|------|-----------------|--------|---------------------|------|-------|--------|-----------------------|
| | | | | U +.0015 -.000 | V | W-KEY | | X +.000 -.001 | Y | Z-KEY | | |
| | | | | | | Sq | Length | | | Sq | Length | |
| 718 | #10-32 | 1.38 | 11/32 | 1.000 | .78 | See Page | | .3745 | .81 | 3/32 | 3/8 | 32 |
| 721 | 1/4-28 | 1.50 | 13/32 | 1.125 | .88 | 128 For | | .4995 | 1.31 | 1/8 | 5/8 | 40 |
| 726 | 1/4-28 | 2.16 | 13/32 | 1.4375 | .84 | Key Information | | .4995 | 1.31 | 1/8 | 5/8 | 63 |
| 732 | 5/16-24 | 2.56 | 9/16 | 1.9375 | 1.00 | | | .6245 | 1.56 | 3/16 | 13/16 | 120 |

* See Assemblies and Mounting Positions, Page 75. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.



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- Dimensions 119-126**

Product Selection / Reference Guide

700 Series Single Reduction Flanged Reducers with HMF Series

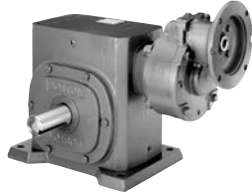
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Selection/Rating Information – Pages 109-118

Mountings – Pages 107-108



F700/QC700 BASIC W/HMF
Dimension Page 119



F700/QC700 B W/HMF
Dimension Page 120



F700/QC700 A W/HMF
Dimension Page 121



F700/QC700 C/D W/HMF
Dimension Page 122



F700 /QC700 E/F W/HMF
Dimension Page 122



F700/QC700 X W/HMF
Dimension Page 123



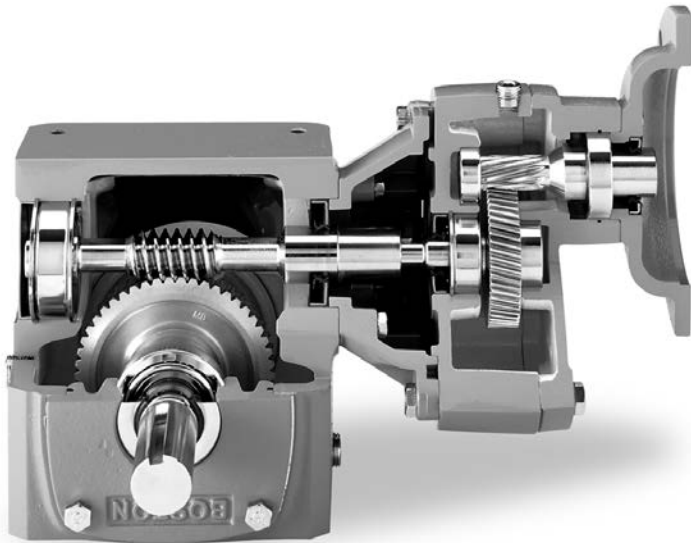
HF700/HQC700 W/HMF
Dimension Page 124



HF700/HQC700 R/L W/HMF
Dimension Page 125

C

Helical Multiplier Reducer Series Features



Combination 700 and HM Series Features

- Rugged housing of fine-grained, gear-quality cast iron provides maximum strength and durability. Greater rigidity and one-piece construction ensure precise alignment of the worm and gear. This housing construction also provides superior resistance to caustic washdown solutions, plus high heat dissipation and reduced noise level. Pipe plugs allow easy fill, level and drain in any mounting position.
- Housings are straddle-milled top and bottom for precise alignment of horizontal and vertical bases.
- Multi-position mounting flexibility - threaded bolt holes let you install the HM Series speed reducers in almost any position.
- Internal baffle assures positive leak-free venting.
- Large oil reservoir provides highly efficient heat dissipation and lubrication for longer operating life.
- High pressure angle on worm provides greater operating efficiency.
- Integral input worm and shaft design made from high-strength case-hardened alloy steel. Reducer sizes 710 through 730 have pre-lubricant ball bearings; 732 through 760 have tapered roller bearings. Double lip oil seals are standard.
- Super-finished oil seal diameters on both input and output shafts provide extended seal life.
- High strength steel output shaft assures capacity for high torque and overhung loads
- High-strength bronze worm gear is straddle mounted between heavy-duty tapered roller bearings to increase thrust and overhung load capacities, sizes 713-760.

C

Numbering System / How to Order

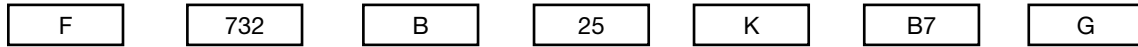
When ordering reducers please include code letters for Style, Size, Base (if required), Ratio, Lubrication (if required), NEMA Mounting (if flanged reducer), Shaft Assembly and Motor (if required).

Example:

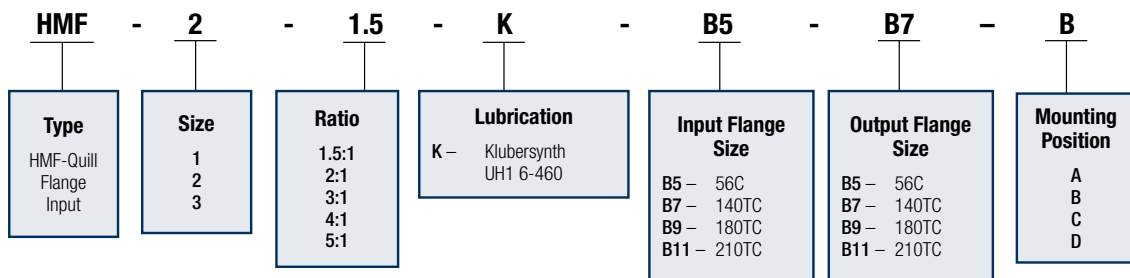
Application requirements: 125:1 reduction, 1 HP NEMA 140TC 1750 RPM, Service Class I, horizontal base, Klubersynth UH1 6-460 lubrication, with standard assembly.



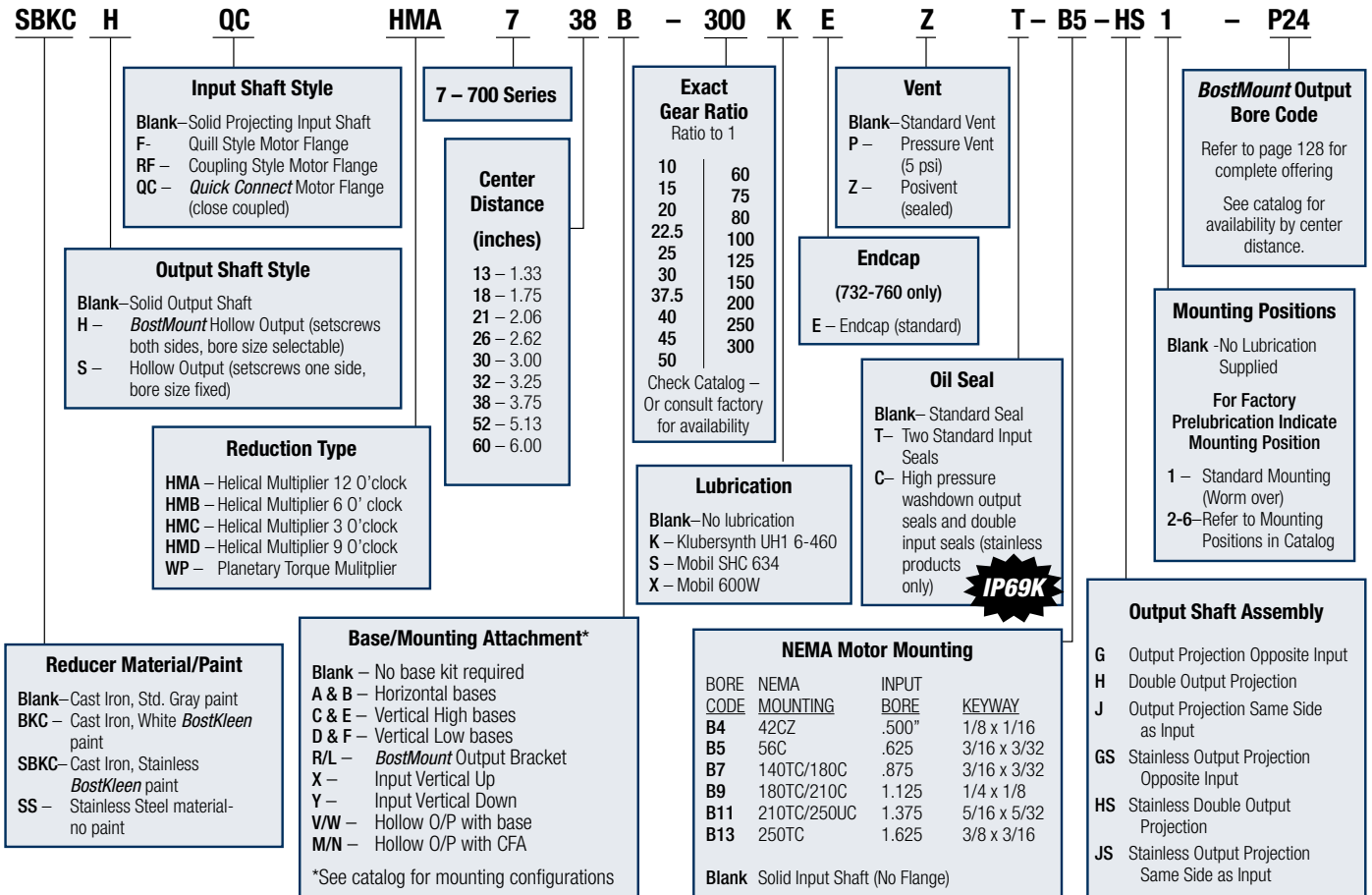
Assembled to an:



Each gearbox can be shipped separately or assembled.



700 Series Right Angle Helical-Worm Gearbox - Double Reduction



Assemblies

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surfaces.

Type "A" and "B" are horizontal bases.

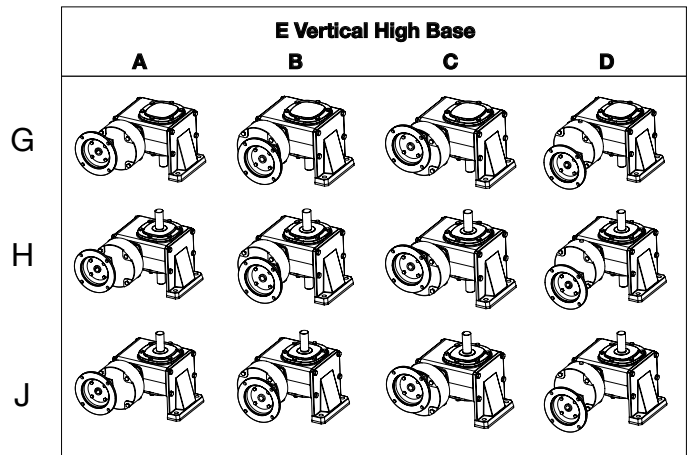
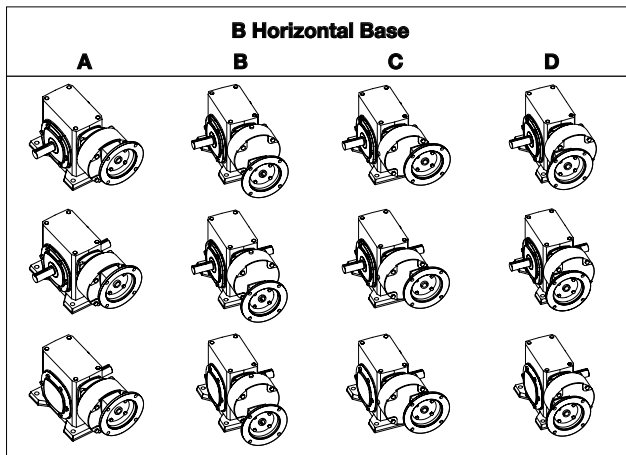
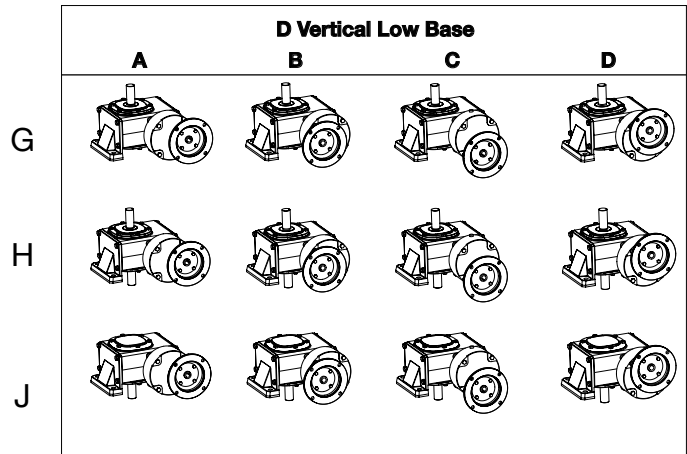
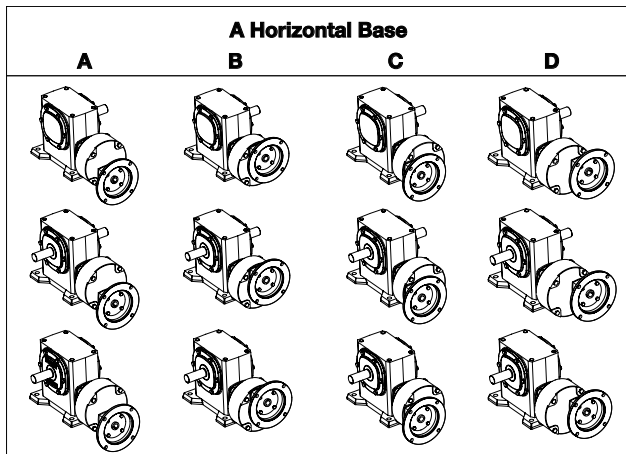
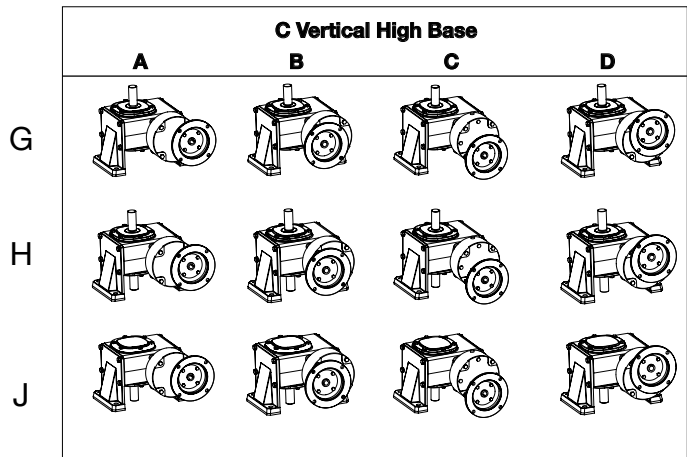
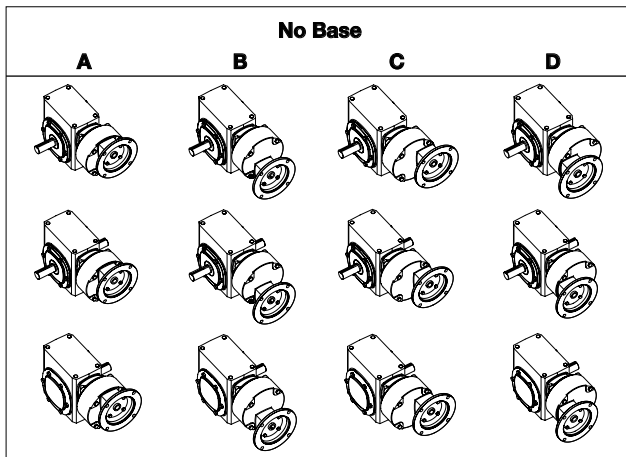
Types "C" and "E" are vertical high bases and types "D" and "F" are vertical low bases.

Type "X" is input vertical up.

Basic models and separate base kits are supplied unless otherwise specified. Assembly "H" available at a slight additional charge.

Input may rotate clockwise or counter clockwise.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



Mounting Data

Assemblies

Standard assemblies define output shaft (slow speed) projection with respect to input shaft (high speed) and mounting surfaces.

Type "A" and "B" are horizontal bases.

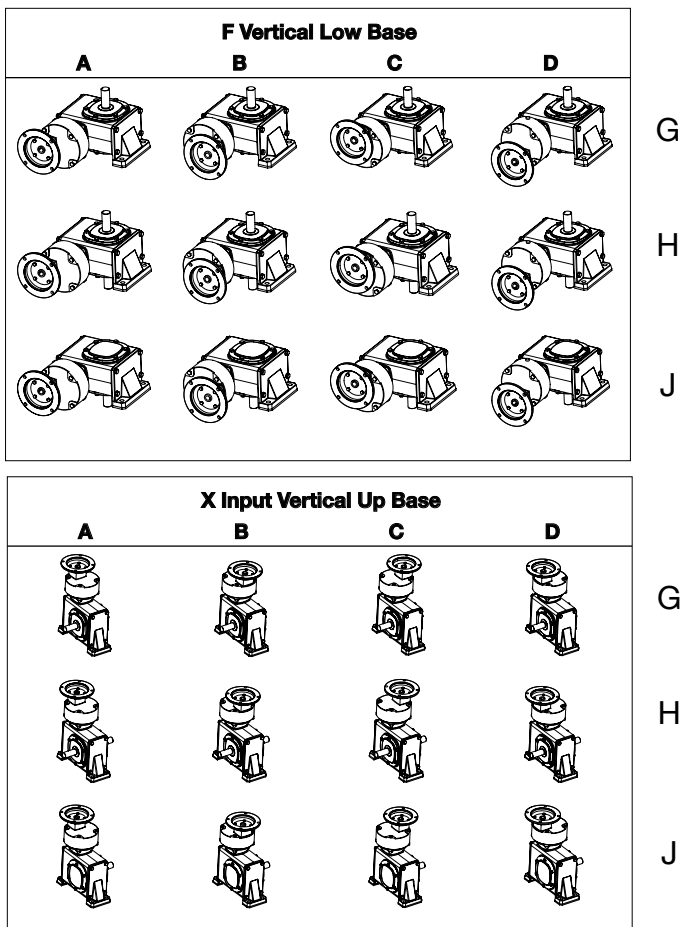
Types "C" and "E" are vertical high bases and types "D" and "F" are vertical low bases.

Type "X" is input vertical up.

Basic models and separate base kits are supplied unless otherwise specified. Assembly "H" available at a slight additional charge.

Input may rotate clockwise or counter clockwise.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



C

Quick Reference Model Selection Chart

CLASS I SERVICE Single Reduction (1.0 Service Factor)

| Reducer Ratio | Output RPM | Input Horsepower @ 1750 rpm | | | | | | | | | | | | | |
|---------------|------------|-----------------------------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-------|-----|----|----|
| | | 1/6 | 1/4 | 1/3 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
| 10 | 175 | | 713 | 713 | 713 | 715 | 715 | 721 | 721 | 726 | 730 | — | — | — | — |
| 15 | 116.7 | | 713 | 713 | 715 | 715 | 721 | 721 | 724 | 730 | — | — | — | — | — |
| 20 | 87.5 | 713 | 713 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 738 | 752 | 752 | — | — |
| 22.5 | 77.8 | 713 | 713 | 713 | 715 | 721 | 721 | 724 | 726 | 730 | 738 | 752 | 752 | — | — |
| 25 | 70 | 713 | 713 | 715 | 715 | 721 | 721 | 726 | 730 | — | — | — | — | — | — |
| 30 | 58.3 | 713 | 713 | 715 | 718 | 721 | 721 | 726 | 730 | 732 | 752 | 752 | 760 | — | — |
| 37.5 | 46.7 | 713 | 713 | 715 | 718 | 721 | 724 | 730 | 732 | — | — | — | — | — | — |
| 40 | 43.8 | 713 | 713 | 715 | 721 | 721 | 724 | 730 | 730 | 738 | 752 | 752 | 760 | — | — |
| 45 | 38.9 | 713 | 713 | 715 | 721 | 724 | 726 | 730 | 730 | 738 | 752 | 760 | 760 | — | — |
| 50 | 35 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 730 | 738 | 752 | 760 | 760 | — | — |
| 60 | 29.2 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 738 | 752 | 752 | 760 | — | — | — |
| 75 | 23.3 | 715 | 718 | 721 | 724 | 726 | 730 | 730 | 738 | 752 | 752 | — | — | — | — |
| 80 | 21.9 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | 738 | 752 | 760 | — | — | — | — |
| 100 | 17.5 | 715 | 718 | 721 | 724 | 730 | 730 | 738 | 738 | 752 | 760 | — | — | — | — |
| 125 | 14 | 718 | 721 | 724 | 726 | 730 | 732 | — | — | — | — | — | — | — | — |
| 150 | 11.7 | 718 | 721 | 724 | 726 | 730 | 732 | 738 | — | — | — | — | — | — | — |
| 200 | 8.8 | 718 | 721 | 724 | 730 | 732 | 738 | — | — | 760 | — | — | — | — | — |
| 250 | 7 | 721 | 724 | 726 | 730 | 738 | — | — | — | — | — | — | — | — | — |
| 300 | 5.8 | 721 | 726 | 730 | 732 | 738 | — | — | — | — | — | — | — | — | — |

CLASS II SERVICE Single Reduction (1.25 Service Factor)

| Reducer Ratio | Output RPM | Input Horsepower @ 1750 rpm | | | | | | | | | | | | | |
|---------------|------------|-----------------------------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-------|-----|----|----|
| | | 1/6 | 1/4 | 1/3 | 1/2 | 3/4 | 1 | 1-1/2 | 2 | 3 | 5 | 7-1/2 | 10 | 15 | 20 |
| 10 | 175 | | 713 | 713 | 713 | 715 | 721 | 724 | 726 | 730 | — | — | — | — | — |
| 15 | 116.7 | | 713 | 713 | 715 | 721 | 721 | 724 | 726 | 730 | — | — | — | — | — |
| 20 | 87.5 | 713 | 713 | 715 | 718 | 721 | 724 | 726 | 732 | 732 | 752 | 752 | 752 | — | — |
| 22.5 | 77.8 | 713 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | 752 | 752 | — | — | — |
| 25 | 70 | 713 | 715 | 715 | 721 | 721 | 724 | 726 | 730 | — | — | — | — | — | — |
| 30 | 58.3 | 713 | 715 | 715 | 721 | 721 | 724 | 730 | 730 | 738 | 752 | 752 | 760 | — | — |
| 37.5 | 46.7 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | — | — | — | — | — | — |
| 40 | 43.8 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | 752 | 752 | 760 | 760 | — | — |
| 45 | 38.9 | 713 | 715 | 718 | 721 | 724 | 726 | 730 | 738 | 752 | 752 | 760 | — | — | — |
| 50 | 35 | 713 | 718 | 721 | 724 | 726 | 730 | 730 | 738 | 752 | 752 | 760 | — | — | — |
| 60 | 29.2 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | 738 | 752 | — | 760 | — | — | — |
| 75 | 23.3 | 715 | 721 | 721 | 724 | 730 | 730 | 738 | 752 | 752 | — | 760 | — | — | — |
| 80 | 21.9 | 715 | 721 | 721 | 724 | 730 | 730 | 738 | 752 | 752 | — | — | — | — | — |
| 100 | 17.5 | 718 | 721 | 724 | 726 | 730 | 732 | 738 | — | 752 | — | — | — | — | — |
| 125 | 14 | 721 | 724 | 726 | 730 | 732 | — | — | — | — | — | — | — | — | — |
| 150 | 11.7 | 721 | 724 | 726 | 730 | 732 | 738 | 738 | — | 752 | — | — | — | — | — |
| 200 | 8.8 | 721 | 724 | 726 | 730 | 738 | — | — | — | — | — | — | — | — | — |
| 250 | 7 | 724 | 726 | 730 | 732 | — | — | — | — | — | — | — | — | — | — |
| 300 | 5.8 | 724 | 726 | 732 | 738 | — | — | — | — | — | — | — | — | — | — |

Note: This chart is meant only as a guide. For actual ratings, see Pages 110-118.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | | |
|--------------------------------|------------|------------------------------|-------|--------|---------------------------------|------------|-----------|-------------------|------------------------|------------------|----------------|---------------------------------|
| | | Gear Capacity | | | Available Models | | | Ratings | | | Catalog Nos. | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | | |
| 175 | 10 2x5 | 203 | 0.67 | 0.56 | HMF1-2K-B5-B5 with F713-5-(B5) | | | 1/2 1/3 1/4 | 152 101 76 | II III III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 315 | 1 | 0.87 | HMF1-2K-B5-B5 with F715-5-(B5) | | | 1 3/4 1/2 | 315 236 158 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 380 | 1.21 | 1.06 | HMF1-2K-B5-B5 with F718-5-(B5) | | | 1 3/4 1/2 | 315 236 158 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 622 | 1.94 | 1.73 | HMF2-2K-B7-B7 with F721-5-(B7) | | | 2 1 1/2 | 621 466 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-2K-B5-B5 with F721-5-(B5) | | | 1 | 311 | III | B5 | HUTF-5/8 |
| | | 850 | 2.72 | 2.36 | HMF2-2K-B7-B7 with F724-5-(B7) | | | 2 1 1/2 | 624 468 | II II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-2K-B5-B5 with F724-5-(B5) | | | 1 | 312 | III | B5 | HUTF-5/8 |
| | | 1140 | 3.91 | 3.17 | HMF3-2K-B9-B9 with F726-5-(B9) | | | 3 | 943 | I | B9 | LUTF |
| | | | | | HMF2-2K-B7-B7 with F726-5-(B7) | | | 2 1 1/2 | 629 471 | II III | B7 B7 | KUTF JUTF |
| | | 1944 | 5.98 | 5.4 | HMF3-2K-B9-B9 with F730-5-(B9) | | | 5 | 1624 | I | B9 | MUTF |
| HMF2-2K-B7-B7 with F730-5-(B7) | | | | | 3 2 | 974 650 | II III | B7 B7 | LUTF KUTF | | | |
| 116.7 | 15 3x5 | 211 | 0.462 | 0.391 | HMF1-3K-B5-B5 with F713-5-(B5) | | | 1/3 1/4 | 152 114 | II III | B5 B5 | EUTF DUTF |
| | | 337 | 0.752 | 0.624 | HMF1-3K-B5-B5 with F715-5-(B5) | | | 3/4 1/2 1/3 | 334 223 148 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 411 | 0.902 | 0.761 | HMF1-3K-B5-B5 with F718-5-(B5) | | | 3/4 1/2 1/3 | 342 228 152 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 697 | 1.510 | 1.291 | HMF2-3K-B7-B7 with F721-5-(B7) | | | 1 1/2 | 691 | I | B7 | JUTF |
| | | | | | HMF2-3K-B5-B5 with F721-5-(B5) | | | 1 3/4 | 461 346 | II III | B5 B5 | HUTF-5/8 GUTF |
| | | 962 | 2.06 | 1.798 | HMF2-3K-B7-B7 with F724-5-(B7) | | | 2 1 1/2 | 934 700 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-3K-B5-B5 with F724-5-(B5) | | | 1 | 467 | III | B5 | HUTF-5/8 |
| | | 1313 | 2.815 | 2.431 | HMF2-3K-B7-B7 with F726-5-(B7) | | | 2 1 1/2 | 932 700 | II III | B7 B7 | KUTF JUTF |
| | | 2326 | 4.93 | 4.31 | HMF3-3K-B9-B9 with F730-5-(B9) | | | 3 | 1414 | II | B9 | LUTF |
| | | | | | HMF2-3K-B7-B7 with F730-5-(B7) | | | 2 | 943 | III | B7 | KUTF |
| 87.5 | 20 2x10 | 257 | 0.426 | 0.357 | HMF1-2K-B5-B5 with F713-10-(B5) | | | 1/3 1/4 1/6 | 200 151 100 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 370 | 0.604 | 0.514 | HMF1-2K-B5-B5 with F715-10-(B5) | | | 1/2 1/3 1/4 | 306 204 153 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 510 | 0.829 | 0.708 | HMF1-2K-B5-B5 with F718-10-(B5) | | | 3/4 1/2 1/3 | 461 307 205 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 777 | 1.26 | 1.08 | HMF2-2K-B5-B5 with F721-10-(B7) | | | 1 3/4 1/2 | 615 461 307 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | | | | |
|-------------------------------------|----------------|------------------------------------|---------------------------------------|----------|-----------------------------------|--------------|-------------------|---------------------------------------|----------------|-------------------|-----------------------------------|----------------|-----------------|----------------------|
| | | Gear Capacity | | | Available Models | | Ratings | | | | Catalog Nos. | | | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz | | | |
| | | | Input | Output | Gearbox Size K | | | | | | | | | |
| 87.5 | 20 2X10 | 1130 | 1.81 | 1.57 | HMF2-2K-B7-B7 with F724-10-(B7) | | 1 1/2 | 938 | I | B7 | JUTF | | | |
| | | | | | HMF2-2K-B5-B5 with F724-10-(B5) | | 1 3/4 | 625 469 | II III | B5 B5 | HUTF-5/8 GUTF | | | |
| | | 1515 | 2.44 | 2.103 | HMF2-2K-B7-B7 with F726-10-(B7) | | 2 1 1/2 | 1242 931 | I II | B7 B7 | KUTF JUTF | | | |
| | | | | | HMF2-2K-B5-B5 with F726-10-(B5) | | 1 | 621 | III | B5 | HUTF-5/8 K | | | |
| | | 2370 | 3.75 | 3.29 | HMF3-2K-B9-B9 with F730-10-(B9) | | 3 | 1881 | II | B9 | LUTF | | | |
| | | | | | HMF2-2K-B7-B7 with F730-10-(B7) | | 2 | 1254 | III | B7 | KUTF | | | |
| | | 2660 | 4.23 | 3.69 | HMF3-2K-B9-B9 with F732-10-(B9) | | 3 | 1886 | II | B9 | LUTF | | | |
| | | 3700 | 5.92 | 5.14 | HMF3-2K-B9-B9 with F738-10-(B9) | | 5 3 | 3125 1875 | I II | B9 B9 | MUTF LUTF | | | |
| HMF3-2K-B11-B11 with RF752-10-(B11) | | | | | 10 7 1/2 | 6286 4714 | II III | B11 B11 | PUTF NUTF | | | | | |
| 77.8 | 22.5 1.5X15 | 262 | 0.381 | 0.32 | HMF1-1.5K-B5-B5 with F713-15-(B5) | | 1/3 1/4 1/6 | 226 170 113 | I II III | B5 B5 B5 | EUTF DUTF CUTF | | | |
| | | | | | 376 | 0.546 | 0.46 | HMF1-1.5K-B5-B5 with F715-15-(B5) | | 1/2 1/3 1/4 | 337 225 169 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | | | | | | | 472 | 0.69 | 0.57 | HMF1-1.5K-B5-B5 with F718-15-(B5) | | 1/2 1/3 | 334 223 |
| | | 752 | 1.09 | 0.91 | | | | | | | HMF1-1.5K-B5-B5 with F721-15-(B5) | | 1 3/4 1/2 | 674 506 337 |
| | | | | | 1060 | 1.56 | 1.29 | HMF2-1.5K-B7-B7 with F724-15-(B7) | | 1 1/2 | 1006 | I | B7 | JUTF |
| | | HMF2-1.5K-B5-B5 with F724-15-(B5) | | 1 3/4 | | | | 671 503 | II III | B5 B5 | HUTF-5/8 GUTF | | | |
| | | 1425 | 2.07 | 1.73 | HMF2-1.5K-B7-B7 with F726-15-(B7) | | 2 1 1/2 | 1353 1014 | I II | B7 B7 | KUTF JUTF | | | |
| | | | | | HMF2-1.5K-B5-B5 with F726-15-(B5) | | 1 | 677 | III | B5 | HUTF-5/8 | | | |
| | | 2425 | 3.51 | 2.95 | HMF3-1.5K-B9-B9 with F730-15-(B9) | | 3 | 2039 | I | B9 | LUTF | | | |
| | | | | | HMF2-1.5K-B7-B7 with F730-15-(B7) | | 2 1 1/2 | 1359 1019 | II III | B7 B7 | KUTF JUTF | | | |
| | | 2600 | 3.74 | 3.16 | HMF3-1.5K-B9-B9 with F732-15-(B9) | | 3 | 2053 | II | B9 | LUTF | | | |
| | | 3600 | 5.14 | 4.38 | HMF3-1.5K-B9-B9 with F738-15-(B9) | | 5 3 | 3449 2070 | I II | B9 B9 | MUTF LUTF | | | |
| | | | | | 7700 | 10.82 | 9.37 | HMF3-1.5K-B11-B11 with RF752-15-(B11) | | 10 7 1/2 | 7008 5256 | I II | B11 B11 | PUTF NUTF |
| | | HMF3-1.5K-B9-B9 with RF752-15-(B9) | | 5 | | | | 3504 | III | B9 | MUTF | | | |
| 10800 | 15.18 | 13.14 | HMF3-1.5K-B11-B11 with RF760-15-(B11) | | 10 7 1/2 | 7008 5256 | II III | B11 B11 | PUTF NUTF | | | | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.



Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | | |
|----------------------------------|---------------------------------|------------------------------|-------|---------------------------------|-------------------------------------|--------------|-----------|------------------------|--------------------------|-----------------------|----------------------|----------------------------------|
| | | Gear Capacity | | Available Models | | | Ratings | | | Catalog Nos. | | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | | |
| 70 | 25 5x5 | 225 | 0.307 | 0.25 | HMF1-5K-B5-B5 with F713-5-(B5) | | | 1/4 1/6 | 183 122 | I II | B5 B5 | DUTF CUTF |
| | | 353 | 0.486 | 0.392 | HMF1-5K-B5-B5 with F715-5-(B5) | | | 1/2 1/3 1/4 | 353 242 181 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 435 | 0.6 | 0.483 | HMF1-5K-B5-B5 with F718-5-(B5) | | | 1/2 1/3 1/4 | 362 242 181 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 756 | 1.00 | 0.84 | HMF1-5K-B5-B5 with F721-5-(B5) | | | 1 3/4 1/2 | 758 568 379 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1081 | 1.394 | 1.201 | HMF1-5K-B5-B5 with F724-5-(B5) | | | 1 3/4 1/2 | 775 581 388 | II II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1451 | 1.89 | 1.612 | HMF2-5K-B7-B7 with F726-5-(B7) | | | 1-1/2 | 1163 | II | B7 | JUTF |
| | | | | | HMF2-5K-B5-B5 with F726-5-(B5) | | | 1 3/4 | 775 581 | II III | B5 B5 | HUTF-5/8 GUTF |
| | | 2590 | 3.41 | 2.877 | HMF2-5K-B7-B7 with F730-5-(B7) | | | 1-1/2 2 | 1519 1139 | II III | B7 B7 | JUTF KUTF |
| 58.3 | 30 2x15 | 277 | 0.31 | 0.256 | HMF1-2K-B5-B5 with F713-15-(B5) | | | 1/4 1/6 | 223 148 | I II | B5 B5 | DUTF CUTF |
| | | 400 | 0.45 | 0.37 | HMF1-2K-B5-B5 with F715-15-(B5) | | | 1/3 1/4 1/6 | 297 223 148 | II II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 510 | 0.572 | 0.472 | HMF1-2K-B5-B5 with F718-15-(B5) | | | 1/2 1/3 1/4 | 445 297 223 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | 30 3x10 | 842 | 0.96 | 0.78 | HMF1-3K-B5-B5 with F721-10-(B5) | | | 1 3/4 1/2 1/3 | 842 660 440 293 | I II III III | B5 B5 B5 B5 | HUTF-5/8 GUTF FUTF EUTF |
| | | 1241 | 1.345 | 1.148 | HMF2-3K-B5-B5 with F724-10-(B5) | | | 1 3/4 1/2 | 930 698 465 | II II III | B5 B5 B5 | HUTF GUTF FUTF |
| | | 1665 | 1.82 | 1.54 | HMF2-3K-B7-B7 with F726-10-(B7) | | | 1-1/2 | 1367 | I | B7 | JUTF |
| | | | | | HMF2-3K-B5-B5 with F726-10-(B5) | | | 1 3/4 | 911 684 | II III | B5 B5 | HUTF GUTF |
| | | 2672 | 2.93 | 2.472 | HMF2-3K-B7-B7 with F730-10-(B7) | | | 2 1-1/2 | 1823 1367 | II III | B7 B7 | KUTF JUTF |
| | | | | | HMF2-3K-B5-B5 with F730-10-(B5) | | | 1 | 911 | III | B5 | HUTF-5/8 |
| | | 2890 | 3.132 | 2.673 | HMF3-3K-B9-B9 with F732-10-(B9) | | | 3 | 2766 | I | B9 | LUTF |
| | HMF2-3K-B7-B7 with F732-10-(B7) | | | | 2 1-1/2 | 1844 1382 | II III | B7 B7 | KUTF JUTF | | | |
| | 4044 | 4.432 | 3.741 | HMF3-3K-B9-B9 with F738-10-(B9) | | | 3 2 | 2734 1823 | II III | B9 B9 | LUTF KUTF | |
| | 30 2x15 | 8760 | 9.35 | 8.103 | HMF3-2K-B11-B11 with RF752-15-(B11) | | | 7-1/2 | 7016 | II | B11 | NUTF |
| | | | | | HMF3-2K-B9-B9 with RF752-15-(B9) | | | 5 3 | 4677 1871 | II III | B9 B9 | MUTF LUTF |
| | | | | | HMF3-2K-B11-B11 with RF760-15-(B11) | | | 10 7-1/2 | 9345 7008 | II II | B11 B11 | PUTF NUTF |
| HMF3-2K-B9-B9 with RF760-15-(B9) | | | | | 5 | 4672 | III | B9 | MUTF | | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | |
|------------|------------------|------------------------------|-------------------------------------|--------|-------------------------------------|---------------|-------------------|------------------------|-----------------|----------------|---------------------------------|
| | | Gear Capacity | | | Available Models | | Ratings | | | Catalog Nos. | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | |
| 46.7 | 37.5 1.5 x 25 | 491 | 0.49 | 0.36 | HMF1-1.5K-B5-B5 with F718-25-(B5) | | 1/2 1/3 1/6 | 491 327 245 | I II III | B5 B5 B5 | FUTF EUTF CUTF |
| | | 792 | 0.75 | 0.58 | HMF1-1.5K-B5-B5 with F721-25-(B5) | | 3/4 1/2 1/3 | 792 528 352 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 1150 | 1.06 | 0.84 | HMF1-1.5K-B5-B5 with F724-25-(B5) | | 1 3/4 1/2 | 1068 800 534 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1525 | 1.35 | 1.11 | HMF1-1.5K-B5-B5 with F726-25-(B5) | | 1 3/4 | 1109 832 | II III | B5 B5 | HUTF-5/8 GUTF |
| | | 2560 | 2.37 | 1.86 | HMF2-1.5K-B7-B7 with F730-25-(B7) | | 2 1-1/2 | 2118 1589 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-1.5K-B5-B5 with F730-25-(B5) | | 1 | 1059 | III | B5 | HUTF-5/8 |
| | | 3000 | 2.73 | 2.19 | HMF2-1.5K-B7-B7 with F732-25-(B7) | | 2 1-1/2 | 2118 1589 | II III | B7 B7 | KUTF JUTF |
| 43.8 | 40 4x10 | 279 | 0.25 | 0.194 | HMF1-4K-B5-B5 with F713-10-(B5) | | 1/4 1/6 | 279 186 | I II | B5 B5 | DUTF CUTF |
| | | 404 | 0.36 | 0.28 | HMF1-4K-B5-B5 with F715-10-(B5) | | 1/3 1/4 1/6 | 372 279 186 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | | | | HMF1-4K-B5-B5 with F718-10-(B5) | | 1/3 1/4 | 391 293 | II III | B5 B5 | EUTF DUTF |
| | | 880 | 0.79 | 0.61 | HMF1-4K-B5-B5 with F721-10-(B5) | | 3/4 1/2 1/3 | 878 587 391 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 1298 | 1.08 | 0.901 | HMF1-4K-B5-B5 with F724-10-(B5) | | 1 3/4 1/2 | 1201 900 600 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 1754 | 1.46 | 1.218 | HMF2-4K-B5-B5 with F726-10-(B5) | | 1 3/4 | 1201 900 | II III | B5 B5 | HUTF-5/8 GUTF |
| | | 2842 | 2.36 | 1.973 | HMF2-4K-B7-B7 with F730-10-(B7) | | 2 1-1/2 | 2402 1802 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-4K-B5-B5 with F730-10-(B5) | | 1 | 1201 | III | B5 | HUTF-5/8 |
| | | 3014 | 2.51 | 2.092 | HMF2-4K-B7-B7 with F732-10-(B7) | | 2 1-1/2 | 2402 1802 | II II | B7 B7 | KUTF JUTF |
| | | 4242 | 3.52 | 2.94 | HMF3-4K-B9-B9 with F738-10-(B9) | | 3 | 3604 | I | B9 | LUTF |
| | | 9413 | 7.74 | 6.53 | HMF3-4K-B11-B11 with RF752-10-(B11) | | 7-1/2 | 9009 | I | B11 | NUTF |
| | | | | | HMF3-4K-B9-B9 with RF752-10-(B9) | | 5 3 | 6006 3604 | II III | B9 B9 | MUTF LUTF |
| 15112 | 12.28 | 10.49 | HMF3-4K-B11-B11 with RF760-10-(B11) | | 10 7-1/2 | 12012 9009 | II II | B11 B11 | PUTF NUTF | | |
| | | | HMF3-4K-B9-B9 with RF760-10-(B9) | | 5 | 6006 | III | B9 | MUTF | | |
| 38.9 | 45 3x15 | 296 | 0.25 | 0.183 | HMF1-3K-B5-B5 with F713-15-(B5) | | 1/4 1/6 | 296 202 | II II | B5 B5 | DUTF CUTF |
| | | 425 | 0.346 | 0.262 | HMF1-3K-B5-B5 with F715-15-(B5) | | 1/3 1/4 1/6 | 408 306 204 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | | | | HMF1-3K-B5-B5 with F718-15-(B5) | | 1/3 1/4 1/6 | 424 318 212 | II II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 856 | 0.66 | 0.53 | HMF1-3K-B5-B5 with F721-15-(B5) | | 1/2 1/3 | 652 435 | II III | B5 B5 | FUTF EUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.



Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | |
|------------|------------|---------------------------------|-------------------------------------|--------|---------------------------------|----------------|-------------------|---------------------------------|------------------|----------------|---------------------------------|
| | | Gear Capacity | | | Available Models | | Ratings | | | Catalog Nos. | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | |
| 38.9 | 45 3x15 | 1279 | 0.951 | 0.789 | HMF2-3K-B5-B5 with F724-15-(B5) | | 3/4 1/2 | 978 652 | II III | B5 B5 | GUTF FUTF |
| | | 1744 | 1.337 | 1.076 | HMF2-3K-B5-B5 with F726-15-(B5) | | 1 3/4 1/2 | 1304 978 652 | II III III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3051 | 2.319 | 1.883 | HMF2-3K-B7-B7 with F730-15-(B7) | | 2 1-1/2 | 2608 1956 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-3K-B5-B5 with F730-15-(B5) | | 1 | 1304 | III | B5 | HUTF-5/8 |
| | | 3126 | 2.34 | 1.929 | HMF2-3K-B7-B7 with F732-15-(B7) | | 2 1-1/2 | 2671 2003 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-3K-B5-B5 with F732-15-(B5) | | 1 | 1304 | III | B5 | HUT-5/8 |
| | | 4380 | 3.24 | 2.703 | HMF3-3K-B9-B9 with F738-15-(B9) | | 3 | 4054 | I | B9 | LUTF |
| 9913 | 7.25 | 6.118 | HMF3-3K-B9-B9 with RF752-15-(B9) | | 5 3 | 6757 4054 | II III | B9 B9 | MUTF LUTF | | |
| 13874 | 10.15 | 8.563 | HMF3-3K-B11-B11 with RF752-15-(B11) | | 10 7-1/2 | 13514 10135 | I II | B11 B11 | PUTF NUTF | | |
| 35 | 50 5x10 | 283 | 0.205 | 0.157 | HMF1-5K-B5-B5 with F713-10-(B5) | | 1/6 | 232 | I | B5 | CUTF |
| | | 411 | 0.296 | 0.228 | HMF1-5K-B5-B5 with F715-10-(B5) | | 1/4 1/6 1/3 | 347 232 477 | I II I | B5 B5 B5 | DUTF CUTF EUTF |
| | | | | | HMF1-5K-B5-B5 with F718-10-(B5) | | 1/4 1/6 | 356 239 | II III | B5 B5 | DUTF CUTF |
| | | | | | HMF1-5K-B5-B5 with F721-10-(B5) | | 1/2 1/3 | 690 460 | II III | B5 B5 | FUTF EUTF |
| | | 1332 | 0.89 | 0.74 | HMF2-5K-B5-B5 with F724-10-(B5) | | 3/4 1/2 1/3 | 1123 749 499 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 1807 | 1.217 | 1.003 | HMF2-5K-B5-B5 with F726-10-(B5) | | 1 3/4 1/2 | 1484 1113 742 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | | | | 2944 | 2.03 | 1.635 | HMF2-5K-B7-B7 with F730-10-(B7) | | 2 1-1/2 | 2898 2174 |
| | | HMF2-5K-B5-B5 with F730-10-(B5) | | 1 | | | | 1449 | III | B5 | HUTF-5/8 |
| | | 3088 | 2.016 | 1.715 | HMF2-5K-B7-B7 with F732-10-(B7) | | 2 1-1/2 | 2968 2226 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-5K-B5-B5 with F732-10-(B5) | | 1 | 1484 | III | B5 | HUTF-5/8 |
| | | 4361 | 2.91 | 2.422 | HMF3-5K-B9-B9 with F738-10-(B9) | | 3 | 4361 | I | B9 | LUTF |
| | | | | | HMF2-5K-B7-B7 with F738-10-(B7) | | 2 1-1/2 | 2989 2242 | II III | B7 | KUTF JUTF |
| 9695 | 6.39 | 5.384 | HMF3-5K-B9-B9 with RF752-10-(B9) | | 5 3 | 7578 4547 | II III | B9 | MUTF LUTF | | |
| 15757 | 10.39 | 8.75 | HMF3-5K-B11-B11 with RF760-10-(B11) | | 10 7-1/2 | 15155 11366 | I II | B11 | PUTF NUTF | | |
| | | | HMF3-5K-B9-B9 with RF760-10-(B9) | | 5 | 7578 | III | B9 | MUTF | | |
| 29.2 | 60 4x15 | 302 | 0.192 | 0.14 | HMF1-4K-B5-B5 with F713-15-(B5) | | 1/6 | 262 | I | B5 | CUTF |
| | | 438 | 0.278 | 0.203 | HMF1-4K-B5-B5 with F715-15-(B5) | | 1/4 1/6 | 393 262 | I II | B5 B5 | DUTF CUTF |
| | | | | | HMF1-4K-B5-B5 with F718-15-(B5) | | 1/3 1/4 1/6 | 524 393 262 | I II II | B5 B5 B5 | EUTF DUTF CUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | |
|------------|------------|------------------------------|-------------------------------------|--------|----------------------------------|---------------|-------------------|------------------------|-----------------|----------------|---------------------------------|
| | | Gear Capacity | | | Available Models | | Ratings | | | Catalog Nos. | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | |
| 29.2 | 60 4X15 | 890 | 0.525 | 0.412 | HMF1-4K-B5-B5 with F721-15-(B5) | | 1/2 1/3 1/4 | 848 566 424 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 1334 | 0.796 | 0.617 | HMF2-4K-B5-B5 with F724-15-(B5) | | 3/4 1/2 1/3 | 1257 838 556 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 1838 | 1.09 | 0.851 | HMF2-4K-B5-B5 with F726-15-(B5) | | 1 3/4 1/2 | 1676 1257 838 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3220 | 1.92 | 1.49 | HMF2-4K-B7-B7 with F730-15-(B7) | | 1-1/2 | 2514 | I | B7 | JUTF |
| | | | | | HMF2-4K-B5-B5 with F730-15-(B5) | | 1 3/4 | 1676 1257 | II III | B5 B5 | HUTF-5/8 GUTF |
| | | 3299 | 1.87 | 1.53 | HMF2-4K-B7-B7 with F732-15-(B7) | | 1-1/2 | 2640 | II | B7 | JUTF |
| | | | | | HMF2-4K-B5-B5 with F732-15-(B5) | | 1 3/4 | 1781 1336 | II III | B5 | HUTF-5/8 GUTF |
| | | 4628 | 2.56 | 2.14 | HMF2-4K-B7-B7 with F738-15-(B7) | | 2 1-1/2 | 3562 2671 | II II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-4K-B5-B5 with F738-15-(B5) | | 1 | 1781 | III | B5 | HUTF-5/8 |
| | | 10512 | 5.9 | 4.86 | HMF3-4K-B9-B9 with RF752-15-(B9) | | 5 3 | 8905 4343 | I III | B9 B9 | MUTF LUTF |
| 14817 | 8.32 | 6.86 | HMF3-4K-B11-B11 with RF760-15-(B11) | | 7-1/2 5 | 13357 8905 | I II | B11 B11 | NUTF MUTF | | |
| | | | HMF3-4K-B9-B9 with RF760-15-(B9) | | 3 | 5343 | III | B9 | LUTF | | |
| 23.3 | 75 5X15 | 446 | 0.24 | 0.165 | HMF1-5K-B5-B5 with F715-15-(B5) | | 1/6 | 314 | II | B5 | CUTF |
| | | 570 | 0.289 | 0.211 | HMF1-5K-B5-B5 with F718-15-(B5) | | 1/4 1/6 | 491 327 | I II | B5 B5 | DUTF CUTF |
| | | 910 | 0.434 | 0.336 | HMF1-5K-B5-B5 with F721-15-(B5) | | 1/3 1/4 1/6 | 698 524 349 | II II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1367 | 0.66 | 0.505 | HMF2-5K-B5-B5 with F724-15-(B5) | | 1/2 1/3 | 1034 690 | II III | B5 B5 | FUTF EUTF |
| | | 1895 | 0.92 | 0.701 | HMF2-5K-B5-B5 with F726-15-(B5) | | 3/4 1/2 1/3 | 1548 1031 688 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 3221 | 1.59 | 1.191 | HMF2-5K-B7-B7 with F730-15-(B7) | | 1-1/2 1 | 3025 2017 | I II | B7 | JUTF HUTF-5/8 |
| | | | | | HMF2-5K-B5-B5 with F730-15-(B5) | | 3/4 | 1512 | III | B5 | GUTF |
| | | 3402 | 1.58 | 1.258 | HMF2-5K-B7-B7 with F732-15-(B7) | | 1-1/2 1 | 3221 2148 | I II | B7 B7 | JUTF HUTF-5/8 |
| | | | | | HMF2-5K-B5-B5 with F732-15-(B5) | | 3/4 | 1611 | III | B5 | GUTF |
| | | 4776 | 2.22 | 1.766 | HMF2-5K-B7-B7 with F738-15-(B7) | | 2 1-1/2 | 4295 3221 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-5K-B5-B5 with F738-15-(B5) | | 1 | 2148 | III | B5 | HUTF-5/8 |
| | | 10872 | 5.05 | 4.019 | HMF3-5K-B9-B9 with RF752-15-(B9) | | 5 3 | 10738 6443 | I II | B9 B9 | MUTF LUTF |
| 15383 | 6.98 | 5.687 | HMF3-5K-B9-B9 with RF760-15-(B9) | | 5 3 | 11000 6600 | II III | B9 B9 | MUTF LUTF | | |
| 21.9 | 80 4X20 | 448 | 0.228 | 0.156 | HMF1-4K-B5-B5 with F715-20-(B5) | | 1/6 | 326 | II | B5 | CUTF |
| | | 627 | 0.303 | 0.218 | HMF1-4K-B5-B5 with F718-20-(B5) | | 1/4 1/6 | 517 344 | I II | B5 B5 | DUTF CUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | |
|------------|-------------|------------------------------|----------------------------------|--------|----------------------------------|---------------|-------------------|------------------------|-----------------|----------------|---------------------------|
| | | Gear Capacity | | | Available Models | | Ratings | | | Catalog Nos. | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | |
| 21.9 | 80 4x20 | 936 | 0.45 | 0.33 | HMF1-4K-B5-B5 with F721-20-(B5) | | 1/3 1/4 1/6 | 698 524 349 | II II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1395 | 0.657 | 0.485 | HMF2-4K-B5-B5 with F724-20-(B5) | | 1/2 1/3 | 1062 707 | II III | B5 B5 | FUTF EUTF |
| | | 1864 | 0.8 | 0.648 | HMF2-4K-B5-B5 with F726-20-(B5) | | 3/4 1/2 1/3 | 1697 1131 754 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 3100 | 1.22 | 1.077 | HMF2-4K-B5-B5 with F730-20-(B5) | | 1 3/4 1/2 | 2514 1886 1256 | II II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3677 | 1.646 | 1.278 | HMF2-4K-B7-B7 with F732-20-(B7) | | 1-1/2 | 3352 | I | B7 | JUTF |
| | | | | | HMF2-4K-B5-B5 with F732-20-(B5) | | 1 3/4 | 2234 1676 | II III | B5 | HUTF-5/8 GUTF |
| | | 5285 | 2.337 | 1.836 | HMF2-4K-B7-B7 with F738-20-(B7) | | 2 1-1/2 | 4525 3394 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-4K-B5-B5 with F738-20-(B5) | | 1 | 2263 | III | B5 | HUTF-5/8 |
| | | 10450 | 4.68 | 3.63 | HMF3-4K-B9-B9 with RF752-20-(B9) | | 3 | 6705 | II | B9 | LUTF |
| 15140 | 6.56 | 5.261 | HMF3-4K-B9-B9 with RF760-20-(B9) | | 5 3 | 11537 6922 | II III | B9 B9 | MUTF LUTF | | |
| 17.5 | 100 5x20 | 457 | 0.19 | 0.127 | HMF1-5K-B5-B5 with F715-20-(B5) | | 1/6 | 402 | I | B5 | CUTF |
| | | 643 | 0.259 | 0.179 | HMF1-5K-B5-B5 with F718-20-(B5) | | 1/4 1/6 | 620 413 | I II | B5 B5 | DUTF CUTF |
| | | 957 | 0.37 | 0.27 | HMF1-5K-B5-B5 with F721-20-(B5) | | 1/3 1/4 1/6 | 861 646 431 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1435 | 0.562 | 0.398 | HMF2-5K-B5-B5 with F724-20-(B5) | | 1/2 1/3 1/4 | 1275 850 637 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 1912 | 0.68 | 0.531 | HMF2-5K-B5-B5 with F726-20-(B5) | | 1/2 1/3 | 1379 1000 | II III | B5 B5 | FUTF EUTF |
| | | 3225 | 1.15 | 0.895 | HMF2-5K-B5-B5 with F730-20-(B5) | | 1 3/4 1/2 | 2759 2069 1379 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3721 | 1.4 | 1.003 | HMF2-5K-B5-B5 with F732-20-(B5) | | 1 3/4 1/2 | 2654 1990 1327 | II II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 5418 | 2.01 | 1.504 | HMF2-5K-B7-B7 with F738-20-(B7) | | 2 1-1/2 | 5378 4033 | I II | B7 B7 | KUTF JUTF |
| | | | | | HMF2-5K-B5-B5 with F738-20-(B5) | | 1 | 2689 | III | B5 | HUTF-5/8 |
| | | 10744 | 3.89 | 2.98 | HMF3-5K-B9-B9 with RF752-20-(B9) | | 3 | 8276 | II | B9 | LUTF K |
| 15622 | 5.43 | 4.338 | HMF3-5K-B9-B9 with RF760-20-(B9) | | 5 3 | 13968 8381 | I II | B9 B9 | MUTF LUTF | | |
| 14 | 125 5X25 | 609 | 0.205 | 0.135 | HMF1-5K-B5-B5 with F718-25-(B5) | | 1/6 | 495 | I | B5 | CUTF |
| | | 933 | 0.31 | 0.21 | HMF1-5K-B5-B5 with F721-25-(B5) | | 1/4 1/6 | 917 611 | I II | B5 B5 | DUTF CUTF |
| | | 1407 | 0.46 | 0.313 | HMF2-5K-B5-B5 with F724-25-(B5) | | 1/3 1/4 1/6 | 1018 764 509 | II II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1937 | 0.59 | 0.43 | HMF2-5K-B5-B5 with F726-25-(B5) | | 1/2 1/3 1/4 | 1637 1091 818 | I II III | B5 B5 B5 | FUTF EUTF DUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | | |
|------------|-------------|------------------------------|-------|------------------|----------------------------------|--|---------|-------------------|------------------------|----------------|----------------|---------------------------|
| | | Gear Capacity | | Available Models | | | Ratings | | | Catalog Nos. | | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | | |
| 14 | 125 5x25 | 3158 | 0.95 | 0.701 | HMF2-5K-B5-B5 with F730-25-(B5) | | | 1 3/4 1/2 | 3158 2423 1615 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3373 | 1.1 | 0.75 | HMF2-5K-B5-B5 with F732-25-(B5) | | | 1 3/4 1/2 | 3230 2423 1615 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| 11.7 | 150 5x30 | 663 | 0.186 | 0.123 | HMF1-5K-B5-B5 with F718-30-(B5) | | | 1/6 | 594 | I | B5 | CUTF |
| | | 977 | 0.28 | 0.18 | HMF1-5K-B5-B5 with F721-30-(B5) | | | 1/4 1/6 | 877 585 | I II | B5 B5 | DUTF CUTF |
| | | 1415 | 0.404 | 0.263 | HMF2-5K-B5-B5 with F724-30-(B5) | | | 1/3 1/4 1/6 | 1170 877 585 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1969 | 0.562 | 0.366 | HMF2-5K-B5-B5 with F726-30-(B5) | | | 1/2 1/3 1/4 | 1756 1170 877 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 3404 | 1.002 | 0.632 | HMF2-5K-B5-B5 with F730-30-(B5) | | | 1 3/4 1/2 | 3404 2553 1702 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 3788 | 1.1 | 0.73 | HMF2-5K-B5-B5 with F732-30-(B5) | | | 1 3/4 1/2 | 3404 2553 1702 | I II III | B5 B5 B5 | HUTF-5/8 GUTF FUTF |
| | | 5303 | 1.39 | 0.984 | HMF2-5K-B5-B5 with F738-30-(B5) | | | 1 3/4 | 3824 2868 | II II | B5 B5 | HUTF-5/8 GUTF |
| | | 11381 | 3.11 | 2.113 | HMF3-5K-B9-B9 with RF752-30-(B9) | | | 3 | 11000 | II | B9 | LUTF |
| | | 15932 | 4.08 | 2.958 | HMF3-5K-B9-B9 with RF760-30-(B9) | | | 3 | 11000 | II | B9 | LUTF |
| 8.8 | 200 5x40 | 643 | 0.162 | 0.089 | HMF1-5K-B5-B5 with F718-40-(B5) | | | 1/6 | 640 | I | B5 | CUTF |
| | | 957 | 0.25 | 0.13 | HMF1-5K-B5-B5 with F721-40-(B5) | | | 1/4 1/6 | 950 640 | I II | B5 B5 | DUTF CUTF |
| | | 1435 | 0.35 | 0.199 | HMF2-5K-B5-B5 with F724-40-(B5) | | | 1/3 1/4 1/6 | 1327 995 663 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 1912 | 0.464 | 0.265 | HMF2-5K-B5-B5 with F726-40-(B5) | | | 1/3 1/4 | 1374 1030 | II III | B5 B5 | EUTF DUTF |
| | | 3303 | 0.775 | 0.459 | HMF2-5K-B5-B5 with F730-40-(B5) | | | 3/4 1/2 1/3 | 3195 2130 1420 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 3636 | 0.8 | 0.505 | HMF2-5K-B5-B5 with F732-40-(B5) | | | 3/4 1/2 1/3 | 3405 2270 1513 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| | | 5418 | 1.17 | 0.752 | HMF2-5K-B5-B5 with F738-40-(B5) | | | 1 3/4 1/2 | 4609 3457 2305 | I II III | B5 B5 B5 | HUTF-5/8 CUTF FUTF |
| | | 15623 | 3.19 | 2.169 | HMF3-5K-B9-B9 with F760-40-(B9) | | | 3 | 14457 | I | B9 | LUTF |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.



Double Reduction Output RPM & Capacity Selection Tables

@ 1750 RPM Input

| Output RPM | Ratio | Flanged Reducers (Gearmotor) | | | | | | | | Motors* | | |
|---------------------------------|-------------|------------------------------|-------|------------------|---------------------------------|----------------------|----------------|-------------------|------------------------|----------------|----------------|---------------------------|
| | | Gear Capacity | | Available Models | | | Ratings | | | Catalog Nos. | | |
| | | Output Torque (lb.in.) | HP | | F, QC, HF, SF, HQC, RF | | | MTR HP | Output Torque (lb.in.) | Service Class | MTR Bore Code | 230/460 VAC 3 Phase 60 Hz |
| | | | Input | Output | Gearbox Size K | | | | | | | |
| 7 | 250 5x50 | 915 | 0.18 | 0.10 | HMF1-5K-B5-B5 with F721-50-(B5) | | | 1/6 | 844 | I | B5 | CUTF |
| | | 1340 | 0.274 | 0.149 | HMF2-5K-B5-B5 with F724-50-(B5) | | | 1/4 1/6 | 1222 814 | I II | B5 B5 | DUTF CUTF |
| | | 1848 | 0.359 | 0.205 | HMF2-5K-B5-B5 with F726-50-(B5) | | | 1/3 1/4 1/6 | 1717 1288 858 | I II III | B5 B5 B5 | EUTF DUTF CUTF |
| | | 3008 | 0.604 | 0.334 | HMF2-5K-B5-B5 with F730-50-(B5) | | | 1/2 1/3 1/4 | 2488 1659 1244 | I II III | B5 B5 B5 | FUTF EUTF DUTF |
| | | 3210 | 0.634 | 0.356 | HMF2-5K-B5-B5 with F732-50-(B5) | | | 1/2 1/3 | 2488 1659 | II III | B5 B5 | FUTF EUTF |
| | | 4373 | 0.862 | 0.486 | HMF2-5K-B5-B5 with F738-50-(B5) | | | 3/4 1/2 1/3 | 3798 2532 1688 | I II III | B5 B5 B5 | GUTF FUTF EUTF |
| 5.8 | 300 5x60 | 877 | 0.17 | 0.08 | HMF1-5K-B5-B5 with F721-60-(B5) | | | 1/6 | 873 | I | B5 | CUTF |
| | | 1255 | 0.239 | 0.116 | HMF2-5K-B5-B5 with F724-60-(B5) | | | 1/6 | 873 | II | B5 | CUTF |
| | | 1725 | 0.31 | 0.16 | HMF2-5K-B5-B5 with F726-60-(B5) | | | 1/4 1/6 | 1388 925 | II II | B5 B5 | DUTF |
| | | 2868 | 0.43 | 0.265 | HMF2-5K-B5-B5 with F730-60-(B5) | | | 1/3 1/4 | 2200 1650 | II II | B5 B5 | EUTF DUTF |
| | | | | | HMF2-5K-B5-B5 with F730-60-(B5) | | | 1/6 | 1100 | III | B5 | CUTF |
| | | 3015 | 0.522 | 0.278 | HMF2-5K-B5-B5 with F732-60-(B5) | | | 1/2 1/3 1/6 | 2881 1921 1440 | I II III | B5 B5 B5 | FUTF EUTF CUTF |
| HMF2-5K-B5-B5 with F738-60-(B5) | | | | | 3/4 1/2 1/3 | 4272 2933 1955 | I II III | B5 B5 B5 | GUTF FUTF EUTF | | | |

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see our Electrical Products Catalog.

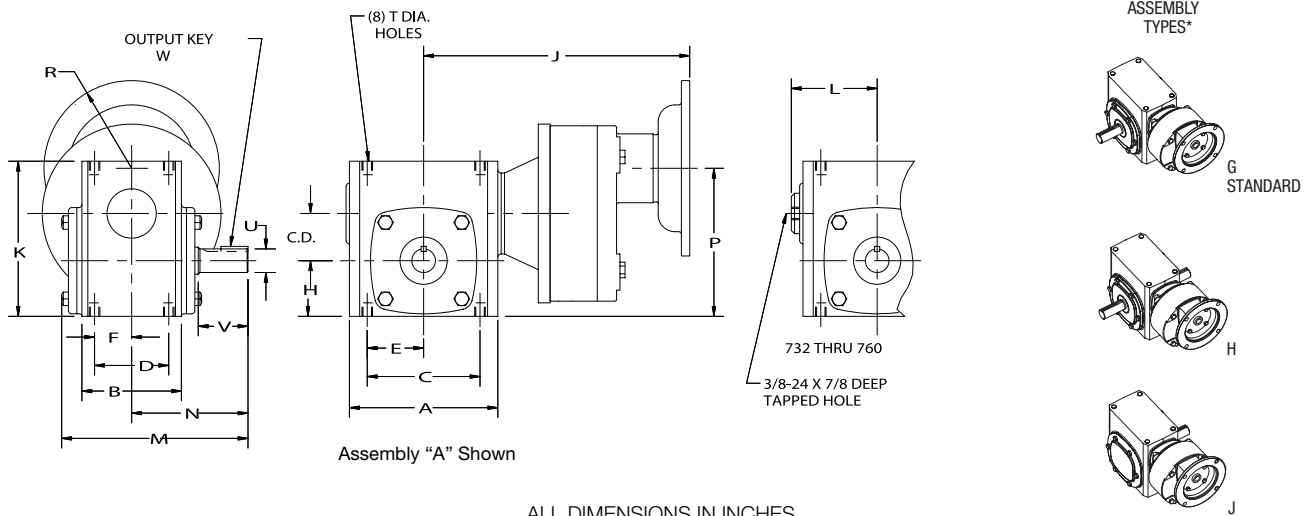
C

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base)

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | H | J-NEMA Mounting | | | | | | K | L | M |
|------|------|-------|------|-------|------|------|------|------|-----------------|-------|------------|-------|-------|-------------------|-------|------|-------|
| | | | | | | | | | F700 | | | QC700 | | | | | |
| | | | | | | | | | 56C | 140TC | 180TC 210C | 56C | 140TC | 180TC 210TC 250TC | | | |
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | 1.72 | 9.12 | — | — | 10.65 | — | — | 4.64 | — | 6.03 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 1.91 | 9.68 | — | — | 11.29 | — | — | 5.38 | — | 6.84 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | 2.06 | 9.87 | — | — | 11.47 | — | — | 5.75 | — | 6.81 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 2.28 | 10.24 | 10.69 | — | 11.94 | 12.39 | — | 6.38 | — | 7.28 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 2.50 | 10.88 | 10.88 | 11.32 | 12.58 | 12.58 | 13.45 | 6.94 | — | 7.81 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 2.94 | 11.38 | 11.38 | 11.82 | 13.02 | 13.02 | 13.94 | 8.00 | — | 8.53 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 3.25 | 11.83 | 11.83 | 14.07 | 13.47 | 13.47 | 16.17 | 8.88 | — | 10.02 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 3.50 | 12.19 | 12.19 | 14.43 | 13.83 | 13.84 | 16.57 | 9.38 | 4.94 | 10.81 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3.88 | 12.69 | 12.69 | 14.93 | 14.34 | 14.34 | 17.71 | 10.44 | 5.50 | 11.88 |
| 752 | 5.16 | 13.13 | 7.38 | 11.00 | 5.81 | 5.50 | 2.91 | 5.31 | — | — | — | — | — | 23.43† | 13.75 | 7.19 | 13.81 |
| 760 | 6.00 | 14.50 | 8.13 | 12.75 | 6.38 | 6.38 | 3.19 | 6.50 | — | — | — | — | — | 23.43† | 16.50 | 7.94 | 15.31 |

| Size | N | P | R-NEMA | | T | | Low Speed Shaft | | | | Approx. Weight (LBS.) | | Fan Kit No.** | |
|------|-------|-------|-----------|-------------------|----------|---------|-----------------|-------|-------|--------|-----------------------|-----------|---------------|-------|
| | | | 56C 140TC | 180TC 210TC 250TC | Tap Size | Depth | U +.000 - .001 | V | W-Key | | F700 (1) | QC700 (1) | | |
| | | | | | | | | | Sq. | Length | | | | |
| 713 | 4.00 | 4.74 | — | 3.31 | — | 5/16-18 | .50 | .625 | 2.00 | 3/16 | 1 | 30 | 33 | — |
| 715 | 4.31 | 5.12 | — | 3.31 | — | 5/16-18 | .50 | .750 | 1.78 | 3/16 | 1 | 36 | 42 | — |
| 718 | 4.31 | 5.49 | — | 3.31 | — | 5/16-18 | .50 | .875 | 1.78 | 3/16 | 1 | 38 | 45 | — |
| 721 | 4.69 | 6.02 | 7.22 | 3.31 | — | 3/8-16 | .56 | 1.000 | 2.09 | 1/4 | 1-1/4 | 47 | 51 | — |
| 724 | 5.09 | 7.76 | — | 3.31 | 4.63 | 3/8-16 | .56 | 1.125 | 2.38 | 1/4 | 1-1/4 | 56 | 61 | — |
| 726 | 5.63 | 8.44 | — | 3.31 | 4.63 | 3/8-16 | .56 | 1.125 | 2.63 | 1/4 | 1-15/16 | 71 | 72 | — |
| 730 | 6.75 | 9.11 | — | 3.31 | 4.63 | 7/16-14 | .88 | 1.250 | 3.25 | 1/4 | 2-1/4 | 91 | 97 | — |
| 732 | 7.06 | 9.63 | — | 3.31 | 4.63 | 7/16-14 | .66 | 1.375 | 3.25 | 5/16 | 2-7/16 | 109 | 109 | 51450 |
| 738 | 7.75 | 10.51 | — | 3.31 | 4.63 | 1/2-13 | .81 | 1.625 | 3.50 | 3/8 | 2-1/4 | 142 | 142 | 51451 |
| 752 | 9.06 | 13.38 | — | — | 4.63 | 5/8-11 | 1.00 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 271† | 51452 |
| 760 | 10.00 | 15.38 | — | — | 4.63 | 5/8-11 | 1.00 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 320† | 51453 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

** For Fan Kits, see Page 130.

(1) For sizes 724 and larger using HM3 add 25 lbs.

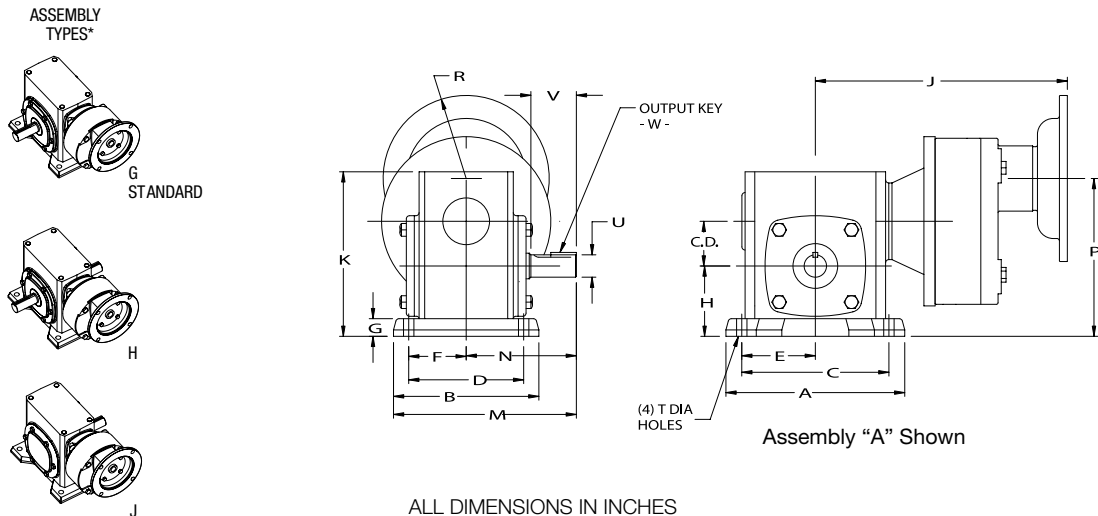
† 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPE. Reference Page 245 for flange details.

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

B Position Horizontal Base

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | | | K | M |
|------|------|-------|-------|-------|------|------|------|------|------|-----------------|-------|------------|-------|-------|-------------------|-------|-------|
| | | | | | | | | | | F700 | | | QC700 | | | | |
| | | | | | | | | | | 56C | 140TC | 180TC 210C | 56C | 140TC | 180TC 210TC 250TC | | |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | .53 | 2.25 | 9.12 | — | — | 10.65 | — | — | 5.19 | 6.09 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | .59 | 2.50 | 9.68 | — | — | 11.29 | — | — | 5.97 | 7.03 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | .69 | 2.75 | 9.87 | — | — | 11.47 | — | — | 6.44 | 7.16 |
| 721 | 2.06 | 7.75 | 5.94 | 6.38 | 4.69 | 3.19 | 2.34 | .72 | 3.00 | 10.24 | 10.69 | — | 11.94 | 12.39 | — | 7.09 | 7.66 |
| 724 | 2.38 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | .75 | 3.25 | 10.88 | 10.88 | 11.32 | 12.58 | 12.58 | 13.45 | 7.69 | 8.19 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.63 | .75 | 3.69 | 11.38 | 11.38 | 11.82 | 13.02 | 13.02 | 13.94 | 8.75 | 8.97 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | .75 | 4.00 | 11.83 | 11.83 | 14.07 | 13.47 | 13.47 | 16.17 | 9.63 | 10.50 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.13 | 4.75 | 3.06 | .88 | 4.38 | 12.19 | 12.19 | 14.43 | 13.83 | 13.83 | 16.57 | 10.25 | 10.94 |
| 738 | 3.75 | 12.13 | 8.66 | 10.38 | 7.00 | 5.19 | 3.50 | .94 | 4.81 | 12.69 | 12.69 | 14.93 | 14.34 | 14.34 | 17.71 | 11.38 | 12.09 |
| 752 | 5.16 | 16.38 | 10.63 | 14.13 | 8.38 | 7.06 | 4.19 | 1.13 | 6.44 | — | — | — | — | — | 23.43†† | 14.88 | 14.38 |
| 760 | 6.00 | 19.00 | 12.00 | 16.50 | 9.50 | 8.25 | 4.75 | 1.25 | 7.75 | — | — | — | — | — | 23.43†† | 17.75 | 16.00 |

| Size | N | P | R-NEMA | | T | Low Speed Shaft | | | | Approx. Weight (LBS.) | | Base Kit No. † | Fan Kit No.** | |
|------|-------|-------|-----------|-------------------|------|-----------------|-------|-------|------|-----------------------|-----------|----------------|---------------|-------|
| | | | 56C 140TC | 180TC 210TC 250TC | | U +.000 -.001 | V | W-Key | | F700 (1) | QC700 (1) | | | |
| | | | Sq. | Length | | | | | | | | | | |
| 713 | 4.00 | 5.27 | — | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 31 | 35 | 56577 | — |
| 715 | 4.31 | 5.71 | — | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 37 | 43 | 56438 | — |
| 718 | 4.31 | 6.18 | — | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 39 | 46 | 56585 | — |
| 721 | 4.69 | 6.74 | 7.94 | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 48 | 51 | 56440 | — |
| 724 | 5.09 | 8.51 | — | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 57 | 62 | 56591 | — |
| 726 | 5.63 | 9.19 | — | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-15/16 | 74 | 75 | 56595 | — |
| 730 | 6.75 | 9.86 | — | 3.31 | 4.63 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 96 | 102 | 65544 | — |
| 732 | 7.06 | 10.51 | — | 3.31 | 4.63 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 118 | 119 | 56599 | 51450 |
| 738 | 7.75 | 11.45 | — | 3.31 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 156 | 158 | 56603 | 51451 |
| 752 | 9.06 | 14.51 | — | — | 4.63 | 25/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 292†† | 56607 | 51452 |
| 760 | 10.00 | 16.63 | — | — | 4.63 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 350†† | 56610 | 51453 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

(1) For sizes 724 and larger using HM3 add 25 lbs.

†† 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPE.

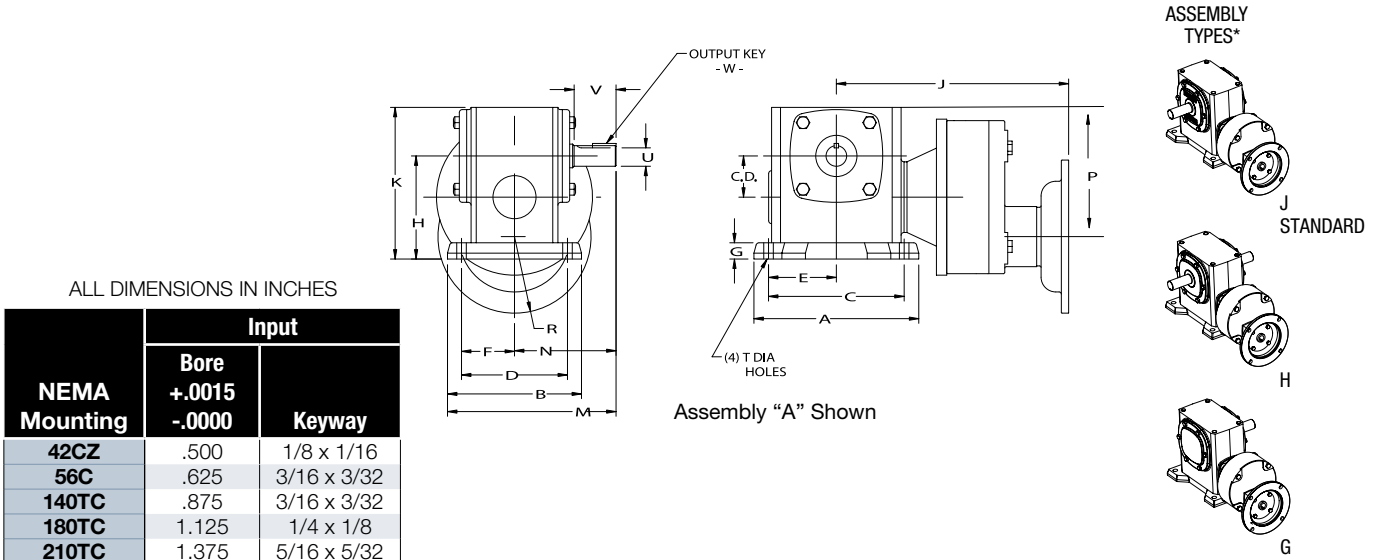
Reference Page 245 for flange details.

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

A Position Horizontal Base

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | | | K | M |
|------|------|-------|------|-------|------|------|------|-----|------|-----------------|-------|---------------|-------|-------|-------------------------|-------|-------|
| | | | | | | | | | | F700 | | | QC700 | | | | |
| | | | | | | | | | | 56C | 140TC | 180TC 210C | 56C | 140TC | 180TC 210TC 250TC | | |
| 713 | 1.33 | 5.38 | 4.19 | 4.38 | 3.31 | 2.19 | 1.66 | .53 | 3.47 | 9.12 | — | — | 10.65 | — | — | 5.19 | 6.09 |
| 715 | 1.54 | 6.44 | 5.44 | 5.25 | 4.31 | 2.63 | 2.16 | .59 | 4.06 | 9.68 | — | — | 11.29 | — | — | 5.97 | 7.03 |
| 718 | 1.75 | 7.00 | 5.69 | 5.75 | 4.50 | 2.88 | 2.25 | .69 | 4.38 | 9.87 | — | — | 11.47 | — | — | 6.44 | 7.16 |
| 721 | 2.06 | 7.75 | 5.94 | 6.37 | 4.69 | 3.19 | 2.34 | .72 | 4.81 | 10.24 | 10.69 | — | 11.94 | 12.39 | — | 7.09 | 7.66 |
| 724 | 2.37 | 8.50 | 6.19 | 7.06 | 4.88 | 3.53 | 2.44 | .75 | 5.19 | 10.88 | 10.88 | 11.32 | 12.58 | 12.58 | 13.45 | 7.69 | 8.19 |
| 726 | 2.62 | 9.63 | 6.66 | 8.00 | 5.25 | 4.00 | 2.62 | .75 | 5.81 | 11.38 | 11.38 | 11.82 | 13.02 | 13.02 | 13.94 | 8.75 | 8.97 |
| 730 | 3.00 | 10.00 | 7.50 | 8.44 | 5.88 | 4.22 | 2.94 | .75 | 6.38 | 11.83 | 11.83 | 14.07 | 13.47 | 13.47 | 16.17 | 9.63 | 10.50 |
| 732 | 3.25 | 11.19 | 7.66 | 9.50 | 6.12 | 4.75 | 3.06 | .88 | 6.75 | 12.19 | 12.19 | 14.43 | 13.83 | 13.83 | 16.57 | 10.25 | 10.89 |
| 738 | 3.75 | 12.13 | 8.66 | 10.37 | 7.00 | 5.19 | 3.50 | .94 | 7.50 | 12.69 | 12.69 | 14.93 | 14.34 | 14.34 | 17.71 | 11.38 | 12.09 |

| Size | N | P | R-NEMA | | | | T Holes | Low Speed Shaft | | | | Approx. Weight (LBS.) | | Base Kit No. † | Fan Kit No. ** | |
|------|------|-------|--------|-------|-------|-------|------------|---------------------|-------|-------|--------|--------------------------|--------------|----------------------|----------------------|-------|
| | | | 56C | 140TC | 180TC | 210TC | | U +.000 -.001 | V | W-Key | | F700 (1) | QC700 (1) | | | |
| | | | | | | | | | | Sq. | Length | | | | | |
| 713 | 4.00 | 4.74 | — | 3.31 | — | — | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 31 | 35 | 56577 | — |
| 715 | 4.31 | 5.12 | — | 3.31 | 3.31 | — | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 37 | 43 | 56438 | — |
| 718 | 4.31 | 5.49 | — | 3.31 | 3.31 | — | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 39 | 46 | 56585 | — |
| 721 | 4.69 | 6.02 | 7.22 | 3.31 | 3.31 | — | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 48 | 51 | 56440 | — |
| 724 | 5.09 | 7.76 | — | 3.31 | 3.31 | 4.63 | — | 15/32 | 1.125 | 2.37 | 1/4 | 1-1/4 | 57 | 62 | 56591 | — |
| 726 | 5.62 | 8.44 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.125 | 2.62 | 1/4 | 1-15/16 | 74 | 75 | 56595 | — |
| 730 | 6.75 | 9.11 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 96 | 102 | 65544 | — |
| 732 | 7.06 | 9.63 | — | 3.31 | 3.31 | 4.63 | — | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 118 | 119 | 56599 | 54150 |
| 738 | 7.75 | 10.51 | — | — | 3.31 | 4.63 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 156 | 158 | 56603 | 54151 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

(1) For sizes 724 and larger using HM3 add 25 lbs.

†† 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPE.

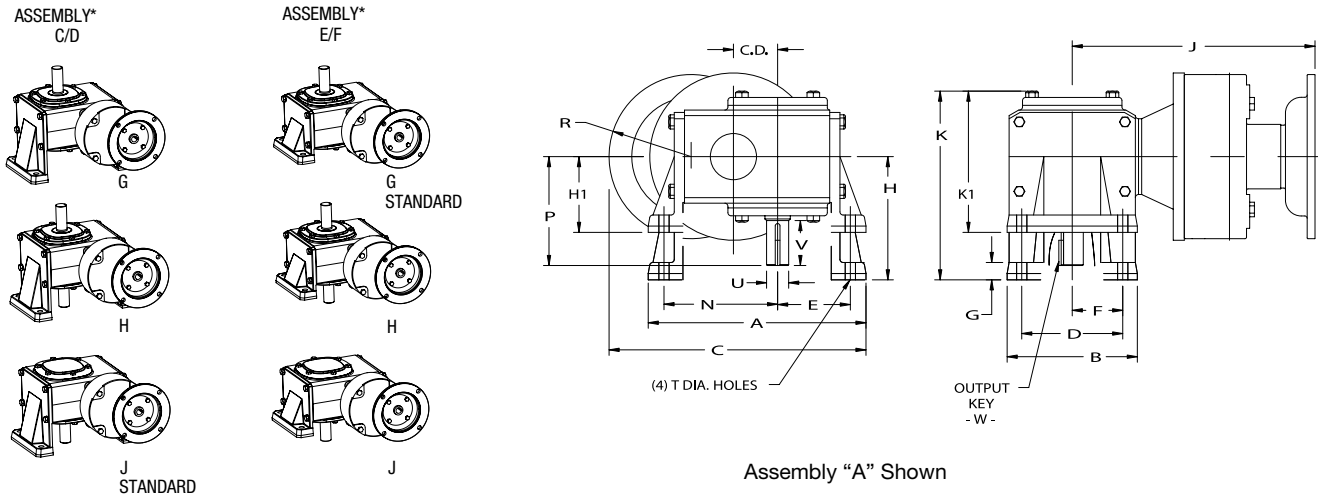
Reference Page 245 for flange details.

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

C/D Position Vertical Base; C/E = High Base; D/F = Low Base

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | H1 | J-NEMA Mounting | | | | | | K | K1 |
|------|------|-------|-------|-------|-------|------|------|------|------|------|-----------------|-------|------------|-------|-------|-------------------|-------|-------|
| | | | | | | | | | | | F700 | | | QC700 | | | | |
| | | | | | | | | | | | 56C | 140TC | 180TC 210C | 56C | 140TC | 180TC 210TC 250TC | | |
| 713 | 1.33 | 7.09 | 4.13 | 6.16 | 3.25 | 1.78 | 1.63 | .53 | 3.56 | 2.31 | 9.12 | — | — | 10.65 | — | — | 5.59 | 4.34 |
| 715 | 1.54 | 8.03 | 5.16 | 6.97 | 4.00 | 1.97 | 2.00 | .69 | 4.38 | 3.00 | 9.68 | — | — | 11.29 | — | — | 6.91 | 5.53 |
| 718 | 1.75 | 8.44 | 5.16 | 7.38 | 4.00 | 2.13 | 2.00 | .69 | 4.38 | 3.00 | 9.87 | — | — | 11.47 | — | — | 6.88 | 5.50 |
| 721 | 2.06 | 9.50 | 6.03 | 8.38 | 4.88 | 2.34 | 2.44 | .72 | 4.88 | 3.13 | 10.24 | 10.69 | — | 11.94 | 12.39 | — | 7.50 | 5.75 |
| 724 | 2.38 | 10.06 | 6.31 | 8.94 | 4.88 | 2.56 | 2.44 | .75 | 5.25 | 3.38 | 10.88 | 10.88 | 11.32 | 12.58 | 12.58 | 13.45 | 7.97 | 6.09 |
| 726 | 2.62 | 11.69 | 7.38 | 10.13 | 5.75 | 3.00 | 2.88 | .88 | 5.59 | 3.63 | 11.38 | 11.38 | 11.82 | 13.02 | 13.02 | 13.94 | 8.50 | 6.53 |
| 730 | 3.00 | 12.50 | 8.00 | 11.13 | 6.00 | 3.34 | 3.00 | .94 | 5.88 | 3.94 | 11.83 | 11.83 | 14.07 | 13.47 | 13.47 | 16.17 | 9.13 | 7.20 |
| 732 | 3.25 | 13.38 | 9.00 | 11.88 | 6.13 | 3.56 | 3.06 | .88 | 6.25 | 4.69 | 12.19 | 12.19 | 14.43 | 13.83 | 13.83 | 16.57 | 10.00 | 8.56 |
| 738 | 3.75 | 15.69 | 10.00 | 13.94 | 8.00 | 4.00 | 4.00 | .94 | 7.00 | 5.25 | 12.69 | 12.69 | 14.93 | 14.34 | 14.34 | 17.71 | 11.12 | 9.38 |
| 752 | 5.16 | 20.50 | 13.13 | 18.00 | 10.00 | 5.44 | 5.00 | 1.13 | 8.63 | 6.38 | — | — | — | — | — | 23.43†† | 13.38 | 11.13 |
| 760 | 6.00 | 23.25 | 14.75 | 20.88 | 11.75 | 6.63 | 5.88 | 1.13 | 9.63 | 7.31 | — | — | — | — | — | 23.43†† | 14.94 | 12.63 |

| Size | N | P | R-NEMA Mounting | | | | Low Speed Shaft | | | | High Base | | Low Base | | Fan Kit No.** | | |
|------|-------|-------|-----------------|-----------|-------------------|---------|-----------------|------|-------|---------|-----------------------|-----|----------------|-----------------------|---------------|-------|-------|
| | | | 42CZ | 56C 140TC | 180TC 210TC 250TC | T Holes | U +.000 -0.001 | V | W-Key | | Approx. Weight (LBS.) | | Base Kit No. † | Approx. Weight (LBS.) | | | |
| | | | | | | | | | Sq. | Length | F | QC | | F | | QC | |
| 713 | 3.69 | 4.00 | — | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 13 | 19 | 56578 | 30 | 35 | 56579 | — |
| 715 | 4.25 | 4.31 | — | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 22 | 27 | 56582 | 39 | 44 | 56583 | — |
| 718 | 4.50 | 4.31 | — | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 24 | 30 | 56582 | 41 | 47 | 56583 | — |
| 721 | 5.09 | 4.69 | — | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 29 | 35 | 56588 | 50 | 52 | 56589 | — |
| 724 | 5.44 | 5.09 | — | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 39 | 44 | 56592 | 63 | 66 | 56593 | — |
| 726 | 6.13 | 5.63 | — | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-15/16 | 59 | 57 | 56596 | 80 | 81 | 56597 | — |
| 730 | 6.75 | 6.75 | — | 3.31 | 4.63 | 17/32 | 1.250 | 3.25 | 1/4 | 2-1/4 | 77 | 79 | 65545 | 98 | 101 | 65546 | — |
| 732 | 7.13 | 7.06 | — | 3.31 | 4.63 | 17/32 | 1.375 | 3.25 | 5/16 | 2-7/16 | 95 | 98 | 56600 | 115 | 119 | 56601 | 51450 |
| 738 | 8.31 | 7.75 | — | 3.31 | 4.63 | 19/32 | 1.625 | 3.50 | 3/8 | 2-1/4 | 153 | 147 | 56604 | 162 | 166 | 56605 | 51451 |
| 752 | 10.56 | 9.06 | — | — | 4.63 | 29/32 | 2.000 | 4.16 | 1/2 | 2-15/16 | — | 267 | 56608 | — | 305†† | 56609 | 51452 |
| 760 | 12.19 | 10.00 | — | — | 4.63 | 29/32 | 2.250 | 4.56 | 1/2 | 3-3/8 | — | 345 | 56611 | — | 375†† | 56612 | 51453 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

** For Fan Kits, see Page 130.

† For Base Kits, see Page 129.

(1) For sizes 724 and larger using HM3 add 25 lbs.

†† 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPE.

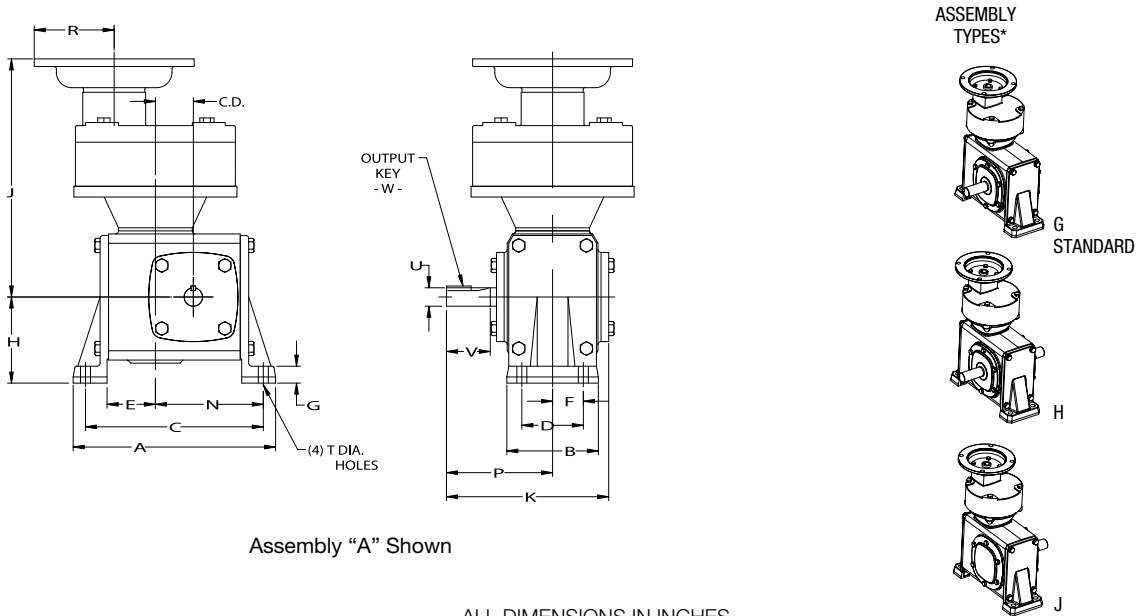
Reference Page 245 for flange details.

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

F700/QC700 Series Flanged Quill/Flanged Coupling Types

X Position Vertical Base; X = Input Vertical Up

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



Assembly "A" Shown

ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA MOUNTING | | | | K | N |
|------|------|-------|------|-------|------|------|------|------|------|-----------------|---------------|----------------|---------------|------|------|
| | | | | | | | | | | F700 | | QC700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210C | | |
| 713 | 1.33 | 7.28 | 2.91 | 6.41 | 2.00 | 1.70 | 1.00 | 0.53 | 2.94 | 9.12 | — | 10.65 | — | 6.03 | 3.92 |
| 715 | 1.54 | 8.25 | 3.72 | 7.25 | 2.50 | 2.00 | 1.25 | 0.69 | 3.50 | 9.68 | — | 11.29 | — | 6.84 | 4.37 |
| 718 | 1.75 | 8.62 | 3.72 | 7.63 | 2.50 | 2.00 | 1.25 | 0.69 | 3.50 | 9.87 | — | 11.47 | — | 6.81 | 4.75 |
| 721 | 2.06 | 9.75 | 3.84 | 8.63 | 2.63 | 2.09 | 1.31 | 0.72 | 3.94 | 10.24 10.69 | — | 11.94 12.39 | — | 7.28 | 5.47 |
| 724 | 2.37 | 10.31 | 4.13 | 9.19 | 2.88 | 2.13 | 1.44 | 0.75 | 4.06 | 10.88 | 11.32 | 12.58 | 13.45 | 7.81 | 6.00 |
| 726 | 2.62 | 11.88 | 4.53 | 10.38 | 3.13 | 2.50 | 1.56 | 0.88 | 4.75 | 11.38 | 11.82 | 13.02 | 13.94 | 8.53 | 6.75 |

| Size | P | R-NEMA Mounting | | T Holes | Low Speed Shaft | | | | Approximate Weight (LBS.) (1) | | Base Kit No. † |
|------|------|-----------------|---------------|---------|---------------------|------|-------|--------|-------------------------------|----|----------------|
| | | 56C 140TC | 180TC 210C | | U +.001 -.000 | V | W-Key | | F | QC | |
| | | | | | | | Sq. | Length | | | |
| 713 | 4.00 | 3.31 | — | 11/32 | .625 | 2.00 | 3/16 | 1 | 31 | 31 | 55196 |
| 715 | 4.31 | 3.31 | — | 13/32 | .750 | 1.78 | 3/16 | 1 | 39 | 42 | 55349 |
| 718 | 4.30 | 3.31 | — | 13/32 | .875 | 1.78 | 3/16 | 1 | 40 | 45 | 55349 |
| 721 | 4.69 | 3.31 | — | 15/32 | 1.000 | 2.09 | 1/4 | 1-1/4 | 50 | 52 | 55644 |
| 724 | 5.09 | 3.31 | 4.63 | 15/32 | 1.125 | 2.38 | 1/4 | 1-1/4 | 59 | 59 | 55678 |
| 726 | 5.63 | 3.31 | 4.63 | 17/32 | 1.125 | 2.63 | 1/4 | 1-1/4 | 76 | 77 | 55769 |

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounted surfaces.

Input may be rotated clockwise or counterclockwise. See Assemblies and Mounting Positions, Pages 107 and 108.

† For Base Kits, see Page 129.

(1) For sizes 724 and larger using HM3 add 25 lbs.
Reference Page 245 for flange details.

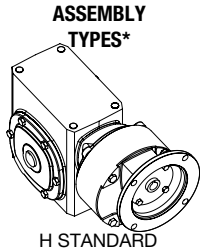


HMF and 700 Series Double Reduction Flanged Reducer Dimensions

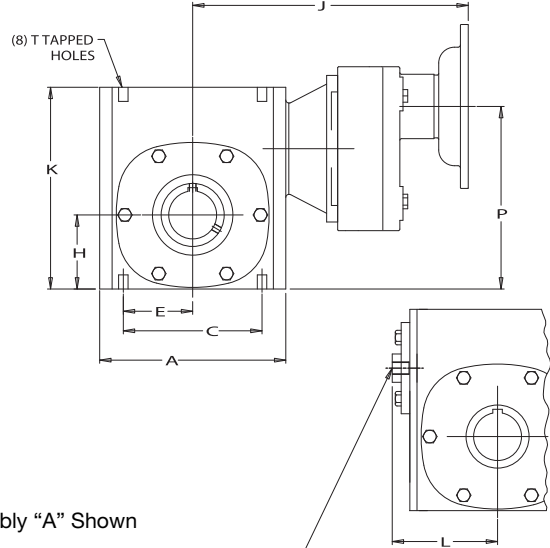
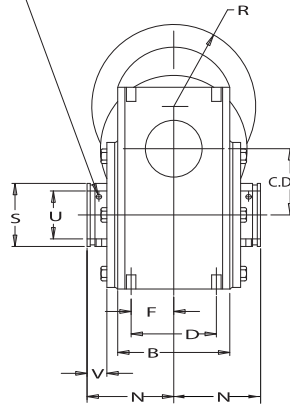
HF700/HQC700 Series Flanged Quill/Flanged Coupling Types

Basic Models (No Base); Bored to Size Hollow Output Shaft

FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.



(2) G SOCKET SETSCREWS
120° APART



Assembly "A" Shown

3/8-24 X 7/8 DEEP
TAPPED HOLE
732 AND 738 SIZES ONLY

ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | | | K | L | N |
|------|------|-------|------|------|------|------|------|---------|------|-----------------|---------------|-------|----------------|---------------|-------|-------|------|------|
| | | | | | | | | | | HF700 | | | HQC700 | | | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 250TC | 56C 140TC | 180TC 210C | 250TC | | | |
| 713 | 1.33 | 4.25 | 2.88 | 3.25 | 2.00 | 1.63 | 1.00 | #10-32 | 1.72 | 9.12 | — | — | 10.65 | — | — | 4.66 | — | 2.50 |
| 715 | 1.54 | 5.13 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 1.91 | 9.68 | — | — | 11.29 | — | — | 5.38 | — | 3.03 |
| 718 | 1.75 | 5.50 | 3.69 | 4.19 | 2.75 | 2.09 | 1.38 | #10-32 | 2.06 | 9.87 | — | — | 11.47 | — | — | 5.75 | — | 3.03 |
| 721 | 2.06 | 6.00 | 3.81 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 2.28 | 10.24 10.69 | — | — | 11.94 12.39 | — | — | 6.38 | — | 3.22 |
| 724 | 2.38 | 6.38 | 4.06 | 5.00 | 2.88 | 2.50 | 1.44 | 1/4-28 | 2.50 | 10.88 | 11.32 | — | 12.58 | 13.45 | — | 6.94 | — | 3.22 |
| 726 | 2.62 | 7.38 | 4.44 | 6.38 | 3.38 | 3.19 | 1.69 | 5/16-24 | 2.94 | 11.38 | 11.82 | — | 13.02 | 13.94 | — | 8.00 | — | 3.44 |
| 730 | 3.00 | 8.12 | 5.25 | 7.00 | 4.00 | 3.50 | 2.00 | 5/16-24 | 3.25 | 11.83 | 14.07 | — | 13.47 | 16.17 | — | 8.88 | — | 4.19 |
| 732 | 3.25 | 9.00 | 5.88 | 7.50 | 4.00 | 3.75 | 2.00 | 5/16-24 | 3.50 | 12.19 | 14.43 | — | 13.83 | 16.57 | — | 9.38 | 4.94 | 4.31 |
| 738 | 3.75 | 10.00 | 6.38 | 8.50 | 4.75 | 4.25 | 2.38 | 3/8-24 | 3.88 | 12.69 | 14.93 | — | 14.34 | 17.71 | — | 10.44 | 5.50 | 4.81 |
| 752 | 5.16 | 13.13 | 7.38 | 11.0 | 5.81 | 5.50 | 2.91 | 3/8-24 | 5.31 | — | 22.44 | 22.44 | — | 22.44 | 22.44 | 13.75 | 7.19 | 6.12 |

| Size | P | R-NEMA Mounting | | | S | T | | Low Speed Shaft | | | | Approx. Weight (LBS.) (1) | | Fan Kit No.** |
|------|-------|-----------------|----------------|-------|------|----------|-------|---------------------------|------|-----------------------|-------|---------------------------|-----|---------------|
| | | 56C 140TC | 180TC 210TC | 250TC | | Tap Size | Depth | Max U +.0015 -.0000 | V | W-Key | | HF | HQC | |
| | | Sq. | Length | | | | | | | | | | | |
| 713 | 4.74 | — | 3.31 | — | .88 | 5/16-18 | .50 | .625 | .68 | 3/16 x 1/8 | 1 | 25 | 27 | — |
| 715 | 5.12 | — | 3.31 | — | 1.38 | 5/16-18 | .50 | 1.000 | .84 | 1/4 x 7/32 | 1-3/8 | 39 | 41 | — |
| 718 | 5.49 | — | 3.31 | — | 1.38 | 5/16-18 | .50 | 1.000 | .74 | 1/4 x 7/32 | 1-3/8 | 41 | 42 | — |
| 721 | 6.02 | 7.22 | 3.31 | — | 2.00 | 3/8-16 | .56 | 1.4375 | .87 | 3/8 x 5/16 | 1-3/4 | 46 | 47 | — |
| 724 | 7.76 | — | 3.31 | 4.63 | 2.00 | 3/8-16 | .56 | 1.4375 | .75 | 3/8 x 5/16 | 1-3/4 | 61 | 65 | — |
| 726 | 8.44 | — | 3.31 | 4.63 | 2.50 | 3/8-16 | .56 | 1.9375 | .78 | 1/2 x 3/8 | 2 | 74 | 75 | — |
| 730 | 9.11 | — | 3.31 | 4.63 | 2.88 | 7/16-14 | .88 | 2.1875 | 1.10 | 1/2 x 3/8 | 2 | 95 | 99 | — |
| 732 | 9.63 | — | 3.31 | 4.63 | 2.88 | 7/16-14 | .66 | 2.1875 | .93 | 1/2 x 3/8 | 2 | 115 | 127 | 51450 |
| 738 | 10.51 | — | 3.31 | 4.63 | 3.25 | 1/2-13 | .75 | 2.4375 | 1.11 | 5/8 x 3/8 | 2-1/2 | 155 | 166 | 51451 |
| 752 | 13.38 | — | — | 4.63 | 4.25 | 5/8-11 | 1.00 | 3.4375 | 1.37 | See Chart on page 128 | 221 | — | — | 51457 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

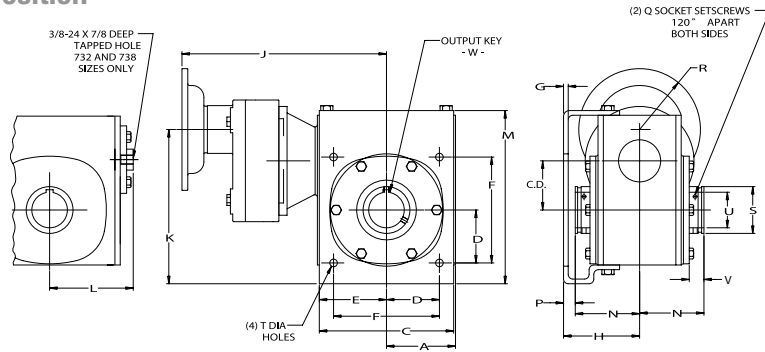
** For Fan Kits, see Page 130.

(1) For sizes 724 and larger using HM3 add 25 lbs.
Input may be rotated clockwise or counterclockwise.
See Page 128 for available bore sizes.
Reference Page 245 for flange details.

HMF and 700 Series Double Reduction Flanged Reducer Dimensions

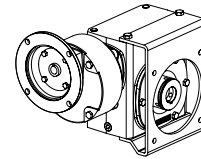
HF700/HQC700 Series Flanged Quill/Flanged Coupling Types R/L Position Mounting Bracket; Bored to Size Hollow Output Shaft

R Position

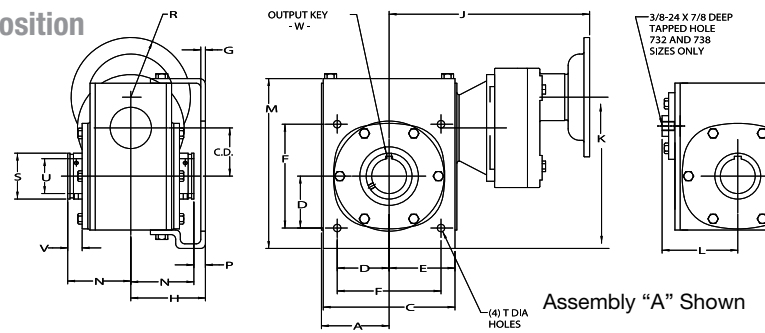


FOR ORDERING INFORMATION, see Page 106.
FOR RATING INFORMATION, See Pages 109-118.

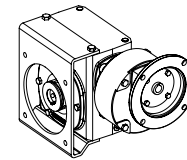
ASSEMBLY TYPES*



L Position



ALL DIMENSIONS IN INCHES



| Size | C.D. | A | B | C | D | E | F | G | H | J-NEMA Mounting | | | | K | L |
|------|------|------|------|------|------|------|------|-----|------|-----------------|---------------|----------------|---------------|--------------|------|
| | | | | | | | | | | HF700 | | HQC700 | | | |
| | | | | | | | | | | 56C 140TC | 180TC 210C | 56C 140TC | 180TC 210C | | |
| 713 | 1.33 | 2.12 | 3.62 | 4.25 | 1.77 | 2.12 | 3.54 | .19 | 3.00 | 9.12 | — | 10.65 | — | 5.34 | — |
| 715 | 1.54 | 2.56 | 3.62 | 4.75 | 1.77 | 2.38 | 3.54 | .19 | 3.56 | 9.68 | — | 11.29 | — | 5.75 | — |
| 718 | 1.75 | 2.75 | 4.06 | 4.81 | 2.08 | 2.41 | 4.16 | .19 | 3.50 | 9.87 | — | 11.47 | — | 6.25 | — |
| 721 | 2.06 | 3.00 | 4.50 | 5.75 | 2.30 | 2.88 | 4.60 | .19 | 3.75 | 10.24 10.69 | — | 11.94 12.39 | — | 6.86 8.06 | — |
| 724 | 2.38 | 3.19 | 5.00 | 5.75 | 2.65 | 2.88 | 5.30 | .25 | 3.72 | 10.88 | 11.32 | 12.58 | 13.45 | 8.86 | — |
| 726 | 2.62 | 3.69 | 6.00 | 7.18 | 2.83 | 3.59 | 5.66 | .25 | 4.06 | 11.38 | 11.82 | 13.02 | 13.94 | 9.44 | — |
| 730 | 3.00 | 4.06 | 7.00 | 8.00 | 3.18 | 4.00 | 6.36 | .25 | 4.50 | 11.83 | 14.07 | 13.47 | 16.17 | 10.39 | — |
| 732 | 3.25 | 4.50 | 7.00 | 8.50 | 3.54 | 4.25 | 7.08 | .25 | 5.25 | 12.19 | 14.43 | 13.83 | 16.57 | 10.88 | 4.94 |
| 738 | 3.75 | 5.00 | 8.00 | 9.50 | 4.06 | 4.75 | 8.12 | .25 | 5.47 | 12.69 | 14.93 | 14.34 | 17.71 | 33.78 | 5.50 |

| Size | M | N | P | Q | R-NEMA Mounting | | S | T Holes | Low Speed Shaft | | | Approx. Weight (LBS.) (1) | | Fan Kit No.** | |
|------|-------|------|-----|---------|-----------------|----------------|------|---------|---------------------------|------|----------|---------------------------|-----|---------------|-------|
| | | | | | 56C 140TC | 180TC 210TC | | | Max U +.0015 -.0000 | V | W-Key | | HF | | HQC |
| | | | | | Size. | Length | | | | | | | | | |
| 713 | 5.55 | 2.50 | .50 | #10-32 | 3.31 | — | .88 | 11/32 | .625 | .68 | 3/16x1/8 | 1 | 34 | 39 | — |
| 715 | 6.16 | 3.03 | .44 | #10-32 | 3.31 | — | 1.38 | 11/32 | 1.000 | .84 | 1/4x7/32 | 1-3/8 | 40 | 46 | — |
| 718 | 6.66 | 3.03 | .47 | #10-32 | 3.31 | — | 1.38 | 11/32 | 1.000 | .74 | 1/4x7/32 | 1-3/8 | 47 | 49 | — |
| 721 | 7.47 | 3.22 | .53 | 1/4-28 | 3.31 | — | 1.94 | 13/32 | 1.4375 | .87 | 3/8x5/16 | 1-3/4 | 58 | 59 | — |
| 724 | 8.30 | 3.22 | .50 | 1/4-28 | 3.31 | 4.63 | 1.94 | 13/32 | 1.4375 | .75 | 3/8x5/16 | 1-3/4 | 66 | 72 | — |
| 726 | 9.25 | 3.44 | .62 | 5/16-24 | 3.31 | 4.63 | 2.50 | 13/32 | 1.9375 | .78 | 1/2x3/8 | 2 | 77 | 78 | — |
| 730 | 10.38 | 4.19 | .31 | 5/16-24 | 3.31 | 4.63 | 2.88 | 13/32 | 2.1875 | 1.12 | 1/2x3/8 | 2 | 101 | 105 | — |
| 732 | 10.91 | 4.31 | .94 | 5/16-24 | 3.31 | 4.63 | 2.88 | 9/16 | 2.1875 | .93 | 1/2x3/8 | 2 | 120 | 132 | 51450 |
| 738 | 11.84 | 4.81 | .66 | 3/8-24 | 3.31 | 4.63 | 3.25 | 9/16 | 2.4375 | 1.11 | 5/8x3/8 | 2-1/2 | 172 | 175 | 51451 |

* See Assemblies and Mounting Positions, Pages 107 and 108.

** For Fan Kits, see Page 130.

(1) For sizes 724 and larger using HM3 add 25 lbs.

Input may be rotated clockwise or counterclockwise.

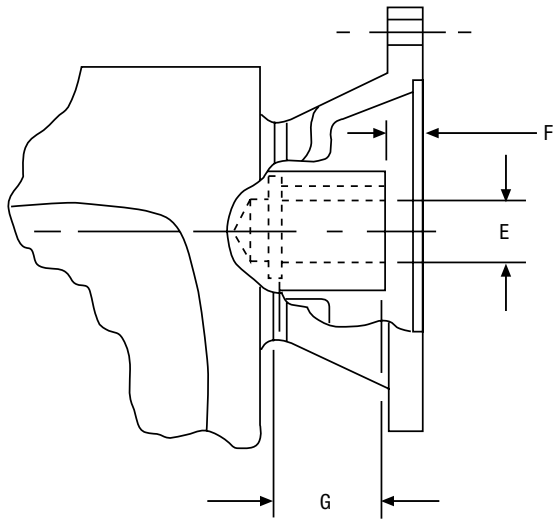
See Page 128 for available bore sizes.

Reference Page 245 for flange details.

700 Series Miscellaneous Component Data

F700 NEMA C Quill Type Motor Flange Data

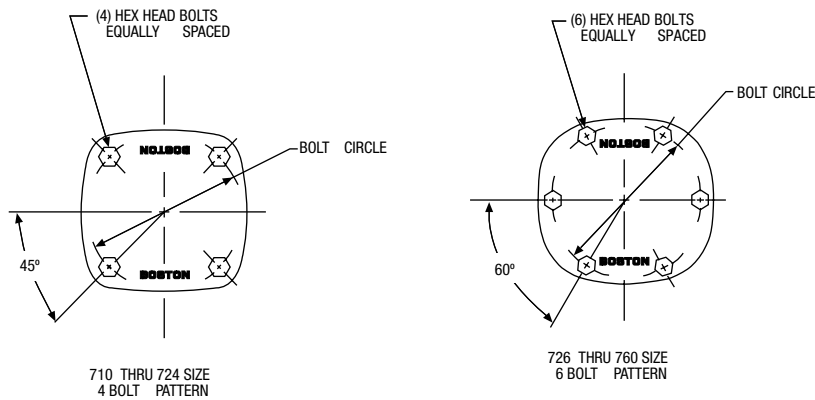
ALL DIMENSIONS IN INCHES



| SIZE | BORE CODE | E | F | G |
|------|-----------|-------|-------|---------|
| 710 | B4 | 1/2 | 3/8 | 1-3/32 |
| | B5 | 5/8 | 9/32 | 1-5/16 |
| 713 | B5 | 5/8 | 23/32 | 1-5/16 |
| 715 | B5 | 5/8 | 21/32 | 1-5/8 |
| | B7 | 7/8 | 7/16 | 1-3/4 |
| 718 | B5 | 5/8 | 21/32 | 1-5/8 |
| | B7 | 7/8 | 17/32 | 1-3/4 |
| 721 | B5 | 5/8 | 5/8 | 1-5/8 |
| | B7 | 7/8 | 13/16 | 1-3/4 |
| 724 | B5 | 5/8 | 11/16 | 1-5/8 |
| | B7 | 7/8 | 11/16 | 1-3/4 |
| | B9 | 1-1/8 | 7/16 | 2-7/16 |
| 726 | B5 | 5/8 | 5/8 | 1-5/8 |
| | B7 | 7/8 | 21/32 | 1-3/4 |
| | B9 | 1-1/8 | 5/8 | 2-3/8 |
| 730 | B5 | 5/8 | 5/8 | 1-11/32 |
| | B7 | 7/8 | 5/8 | 1-11/32 |
| | B9 | 1-1/8 | 11/16 | 2-11/16 |
| 732 | B5 | 5/8 | 23/32 | 1-5/8 |
| | B7 | 7/8 | 23/32 | 1-3/4 |
| | B9 | 1-1/8 | 29/32 | 2-3/8 |
| 738 | B7 | 7/8 | 19/32 | 1-3/4 |
| | B9 | 1-1/8 | 5/16 | 2-1/8 |
| | B11 | 1-3/8 | 3/4 | 2-7/8 |

Cast Iron Output Bearing Carrier Data

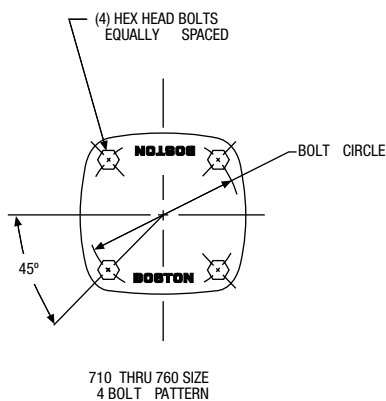
ALL DIMENSIONS IN INCHES



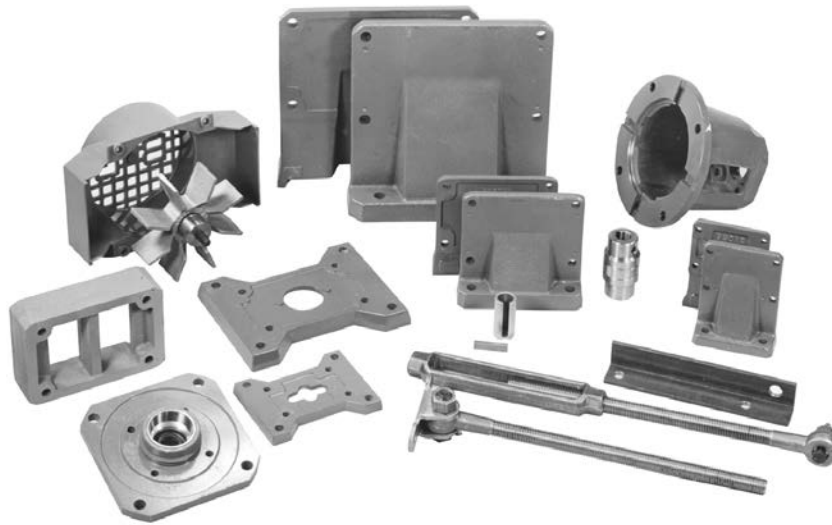
| SIZE | BOLT | | |
|------|-------------|---------|--------|
| | CIRCLE DIA. | SIZE | LENGTH |
| 710 | 2-3/8 | 10-32 | 1/2 |
| 713 | 3 | 1/4-20 | 5/8 |
| 715 | 3-5/8 | 5/16-18 | 3/4 |
| 718 | 4 | 5/16-18 | 3/4 |
| 721 | 4-3/8 | 5/16-18 | 3/4 |
| 724 | 4-15/16 | 5/16-18 | 3/4 |
| 726 | 5-3/8 | 5/16-18 | 3/4 |
| 730 | 6 | 5/16-18 | 3/4 |
| 732 | 6-9/16 | 5/16-18 | 3/4 |
| 738 | 7-5/8 | 3/8-16 | 7/8 |
| 752 | 10-3/8 | 7/16-14 | 1-1/4 |
| 760 | 12-1/16 | 1/2-13 | 1-1/4 |

Input Bearing Retainer Data

ALL DIMENSIONS IN INCHES



| SIZE | BOLT | | |
|------|-------------|---------|--------|
| | CIRCLE DIA. | SIZE | LENGTH |
| 710 | 1-5/8 | 10-32 | 1/2 |
| 713 | 2 | 1/4-20 | 5/8 |
| 715 | 2-5/8 | 5/16-18 | 3/4 |
| 718 | 2-5/8 | 5/16-18 | 3/4 |
| 721 | 3 | 5/16-18 | 3/4 |
| 724 | 3 | 5/16-18 | 3/4 |
| 726 | 3-7/16 | 5/16-18 | 3/4 |
| 730 | 3-7/16 | 5/16-18 | 3/4 |
| 732 | 3-7/16 | 5/16-18 | 3/4 |
| 738 | 3-7/16 | 5/16-18 | 3/4 |
| 752 | 4-3/8 | 7/16-14 | 1-1/4 |
| 760 | 4-3/8 | 7/16-14 | 1-1/4 |



Section Contents

| | |
|---|------------|
| Output Bracket | 128 |
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| Bases | 129 |
| Posivent[®] | 129 |
| Fan Kits | 130 |
| Riser Block Kit | 130 |
| Bushing | 130 |
| CFA Hardware Kit | 130 |
| RF C-Face Flange Kit | 131 |
| Bost-Kleen & Washdown Duty | 132 |

D

700 Series Accessories

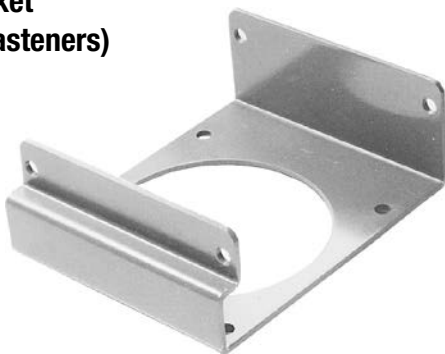
| H Series Hollow Output Bore Sizes | | | | | | | | | | | | | | |
|-----------------------------------|------------------|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|---------------------|
| Unit Size | | | | | | | | | | | | | | |
| Fraction Size | Output Bore Code | 713 | SS713 | 715 | 718 | 721 | 724 | 726 | 730 | 732 | 738 | 752 | Decimal Size* | Key Size† |
| 5/8 | P10 | • | • | | | | | | | | | | .6250 | 3/16 x 1/8 x 1" |
| 3/4 | P12 | | • | • | • | • | • | | | | | | .7500 | 3/16 x 5/32 x 1" |
| 7/8 | P14 | | • | • | • | • | • | | | | | | .8750 | 3/16 x 5/32 x 1" |
| 15/16 | P15 | | • | • | • | • | • | • | | | | | .9375 | 1/4 x 7/32 x 1-3/8" |
| 1 | P16 | | • | • | • | • | • | • | | | | | 1.0000 | 1/4 x 7/32 x 1-3/8" |
| 1 1/16 | P17 | | | | | • | • | • | | | | | 1.0625 | 1/4 x 7/32 x 1-3/8" |
| 1 1/8 | P18 | | | | | • | • | • | | | | | 1.1250 | 1/4 x 7/32 x 1-3/8" |
| 1 3/16 | P19 | | | | | • | • | • | • | • | | | 1.1875 | 1/4 x 7/32 x 1-3/8" |
| 1 1/4 | P20 | | | | | • | • | • | • | • | | | 1.2500 | 1/4 x 7/32 x 1-3/8" |
| 1 5/16 | P21 | | | | | • | • | • | • | • | | | 1.3125 | 5/16 x 1/4 x 1-5/8" |
| 1 3/8 | P22 | | | | | | | • | • | • | • | | 1.3750 | 5/16 x 1/4 x 1-5/8" |
| 1 7/16 | P23 | | | | | • | • | • | • | • | • | | 1.4375 | 3/8 x 5/16 x 1-3/4" |
| 1 1/2 | P24 | | | | | | | • | • | • | • | | 1.5000 | 3/8 x 5/16 x 1-3/4" |
| 1 5/8 | P26 | | | | | | | • | • | • | • | | 1.6250 | 3/8 x 5/16 x 1-3/4" |
| 1 11/16 | P27 | | | | | | | • | • | • | • | | 1.6875 | 3/8 x 5/16 x 1-3/4" |
| 1 3/4 | P28 | | | | | | | • | • | • | • | | 1.7500 | 3/8 x 5/16 x 1-3/4" |
| 1 7/8 | P30 | | | | | | | • | • | • | • | | 1.8750 | 1/2 x 3/8 x 2" |
| 1 15/16 | P31 | | | | | | | • | • | • | • | | 1.9375 | 1/2 x 3/8 x 2" |
| 2 | P32 | | | | | | | | • | • | • | | 2.0000 | 1/2 x 3/8 x 2" |
| 2 1/8 | P34 | | | | | | | | | • | • | | 2.1250 | 1/2 x 3/8 x 2" |
| 2 3/16 | P35 | | | | | | | | • | • | • | | 2.1875 | 1/2 x 3/8 x 2" |
| 2 1/4 | P36 | | | | | | | | | | • | | 2.2500 | 1/2 x 3/8 x 2" |
| 2 7/16 | P39 | | | | | | | | | | • | | 2.4375 | 5/8 x 1/2 x 2-1/2" |
| 3 7/16 | P55 | | | | | | | | | | | • | 3.4375 | 7/8 x 5/8 x 3" |

* Bore Tolerance +.0015 - .0000

• Available bore sizes

† Key is provided with reducer to fit hollow shaft. Driven shaft requires standard width and depth keyway.
Also available in stainless steel.

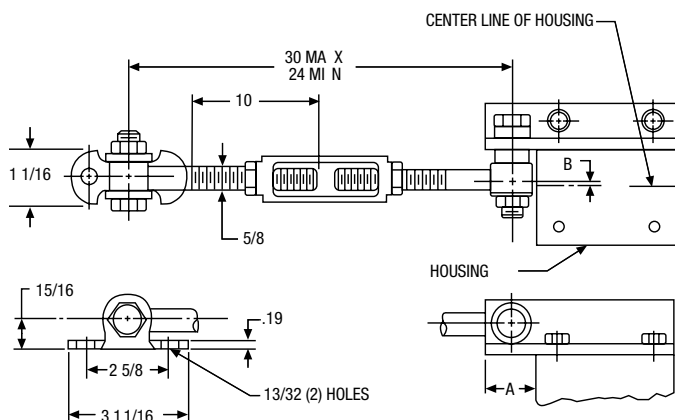
Output Bracket (Including Fasteners)



ORDER BY CATALOG OR KIT NUMBER

| Size | Catalog Number | Kit Number |
|------|----------------|------------|
| 713 | XH713-11RLK | 13977 |
| 715 | XH715-11RLK | 13978 |
| 718 | XH718-11RLK | 13979 |
| 721 | XH721-11RLK | 13980 |
| 724 | XH724-11RLK | 13981 |
| 726 | XH726-11RLK | 13982 |
| 730 | XH730-11RLK | 65547 |
| 732 | XH732-11RLK | 13983 |
| 738 | XH738-11RLK | 13984 |

Reaction Rod Kits



Accessory kits are shipped separately, unless otherwise specified.
ORDER BY CATALOG OR KIT NUMBER

| Size | Dimensions | | Catalog Number | Kit Number |
|------|------------|-----|----------------|------------|
| | A | B | | |
| 713 | 1.31 | .26 | XH713-76K | 13973 |
| 715 | 1.18 | .12 | XH715-76K | 13974 |
| 718 | 1.09 | .09 | X718-76K | 69692 |
| 721 | 1.25 | .03 | X721-76K | 69693 |
| 724 | 1.00 | .03 | X721-76K | 69693 |
| 726 | 1.25 | .22 | X726-76K | 69694 |
| 730 | 2.10 | .52 | X732-76K | 69695 |
| 732 | 1.50 | .53 | X732-76K | 69695 |
| 738 | 1.41 | .91 | XH738-76K | 13976 |

Complete kit includes all hardware shown, angle bracket and cap screws.

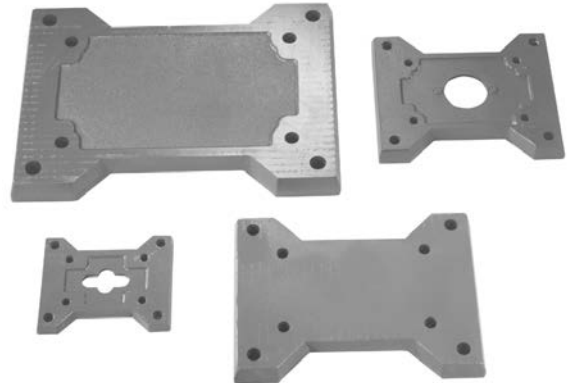
700 Series Accessories

Dimensions of bases assembled on units are shown on applicable reducer dimension pages.
Accessory kits are shipped separately, unless otherwise specified.

ORDER BY KIT NUMBER

| Size | Cast Iron Kit Number |
|--------|----------------------|
| 710A,B | 87874 |
| 713A,B | 56437 |
| 715A,B | 56438 |
| 718A,B | 56439 |
| 721A,B | 56440 |
| 724A,B | 56441 |
| 726A,B | 56442 |
| 730A,B | 65544 |
| 732A,B | 56599 |
| 738A,B | 56603 |
| 752A,B | 56607 |
| 760A,B | 56610 |

Cast Iron Base Kits (Including Fasteners) For Horizontal Positions A & B



ORDER BY KIT NUMBER

| SIZE | KIT NUMBER | SIZE | KIT NUMBER |
|--------|------------|--------|------------|
| 710C | 56576 | 724X/Y | 55678 |
| 713D | 56579 | 726D | 56597 |
| 713C | 56578 | 726C | 56596 |
| 713X/Y | 55196 | 726X/Y | 55769 |
| 715D | 56583 | 730D | 65546 |
| 715C | 56582 | 730C | 65545 |
| 715X/Y | 55349 | 732D | 56601 |
| 718D | 56583 | 732C | 56600 |
| 718C | 56582 | 738D | 56605 |
| 718X/Y | 55349 | 738C | 56604 |
| 721D | 56589 | 752D | 56609 |
| 721C | 56588 | 752C | 56608 |
| 721X/Y | 55644 | 760D | 56612 |
| 724D | 56593 | 760C | 56611 |
| 724C | 56592 | | |

Cast Iron Base Kits (Including Fasteners) For Vertical Positions C, D, E & F



Type "C" and "E" are High Base.
Type "D" and "F" are Low Base.
Type "X" and "Y" are Input Vertical.

For E Base order C Base.
For F Base order D Base.

710 available High Base only.

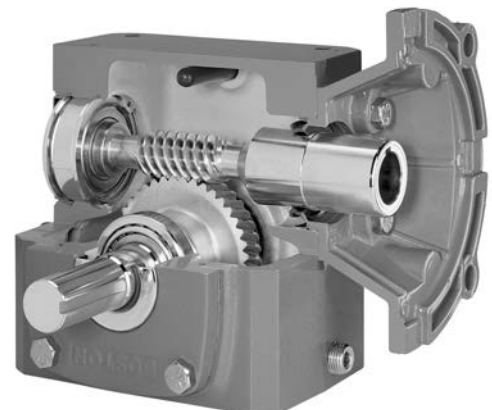
The Boston Gear PosiVent option is available in all current 700 series styles and configurations. This specially-designed internal pressure equalization system allows the gearbox to operate in all environments without the use of conventional pressure vents. Unlike competitive versions, our unique single seam design allows for easy installation and extended life. This means longer trouble-free operation with virtually no maintenance.

USDA approved washdown finishes available in Bost-Kleen™ and Stainless Bost-Kleen™

The PosiVent option is ideal for material handling, food processing, medical and pharmaceutical applications.

To order specify the letter "Z" for the vent option, in the 700 series catalog number.

Speed Reducers With PosiVent® Option

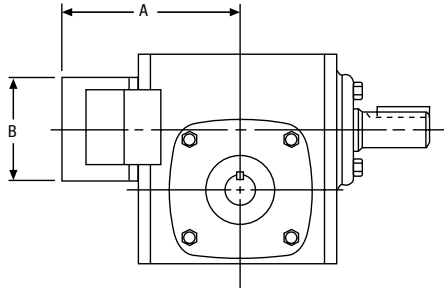
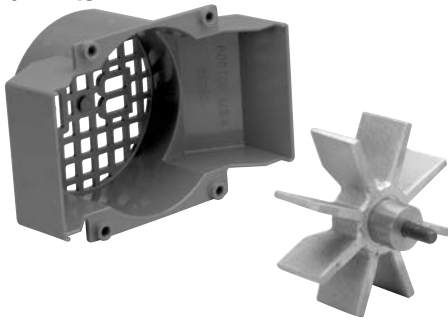


D

700 Series Accessories

Accessory kits are shipped separately, unless otherwise specified.

Fan Kits



ALL DIMENSIONS IN INCHES
ORDER BY KIT NUMBER

| Size | Kit Number | A | B |
|------|------------|-------|------|
| 732 | 51450 | 7.60 | 4.87 |
| 738 | 51451 | 8.09 | 5.19 |
| 752 | 51452 | 10.87 | 6.25 |
| 760 | 51453 | 11.56 | 7.50 |

Riser Block Kit

Riser blocks permit the speed reducer to be mounted in the most desirable position, i.e. high speed input shaft above the oil level. The riser blocks allow clearance over the motor without inverting the speed reducer. They are ideal for mounting on inclined conveyors for frame clearance. The kit includes Riser Block and attachment bolts. Horizontal Base must be ordered separately.

Dimensions of kits assembled on units are shown on Page 37.



ORDER BY KIT NUMBER

| Size | C.D. | Kit Number | Motor Frame |
|------|------|------------|-------------|
| 710 | 1.00 | 51434 | 42CZ |
| | | 51513 | 56C |
| 713 | 1.33 | 51435 | 56C |
| 715 | 1.54 | 51436 | 56C |
| | | | 140TC |
| 718 | 1.75 | 51437 | 56C |
| | | | 140TC |
| 721 | 2.06 | 51438 | 56C |
| | | | 140TC |
| 724 | 2.38 | 51439 | 56C |
| | | | 140TC |
| | | | 180TC |
| 726 | 2.62 | 51440 | 56C |
| | | | 140TC |
| 730 | 3.00 | 65542 | 56C/140TC |
| | | 65548 | 180TC |
| 732 | 3.25 | 51441 | 56C |
| | | | 140TC |
| | | 51516 | 180TC |

D

7/8 x 5/8 Input Bushing & Key Kit

Convenient for reducing input quill of a flanged reducer from 7/8" bore to 5/8" bore.



ORDER BY KIT NUMBER

| DESCRIPTION | KIT NUMBER |
|-------------------------|------------|
| 7/8 X 5/8 Bushing & Key | 18958 |

CFA Hardware Kits

These end caps are ideally suited to cover the non-working shaft end of the Boston hollow shaft worm gear speed reducers. (And in particular, the HF700 M/N CFA models.)

ORDER BY KIT NUMBER

| DESCRIPTION | KIT NUMBER | CATALOG NUMBER |
|----------------------|------------|----------------|
| 718 CFA Hardware Kit | 87406 | XH718-CFA-Kit |
| 721 CFA Hardware Kit | 87408 | XH721-CFA-Kit |
| 724 CFA Hardware Kit | 87415 | XH724-CFA-Kit |
| 726 CFA Hardware Kit | 87422 | XH726-CFA-Kit |



Not Recommended for Shock Loads or Reversing Applications

700 Series Accessories

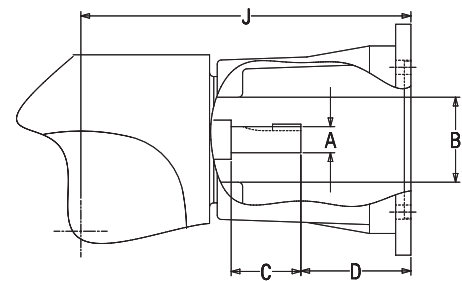
Accessory kits are shipped separately, unless otherwise specified.

ORDER BY KIT NUMBER

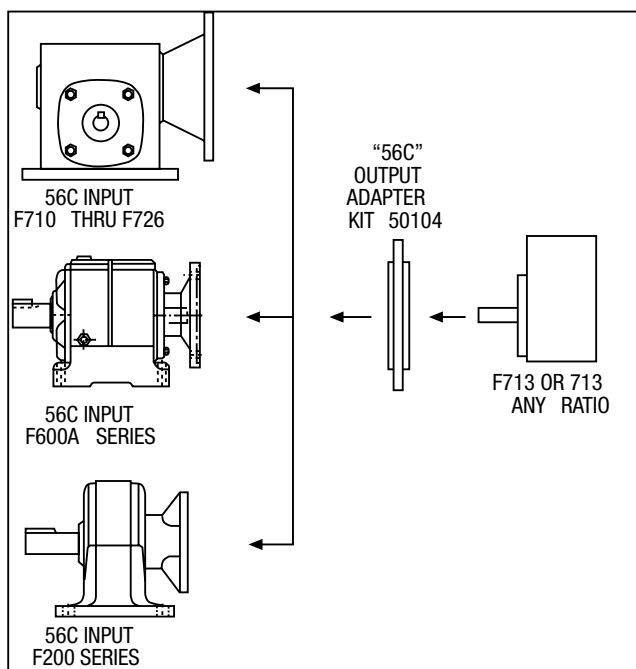
| Reduction | | NEMA Frame | Flange Kit No.* | A | B | C | D | J |
|-----------|--------|------------|-----------------|-------|---------|---------|---------|-------|
| Single | Double | | | | | | | |
| 710 | W713 | 42CZ | 52966 | 3/8 | 1-3/16 | 13/16 | 1-7/8 | 4.76 |
| | W718 | 56C | 52967 | | 1-1/8 | | 2-27/32 | 5.72 |
| 713 | W721 | 56C | 52968 | 1/2 | 1-7/8 | 1-5/16 | 2-11/16 | 6.59 |
| | W726 | 140TC | 52970 | | | | | |
| 715 | | 56C | 52969 | 5/8 | 1-7/8 | 1-9/16 | 2-21/32 | 7.34 |
| | | 140TC | 52970 | | | | 7.34 | |
| 718 | W730 | 56C | 52969 | 5/8 | 1-7/8 | 1-9/16 | 2-21/32 | 7.53 |
| | W732 | 140TC | 52970 | | | | 7.53 | |
| 721 | W738 | 56C | 52971 | 5/8 | 2 | 1-9/16 | 3-3/16 | 8.31 |
| | | 140TC | 52972 | | | | 8.31 | |
| 724 | | 56C | 52973 | 3/4 | 2 | 2 | 2-3/4 | 8.50 |
| | | 140TC | 52974 | | | | 2-3/4 | 8.50 |
| | | 180TC | 52964 | | | | 4-3/16 | 9.94 |
| 726 | W752 | 56C | 52976 | 3/4 | 2-7/16 | 2 | 3-5/32 | 9.47 |
| | | 140TC | 52977 | | 2-7/16 | | 3-5/32 | 9.47 |
| | | 180TC | 52975 | | 3-3/8 | | 4-1/8 | 10.44 |
| 730 | | 56C | 52976 | 3/4 | 2-7/16 | 2 | 3-5/32 | 9.92 |
| | | 140TC | 52977 | | 2-7/16 | | 3-5/32 | 9.92 |
| | | 180TC | 52975 | | 3-3/8 | | 4-1/8 | 10.88 |
| 732 | W760 | 56C | 52978 | 7/8 | 2-7/16 | 2-11/32 | 2-27/32 | 10.28 |
| | | 140TC | 52979 | | 2-7/16 | | 2-27/32 | 10.28 |
| | | 180TC | 52980 | | 3-3/8 | | 3-13/16 | 11.25 |
| 738 | | 140TC | 52981 | 1 | 2-11/16 | 2-3/4 | 2-15/16 | 11.81 |
| | | 180TC | 52982 | | 2-7/16 | | 4-1/2 | 11.81 |
| | | 210TC | 52983 | | 2-7/16 | | 4-1/2 | 12.88 |
| 752 | | 180TC | 52984 | 1-1/4 | 3-3/8 | 3-1/4 | 5-5/16 | 16.00 |
| | | 210TC | 52985 | | | | 16.00 | |
| | | 250TC | 52986 | | | | 16.00 | |
| 760 | | 210TC | 52987 | 1-1/2 | 3-3/8 | 3-7/8 | 4-15/16 | 16.69 |
| | | 250TC | 52988 | | | | 16.69 | |

RF700 NEMA C-Face Flange Kits

Flange is designed specifically to adapt Boston 700 Series speed reducers to a standard NEMA C-Face mounted motor. Flanges are offered in kit form and should be ordered in addition to the worm gear speed reducer size and specific ratio. Refer to pages 16-33 for ordering and rating information. The kit includes flange, Boston FC type three jaw coupling, polyurethane insert and all mounting hardware. See RF models for dimensions.



* Includes FC coupling kit.



713 "56C" Face Output Adapter kit

Capable of adapting any F713 or 713 Speed Reducer to a suitable size Worm, Helical or Planetary Drive to obtain a Multiple Reduction Gear Drive.

Ideally suited to make Multi-reduction gear reducers from stock 56C input flanged reducers.

Simply order Kit No. 50104. The kit contains all appropriate hardware and instructions for easy use.

- Overall Output Ratings Should Not Exceed Gear Capacity for Required Output RPM.
- Refer To Rating Tables And Interpolate As Required To Obtain Appropriate H.P. And Torque.

700 Series Worm Gear Bost-Kleen Speed Reducers Washdown Duty



Boston Gear's Bost-Kleen and Stainless Bost-Kleen reducers assure contamination-safe operation in the most stringent environmental conditions.

White Bost-Kleen™

- Washable and Scrubbable
- Corrosion Resistant
- Durable White Epoxy Finish
- Boston Gear's Proven 700 Series Quality
- Limited Lifetime Warranty
- Cast Iron Housing
- Plated Pressure Relief Valves Standard
- Double Lipped Oil Seals
- Available from Stock up to 25 HP in 1" to 6" Center Distances

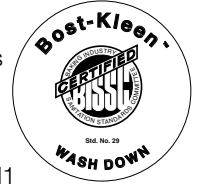


Available options on BK and SBK

- Stainless Steel Output Shafts
- Premounted Stainless Washdown Motors
- Prelubrication from the factory see page 16 for a complete list of lubrication options
- Exposed hardware made of stainless steel.

BISSC Certified Units

- Includes all the standard Bost-Kleen features
- Single reduction quill style units
- Available in BK or SBK
- Pre-lubricated standard with Klubersynth UH1 6-460 synthetic oil when ordered with "K" in the catalog description
- Durable, non-absorbent, non-toxic white epoxy finish
- Smooth flat machined surfaces to resist dirt build-up. Bolt heads and nuts are exposed so contaminants can easily be removed to simplify washdown.
- Solid projecting output shafts
(BISSC—The Baking Industry Sanitation Standards Committee)



Stainless Bost-Kleen™

- Includes all the features of the standard white Bost-Kleen reducers
- U.S.D.A. approved for use in food processing and handling industry where incidental food contact may occur
- Excluder seal on solid output shaft units
- Durable stainless steel epoxy coating system utilizes a unique #316L stainless steel leafing pigment. This catalyzed system creates a hard, non-toxic metallic finish



BISSC CERTIFIED Basic Model Numbers, Dimensions and Available Ratios

| WHITE BOST-KLEEN | | STAINLESS BOST-KLEEN | | Center Distance | NEMA Mounting* | Input Shaft Dia.** +.000 -.001 | Output Shaft Dia. +.000 -.001 | Available Ratios |
|------------------|------------|----------------------|-------------|-----------------|---------------------|--------------------------------------|-------------------------------------|-----------------------------------|
| Non-Flanged Type | Quill Type | Non-Flanged Type | Quill Typed | | | | | |
| BK710† | BKF710† | SBK710† | SBKF710† | 1.00 | 56C | .3745 | .500 | 5, 10, 15, 20, 30, 40, 50, 60 |
| BK713 | BKF713 | SBK713 | SBKF713 | 1.33 | 56C | .4995 | .625 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK715 | BKF715 | SBK715 | SBKF715 | 1.54 | 56C, 140TC | .6245 | .750 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK718 | BKF718 | SBK718 | SBKF718 | 1.75 | 56C, 140TC | .6245 | .875 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK721 | BKF721 | SBK721 | SBKF721 | 2.06 | 56C, 140TC | .6245 | 1.000 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK724 | BKF724 | SBK724 | SBKF724 | 2.38 | 56C, 140TC, 180TC | .7495 | 1.125 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK726 | BKF726 | SBK726 | SBKF726 | 2.62 | 56C, 140TC, 180TC | .7495 | 1.125 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK730 | BKF730 | SBK730 | SBKF730 | 3.00 | 56C, 140TC, 180TC | .8745 | 1.250 | 5, 10, 15, 20, 25, 30, 40, 50, 60 |
| BK732 | BKF732 | SBK732 | SBKF732 | 3.25 | 56C, 140TC | .8745 | 1.375 | 10, 15, 20, 25, 30, 40, 50, 60 |
| BK738 | BKF738 | SBK738 | SBKF738 | 3.75 | 140TC, 180TC, 210TC | .9995 | 1.625 | 10, 15, 20, 30, 40, 50, 60 |
| BK752 | — | SBK752 | — | 5.16 | — | 1.2495 | 2.000 | 10, 15, 20, 30, 40, 50, 60 |
| BK760 | — | SBK760 | — | 6.00 | — | 1.4995 | 2.250 | 10, 15, 20, 30, 40, 50, 60 |

* For BKF700 and SBKF700 Series Quill Type.

** For BK700 and SBK700 Series Reductor Type.

† Cast Iron Base Not Available.

See Pages 16 (Single reduction) and 56 (double reduction), add prefix "BK" (Bost-Kleen) or SBK (Stainless Bost-Kleen) to style type. All other ordering information remains the same.

700 Series Worm Gear Speed Reducers

Installation, Lubrication, Operation Instructions and Parts



Section Contents

| | |
|--|----------------|
| General Instructions | 133 |
| Lubrication Instructions | 135 |
| Oil Capacities | 135 |
| Recommended Lubricants | 135 |
| Lubricant interchange | 135 |
| Single Reduction Parts List | 136-137 |
| Double Reduction Parts List | 138-139 |
| Lifetime Warranty | 140 |

⚠ California Proposition 65 Warning: The Bronze gear and wear debris found inside any worm gearbox contains lead, a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

General Instructions

1. Align all shafts accurately. Improper alignment can result in failure. Use of flexible couplings is recommended to compensate for slight misalignment.
2. When mounting, use maximum possible bolt size and secure reducer to a rigid foundation. Periodic inspection of all bolts is recommended.
3. Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.
4. For hollow-shaft speed reducers, place speed reducer as close as possible to supporting bearing on drive shaft. Spot-drill driven shaft for setscrews in severe applications. See kit instructions for reaction rod assembly.
5. Check and record gear backlash at installation and again at regular intervals. This should be done by measuring the rotary movement of the output shaft (rotating alternately clockwise and counterclockwise) at a suitable radius while holding the input shaft stationary. Gears should be replaced when the backlash exceeds four times the measurement taken at installation.
6. Gear drives are rated for 1750 input RPM and Class Service (Service Factor 1.0), using Klübersynth UH1 6-460 synthetic lubricant. For lower input speeds or for different service classes or lubricants, see catalog selection pages for rating information.
7. Initial operating temperatures may be higher than normal during the break-in period of the gear set. FOR MAXIMUM LIFE, DO NOT ALLOW THE SPEED REDUCER TO OPERATE CONTINUOUSLY ABOVE 225°F AT THE GEAR CASE. In the event of overheating, check for overloads or high ambient temperatures. Keep shafts and vent plugs clean to prevent foreign particles from entering seals or gear housing.
8. All reducers should be checked to see if they have been lubricated. Prelubed 700 Series reducers will have a solid plug in the vent hole which must be replaced by the vent plug at time of installation.

E

700 Series Worm Gear Speed Reducers

NOTE

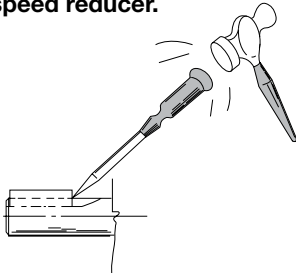
- Vented oil filler plug must be located in the uppermost position.
- For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.
- For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must point toward center of housing.

CAUTION

- For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards. You must consider overall operational system safety at all times.
- When using a speed reducer to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.
- Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

Key Staking Instructions

Lightly tap area of keyway adjacent to key. This will upset material and not allow key to move axially when assembling to speed reducer.



Instructions for Flanged Models

F700 (Quill Type Input)

1. Assemble the key to the motor shaft and coat the quill bore with anti-seize compound. Insert the motor shaft into the reducer input shaft. **DO NOT** coat motorshaft with anti-seize compound.
2. Rotate the motor to proper position and firmly secure to flange with four hex-head cap screws.

RF700 (Coupling Input – 3-Jaw Type FC)

1. Coat coupling bore with anti-seize compound.
2. Position coupling half on input shaft with shaft flush to end of coupling bore.
3. Locate remaining half on motor shaft, with 1/32" clearance between jaw surfaces.
4. Tighten setscrews securely. For reversing applications, a thread-locking compound is recommended.
5. Install coupling insert and position motor. Rotate motor to proper position and firmly secure to flange.

CAUTION – If the motor does not readily seat itself, check to determine if key has moved axially along motor shaft, causing interference. Staking of the keyway adjacent to the motor key will facilitate this procedure.

QC700 (Coupling Input-3-Jaw Quick Connect Type)

1. Coat coupling bore with anti-seize compound.
2. Install motor coupling half onto motor shaft. Use a straight edge to align coupling jaw top end flush with motor shaft except 738-B9 which will be flush with bottom of jaw. Secure with set screw.
3. Install urethane spider insert on motor coupling half.
4. Insert D-Bore coupling half into urethane spider element.
5. Rotate reducer input shaft so “milled flats” are either vertical or parallel. Rotate motor coupling D-Bore to match the reducer milled flats. Coat “D” flats with anti-seize compound furnished with speed reducer.
6. Insert motor assembly into reducer flange assembly. Minor rotating of the motor may be necessary to facilitate D-Bore alignment.
7. Once aligned, push motor towards reducer until properly seated against the face of the reducer flange.
8. Insert (4) hex head cap screws into the designated locations and securely tighten.

WARNING

Boston Gear speed reducers are normally shipped without lubricant. They must be filled to the proper level with the recommended lubricant for your application before operation.

Lubrication Instructions

The table on Page 135 indicates the type and viscosity of lubricant suitable for reducers operating at various temperatures.

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the proper type of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris, since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil. Under normal environmental conditions oil changes are suggested after the initial 250 hours or every 6 months.

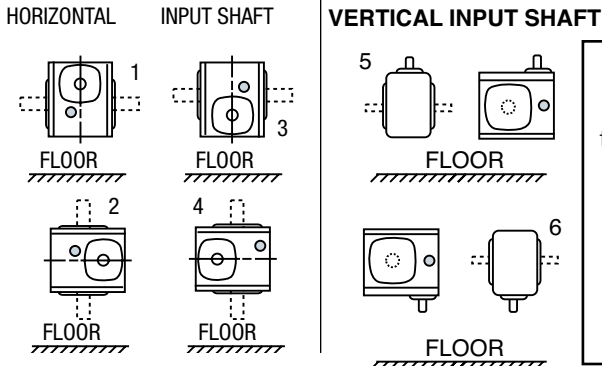
Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the worm gear set. The temperature of Double Reduction Worm Gear Reducers may reach 160°F and Single Reduction Worm Gear Reducers approximately 225°F.

Oil Capacities

Single Reduction Models Only

Oil Levels for typical mounting positions



CAUTION

Avoiding those positions where the high speed oil seal is immersed in oil will provide greater security against high speed input seal wear.

- Indicates proper oil level.
- When mounting gearboxes in positions 2, 3, 4, 6 Double Input Seals are required.

OIL CAPACITY IN FLUID OUNCES

| Unit Size | Position | | | | |
|-----------|----------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 & 6 |
| 710 | 2.2 | 3.3 | 3.3 | 3.3 | 3.3 |
| 713 | 5.5 | 7.0 | 7.0 | 7.0 | 5.5 |
| 715 | 10.0 | 15.0 | 15.0 | 13.5 | 13.5 |
| 718 | 12.0 | 16.0 | 18.5 | 16.0 | 16.0 |
| 721 | 15.0 | 20.5 | 20.5 | 19.0 | 19.0 |
| 724 | 18.0 | 24.5 | 28.5 | 24.5 | 24.5 |
| 726 | 28.0 | 36.0 | 43.0 | 36.0 | 36.0 |
| 730 | 43.0 | 60.0 | 66.0 | 58.0 | 58.0 |
| 732 | 58.0 | 84.0 | 90.0 | 80.0 | 80.0 |
| 738 | 85.0 | 120.0 | 130.0 | 120.0 | 107.0 |
| 752 | 204.0 | 240.0 | 245.0 | 240.0 | 215.0 |
| 760 | 330.0 | 400.0 | 415.0 | 400.0 | 370.0 |

Double Reduction Models

The variety of mounting possibilities for double reduction drives makes it impractical to illustrate positions for these models. In general, the vent filler is at the uppermost plug position, and the drain plug at the lowest possible position. The oil level must be at the approximate centerline of the uppermost gear.

Recommended Lubricants

ENCLOSED WORM GEAR REDUCERS

| AMBIENT (Room) TEMPERATURE | RECOMMENDED OIL (or equivalent) | VISCOSITY RANGE SUS @ 100°F | Oil Type | ISO VISCOSITY GRADE NO.† |
|---------------------------------|----------------------------------|-----------------------------|----------|--------------------------|
| -20° to 225°F** (-29° to 107°C) | Klubersynth* UH1 6-460 Synthetic | 1950/2500 | PAG | 460 |
| -30° to 225°F** (-34° to 107°C) | Mobil SHC634 Synthetic | 1950/2500 | PAO | 320/460 |

WORM GEAR LUBRICANTS AVAILABLE FROM BOSTON GEAR ORDER BY ITEM CODE

| Type | Klubersynth UH1 6-460 | Mobil SHC634 |
|-----------|-----------------------|--------------|
| Size | QT. | QT. |
| Item Code | 65159 | 51493 |

Available in quarts only

CAUTION: Relubricate more frequently if drive operated in high ambient temperatures or unusually contaminated atmosphere. High loads and operating temperatures will also require more frequent lubrication.

* Synthetic recommendation is Klubersynth UH1 6-460, the use of other lubrications may reduce efficiency and torque capacity.

** The Klubersynth UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperature as damage may occur to oil seals and other components.

† Other lubricants corresponding to AGMA/ISO numbers are available from all major oil companies.

Lubricant Interchange

1. Ambient temperature is based upon 1.0 service factor.
2. Lubricants are compounded for use in worm gears. Some contain non-corrosive, extreme pressure additives. DO NOT USE lubes that contain sulphur and/or chlorine which are corrosive to bronze gears. Extreme pressure lubes, in some cases contain materials that are toxic. Avoid use of these lubes where they can result in harmful effects. If in doubt, consult your lube supplier.

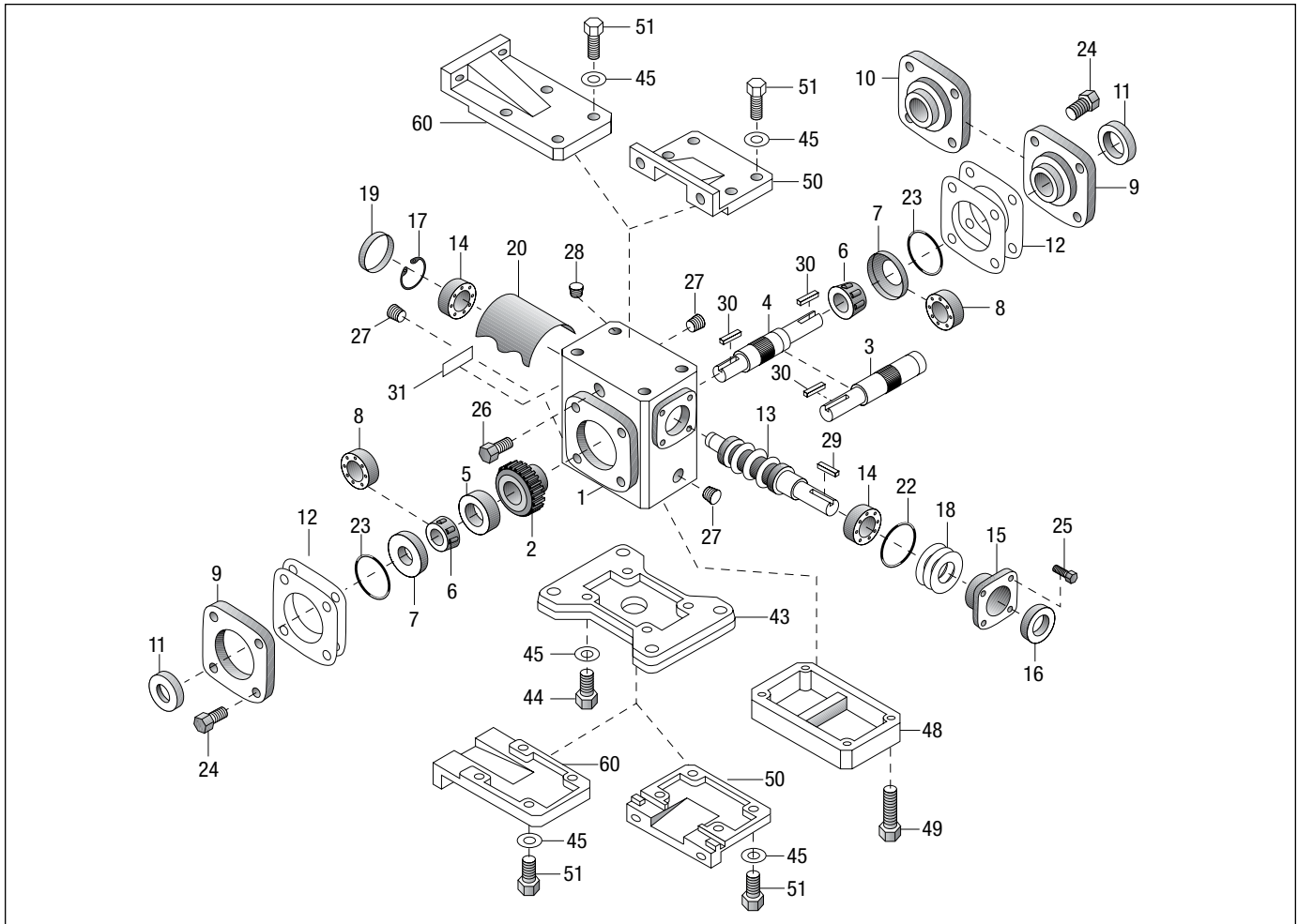
WARNING: Different oil types should not be mixed. For example Klubersynth UH1 6-460 is not compatible with Mobil SHC634.

| Manufacturer | Lubricant Name | AGMA Rating |
|------------------------|-------------------------|-------------|
| Getty Refining Co. | Veedol Asreslube 98 | 8 EP |
| Getty Refining Co. | Veedol Asreslube 95 | 7 EP |
| Getty Refining Co. | Veedol Asreslube 90 | 6 EP |
| Lubrication Engr. Inc. | Almasol 609 | 8 |
| Lubrication Engr. Inc. | Almasol 608 | 7 |
| Mobil Oil Corp. | Mobilgear 634 | 8 EP |
| Mobil Oil Corp. | Mobil Extra Hecla Super | 8 |
| Mobil Oil Corp. | Mobil Cylinder 600W | 7 |
| Shell Oil Co. | Omala 460 | 7 EP |
| Shell Oil Co. | Valvala J460 | 7 |
| Shell Oil Co. | Omala 680 | 8 EP |
| Shell Oil Co. | Valvala J680 | 8 |
| Texaco Inc. | Meropa 680 | 8 EP |
| Texaco Inc. | Meropa 460 | 7 EP |

700 Series Worm Gear Speed Reducers

Parts List – Single Reduction Models

Models 710-760



| Part No. | Description |
|----------|--|
| 1 | HOUSING |
| 2* | WORM GEAR |
| 3* | SINGLE PROJECTING OUTPUT SHAFT |
| 4* | DOUBLE PROJECTING OUTPUT SHAFT |
| 5* | GEAR SPACER |
| 6* | OUTPUT BEARING (CONE) – MODELS 713-760 |
| 7 | OUTPUT BEARING (CUP) – MODELS 713-760 |
| 8 | OUTPUT BEARING – MODEL 710 ONLY |
| 9 | BEARING CARRIER (OPEN) |
| 10 | BEARING CARRIER (CLOSED) |
| 11* | OUTPUT OIL SEAL |
| 12* | ADJUSTMENT SHIMS |
| 13 | INPUT WORM SHAFT |
| 14 | INPUT BEARING – MODELS 710-730 |
| 15 | INPUT BEARING RETAINER |
| 16 | INPUT OIL SEAL – MODELS 710-760 |
| 17 | RETAINING RING |
| 18 | ADJUSTMENT SHIMS |
| 19 | BORE PLUG – MODELS 710-730 |
| 20 | INTERNAL BAFFLE – MODELS 713-760 |
| 22 | INPUT "O" RING |
| 23* | OUTPUT "O" RING |
| 24 | HEX HEAD CAP SCREW |
| 25 | HEX HEAD CAP SCREW |

| Part No. | Description |
|----------|---------------------------------------|
| 26** | VENT PLUG – 2 PIECE |
| 27 | PIPE PLUG |
| 28 | PROTECTIVE CAP PLUG (BK & SBK ONLY) |
| 29 | INPUT KEY |
| 30 | OUTPUT KEY |
| 31 | NAMEPLATE |
| 32 | INPUT BEARING (CUP) – MODELS 732-760 |
| 33 | INPUT BEARING (CONE) – MODELS 732-760 |
| 34 | GREASE CUPS – MODELS 732-760 |
| 35 | HEX HEAD CAP SCREW |
| 37 | OUTPUT GEAR KEY – MODELS 730-760 |
| 38 | RETAINING RING – MODELS 710-738 |
| 39 | MOTOR SHAFT – MODELS 710-738 |
| 40 | MOTOR FLANGE – MODELS 710-738 |
| 41 | OIL SEAL – MODELS 710-738 |
| 42 | HEX HEAD CAP SCREW |
| 43 | HORIZONTAL BASE |
| 44 | HEX HEAD CAP SCREW |
| 45 | LOCKWASHER |
| 46 | 2 PIECE FC/BF COUPLING – WITH INSERT |
| 47 | RETAINING MOTOR FLANGE |
| 48 | RISER BLOCK (MODELS 710-732) |
| 49 | HEX HEAD CAP SCREW (MODELS 710-732) |
| 50 | VERTICAL BASE (HIGH OR LOW) |

| Part No. | Description |
|----------|--|
| 51 | HEX HEAD CAP SCREW |
| 60 | VERTICAL BASE (X & Y ASSEMBLY 713-726) |
| 101 | FAN |
| 102 | SPACER |
| 103 | HEX HEAD CAP SCREW |
| 104 | FAN GUARD |
| 105 | HEX HEAD CAP SCREW |
| 106 | WASHER |
| 165 | HOLLOW OUTPUT SHAFT (S VERSION ONLY) |
| 166 | HOLLOW OUTPUT SHAFT (H VERSION ONLY) |
| 167 | WORM GEAR |
| 168 | OUTPUT BEARING (CONE) |
| 169 | OUTPUT BEARING (CUP) |
| 170 | OIL SEAL |
| 171 | BEARING CARRIER |
| 172 | HOLLOW SHAFT MTG. BRACKET |
| 173 | HEX HEAD CAP SCREW |
| 174 | LOCKWASHER |
| 175 | KEY (INTERNAL) |
| 176 | KEY (EXTERNAL) |
| 177 | "V" TYPE BASE-MODEL 718, 721,726, 732) |
| 178 | SOCKET SETSCREW |

* For Models 710 to 726, these parts are available as complete assemblies. See Part Ordering Information, page 137.

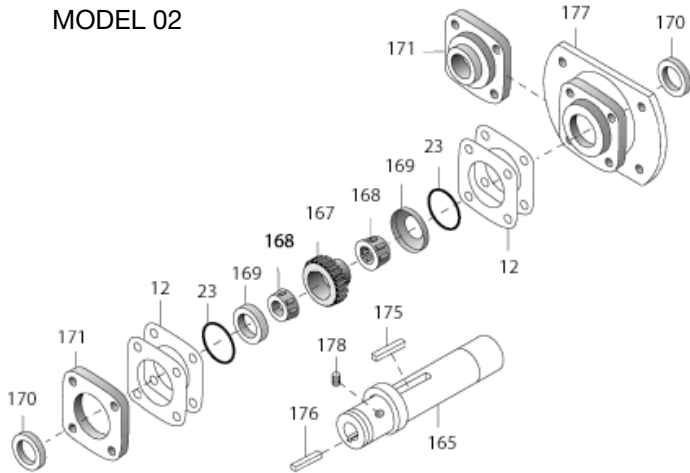
** Extension not required on single reduction Models 713 through 732.

700 Series Worm Gear Speed Reducers

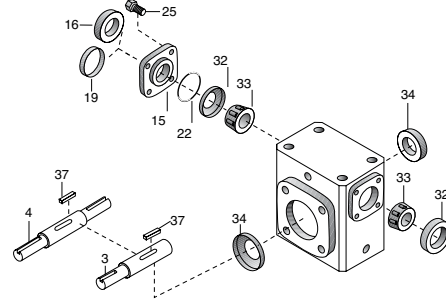
Options & Accessories – Single Reduction Models

Hollow output Shaft Models S and SF718-732*

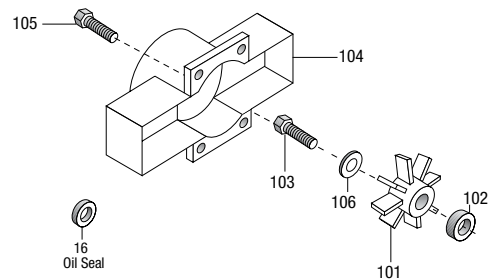
MODEL 02



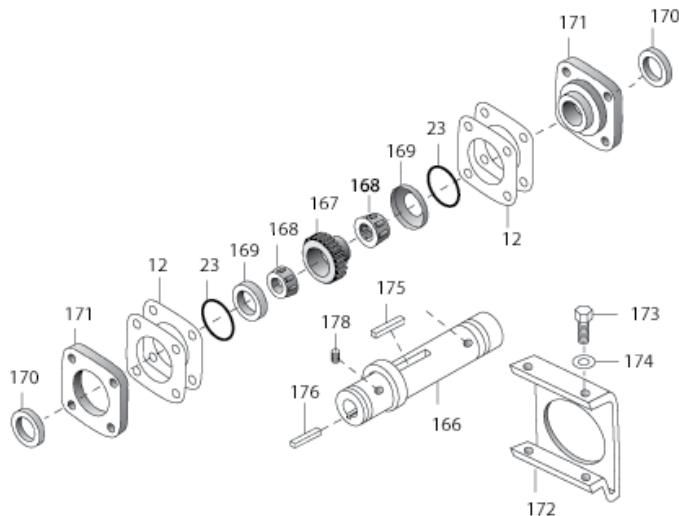
Models 732-760



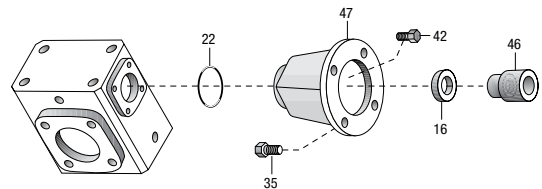
Fan Kit for Models 732-760



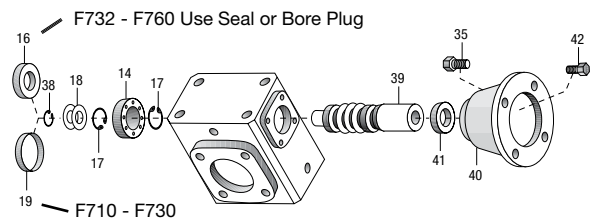
Hollow Output Shaft Models H, HF, and HQ713-752



Models QC710-QC738 RF752-RF760



Models F710-F738



PART ORDERING INFORMATION

1. Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number. For example, "One output oil seal, Part No. 11, for QC718-30-B5-G".
2. Output shaft components for Boston Gear models 710 through 726 are available only as complete assemblies that include Parts 2, 3, 5, 6, 11, 12 and 23 for single projecting shafts; and Parts 2, 4, 5, 6, 11, 12 and 23 for double projecting shafts. When ordering, specify "output shaft assembly" and full Boston Gear catalog number from nameplate.

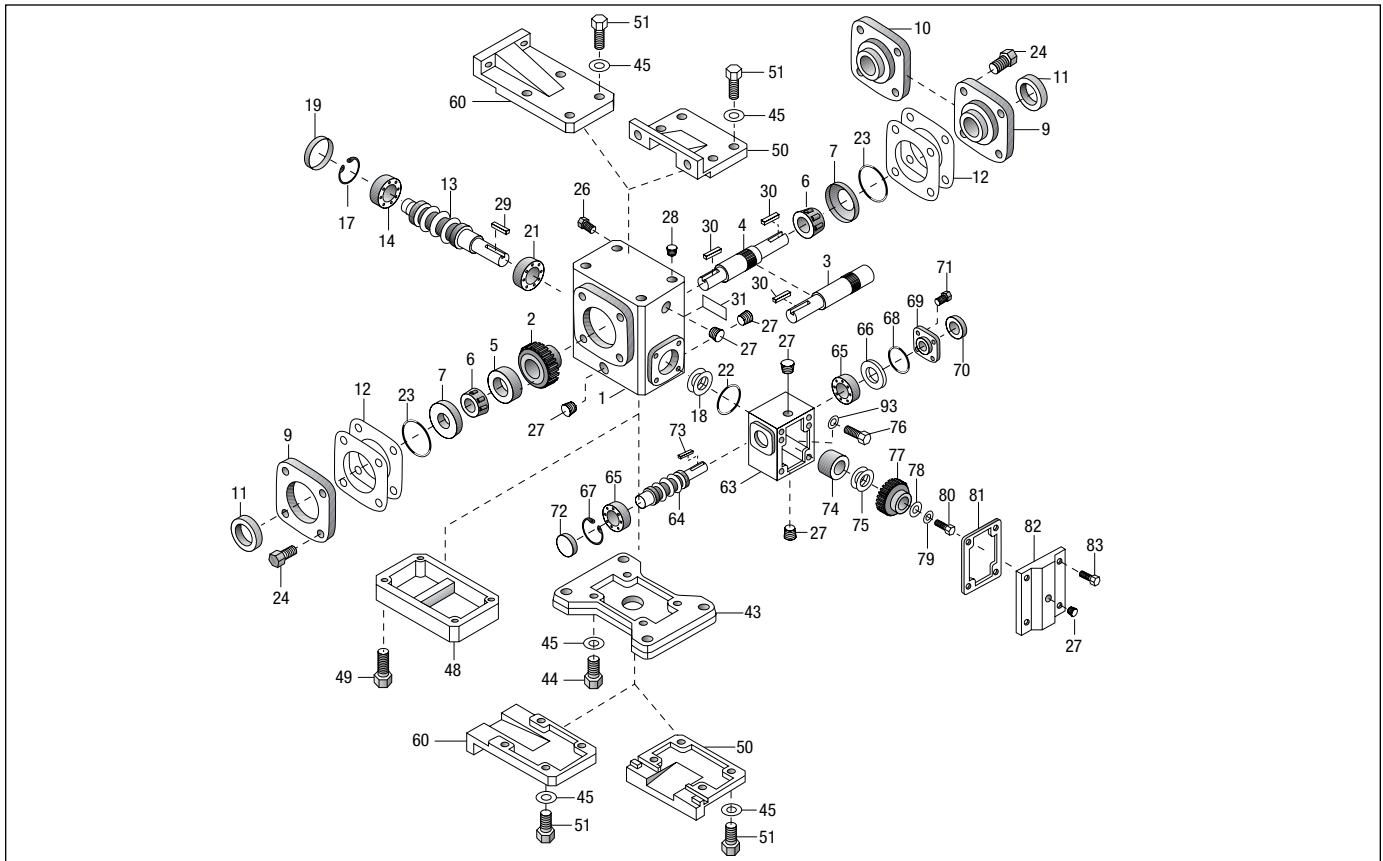
* Not available in the 730 center distance, see H series.

E

700 Series Worm Gear Speed Reducers

Parts List – Double Reduction Models

Models W713-W760



| Part No. | Description |
|----------|---|
| 1 | HOUSING |
| 2* | WORM GEAR |
| 3* | SINGLE PROJECTING OUTPUT SHAFT |
| 4* | DOUBLE PROJECTING OUTPUT SHAFT |
| 5* | GEAR SPACER |
| 6* | OUTPUT BEARING (CONE) |
| 7 | OUTPUT BEARING (CUP) |
| 9 | BEARING CARRIER (OPEN) |
| 10 | BEARING CARRIER (CLOSED) |
| 11* | OUTPUT OIL SEAL |
| 12* | ADJUSTMENT SHIMS |
| 13 | INTERMEDIATE WORM SHAFT |
| 14 | INTERMEDIATE BEARING—MODELS W713-W730 |
| 15 | INTER. BEARING RETAINER—MODELS W732-760 |
| 16 | INTER. OIL SEAL – MODELS W732-W760 |
| 17 | RETAINING RING – MODELS W713-W730 |
| 18 | ADJUSTMENTS SHIMS |
| 19 | BORE PLUG – MODELS W713-W730 |
| 21 | INTERMEDIATE BEARING |
| 22 | INTERMEDIATE “O” RING |
| 23* | OUTPUT “O” RING |
| 24 | HEX HEAD CAP SCREW |
| 25 | HEX HEAD CAP SCREW |
| 26 | VENT PLUG – 2 PIECE |
| 27 | PIPE PLUG |
| 28 | PROTECTIVE CAP PLUG |
| 29 | INTERMEDIATE KEY |
| 30 | OUTPUT KEY |
| 31 | NAMEPLATE |

| Part No. | Description |
|----------|--|
| 32 | INTER. BEARING (CUP) – MODELS W732-W760 |
| 33 | INTER. BEARING (CONE) – MODELS W732-W760 |
| 34 | GREASE CUPS – MODELS W732-W760 |
| 35 | HEX HEAD CAP SCREW |
| 37 | OUTPUT GEAR KEY – MODELS W730-W760 |
| 43 | HORIZONTAL BASE |
| 44 | HEX HEAD CAP SCREW |
| 45 | LOCKWASHER |
| 48 | RISER BLOCK |
| 49 | HEX HEAD CAP SCREW |
| 50 | VERTICAL BASE (HIGH OR LOW) |
| 51 | HEX HEAD CAP SCREW |
| 60 | VERTICAL BASE (ASSEMBLY X & Y 713 - 726) |
| 63 | ATTACHMENT HOUSING |
| 64 | INPUT WORM SHAFT |
| 65 | INPUT BEARING |
| 66 | ADJUSTMENT SHIMS |
| 67 | RETAINING RING |
| 68 | “O” RING |
| 69 | BEARING RETAINER |
| 70 | OIL SEAL |
| 71 | HEX HEAD CAP SCREW |
| 72 | BORE PLUG – MODELS W713-W752 |
| 73 | INPUT WORM SHAFT KEY |
| 74 | GEAR SPACER - INTERMEDIATE |
| 75 | ADJUSTMENT SHIMS |
| 76 | HEX HEAD CAP SCREW |
| 77 | INTERMEDIATE WORM GEAR |
| 78 | WASHER |

| Part No. | Description |
|----------|--|
| 79 | LOCKWASHER |
| 80 | HEX HEAD CAP SCREW |
| 81 | ATTACHMENT COVER GASKET |
| 82 | ATTACHMENT COVER |
| 83 | HEX HEAD CAP SCREW |
| 84 | INPUT BEARING (CONE) – MODEL W760 ONLY |
| 85 | INPUT BEARING (CUP) – MODEL W760 ONLY |
| 86 | TWO PIECE COUPLING WITH INSERT |
| 87 | MOTOR FLANGE |
| 88 | HEX HEAD CAP SCREW |
| 89 | MOTOR FLANGE |
| 90 | INPUT WORM SHAFT |
| 91 | EXTERNAL RETAINING RING |
| 92 | OIL SEAL – MODELS FW713-FW752 |
| 93 | WASHER |
| 165 | HOLLOW OUTPUT SHAFT (S VERSION ONLY) |
| 166 | HOLLOW OUTPUT SHAFT (H VERSION ONLY) |
| 167 | WORM GEAR |
| 168 | OUTPUT BEARING (CONE) |
| 169 | OUTPUT BEARING (CUP) |
| 170 | OIL SEAL |
| 171 | BEARING CARRIER |
| 172 | HOLLOW SHAFT MTG. BRACKET |
| 173 | HEX HEAD CAP SCREW |
| 174 | LOCKWASHER |
| 175 | KEY (INTERNAL) |
| 176 | KEY (EXTERNAL) |
| 177 | “V” TYPE BASE MODEL (718, 721, 726, 732) |

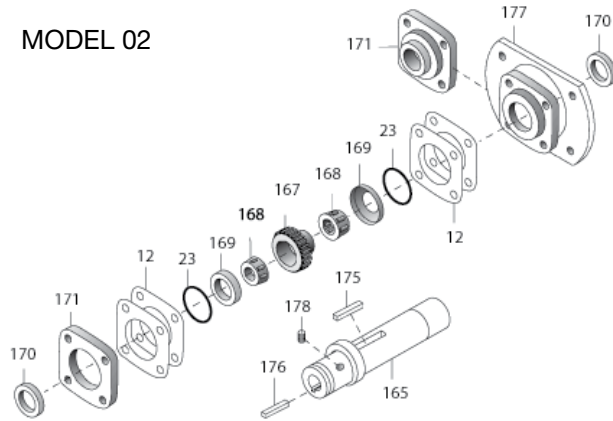
* For Models 710 to 726, these parts are available as complete assemblies. See Part Ordering Information, Page 139.

700 Series Worm Gear Speed Reducers

Options & Accessories – Double Reduction Models

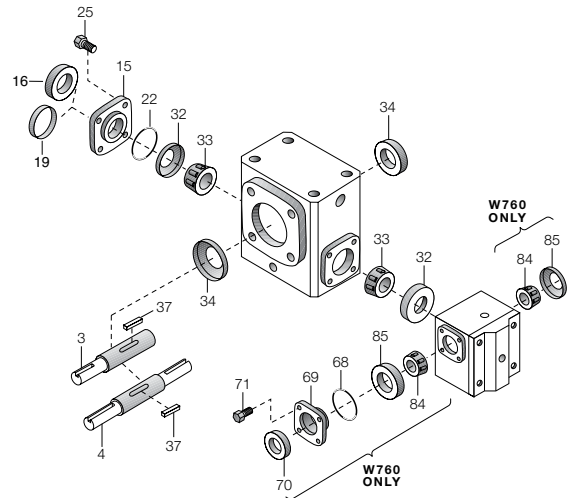
Hollow Output Shaft Models SW, SFW, and SRFW718-732*

MODEL 02

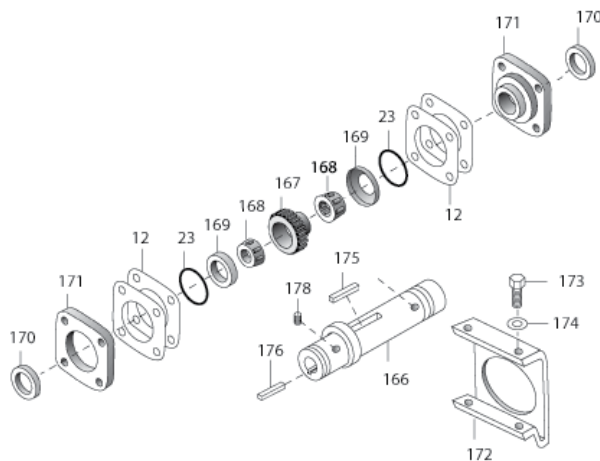


Models W732-W760

Parts added to W732-W760

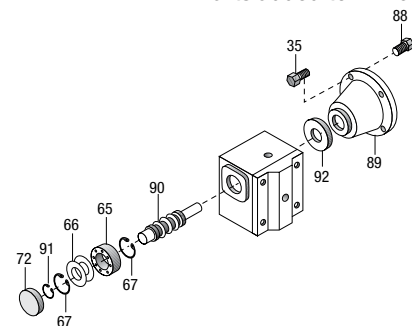


Hollow Output Shaft Models HW, HFW, and HQCW713-738



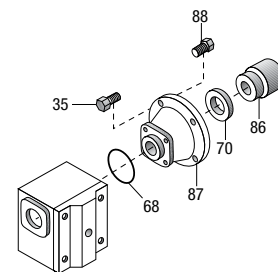
Models FW713-FW752

Parts added to W713-W752.



Models QCW713-QCW760

parts added to W713-W730 OR W732-W760.
these parts available IN KIT FORM.



PART ORDERING INFORMATION

1. Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number. For example, "One output oil seal, Part No. 11, for W713-150-G".
 2. Output shaft components for Boston Gear models 710 through 726 are available only as complete assemblies that include Parts 2, 3, 5, 6, 11, 12 and 23 for single projecting shafts; and Parts 2, 4, 5, 6, 11, 12 and 23 for double projecting shafts. When ordering, specify "output shaft assembly" and full Boston Gear catalog number from nameplate.
- * Not available in 730 center distance, see H series.

700 Series Worm Gear Speed Reducers

700 Series Lifetime Warranty

The Company warrants that all 700 Series speed reducers will be free from defects in material and workmanship over the lifetime of the product.

Oil seals are considered to be replaceable maintenance items.

Any products which shall be proved to the Company's satisfaction to have been defective at the time of delivery in these respects will be replaced or repaired by the Company at its option. Freight is the responsibility of the customer. The Company's liability under this warranty is limited to such replacement or repair and it shall not be held liable in any form of action for direct or consequential damages to property or person. The foregoing warranty is expressly made in lieu of all other warranties whatsoever, express, implied and statutory and including without limitation the implied warranties of merchantability and fitness.

No employee, agent, distributor, or other person is authorized to give additional warranties on behalf of Boston Gear, nor to assume for Boston Gear any other liability in connection with any of its products, except an officer of Boston Gear by a signed writing.

WARNING

Boston Gear speed reducers are normally shipped without lubricant. They must be filled to the proper level with the recommended lubricant for your application. Klubersynth UH1 6-460 is exclusively recommended by the factory, other lubricants will void warranty.

These instructions must be read thoroughly before installing or operating speed reducers. File instructions for future reference and for ordering of replacement parts.

E



Single Reduction Flanged Reducers & Non-Flanged Reducers

Ordering Information – Pages 143-146
 Selection/Rating Information – Pages 143-146
 Lubrication – Pages 143-146



F309B
 Dimensions - Page 143



309 A & B
 Dimensions - Page 146

Double Reduction Flanged Reducers & Non-Flanged Reducers

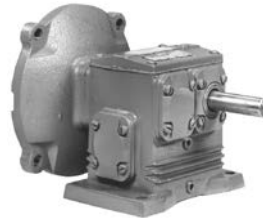
Ordering Information — Pages 144-147
 Selection/Rating Information — Pages 144-147
 Lubrication — Pages 144-147



FWA309A
 Dimensions - Page 144



WA309A
 Dimensions - Page 146



TWF113A
 Dimensions - Page 145



TW113A
 Dimensions - Page 148

Section Contents

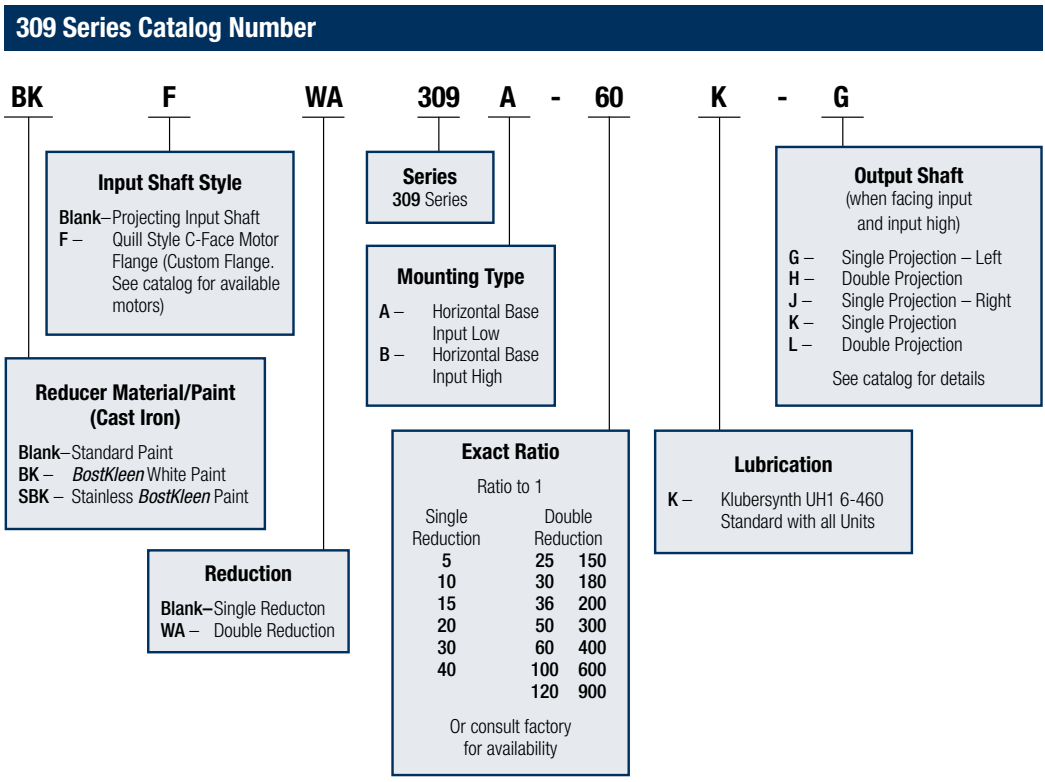
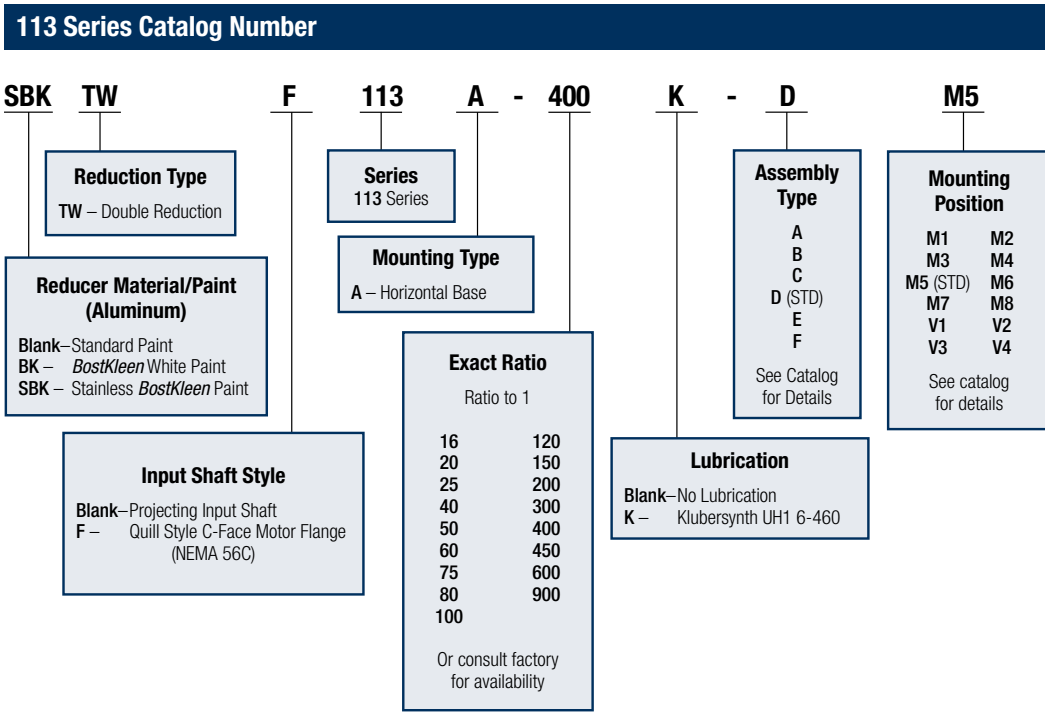
| | |
|---|------------|
| Product Reference Guide | 141 |
| Single Reduction – F309B | 143 |
| Double Reduction – FWA309A..... | 144 |
| Double Reduction – TWF113A..... | 145 |
| Single Reduction – 309 A/B | 146 |
| Double Reduction – WA309A..... | 147 |
| Double Reduction – TW113A..... | 148 |

Sub-Fractional HP Speed Reducers

113 and 309 Series Catalog Numbers

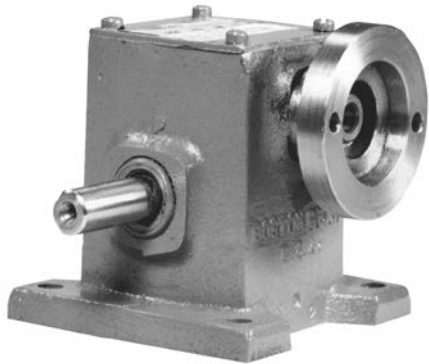
Position Info

F



Sub-Fractional HP Single Reduction Flanged Reducers

F309B Series Flanged Quill Type Integral Horizontal Base



LUBRICATION – Prelubricated for Ambient Temperature Range of -20° to +125° F. For all mounting positions.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: F309B-10-G

1750 INPUT RPM

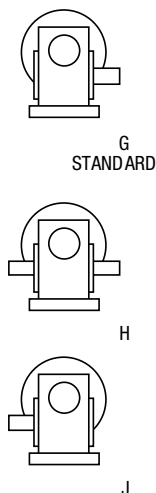
| Motor HP | Output | | | Gear Capacity | | Ratio | Catalog Number | Motor Cat. No. |
|----------|--------|------------------|-----|------------------|------|-------|----------------|-----------------|
| | RPM | Torque (LB. In.) | HP | Torque (LB. In.) | HP | | | 115-1-60 Open** |
| 1/20 | 350 | 6 | .03 | 14 | .078 | 5 | F309B-5-K | AST-B |
| | 175 | 12 | .03 | 25 | .069 | 10 | F309B-10-K | |
| | 116.7 | 15 | .03 | 30 | .056 | 15 | F309B-15-K | |
| | 87.5 | 23 | .03 | 43 | .060 | 20 | F309B-20-K | |
| | 58.3 | 30 | .03 | 30 | .031 | 30 | F309B-30-K | |
| | 43.8 | 31 | .02 | 31 | .022 | 40 | F309B-40-K | |
| 1/12 | 350 | 9 | .05 | 14 | .078 | 5 | F309B-5-K | AAST-B |
| | 175 | 16 | .04 | 25 | .069 | 10 | F309B-10-K | |
| | 116.7 | 22 | .04 | 30 | .056 | 15 | F309B-15-K | |
| | 87.5 | 30 | .04 | 43 | .060 | 20 | F309B-20-K | |

** Open Dripproof. For motor dimensions, see Page 337.

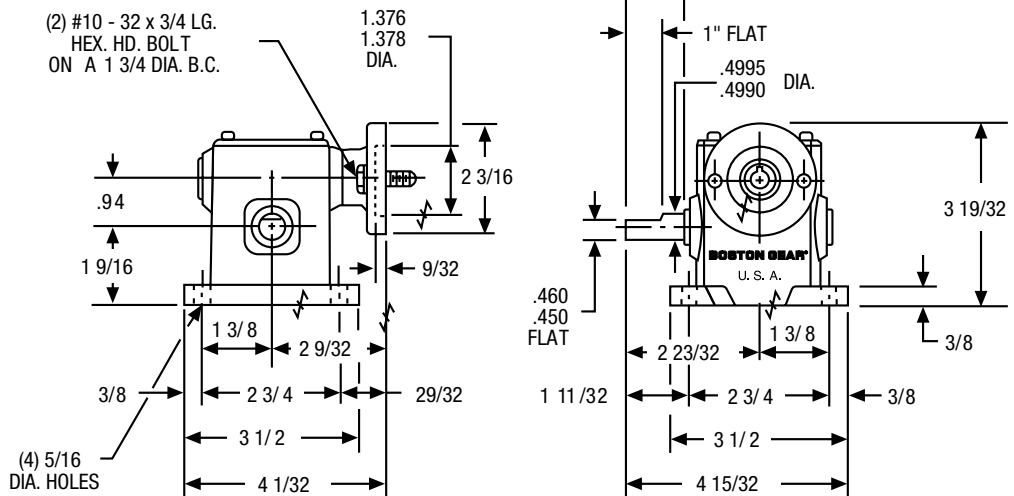
Dimensions

Assembly Types

ASSEMBLY TYPES*



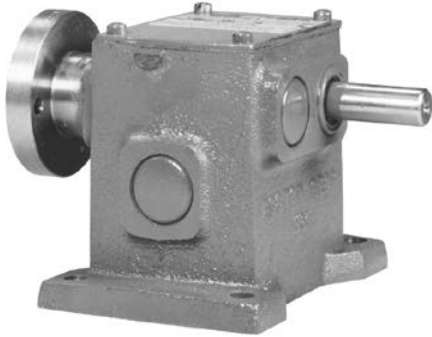
(2) #10 - 32 x 3/4 LG. HEX. HD. BOLT ON A 1 3/4 DIA. B.C.



* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.

Sub-Fractional HP Double Reduction Flanged Reducers

FWA309A Series Flanged Quill Type Integral Horizontal Base; Parallel Shafts



LUBRICATION – Prelubricated for Ambient Temperature Range of -20° to +125° F. For all mounting positions.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: FWA309A-50-K

1750 INPUT RPM

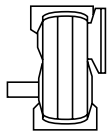
| Motor HP | Output | | | Gear Capacity | | Ratio | Catalog Number | Motor Cat. No. |
|----------|--------|------------------|------|------------------|------|-------|----------------|-----------------|
| | RPM | Torque (LB. In.) | HP | Torque (LB. In.) | HP | | | 115-1-60 Open** |
| 1/20 | 70.0 | 25 | .028 | 50 | .056 | 25 | FWA309A-25-K | AST-B |
| | 58.3 | 29 | .027 | 50 | .046 | 30 | FWA309A-30-K | |
| | 48.6 | 25 | .019 | 40 | .031 | 36 | FWA309A-36-K | |
| | 35.0 | 35 | .019 | 55 | .031 | 50 | FWA309A-50-K | |
| | 29.2 | 43 | .020 | 43 | .020 | 60 | FWA309A-60-K | |
| | 17.5 | 45 | .012 | 60 | .017 | 100 | FWA309A-100-K | |
| | 14.6 | 55 | .012 | 55 | .012 | 120 | FWA309A-120-K | |
| | 11.7 | 45 | .008 | 45 | .008 | 150 | FWA309A-150-K | |
| | 9.7 | 45 | .007 | 45 | .007 | 180 | FWA309A-180-K | |
| | 8.8 | 65 | .009 | 65 | .009 | 200 | FWA309A-200-K | |

** Open Dripproof. For motor dimensions, see Page 337.

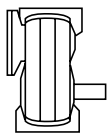
Dimensions

Assembly Types

ASSEMBLY TYPES*

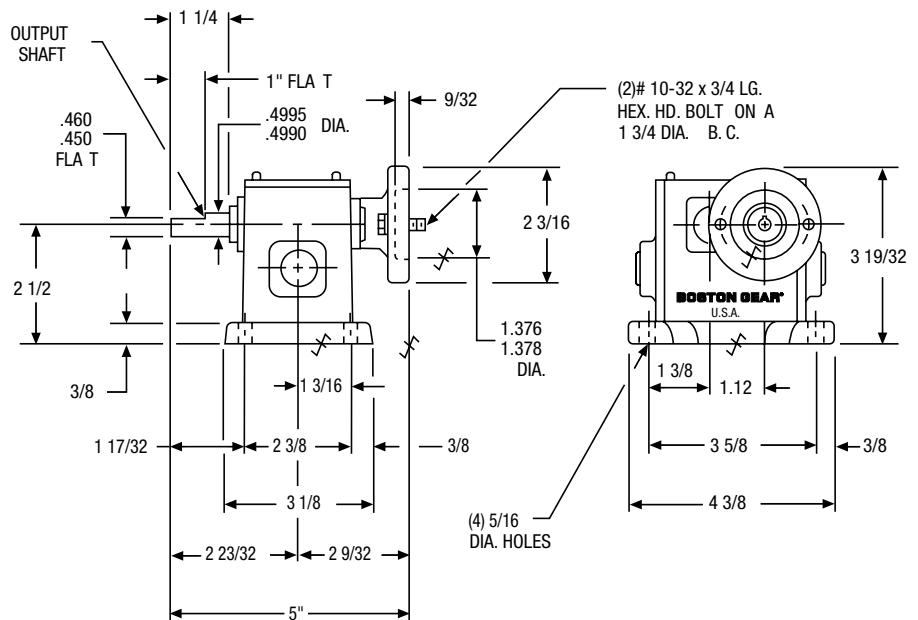


K STANDARD



G

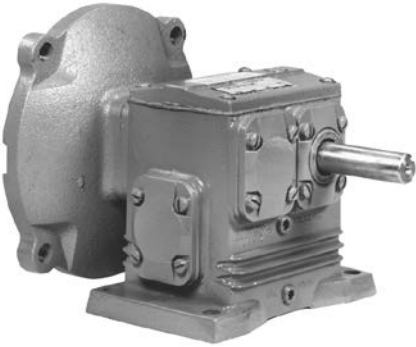
TOP VIEW



* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.

Sub-Fractional HP Double Reduction Flanged Reducers

TWF113A Series Flanged Quill Type Integral Horizontal Base*; Parallel Shafts



LUBRICATION – Quantity - 1/2 Pint.
MUST BE ORDERED SEPARATELY.
See Lubrication Instructions, Page 134



1750 INPUT RPM

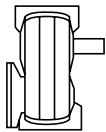
| Motor HP | OutPut | | | Ratio | Catalog Number | Motor Cat. No. |
|----------|--------|------------------|------|-------|----------------|---------------------|
| | RPM | Torque (LB. In.) | HP | | | 115/230-1-60 OPEN** |
| 1/6 | 17.5 | 228 | .06 | 100 | TWF113A-100 | CR-W |
| | 11.7 | 244 | .045 | 150 | TWF113A-150 | |
| | 8.8 | 246 | .034 | 200 | TWF113A-200 | |
| | 5.8 | 280 | .026 | 300 | TWF113A-300 | |
| | 4.4 | 250 | .017 | 400 | TWF113A-400 | |
| | 2.9 | 295 | .014 | 600 | TWF113A-600 | |
| | 1.9 | 295 | .009 | 900 | TWF113A-900 | |

* Base is not detachable.

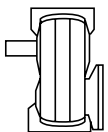
** Open Dripproof. For motor dimensions, see Page 337.

Dimensions

ASSEMBLY TYPES †

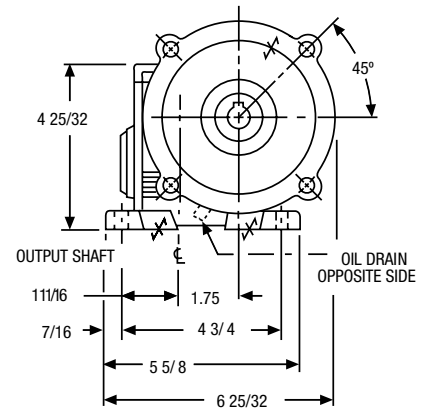
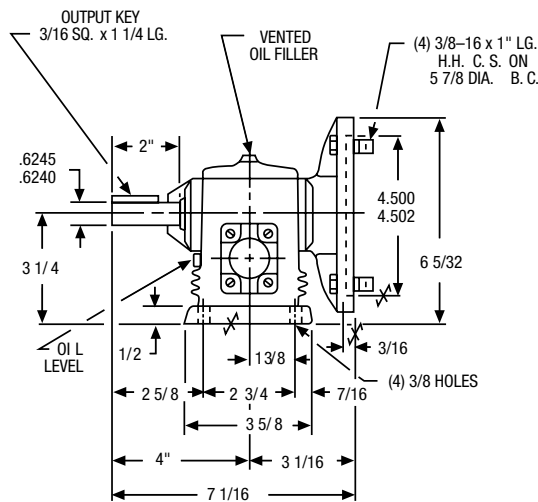


DM5 STANDARD



AM1

TOP VIEW



Approx. Weight: 10 lbs.

† Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces, viewed from end of input shaft.

Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation. Assembly H available at slight additional charge.

Sub-Fractional HP Single Reduction Non-Flanged Reducers

309A/309B Series

A Position Horizontal Base**; B Position Horizontal Base**



LUBRICATION – Prelubricated for Ambient Temperature Range of -20° to +125° F. For all angle operation.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: 309B-20-G

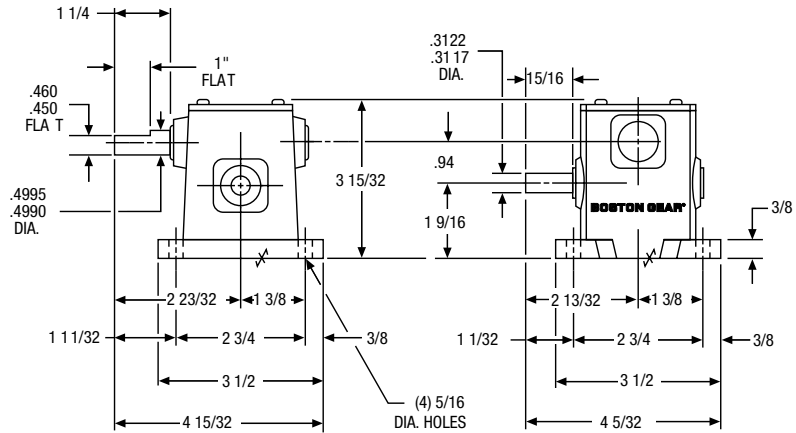
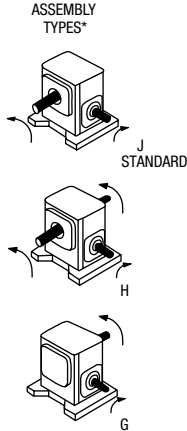
1750 INPUT RPM

| OutPut | | | Approx Input HP | Ratio | Catalog Numbers | |
|--------|----------|------|-----------------|-------|-----------------|-----------------|
| RPM | Torque † | HP | | | A Base Position | B Base Position |
| 350 | 14 | .078 | .12 | 5 | 309A-5-K | 309B-5-K |
| 175 | 25 | .069 | .13 | 10 | 309A-10-K | 309B-10-K |
| 116.7 | 30 | .056 | .17 | 15 | 309A-15-K | 309B-15-K |
| 87.5 | 43 | .060 | .17 | 20 | 309A-20-K | 309B-20-K |
| 58.3 | 33 | .031 | .10 | 30 | 309A-30-K | 309B-30-K |
| 43.2 | 31 | .022 | .07 | 40 | 309A-40-K | 309B-40-K |

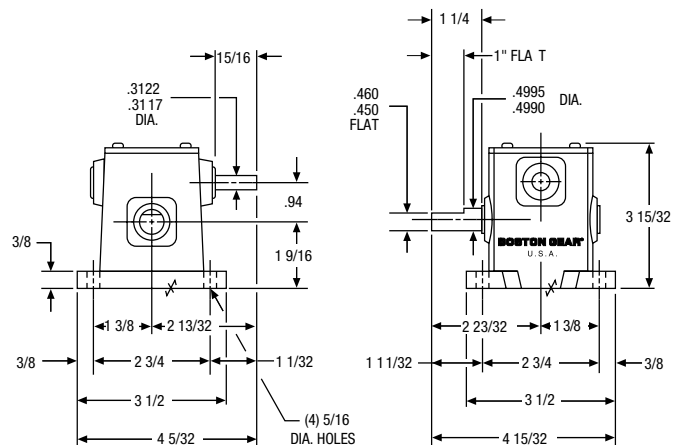
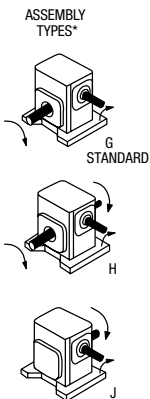
** Base is not detachable.

† Maximum torque in Pound Inches.

309A Dimensions



309B Dimensions



Sub-Fractional HP Double Reduction Non-Flanged Reducers

WA309A Series
Horizontal Base**; Parallel Shafts



LUBRICATION – Prelubricated for Ambient Temperature Range of -20° to +125° F.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: WA309A-25-K

1750 INPUT RPM

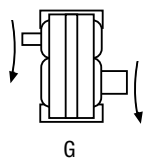
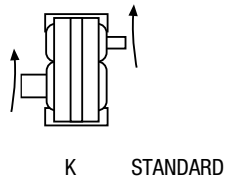
| OutPut | | | Approx Input HP | Ratio | Catalog Number |
|--------|----------|------|-----------------|-------|---------------------|
| RPM | Torque † | HP | | | |
| 70.0 | 50 | .056 | .12 | 25 | WA309A-25-K |
| 58.3 | 50 | .046 | .10 | 30 | WA309A-30-K |
| 48.6 | 40 | .031 | .08 | 36 | WA309A-36-K |
| 35.0 | 55 | .031 | .08 | 50 | WA309A-50-K |
| 29.2 | 43 | .020 | .07 | 60 | WA309A-60-K |
| 17.5 | 60 | .017 | .06 | 100 | WA309A-100-K |
| 14.6 | 55 | .012 | .07 | 120 | WA309A-120-K |
| 11.7 | 45 | .008 | .05 | 150 | WA309A-150-K |
| 9.7 | 45 | .007 | .046 | 180 | WA309A-180-K |
| 8.8 | 65 | .009 | .06 | 200 | WA309A-200-K |
| 5.8 | 45 | .004 | .033 | 300 | WA309A-300-K |
| 4.4 | 65 | .005 | .06 | 400 | WA309A-400-K |
| 2.9 | 45 | .002 | .032 | 600 | WA309A-600-K |
| 1.9 | 45 | .001 | .026 | 900 | WA309A-900-K |

** Base is not detachable.

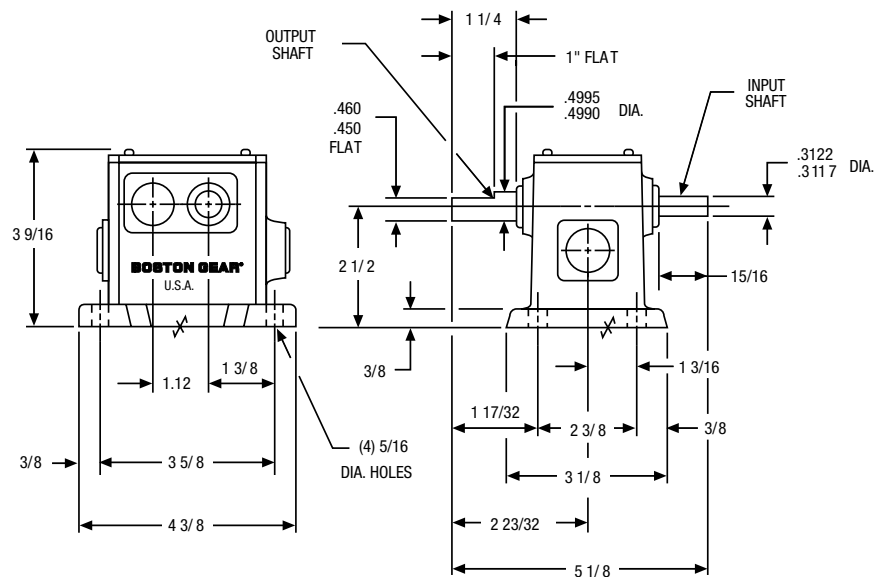
† Maximum Torque in Pound Inches.

Dimensions

ASSEMBLY TYPES**



TOP VIEW



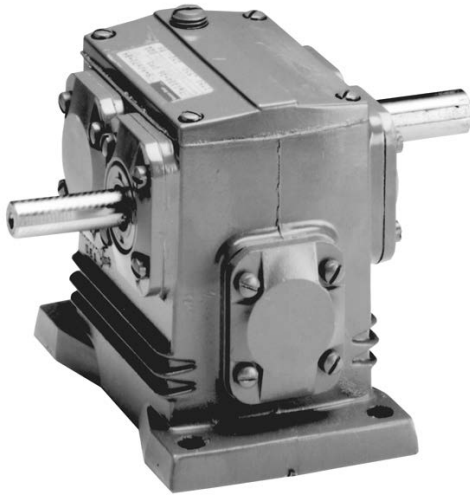
Approx. Weight 5 lbs.

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.

Sub-Fractional HP Double Reduction Non-Flanged Reducers

TW113A Series

Horizontal Base**; Parallel Shafts



LUBRICATION – Quantity - 1/2 Pint.

MUST BE ORDERED SEPARATELY.

See Lubrication Instructions, Page 134.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: TW113A-16-DM5.

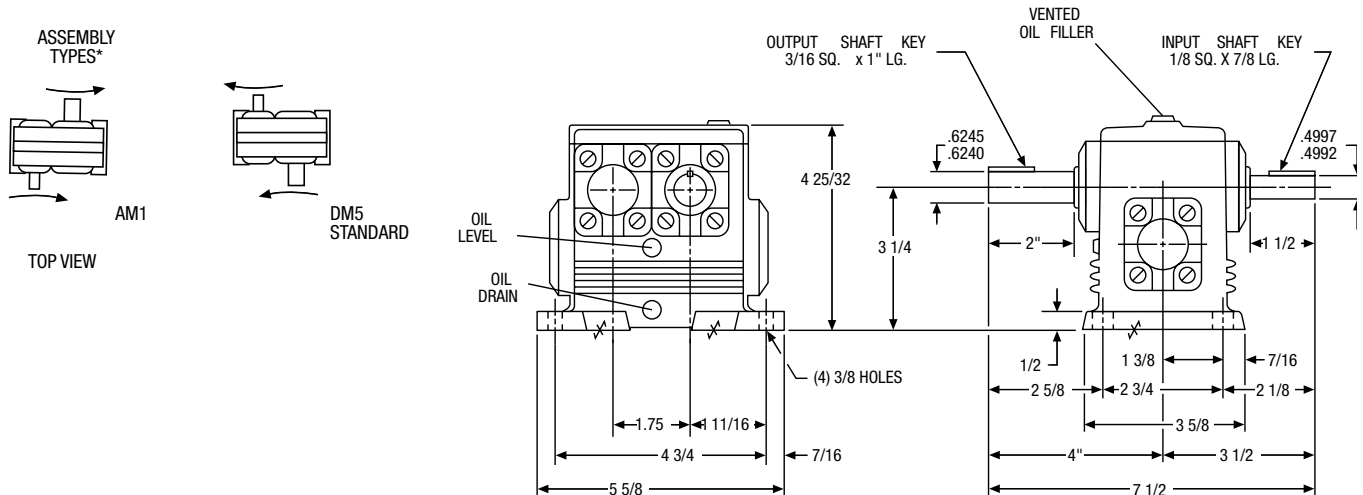
1750 INPUT RPM

| OutPut | | | Approx Input HP | Ratio | Catalog Number |
|--------|----------|------|-----------------|-------|-------------------|
| RPM | Torque † | HP | | | |
| 109.4 | 150 | .26 | .55 | 16 | TW113A-16 |
| 87.5 | 180 | .25 | .57 | 20 | TW113A-20 |
| 70.0 | 185 | .21 | .50 | 25 | TW113A-25 |
| 43.8 | 185 | .13 | .33 | 40 | TW113A-40 |
| 35.0 | 210 | .12 | .31 | 50 | TW113A-50 |
| 29.2 | 200 | .093 | .24 | 60 | TW113A-60 |
| 23.3 | 220 | .081 | .23 | 75 | TW113A-75 |
| 21.9 | 225 | .078 | .22 | 80 | TW113A-80 |
| 17.5 | 228 | .063 | .17 | 100 | TW113A-100 |
| 14.6 | 235 | .054 | .18 | 120 | TW113A-120 |
| 11.7 | 244 | .045 | .17 | 150 | TW113A-150 |
| 8.8 | 246 | .034 | .12 | 200 | TW113A-200 |
| 5.8 | 280 | .026 | .12 | 300 | TW113A-300 |
| 4.4 | 250 | .017 | .12 | 400 | TW113A-400 |
| 3.9 | 288 | .018 | .10 | 450 | TW113A-450 |
| 2.9 | 295 | .014 | .08 | 600 | TW113A-600 |
| 1.9 | 295 | .009 | .08 | 900 | TW113A-900 |

Dimensions

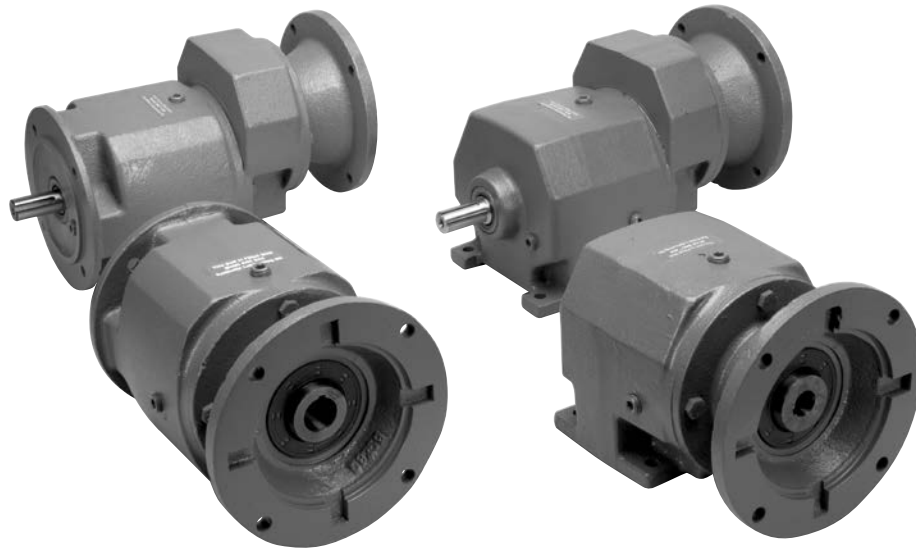
** Base is not detachable.

† Maximum torque in Pound Inches.



Approx. Weight 6 lbs.

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.



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| Product Reference Guide | 150 |
| Numbering System / How to Order | 151 |
| Interchange and Selection Procedure | 152-153 |
| Mountings | 155 |
| Lubrication | 156 |
| Overhung Load / Weights | 157-158 |
| Output RPM Selection Tables | 159-175 |
| Reducer Ratings | 176-185 |
| Dimensions | 186-193 |
| Washdown Duty / Parts List | 194-195 |

800 Series Product Selection / Reference Guide

800 Series Inline Helical Gear Drives

F800B Series In-Line Helical Gear Flanged Input



**Double Reduction
Foot Mounted, Flange Input**
Selection Pages 159-175
Dimensions-Page 186



**Triple Reduction
Foot Mounted, Flange Input**
Selection Pages 159-175
Dimensions-Page 187



**Double Reduction
Output Flange Mount, Flange Input**
Selection Pages 159-175
Dimensions-Page 188



**Triple Reduction
Output Flange Mount, Flange Input**
Selection Pages 159-175
Dimensions-Page 189

800B Series In-Line Helical Gear Non-Flanged Input



**Double Reduction
Foot Mounted**
Selection Pages 176-185
Dimensions-Page 190



**Triple Reduction
Foot Mounted**
Selection Pages 176-185
Dimensions-Page 191



**Double Reduction
Output Flange Mount**
Selection Pages 176-185
Dimensions-Page 192



**Triple Reduction
Output Flange Mount**
Selection Pages 176-185
Dimensions-Page 193

G

800 Series In-Line Helical Gear Drives

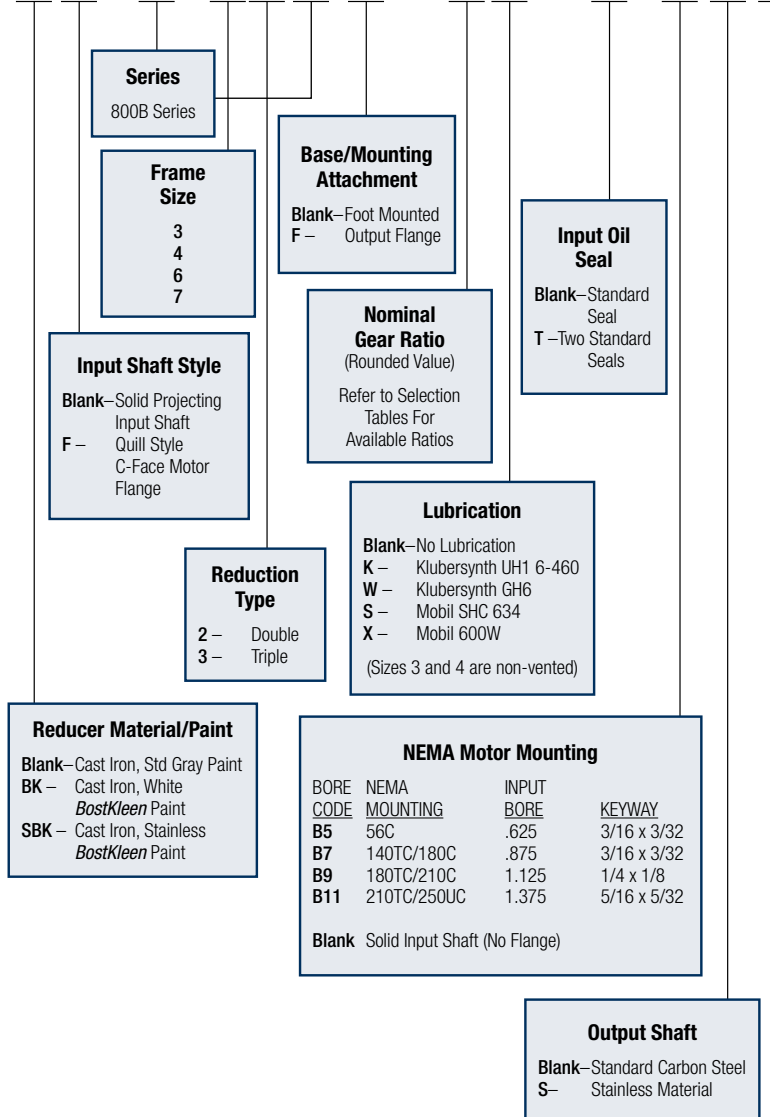
Numbering System / How to Order

800 Series In-Line Helical Gear Drives

Clutch/Brake

Motor

*BK F 8 3 2 B F - 45 K T - B5 - S - M1 - CMBA56U-6 - HUTF5/8-IDB - 3



| Common C-Face Brakes Installed | | |
|--------------------------------|-----------|-----------|
| 115/230 VAC 60hz | Ft-Lb | Bore Code |
| CMBA56R-3 | 3 | B5 |
| CMBA56R-6 | 6 | B5 |
| CMBA140TR-6 | 6 | B7 |
| 208-230/460 VAC 60hz | | |
| Ft-Lb | Bore Code | |
| CMBA56U-3 | 3 | B5 |
| CMBA56U-6 | 6 | B5 |
| CMBA140TU-6 | 6 | B7 |

Other sizes available. See catalog.

| Motor Conduit Box Orientation | |
|------------------------------------|------------|
| (When looking at fan end of motor) | |
| 0 | 12 O'clock |
| 3 | 3 O'clock |
| 6 | 6 O'clock |
| 9 | 9 O'clock |

| Common C-Face Motors Installed | | | |
|--------------------------------|-----------|------------------|------------------|
| HP Rating | Bore Code | AC Voltage | |
| | | 115/208-230-1-60 | 208-230/460-3-60 |
| 1/4 HP | B5 | DRTFB | DUTFB |
| 1/3 HP | B5 | ERTFB | EUTFB |
| 1/2 HP | B5 | FRTFB | FUTFB |
| | B5 | | FUT-SS |
| | B5 | | FUTF-IDB |
| 3/4 HP | B5 | GRTFB | GUTFB |
| | B5 | | GUT-SS |
| | B5 | | GUTF-IDB |
| 1 HP | B5 | HRTF-5/8B | HUTF5/8B |
| | B5 | | HUT5/8-SS |
| | B5 | | HUTF5/8-IDB |
| | B7 | HRTF-5/8B | HUTFB |
| | B7 | | HUT-SS |
| | B7 | | HUTF-IDB |
| 1.5 HP | B7 | HRTF-5/8B | JUTFB |
| | B7 | | JUTF-SS |
| | B7 | | JUTF-IDB |
| 2 HP | B5 | HRTF-5/8B | KUTF5/8B |
| | B7 | | KUTFB |
| | B7 | | KUTF-SS |
| | B7 | | KUTF-IDB |
| 3 HP | B9 | HRTF-5/8B | LUTFB |
| | B9 | | LUTF-SS |
| | B9 | | LUTF-IDB |
| 5 HP | B9 | HRTF-5/8B | MUTFB |

Other motors available, please see catalog pages 333 to 342.
 T – Totally enclosed non-ventilated
 TF – Totally enclosed fan cooled
 SS – Stainless
 IDB – Inverter Duty (10:1 turn down constant torque)
 B5 – 56C
 B7 – 140TC
 B9 – 180TC

*Example:

Above listed configuration is an example part number using this numbering system.

How to Order

Example:

Required flange input NEMA 56C, and flanged output, 1/3 HP, Class I, 45:1 ratio, lubricated, and standard mounting position.

Order:

1 pc F832BF-45K-B5



800 Series In-Line Helical Gear Drives

Interchange Guide



**Foot Mounted
NEMA C-Face
F800B**



**Foot Mounted
800B**



**Output Flange Mounted
NEMA C-Face
F800BF**



**Output Flange Mounted
800BF**

Boston Gear 800 Series In-Line Helical Gear Drives are designed to be functionally interchangeable with these and many other manufacturer's drives. This chart is intended to be a guide only. Please see appropriate manufacturer's catalogs for exact details regarding ratings and dimensions.

| Manufacturers | Size | Foot Mounted NEMA C-Face F800B | Foot Mounted 800B | Output Flange Mounted NEMA C-Face F800BF | Output Flange Mounted 800BF |
|-----------------|------|--------------------------------------|----------------------|--|-----------------------------------|
| Boston | 830 | F832B/F833B | 832B/833B | F832BF/F833BF | 832BF/833BF |
| SEW Eurodrive | 32 | R32LP | Not Available | RF32LP | Not Available |
| Dodge (Quantis) | NA | Not Available | Not Available | Not Available | Not Available |
| Falk | 03 | 03UCBN2(3)-A | 03UCBN2(3)-N | 03UCFN2(3)-A | 03UCFN2(3)-N |
| David Brown | M03 | M032(3)BAN | M032(3)BRN | M032(3)FAN | M032(3)FRN |
| Flender | E20* | E20 (M, G, OR A)* | E20A* | EF20 (M, G OR A)* | EF20A* |
| Sumitomo | 3090 | H (C or M) 3090/95/97 | H3090/95/97 | HF(C or M) 3090/95/97 | HF3090/95/97 |
| Stober | C002 | C002N-MR | C002N-AW | C002F-MR | C002F-AW |
| Nord | 02 | SK02 | SK02-W | SK02F | SK02-W |
| Boston | 840 | F842B/F843B | 842B/843B | F842BF/F843BF | 842BF/843BF |
| SEW Eurodrive | 40 | R40LP | R40 | RF40LP | RF40 |
| Dodge (Quantis) | 38 | HB382(3)CN | Not Available | HB382(3)CN | Not Available |
| Falk | 04 | 04UCBN2(3)-A | 04UCBN2(3)-N | 04UCFN2(3)-A | 04UCFN2(3)-N |
| David Brown | M04 | M042(3)BAN | M042(3)BRN | M042(3)FAN | M042(3)FRN |
| Flender | 30 | E30/Z30/D30-(M, G, or A) | E30/Z30/D30 | EF30/ZF30/DF30 (M, G or A) | EF30/ZF30/DF30 |
| Sumitomo | 3100 | H(C or M) 3100/05 | H3100/05 | HF(C or M) 3100/05 | HF3100/05 |
| Stober | C100 | C102/3N-MR | C102/3N-AW | C102/3F-MR | C102/3F-AW |
| Nord | 12 | SK12(3) | SK12(3)-W | SK12(3)F | SK12(3)F-W |
| Boston | 860 | F862B/F863B | 862B/863B | F862BF/F863BF | 862BF/863BF |
| SEW Eurodrive | 60 | R60LP/R63LP | R60/R63 | RF60LP/RF63LP | RF60/RF63 |
| Dodge (Quantis) | 48 | HB482(3)CN | Not Available | HB482(3)CN | Not Available |
| Falk | 06 | 06UCBN2(3)-A | 06UCBN2(3)-N | 06UCFN2(3)-A | 06UCFN2(3)-N |
| David Brown | M06 | M062(3)BAN | M062(3)BRN | M062(3)FAN | M062(3)FRN |
| Flender | 40 | E40/Z40/D40-(M, G or A) | E40/Z40/D40 | EF40/ZF40/DF40-(M, G or A) | EF40/ZF40/DF40 |
| Sumitomo | 3110 | H(C or M) 3110/15 | H3110/15 | HF(C or M) 3110/15 | HF3110/15 |
| Stober | C200 | C202/3N-MR | C202/3N-AW | C202/3F-MR | C202/3F-AW |
| Nord | 22 | SK22 | SK22(3)-W | SK22(3)F | SK22(3)F-W |
| Boston | 870 | F872B/F873B | 872B/873B | F872BF/F873BF | 872BF/873BF |
| SEW Eurodrive | 70 | R70LP/R73LP | R70/R73 | RF70LP/RF73LP | RF70/RF73 |
| Dodge (Quantis) | 68 | HB682(3)CN | Not Available | HB682(3)CN | Not Available |
| Falk | 07 | 07UCBN2(3)-A | 07UCBN2(3)-N | 07UCFN2(3)-A | 07UCFN2(3)-N |
| David Brown | M07 | M072(3)BAN | M072(3)BRN | M072(3)FAN | M072(3)FRN |
| Flender | 60 | E60/Z60/D60 - (M,D or A) | E60/Z60/D60 | EF60/ZF60/DF60 (M, D or A) | EF60/ZF60/DF60 |
| Sumitomo | 3140 | H(C or M) 3140/45 | H3140/45 | HF(C or M) 3140/45 | HF3140/45 |
| Stober | C400 | C402/3N-MR | C402/3N-AW | C402/3F-MR | C402/3F-AW |
| Nord | 32 | SK32(3) | SK32(3)-W | SK32(3)F | SK32(3)F-W |

* Single reduction models only.

If you require assistance with an interchange, please contact our customer service department at 1-888-999-9860.

800 Series In-Line Helical Gear Drives

Motorized Gear Drives

1. Determine application service factor from page 154, or from Application Classifications on pages 348-349.
2. Determine output speed required.
3. Determine HP or output torque requirement.
4. Select a speed reducer size based on output speed and horsepower requirement for given service class.
5. Check overhung load calculation.

Example

Select an In-line motorized helical gear drive and motor to drive a uniformly loaded line conveyor 24 hours/day requiring 2 HP at 35 RPM.

POWER REQUIREMENT

230/460 volt
3 phase
60 hertz

1. Select Service Factor Class from page 154.
Service Class = II
2. Output RPM = 35
3. 2 HP
4. Select a 2 HP drive that will satisfy minimum of II service class.
5. O.H.L. = 1720 lbs. page 157
6. Order: 1 - F872B-50K-B7 (F01078)
1 - KUTF Motor Ref - page 339 for specific motor manufacturer.

Both a double and triple reduction gear drive is available. The double reduction will have an economic advantage. The triple reduction should be specified when relative rotation is of concern.

Overhung Load

If the output shaft of a gear drive is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

OHL = Overhung Load (LB.)
T = Shaft Torque (LB.-IN.)
D = Pitch Diameter of Sprocket, Pinion or Pulley (IN.)
K = Load Connection Factor

Load Connection Factor (K)

| | |
|-------------------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive. | 1.50 |
| Pulley and Flat Belt Drive. | 2.50 |

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley of a larger PD. Relocation of the load closer to the center of gear drive will also increase OHL capacity.

Permissible Overhung Loads and Output Shaft Thrust Loads are listed for each reducer in the Tables on Page 157.



In-Line Helical Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|------------------------|--------|-------------------------|-------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 35 | 50 | 5216 | 3.16 | 872B-50K (F00436) | 872BF-50K (F00469) | 3 | 4900 | I | F872B-50K-B9 (F01079) | F872BF-50K-B9 (F01125) |
| | | | | | | 2 | 3268 | II | F872B-50K-B7 (F01078) | F872BF-50K-B7 (F01124) |
| | | 5290 | 3.02 | 873B-50K (F00489) | 873BF-50K (F00507) | 3 | 5256 | I | F873B-50K-B9 (F01154) | F873BF-50K-B9 (F001182) |
| | | | | | | 2 | 3504 | II | F873B-50K-B7 (F01153) | F873BF-50K-B7 (F01181) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service Class III (S.F. = 2.00)
Overhung Load Ratings refer to Page 157.
Indicates Triple Reduction

800 Series In-Line Helical Gear Drives

To properly select a gear drive, the following application information should be known.

1. Service Factor or AGMA Service class.
2. Output Horsepower or Torque
3. Output RPM or Ratio
(Maximum Input Speed 4500 RPM)

Consult Engineering for mounting positions: M2, M3, M4, M6, M7, and M9

Non-Motorized Gear Drives

1. Determine application service factor from the service factor chart on this page, or from Application Classifications on pages 348-349.
2. Determine design Horsepower or Torque.
- Design HP = Application HP x S.F.
- Design Torque = Application Torque x S.F.
3. Select a Gear drive that satisfies output RPM, service class and/or output torque requirement.
Reference rating tables pages 176-185.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 157 for calculations.

Example

Select an In-line 800 Series Gear Drive for a continuous duty concrete mixer requiring 700 lb-in. of torque at approx. 1000 RPM, to operate up to 8 hrs/day. The Gear Drive will be driven at 1450 input RPM.

1. Application Service Factor = 1.25
2. Design Torque = 700 x 1.25 = 875 LB-IN.
3. Select at speed and torque level of 875 LB-IN. or greater.
4. Order 862B1.5K.

NOTE: The use of an auxiliary drive between the gear drive and the driven machine reduces the torque required at the output shaft in direct proportion to the auxiliary drive ratio.

A 3:1 chain ratio would reduce the torque requirement at the output shaft of the gear drive to one-third, resulting in a smaller unit size selection.

SERVICE FACTOR CHART

| AGMA CLASS OF SERVICE | SERVICE FACTOR | OPERATING CONDITIONS |
|-----------------------|----------------|--|
| I | 1.00 | Moderate Shock-not more than 15 minutes in 2 hours Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. Uniform Load-more than 10 hours per day. |
| | 1.50 | Heavy Shock-not more than 15 minutes in 2 hours. Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day." |

For complete AGMA Service Factors and Load Classifications, see Engineering Pages 348-349.

800 Series In-Line Helical Ratings

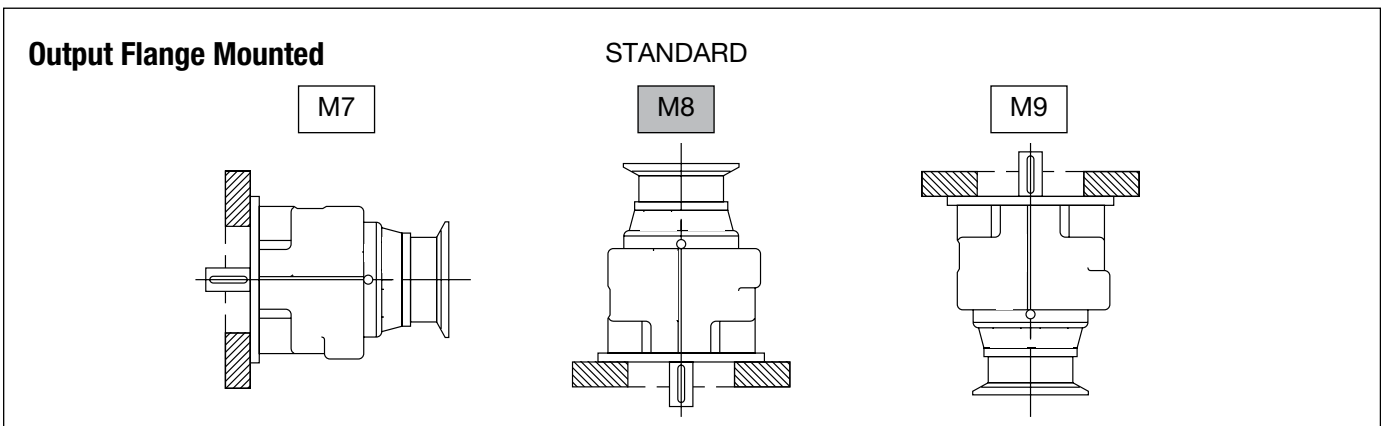
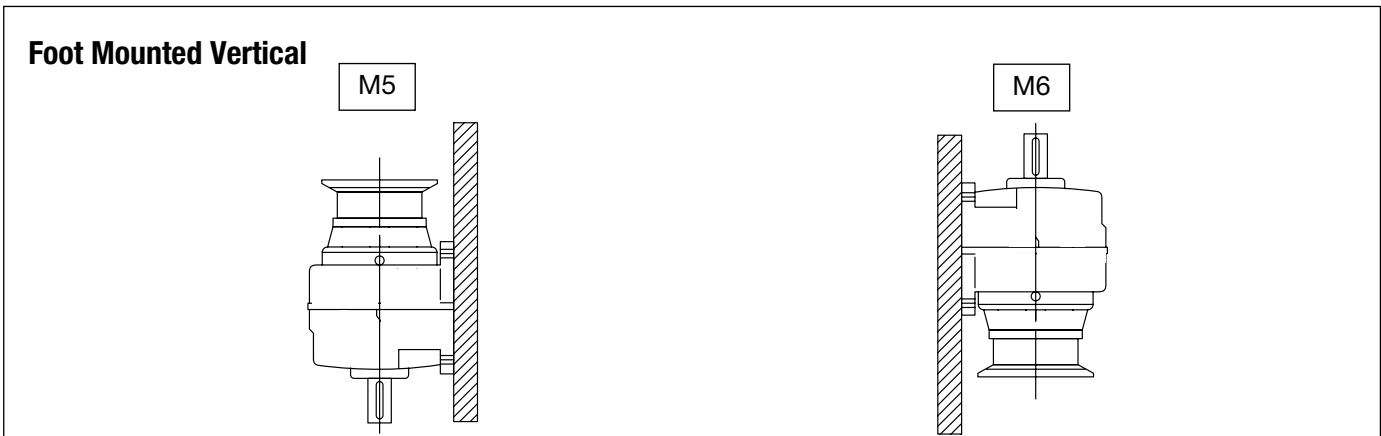
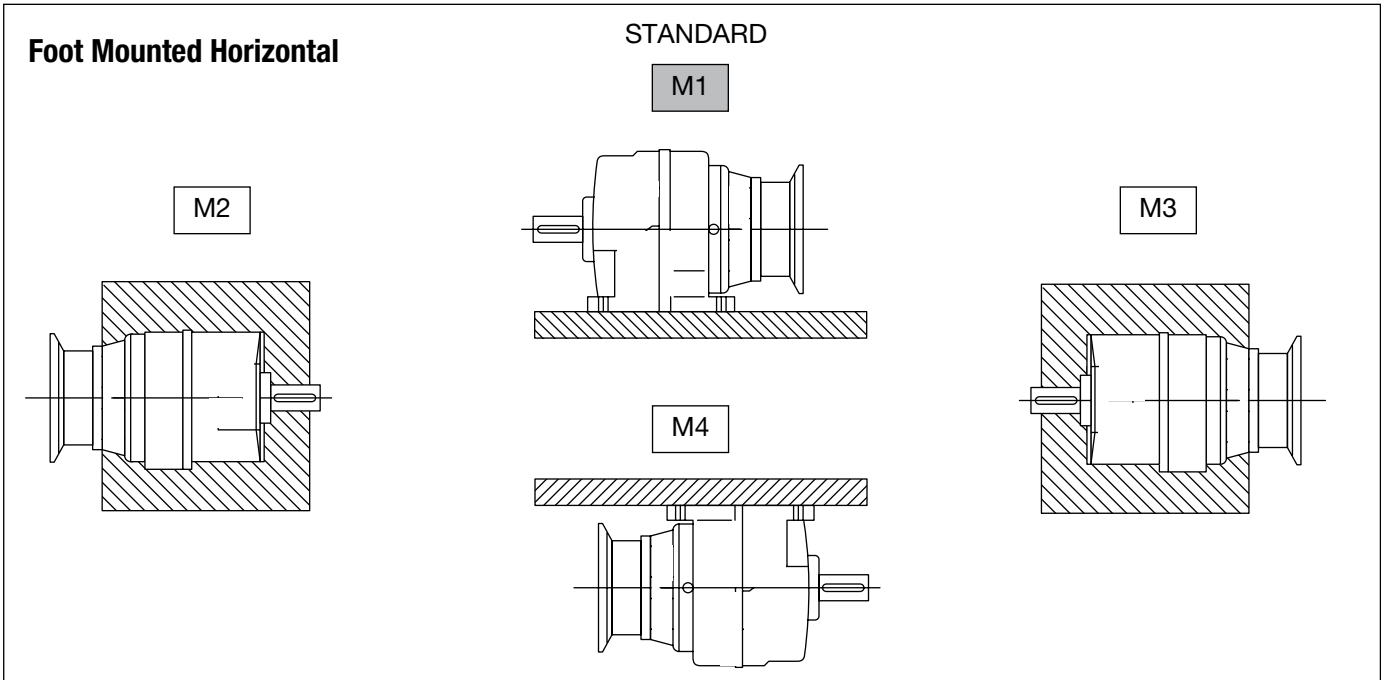
Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832B/BF1.5K | 1170 | 288 | 5.80 | 970 | 293 | 4.82 | 773 | 293 | 3.85 |
| 842B/BF1.5K | 1170 | 479 | 9.08 | 970 | 509 | 8.00 | 773 | 549 | 6.89 |
| 862B/BF1.5K | 1170 | 830 | 16.20 | 970 | 884 | 14.30 | 773 | 950 | 12.30 |
| 872B/BF1.5K | 1170 | 1094 | 21.20 | 970 | 1090 | 17.50 | 773 | 1090 | 14.00 |

800 Series In-Line Helical Mounting Positions

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Positions M1 & M8 are standard and will be supplied with oil for this position unless otherwise specified.

CAUTION - Mounting of gear drives in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

Avoiding those positions where the high speed oil seal is immersed in oil will provide greater security against high speed input seal wear.

Note: The above drawings will serve to represent both flanged and non-flanged styles

800 Series In-Line Helical Gear Drives

Lubricants

Lubricant and Quantity

Klubersynth Synthetic UH1 6-460 is recommended for the 800 Series gear drives and, at all times, the lubricant must remain free from contamination. Normal operating temperatures range between 150°F - 170°F. During the initial break-in of the gear drive, higher than normal operating temperatures may result.

All gear drives are supplied filled with UH1 6-460 synthetic oil and with the quantity listed below for standard mounting position M1 or M8 or to mounting specified at time of order.

- Sizes 832/833B and 842/843B do not require a vent plug.
- Sizes 862/863B and 872/873B will require an oil change after 20,000 hours of operation. More frequent changes may be required when operating in high temperature ranges or unusually contaminated environments.
- Satisfactory performance may be obtained in some applications with non-synthetic oils and will require more frequent changes.

| Recommended Lubricant | Ambient (Room) Temperature | ISO Viscosity Grade No. | Viscosity Range SUS @100°F | Boston Gear Item Code |
|-----------------------|-------------------------------|-------------------------|----------------------------|-----------------------|
| | | | | Quart |
| Klubersynth UH1 6-460 | -20° to 225°F (-29° to 107°C) | 460 | 1950/2500 | 65159 |
| Mobile SHC634 | -30° to 225°F (-34° to 107°C) | 320 / 460 | 1950/2500 | 51493 |

OIL CAPACITIES (PINTS)

| UNIT | MOUNTING POSITIONS | | | | | | | | |
|------|--------------------|------|------|------|------|------|-----------------------|------|------|
| | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 |
| SIZE | Foot Mounted | | | | | | Output Flange Mounted | | |
| 832B | 1.3 | 1.3 | 2.3 | 1.7 | 2.1 | 2.1 | 1.3 | 2.0 | 2.2 |
| 833B | 2.8 | 1.7 | 3.0 | 2.6 | 3.6 | 3.2 | 1.7 | 3.0 | 3.3 |
| 842B | 1.8 | 2.0 | 2.6 | 2.4 | 3.0 | 3.0 | 2.0 | 3.4 | 3.4 |
| 843B | 3.4 | 3.0 | 3.4 | 3.4 | 4.4 | 3.8 | 3.4 | 4.8 | 4.8 |
| 862B | 4.0 | 4.6 | 6.0 | 7.0 | 8.0 | 8.0 | 4.6 | 8.6 | 9.4 |
| 863B | 9.0 | 5.8 | 8.0 | 8.8 | 11.0 | 11.0 | 5.8 | 11.0 | 11.0 |
| 872B | 8.0 | 8.6 | 12.0 | 12.0 | 14.4 | 14.4 | 8.6 | 16.4 | 16.0 |
| 873B | 16.0 | 11.0 | 14.0 | 14.0 | 19.0 | 19.0 | 11.0 | 19.0 | 19.0 |

Refer to mounting positions on page 155.

800 Series In-Line Helical Gear Drives

Overhung Loads

OVERHUNG LOADS (LBS) & AXIAL THRUST (LBS) CAPACITIES ON OUTPUT SHAFT

| OUTPUT RPM | 832 / 833 OHL | 842 / 843 OHL | 862 / 863 OHL | 872 / 873 OHL |
|---------------|---------------|---------------|---------------|---------------|
| 1000 | 270 | 425 | 715 | 950 |
| 500 | 300 | 455 | 805 | 1065 |
| 350 | 340 | 465 | 830 | 1065 |
| 250 | 360 | 485 | 880 | 1065 |
| 200 | 385 | 505 | 900 | 1065 |
| 150 | 385 | 525 | 945 | 1090 |
| 100 | 385 | 620 | 1010 | 1275 |
| 50 | 385 | 770 | 1360 | 1720 |
| 25 & under | 385 | 770 | 1600 | 2090 |
| THRUST | 390 | 635 | 1200 | 1580 |

Overhung loads are calculated at the center of the shaft extension and with no thrust load. For combined loading consult factory.

OVERHUNG LOADS (LBS) ON INPUT SHAFT AT 1750 RPM

| SIZE | 832 | 833 | 842 | 843 | 862 | 863 | 872 | 873 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|
| OHL | 344 | 390 | 314 | 373 | 310 | 315 | 402 | 371 |

Overhung loads are calculated at the center of the shaft extension and with no thrust load.



800 Series In-Line Helical Gear Drives

Weights

APPROXIMATE WEIGHTS (LBS)

| NON-FLANGE | | FLANGE | | | | |
|------------|-----|--------|---------------|----------|----------|-----------|
| SIZE | LBS | SIZE | NEMA MOUNTING | | | |
| | | | 56C B5 | 140TC B7 | 180TC B9 | 210TC B11 |
| 832B | 19 | F832B | 22 | 22 | 25 | — |
| 832BF | 21 | F832BF | 24 | 24 | 27 | — |
| 842B | 25 | F842B | 29 | 29 | 32 | — |
| 842BF | 29 | F842BF | 33 | 33 | 36 | — |
| 862B | 48 | F862B | 49 | 49 | 63 | 63 |
| 862BF | 50 | F862BF | 51 | 51 | 66 | 66 |
| 872B | 86 | F872B | 92 | 92 | 99 | 99 |
| 872BF | 92 | F872BF | 99 | 99 | 105 | 105 |
| 833B | 26 | F833B | 30 | — | — | — |
| 833BF | 29 | F833BF | 32 | — | — | — |
| 843B | 33 | F843B | 37 | — | — | — |
| 843BF | 37 | F843BF | 41 | — | — | — |
| 863B | 57 | F863B | 61 | 61 | — | — |
| 863BF | 59 | F863BF | 63 | 63 | — | — |
| 873B | 106 | F873B | 107 | 107 | 121 | — |
| 873BF | 113 | F873BF | 114 | 114 | 128 | — |

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800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|------------------------|-------------------------|-------------------------|----------------------|----------------------------|-----------------------------|---------------------------|----------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 1170 | 1.5 | 288 | 5.80 | 832B-1.5K (F00103) | 832BF-1.5K-M8 (F00136) | 5 | 251 | I | F832B-1.5K-B9-M1 (F00591) | F832BF-1.5K-B9-M8 (F00653) |
| | | | | | | 3 | 149 | II | | |
| | | 479 | 9.08 | 842B-1.5K (F00205) | 842BF-1.5K-M8 (F00238) | 2 | 98 | III | F832B-1.5K-B7-M1 (F00590) | F832BF-1.5K-B7-M8 (F00652) |
| | | | | | | 5 | 248 | II | F842B-1.5K-B9-M1 (F00728) | F842BF-1.5K-B9-M8 (F00787) |
| 830 | 16.20 | 862B-1.5K (F00307) | 862BF-1.5K-M8 (F00341) | 10 | 500 | II | F862B-1.5K-B11-M1 (F00871) | F862BF-1.5K-B11-M8 (F00935) | | |
| | | | | 7.5 | 380 | III | | | | |
| 1094 | 21.20 | 872B-1.5K (F00411) | 872BF-1.5K-M8 (F00444) | 10 | 510 | III | F872B-1.5K-B11-M1 (F01044) | F872BF-1.5K-B11-M8 (F01090) | | |
| | | | | | | | | | | |
| 922 | 1.9 | 325 | 4.77 | 832B-1.9K (F00104) | 832BF-1.9K-M8 (F00137) | 3 | 200 | II | F832B-1.9K-B9-M1 (F00593) | F832BF-1.9K-B9-M8 (F00655) |
| | | | | | | 2 | 133 | III | F832B-1.9K-B7-M1 (F00592) | F832BF-1.9K-B7-M8 (F00654) |
| | | 643 | 8.69 | 842B-1.9K (F00206) | 842BF-1.9K-M8 (F00239) | 5 | 343 | II | F842B-1.9K-B9-M1 (F00729) | F842BF-1.9K-B9-M8 (F00788) |
| | | | | | | 3 | 209 | III | | |
| 1100 | 15.40 | 862B-1.9K (F00308) | 862BF-1.9K-M8 (F00342) | 10 | 710 | II | F862B-1.9K-B11-M1 (F00872) | F862BF-1.9K-B11-M8 (F00936) | | |
| | | | | 7.5 | 535 | III | | | | |
| 1492 | 21.20 | 872B-1.9K (F00412) | 872BF-1.9K-M8 (F00445) | 10 | 695 | III | F872B-1.9K-B11-M1 (F01045) | F872BF-1.9K-B11-M8 (F01091) | | |
| | | | | 7.5 | 521 | III | | | | |
| 760 | 2.3 | 333 | 4.29 | 832B-2.3K (F00111) | 832BF-2.3K-M8 (F00144) | 3 | 234 | I | F832B-2.3K-B9-M1 (F00604) | F832BF-2.3K-B9-M8 (F00664) |
| | | | | | | 2 | 156 | III | F832B-2.3K-B7-M1 (F00603) | F832BF-2.3K-B7-M8 (F00663) |
| | | 695 | 8.52 | 842B-2.3K (F00213) | 842BF-2.3K-M8 (F00246) | 5 | 378 | II | F842B-2.3K-B9-M1 (F00742) | F842BF-2.3K-B9-M8 (F00801) |
| | | | | | | 3 | 226 | III | | |
| 1217 | 15.00 | 862B-2.3K (F00315) | 862BF-2.3K-M8 (F00349) | 10 | 800 | II | F862B-2.3K-B11-M1 (F00884) | F862BF-2.3K-B11-M8 (F00946) | | |
| | | | | 7.5 | 600 | III | | | | |
| 1680 | 21.20 | 872B-2.3K (F00419) | 872BF-2.3K-M8 (F00452) | 10 | 780 | III | F872B-2.3K-B11-M1 (F01055) | F872BF-2.3K-B11-M8 (F01101) | | |
| | | | | | | | | | | |
| 673 (CONT.) | 2.6 | 350 | 3.98 | 832B-2.6K-M1 (F00112) | 832BF-2.6K-M8 (F00145) | 3 | 257 | I | F832B-2.6K-B9-M1 (F00606) | F832BF-2.6K-B9-M8 (F00666) |
| | | | | | | 2 | 171 | III | F832B-2.6K-B7-M1 (F00605) | F832BF-2.6K-B7-M8 (F00665) |
| | | 715 | 7.95 | 842B-2.6K-M1 (F00214) | 842BF-2.6K-M8 (F00247) | 5 | 416 | II | F842B-2.6K-B9-M1 (F00743) | F842BF-2.6K-B9-M8 (F00802) |
| 3 | 250 | | | | | III | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|------------------------|-------------------------|-------------------------|----------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 673 (CONT.) | 2.6 | 1320 | 14.50 | 862B-2.6K-M1 (F00316) | 862BF-2.6K-M8 (F00350) | 10 7.5 | 900 676 | II III | F862B-2.6K-B11-M1 (F00885) | F862BF-2.6K-B11-M8 (F00947) |
| | | 1800 | 21.20 | 872B-2.6K-M1 (F00420) | 872BF-2.6K-M8 (F00453) | 10 | 840 | III | F872B-2.6K-B11-M1 (F01056) | F872BF-2.6K-B11-M8 (F01102) |
| 605 | 2.9 | 533 | 5.18 | 832B-2.9K-M1 (F00113) | 832BF-2.9K-M8 (F00146) | 5 3 | 508 305 | I III | F832B-2.9K-B9-M1 (F00607) | F832BF-2.9K-B9-M8 (F00667) |
| | | 840 | 8.34 | 842B-2.9K-M1 (F00215) | 842BF-2.9K-M8 (F00248) | 5 3 | 500 300 | II III | F842B-2.9K-B9-M1 (F00744) | F842BF-2.9K-B9-M8 (F00803) |
| | | 1560 | 15.90 | 862B-2.9K-M1 (F00317) | 862BF-2.9K-M8 (F00351) | 10 7.5 | 972 730 | II III | F862B-2.9K-B11-M1 (F00886) | F862BF-2.9K-B11-M8 (F00948) |
| | | 2135 | 21.20 | 872B-2.9K-M1 (F00421) | 872BF-2.9K-M8 (F00454) | 10 | 998 | III | F872B-2.9K-B11-M1 (F01057) | F872BF-2.9K-B11-M8 (F01103) |
| 530 | 3.3 | 370 | 3.24 | 832B-3.3K-M1 (F00118) | 832BF-3.3K-M8 (F00151) | 3 | 338 | I | F832B-3.3K-B9-M1 (F00615) | F832BF-3.3K-B9-M8 (F00673) |
| | | | | | | 2 1.5 | 226 169 | II III | F832B-3.3K-B7-M1 (F00613) | F832BF-3.3K-B7-M8 (F00672) |
| | | 775 | 7.03 | 842B-3.3K-M1 (F00220) | 842BF-3.3K-M8 (F00253) | 5 3 | 510 306 | I III | F842B-3.3K-B9-M1 (F00757) | F842BF-3.3K-B9-M8 (F00812) |
| | | 1550 | 13.40 | 862B-3.3K-M1 (F00323) | 862BF-3.3K-M8 (F00356) | 10 7.5 | 1145 858 | I II | F862B-3.3K-B11-M1 (F00898) | F862BF-3.3K-B11-M8 (F00957) |
| | | | | | | 5 | 572 | III | F862B-3.3K-B9-M1 (F00899) | F862BF-3.3K-B9-M8 (F00958) |
| 2398 | 21.20 | 872B-3.3K-M1 (F00426) | 872BF-3.3K-M8 (F00459) | 10 | 1120 | III | F872B-3.3K-B11-M1 (F01064) | F872BF-3.3K-B11-M8 (F01110) | | |
| 500 | 3.5 | 376 | 3.11 | 832B-3.5K-M1 (F00119) | 832BF-3.5K-M8 (F00152) | 3 | 358 | I | F832B-3.5K-B9-M1 (F00617) | F832BF-3.5K-B9-M8 (F00675) |
| | | | | | | 2 1.5 | 241 180 | II III | F832B-3.5K-B7-M1 (F00616) | F832BF-3.5K-B7-M8 (F00674) |
| | | 858 | 6.46 | 842B-3.5K-M1 (F00221) | 842BF-3.5K-M8 (F00254) | 5 3 | 600 358 | I III | F842B-3.5K-B9-M1 (F00758) | F842BF-3.5K-B9-M8 (F00813) |
| | | 1665 | 12.70 | 862B-3.5K-M1 (F00324) | 862BF-3.5K-M8 (F00357) | 10 7.5 | 1298 974 | I II | F862B-3.5K-B11-M1 (F00900) | F862BF-3.5K-B11-M8 (F00959) |
| | | | | | | 5 | 680 | III | F862B-3.5K-B9-M1 (F00901) | F862BF-3.5K-B9-M8 (F00960) |
| 2704 | 21.00 | 872B-3.5K-M1 (F00427) | 872BF-3.5K-M8 (F00460) | 10 | 1275 | III | F872B-3.5K-B11-M1 (F01065) | F872BF-3.5K-B11-M8 (F01111) | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|------------------------|-------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 448 | 3.9 | 552 | 3.97 | 832B-3.9K-M1 (F00120) | 832BF-3.9K-M8 (F00153) | 3 | 412 | I | F832B-3.9K-B9-M1 (F00619) | F832BF-3.9K-B9-M8 (F00677) | |
| | | | | | | 2 | 275 | III | F832B-3.9K-B7-M1 (F00618) | F832BF-3.9K-B7-M8 (F00676) | |
| | | 959 | 6.96 | 842B-3.9K-M1 (F00222) | 842BF-3.9K-M8 (F00255) | 5 | 700 | I | F842B-3.9K-B9-M1 (F00759) | F842BF-3.9K-B9-M8 (F00814) | |
| | | | | | | 3 | 420 | III | | | |
| | | 1835 | 13.30 | 862B-3.9K-M1 (F00325) | 862BF-3.9K-M8 (F00358) | 10 | 1366 | I | F862B-3.9K-B11-M1 (F00902) | F862BF-3.9K-B11-M8 (F00961) | |
| 7.5 | 1024 | | | | | II | | | | | |
| | | 5 | 683 | III | F862B-3.9K-B9-M1 (F00903) | F862BF-3.9K-B9-M8 (F00962) | | | | | |
| 2902 | 21.20 | 872B-3.9K-M1 (F00428) | 872BF-3.9K-M8 (F00461) | 10 | 1355 | III | F872B-3.9K-B11-M1 (F01066) | F872BF-3.9K-B11-M8 (F01112) | | | |
| 400 | 4.4 | 572 | 3.54 | 832B-4.4K-M1 (F00123) | 832BF-4.4K-M8 (F00156) | 3 | 480 | I | F832B-4.4K-B9-M1 (F00625) | F832BF-4.4K-B9-M8 (F00681) | |
| | | | | | | 2 | 320 | II | F832B-4.4K-B7-M1 (F00624) | F832BF-4.4K-B7-M8 (F00680) | |
| | | 1000 | 6.59 | 842B-4.4K-M1 (F00225) | 842BF-4.4K-M8 (F00258) | 5 | 773 | I | F842B-4.4K-B9-M1 (F00764) | F842BF-4.4K-B9-M8 (F00817) | |
| | | | | | | 3 | 464 | III | | | |
| | | 1933 | 12.50 | 862B-4.4K-M1 (F00328) | 862BF-4.4K-M8 (F00361) | 10 | 1531 | I | F862B-4.4K-B11-M1 (F00909) | F862BF-4.4K-B11-M8 (F00967) | |
| 7.5 | 1148 | | | | | II | | | | | |
| | | 5 | 766 | III | F862B-4.4K-B9-M1 (F00910) | F862BF-4.4K-B9-M8 (F00968) | | | | | |
| 3265 | 21.20 | 872B-4.4K-M1 (F00431) | 872BF-4.4K-M8 (F00464) | 10 | 1524 | III | F872B-4.4K-B11-M1 (F01071) | F872BF-4.4K-B11-M8 (F01117) | | | |
| 340 | 5.1 | 592 | 3.31 | 832B-5.1K-M1 (F00126) | 832BF-5.1K-M8 (F00159) | 3 | 531 | I | F832B-5.1K-B9-M1 (F00634) | F832BF-5.1K-B9-M8 (F00686) | |
| | | | | | | 2 | 354 | II | F832B-5.1K-B7-M1 (F00631) | F832BF-5.1K-B7-M8 (F00684) | |
| | | 1065 | 5.96 | 842B-5.1K-M1 (F00228) | 842BF-5.1K-M8 (F00261) | 5 | 840 | I | F842B-5.1K-B9-M1 (F00769) | F842BF-5.1K-B9-M8 (F00820) | |
| | | | | | | 3 | 504 | III | | | |
| | | 2042 | 11.60 | 862B-5.1K-M1 (F00331) | 862BF-5.1K-M8 (F00365) | 10 | 1742 | I | F862B-5.1K-B11-M1 (F00915) | F862BF-5.1K-B11-M8 (F00973) | |
| 7.5 | 1306 | | | | | II | | | | | |
| | | 5 | 870 | III | F862B-5.1K-B9-M1 (F00916) | F862BF-5.1K-B9-M8 (F00974) | | | | | |
| 3698 | 21.20 | 872B-5.1K-M1 (F00434) | 872BF-5.1K-M8 (F00467) | 10 | 1726 | III | F872B-5.1K-B11-M1 (F01076) | F872BF-5.1K-B11-M8 (F01122) | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|------------------------|-------------------------|-------------------------|----------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 307 | 5.7 | 563 | 2.91 | 832B-5.7K-M1 (F00127) | 832BF-5.7K-M8 (F00160) | 2 | 383 | I | F832B-5.7K-B7-M1 (F00636) | F832BF-5.7K-B7-M8 (F00688) | |
| | | | | | | 1.5 | 287 | II | | | |
| | | 1110 | 5.64 | 842B-5.7K-M1 (F00229) | 842BF-5.7K-M8 (F00262) | 1 | 191 | III | F832B-5.7K-B5-M1 (F00635) | F832BF-5.7K-B5-M8 (F00687) | |
| | | | | | | 5 | 925 | I | | | |
| | | 2140 | 10.80 | 862B-5.7K-M1 (F00332) | 862BF-5.7K-M8 (F00366) | 3 | 555 | II | F842B-5.7K-B9-M1 (F00771) | F842BF-5.7K-B9-M8 (F00822) | |
| | | | | | | 2 | 370 | III | | | |
| 4160 | 21.20 | 872B-5.7K-M1 (F00435) | 872BF-5.7K-M8 (F00468) | 7.5 | 1464 | II | F862B-5.7K-B11-M1 (F00918) | F862BF-5.7K-B11-M8 (F00975) | | | |
| | | | | 5 | 976 | III | | | | | |
| | | | | | | 10 | 1942 | III | F872B-5.7K-B11-M1 (F01077) | F872BF-5.7K-B11-M8 (F01123) | |
| | | | | | | | | | | | |
| 273 | 6.4 | 588 | 2.52 | 832B-6.4K-M1 (F00130) | 832BF-6.4K-M8 (F00163) | 2 | 462 | I | F832B-6.4K-B7-M1 (F00642) | F832BF-6.4K-B7-M8 (F00692) | |
| | | | | | | 1.5 | 346 | II | | | |
| | | 1095 | 5.34 | 842B-6.4K-M1 (F00232) | 842BF-6.4K-M8 (F00265) | 1 | 230 | III | F832B-6.4K-B5-M1 (F00641) | F832BF-6.4K-B5-M8 (F00691) | |
| | | | | | | 5 | 1014 | I | | | |
| | | 2248 | 10.20 | 862B-6.4K-M1 (F00335) | 862BF-6.4K-M8 (F00369) | 3 | 608 | II | F842B-6.4K-B9-M1 (F00777) | F842BF-6.4K-B9-M8 (F00826) | |
| | | | | | | 2 | 406 | III | | | |
| 4623 | 20.90 | 872B-6.4K-M1 (F00438) | 872BF-6.4K-M8 (F00471) | 7.5 | 1636 | II | F862B-6.4K-B11-M1 (F00924) | F862BF-6.4K-B11-M8 (F00980) | | | |
| | | | | 5 | 1091 | III | | | | | |
| | | | | | | 10 | 2189 | III | F872B-6.4K-B11-M1 (F01082) | F872BF-6.4K-B11-M8 (F01128) | |
| 246 | 7.2 | 576 | 2.34 | 832B-7.2K-M1 (F00132) | 832BF-7.2K-M8 (F00165) | 2 | 488 | I | F832B-7.2K-B7-M1 (F00646) | F832BF-7.2K-B7-M8 (F00695) | |
| | | | | | | 1.5 | 366 | II | | | |
| | | 1171 | 4.88 | 842B-7.2K-M1 (F00234) | 842BF-7.2K-M8 (F00267) | 1 | 244 | III | F832B-7.2K-B5-M1 (F00644) | F832BF-7.2K-B5-M8 (F00694) | |
| | | | | | | 5 | 1171 | I | | | |
| | | 2380 | 9.49 | 862B-7.2K-M1 (F00337) | 862BF-7.2K-M8 (F00371) | 3 | 713 | II | F842B-7.2K-B9-M1 (F00781) | F842BF-7.2K-B9-M8 (F00829) | |
| | | | | | | 2 | 475 | III | | | |
| 4859 | 19.30 | 872B-7.2K-M1 (F00440) | 872BF-7.2K-M8 (F00473) | 7.5 | 1855 | I | F862B-7.2K-B11-M1 (F00928) | F862BF-7.2K-B11-M8 (F00984) | | | |
| | | | | 5 | 1237 | III | | | | | |
| | | | | | | 10 | 2492 | III | F872B-7.2K-B11-M1 (F01085) | F872BF-7.2K-B11-M8 (F01131) | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|---------------------------|----------------------------|---------------------------|----------------------------|--------------------------|---------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | | |
| 218 | 8 | 560 | 2.01 | 832B-8K-M1 (F00134) | 832BF-8K-M8 (F00167) | 2 | 560 | I | F832B-8K-B7-M1 (F00649) | F832BF-8K-B7-M8 (F00698) | | |
| | | | | | | 1.5 | 415 | II | | | | |
| | | 1206 | 4.54 | 842B-8K-M1 (F00236) | 842BF-8K-M8 (F00269) | 1 | 276 | III | F832B-8K-B5-M1 (F00648) | F832BF-8K-B5-M8 (F00697) | | |
| | | | | | | 3 | 797 | I | F842B-8K-B9-M1 (F00784) | F842BF-8K-B9-M8 (F00832) | | |
| | | 2480 | 8.82 | 862B-8K-M1 (F00339) | 862BF-8K-M8 (F00373) | 2 | 526 | III | F842B-8K-B7-M1 (F00783) | F842BF-8K-B7-M8 (F00831) | | |
| | | | | | | 7.5 | 2087 | I | F862B-8K-B11-M1 (F00931) | F862BF-8K-B11-M8 (F00987) | | |
| | | 5074 | 18.00 | 872B-8K-M1 (F00442) | 872BF-8K-M8 (F00475) | 5 | 1391 | II | F862B-8K-B9-M1 (F00932) | F862BF-8K-B9-M8 (F00988) | | |
| | | | | | | 3 | 835 | III | | | | |
| | | 194 | 9 | 636 | 1.86 | 832B-9K-M1 (F00135) | 832BF-9K-M8 (F00168) | 10 | 2790 | II | F872B-8K-B11-M1 (F01088) | F872BF-8K-B11-M8 (F01134) |
| | | | | | | | | 7.5 | 2092 | III | | |
| 1275 | 4.14 | | | 842B-9K-M1 (F00237) | 842BF-9K-M8 (F00270) | 1.5 | 508 | I | F832B-9K-B7-M1 (F00651) | F832BF-9K-B7-M8 (F00700) | | |
| | | | | | | 1 | 338 | II | F832B-9K-B5-M1 (F00650) | F832BF-9K-B5-M8 (F00699) | | |
| 2608 | 8.18 | | | 862B-9K-M1 (F00340) | 862BF-9K-M8 (F00374) | .75 | 253 | III | | | | |
| | | | | | | 3 | 924 | I | F842B-9K-B9-M1 (F00786) | F842BF-9K-B9-M8 (F00834) | | |
| 5358 | 16.70 | | | 872B-9K-M1 (F00443) | 872BF-9K-M8 (F00476) | 2 | 616 | III | F842B-9K-B7-M1 (F00785) | F842BF-9K-B7-M8 (F00833) | | |
| | | | | | | 7.5 | 2366 | I | F862B-9K-B11-M1 (F00933) | F862BF-9K-B11-M8 (F00989) | | |
| 175 | 10 | | | 576 | 1.63 | 832B-10K-M1 (F00105) | 832BF-10K-M8 (F00138) | 5 | 1577 | II | F862B-9K-B9-M1 (F00934) | F862BF-9K-B9-M8 (F00990) |
| | | | | | | | | 3 | 946 | III | | |
| | | 1295 | 3.82 | 842B-10K-M1 (F00207) | 842BF-10K-M8 (F00240) | 10 | 3175 | II | F872B-9K-B11-M1 (F01089) | F872BF-9K-B11-M8 (F01135) | | |
| | | | | | | 7.5 | 2381 | III | | | | |
| | | 2600 | 7.56 | 862B-10K-M1 (F00309) | 862BF-10K-M8 (F00343) | 1.5 | 524 | I | F832B-10K-B7-M1 (F00595) | F832BF-10K-B7-M8 (F00657) | | |
| | | | | | | 1 | 349 | II | F832B-10K-B5-M1 (F00594) | F832BF-10K-B5-M8 (F00656) | | |
| | | 5360 | 15.70 | 872B-10K-M1 (F00413) | 872BF-10K-M8 (F00446) | 3 | 1006 | I | F842B-10K-B9-M1 (F00732) | F842BF-10K-B9-M8 (F00791) | | |
| | | | | | | 2 | 670 | II | F842B-10K-B7-M1 (F00730) | F842BF-10K-B7-M8 (F00790) | | |
| | | | | | | 1.5 | 503 | III | | | | |
| | | | | | | 7.5 | 2548 | I | F862B-10K-B11-M1 (F00873) | F862BF-10K-B11-M8 (F00937) | | |
| | | | | 5 | 1700 | II | F862B-10K-B9-M1 (F00874) | F862BF-10K-B9-M8 (F00938) | | | | |
| | | | | 3 | 1019 | III | | | | | | |
| | | | | 10 | 3278 | II | F872B-10K-B11-M1 (F01046) | F872BF-10K-B11-M8 (F01092) | | | | |
| | | | | 7.5 | 2458 | III | | | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|-----------------------|-------------------------|-------------------------|----------------------|---------------------------|----------------------------|--------------------------|---------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 159 | 11 | 576 | 1.43 | 832B-11K-M1 (F00106) | 832BF-11K-M8 (F00139) | 1 | 400 | I | F832B-11K-B5-M1 (F00596) | F832BF-11K-B5-M8 (F00658) | |
| | | | | | | .75 | 300 | II | | | |
| | | 1330 | 3.45 | 842B-11K-M1 (F00208) | 842BF-11K-M8 (F00241) | 3 | 1144 | I | F842B-11K-B9-M1 (F00734) | F842BF-11K-B9-M8 (F00793) | |
| | | | | | | 2 | 827 | II | | | |
| 2680 | 6.70 | 862B-11K-M1 (F00310) | 862BF-11K-M8 (F00344) | 5 | 1975 | I | F862B-11K-B9-M1 (F00875) | F862BF-11K-B9-M8 (F00939) | | | |
| | | | | 3 | 1186 | III | | | | | |
| 5291 | 13.70 | 872B-11K-M1 (F00414) | 872BF-11K-M8 (F00447) | 10 | 3822 | I | F872B-11K-B11-M1 (F01047) | F872BF-11K-B11-M8 (F01093) | | | |
| | | | | 7.5 | 2866 | II | | | | | |
| 145 | 12 | 550 | 1.30 | 832B-12K-M1 (F00107) | 832BF-12K-M8 (F00140) | 1 | 418 | I | F832B-12K-B5-M1 (F00597) | F832BF-12K-B5-M8 (F00659) | |
| | | | | | | .75 | 314 | II | | | |
| | | 1419 | 3.23 | 842B-12K-M1 (F00209) | 842BF-12K-M8 (F00242) | 3 | 1304 | I | F842B-12K-B9-M1 (F00736) | F842BF-12K-B9-M8 (F00795) | |
| | | | | | | 2 | 870 | II | | | |
| 2840 | 6.49 | 862B-12K-M1 (F00311) | 862BF-12K-M8 (F00345) | 5 | 2167 | I | F862B-12K-B9-M1 (F00876) | F862BF-12K-B9-M8 (F00940) | | | |
| | | | | 3 | 1300 | III | | | | | |
| 5439 | 12.50 | 872B-12K-M1 (F00415) | 872BF-12K-M8 (F00448) | 10 | 4177 | I | F872B-12K-B11-M1 (F01048) | F872BF-12K-B11-M8 (F01094) | | | |
| | | | | 7.5 | 3132 | II | | | | | |
| 125 | 14 | 550 | 1.14 | 832B-14K-M1 (F00108) | 832BF-14K-M8 (F00141) | 1 | 478 | I | F832B-14K-B5-M1 (F00598) | F832BF-14K-B5-M8 (F00660) | |
| | | | | | | .75 | 358 | II | | | |
| | | 1443 | 2.89 | 842B-14K-M1 (F00210) | 842BF-14K-M8 (F00243) | 2 | 988 | II | F842B-14K-B7-M1 (F00737) | F842BF-14K-B7-M8 (F00796) | |
| | | | | | | 1.5 | 741 | III | | | |
| 2910 | 5.72 | 862B-14K-M1 (F00312) | 862BF-14K-M8 (F00346) | 5 | 2519 | I | F862B-14K-B9-M1 (F00877) | F862BF-14K-B9-M8 (F00941) | | | |
| | | | | 3 | 1512 | III | | | | | |
| 5364 | 10.90 | 872B-14K-M1 (F00416) | 872BF-14K-M8 (F00449) | 10 | 4870 | I | F872B-14K-B11-M1 (F01049) | F872BF-14K-B11-M8 (F01095) | | | |
| | | | | 7.5 | 3653 | II | | | | | |
| | | | | | | 5 | 2435 | III | F872B-14K-B9-M1 (F01050) | F872BF-14K-B9-M8 (F01096) | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|------------------------|--------|---------------------------|----------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 109 | 16 | 576 | 1.06 | 832B-16K-M1 (F00109) | 832BF-16K-M8 (F00142) | 1 | 539 | I | F832B-16K-B5-M1 (F00599) | F832BF-16K-B5-M8 (F00661) |
| | | | | | | .75 | 404 | II | | |
| | | | | | | .50 | 270 | III | | |
| | | 1380 | 2.49 | 842B-16K-M1 (F00211) | 842BF-16K-M8 (F00244) | 2 | 1097 | II | F842B-16K-B7-M1 (F00739) | F842BF-16K-B7-M8 (F00798) |
| | | | | | | 1.5 | 823 | II | | |
| | | 2900 | 5.12 | 862B-16K-M1 (F00313) | 862BF-16K-M8 (F00347) | 1 | 548 | III | F842B-16K-B5-M1 (F00738) | F842BF-16K-B5-M8 (F00797) |
| | | | | | | 5 | 2792 | I | | |
| | | | | | | 3 | 1675 | II | | |
| | | | | | | 2 | 1117 | III | | |
| | | 5245 | 9.60 | 872B-16K-M1 (F00417) | 872BF-16K-M8 (F00450) | 7.5 | 4055 | I | F872B-16K-B11-M1 (F01051) | F872BF-16K-B11-M8 (F01097) |
| 5 | 2703 | | | | | II | | | | |
| 3 | 1639 | | | | | III | | | | |
| | | | | | | | | | | |
| 97 | 18 | 590 | 0.91 | 832B-18K-M1 (F00110) | 832BF-18K-M8 (F00143) | .75 | 483 | I | F832B-18K-B5-M1 (F00600) | F832BF-18K-B5-M8 (F00662) |
| | | | | | | .50 | 322 | II | | |
| | | | | | | .33 | 210 | III | | |
| | | 1420 | 2.35 | 842B-18K-M1 (F00212) | 842BF-18K-M8 (F00245) | 2 | 1192 | I | F842B-18K-B7-M1 (F00741) | F842BF-18K-B7-M8 (F00800) |
| | | | | | | 1.5 | 894 | II | | |
| | | 2940 | 4.88 | 862B-18K-M1 (F00314) | 862BF-18K-M8 (F00348) | 1 | 596 | III | F842B-18K-B5-M1 (F00740) | F842BF-18K-B5-M8 (F00799) |
| | | | | | | 3 | 1788 | II | | |
| | | | | | | 2 | 1192 | III | | |
| | | | | | | | | | | |
| | | 5320 | 8.50 | 872B-18K-M1 (F00418) | 872BF-18K-M8 (F00451) | 7.5 | 4645 | I | F872B-18K-B11-M1 (F01053) | F872BF-18K-B11-M8 (F01099) |
| 5 | 3096 | | | | | II | | | | |
| 3 | 1858 | | | | | III | | | | |
| | | | | | | | | | | |
| 87 (CONT.) | 20 | 590 | 0.85 | 832B-20K-M1 (F00114) | 832BF-20K-M8 (F00147) | .75 | 526 | I | F832B-20K-B5-M1 (F00608) | F832BF-20K-B5-M8 (F00668) |
| | | | | | | .50 | 350 | II | | |
| | | | | | | .33 | 232 | III | | |
| | | 1442 | 2.01 | 842B-20K-M1 (F00216) | 842BF-20K-M8 (F00249) | 2 | 1420 | I | F842B-20K-B7-M1 (F00748) | F842BF-20K-B7-M8 (F00805) |
| | | | | | | 1.5 | 1065 | II | | |
| | | | | | | .75 | 533 | III | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------------|-------------------------|--------------------------|-------------------------|--------------------------|----------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 87 (CONT.) | 20 | 3014 | 4.19 | 862B-20K-M1 (F00318) | 862BF-20K-M8 (F00352) | 3 | 2137 | I | F862B-20K-B9-M1 (F00888) | F862BF-20K-B9-M8 (F00950) | |
| | | | | | | 2 | 1425 | III | F862B-20K-B7-M1 (F00887) | F862BF-20K-B7-M8 (F00949) | |
| | | 5319 | 7.64 | 872B-20K-M1 (F00422) | 872BF-20K-M8 (F00455) | 7.5 | 5319 | I | F872B-20K-B11-M1 (F01058) | F872BF-20K-B11-M8 (F01104) | |
| | | | | | | 5 3 | 3444 2066 | II III | F872B-20K-B9-M1 (F01059) | F872BF-20K-B9-M8 (F01105) | |
| 79 | 22 | 574 | 0.72 | 832B-22K-M1 (F00115) | 832BF-22K-M8 (F00148) | .75 | 574 | I | F832B-22K-B5-M1 (F00610) | F832BF-22K-B5-M8 (F00669) | |
| | | | | | | .50 | 395 | II | | | |
| | | 1443 | 1.85 | 842B-22K-M1 (F00217) | 842BF-22K-M8 (F00250) | 1.5 | 1158 | I | F842B-22K-B7-M1 (F00751) | F842BF-22K-B7-M8 (F00807) | |
| | | | | | | 1 .75 | 772 579 | II III | F842B-22K-B5-M1 (F00750) | F842BF-22K-B5-M8 (F00806) | |
| | | 3030 | 3.95 | 862B-22K-M1 (F00319) | 862BF-22K-M8 (F00353) | 3 | 2281 | I | F862B-22K-B9-M1 (F00891) | F862BF-22K-B9-M8 (F00952) | |
| 2 | 1520 | | | | | III | F862B-22K-B7-M1 (F00889) | F862BF-22K-B7-M8 (F00951) | | | |
| 5398 | 6.77 | 872B-22K-M1 (F00423) | 872BF-22K-M8 (F00456) | 5 3 | 3946 2367 | I III | F872B-22K-B9-M1 (F01060) | F872BF-22K-B9-M8 (F01106) | | | |
| 70 | 25 | 580 | 0.65 | 832B-25K-M1 (F00116) | 832BF-25K-M8 (F00149) | .50 | 442 | I | F832B-25K-B5-M1 (F00611) | F832BF-25K-B5-M8 (F00670) | |
| | | | | | | .33 | 294 | III | | | |
| | | 1312 | 1.64 | 842B-25K-M1 (F00218) | 842BF-25K-M8 (F00251) | 1.5 | 1187 | I | F842B-25K-B7-M1 (F00753) | F842BF-25K-B7-M8 (F00809) | |
| | | | | | | 1 .75 | 791 593 | II III | F842B-25K-B5-M1 (F00752) | F842BF-25K-B5-M8 (F00808) | |
| | | 3070 | 3.49 | 862B-25K-M1 (F00320) | 862BF-25K-M8 (F00354) | 3 | 2618 | I | F862B-25K-B9-M1 (F00893) | F862BF-25K-B9-M8 (F00954) | |
| 2 1.5 | 1745 1309 | | | | | II III | F862B-25K-B7-M1 (F00892) | F862BF-25K-B7-M8 (F00953) | | | |
| 5279 | 6.17 | 872B-25K-M1 (F00424) | 872BF-25K-M8 (F00457) | 5 3 | 4236 2540 | I III | F872B-25K-B9-M1 (F01061) | F872BF-25K-B9-M8 (F01107) | | | |
| 62 (CONT.) | 28 | 580 | 0.59 | 832B-28K-M1 (F00117) | 832BF-28K-M8 (F00150) | .50 .33 .25 | 491 327 245 | I II III | F832B-28K-B5-M1 (F00612) | F832BF-28K-B5-M8 (F00671) | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

G

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | | |
|--------------------|--------|------------------------|--------------------------|---------------------------|--------------------------|---------------------------|------------------------|--------|--------------------------|---------------------------|--------------------------|---------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | | |
| 62 (CONT.) | 28 | 1467 | 1.46 | 842B-28K-M1 (F00219) | 842BF-28K-M8 (F00252) | 1.5 | 1467 | I | F842B-28K-B7-M1 (F00755) | F842BF-28K-B7-M8 (F00811) | | |
| | | | | | | 1 | 994 | II | F842B-28K-B5-M1 (F00754) | F842BF-28K-B5-M8 (F00810) | | |
| | | 3070 | 3.19 | 862B-28K-M1 (F00321) | 862BF-28K-M8 (F00355) | 3 | 2867 | I | F862B-28K-B9-M1 (F00896) | F862BF-28K-B9-M8 (F00956) | | |
| | | | | | | 2 | 1910 | II | F862B-28K-B7-M1 (F00895) | F862BF-28K-B7-M8 (F00955) | | |
| | | 5287 | 5.64 | 872B-28K-M1 (F00425) | 872BF-28K-M8 (F00458) | 5 | 4639 | I | F872B-28K-B9-M1 (F01063) | F872BF-28K-B9-M8 (F01109) | | |
| | | | | | | 3 | 2783 | II | | | | |
| 2 | 1855 | III | F872B-28K-B7-M1 (F01062) | F872BF-28K-B7-M8 (F01108) | | | | | | | | |
| 54 | 32 | 555 | 0.52 | 832B-32K-M1 (F00121) | 832BF-32K-M8 (F00154) | .50 | 528 | I | F832B-32K-B5-M1 (F00620) | F832BF-32K-B5-M8 (F00678) | | |
| | | | | | | .33 | 370 | II | | | | |
| | | | | | | .25 | 264 | III | | | | |
| | | 1338 | 1.29 | 842B-32K-M1 (F00223) | 842BF-32K-M8 (F00256) | 1 | 1026 | I | F842B-32K-B5-M1 (F00760) | F842BF-32K-B5-M8 (F00815) | | |
| | | | | | | .75 | 770 | II | | | | |
| | | | | | | .50 | 513 | III | | | | |
| | | 3120 | 2.79 | 862B-32K-M1 (F00326) | 862BF-32K-M8 (F00359) | 2 | 2225 | II | F862B-32K-B7-M1 (F00905) | F862BF-32K-B7-M8 (F00964) | | |
| | | | | | | 1.5 | 1669 | II | | | | |
| | | 5342 | 4.90 | 872B-32K-M1 (F00429) | 872BF-32K-M8 (F00462) | 1 | 1159 | III | F862B-32K-B5-M1 (F00904) | F862BF-32K-B5-M8 (F00963) | | |
| | | | | | | 5 | 5342 | I | | | F872B-32K-B9-M1 (F01068) | F872BF-32K-B9-M8 (F01114) |
| | | | | | | 3 | 3236 | II | | | | |
| | | 2 | 2158 | III | F872B-32K-B7-M1 (F01067) | F872BF-32K-B7-M8 (F01113) | | | | | | |
| 48 (CONT.) | 36 | 557 | 0.47 | 832B-36K-M1 (F00122) | 832BF-36K-M8 (F00155) | .50 | 557 | I | F832B-36K-B5-M1 (F00622) | F832BF-36K-B5-M8 (F00679) | | |
| | | | | | | .33 | 391 | I | | | | |
| | | | | | | .25 | 294 | II | | | | |
| | | 562 | 0.47 | 833B-36K-M1 (F00178) | 833BF-36K-M8 (F00196) | .50 | 562 | I | F833B-36K-B5-M1 (F00705) | F833BF-36K-B5-M8 (F00718) | | |
| | | | | | | .33 | 400 | I | | | | |
| | | | | | | .25 | 299 | II | | | | |
| | | 1457 | 1.15 | 842B-36K-M1 (F00224) | 842BF-36K-M8 (F00257) | .50 | 1254 | I | F842B-36K-B5-M1 (F00763) | F842BF-36K-B5-M8 (F00816) | | |
| | | | | | | .75 | 940 | II | | | | |
| | | | | | | .50 | 627 | III | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

□ Indicates Triple Reduction



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|-------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 48 (CONT.) | 36 | 1390 | 1.17 | 843B-36K-M1 (F00280) | 843BF-36K-M8 (F00298) | 1 | 1190 | I | F843B-36K-B5-M1 (F00844) | F843BF-36K-B5-M8 (F00862) |
| | | | | | | .75 | 893 | II | | |
| | | .50 | 595 | III | | | | | | |
| | | 3120 | 2.55 | 862B-36K-M1 (F00327) | 862BF-36K-M8 (F00360) | 2 | 2436 | I | F862B-36K-B7-M1 (F00908) | F862BF-36K-B7-M8 (F00966) |
| | | | | | | 1.5 | 1827 | II | | |
| | | 1 | 1218 | III | F862B-36K-B5-M1 (F00907) | F862BF-36K-B5-M8 (F00965) | | | | |
| | 2978 | 2.51 | 863B-36K-M1 (F00384) | 863BF-36K-M8 (F00402) | 2 | 2372 | I | F863B-36K-B7-M1 (F01001) | F863BF-36K-B7-M8 (F01025) | |
| | | | | | 1.5 | 1779 | II | | | |
| | 1 | 1186 | III | F863B-36K-B5-M1 (F01000) | F863BF-36K-B5-M8 (F01024) | | | | | |
| | 5296 | 4.48 | 872B-36K-M1 (F00430) | 872BF-36K-M8 (F00463) | 5 | 5296 | I | F872B-36K-B9-M1 (F01070) | F872BF-36K-B9-M8 (F01116) | |
| | | | | | 3 | 3546 | II | | | |
| | 2 | 2364 | III | F872B-36K-B7-M1 (F01069) | F872BF-36K-B7-M8 (F01115) | | | | | |
| 5225 | 4.42 | 873B-36K-M1 (F00486) | 873BF-36K-M8 (F00504) | 5 | 5225 | I | F873B-36K-B9-M1 (F01148) | F873BF-36K-B9-M8 (F01176) | | |
| | | | | 3 | 3546 | II | | | | |
| 2 | 2364 | III | F873B-36K-B7-M1 (F01147) | F873BF-36K-B7-M8 (F01175) | | | | | | |
| 43 (CONT.) | 40 | 466 | 0.36 | 832B-40K-M1 (F00124) | 832BF-40K-M8 (F00157) | .33 | 431 | I | F832B-40K-B5-M1 (F00626) | F832BF-40K-B5-M8 (F00682) |
| | | | | | | .25 | 323 | I | | |
| | | | | | | .16 | 216 | III | | |
| | | 560 | 0.41 | 833B-40K-M1 (F00179) | 833BF-40K-M8 (F00197) | .33 | 456 | I | F833B-40K-B5-M1 (F00706) | F833BF-40K-B5-M8 (F00719) |
| | | | | | | .25 | 342 | II | | |
| | | | | | | .16 | 228 | III | | |
| | 1375 | 1.00 | 842B-40K-M1 (F00226) | 842BF-40K-M8 (F00259) | 1 | 1254 | I | F842B-40K-B5-M1 (F00765) | F842BF-40K-B5-M8 (F00818) | |
| | | | | | .75 | 940 | II | | | |
| | | | | | .50 | 627 | III | | | |
| | 1390 | 1.02 | 843B-40K-M1 (F00281) | 843BF-40K-M8 (F00299) | 1 | 1360 | I | F843B-40K-B5-M1 (F00845) | F843BF-40K-B5-M8 (F00863) | |
| | | | | | .75 | 1020 | I | | | |
| | | | | | .50 | 680 | III | | | |
| 2992 | 2.18 | 862B-40K-M1 (F00329) | 862BF-40K-M8 (F00362) | 2 | 2678 | I | F862B-40K-B7-M1 (F00912) | F862BF-40K-B7-M8 (F00970) | | |
| | | | | 1.5 | 2008 | II | | | | |
| | | | | 1 | 1339 | III | | | F862B-40K-B5-M1 (F00911) | F862BF-40K-B5-M8 (F00969) |
| 2978 | 2.21 | 863B-40K-M1 (F00385) | 863BF-40K-M8 (F00403) | 2 | 2695 | I | F863B-40K-B7-M1 (F01003) | F863BF-40K-B7-M8 (F01027) | | |
| | | | | 1.5 | 2022 | II | | | | |
| 1 | 1348 | III | F863B-40K-B5-M1 (F01002) | F863BF-40K-B5-M8 (F01026) | | | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.
□ Indicates Triple Reduction

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|-----------------------|-------------------------|-------------------------|----------------------|--------------------------|---------------------------|--------------------------|---------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 43 (CONT.) | 40 | 5050 | 3.83 | 872B-40K-M1 (F00432) | 872BF-40K-M8 (F00465) | 3 | 3955 | I | F872B-40K-B9-M1 (F01073) | F872BF-40K-B9-M8 (F01119) | |
| | | | | | | 2 | 2636 | III | F872B-40K-B7-M1 (F01072) | F872BF-40K-B7-M8 (F01118) | |
| | | 5225 | 3.80 | 873B-40K-M1 (F00487) | 873BF-40K-M8 (F00505) | 3 | 4125 | I | F873B-40K-B9-M1 (F01150) | F873BF-40K-B9-M8 (F01178) | |
| | | | | | | 2 | 2750 | II | F873B-40K-B7-M1 (F01149) | F873BF-40K-B7-M8 (F01177) | |
| 38 | 45 | 480 | 0.33 | 832B-45K-M1 (F00125) | 832BF-45K-M8 (F00158) | .33 | 480 | I | F832B-45K-B5-M1 (F00628) | F832BF-45K-B5-M8 (F00683) | |
| | | | | | | .25 | 359 | I | | | |
| | | | | | | .16 | 239 | III | | | |
| | | 544 | 0.38 | 833B-45K-M1 (F00180) | 833BF-45K-M8 (F00198) | .33 | 478 | I | F833B-45K-B5-M1 (F00707) | F833BF-45K-B5-M8 (F00720) | |
| | | | | | | .25 | 358 | I | | | |
| | | | | | | .16 | 239 | III | | | |
| | | 1410 | 0.90 | 842B-45K-M1 (F00227) | 842BF-45K-M8 (F00260) | .75 | 1180 | I | F842B-45K-B5-M1 (F00767) | F842BF-45K-B5-M8 (F00819) | |
| | | | | | | .50 | 788 | II | | | |
| | | | | | | .33 | 525 | III | | | |
| | | 1420 | 0.92 | 843B-45K-M1 (F00282) | 843BF-45K-M8 (F00300) | .75 | 1158 | I | F843B-45K-B5-M1 (F00846) | F843BF-45K-B5-M8 (F00864) | |
| | | | | | | .50 | 772 | II | | | |
| | | | | | | .33 | 515 | III | | | |
| | | 2950 | 2.01 | 862B-45K-M1 (F00330) | 862BF-45K-M8 (F00364) | 2 | 2932 | I | F862B-45K-B7-M1 (F00914) | F862BF-45K-B7-M8 (F00972) | |
| | | | | | | 1.5 | 2199 | I | | | |
| | | 3040 | 2.01 | 863B-45K-M1 (F00386) | 863BF-45K-M8 (F00404) | 2 | 3025 | I | F863B-45K-B7-M1 (F01005) | F863BF-45K-B7-M8 (F01029) | |
| | | | | | | 1.5 | 2269 | I | | | |
| 5167 | 3.54 | 872B-45K-M1 (F00433) | 872BF-45K-M8 (F00466) | 3 | 4334 | I | F872B-45K-B9-M1 (F01075) | F872BF-45K-B9-M8 (F01121) | | | |
| | | | | 2 | 3010 | II | | | | | |
| 5300 | 3.52 | 873B-45K-M1 (F00488) | 873BF-45K-M8 (F00506) | 1.5 | 2167 | III | F872B-45K-B7-M1 (F01074) | F872BF-45K-B7-M8 (F01120) | | | |
| | | | | 3 | 4526 | I | | | | | |
| | | | | 2 | 3013 | II | | | | | |
| | | | | 1.5 | 2404 | III | | | | | |
| 35 (CONT.) | 50 | 555 | 0.34 | 832B-50K-M1 (F00128) | 832BF-50K-M8 (F00161) | .33 | 540 | I | F832B-50K-B5-M1 (F00637) | F832BF-50K-B5-M8 (F00689) | |
| | | | | | | .25 | 405 | I | | | |
| | | | | | | .16 | 270 | III | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.
□ Indicates Triple Reduction



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|-------------------------|--------------------------|-------------------------|--------------------------|----------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 35 (CONT.) | 50 | 540 | 0.33 | 833B-50K-M1 (F00181) | 833BF-50K-M8 (F00199) | .33 | 540 | I | F833B-50K-B5-M1 (F00708) | F833BF-50K-B5-M8 (F00721) | |
| | | | | | | .25 | 409 | I | | | |
| | | | | | | .16 | 273 | III | | | |
| | | 1500 | 0.87 | 842B-50K-M1 (F00230) | 842BF-50K-M8 (F00263) | .75 | 1280 | I | F842B-50K-B5-M1 (F00772) | F842BF-50K-B5-M8 (F00823) | |
| | | | | | | .50 | 854 | II | | | |
| | | | | | | .33 | 592 | III | | | |
| | | 1429 | 0.81 | 843B-50K-M1 (F00283) | 843BF-50K-M8 (F00301) | .75 | 1323 | I | F843B-50K-B5-M1 (F00847) | F843BF-50K-B5-M8 (F00865) | |
| | | | | | | .50 | 882 | II | | | |
| | | | | | | .33 | 588 | III | | | |
| | | 3150 | 1.86 | 862B-50K-M1 (F00333) | 862BF-50K-M8 (F00367) | 1.5 | 2514 | I | F862B-50K-B7-M1 (F00921) | F862BF-50K-B7-M8 (F00978) | |
| | | | | | | 1 | 1676 | II | | | |
| | | | | | | .75 | 1257 | III | | | |
| | | 3040 | 1.77 | 863B-50K-M1 (F00387) | 863BF-50K-M8 (F00405) | 1.5 | 2578 | I | F863B-50K-B7-M1 (F01007) | F863BF-50K-B7-M8 (F01031) | |
| | | | | | | 1 | 1718 | II | | | |
| .75 | 1289 | | | | | III | | | | | |
| 5216 | 3.16 | 872B-50K-M1 (F00436) | 872BF-50K-M8 (F00469) | 3 | 4900 | I | F872B-50K-B9-M1 (F01079) | F872BF-50K-B9-M8 (F01125) | | | |
| | | | | 2 | 3268 | II | | | | | |
| | | | | 1.5 | 2552 | III | | | | | |
| 5290 | 3.02 | 873B-50K-M1 (F00489) | 873BF-50K-M8 (F00507) | 3 | 5256 | I | F873B-50K-B9-M1 (F01154) | F873BF-50K-B9-M8 (F01182) | | | |
| | | | | 2 | 3504 | II | | | | | |
| | | | | 1.5 | 2628 | III | | | | | |
| 31 (CONT.) | 56 | 540 | 0.29 | 832B-56K-M1 (F00129) | 832BF-56K-M8 (F00162) | .25 | 460 | I | F832B-56K-B5-M1 (F00639) | F832BF-56K-B5-M8 (F00690) | |
| | | | | | | .16 | 308 | II | | | |
| | | 554 | 0.30 | 833B-56K-M1 (F00182) | 833BF-56K-M8 (F00200) | .25 | 462 | I | F833B-56K-B5-M1 (F00709) | F833BF-56K-B5-M8 (F00722) | |
| | | | | | | .16 | 308 | II | | | |
| | | 1392 | 0.71 | 842B-56K-M1 (F00231) | 842BF-56K-M8 (F00264) | .5 | 970 | I | F842B-56K-B5-M1 (F00775) | F842BF-56K-B5-M8 (F00824) | |
| .33 | 647 | | | | | III | | | | | |
| 1396 | 0.76 | 843B-56K-M1 (F00284) | 843BF-56K-M8 (F00302) | .75 | 1378 | I | F843B-56K-B5-M1 (F00848) | F843BF-56K-B5-M8 (F00866) | | | |
| | | | | .50 | 918 | II | | | | | |
| 2460 | 1.28 | 862B-56K-M1 (F00334) | 862BF-56K-M8 (F00368) | .33 | 612 | III | F862B-56K-B5-M1 (F00923) | F862BF-56K-B5-M8 (F00979) | | | |
| | | | | 1 | 2018 | I | | | | | |
| | | | | .75 | 1513 | II | | | | | |
| | | | | | | .50 | 1000 | III | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 157.
□ Indicates Triple Reduction

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|--------------------------|---------------------------|--------------------------|---------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 31 (CONT.) | 56 | 2887 | 1.54 | 863B-56K-M1 (F00388) | 863BF-56K-M8 (F00406) | 1.5 | 2887 | I | F863B-56K-B7-M1 (F01009) | F863BF-56K-B7-M8 (F01033) | |
| | | | | | | 1 | 1939 | II | F863B-56K-B5-M1 (F01008) | F863BF-56K-B5-M8 (F01032) | |
| | | 4629 | 2.50 | 872B-56K-M1 (F00437) | 872BF-56K-M8 (F00470) | 2 | 3665 | I | F872B-56K-B7-M1 (F01081) | F872BF-56K-B7-M8 (F01127) | |
| | | | | | | 1.5 | 2749 | II | | | |
| | | 5227 | 2.69 | 873B-56K-M1 (F00490) | 873BF-56K-M8 (F00508) | 2 | 3886 | I | F873B-56K-B7-M1 (F01156) | F873BF-56K-B7-M8 (F01184) | |
| | | | | | | 1.5 | 2915 | II | | | |
| | | | | 1 | 1941 | III | F873B-56K-B5-M1 (F01155) | F873BF-56K-B5-M8 (F01183) | | | |
| 27 | 63 | 500 | 0.25 | 832B-63K-M1 (F00131) | 832BF-63K-M8 (F00164) | .25 | 500 | I | F832B-63K-B5-M1 (F00643) | F832BF-63K-B5-M8 (F00693) | |
| | | | | | | .16 | 330 | II | | | |
| | | 522 | 0.25 | 833B-63K-M1 (F00183) | 833BF-63K-M8 (F00201) | .25 | 502 | I | F833B-63K-B5-M1 (F00710) | F833BF-63K-B5-M8 (F00723) | |
| | | | | | | .16 | 335 | II | | | |
| | | 1475 | 0.70 | 842B-63K-M1 (F00233) | 842BF-63K-M8 (F00266) | .50 | 1000 | I | F842B-63K-B5-M1 (F00778) | F842BF-63K-B5-M8 (F00827) | |
| | | | | | | .33 | 666 | III | | | |
| | | 1300 | 0.65 | 843B-63K-M1 (F00285) | 843BF-63K-M8 (F00303) | .50 | 1044 | I | F843B-63K-B5-M1 (F00849) | F843BF-63K-B5-M8 (F00867) | |
| | | | | | | .33 | 696 | III | | | |
| | | 3098 | 1.52 | 862B-63K-M1 (F00336) | 862BF-63K-M8 (F00370) | 1.5 | 3027 | I | F862B-63K-B7-M1 (F00927) | F862BF-63K-B7-M8 (F00983) | |
| | | | | | | 1 | 2018 | II | F862B-63K-B5-M1 (F00926) | F862BF-63K-B5-M8 (F00982) | |
| | | 2973 | 1.41 | 863B-63K-M1 (F00389) | 863BF-63K-M8 (F00407) | 1.5 | 2973 | I | F863B-63K-B7-M1 (F01011) | F863BF-63K-B7-M8 (F01035) | |
| | | | | | | 1 | 2109 | I | F863B-63K-B5-M1 (F01010) | F863BF-63K-B5-M8 (F01034) | |
| | | 5300 | 2.64 | 872B-63K-M1 (F00439) | 872BF-63K-M8 (F00472) | .75 | 1582 | II | | | |
| | | | | | | .50 | 1054 | III | | | |
| | | 5226 | 2.52 | 873B-63K-M1 (F00491) | 873BF-63K-M8 (F00509) | 2 | 3993 | I | F872B-63K-B7-M1 (F01084) | F872BF-63K-B7-M8 (F01130) | |
| 1.5 | 2995 | | | | | II | | | | | |
| | | | | 1 | 2080 | III | F872B-63K-B5-M1 (F01083) | F872BF-63K-B5-M8 (F01129) | | | |
| | | | | 2 | 4149 | I | F873B-63K-B7-M1 (F01158) | F873BF-63K-B7-M8 (F01186) | | | |
| | | | | 1.5 | 3112 | II | | | | | |
| | | | | 1 | 2075 | III | F873B-63K-B5-M1 (F01157) | F873BF-63K-B5-M8 (F01185) | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

□ Indicates Triple Reduction



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|-----------------------|-------------------------|-------------------------|----------------------|--------------------------|---------------------------|--------------------------|---------------------------|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 24 | 71 | 500 | 0.22 | 832B-71K-M1 (F00133) | 832BF-71K-M8 (F00166) | .25 .16 | 500 375 | I I | F832B-71K-B5-M1 (F00647) | F832BF-71K-B5-M8 (F00696) | |
| | | 577 | 0.24 | 833B-71K-M1 (F00184) | 833BF-71K-M8 (F00202) | .25 .16 | 577 400 | I I | F833B-71K-B5-M1 (F00711) | F833BF-71K-B5-M8 (F00724) | |
| | | 1485 | 0.62 | 842B-71K-M1 (F00235) | 842BF-71K-M8 (F00268) | .50 .33 .25 | 1186 709 592 | I II III | F842B-71K-B5-M1 (F00782) | F842BF-71K-B5-M8 (F00830) | |
| | | 1427 | 0.60 | 843B-71K-M1 (F00286) | 843BF-71K-M8 (F00304) | .50 .33 .25 | 1189 793 594 | I II III | F843B-71K-B5-M1 (F00850) | F843BF-71K-B5-M8 (F00868) | |
| | | 2966 | 1.28 | 862B-71K-M1 (F00338) | 862BF-71K-M8 (F00372) | 1 .75 .50 | 2303 1720 1457 | I II III | F862B-71K-B5-M1 (F00930) | F862BF-71K-B5-M8 (F00986) | |
| | | 3040 | 1.23 | 863B-71K-M1 (F00390) | 863BF-71K-M8 (F00408) | 1 .75 .50 | 2473 1855 1236 | I II III | F863B-71K-B5-M1 (F01012) | F863BF-71K-B5-M8 (F01036) | |
| | | 5385 | 2.38 | 872B-71K-M1 (F00441) | 872BF-71K-M8 (F00474) | 2 1.5 | 4479 3359 | I II | F872B-71K-B7-M1 (F01087) | F872BF-71K-B7-M8 (F01133) | |
| | | | | | | 1 | 2239 | III | F872B-71K-B5-M1 (F01086) | F872BF-71K-B5-M8 (F01132) | |
| 5298 | 2.14 | 873B-71K-M1 (F00492) | 873BF-71K-M8 (F00510) | 2 1.5 | 4952 3714 | I II | F873B-71K-B7-M1 (F01160) | F873BF-71K-B7-M8 (F01188) | | | |
| | | | | 1 | 2476 | III | F873B-71K-B5-M1 (F01159) | F873BF-71K-B5-M8 (F01187) | | | |
| 21 | 80 | 565 | 0.21 | 833B-80K-M1 (F00185) | 833BF-80K-M8 (F00203) | .25 .16 | 565 448 | I I | F833B-80K-B5-M1 (F00712) | F833BF-80K-B5-M8 (F00725) | |
| | | 1320 | 0.51 | 843B-80K-M1 (F00287) | 843BF-80K-M8 (F00305) | .50 .33 .25 | 1294 862 647 | I II III | F843B-80K-B5-M1 (F00851) | F843BF-80K-B5-M8 (F00869) | |
| | | 3038 | 1.13 | 863B-80K-M1 (F00391) | 863BF-80K-M8 (F00409) | 1 .75 .50 | 2689 2016 1344 | I II III | F863B-80K-B5-M1 (F01013) | F863BF-80K-B5-M8 (F01037) | |
| | | 5315 | 2.01 | 873B-80K-M1 (F00493) | 873BF-80K-M8 (F00511) | 2 1.5 | 5288 3966 | I I | F873B-80K-B7-M1 (F01162) | F873BF-80K-B7-M8 (F01190) | |
| | | | | | | 1 | 2644 | III | F873B-80K-B5-M1 (F01161) | F873BF-80K-B5-M8 (F01189) | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

□ Indicates Triple Reduction

G

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|--------------------------|---------------------------|---------------------|--|--|--|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange | |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) | |
| 19 | 90 | 575 | 0.19 | 833B-90K-M1 (F00186) | 833BF-90K-M8 (F00204) | .16 | 504 | I | F833B-90K-B5-M1 (F00713) | F833BF-90K-B5-M8 (F00726) | |
| | | 1395 | 0.47 | 843B-90K-M1 (F00288) | 843BF-90K-M8 (F00306) | .50 .33 .25 .16 | 1398 989 741 494 | I I II III | F843B-90K-B5-M1 (F00852) | F843BF-90K-B5-M8 (F00870) | |
| | | 2745 | 0.98 | 863B-90K-M1 (F00392) | 863BF-90K-M8 (F00410) | .75 .50 | 2100 1400 | I III | F863B-90K-B5-M1 (F01014) | F863BF-90K-B5-M8 (F01038) | |
| | | 5252 | 1.73 | 873B-90K-M1 (F00494) | 873BF-90K-M8 (F00512) | 1.5 1 .75 | 4554 3035 2277 | I II III | F873B-90K-B7-M1 (F01164) F873B-90K-B5-M1 (F01163) | F873BF-90K-B7-M8 (F01192) F873BF-90K-B5-M8 (F01191) | |
| 17 | 100 | 570 | 0.17 | 833B-100K-M1 (F00169) | 833BF-100K-M8 (F00187) | .16 | 560 | I | F833B-100K-B5-M1 (F00701) | F833BF-100K-B5-M8 (F00714) | |
| | | 1400 | 0.42 | 843B-100K-M1 (F00271) | 843BF-100K-M8 (F00289) | .33 .25 .16 | 1115 836 557 | I II III | F843B-100K-B5-M1 (F00835) | F843BF-100K-B5-M8 (F00853) | |
| | | 3095 | 0.88 | 863B-100K-M1 (F00375) | 863BF-100K-M8 (F00393) | .75 .50 .33 | 2638 1759 1172 | I II III | F863B-100K-B5-M1 (F00991) | F863BF-100K-B5-M8 (F01015) | |
| | | 5252 | 1.58 | 873B-100K-M1 (F00477) | 873BF-100K-M8 (F00495) | 1.5 1 .75 | 4986 3324 2498 | I II III | F873B-100K-B7-M1 (F01137) F873B-100K-B5-M1 (F01136) | F873BF-100K-B7-M8 (F01166) F873BF-100K-B5-M8 (F01165) | |
| 15 | 112 | 543 | 0.15 | 833B-112K-M1 (F00170) | 833BF-112K-M8 (F00188) | .16 | 543 | I | F833B-112K-B5-M1 (F00702) | F833BF-112K-B5-M8 (F00715) | |
| | | 1340 | 0.37 | 843B-112K-M1 (F00272) | 843BF-112K-M8 (F00290) | .33 .25 .16 | 1282 962 641 | I II III | F843B-112K-B5-M1 (F00836) | F843BF-112K-B5-M8 (F00854) | |
| | | 2820 | 0.79 | 863B-112K-M1 (F00376) | 863BF-112K-M8 (F00394) | .75 .50 .33 | 2678 1786 1190 | I II III | F863B-112K-B5-M1 (F00992) | F863BF-112K-B5-M8 (F01016) | |
| | | 5300 | 1.37 | 873B-112K-M1 (F00478) | 873BF-112K-M8 (F00496) | 1 .75 .50 | 3868 2900 1934 | I II III | F873B-112K-B5-M1 (F01139) | F873BF-112K-B5-M8 (F01167) | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

☐ Indicates Triple Reduction



800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|------------------------|----------------|---------------------------|----------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 14 | 125 | 523 | 0.13 | 833B-125K-M1 (F00171) | 833BF-125K-M8 (F00189) | .16 | 523 | I | F833B-125K-B5-M1 (F00703) | F833BF-125K-B5-M8 (F00716) |
| | | 1430 | 0.33 | 843B-125K-M1 (F00273) | 843BF-125K-M8 (F00291) | .33 .25 .16 | 1430 1083 722 | I I III | F843B-125K-B5-M1 (F00837) | F843BF-125K-B5-M8 (F00855) |
| | | 3000 | 0.70 | 863B-125K-M1 (F00377) | 863BF-125K-M8 (F00395) | .50 .33 | 2150 1433 | I III | F863B-125K-B5-M1 (F00993) | F863BF-125K-B5-M8 (F01017) |
| | | 5337 | 1.26 | 873B-125K-M1 (F00479) | 873BF-125K-M8 (F00497) | 1 .75 .50 | 4236 3177 2118 | I II III | F873B-125K-B5-M1 (F01140) | F873BF-125K-B5-M8 (F01168) |
| 12 | 140 | 487 | 0.11 | 833B-140K-M1 (F00172) | 833BF-140K-M8 (F00190) | .16 | 487 | I | F833B-140K-B5-M1 (F00704) | F833BF-140K-B5-M8 (F00717) |
| | | 1360 | 0.29 | 843B-140K-M1 (F00274) | 843BF-140K-M8 (F00292) | .25 .16 | 1175 783 | I II | F843B-140K-B5-M1 (F00838) | F843BF-140K-B5-M8 (F00856) |
| | | 2916 | 0.65 | 863B-140K-M1 (F00378) | 863BF-140K-M8 (F00396) | .50 .33 | 2443 1495 | I III | F863B-140K-B5-M1 (F00994) | F863BF-140K-B5-M8 (F01018) |
| | | 5247 | 1.11 | 873B-140K-M1 (F00480) | 873BF-140K-M8 (F00498) | 1 .75 .50 | 4727 3545 2363 | I II III | F873B-140K-B5-M1 (F01141) | F873BF-140K-B5-M8 (F01169) |
| 10 | 160 | 490 | 0.10 | 833B-160K-M1 (F00173) | 833BF-160K-M8 (F00191) | — | — | — | — | — |
| | | 1410 | 0.27 | 843B-160K-M1 (F00275) | 843BF-160K-M8 (F00293) | .25 .16 | 1325 883 | I II | F843B-160K-B5-M1 (F00839) | F843BF-160K-B5-M8 (F00857) |
| | | 3130 | 0.58 | 863B-160K-M1 (F00379) | 863BF-160K-M8 (F00397) | .50 .33 .25 | 2700 1800 1350 | I II III | F863B-160K-B5-M1 (F00995) | F863BF-160K-B5-M8 (F01019) |
| | | 5280 | 1.02 | 873B-160K-M1 (F00481) | 873BF-160K-M8 (F00499) | 1 .75 .50 | 5176 3882 2588 | I I III | F873B-160K-B5-M1 (F01142) | F873BF-160K-B5-M8 (F01170) |
| 9.7 (CONT.) | 180 | 555 | 0.10 | 833B-180K-M1 (F00174) | 833BF-180K-M8 (F00192) | — | — | — | — | — |
| | | 1436 | 0.24 | 843B-180K-M1 (F00276) | 843BF-180K-M8 (F00294) | .25 .16 | 1436 997 | I I | F843B-180K-B5-M1 (F00840) | F843BF-180K-B5-M8 (F00858) |
| | | 3146 | 0.53 | 863B-180K-M1 (F00380) | 863BF-180K-M8 (F00398) | .50 .33 | 2975 1980 | I II | F863B-180K-B5-M1 (F00996) | F863BF-180K-B5-M8 (F01020) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

☐ Indicates Triple Reduction

G

800 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 176-185.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Ratio* | Non-Flanged | | | | Flanged (Gearmotors) | | | | |
|--------------------|--------|------------------------|----------|-------------------------|-------------------------|----------------------|------------------------|----------------|---------------------------|----------------------------|
| | | Gear Capacity | | Non-Flange O/P | Output Flange | Ratings | | | Non-Flange O/P | Output Flange |
| | | Output Torque (LB-IN.) | Input HP | Catalog No. (Item Code) | Catalog No. (Item Code) | Motor HP | Output Torque (LB-IN.) | S.C.** | Catalog No. (Item Code) | Catalog No. (Item Code) |
| 9.7 (CONT.) | 180 | 5362 | 0.92 | 873B-180K-M1 (F00482) | 873BF-180K-M8 (F00500) | .75 .50 .33 | 4371 2914 1942 | I II III | F873B-180K-B5-M1 (F01143) | F873BF-180K-B5-M8 (F01171) |
| 8.8 | 200 | 568 | 0.09 | 833B-200K-M1 (F00175) | 833BF-200K-M8 (F00193) | — | — | — | — | — |
| | | 1428 | 0.21 | 843B-200K-M1 (F00277) | 843BF-200K-M8 (F00295) | .25 .16 | 1428 1133 | I I | F843B-200K-B5-M1 (F00841) | F843BF-200K-B5-M8 (F00859) |
| | | 3173 | 0.47 | 863B-200K-M1 (F00381) | 863BF-200K-M8 (F00399) | .33 .25 .16 | 2250 1688 1125 | I II III | F863B-200K-B5-M1 (F00997) | F863BF-200K-B5-M8 (F01021) |
| | | 5432 | 0.82 | 873B-200K-M1 (F00483) | 873BF-200K-M8 (F00501) | .75 .50 .33 | 4968 3216 2208 | I II III | F873B-200K-B5-M1 (F01144) | F873BF-200K-B5-M8 (F01172) |
| 7.8 | 225 | 544 | 0.08 | 833B-225K-M1 (F00176) | 833BF-225K-M8 (F00194) | — | — | — | — | — |
| | | 1410 | 0.19 | 843B-225K-M1 (F00278) | 843BF-225K-M8 (F00296) | .16 | 1219 | I | F843B-225K-B5-M1 (F00842) | F843BF-225K-B5-M8 (F00860) |
| | | 3146 | 0.44 | 863B-225K-M1 (F00382) | 863BF-225K-M8 (F00400) | .33 .25 .16 | 2383 1788 1192 | I II III | F863B-225K-B5-M1 (F00998) | F863BF-225K-B5-M8 (F01022) |
| | | 5341 | 0.75 | 873B-225K-M1 (F00484) | 873BF-225K-M8 (F00502) | .75 .50 .33 | 5341 3561 2375 | I II III | F873B-225K-B5-M1 (F01145) | F873BF-225K-B5-M8 (F01173) |
| 7.0 | 250 | 540 | 0.07 | 833B-250K-M1 (F00177) | 833BF-250K-M8 (F00195) | — | — | — | — | — |
| | | 1410 | 0.17 | 843B-250K-M1 (F00279) | 843BF-250K-M8 (F00297) | .16 | 1385 | I | F843B-250K-B5-M1 (F00843) | F843BF-250K-B5-M8 (F00861) |
| | | 3110 | 0.39 | 863B-250K-M1 (F00383) | 863BF-250K-M8 (F00401) | .33 .25 .16 | 2709 2032 1355 | I II III | F863B-250K-B5-M1 (F00999) | F863BF-250K-B5-M8 (F01023) |
| | | 5423 | 0.67 | 873B-250K-M1 (F00485) | 873BF-250K-M8 (F00503) | .50 .33 | 4047 2698 | I III | F873B-250K-B5-M1 (F01146) | F873BF-250K-B5-M8 (F01174) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 176-185.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 157.

□ Indicates Triple Reduction



800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832B/BF1.5K | 1170 | 288 | 5.80 | 970 | 293 | 4.82 | 773 | 293 | 3.85 |
| 842B/BF1.5K | 1170 | 479 | 9.08 | 970 | 509 | 8.00 | 773 | 549 | 6.89 |
| 862B/BF1.5K | 1170 | 830 | 16.20 | 970 | 884 | 14.30 | 773 | 950 | 12.30 |
| 872B/BF1.5K | 1170 | 1094 | 21.20 | 970 | 1090 | 17.50 | 773 | 1090 | 14.00 |
| 832B/BF1.9K | 922 | 325 | 4.77 | 763 | 325 | 3.95 | 610 | 325 | 3.16 |
| 842B/BF1.9K | 922 | 643 | 8.69 | 763 | 685 | 7.66 | 610 | 738 | 6.60 |
| 862B/BF1.9K | 922 | 1100 | 15.40 | 763 | 1189 | 13.60 | 610 | 1278 | 11.70 |
| 872B/BF1.9K | 922 | 1492 | 21.20 | 763 | 1485 | 17.50 | 610 | 1484 | 14.00 |
| 832B/BF2.3K | 760 | 333 | 4.29 | 630 | 339 | 3.56 | 504 | 339 | 2.84 |
| 842B/BF2.3K | 760 | 695 | 8.52 | 630 | 739 | 7.51 | 504 | 788 | 6.40 |
| 862B/BF2.3K | 760 | 1217 | 15.00 | 630 | 1292 | 13.20 | 504 | 1396 | 11.40 |
| 872B/BF2.3K | 760 | 1680 | 21.20 | 630 | 1680 | 17.50 | 504 | 1680 | 14.00 |
| 832B/BF2.6K | 673 | 350 | 3.98 | 560 | 350 | 3.30 | 446 | 350 | 2.64 |
| 842B/BF2.6K | 673 | 715 | 7.95 | 560 | 762 | 7.01 | 446 | 777 | 5.72 |
| 862B/BF2.6K | 673 | 1320 | 14.50 | 560 | 1408 | 12.80 | 446 | 1498 | 10.90 |
| 872B/BF2.6K | 673 | 1800 | 21.20 | 560 | 1796 | 17.50 | 446 | 1796 | 14.00 |
| 832B/BF2.9K | 605 | 533 | 5.18 | 500 | 544 | 4.38 | 400 | 559 | 3.60 |
| 842B/BF2.9K | 605 | 840 | 8.34 | 500 | 872 | 7.35 | 400 | 939 | 6.33 |
| 862B/BF2.9K | 605 | 1560 | 15.90 | 500 | 1660 | 14.00 | 400 | 1790 | 12.10 |
| 872B/BF2.9K | 605 | 2135 | 21.20 | 500 | 2130 | 17.50 | 400 | 2130 | 14.00 |
| 832B/BF3.3K | 530 | 370 | 3.24 | 440 | 370 | 2.69 | 350 | 370 | 2.15 |
| 842B/BF3.3K | 530 | 775 | 7.03 | 440 | 775 | 5.83 | 350 | 775 | 4.66 |
| 862B/BF3.3K | 530 | 1550 | 13.40 | 440 | 1648 | 11.80 | 350 | 1720 | 9.85 |
| 872B/BF3.3K | 530 | 2398 | 21.20 | 440 | 2390 | 17.50 | 350 | 2390 | 14.00 |
| 832B/BF3.5K | 500 | 376 | 3.11 | 414 | 376 | 2.57 | 331 | 376 | 2.06 |
| 842B/BF3.5K | 500 | 858 | 6.46 | 414 | 832 | 5.35 | 331 | 832 | 4.28 |
| 862B/BF3.5K | 500 | 1665 | 12.70 | 414 | 1751 | 11.10 | 331 | 1814 | 9.16 |
| 872B/BF3.5K | 500 | 2704 | 21.00 | 414 | 2720 | 17.50 | 331 | 2720 | 14.00 |
| 832B/BF3.9K | 448 | 552 | 3.97 | 372 | 563 | 3.36 | 297 | 576 | 2.75 |
| 842B/BF3.9K | 448 | 959 | 6.96 | 372 | 1020 | 6.13 | 297 | 1100 | 5.28 |
| 862B/BF3.9K | 448 | 1835 | 13.30 | 372 | 1950 | 11.70 | 297 | 2110 | 10.10 |
| 872B/BF3.9K | 448 | 2902 | 21.20 | 372 | 2892 | 17.50 | 297 | 2892 | 14.00 |
| 832B/BF4.4K | 400 | 572 | 3.54 | 330 | 585 | 3.00 | 264 | 588 | 2.41 |
| 842B/BF4.4K | 400 | 1000 | 6.59 | 330 | 1066 | 5.81 | 264 | 1146 | 5.00 |
| 862B/BF4.4K | 400 | 1933 | 12.50 | 330 | 2050 | 11.00 | 264 | 2215 | 9.49 |
| 872B/BF4.4K | 400 | 3265 | 21.20 | 330 | 3254 | 17.50 | 264 | 3254 | 14.00 |
| 832B/BF5.1K | 340 | 592 | 3.31 | 285 | 592 | 2.74 | 227 | 592 | 2.19 |
| 842B/BF5.1K | 340 | 1065 | 5.96 | 285 | 1135 | 5.26 | 227 | 1232 | 4.53 |
| 862B/BF5.1K | 340 | 2042 | 11.60 | 285 | 2167 | 10.20 | 227 | 2330 | 8.78 |
| 872B/BF5.1K | 340 | 3698 | 21.20 | 285 | 3685 | 17.50 | 227 | 3685 | 14.00 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 153.

800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832B/BF1.5K | 460 | 293 | 2.29 | 67 | 293 | .33 | 21 | 1.440 |
| 842B/BF1.5K | 460 | 580 | 4.34 | 67 | 580 | .63 | 29 | 1.512 |
| 862B/BF1.5K | 460 | 1054 | 8.11 | 67 | 1058 | 1.18 | 51 | 1.467 |
| 872B/BF1.5K | 460 | 1090 | 8.30 | 67 | 1090 | 1.20 | 99 | 1.479 |
| 832B/BF1.9K | 363 | 325 | 1.87 | 53 | 325 | .27 | 21 | 1.945 |
| 842B/BF1.9K | 363 | 767 | 4.08 | 53 | 767 | .59 | 29 | 2.121 |
| 862B/BF1.9K | 363 | 1384 | 7.53 | 53 | 1384 | 1.09 | 51 | 2.074 |
| 872B/BF1.9K | 363 | 1500 | 8.32 | 53 | 1500 | 1.21 | 99 | 2.012 |
| 832B/BF2.3K | 300 | 337 | 1.68 | 43 | 333 | .24 | 21 | 2.263 |
| 842B/BF2.3K | 300 | 787 | 3.80 | 43 | 787 | .55 | 29 | 2.337 |
| 862B/BF2.3K | 300 | 1494 | 7.26 | 43 | 1492 | 1.05 | 51 | 2.324 |
| 872B/BF2.3K | 300 | 1680 | 8.30 | 43 | 1680 | 1.20 | 99 | 2.261 |
| 832B/BF2.6K | 265 | 350 | 1.56 | 38 | 350 | .23 | 21 | 2.506 |
| 842B/BF2.6K | 265 | 775 | 3.39 | 38 | 775 | .49 | 29 | 2.577 |
| 862B/BF2.6K | 265 | 1495 | 6.47 | 38 | 1500 | .94 | 51 | 2.609 |
| 872B/BF2.6K | 265 | 1792 | 8.31 | 38 | 1785 | 1.20 | 99 | 2.434 |
| 832B/BF2.9K | 238 | 576 | 2.18 | 34 | 576 | .32 | 21 | 2.945 |
| 842B/BF2.9K | 238 | 1080 | 4.33 | 34 | 1080 | .63 | 29 | 2.814 |
| 862B/BF2.9K | 238 | 2018 | 8.10 | 34 | 2018 | 1.17 | 51 | 2.813 |
| 872B/BF2.9K | 238 | 2140 | 8.30 | 34 | 2140 | 1.20 | 99 | 2.888 |
| 832B/BF3.3K | 210 | 367 | 1.27 | 30 | 367 | .18 | 21 | 3.268 |
| 842B/BF3.3K | 210 | 772 | 2.76 | 30 | 772 | .40 | 29 | 3.158 |
| 862B/BF3.3K | 210 | 1788 | 6.09 | 30 | 1788 | .88 | 51 | 3.313 |
| 872B/BF3.3K | 210 | 2391 | 8.33 | 30 | 2391 | 1.21 | 99 | 3.240 |
| 832B/BF3.5K | 197 | 376 | 1.22 | 28 | 376 | .18 | 21 | 3.455 |
| 842B/BF3.5K | 197 | 830 | 2.54 | 28 | 830 | .37 | 29 | 3.692 |
| 862B/BF3.5K | 197 | 1911 | 5.74 | 28 | 1911 | .83 | 51 | 3.758 |
| 872B/BF3.5K | 197 | 2391 | 7.32 | 28 | 2390 | 1.06 | 99 | 3.687 |
| 832B/BF3.9K | 177 | 576 | 1.62 | 26 | 576 | .23 | 21 | 3.978 |
| 842B/BF3.9K | 177 | 1277 | 3.65 | 26 | 1277 | .53 | 29 | 3.948 |
| 862B/BF3.9K | 177 | 2540 | 7.18 | 26 | 2540 | 1.04 | 51 | 3.952 |
| 872B/BF3.9K | 177 | 2880 | 8.29 | 26 | 2880 | 1.20 | 99 | 3.920 |
| 832B/BF4.4K | 157 | 582 | 1.42 | 23 | 582 | .21 | 21 | 4.630 |
| 842B/BF4.4K | 157 | 1187 | 3.08 | 23 | 1187 | .45 | 29 | 4.351 |
| 862B/BF4.4K | 157 | 2374 | 6.05 | 23 | 2374 | .88 | 51 | 4.429 |
| 872B/BF4.4K | 157 | 3243 | 8.30 | 23 | 3243 | 1.20 | 99 | 4.410 |
| 832B/BF5.1K | 135 | 585 | 1.29 | 20 | 585 | .19 | 21 | 5.126 |
| 842B/BF5.1K | 135 | 1288 | 2.84 | 20 | 1288 | .41 | 29 | 5.119 |
| 862B/BF5.1K | 135 | 2570 | 5.70 | 20 | 2570 | .83 | 51 | 5.040 |
| 872B/BF5.1K | 135 | 3660 | 8.27 | 20 | 3660 | 1.20 | 99 | 4.995 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 153.



800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) |
| 832B/BF5.7K | 307 | 563 | 2.91 | 254 | 563 | 2.41 | 203 | 563 | 1.93 |
| 842B/BF5.7K | 307 | 1110 | 5.64 | 254 | 1182 | 4.97 | 203 | 1272 | 4.28 |
| 862B/BF5.7K | 307 | 2140 | 10.80 | 254 | 2280 | 9.56 | 203 | 2450 | 8.23 |
| 872B/BF5.7K | 307 | 4160 | 21.20 | 254 | 4146 | 17.50 | 203 | 4146 | 14.00 |
| 832B/BF6.4K | 273 | 588 | 2.52 | 226 | 588 | 2.08 | 181 | 588 | 1.67 |
| 842B/BF6.4K | 273 | 1095 | 5.34 | 226 | 1138 | 4.60 | 181 | 1175 | 3.80 |
| 862B/BF6.4K | 273 | 2248 | 10.20 | 226 | 2400 | 9.01 | 181 | 2501 | 7.52 |
| 872B/BF6.4K | 273 | 4623 | 20.90 | 226 | 4674 | 17.50 | 181 | 4674 | 14.00 |
| 832B/BF7.2K | 243 | 576 | 2.34 | 201 | 576 | 1.93 | 161 | 576 | 1.55 |
| 842B/BF7.2K | 243 | 1171 | 4.88 | 201 | 1206 | 4.16 | 161 | 1246 | 3.44 |
| 862B/BF7.2K | 243 | 2380 | 9.49 | 201 | 2500 | 8.26 | 161 | 2590 | 6.83 |
| 872B/BF7.2K | 243 | 4859 | 19.30 | 201 | 5168 | 17.00 | 161 | 5282 | 13.90 |
| 832B/BF8K | 218 | 560 | 2.01 | 181 | 560 | 1.66 | 145 | 560 | 1.33 |
| 842B/BF8K | 218 | 1206 | 4.54 | 181 | 1254 | 3.91 | 145 | 1299 | 3.24 |
| 862B/BF8K | 218 | 2480 | 8.82 | 181 | 2640 | 7.77 | 145 | 2760 | 6.49 |
| 872B/BF8K | 218 | 5074 | 18.00 | 181 | 5343 | 15.70 | 145 | 5360 | 12.60 |
| 832B/BF9K | 194 | 636 | 1.86 | 161 | 636 | 1.54 | 128 | 636 | 1.23 |
| 842B/BF9K | 194 | 1275 | 4.14 | 161 | 1326 | 3.53 | 128 | 1414 | 2.92 |
| 862B/BF9K | 194 | 2608 | 8.18 | 161 | 2737 | 7.11 | 128 | 2830 | 5.88 |
| 872B/BF9K | 194 | 5358 | 16.70 | 161 | 5384 | 13.90 | 128 | 5375 | 11.10 |
| 832B/BF10K | 175 | 576 | 1.63 | 145 | 576 | 1.35 | 116 | 576 | 1.08 |
| 842B/BF10K | 175 | 1295 | 3.82 | 145 | 1330 | 3.26 | 116 | 1400 | 2.73 |
| 862B/BF10K | 175 | 2600 | 7.56 | 145 | 2680 | 6.44 | 116 | 2780 | 5.36 |
| 872B/BF10K | 175 | 5360 | 15.70 | 145 | 5238 | 13.10 | 116 | 5200 | 10.40 |
| 832B/BF11K | 159 | 576 | 1.43 | 131 | 576 | 1.18 | 105 | 576 | 0.95 |
| 842B/BF11K | 159 | 1330 | 3.45 | 131 | 1380 | 2.96 | 105 | 1420 | 2.43 |
| 862B/BF11K | 159 | 2680 | 6.70 | 131 | 2760 | 5.72 | 105 | 2900 | 4.79 |
| 872B/BF11K | 159 | 5291 | 13.70 | 131 | 5315 | 11.40 | 105 | 5304 | 9.10 |
| 832B/BF12K | 145 | 550 | 1.30 | 120 | 550 | 1.08 | 96 | 550 | 0.86 |
| 842B/BF12K | 145 | 1419 | 3.23 | 120 | 1488 | 2.72 | 96 | 1439 | 2.17 |
| 862B/BF12K | 145 | 2840 | 6.49 | 120 | 2920 | 5.53 | 96 | 2990 | 4.52 |
| 872B/BF12K | 145 | 5439 | 12.50 | 120 | 5300 | 10.40 | 96 | 5300 | 8.31 |
| 832B/BF14K | 125 | 550 | 1.14 | 103 | 554 | 0.95 | 82 | 554 | 0.76 |
| 842B/BF14K | 125 | 1443 | 2.89 | 103 | 1440 | 2.39 | 82 | 1440 | 1.91 |
| 862B/BF14K | 125 | 2910 | 5.72 | 103 | 2970 | 4.83 | 82 | 3030 | 3.95 |
| 872B/BF14K | 125 | 5364 | 10.90 | 103 | 5378 | 9.05 | 82 | 5378 | 7.24 |
| 832B/BF16K | 109 | 576 | 1.06 | 90 | 576 | 0.88 | 72 | 576 | 0.70 |
| 842B/BF16K | 109 | 1380 | 2.49 | 90 | 1380 | 2.06 | 72 | 1380 | 1.65 |
| 862B/BF16K | 109 | 2900 | 5.12 | 90 | 3010 | 4.42 | 72 | 3070 | 3.60 |
| 872B/BF16K | 109 | 5245 | 9.60 | 90 | 5250 | 7.96 | 72 | 5250 | 6.37 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 153.

800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832B/BF5.7K | 121 | 555 | 1.13 | 18 | 555 | .16 | 21 | 5.540 |
| 842B/BF5.7K | 121 | 1320 | 2.64 | 18 | 1320 | .38 | 29 | 5.641 |
| 862B/BF5.7K | 121 | 2622 | 5.24 | 18 | 2622 | .76 | 51 | 5.649 |
| 872B/BF5.7K | 121 | 4112 | 8.26 | 18 | 4112 | 1.20 | 99 | 5.620 |
| 832B/BF6.4K | 108 | 588 | 0.98 | 16 | 588 | .14 | 21 | 6.685 |
| 842B/BF6.4K | 108 | 1222 | 2.35 | 16 | 1222 | .34 | 29 | 5.970 |
| 862B/BF6.4K | 108 | 2674 | 4.78 | 16 | 2674 | .69 | 51 | 6.313 |
| 872B/BF6.4K | 108 | 4653 | 8.29 | 16 | 4653 | 1.20 | 99 | 6.335 |
| 832B/BF7.2K | 96 | 576 | 0.91 | 14 | 576 | .13 | 21 | 7.067 |
| 842B/BF7.2K | 96 | 1315 | 2.16 | 14 | 1315 | .31 | 29 | 6.874 |
| 862B/BF7.2K | 96 | 2772 | 4.37 | 14 | 2722 | .63 | 51 | 7.160 |
| 872B/BF7.2K | 96 | 5276 | 8.26 | 14 | 5276 | 1.20 | 99 | 7.210 |
| 832B/BF8K | 86 | 560 | 0.78 | 12 | 560 | .11 | 21 | 8.000 |
| 842B/BF8K | 86 | 1328 | 1.97 | 12 | 1328 | .29 | 29 | 7.610 |
| 862B/BF8K | 86 | 2867 | 4.02 | 12 | 2867 | .58 | 51 | 8.051 |
| 872B/BF8K | 86 | 5322 | 7.44 | 12 | 5322 | 1.08 | 99 | 8.073 |
| 832B/BF9K | 77 | 633 | 0.73 | 11 | 633 | .11 | 21 | 9.792 |
| 842B/BF9K | 77 | 1366 | 1.73 | 11 | 1366 | .25 | 29 | 8.913 |
| 862B/BF9K | 77 | 2937 | 3.63 | 11 | 2937 | .53 | 51 | 9.131 |
| 872B/BF9K | 77 | 5324 | 6.54 | 11 | 5324 | .95 | 99 | 9.188 |
| 832B/BF10K | 69 | 576 | 0.64 | 10 | 576 | .09 | 21 | 10.112 |
| 842B/BF10K | 69 | 1402 | 1.63 | 10 | 1402 | .24 | 29 | 9.706 |
| 862B/BF10K | 69 | 2935 | 3.37 | 10 | 2935 | .49 | 51 | 9.832 |
| 872B/BF10K | 69 | 5194 | 6.18 | 10 | 5194 | .90 | 99 | 9.485 |
| 832B/BF11K | 63 | 576 | 0.56 | 9.1 | 576 | .08 | 21 | 11.566 |
| 842B/BF11K | 63 | 1420 | 1.44 | 9.1 | 1420 | .21 | 29 | 11.025 |
| 862B/BF11K | 63 | 2900 | 3.00 | 9.1 | 2900 | .43 | 51 | 11.434 |
| 872B/BF11K | 63 | 5272 | 5.38 | 9.1 | 5272 | .78 | 99 | 11.060 |
| 832B/BF12K | 57 | 550 | 0.51 | 8.3 | 550 | .07 | 21 | 12.101 |
| 842B/BF12K | 57 | 1416 | 1.27 | 8.3 | 1416 | .18 | 29 | 12.584 |
| 862B/BF12K | 57 | 3032 | 2.73 | 8.3 | 3032 | .40 | 51 | 12.537 |
| 872B/BF12K | 57 | 5247 | 4.90 | 8.3 | 5247 | .71 | 99 | 12.087 |
| 832B/BF14K | 49 | 539 | 0.44 | 7.1 | 539 | .06 | 21 | 13.829 |
| 842B/BF14K | 49 | 1418 | 1.12 | 7.1 | 1418 | .16 | 29 | 14.295 |
| 862B/BF14K | 49 | 3087 | 2.39 | 7.1 | 3087 | .35 | 51 | 14.580 |
| 872B/BF14K | 49 | 5320 | 4.26 | 7.1 | 5320 | .62 | 99 | 14.094 |
| 832B/BF16K | 43 | 576 | 0.41 | 6.2 | 576 | .06 | 21 | 15.599 |
| 842B/BF16K | 43 | 1363 | 0.97 | 6.2 | 1363 | .14 | 29 | 15.866 |
| 862B/BF16K | 43 | 3035 | 2.12 | 6.2 | 3035 | .31 | 51 | 16.159 |
| 872B/BF16K | 43 | 5212 | 3.76 | 6.2 | 5212 | .55 | 99 | 15.645 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 153.



800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832B/BF18K | 97 | 590 | 0.91 | 80 | 590 | 0.75 | 64 | 590 | 0.60 |
| 842B/BF18K | 97 | 1420 | 2.35 | 80 | 1420 | 1.95 | 64 | 1420 | 1.56 |
| 862B/BF18K | 97 | 2940 | 4.88 | 80 | 3060 | 4.20 | 64 | 3060 | 3.37 |
| 872B/BF18K | 97 | 5320 | 8.50 | 80 | 5320 | 7.05 | 64 | 5320 | 5.64 |
| 832B/BF20K | 87 | 590 | 0.85 | 72 | 590 | 0.70 | 58 | 590 | 0.56 |
| 842B/BF20K | 87 | 1442 | 2.01 | 72 | 1442 | 1.67 | 58 | 1442 | 1.33 |
| 862B/BF20K | 87 | 3014 | 4.19 | 72 | 3014 | 3.54 | 58 | 3014 | 2.88 |
| 872B/BF20K | 87 | 5319 | 7.64 | 72 | 5266 | 6.33 | 58 | 5266 | 5.06 |
| 832B/BF22K | 79 | 574 | 0.72 | 65 | 590 | 0.60 | 52 | 590 | 0.48 |
| 842B/BF22K | 79 | 1443 | 1.85 | 65 | 1443 | 1.53 | 52 | 1443 | 1.23 |
| 862B/BF22K | 79 | 3030 | 3.95 | 65 | 3090 | 3.34 | 52 | 3120 | 2.70 |
| 872B/BF22K | 79 | 5398 | 6.77 | 65 | 5398 | 5.61 | 52 | 5398 | 4.48 |
| 832B/BF25K | 70 | 580 | 0.65 | 58 | 580 | 0.54 | 46 | 580 | 0.43 |
| 842B/BF25K | 70 | 1312 | 1.64 | 58 | 1312 | 1.36 | 46 | 1312 | 1.09 |
| 862B/BF25K | 70 | 3070 | 3.49 | 58 | 3070 | 2.89 | 46 | 3070 | 2.31 |
| 872B/BF25K | 70 | 5279 | 6.17 | 58 | 5279 | 5.11 | 46 | 5279 | 4.09 |
| 832B/BF28K | 62 | 580 | 0.59 | 51 | 580 | 0.49 | 41 | 580 | 0.39 |
| 842B/BF28K | 62 | 1467 | 1.46 | 51 | 1467 | 1.21 | 41 | 1467 | 0.97 |
| 862B/BF28K | 62 | 3070 | 3.19 | 51 | 3070 | 2.64 | 41 | 3070 | 2.11 |
| 872B/BF28K | 62 | 5287 | 5.64 | 51 | 5287 | 4.67 | 41 | 5287 | 3.74 |
| 832B/BF32K | 54 | 555 | 0.52 | 45 | 555 | 0.43 | 36 | 555 | 0.34 |
| 842B/BF32K | 54 | 1338 | 1.29 | 45 | 1338 | 1.07 | 36 | 1338 | 0.85 |
| 862B/BF32K | 54 | 3120 | 2.79 | 45 | 3120 | 2.31 | 36 | 3120 | 1.85 |
| 872B/BF32K | 54 | 5342 | 4.90 | 45 | 5342 | 4.06 | 36 | 5342 | 3.25 |
| 832B/BF36K | 48 | 557 | 0.47 | 40 | 557 | 0.39 | 32 | 557 | 0.31 |
| 842B/BF36K | 48 | 1457 | 1.15 | 40 | 1457 | 0.95 | 32 | 1457 | 0.76 |
| 862B/BF36K | 48 | 3120 | 2.55 | 40 | 3120 | 2.11 | 32 | 3120 | 1.69 |
| 872B/BF36K | 48 | 5296 | 4.48 | 40 | 5296 | 3.71 | 32 | 5296 | 2.97 |
| 833B/BF36K | 48 | 562 | 0.47 | 40 | 562 | 0.39 | 32 | 562 | 0.31 |
| 843B/BF36K | 48 | 1390 | 1.17 | 40 | 1390 | 0.97 | 32 | 1390 | 0.77 |
| 863B/BF36K | 48 | 2978 | 2.51 | 40 | 2977 | 2.08 | 32 | 2977 | 1.66 |
| 873B/BF36K | 48 | 5225 | 4.42 | 40 | 5225 | 3.66 | 32 | 5225 | 2.93 |
| 832B/BF40K | 43 | 466 | 0.36 | 36 | 484 | 0.31 | 29 | 484 | 0.25 |
| 842B/BF40K | 43 | 1375 | 1.00 | 36 | 1254 | 0.85 | 29 | 1254 | 0.69 |
| 862B/BF40K | 43 | 2992 | 2.18 | 36 | 2930 | 1.84 | 29 | 2930 | 1.51 |
| 872B/BF40K | 43 | 5050 | 3.83 | 36 | 5050 | 3.24 | 29 | 5050 | 2.63 |
| 833B/BF40K | 43 | 560 | 0.41 | 36 | 562 | 0.34 | 29 | 562 | 0.27 |
| 843B/BF40K | 43 | 1390 | 1.02 | 36 | 1390 | 0.85 | 29 | 1390 | 0.68 |
| 863B/BF40K | 43 | 2978 | 2.21 | 36 | 2978 | 1.83 | 29 | 2978 | 1.46 |
| 873B/BF40K | 43 | 5225 | 3.80 | 36 | 5225 | 3.15 | 29 | 5225 | 2.52 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 153.

□ Indicates Triple Reduction

800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832B/BF18K | 38 | 590 | .35 | 5.5 | 590 | .05 | 21 | 18.667 |
| 842B/BF18K | 38 | 1420 | .92 | 5.5 | 1420 | .13 | 29 | 17.252 |
| 862B/BF18K | 38 | 3060 | 1.99 | 5.5 | 3060 | .29 | 51 | 17.253 |
| 872B/BF18K | 38 | 5320 | 3.33 | 5.5 | 5320 | .48 | 99 | 17.920 |
| 832B/BF20K | 34 | 590 | .33 | 5.0 | 590 | .05 | 21 | 20.308 |
| 842B/BF20K | 34 | 1442 | .78 | 5.0 | 1442 | .11 | 29 | 20.548 |
| 862B/BF20K | 34 | 3014 | 1.69 | 5.0 | 3014 | .25 | 51 | 20.606 |
| 872B/BF20K | 34 | 5266 | 2.98 | 5.0 | 5266 | .43 | 99 | 19.936 |
| 832B/BF22K | 31 | 590 | .28 | 4.5 | 590 | .04 | 21 | 22.848 |
| 842B/BF22K | 31 | 1425 | .72 | 4.5 | 1425 | .10 | 29 | 22.343 |
| 862B/BF22K | 31 | 3120 | 1.58 | 4.5 | 3120 | .23 | 51 | 22.001 |
| 872B/BF22K | 31 | 5398 | 2.63 | 4.5 | 5398 | .38 | 99 | 22.835 |
| 832B/BF25K | 28 | 580 | .25 | 4.0 | 580 | .04 | 21 | 25.560 |
| 842B/BF25K | 28 | 1312 | .64 | 4.0 | 1312 | .09 | 29 | 22.908 |
| 862B/BF25K | 28 | 3070 | 1.36 | 4.0 | 3070 | .20 | 51 | 25.246 |
| 872B/BF25K | 28 | 5279 | 2.41 | 4.0 | 5279 | .35 | 99 | 24.500 |
| 832B/BF28K | 25 | 580 | .23 | 3.6 | 580 | .03 | 21 | 28.400 |
| 842B/BF28K | 25 | 1467 | .57 | 3.6 | 1467 | .08 | 29 | 28.777 |
| 862B/BF28K | 25 | 3070 | 1.24 | 3.6 | 3070 | .18 | 51 | 27.643 |
| 872B/BF28K | 25 | 5287 | 2.20 | 3.6 | 5287 | .32 | 99 | 26.845 |
| 832B/BF32K | 21 | 555 | .20 | 3.1 | 555 | .03 | 21 | 30.587 |
| 842B/BF32K | 21 | 1315 | .50 | 3.1 | 1338 | .07 | 29 | 29.701 |
| 862B/BF32K | 21 | 3120 | 1.08 | 3.1 | 3120 | .16 | 51 | 32.193 |
| 872B/BF32K | 21 | 5342 | 1.91 | 3.1 | 5344 | .28 | 99 | 31.220 |
| 832B/BF36K | 19 | 557 | .18 | 2.8 | 557 | .03 | 21 | 33.986 |
| 842B/BF36K | 19 | 1457 | .44 | 2.8 | 1457 | .06 | 29 | 36.292 |
| 862B/BF36K | 19 | 3120 | .99 | 2.8 | 3120 | .14 | 51 | 35.249 |
| 872B/BF36K | 19 | 5296 | 1.74 | 2.8 | 5296 | .25 | 99 | 34.208 |
| 833B/BF36K | 19 | 562 | .18 | 2.8 | 562 | .03 | 29 | 35.393 |
| 843B/BF36K | 19 | 1390 | .45 | 2.8 | 1380 | .07 | 37 | 35.193 |
| 863B/BF36K | 19 | 2977 | .97 | 2.8 | 2977 | .14 | 59 | 35.059 |
| 873B/BF36K | 19 | 5225 | 1.71 | 2.8 | 5225 | .25 | 114 | 34.934 |
| 832B/BF40K | 17 | 485 | .15 | 2.5 | 485 | .02 | 21 | 37.438 |
| 842B/BF40K | 17 | 1254 | .40 | 2.5 | 1254 | .06 | 29 | 36.292 |
| 862B/BF40K | 17 | 2930 | .89 | 2.5 | 2930 | .13 | 51 | 38.753 |
| 872B/BF40K | 17 | 5050 | 1.54 | 2.5 | 5050 | .22 | 99 | 38.150 |
| 833B/BF40K | 17 | 562 | .16 | 2.5 | 562 | .02 | 29 | 40.446 |
| 843B/BF40K | 17 | 1390 | .39 | 2.5 | 1390 | .06 | 37 | 40.216 |
| 863B/BF40K | 17 | 2972 | .85 | 2.5 | 2978 | .12 | 59 | 39.830 |
| 873B/BF40K | 17 | 5225 | 1.47 | 2.5 | 5225 | .22 | 114 | 40.631 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 153.
 □ Indicates Triple Reduction



800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832B/BF45K | 38 | 480 | 0.33 | 32 | 480 | 0.28 | 25 | 480 | 0.23 |
| 842B/BF45K | 38 | 1410 | 0.90 | 32 | 1410 | 0.76 | 25 | 1450 | 0.61 |
| 862B/BF45K | 38 | 2950 | 2.01 | 32 | 3010 | 1.70 | 25 | 3090 | 1.39 |
| 872B/BF45K | 38 | 5167 | 3.54 | 32 | 5215 | 2.99 | 25 | 5254 | 2.41 |
| 833B/BF45K | 38 | 544 | 0.38 | 32 | 540 | 0.31 | 25 | 540 | 0.25 |
| 843B/BF45K | 38 | 1420 | 0.92 | 32 | 1420 | 0.76 | 25 | 1420 | 0.61 |
| 863B/BF45K | 38 | 3040 | 2.01 | 32 | 3040 | 1.66 | 25 | 3040 | 1.33 |
| 873B/BF45K | 38 | 5300 | 3.52 | 32 | 5300 | 2.91 | 25 | 5300 | 2.33 |
| 832B/BF50K | 35 | 555 | 0.34 | 29 | 536 | 0.28 | 23 | 536 | 0.22 |
| 842B/BF50K | 35 | 1500 | 0.87 | 29 | 1453 | 0.72 | 23 | 1500 | 0.58 |
| 862B/BF50K | 35 | 3150 | 1.86 | 29 | 3150 | 1.55 | 23 | 3150 | 1.24 |
| 872B/BF50K | 35 | 5216 | 3.16 | 29 | 5250 | 2.66 | 23 | 5250 | 2.10 |
| 833B/BF50K | 35 | 540 | 0.33 | 29 | 540 | 0.27 | 23 | 540 | 0.22 |
| 843B/BF50K | 35 | 1429 | 0.81 | 29 | 1429 | 0.67 | 23 | 1429 | 0.54 |
| 863B/BF50K | 35 | 3040 | 1.77 | 29 | 3040 | 1.46 | 23 | 3040 | 1.17 |
| 873B/BF50K | 35 | 5290 | 3.02 | 29 | 5290 | 2.50 | 23 | 5290 | 2.00 |
| 832B/BF56K | 31 | 540 | 0.29 | 25 | 540 | 0.25 | 20 | 540 | 0.20 |
| 842B/BF56K | 31 | 1392 | 0.71 | 25 | 1400 | 0.60 | 20 | 1400 | 0.49 |
| 862B/BF56K | 31 | 2460 | 1.28 | 25 | 2460 | 1.06 | 20 | 2460 | 0.85 |
| 872B/BF56K | 31 | 4629 | 2.50 | 25 | 4647 | 2.10 | 20 | 4700 | 1.70 |
| 833B/BF56K | 31 | 554 | 0.30 | 25 | 540 | 0.25 | 20 | 540 | 0.20 |
| 843B/BF56K | 31 | 1396 | 0.76 | 25 | 1396 | 0.63 | 20 | 1396 | 0.50 |
| 863B/BF56K | 31 | 2887 | 1.54 | 25 | 2987 | 1.27 | 20 | 2987 | 1.01 |
| 873B/BF56K | 31 | 5227 | 2.69 | 25 | 5227 | 2.23 | 20 | 5227 | 1.78 |
| 832B/BF63K | 27 | 500 | 0.25 | 23 | 480 | 0.20 | 18 | 480 | 0.16 |
| 842B/BF63K | 27 | 1475 | 0.70 | 23 | 1475 | 0.58 | 18 | 1425 | 0.45 |
| 862B/BF63K | 27 | 3098 | 1.52 | 23 | 3120 | 1.29 | 18 | 3138 | 1.02 |
| 872B/BF63K | 27 | 5300 | 2.64 | 23 | 5300 | 2.18 | 18 | 5300 | 1.75 |
| 833B/BF63K | 27 | 522 | 0.26 | 23 | 530 | 0.22 | 18 | 530 | 0.17 |
| 843B/BF63K | 27 | 1300 | 0.65 | 23 | 1300 | 0.54 | 18 | 1300 | 0.43 |
| 863B/BF63K | 27 | 2973 | 1.41 | 23 | 2973 | 1.17 | 18 | 2973 | 0.94 |
| 873B/BF63K | 27 | 5226 | 2.52 | 23 | 5228 | 2.09 | 18 | 5228 | 1.67 |
| 832B/BF71K | 24 | 500 | 0.22 | 20 | 500 | 0.18 | 16 | 500 | 0.15 |
| 842B/BF71K | 24 | 1485 | 0.62 | 20 | 1485 | 0.51 | 16 | 1485 | 0.41 |
| 862B/BF71K | 24 | 2966 | 1.28 | 20 | 2966 | 1.06 | 16 | 2966 | 0.85 |
| 872B/BF71K | 24 | 5385 | 2.38 | 20 | 5385 | 1.97 | 16 | 5385 | 1.58 |
| 833B/BF71K | 24 | 577 | 0.24 | 20 | 577 | 0.20 | 16 | 577 | 0.16 |
| 843B/BF71K | 24 | 1427 | 0.60 | 20 | 1427 | 0.50 | 16 | 1427 | 0.40 |
| 863B/BF71K | 24 | 3040 | 1.23 | 20 | 3040 | 1.02 | 16 | 3040 | 0.81 |
| 873B/BF71K | 24 | 5298 | 2.14 | 20 | 5298 | 1.77 | 16 | 5298 | 1.42 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 153.

□ Indicates Triple Reduction

800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832B/BF45K | 15 | 480 | .13 | 2.2 | 480 | .02 | 21 | 41.599 |
| 842B/BF45K | 15 | 1450 | .36 | 2.2 | 1450 | .05 | 29 | 45.591 |
| 862B/BF45K | 15 | 3090 | .82 | 2.2 | 3090 | .12 | 51 | 42.431 |
| 872B/BF45K | 15 | 5254 | 1.41 | 2.2 | 5254 | .20 | 99 | 41.802 |
| 833B/BF45K | 15 | 580 | .15 | 2.2 | 540 | .02 | 29 | 42.354 |
| 843B/BF45K | 15 | 1420 | .36 | 2.2 | 1420 | .05 | 37 | 45.630 |
| 863B/BF45K | 15 | 3040 | .78 | 2.2 | 3040 | .12 | 59 | 44.706 |
| 873B/BF45K | 15 | 5300 | 1.38 | 2.2 | 5300 | .20 | 114 | 44.521 |
| 832B/BF50K | 14 | 536 | .13 | 2.0 | 536 | .02 | 21 | 46.910 |
| 842B/BF50K | 14 | 1500 | .34 | 2.0 | 1500 | .05 | 29 | 49.414 |
| 862B/BF50K | 14 | 3150 | .73 | 2.0 | 3150 | .10 | 51 | 48.501 |
| 872B/BF50K | 14 | 5250 | 1.26 | 2.0 | 5250 | .18 | 99 | 47.276 |
| 833B/BF50K | 14 | 540 | .12 | 2.0 | 540 | .02 | 29 | 48.400 |
| 843B/BF50K | 14 | 1429 | .32 | 2.0 | 1429 | .04 | 37 | 52.143 |
| 863B/BF50K | 14 | 3040 | .70 | 2.0 | 3040 | .10 | 59 | 50.789 |
| 873B/BF50K | 14 | 5290 | 1.19 | 2.0 | 5290 | .17 | 114 | 51.776 |
| 832B/BF56K | 12 | 540 | .12 | 2.0 | 540 | .02 | 21 | 53.312 |
| 842B/BF56K | 12 | 1400 | .28 | 2.0 | 1400 | .04 | 29 | 56.158 |
| 862B/BF56K | 12 | 2460 | .50 | 2.0 | 2460 | .07 | 51 | 55.125 |
| 872B/BF56K | 12 | 4700 | 1.01 | 2.0 | 4700 | .15 | 99 | 53.029 |
| 833B/BF56K | 12 | 540 | .12 | 2.0 | 540 | .02 | 29 | 54.596 |
| 843B/BF56K | 12 | 1396 | .30 | 2.0 | 1396 | .04 | 37 | 54.281 |
| 863B/BF56K | 12 | 2987 | .59 | 2.0 | 2987 | .09 | 59 | 57.321 |
| 873B/BF56K | 12 | 5227 | 1.06 | 2.0 | 5227 | .15 | 114 | 57.422 |
| 832B/BF63K | 11 | 480 | .09 | 1.6 | 480 | .01 | 21 | 57.390 |
| 842B/BF63K | 11 | 1475 | .28 | 1.6 | 1475 | .04 | 29 | 60.380 |
| 862B/BF63K | 11 | 3138 | .61 | 1.6 | 3138 | .09 | 51 | 58.384 |
| 872B/BF63K | 11 | 5300 | 1.03 | 1.6 | 5300 | .15 | 99 | 57.770 |
| 833B/BF63K | 11 | 570 | .11 | 1.6 | 530 | .01 | 29 | 59.396 |
| 843B/BF63K | 11 | 1300 | .26 | 1.6 | 1300 | .04 | 37 | 59.054 |
| 863B/BF63K | 11 | 2973 | .54 | 1.6 | 2973 | .08 | 59 | 62.319 |
| 873B/BF63K | 11 | 5226 | .98 | 1.6 | 5228 | .14 | 114 | 61.309 |
| 832B/BF71K | 10 | 500 | .09 | 1.4 | 500 | .01 | 21 | 65.190 |
| 842B/BF71K | 10 | 1485 | .25 | 1.4 | 1485 | .03 | 29 | 68.619 |
| 862B/BF71K | 10 | 2966 | .50 | 1.4 | 2966 | .07 | 51 | 66.358 |
| 872B/BF71K | 10 | 5385 | .94 | 1.4 | 5385 | .13 | 99 | 64.801 |
| 833B/BF71K | 10 | 577 | .09 | 1.4 | 577 | .01 | 29 | 71.078 |
| 843B/BF71K | 10 | 1427 | .23 | 1.4 | 1427 | .03 | 37 | 70.302 |
| 863B/BF71K | 10 | 3040 | .47 | 1.4 | 3040 | .07 | 59 | 73.093 |
| 873B/BF71K | 10 | 5298 | .85 | 1.4 | 5298 | .13 | 114 | 73.172 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 153.

□ Indicates Triple Reduction



800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 833B/BF80K | 21 | 565 | 0.21 | 18 | 565 | 0.17 | 14 | 565 | 0.14 |
| 843B/BF80K | 21 | 1320 | 0.51 | 18 | 1320 | 0.42 | 14 | 1320 | 0.34 |
| 863B/BF80K | 21 | 3038 | 1.13 | 18 | 3038 | 0.94 | 14 | 3038 | 0.75 |
| 873B/BF80K | 21 | 5315 | 2.01 | 18 | 5315 | 1.66 | 14 | 5315 | 1.33 |
| 833B/BF90K | 19 | 575 | 0.19 | 16 | 575 | 0.15 | 12 | 575 | 0.12 |
| 843B/BF90K | 19 | 1395 | 0.47 | 16 | 1395 | 0.39 | 12 | 1395 | 0.31 |
| 863B/BF90K | 19 | 2745 | 0.98 | 16 | 2745 | 0.82 | 12 | 2745 | 0.65 |
| 873B/BF90K | 19 | 5252 | 1.73 | 16 | 5252 | 1.43 | 12 | 5252 | 1.14 |
| 833B/BF100K | 17 | 570 | 0.17 | 14 | 575 | 0.14 | 11 | 575 | 0.11 |
| 843B/BF100K | 17 | 1400 | 0.42 | 14 | 1400 | 0.35 | 11 | 1400 | 0.28 |
| 863B/BF100K | 17 | 3095 | 0.88 | 14 | 3095 | 0.72 | 11 | 3095 | 0.58 |
| 873B/BF100K | 17 | 5252 | 1.58 | 14 | 5252 | 1.31 | 11 | 5252 | 1.05 |
| 833B/BF112K | 15 | 543 | 0.15 | 12 | 540 | 0.12 | 10 | 540 | 0.10 |
| 843B/BF112K | 15 | 1340 | 0.37 | 12 | 1340 | 0.30 | 10 | 1340 | 0.24 |
| 863B/BF112K | 15 | 2820 | 0.79 | 12 | 2820 | 0.65 | 10 | 2820 | 0.52 |
| 873B/BF112K | 15 | 5300 | 1.37 | 12 | 5300 | 1.14 | 10 | 5300 | 0.91 |
| 833B/BF125K | 14 | 523 | 0.13 | 11 | 520 | 0.11 | 9.3 | 520 | 0.09 |
| 843B/BF125K | 14 | 1430 | 0.33 | 11 | 1430 | 0.27 | 9.3 | 1430 | 0.22 |
| 863B/BF125K | 14 | 3000 | 0.70 | 11 | 3000 | 0.58 | 9.3 | 3000 | 0.46 |
| 873B/BF125K | 14 | 5337 | 1.26 | 11 | 5337 | 1.04 | 9.3 | 5337 | 0.83 |
| 833B/BF140K | 12 | 487 | 0.11 | 10 | 487 | 0.09 | 8.3 | 467 | 0.08 |
| 843B/BF140K | 12 | 1360 | 0.29 | 10 | 1360 | 0.24 | 8.3 | 1360 | 0.20 |
| 863B/BF140K | 12 | 2916 | 0.65 | 10 | 2916 | 0.54 | 8.3 | 2916 | 0.43 |
| 873B/BF140K | 12 | 5247 | 1.11 | 10 | 5247 | 0.92 | 8.3 | 5247 | 0.74 |
| 833B/BF160K | 10 | 490 | 0.10 | 9.1 | 490 | 0.09 | 7.2 | 490 | 0.07 |
| 843B/BF160K | 10 | 1410 | 0.27 | 9.1 | 1410 | 0.22 | 7.2 | 1410 | 0.18 |
| 863B/BF160K | 10 | 3130 | 0.58 | 9.1 | 3130 | 0.48 | 7.2 | 3130 | 0.39 |
| 873B/BF160K | 10 | 5280 | 1.02 | 9.1 | 5280 | 0.84 | 7.2 | 5280 | 0.67 |
| 833B/BF180K | 9.7 | 555 | 0.10 | 8.0 | 555 | 0.08 | 6.4 | 555 | 0.06 |
| 843B/BF180K | 9.7 | 1436 | 0.24 | 8.0 | 1436 | 0.20 | 6.4 | 1436 | 0.16 |
| 863B/BF180K | 9.7 | 3146 | 0.53 | 8.0 | 3148 | 0.44 | 6.4 | 3148 | 0.35 |
| 873B/BF180K | 9.7 | 5362 | 0.92 | 8.0 | 5362 | 0.76 | 6.4 | 5362 | 0.61 |
| 833B/BF200K | 8.8 | 568 | 0.09 | 7.3 | 555 | 0.07 | 5.8 | 555 | 0.06 |
| 843B/BF200K | 8.8 | 1428 | 0.21 | 7.3 | 1428 | 0.17 | 5.8 | 1428 | 0.14 |
| 863B/BF200K | 8.8 | 3173 | 0.47 | 7.3 | 3173 | 0.39 | 5.8 | 3173 | 0.31 |
| 873B/BF200K | 8.8 | 5432 | 0.82 | 7.3 | 5432 | 0.68 | 5.8 | 5432 | 0.55 |
| 833B/BF225K | 7.8 | 544 | 0.08 | 6.4 | 544 | 0.07 | 5.2 | 544 | 0.05 |
| 843B/BF225K | 7.8 | 1410 | 0.19 | 6.4 | 1410 | 0.16 | 5.2 | 1410 | 0.13 |
| 863B/BF225K | 7.8 | 3146 | 0.44 | 6.4 | 3146 | 0.36 | 5.2 | 3146 | 0.29 |
| 873B/BF225K | 7.8 | 5341 | 0.75 | 6.4 | 5341 | 0.62 | 5.2 | 5341 | 0.50 |
| 833B/BF250K | 7.0 | 540 | 0.07 | 5.8 | 540 | 0.06 | 4.6 | 540 | 0.05 |
| 843B/BF250K | 7.0 | 1410 | 0.17 | 5.8 | 1410 | 0.14 | 4.6 | 1410 | 0.11 |
| 863B/BF250K | 7.0 | 3110 | 0.39 | 5.8 | 3110 | 0.32 | 4.6 | 3110 | 0.26 |
| 873B/BF250K | 7.0 | 5423 | 0.67 | 5.8 | 5423 | 0.56 | 4.6 | 5423 | 0.45 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 153.

□ Indicates Triple Reduction

800 Series Ratio and Capacity Selection Tables

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 833B/BF80K | 8.6 | 565 | .08 | 1.25 | 565 | .01 | 29 | 79.506 |
| 843B/BF80K | 8.6 | 1320 | .19 | 1.25 | 1320 | .03 | 37 | 76.483 |
| 863B/BF80K | 8.6 | 3038 | .43 | 1.25 | 3038 | .06 | 59 | 79.466 |
| 873B/BF80K | 8.6 | 5315 | .77 | 1.25 | 5315 | .11 | 114 | 78.141 |
| 833B/BF90K | 7.7 | 575 | .07 | 1.25 | 575 | .01 | 29 | 89.460 |
| 843B/BF90K | 7.7 | 1395 | .18 | 1.25 | 1395 | .03 | 37 | 87.686 |
| 863B/BF90K | 7.7 | 2745 | .38 | 1.25 | 2745 | .05 | 59 | 82.764 |
| 873B/BF90K | 7.7 | 5252 | .66 | 1.25 | 5252 | .10 | 114 | 89.712 |
| 833B/BF100K | 6.9 | 575 | .06 | 1.25 | 575 | .01 | 29 | 99.401 |
| 843B/BF100K | 6.9 | 1400 | .16 | 1.25 | 1400 | .02 | 37 | 98.820 |
| 863B/BF100K | 6.9 | 3095 | .33 | 1.25 | 3095 | .05 | 59 | 103.962 |
| 873B/BF100K | 6.9 | 5252 | .61 | 1.25 | 5252 | .09 | 114 | 98.233 |
| 833B/BF112K | 6.2 | 540 | .06 | .89 | 540 | .01 | 29 | 107.054 |
| 843B/BF112K | 6.2 | 1340 | .14 | .89 | 1340 | .02 | 37 | 113.691 |
| 863B/BF112K | 6.2 | 2820 | .30 | .89 | 2820 | .04 | 59 | 105.536 |
| 873B/BF112K | 6.2 | 5300 | .53 | .89 | 5300 | .08 | 114 | 114.319 |
| 833B/BF125K | 5.5 | 520 | .05 | .80 | 520 | .01 | 29 | 118.950 |
| 843B/BF125K | 5.5 | 1430 | .13 | .80 | 1430 | .02 | 37 | 128.128 |
| 863B/BF125K | 5.5 | 3000 | .27 | .80 | 3000 | .04 | 59 | 127.052 |
| 873B/BF125K | 5.5 | 5337 | .48 | .80 | 5337 | .07 | 114 | 125.178 |
| 833B/BF140K | 5.0 | 487 | .05 | .71 | 487 | .01 | 29 | 131.034 |
| 843B/BF140K | 5.0 | 1360 | .11 | .71 | 1360 | .02 | 37 | 138.931 |
| 863B/BF140K | 5.0 | 2916 | .25 | .71 | 2916 | .04 | 59 | 132.567 |
| 873B/BF140K | 5.0 | 5247 | .43 | .71 | 5247 | .06 | 114 | 139.695 |
| 833B/BF160K | 4.3 | 490 | .04 | .62 | 490 | .01 | 29 | 145.595 |
| 843B/BF160K | 4.3 | 1410 | .10 | .62 | 1410 | .01 | 37 | 156.574 |
| 863B/BF160K | 4.3 | 3130 | .22 | .62 | 3130 | .03 | 59 | 159.582 |
| 873B/BF160K | 4.3 | 5280 | .40 | .62 | 5280 | .06 | 114 | 152.964 |
| 833B/BF180K | 3.8 | 555 | .04 | .55 | 555 | .01 | 29 | 164.184 |
| 843B/BF180K | 3.8 | 1436 | .09 | .55 | 1436 | .01 | 37 | 176.854 |
| 863B/BF180K | 3.8 | 3148 | .20 | .55 | 3148 | .03 | 59 | 175.553 |
| 873B/BF180K | 3.8 | 5362 | .36 | .55 | 5362 | .05 | 114 | 172.231 |
| 833B/BF200K | 3.4 | 555 | .03 | .50 | 555 | .01 | 29 | 186.590 |
| 843B/BF200K | 3.4 | 1428 | .08 | .50 | 1428 | .01 | 37 | 200.989 |
| 863B/BF200K | 3.4 | 3173 | .18 | .50 | 3173 | .03 | 59 | 199.528 |
| 873B/BF200K | 3.4 | 5432 | .33 | .50 | 5432 | .05 | 114 | 195.757 |
| 833B/BF225K | 3.1 | 544 | .03 | .44 | 544 | .01 | 29 | 200.962 |
| 843B/BF225K | 3.1 | 1410 | .07 | .44 | 1410 | .01 | 37 | 216.098 |
| 863B/BF225K | 3.1 | 3146 | .17 | .44 | 3146 | .02 | 59 | 211.326 |
| 873B/BF225K | 3.1 | 5341 | .29 | .44 | 5341 | .41 | 114 | 210.462 |
| 833B/BF250K | 2.76 | 540 | .03 | .40 | 540 | .01 | 29 | 228.387 |
| 843B/BF250K | 2.76 | 1410 | .06 | .40 | 1410 | .01 | 37 | 245.633 |
| 863B/BF250K | 2.76 | 3110 | .15 | .40 | 3110 | .02 | 59 | 240.188 |
| 873B/BF250K | 2.76 | 5423 | .26 | .40 | 5423 | .04 | 114 | 239.210 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 350-352.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 153.

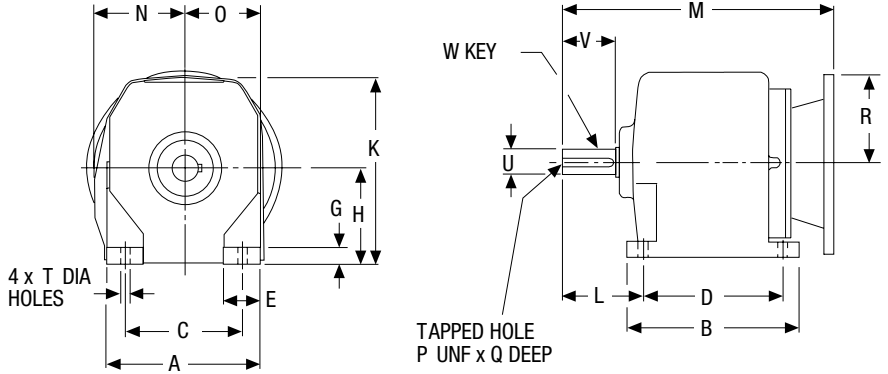
□ Indicates Triple Reduction



800 Series In-Line Helical Gear Drive Dimensions

F800B Series Double Reduction; NEMA C-Face Input Foot Mounted

G



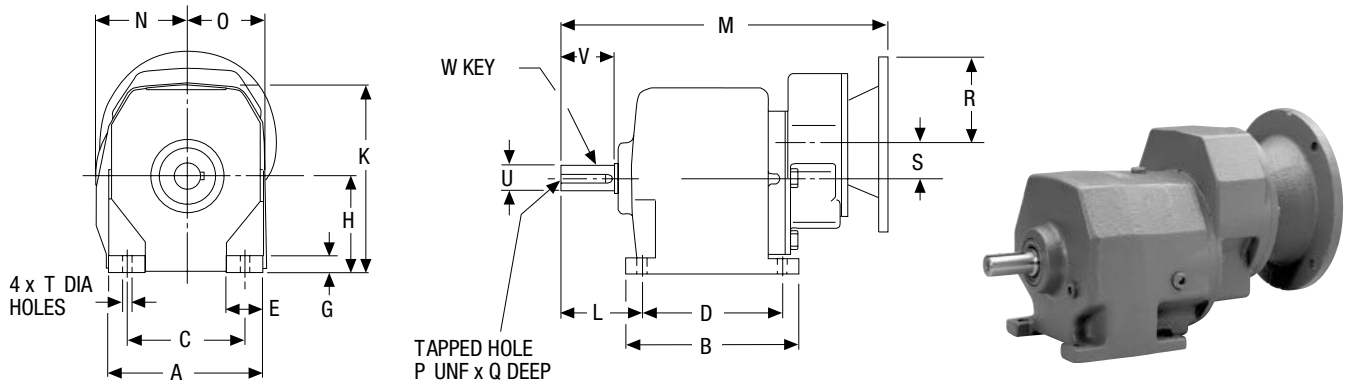
| Size | A | B | C | D | E | G | H | K | L | N | O | P | Q | T |
|-------|------|------|------|------|------|------|------|-------|------|------|------|-----|------|-----|
| F832B | 5.44 | 4.33 | 4.33 | 3.35 | 1.05 | .48 | 2.95 | 5.79 | 2.28 | 3.16 | 2.84 | 1/4 | .63 | .39 |
| F842B | 5.71 | 6.30 | 4.33 | 5.12 | 1.48 | .67 | 3.54 | 6.99 | 2.95 | 3.31 | 2.95 | 1/4 | .63 | .39 |
| F862B | 7.48 | 7.87 | 5.31 | 6.50 | 2.19 | .81 | 4.53 | 9.06 | 3.54 | 4.13 | 3.87 | 3/8 | .87 | .59 |
| F872B | 9.06 | 9.65 | 6.69 | 8.07 | 2.64 | 1.03 | 5.51 | 10.83 | 4.53 | 5.12 | 4.69 | 5/8 | 1.38 | .75 |

| Size | Low Speed Shaft | | | | M | | | | R | | | |
|-------|---------------------|------|-------|-------|---------------|-------|-------|-------|---------------|-------|-------|-------|
| | U +.000 -.001 | V | W-Key | | NEMA Mounting | | | | NEMA Mounting | | | |
| | | | Sq. | Lgth. | 56C | 140TC | 180TC | 210TC | 56C | 140TC | 180TC | 210TC |
| | | | | | B5 | B7 | B9 | B11 | B5 | B7 | B9 | B11 |
| F832B | .750 | 1.57 | .19 | 1.28 | 9.82 | 9.82 | 10.65 | — | 3.31 | 3.31 | 4.63 | — |
| F842B | 1.000 | 1.97 | .25 | 1.75 | 10.73 | 10.73 | 11.55 | — | 3.31 | 3.31 | 4.63 | — |
| F862B | 1.250 | 2.36 | .25 | 2.00 | 12.26 | 12.26 | 14.61 | 14.61 | 3.31 | 3.31 | 4.63 | 4.63 |
| F872B | 1.625 | 3.15 | .38 | 2.37 | 15.15 | 15.15 | 16.76 | 16.76 | 3.31 | 3.31 | 4.63 | 4.63 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series In-Line Helical Gear Drives Dimensions

F800B Series Triple Reduction; NEMA C-Face Input Foot Mounted



| Size | A | B | C | D | E | G | H | K | L | N | O | P | Q | S |
|-------|------|------|------|------|------|------|------|-------|------|------|------|-----|------|------|
| F833B | 5.44 | 4.33 | 4.33 | 3.35 | 1.05 | .48 | 2.95 | 5.79 | 2.28 | 3.16 | 2.84 | 1/4 | .63 | 1.40 |
| F843B | 5.71 | 6.30 | 4.33 | 5.12 | 1.48 | .67 | 3.54 | 6.99 | 2.95 | 3.31 | 2.95 | 1/4 | .63 | 1.40 |
| F863B | 7.48 | 7.87 | 5.31 | 6.50 | 2.19 | .81 | 4.53 | 9.06 | 3.54 | 4.13 | 3.87 | 3/8 | .87 | 1.83 |
| F873B | 9.06 | 9.65 | 6.69 | 8.07 | 2.64 | 1.03 | 5.51 | 10.83 | 4.53 | 5.12 | 4.69 | 5/8 | 1.38 | 2.34 |

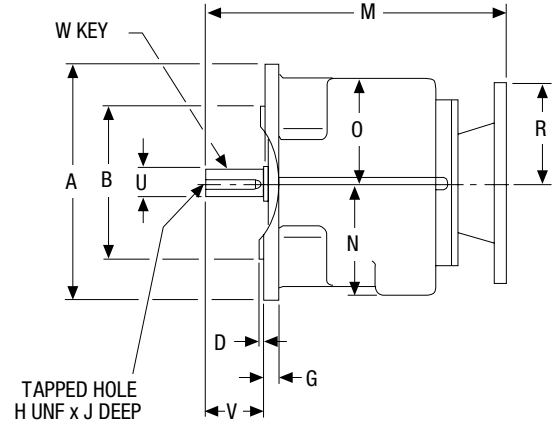
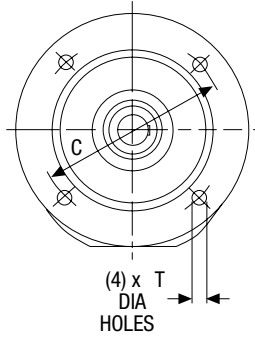
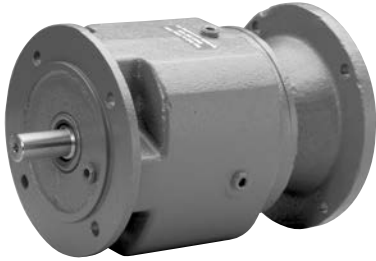
| Size | T | Low Speed Shaft | | | | M | | | R | | |
|-------|-----|---------------------|------|-------|-------|---------------|-------------|-------------|---------------|-------------|-------------|
| | | U +.000 -.001 | V | W-Key | | NEMA Mounting | | | NEMA Mounting | | |
| | | | | Sq. | Lgth. | 56C B5 | 140TC B7 | 180TC B9 | 56C B5 | 140TC B7 | 180TC B9 |
| F833B | .39 | .750 | 1.57 | .19 | 1.28 | 12.03 | — | — | 3.31 | — | — |
| F843B | .39 | 1.000 | 1.97 | .25 | 1.75 | 12.94 | — | — | 3.31 | — | — |
| F863B | .59 | 1.250 | 2.36 | .25 | 2.00 | 15.38 | 15.38 | — | 3.31 | 3.31 | — |
| F873B | .75 | 1.625 | 3.15 | .38 | 2.37 | 18.28 | 18.28 | 20.63 | 3.31 | 3.31 | 4.63 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series In-Line Helical Gear Drive Dimensions

F800BF Series Double Reduction; NEMA C-Face Input Output Flange Mounted

G



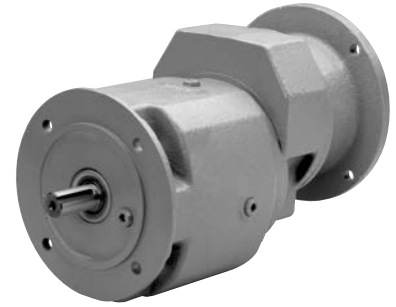
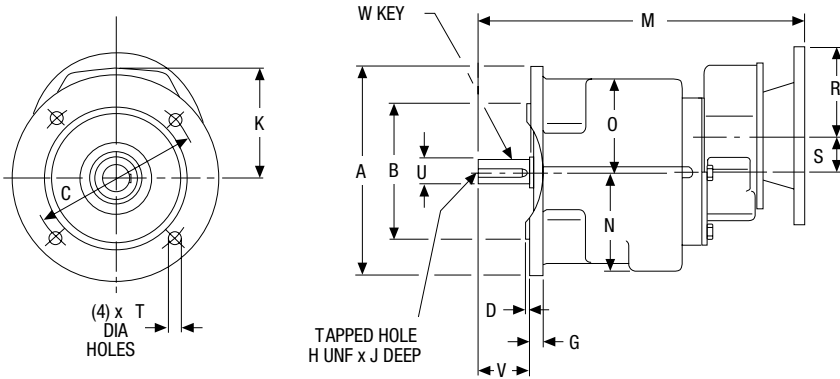
| Size | A | B +.000 -.003 | C | D | G | H | J | N | O | T |
|--------|-------|---------------------|-------|-----|-----|-----|------|------|------|-----|
| F832BF | 6.30 | 4.330 | 5.12 | .14 | .28 | 1/4 | .63 | 3.15 | 2.76 | .39 |
| F842BF | 7.87 | 5.118 | 6.50 | .14 | .47 | 1/4 | .63 | 3.74 | 3.46 | .47 |
| F862BF | 9.84 | 7.086 | 8.46 | .16 | .47 | 3/8 | .87 | 4.45 | 4.53 | .59 |
| F872BF | 11.81 | 9.055 | 10.43 | .16 | .55 | 5/8 | 1.38 | 5.43 | 5.43 | .59 |

| Size | Low Speed Shaft | | | | M | | | | R | | | |
|--------|---------------------|------|-------|-------|---------------|-------------|-------------|--------------|---------------|-------------|-------------|--------------|
| | U +.000 -.001 | V | W-Key | | NEMA Mounting | | | | NEMA Mounting | | | |
| | | | Sq. | Lgth. | 56C B5 | 140TC B7 | 180TC B9 | 210TC B11 | 56C B5 | 140TC B7 | 180TC B9 | 210TC B11 |
| F832BF | .750 | 1.57 | .19 | 1.28 | 9.82 | 9.82 | 10.65 | — | 3.31 | 3.31 | 4.63 | — |
| F842BF | 1.000 | 1.97 | .25 | 1.75 | 10.73 | 10.73 | 11.55 | — | 3.31 | 3.31 | 4.63 | — |
| F862BF | 1.250 | 2.36 | .25 | 2.00 | 12.26 | 12.26 | 14.61 | 14.61 | 3.31 | 3.31 | 4.63 | 4.63 |
| F872BF | 1.625 | 3.15 | .38 | 2.37 | 15.15 | 15.15 | 16.76 | 16.76 | 3.31 | 3.31 | 4.63 | 4.63 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series In-Line Helical Gear Drives Dimensions

F800BF Series Triple Reduction; NEMA C-Face Input Output Flange Mounted



G

| Size | A | B +.000 -.003 | C | D | G | H | J | K | N | O | S |
|--------|-------|---------------------|-------|-----|-----|-----|------|------|------|------|------|
| F833BF | 6.30 | 4.330 | 5.12 | .14 | .28 | 1/4 | .63 | 4.17 | 3.15 | 2.76 | 1.40 |
| F843BF | 7.87 | 5.118 | 6.50 | .14 | .47 | 1/4 | .63 | 4.17 | 3.74 | 3.46 | 1.40 |
| F863BF | 9.84 | 7.086 | 8.46 | .16 | .47 | 3/8 | .87 | 4.45 | 4.45 | 4.53 | 1.83 |
| F873BF | 11.81 | 9.055 | 10.43 | .16 | .55 | 5/8 | 1.38 | 5.43 | 5.43 | 5.43 | 2.34 |

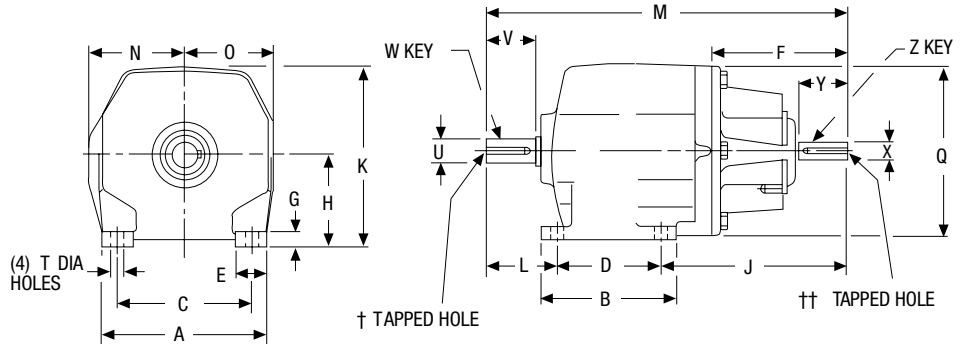
| Size | T | Low Speed Shaft | | | | M | | | R | | |
|--------|-----|---------------------|------|-------|-------|---------------|-------------|-------------|---------------|-------------|-------------|
| | | U +.000 -.001 | V | W-Key | | NEMA Mounting | | | NEMA Mounting | | |
| | | | | Sq. | Lgth. | 56C B5 | 140TC B7 | 180TC B9 | 56C B5 | 140TC B7 | 180TC B9 |
| F833BF | .39 | .750 | 1.57 | .19 | 1.28 | 12.03 | — | — | 3.31 | — | — |
| F843BF | .47 | 1.000 | 1.97 | .25 | 1.75 | 12.94 | — | — | 3.31 | — | — |
| F863BF | .59 | 1.250 | 2.36 | .25 | 2.00 | 15.38 | 15.38 | — | 3.31 | 3.31 | — |
| F873BF | .59 | 1.625 | 3.15 | .38 | 2.37 | 18.28 | 18.28 | 20.63 | 3.31 | 3.31 | 4.63 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series In-Line Helical Gear Drive Dimensions

800B Series Double Reduction; Non-Flanged Foot Mounted

G



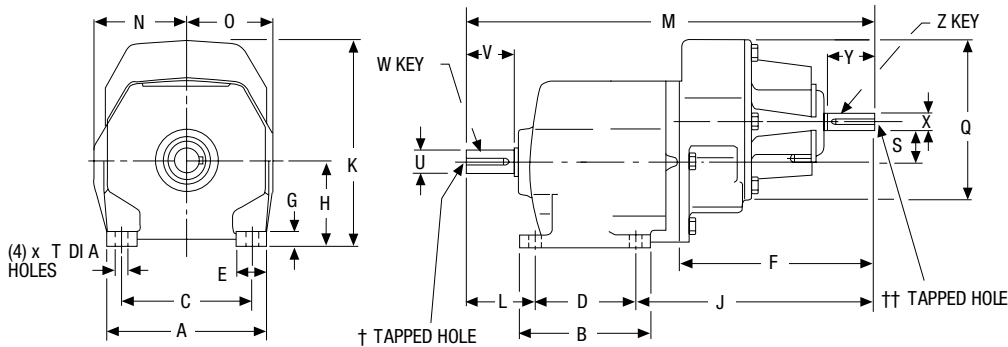
| Size | A | B | C | D | E | F | G | H | J | K | L | M | N |
|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|
| 832B | 5.44 | 4.33 | 4.33 | 3.35 | 1.05 | 4.37 | .48 | 2.95 | 5.94 | 5.79 | 2.28 | 11.57 | 3.16 |
| 842B | 5.71 | 6.30 | 4.33 | 5.12 | 1.48 | 4.37 | .67 | 3.54 | 4.41 | 6.99 | 2.95 | 12.48 | 3.31 |
| 862B | 7.48 | 7.87 | 5.31 | 6.50 | 2.19 | 4.37 | .81 | 4.53 | 4.49 | 9.06 | 3.54 | 14.53 | 4.13 |
| 872B | 9.06 | 9.65 | 6.69 | 8.07 | 2.64 | 4.53 | 1.03 | 5.51 | 4.72 | 10.83 | 4.53 | 17.32 | 5.12 |

| Size | O | Q | T | Low Speed Shaft | | | | High Speed Shaft | | | |
|------|------|------|-----|---------------------|------|-------|-------|---------------------|------|-------|-------|
| | | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | |
| | | | | | | Sq. | Lgth. | | | Sq. | Lgth. |
| 832B | 2.84 | 5.51 | .39 | .750 | 1.57 | .19 | 1.28 | .625 | 1.57 | .19 | 1.28 |
| 842B | 2.95 | 5.51 | .39 | 1.000 | 1.97 | .25 | 1.75 | .625 | 1.57 | .19 | 1.28 |
| 862B | 3.87 | 7.09 | .59 | 1.250 | 2.36 | .25 | 2.00 | .750 | 1.57 | .19 | 1.28 |
| 872B | 4.69 | 8.46 | .75 | 1.625 | 3.15 | .38 | 2.37 | .875 | 1.97 | .19 | 1.28 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.
 † 832B 1/4 UNF x 0.63 DP, 842B 1/4UNF x 0.63 DP. Size 862B 3/8 UNF x 0.87 DP. Size 872B 5/8 UNF x 1.38 DP.
 ††832B 1/4 UNF x 0.49 DP, 842B 1/4 UNF x 0.49 DP. Size 862B 1/4 UNF x 0.63 DP. Size 872B 5/16 UNF x 0.63 DP.

800 Series In-Line Helical Gear Drives Dimensions

800B Series Triple Reduction; Non-Flanged Foot Mounted



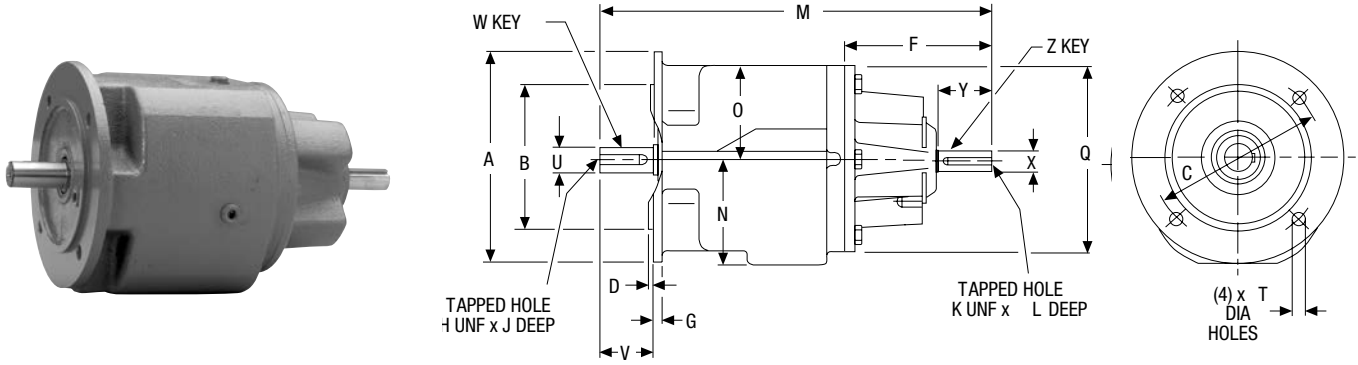
| Size | A | B | C | D | E | F | G | H | J | K | L | M | N |
|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|
| 833B | 5.44 | 4.33 | 4.33 | 3.35 | 1.05 | 6.57 | .48 | 2.95 | 8.15 | 7.13 | 2.28 | 13.78 | 3.16 |
| 843B | 5.71 | 6.30 | 4.33 | 5.12 | 1.48 | 6.57 | .67 | 3.54 | 6.61 | 7.72 | 2.95 | 14.69 | 3.31 |
| 863B | 7.48 | 7.87 | 5.31 | 6.50 | 2.19 | 6.97 | .81 | 4.53 | 7.09 | 9.13 | 3.54 | 17.13 | 4.13 |
| 873B | 9.06 | 9.65 | 6.69 | 8.07 | 2.64 | 7.76 | 1.03 | 5.51 | 7.95 | 11.42 | 4.53 | 20.55 | 5.12 |

| Size | O | Q | S | T | Low Speed Shaft | | | | High Speed Shaft | | | |
|------|------|------|------|-----|---------------------|------|-------|-------|---------------------|------|-------|-------|
| | | | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | |
| | | | | | | | Sq. | Lgth. | | | Sq. | Lgth. |
| 833B | 2.84 | 5.51 | 1.40 | .39 | .750 | 1.57 | .19 | 1.28 | .625 | 1.57 | .19 | 1.28 |
| 843B | 2.95 | 5.51 | 1.40 | .39 | 1.000 | 1.97 | .25 | 1.75 | .625 | 1.57 | .19 | 1.28 |
| 863B | 3.87 | 5.51 | 1.83 | .59 | 1.250 | 2.36 | .25 | 2.00 | .625 | 1.57 | .19 | 1.28 |
| 873B | 4.69 | 7.09 | 2.34 | .75 | 1.625 | 3.15 | .38 | 2.37 | .750 | 1.57 | .19 | 1.28 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.
 † Size 833B 1/4 UNF x 0.63 DP, 843 1/4 UNF x 0.63 DP, 863B 3/8 UNF x 0.87 DP. Size 873B 5/8 UNF x 1.38 DP.
 †† Size 833B 1/4 UNF x 0.49 DP, 843 1/4 UNF x 0.49 DP, 863B 1/4 UNF x 0.63 DP. Size 873B 5/16 UNF x 0.63 DP.

800 Series In-Line Helical Gear Drive Dimensions

800BF Series Double Reduction; Non-Flanged Output Flange Mounted



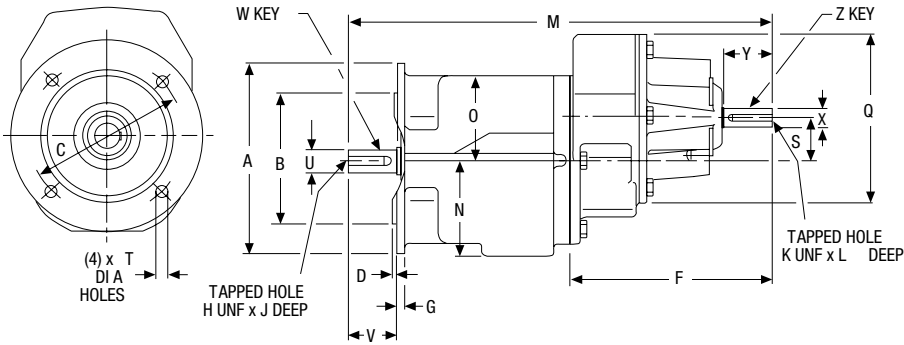
| Size | A | B +.000 -.003 | C | D | F | G | H | J | K | L | M | N |
|-------|-------|---------------------|-------|-----|------|-----|-----|------|------|-----|-------|------|
| 832BF | 6.30 | 4.331 | 5.12 | .14 | 4.37 | .28 | 1/4 | .63 | 1/4 | .49 | 11.57 | 3.15 |
| 842BF | 7.87 | 5.118 | 6.50 | .14 | 4.37 | .47 | 1/4 | .63 | 1/4 | .49 | 12.48 | 3.74 |
| 862BF | 9.84 | 7.087 | 8.46 | .16 | 4.37 | .47 | 3/8 | .87 | 1/4 | .63 | 14.53 | 4.45 |
| 872BF | 11.81 | 9.055 | 10.43 | .16 | 4.53 | .55 | 5/8 | 1.38 | 5/16 | .63 | 17.32 | 5.43 |

| Size | O | Q | T | Low Speed Shaft | | | | High Speed Shaft | | | |
|-------|------|------|-----|---------------------|------|-------|-------|---------------------|------|-------|-------|
| | | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | |
| | | | | | | Sq. | Lgth. | | | Sq. | Lgth. |
| 832BF | 2.76 | 5.51 | .39 | .750 | 1.57 | .19 | 1.28 | .6250 | 1.57 | .19 | 1.28 |
| 842BF | 3.46 | 5.51 | .47 | 1.000 | 1.97 | .25 | 1.75 | .6250 | 1.57 | .19 | 1.28 |
| 862BF | 4.53 | 7.09 | .59 | 1.250 | 2.36 | .25 | 2.00 | .7500 | 1.57 | .19 | 1.28 |
| 872BF | 5.43 | 8.35 | .59 | 1.625 | 3.15 | .38 | 2.37 | .8750 | 1.97 | .19 | 1.28 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series In-Line Helical Gear Drives Dimensions

800BF Series Triple Reduction; Non-Flanged Output Flange Mounted



| Size | A | B +.000 -.003 | C | D | F | G | H | J | K | L | M | N |
|-------|-------|---------------------|-------|-----|------|-----|-----|------|------|-----|-------|------|
| 833BF | 6.30 | 4.331 | 5.12 | .14 | 6.57 | .28 | 1/4 | .63 | 1/4 | .49 | 13.78 | 3.15 |
| 843BF | 7.87 | 5.118 | 6.50 | .14 | 6.57 | .47 | 1/4 | .63 | 1/4 | .49 | 14.69 | 3.74 |
| 863BF | 9.84 | 7.087 | 8.46 | .16 | 6.97 | .47 | 3/8 | .87 | 1/4 | .63 | 17.13 | 4.45 |
| 873BF | 11.81 | 9.055 | 10.43 | .16 | 7.76 | .55 | 5/8 | 1.38 | 5/16 | .63 | 20.55 | 5.43 |

| Size | O | Q | S | T | Low Speed Shaft | | | | High Speed Shaft | | | |
|-------|------|------|------|-----|---------------------|------|-------|-------|---------------------|------|-------|-------|
| | | | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | |
| | | | | | | | Sq. | Lgth. | | | Sq. | Lgth. |
| 833BF | 2.76 | 5.51 | 1.40 | .39 | .750 | 1.57 | .19 | 1.28 | .625 | 1.57 | .19 | 1.28 |
| 843BF | 3.46 | 5.51 | 1.40 | .47 | 1.000 | 1.97 | .25 | 1.75 | .625 | 1.57 | .19 | 1.28 |
| 863BF | 4.53 | 5.51 | 1.83 | .59 | 1.250 | 2.36 | .25 | 2.00 | .625 | 1.57 | .19 | 1.28 |
| 873BF | 5.43 | 7.09 | 2.34 | .59 | 1.625 | 3.15 | .38 | 2.37 | .750 | 1.57 | .19 | 1.28 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

800 Series Washdown Duty



Boston Gear's Bost-Kleen and Stainless Bost-Kleen reducers assure contamination-safe operation in the most stringent environmental conditions.

White Bost-Kleen™

- Washable and Scrubbable
- Corrosion Resistant
- Durable White Epoxy Finish
- Includes all the standard 800 features
- Limited Lifetime Warranty
- Cast Iron Housing
- Plated Pressure Relief Valves Standard
- Standard NEMA C-face or projecting input shaft configurations
- Single, Double and Triple reduction ratios from 1:5:1 to 250:1



Available options on BK and SBK

- Stainless Steel Output Shafts
- Premounted Stainless Washdown Motors
- Prelubrication from the factory see page 16 for a complete list of lubrication options
- Exposed hardware made of stainless steel.

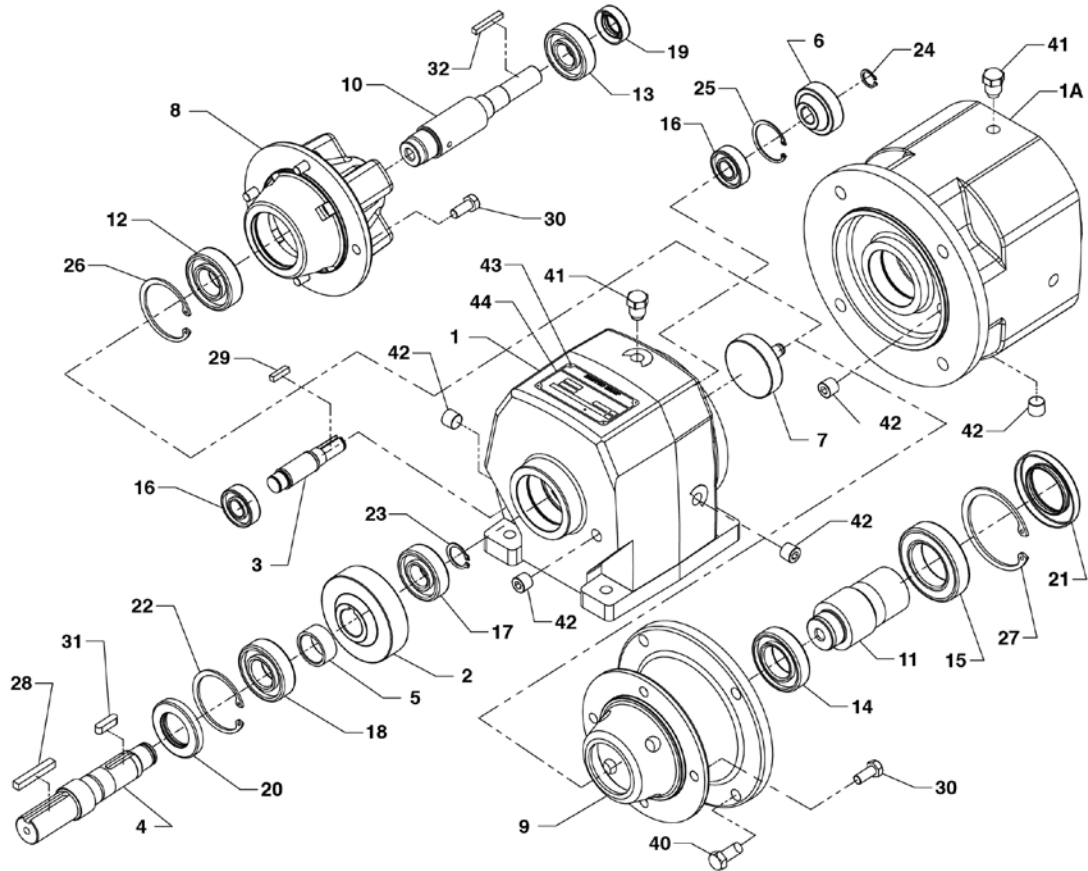
Stainless Bost-Kleen

- Includes all the features of the standard white Bost-Kleen reducers
- U.S.D.A. approved for use in food processing and handling industry where incidental food contact may occur
- Excluder seal on solid output shaft units
- Durable stainless steel epoxy coating system utilizes a unique #316L stainless steel leafing pigment. This catalyzed system creates a hard, non-toxic metallic finish



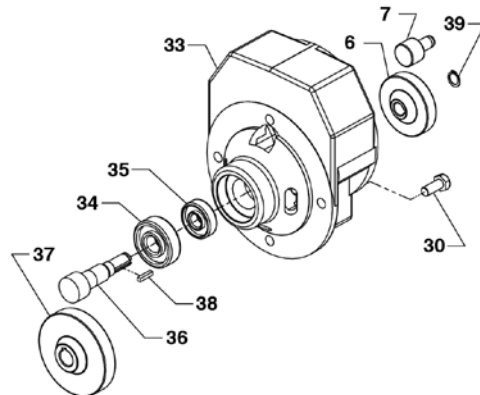
G

800 Series Parts List – In-Line Helical Gear Drives



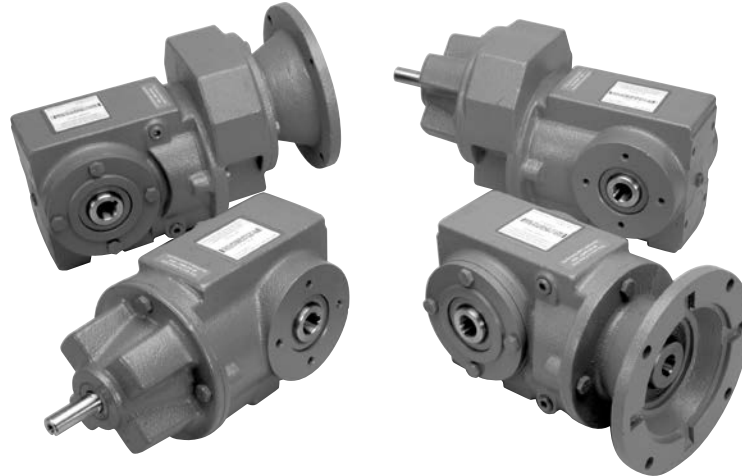
| Item No. | Description of Part |
|----------|-------------------------------------|
| 1 | HOUSING, BASE MOUNT |
| 1A | HOUSING, FLANGE MOUNT |
| 2 | HELICAL GEAR OUTPUT |
| 3 | HELICAL PINION, OUTPUT |
| 4 | OUTPUT SHAFT |
| 5 | OUTPUT SPACER |
| 6 | HELICAL GEAR, 1ST RED |
| 7 | HELICAL PINION, 1ST RED |
| 8 | INPUT BEARING CARRIER |
| 9 | MOTOR FLANGE (B5/B7-B9/B11) |
| 10 | INPUT REDUCER SHAFT |
| 11 | INPUT MOTOR SHAFT |
| 12 | BEARING, INPUT SHAFT (INBOARD) |
| 13 | BEARING, INPUT SHAFT (OUTBOARD) |
| 14 | BEARING, MOTOR SHAFT (INBOARD) |
| 15 | BEARING, MOTOR SHAFT (OUTBOARD) |
| 16 | BEARING, OUTPUT PINION |
| 17 | BEARING, OUTPUT SHAFT (INBOARD) |
| 18 | BEARING, OUTPUT SHAFT (OUTPUT) |
| 19 | OIL SEAL, INPUT REDUCTOR SHAFT |
| 20 | OIL SEAL, OUTPUT SHAFT |
| 21 | OIL SEAL, INPUT MOTOR SHAFT |
| 22 | RETAINING RING, OUTPUT (HOUSING) |
| 23 | RETAINING RING, OUTPUT (SHAFT) |
| 24 | RETAINING RING, OUTPUT PINION |
| 25 | RETAINING RING, OUTPUT PINION BORE |
| 26 | RETAINING RING, INPUT CARRIER |
| 27 | RETAINING RING, B5/B7-B9/B11 FLANGE |
| 28 | KEY, OUTPUT SHAFT PROJECTION |
| 29 | KEY, OUTPUT PINION |
| 30 | HEX HEAD CAP SCREWS |

Triple Module



| Item No. | Description of Part |
|----------|------------------------------|
| 31 | KEY, OUTPUT SHAFT |
| 32 | KEY, INPUT REDUCTOR |
| 33 | TRIPLE HOUSING ADAPTER |
| 34 | BEARING |
| 35 | BEARING |
| 36 | HELICAL PINION, 2ND REDUCTOR |
| 37 | HELICAL GEAR, 2ND REDUCTOR |
| 38 | KEY |
| 39 | RING |
| 40 | HEX HEAD CAP SCREW |
| 41 | PLUG, OIL VENT |
| 42 | PLUG, PIPE |
| 43 | NAMEPLATE TAPE |
| 44 | NAMEPLATE |

800 Series Right Angle Helical Worm Gear Drives



Easy to Select, Easy to Apply, Easy to Obtain

The Boston Gear 800BR Series contains a broad selection of compact, heavy-duty helical gear drives, with long life performance features and simplified maintenance. Models include double and triple reduction units in flanged or foot mounted arrangements. You can choose from a wide range of reduction ratios to suit specific applications and a variety of input shaft configurations for maximum positioning flexibility. All units are adaptable to floor, sidewall or ceiling mounting.

Two Available USDA Approved Finishes

- Durable non-absorbent, non-toxic white (BK) or stainless epoxy finish (SBK)
- Washable & Scrubbable
- Includes all the standard 800BR features



H

Section Contents

| | |
|--|----------------|
| Product Reference Guide | 198 |
| Interchange / How to Order | 199-201 |
| Selection Procedure | 202-203 |
| Overhung Load / Weights | 204 |
| Lubrication / Mounting | 205-206 |
| Flanged Gear Drive Ratings | 207-221 |
| Non-Flanged Gear Drive Ratings | 222-231 |
| Flanged Gear Drive Dimensions | 232-233 |
| Non-Flanged Gear Drive Dimensions | 234-235 |
| Accessories / Parts List | 236-238 |

Product Selection / Reference Guide

800 Series Helical Gear Drives

SF800BR Series Right Angle Helical Worm Flanged



**Double Reduction
Flange Input**
Selection Pages 207-221
Dimensions-Page 232



**Triple Reduction
Flange Input**
Selection Pages 207-221
Dimensions-Page 233

SF800BR Series Right Angle Helical Worm Non-Flanged



Double Reduction
Selection Pages 207-221
Dimensions-Page 234



Triple Reduction
Selection Pages 207-221
Dimensions-Page 235

SF/S800BR Series Accessories and Options



Output Flange Kits
Dimensions-Page 236



Torque Arm Kits
Dimensions-Page 236



Base Kits
Dimensions-Page 237



Output Shaft Kits
Dimensions-Page 237

800 Series Right Angle Helical Worm Gear Drives

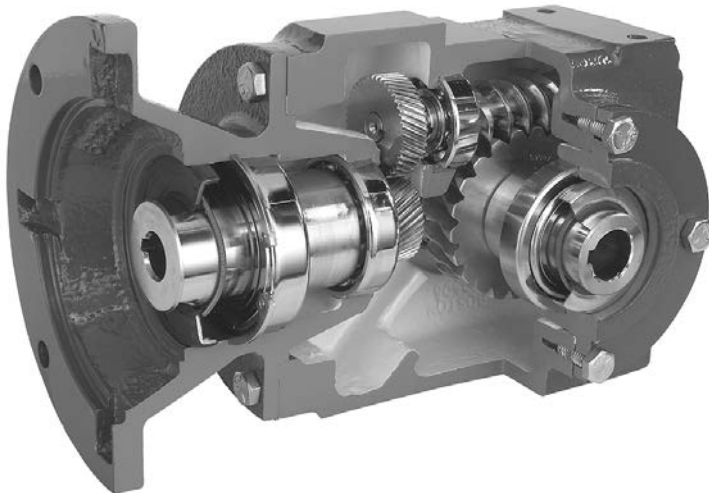
The Inside Story

Available in USDA approved finish for washdown applications

Oil seal location provides easy, access for routine product maintenance. Additionally, all sizes can be double sealed on the high speed shaft for severe applications.

All units shipped prelubricated for your particular mounting position.

Available in both standard NEMA C-Face flanged and direct input non-flanged configurations. NEMA C-Face units allow for direct assembly of the reducer and motor.



Rugged housing of fine grained, gear quality cast iron provides maximum strength and durability.

The use of state of the art helical and worm gear combinations affords optimum performance fulfilling a wide variety of ratio requirements.

Available in both hollow and projecting output shaft styles.

Modular base allows dimensional interchangeability with major European manufacturers.

A wide range of available gear reduction ratios, from 8:1 to 900:1, allows the 800BR Series to fulfill a broad range of output speed requirements.

Super finished oil seal diameter on both input and output shafts provide extended life for double lipped seals.

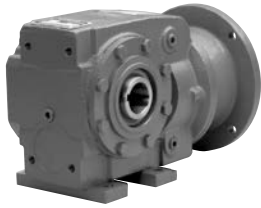
REDUCER EXPRESS
SAME DAY
GUARANTEED
SHIPMENT

See page 356 for conditions.

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800 Series Right Angle Helical Worm Gear Drives

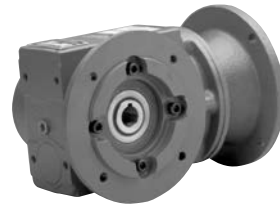
Interchange Guide



**Base Mounted
NEMA C-Face
SF800BRB**



**Base Mounted
S800BRB**



**Output Flange Mount
NEMA C-Face
SF800BRF**



**Output Flange Mount
S800BRF**

Boston Gear 800BR Series Right Angle Helical-Worm Gear Drives are designed to be functionally interchangeable with these and many other manufacturer's drives. This chart is intended to be a guide only. Please see appropriate manufacturer's catalogs for exact details regarding ratings and dimensions.

| Manufacturers | Size | Base Mounted* NEMA C-Face SF800BRB | Base Mounted* S800BRB | Output Flange Mount NEMA C-Face SF800BRF | Output Flange Mount S800BRF |
|---------------|------|--|--------------------------|--|-----------------------------------|
| Boston | 830 | SF832BRB/SF833BRB | S832BRB/S833BRB | SF832BRF/SF833BRF | S832BRF/S833BRF |
| SEW Eurodrive | 32 | SA32LP | SA32 | SAF32LP | SAF32 |
| Falk | 03 | UWCQ2(3)-A | UWCQ2(3)-N | UWCQ2(3)-A | UWCQ2(3)-N |
| David Brown | C03 | C032(3)BAN | C032(3)BRN | C032(3)BAF | C032(3)BRF |
| Flender | NA | Not Available | Not Available | Not Available | Not Available |
| Stober | S102 | S102VN-MR | S102VN-AW | S102AF-MR | S102AF-AW |
| Nord | N/A | Not Available | Not Available | Not Available | Not Available |
| Boston | 840 | SF842BRB/SF843BRB | S842BRB/S843BRB | SF842BRF/SF843BRF | S842BRF/S843BRF |
| SEW Eurodrive | 42 | SA42LP | SA42 | SAF42LP | SAF42 |
| Falk | 04 | UWCQ2(3)-A | UWCQ2(3)-N | UWCQ2(3)-A | UWCQ2(3)-N |
| David Brown | C04 | C042(3)BAN | C042(3)BRN | C042(3)BAF | C042(3)BRF |
| Flender | 21 | CA21-(M,G, or A) | CA21A | CF21-(M, G or A) | CF21A |
| Stober | S200 | S202/3VN-MR | S202/3VN-AW | S202/3AF-MR | S202/3AF-AW |
| Nord | SK04 | SK02040A | SK02040A | SK02040AF | SK02040AF-W |
| Boston | 850 | SF852BRB/SF853BRB | S852BRB/S853BRB | SF852BRF/SF853BRF | S852BRF/S853BRF |
| SEW Eurodrive | 52 | SA52LP | SA52 | SAF52LP | SAF52 |
| Falk | 05 | UWCQ2(3)-A | UWCQ2(3)-N | UWCQ2(3)-A | UWCQ2(3)-N |
| David Brown | C05 | C052(3)BAN | C052(3)BRN | C052(3)BAF | C052(3)BRF |
| Flender | 41 | CA41-(M,G, or A) | CA41A | CF41-(M, G or A) | CF41A |
| Stober | S300 | S302/3VN-MR | S302/3VN-AW | S302/3AF-MR | S302/3AF-AW |
| Nord | SK05 | SK02(13)050A | SK02(13)050A-W | SK02(13)050AF | SK02(13)050AF |
| Boston | 860 | SF862BRB/SF863BRB | S862BRB/S863BRB | SF862BRF/SF863BRF | S862BRF/S863BRF |
| SEW Eurodrive | 62 | SA62LP | SA62 | SAF62LP | SAF62 |
| Falk | 06 | UWCQ2(3)-A | UWCQ2(3)-N | UWCQ2(3)-A | UWCQ2(3)-N |
| David Brown | C06 | C062(3)BAN | C062(3)BRN | C062(3)BAF | C062(3)BRF |
| Flender | 61 | CA61-(M,G, or A) | CA61A | CF61-(M, G or A) | CF61A |
| Stober | S400 | S402/3VN-MR | S402/3VN-AW | S402/3AF-MR | S402/3AF-AW |
| Nord | SK06 | SK12(3)063A | SK12(3)063A-W | SK23(3)063AF-W | SK23(3)063AF-W |

* Detachable base kit required. See page 237.

If you require assistance with an interchange, please contact our interchange hotline at 1-888-999-9860 ext 5335.

800 Series Right Angle Helical Worm Selection Tables

Numbering System / How to Order

800 Series Right Angle Helical Worm Gear Drives

BK SF 8 3 2 BR F - 45 K T - B5 - G - M2 -

Clutch/Brake

Motor

CMBA56U-6 - HUTF5/8-IDB - 3

Series
800BR Series

Frame Size
3
4
5
6

Base/Mounting Attachment
Blank - Foot Mounted
B - Detachable Base
F - Output Flange
T - Torque Arm

Input Oil Seal
Blank - Standard Seal
T - Two Standard Seals

Nominal Gear Ratio
(Rounded Value)
Refer to Selection Tables For Available Ratios

Input Shaft Style
S - Solid Projecting Input Shaft
SF - Quill Style C-Face Motor Flange

Reduction Type
2 - Double
3 - Triple

Lubrication
Blank - No Lubrication
K - Klubersynth UH1 6-460
W - Klubersynth GH6
S - Mobil SHC 634
X - Mobil 600W
(Sizes 3 and 4 are non-vented)

Reducer Material/Paint
Blank - Cast Iron, Std Gray Paint
BK - Cast Iron, White BostKleen Paint
SBK - Cast Iron, Stainless BostKleen Paint

NEMA Motor Mounting

| BORE CODE | NEMA MOUNTING | INPUT BORE | KEYWAY |
|-----------|---------------|------------|-------------|
| B5 | 56C | .625 | 3/16 x 3/32 |
| B7 | 140TC/180C | .875 | 3/16 x 3/32 |
| B9 | 180TC/210C | 1.125 | 1/4 x 1/8 |
| B11 | 210TC/250UC | 1.375 | 5/16 x 5/32 |

Blank Solid Input Shaft (No Flange)

Common C-Face Brake Installed

| 115/230 VAC 60hz | Ft-Lb | Bore Code |
|------------------|-------|-----------|
| CMBA56R-3 | 3 | B5 |
| CMBA56R-6 | 6 | B5 |
| CMBA140TR-6 | 6 | B7 |

| 208-230/460 VAC 60hz | Ft-Lb | Bore Code |
|----------------------|-------|-----------|
| CMBA56U-3 | 3 | B5 |
| CMBA56U-6 | 6 | B5 |
| CMBA140TU-6 | 6 | B7 |

Other sizes available. See catalog.

Motor Conduit Box Orientation
(When looking at fan end of motor)

0 - 12 O'clock
3 - 3 O'clock
6 - 6 O'clock
9 - 9 O'clock

Common C-Face Motors Installed

| HP Rating | Bore Code | AC Voltage | |
|-----------|-----------|------------------|------------------|
| | | 115/208-230-1-60 | 208-230/460-3-60 |
| 1/4 HP | B5 | DRTFB | DUTFB |
| 1/3 HP | B5 | ERTFB | EUTFB |
| 1/2 HP | B5 | FRTFB | FUTFB |
| | B5 | | FUT-SS |
| | B5 | | FUTF-IDB |
| 3/4 HP | B5 | GRTFB | GUTFB |
| | B5 | | GUT-SS |
| | B5 | | GUTF-IDB |
| 1 HP | B5 | HRTF-5/8B | HUTF5/8B |
| | B5 | | HUT5/8-SS |
| | B5 | | HUTF5/8-IDB |
| | B7 | HUTFB | |
| | B7 | HUT-SS | |
| | B7 | HUTF-IDB | |
| 1.5 HP | B7 | | JUTFB |
| | B7 | | JUTF-SS |
| | B7 | | JUTF-IDB |
| 2 HP | B5 | | KUTF5/8B |
| | B7 | | KUTFB |
| | B7 | | KUTF-SS |
| | B7 | | KUTF-IDB |
| 3 HP | B9 | | LUTFB |
| | B9 | | LUTF-SS |
| | B9 | | LUTF-IDB |
| 5 HP | B9 | | MUTFB |

Other motors available, please see catalog pages 333 to 342.

T - Totally enclosed non-ventilated
TF - Totally enclosed fan cooled
SS - Stainless
IDB - Inverter Duty (10:1 turn down constant torque)
B5 - 56C
B7 - 140TC
B9 - 180TC

How to Order

EXAMPLE:

Required flange input, NEMA 56C, 3/4 HP, Class I, detachable base, 45:1 ratio, lubricated, with double output shaft and standard mounting position.

Order:

- 1 pc SF832BR-45K-B5
or item code F01425
- 1 pc XS830BR-11K (Base Kit)
or 5 digit item code 59610
- 1 pc XS830BR-3PBK (Output Shaft)
or 5 digit item code 59609

If components are to be factory assembled specify as SF832BRB-45K B5 H.

Output Shaft Projection

Blank - Carbon Steel Hollow Shaft
G - Carbon Steel Left Projection
H - Carbon Steel Double Projection
J - Carbon Steel Right Projection
S - Stainless Hollow Shaft
GS - Stainless Left Projection
HS - Stainless Double Projection
JS - Stainless Right Projection

Mounting Positions

Blank - No Lubrication
M1-M6 - Lubrication per Mounting Positions in Catalog



800 Series Right Angle Helical Worm Gear Drives

Motorized Gear Drives

1. Determine application service factor from page 203 or from Application Classifications on page 348-349.
2. Determine output speed required.
3. Determine HP or output torque requirement.
4. Select based on output speed and horsepower requirement for given service class.
5. Check overhung load Ref. calculation.

Example

Select a right angle motorized helical-worm shaft mounted gear drive and motor to drive a uniformly loaded line conveyor 24 hours/day requiring 2 HP at 35 RPM.

Power Requirement
 230/460 volt
 3 phase
 60 hertz

1. Select Service Factor Class from page 203.
Service Class = II
2. Output RPM = 35
3. 2 HP
4. Select a 2 HP drive that will satisfy min. of II service class.
5. Order: 1 - SF862BR-50K-B7 (F01613) Ref. Page 201
1 - KUTF Motor

Overhung Load (Not Required for Example)

If the output shaft of a gear drive is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

- OHL = Overhung Load (LB.)
- T = Shaft Torque (LB.-INS.)
- D = PD of Sprocket, Pinion or Pulley (IN.)
- K = Load Connection Factor

Load Connection Factor (K)

| | |
|----------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive | 1.50 |
| Pulley and Flat Belt Drive | 2.50 |

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley of a larger PD. Relocation of the load closer to the center of gear drive will also increase OHL capacity.

Permissible Overhung Loads and Output Shaft Thrust Loads are listed for each gear drive in the Tables on Page 204.

800 Series Right Angle Helical-Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
 ORDER BY CATALOG NUMBER OR ITEM CODE
 FOR STANDARD MOUNTING POSITIONS

| Approx. Output RPM | Nominal Ratio* | NON-FLANGED | | | FLANGED (GEARMOTORS) | | | |
|--------------------|----------------|---------------|----------|----------------------------|----------------------|-----------------------|-------------------------|--|
| | | GEAR Capacity | | Catalog Number (Item Code) | Motor HP | Ratings Output Torque | Service Class** | Catalog Number (Item Code) Shaft Mounted |
| | | Output Torque | HP Input | | | | | |
| 35 | 50 | 3248 | 2.24 | S852BR-50K (F01304) | 2 | 2899 | I | SF852BR-50K-B7 (F01547) |
| | | | | | 1.5 | 2174 | II | |
| | | 5930 | 3.79 | S862BR-50K (F01349) | 1 | 1499 | III | SF852BR-50K-B5 (F01546) |
| | | | | | 3 | 4692 | I | SF862BR-50K-B9 (F01614) |
| | | | | 2 | 3128 | II | SF862BR-50K-B7 (F01613) | |
| | | | | | 1.5 | 2346 | III | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service Class III (S.F. = 2.00)
 Overhung Load Ratings refer to Page 204.

800 Series Right Angle Helical Worm Gear Drives

To properly select a gear drive, the following application information should be known.

1. Service Factor or AGMA Service class.
2. Output Horsepower or Torque
3. Output RPM or Ratio
(Maximum Input Speed 4500 RPM)

Consult Engineering for mounting positions: M2, M3, M4, and M6.

Non-Motorized Gear Drives

1. Determine application service factor from the service factor chart on this page, or from Application Classifications on pages 348-349.
2. Determine design Horsepower or Torque.
 - Design HP = Application HP x S.F.
 - Design Torque = Application Torque x S.F.
3. Select a Gear drive that satisfies output RPM, service class and/or output torque requirement.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Ref. page 204 for calculations.

Example

Select a right angle 800BR Series Gear Drive for a continuous duty concrete mixer requiring 2800 lb-in. of torque at approx. 140 RPM, to operate up to 8 hrs/day. The Gear Drive will be driven at 1160 input RPM.

1. Application Service Factor = 1.25
2. Design Torque = 2800 x 1.25 = 3500
3. Select at speed and torque level of 3500 lb-ins. or greater.
4. Order 862BR-8K.

Order solid projecting shaft, output mounting flange or reaction torque arms from available kits reference pages 236 and 237.

NOTE: The use of an auxiliary drive between the gear drive and the driven machine reduces the torque required at the output shaft in direct proportion to the auxiliary drive ratio.

A 3:1 chain ratio would reduce the torque requirement at the output shaft of the gear drive to one-third, resulting in a smaller unit size selection.

SERVICE FACTOR CHART

| AGMA Class of Service | Service Factor | Operating Conditions |
|-----------------------|----------------|--|
| I | 1 | Moderate Shock-not more than 15 minutes in 2 hours Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. Uniform Load-more than 10 hours per day. |
| | 1.5 | Heavy Shock-not more than 15 minutes in 2 hours. Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day. |

For complete AGMA Service Factors and Load Classifications, see Engineering Pages 348-349.

H

800 Series Right Angle Helical-Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM Service Factor 1.0

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832BR-8K | 218 | 689 | 2.65 | 181 | 717 | 2.30 | 145 | 751 | 1.95 |
| 842BR-8K | 218 | 1100 | 4.39 | 181 | 1152 | 3.81 | 145 | 1209 | 3.23 |
| 852BR-8K | 218 | 1678 | 6.66 | 181 | 1829 | 6.00 | 145 | 1991 | 5.28 |
| 862BR-8K | 218 | 2910 | 11.40 | 181 | 3292 | 10.20 | 145 | 3607 | 8.98 |

800 Series Right Angle Helical Worm Gear Drives

Overhung Loads (lbs) & Axial Thrusts (lbs)

Overhung Loads & Axial Thrust Capacities on Output Shaft

| Output RPM | 832 / 833 | | 842 / 843 | | 852 / 853 | | 862 / 863 | |
|------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | OHL | Thrust | OHL | Thrust | OHL | Thrust | OHL | Thrust |
| 180 | 440 | 1650 | 1770 | 2570 | 1670 | 3420 | 1730 | 3920 |
| 125 | 440 | 1840 | 1770 | 2830 | 1670 | 3720 | 1720 | 4220 |
| 80 | 440 | 2260 | 1770 | 3410 | 1670 | 4220 | 1700 | 4990 |
| 50 | 440 | 2740 | 1770 | 4160 | 1670 | 5220 | 1660 | 5850 |
| 32 | 440 | 3000 | 1770 | 4530 | 1670 | 5540 | 1640 | 6400 |
| 25 | 440 | 3000 | 1770 | 4670 | 1670 | 5860 | 1620 | 6550 |
| 10 | 430 | 3890 | 1770 | 6160 | 1670 | 7760 | 1570 | 8550 |
| 5 | 430 | 4620 | 1770 | 7090 | 1670 | 9000 | 1560 | 10500 |
| 1 | 430 | 4840 | 1770 | 7130 | 1660 | 8950 | 1560 | 10500 |

Overhung Loads (LBS) on Input Shaft at 1750 RPM

| Ratio | Size | | | |
|-------|------|-----|-----|-----|
| | 832 | 842 | 852 | 862 |
| 8.0 | 290 | 270 | 255 | 300 |
| 14.0 | 300 | 280 | 260 | 315 |
| 20.0 | 300 | 285 | 265 | 320 |
| 32.0 | 305 | 290 | 265 | 320 |
| 50.0 | 310 | 290 | 270 | 320 |
| 71.0 | 310 | 295 | 265 | 315 |
| 112.0 | 310 | 305 | 280 | 320 |
| 160.0 | 320 | 305 | 280 | 335 |
| 250.0 | 320 | 310 | 290 | 345 |

| Ratio | Size | | | |
|-------|------|-----|-----|-----|
| | 833 | 843 | 853 | 863 |
| 100.0 | 315 | 310 | 295 | 280 |
| 180.0 | 315 | 315 | 300 | 285 |
| 280.0 | 315 | 315 | 305 | 285 |
| 400.0 | 315 | 315 | 305 | 290 |
| 560.0 | 320 | 315 | 305 | 295 |
| 900.0 | 320 | 315 | 305 | 300 |

Approximate Weights (LBS)

| NON-FLANGE Reducers | | FLANGE Reducers | | | | |
|---------------------|-----|-----------------|---------------|----------|----------|-----------|
| | | Size | NEMA Mounting | | | |
| Size | Lbs | | 56C B5 | 140TC B7 | 180TC B9 | 210TC B11 |
| S832BR | 24 | SF832BR | 26 | 26 | — | — |
| S842BR | 32 | SF842BR | 31 | 31 | 34 | — |
| S852BR | 39 | SF852BR | — | 35 | 38 | — |
| S862BR | 70 | SF862BR | — | — | 80 | 80 |
| S833BR | 32 | SF833BR | 33 | — | — | — |
| S843BR | 40 | SF843BR | 39 | — | — | — |
| S853BR | 47 | SF853BR | 43 | — | — | — |
| S863BR | 83 | SF863BR | 78 | 78 | — | — |

800 Series Right Angle Helical Worm Gear Drives

Lubricant and Quantity

Klubersynth UH1 6-460 is recommended for the 800BR Series gear drives and at all times, the lubricant must remain free from contamination. Normal operating temperatures range between 150°F - 170°F. During the initial break-in of the gear drive, higher than normal operating temperatures may result.

All gear drives are supplied filled with UH1 6-460 synthetic oil and with the quantity listed below for standard mounting position M1 or to mounting specified at time of order.

- Sizes 832/833BR and 842/843BR do not require a vent plug.
- Sizes 852/853BR and 862/863BR will require an oil change after 20,000 hours of operation. More frequent changes may be required when operating in high temperature ranges or unusually contaminated environments.
- Satisfactory performance may be obtained in some applications with non-synthetic oils and will require more frequent changes.

| Recommended Lubricant | Ambient (Room) Temperature | ISO Viscosity Grade No. | Viscosity Range SUS @100°F | Boston Gear Item Code |
|-----------------------|-------------------------------|-------------------------|----------------------------|-----------------------|
| | | | | Quart |
| Klubersynth UH1 6-460 | -20° to 225°F (-29° to 107°C) | 460 | 1950/2500 | 65159 |
| Mobil SHC634 | -30° to 225°F (-34° to 107°C) | 320 / 460 | 1950/2500 | 51493 |

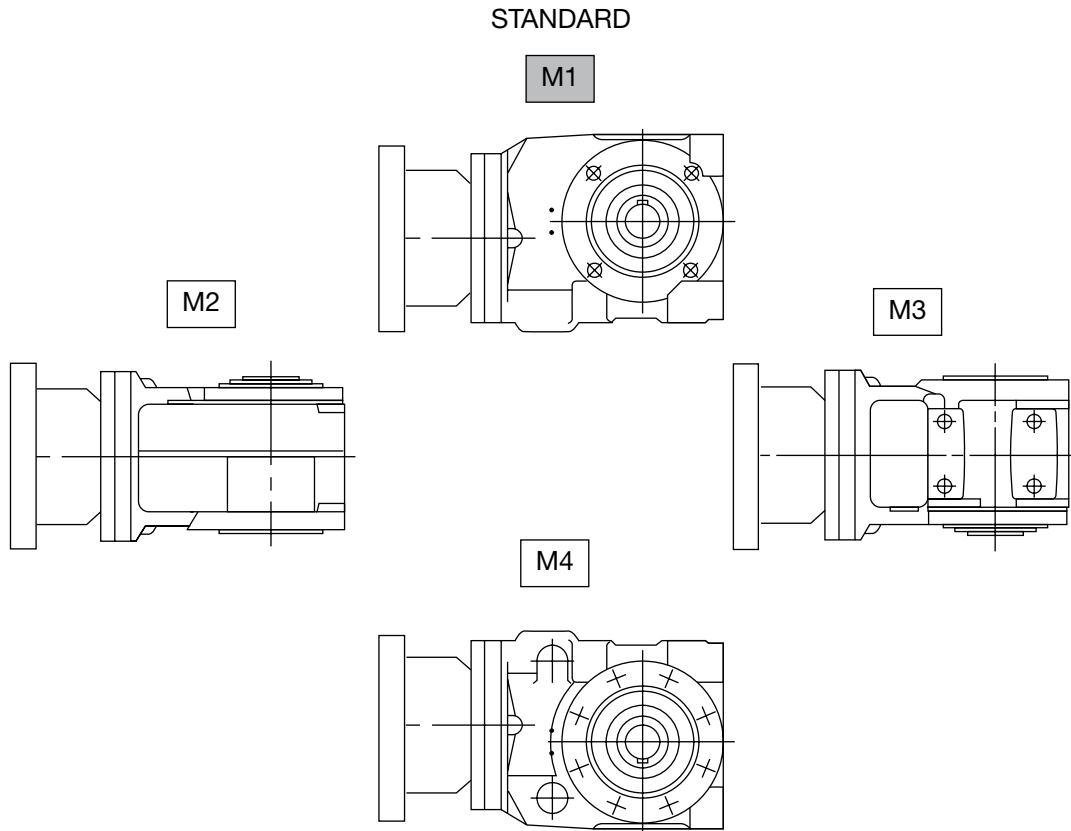
Oil Capacities (PINTS)

| Unit Size | Mounting Positions | | | | | |
|-----------|--------------------|-----|-----|-----|-----|------|
| | M1 | M2 | M3 | M4 | M5 | M6 |
| 832BR | .80 | 1.0 | 1.0 | 1.7 | 1.7 | 1.7 |
| 833BR | 2.3 | 1.3 | 1.3 | 2.8 | 2.8 | 2.8 |
| 842BR | 1.2 | 1.6 | 1.6 | 2.0 | 2.0 | 2.0 |
| 843BR | 2.6 | 1.8 | 1.8 | 3.2 | 3.4 | 3.4 |
| 852BR | 1.8 | 2.3 | 2.3 | 2.7 | 3.8 | 3.8 |
| 853BR | 3.2 | 2.8 | 2.8 | 4.4 | 4.8 | 4.8 |
| 862BR | 4.0 | 4.6 | 4.6 | 7.0 | 7.0 | 7.0 |
| 863BR | 7.0 | 5.8 | 5.8 | 8.8 | 9.6 | 10.0 |

H

800 Series Right Angle Helical Worm Mounting Positions

Horizontal Mountings



Vertical Mountings



- Position M1 is standard and will be supplied with oil for this position unless otherwise specified.

CAUTION: Mounting of gear drives in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting. Avoiding those positions where the high speed oil seal is immersed in oil will provide greater security against high speed input seal wear.

Note: The above drawings will serve to represent both flanges and non-flanged styles.

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|----------------------------|-----|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) | | |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | | | |
| 218 | 8 | 689 | 2.65 | S832BR-8K-M1 (F01218) | 2 | 519 | I | SF832BR-8K-B7-M1 (F01432) | | |
| | | | | | 1.5 | 389 | II | SF832BR-8K-B5-M1 (F01431) | | |
| | | 1160 | 4.39 | S842BR-8K-M1 (F01263) | 3 | 751 | II | SF842BR-8K-B9-M1 (F01491) | | |
| | | | | | 2 | 500 | III | SF842BR-8K-B7-M1 (F01490) | | |
| | | 1678 | 6.66 | S852BR-8K-M1 (F01309) | 5 | 1260 | I | SF852BR-8K-B9-M1 (F01558) | | |
| | | | | | 3 | 755 | III | SF852BR-8K-B9-M1 (F01558) | | |
| | | 2940 | 11.40 | S862BR-8K-M1 (F01354) | 10 | 2578 | I | SF862BR-8K-B11-M1 (F01622) | | |
| | | | | | 7.5 | 1933 | II | SF862BR-8K-B11-M1 (F01622) | | |
| | | | | | 5 | 1289 | III | SF862BR-8K-B9-M1 (F01623) | | |
| | | | | | | | | | | |
| 159 | 11 | 742 | 2.14 | S832BR-11K-M1 (F01195) | 2 | 694 | I | SF832BR-11K-B7-M1 (F01404) | | |
| | | | | | 1.5 | 520 | II | SF832BR-11K-B7-M1 (F01404) | | |
| | | 1194 | 3.57 | S842BR-11K-M1 (F01240) | 3 | 1003 | I | SF842BR-11K-B9-M1 (F01453) | | |
| | | | | | 2 | 668 | II | SF842BR-11K-B7-M1 (F01452) | | |
| | | 1930 | 5.52 | S852BR-11K-M1 (F01285) | 1.5 | 501 | III | SF842BR-11K-B7-M1 (F01452) | | |
| | | | | | 5 | 1746 | I | SF852BR-11K-B9-M1 (F01517) | | |
| | | 3480 | 9.38 | S862BR-11K-M1 (F01331) | 3 | 1048 | II | SF852BR-11K-B9-M1 (F01517) | | |
| | | | | | 2 | 666 | III | SF852BR-11K-B7-M1 (F01516) | | |
| | | | | | | | 7.5 | 2780 | I | SF862BR-11K-B11-M1 (F01584) |
| | | | | | | | 5 | 1853 | II | SF862BR-11K-B9-M1 (F01585) |
| | | | | | 3 | 1112 | III | SF862BR-11K-B9-M1 (F01585) | | |
| | | | | | | | | | | |
| 145 (CONT.) | 12 | 787 | 1.95 | S832BR-12K-M1 (F01197) | 1.5 | 605 | I | SF832BR-12K-B7-M1 (F01407) | | |
| | | | | | 1 | 403 | II | SF832BR-12K-B5-M1 (F01406) | | |
| | | 1264 | 3.25 | S842BR-12K-M1 (F01242) | .75 | 302 | III | SF832BR-12K-B5-M1 (F01406) | | |
| | | | | | 3 | 1166 | I | SF842BR-12K-B9-M1 (F01456) | | |
| | | | | | | | 2 | 777 | II | SF842BR-12K-B7-M1 (F01455) |
| | | | | | | | 1.5 | 583 | III | SF842BR-12K-B7-M1 (F01455) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 204.
 † For Base / Projecting Shaft / Output Flange see How to Order Page 201.



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|----------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 145 (CONT) | 12 | 2010 | 5.22 | S852BR-12K-M1 (F01287) | 5 | 1924 | I | SF852BR-12K-B9-M1 (F01520) |
| | | | | | 3 | 1155 | II | SF852BR-12K-B7-M1 (F01519) |
| | | 3646 | 8.77 | S862BR-12K-M1 (F01333) | 2 | 770 | III | SF862BR-12K-B11-M1 (F01587) |
| | | | | | 7.5 | 3117 | I | SF862BR-12K-B9-M1 (F01588) |
| 125 | 14 | 790 | 1.79 | S832BR-14K-M1 (F01199) | 5 | 662 | I | SF832BR-14K-B7-M1 (F01410) |
| | | | | | 1 | 441 | II | SF832BR-14K-B5-M1 (F01409) |
| | | 1288 | 2.99 | S842BR-14K-M1 (F01244) | 3 | 1288 | I | SF842BR-14K-B9-M1 (F01459) |
| | | | | | 2 | 861 | II | SF842BR-14K-B7-M1 (F01458) |
| | | 2060 | 4.85 | S852BR-14K-M1 (F01289) | 1.5 | 646 | III | SF852BR-14K-B9-M1 (F01523) |
| | | | | | 3 | 1274 | II | SF852BR-14K-B7-M1 (F01522) |
| | | 3827 | 8.20 | S862BR-14K-M1 (F01335) | 7.5 | 3498 | I | SF862BR-14K-B11-M1 (F01591) |
| | | | | | 5 | 2332 | II | SF862BR-14K-B9-M1 (F01592) |
| 109 | 16 | 730 | 1.70 | S832BR-16K-M1 (F01201) | 3 | 1399 | III | SF832BR-16K-B7-M1 (F01413) |
| | | | | | 1 | 430 | II | SF832BR-16K-B5-M1 (F01412) |
| | | 1218 | 2.72 | S842BR-16K-M1 (F01246) | 2 | 895 | I | SF842BR-16K-B7-M1 (F01462) |
| | | | | | 1.5 | 671 | II | SF842BR-16K-B5-M1 (F01461) |
| | | 2710 | 5.92 | S852BR-16K-M1 (F01291) | 1 | 448 | III | SF852BR-16K-B9-M1 (F01525) |
| | | | | | 5 | 2287 | I | SF862BR-16K-B11-M1 (F01595) |
| 4199 | 9.03 | S862BR-16K-M1 (F01337) | 3 | 1372 | III | SF862BR-16K-B9-M1 (F01596) | | |
| | | | 7.5 | 3054 | I | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 204.

† For Base / Projecting Shaft / Output Flange see How to Order Page 201.

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------------|------------------------|----------|-------------------------|----------------------|----------------------------|-----------------|----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 97 | 18 | 864 | 1.50 | S832BR-18K-M1 (F01202) | 1.5 | 864 | I | SF832BR-18K-B7-M1 (F01415) |
| | | | | | 1 .75 | 576 432 | II III | SF832BR-18K-B5-M1 (F01414) |
| | | 1388 | 2.50 | S842BR-18K-M1 (F01247) | 2 1.5 | 1110 832 | I II | SF842BR-18K-B7-M1 (F01464) |
| | | | | | 1 | 555 | III | SF842BR-18K-B5-M1 (F01463) |
| | | 2162 | 4.21 | S852BR-18K-M1 (F01292) | 3 | 1540 | I | SF852BR-18K-B9-M1 (F01527) |
| | | | | | 2 | 1026 | III | SF852BR-18K-B7-M1 (F01526) |
| 4208 | 7.10 | S862BR-18K-M1 (F01338) | 5 3 | 2962 1777 | I III | SF862BR-18K-B9-M1 (F01597) | | |
| 87 | 20 | 860 | 1.43 | S832BR-20K-M1 (F01203) | 1 .75 | 600 451 | I III | SF832BR-20K-B5-M1 (F01416) |
| | | | | | 2 1.5 | 1173 880 | I II | SF842BR-20K-B7-M1 (F01466) |
| | | 1391 | 2.37 | S842BR-20K-M1 (F01248) | 1 | 586 | III | SF842BR-20K-B5-M1 (F01465) |
| | | | | | 3 | 1803 | I | SF852BR-20K-B9-M1 (F01529) |
| | | 2345 | 3.90 | S852BR-20K-M1 (F01294) | 2 1.5 | 1202 902 | II III | SF852BR-20K-B7-M1 (F01528) |
| 5 3 | 3343 2006 | | | | I III | SF862BR-20K-B9-M1 (F01598) | | |
| 79 | 22 | 804 | 1.39 | S832BR-22K-M1 (F01205) | 1 .75 .50 | 578 434 289 | I II III | SF832BR-22K-B5-M1 (F01418) |
| | | | | | 2 1.5 | 1184 888 | I II | SF842BR-22K-B7-M1 (F01470) |
| | | 1321 | 2.23 | S842BR-22K-M1 (F01250) | 1 | 592 | III | SF842BR-22K-B5-M1 (F01468) |
| | | | | | 5 3 | 3086 1889 | I II | SF852BR-22K-B9-M1 (F01532) |
| | | 3086 | 4.90 | S852BR-22K-M1 (F01296) | 2 | 1259 | III | SF852BR-22K-B7-M1 (F01531) |
| 5 3 | 3226 1935 | | | | II III | SF862BR-22K-B9-M1 (F01601) | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 204.

† For Base / Projecting Shaft / Output Flange see How to Order Page 201.



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
 ORDER BY CATALOG NUMBER OR ITEM CODE
 FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|--|-----------------|----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 70 | 25 | 843 | 1.28 | S832BR-25K-M1 (F01207) | 1 .75 .50 | 658 494 329 | I II III | SF832BR-25K-B5-M1 (F01420) |
| | | 1389 | 2.04 | S842BR-25K-M1 (F01252) | 2 1.5 | 1360 1020 | I I | SF842BR-25K-B7-M1 (F01473) |
| | | | | | 1 | 680 | III | SF842BR-25K-B5-M1 (F01472) |
| | | 3177 | 4.62 | S852BR-25K-M1 (F01298) | 3 | 2062 | II | SF852BR-25K-B9-M1 (F01535) |
| | | | | | 2 | 1374 | III | SF852BR-25K-B7-M1 (F01534) |
| 5026 | 6.94 | S862BR-25K-M1 (F01343) | 5 3 | 3620 2172 | I III | SF862BR-25K-B9-M1 (F01603) | | |
| 62 | 28 | 862 | 1.17 | S832BR-28K-M1 (F01208) | 1 .75 .50 | 736 552 368 | I II III | SF832BR-28K-B5-M1 (F01421) |
| | | 1363 | 1.88 | S842BR-28K-M1 (F01253) | 1.5 | 1087 | I | SF842BR-28K-B7-M1 (F01475) |
| | | | | | 1 .75 | 725 543 | II III | SF842BR-28K-B5-M1 (F01474) |
| | | 3200 | 4.24 | S852BR-28K-M1 (F01299) | 3 | 2263 | I | SF852BR-28K-B9-M1 (F01537) |
| | | | | | 2 | 1508 | III | SF852BR-28K-B7-M1 (F01536) |
| 5290 | 6.49 | S862BR-28K-M1 (F01344) | 5 3 | 4073 2444 | I III | SF862BR-28K-B9-M1 (F01604) | | |
| 54 | 32 | 971 | 1.00 | S832BR-32K-M1 (F01209) | 1 .75 .50 | 971 728 485 | I II III | SF832BR-32K-B5-M1 (F01422) |
| | | 1560 | 1.66 | S842BR-32K-M1 (F01254) | 1.5 | 1409 | I | SF842BR-32K-B7-M1 (F01477) |
| | | | | | 1 .75 | 940 705 | II III | SF842BR-32K-B5-M1 (F01476) |
| | | 2813 | 2.98 | S852BR-32K-M1 (F01300) | 3 | 2813 | I | SF852BR-32K-B9-M1 (F01539) |
| | | | | | 2 1.5 | 1887 1415 | II III | SF852BR-32K-B7-M1 (F01538) |
| 5184 | 4.93 | S862BR-32K-M1 (F01345) | 3 2 | 3153 2102 | II III | SF862BR-32K-B9-M1 (F01606) SF862BR-32K-B7-M1 (F01605) | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service Class III (S.F. = 2.00)
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 204.
 † For Base / Projecting Shaft / Output Flange see How to Order Page 201.

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|----------------------------|-----------------|----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 48 | 36 | 936 | 0.99 | S832BR-36K-M1 (F01210) | 1 | 936 | I | SF832BR-36K-B5-M1 (F01423) |
| | | | | | .75 | 709 | I | |
| | | | | | .50 | 472 | III | |
| | | 1525 | 1.59 | S842BR-36K-M1 (F01255) | 1.5 | 1438 | I | SF842BR-36K-B7-M1 (F01479) |
| | | | | | 1 | 959 | II | SF842BR-36K-B5-M1 (F01478) |
| | | .75 | 719 | III | 3 | 2722 | I | SF852BR-36K-B9-M1 (F01541) |
| | | | | | 2 | 1816 | II | SF852BR-36K-B7-M1 (F01540) |
| | | 3262 | 3.59 | S852BR-36K-M1 (F01301) | 5 | 5102 | I | SF862BR-36K-B9-M1 (F01608) |
| 3 | 3061 | | | | II | SF862BR-36K-B7-M1 (F01607) | | |
| 5768 | 5.65 | S862BR-36K-M1 (F01346) | 2 | 2040 | III | | | |
| | | | | | | | | |
| 43 | 40 | 933 | 0.94 | S832BR-40K-M1 (F01211) | .75 | 744 | I | SF832BR-40K-B5-M1 (F01424) |
| | | | | | .50 | 746 | II | |
| | | | | | .33 | 330 | III | |
| | | 1527 | 1.51 | S842BR-40K-M1 (F01256) | 1.5 | 1516 | I | SF842BR-40K-B7-M1 (F01481) |
| | | | | | 1 | 1010 | II | SF842BR-40K-B5-M1 (F01480) |
| | | .75 | 758 | III | 3 | 3156 | I | SF852BR-40K-B9-M1 (F01543) |
| | | | | | 2 | 2104 | II | SF852BR-40K-B7-M1 (F01542) |
| | | 1.5 | 1578 | III | 5 | 5754 | I | SF862BR-40K-B9-M1 (F01610) |
| 3 | 3453 | | | | II | SF862BR-40K-B7-M1 (F01609) | | |
| 6045 | 5.25 | S862BR-40K-M1 (F01347) | 2 | 2302 | III | | | |
| | | | | | | | | |
| 38 (CONT.) | 45 | 1032 | 0.8 | S832BR-45K-M1 (F01212) | .75 | 967 | I | SF832BR-45K-B5-M1 (F01425) |
| | | | | | .50 | 644 | II | |
| | | | | | .33 | 430 | III | |
| | | 1669 | 1.34 | S842BR-45K-M1 (F01257) | 1 | 1244 | I | SF842BR-45K-B5-M1 (F01482) |
| .75 | 933 | | | | II | | | |
| | | | .50 | 622 | III | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service Class III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
 ORDER BY CATALOG NUMBER OR ITEM CODE
 FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 38 (CONT.) | 45 | 3165 | 2.37 | S852BR-45K-M1 (F01303) | 2 | 2669 | I | SF852BR-45K-B7-M1 (F01545) |
| | | | | | 1.5 | 1978 | II | |
| | | 5810 | 3.95 | S862BR-45K-M1 (F01348) | 1 | 1335 | III | SF852BR-45K-B5-M1 (F01544) |
| | | | | | 3 | 4410 | I | SF862BR-45K-B9-M1 (F01612) |
| 35 | 50 | 1000 | 0.71 | S832BR-50K-M1 (F01213) | .50 | 703 | I | SF832BR-50K-B5-M1 (F01426) |
| | | | | | .33 | 469 | III | |
| | | 1616 | 1.19 | S842BR-50K-M1 (F01258) | 1 | 1354 | I | SF842BR-50K-B5-M1 (F01483) |
| | | | | | .75 | 1015 | II | |
| | | 3248 | 2.24 | S852BR-50K-M1 (F01304) | .50 | 677 | III | |
| | | | | | 2 | 2899 | I | SF852BR-50K-B7-M1 (F01547) |
| | | 5930 | 3.79 | S862BR-50K-M1 (F01349) | 1.5 | 2174 | II | SF852BR-50K-B5-M1 (F01546) |
| | | | | | 3 | 4692 | I | SF862BR-50K-B9-M1 (F01614) |
| | | | | | 2 | 3128 | II | SF862BR-50K-B7-M1 (F01613) |
| | | | | | 1.5 | 2346 | III | |
| 31 | 56 | 1033 | 0.74 | S832BR-56K-M1 (F01214) | .75 | 1033 | I | SF832BR-56K-B5-M1 (F01427) |
| | | | | | .50 | 698 | II | |
| | | 1670 | 1.18 | S842BR-56K-M1 (F01259) | .33 | 465 | III | |
| | | | | | 1 | 1416 | I | SF842BR-56K-B5-M1 (F01484) |
| | | 3813 | 2.63 | S852BR-56K-M1 (F01305) | .75 | 1062 | II | |
| | | | | | .50 | 708 | III | |
| | | 6500 | 4.2 | S862BR-56K-M1 (F01350) | 2 | 2900 | I | SF852BR-56K-B7-M1 (F01549) |
| | | | | | 1.5 | 2174 | II | SF852BR-56K-B5-M1 (F01548) |
| | | | | | 1 | 1449 | III | |
| | | | | | 3 | 4633 | I | SF862BR-56K-B9-M1 (F01616) |
| | | | | | 2 | 3088 | III | SF862BR-56K-B7-M1 (F01615) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 204.
 † For Base / Projecting Shaft / Output Flange see How to Order Page 201.

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 27 | 63 | 1040 | 0.67 | S832BR-63K-M1 (F01215) | .50 .33 | 775 517 | I III | SF832BR-63K-B5-M1 (F01428) |
| | | 1710 | 1.07 | S842BR-63K-M1 (F01260) | 1 .75 .50 | 1597 1197 800 | I II III | SF842BR-63K-B5-M1 (F01485) |
| | | 3899 | 2.39 | S852BR-63K-M1 (F01306) | 2 1.5 | 3261 2446 | I II | SF852BR-63K-B7-M1 (F01552) |
| | | | | | 1 | 1630 | III | SF852BR-63K-B5-M1 (F01550) |
| | | 6720 | 3.76 | S862BR-63K-M1 (F01351) | 3 | 5360 | I | SF862BR-63K-B9-M1 (F01618) |
| | | | | | 2 1.5 | 3574 2680 | II III | SF862BR-63K-B7-M1 (F01617) |
| 24 | 71 | 1192 | 0.59 | S832BR-71K-M1 (F01216) | .50 .33 .25 | 1009 673 505 | I II III | SF832BR-71K-B5-M1 (F01429) |
| | | 1739 | 0.88 | S842BR-71K-M1 (F01261) | .75 .50 .33 | 1482 950 658 | I II III | SF842BR-71K-B5-M1 (F01487) |
| | | 3225 | 1.71 | S852BR-71K-M1 (F01307) | 1.5 | 2828 | I | SF852BR-71K-B7-M1 (F01555) |
| | | | | | 1 .75 | 1885 1414 | II III | SF852BR-71K-B5-M1 (F01554) |
| | | 6645 | 2.94 | S862BR-71K-M1 (F01352) | 2 1.5 | 4520 3389 | II III | SF862BR-71K-B7-M1 (F01619) |
| 21 | 80 | 1250 | 0.54 | S832BR-80K-M1 (F01217) | .50 .33 .25 | 1158 772 579 | I II III | SF832BR-80K-B5-M1 (F01430) |
| | | 1619 | 0.74 | S842BR-80K-M1 (F01262) | .75 .50 .33 | 1640 1093 729 | I II III | SF842BR-80K-B5-M1 (F01488) |
| | | 3453 | 1.5 | S852BR-80K-M1 (F01308) | 1.5 | 3453 | I | SF852BR-80K-B7-M1 (F01557) |
| | | | | | 1 .75 | 2368 1776 | II III | SF852BR-80K-B5-M1 (F01556) |
| | | 6783 | 2.77 | S862BR-80K-M1 (F01353) | 2 1.5 | 4895 3671 | I II | SF862BR-80K-B7-M1 (F01621) |
| | | | | | 1 | 2444 | III | SF862BR-80K-B5-M1 (F01620) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|-------------------------|----------|-------------------------|----------------------|-----------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 19 | 90 | 1187 | 0.57 | S832BR-90K-M1 (F01219) | 0.5 | 1040 | I | SF832BR-90K-B5-M1 (F01433) |
| | | | | | 0.33 | 693 | II | |
| | | | | | 0.25 | 520 | III | |
| | | 1934 | 0.91 | S842BR-90K-M1 (F01264) | 0.75 | 1593 | I | SF842BR-90K-B5-M1 (F01492) |
| | | | | | 0.5 | 1062 | II | |
| | | | | | 0.33 | 708 | III | |
| 4178 | 1.82 | S852BR-90K-M1 (F01310) | 1.5 | 3442 | I | SF852BR-90K-B7-M1 (F01560) | | |
| | | | 1 | 2295 | II | SF852BR-90K-B5-M1 (F01559) | | |
| | | | 0.75 | 1720 | III | | | |
| 7514 | 3.05 | S862BR-90K-M1 (F01355) | 3 | 7388 | I | SF862BR-90K-B9-M1 (F01625) | | |
| | | | 2 | 4925 | II | SF862BR-90K-B7-M1 (F01624) | | |
| | | | 1.5 | 3694 | III | | | |
| 17 | 100 | 1120 | 0.51 | S832BR-100K-M1 (F01193) | 0.5 | 1098 | I | SF832BR-100K-B5-M1 (F01401) |
| | | | | | 0.33 | 732 | II | |
| | | | | | 0.25 | 549 | III | |
| | | 1302 | 0.47 | S833BR-100K-M1 (F01220) | 0.33 | 923 | I | SF833BR-100K-B5-M1 (F01434) |
| | | | | | 0.25 | 692 | II | |
| | | | | | 0.16 | 461 | III | |
| | | 1835 | 0.81 | S842BR-100K-M1 (F01238) | 0.75 | 1697 | I | SF842BR-100K-B5-M1 (F01450) |
| | | | | | 0.5 | 1132 | II | |
| | | | | | 0.33 | 755 | III | |
| | | 1700 | 0.63 | S843BR-100K-M1 (F01265) | 0.5 | 1349 | I | SF843BR-100K-B5-M1 (F01495) |
| 0.33 | 900 | | | | II | | | |
| 0.25 | 674 | | | | III | | | |
| 4225 | 1.71 | S852BR-100K-M1 (F01283) | 1.5 | 3704 | I | SF852BR-100K-B7-M1 (F01514) | | |
| | | | 1 | 2469 | II | SF852BR-100K-B5-M1 (F01513) | | |
| | | | 0.75 | 1852 | III | | | |
| 3477 | 1.22 | S853BR-100K-M1 (F01311) | 1 | 2849 | I | SF853BR-100K-B5-M1 (F01563) | | |
| | | | 0.75 | 2136 | II | | | |
| | | | 0.5 | 1424 | III | | | |
| 7539 | 2.87 | S862BR-100K-M1 (F01329) | 2 | 5252 | I | SF862BR-100K-B7-M1 (F01581) | | |
| | | | 1.5 | 3939 | III | | | |
| 7173 | 2.34 | S863BR-100K-M1 (F01356) | 2 | 6128 | I | SF863BR-100K-B7-M1 (F01627) | | |
| | | | 1.5 | 4596 | II | | | |
| | | | | | 1 | 3064 | III | SF863BR-100K-B5-M1 (F01626) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.
□ Indicates Triple Reduction

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|-------------------------|----------|-------------------------|----------------------|-----------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 15 | 112 | 1360 | 0.44 | S832BR-112K-M1 (F01194) | .33 | 1029 | I | SF832BR-112K-B5-M1 (F01402) |
| | | | | | .25 | 772 | II | |
| | | | | | .16 | 514 | III | |
| | | 1412 | 0.48 | S842BR-112K-M1 (F01239) | .33 | 980 | I | SF842BR-112K-B5-M1 (F01451) |
| .25 | 735 | | | | II | | | |
| 3088 | 1.00 | S852BR-112K-M1 (F01284) | .75 | 3088 | I | SF852BR-112K-B5-M1 (F01515) | | |
| | | | .50 | 2317 | II | | | |
| 6574 | 1.97 | S862BR-112K-M1 (F01330) | 1.5 | 5003 | I | SF862BR-112K-B7-M1 (F01583) | | |
| | | | .75 | 3366 | II | SF862BR-112K-B5-M1 (F01582) | | |
| 14 | 118 | 1321 | 0.42 | S833BR-118K-M1 (F01221) | .33 | 1048 | I | SF833BR-118K-B5-M1 (F01435) |
| | | | | | .25 | 786 | II | |
| | | | | | .16 | 524 | III | |
| | | 1698 | 0.55 | S843BR-118K-M1 (F01266) | .50 | 1543 | I | SF843BR-118K-B5-M1 (F01496) |
| .33 | 1029 | | | | II | | | |
| 3436 | 1.07 | S853BR-118K-M1 (F01312) | .75 | 3210 | I | SF853BR-118K-B5-M1 (F01564) | | |
| | | | .50 | 2407 | II | | | |
| 7434 | 2.14 | S863BR-118K-M1 (F01357) | 2 | 6945 | I | SF863BR-118K-B7-M1 (F01629) | | |
| | | | 1.5 | 5209 | II | SF863BR-118K-B5-M1 (F01628) | | |
| 14 | 125 | 1311 | 0.36 | S832BR-125K-M1 (F01196) | .33 | 1213 | I | SF832BR-125K-B5-M1 (F01405) |
| | | | | | .25 | 910 | II | |
| | | | | | .16 | 606 | III | |
| | | 1248 | 0.36 | S842BR-125K-M1 (F01241) | .33 | 1155 | I | SF842BR-125K-B5-M1 (F01454) |
| .25 | 866 | | | | II | | | |
| 2630 | 0.75 | S852BR-125K-M1 (F01286) | .75 | 2630 | I | SF852BR-125K-B5-M1 (F01518) | | |
| | | | .50 | 1753 | II | | | |
| 4832 | 1.28 | S862BR-125K-M1 (F01332) | .33 | 1167 | III | SF862BR-125K-B5-M1 (F01586) | | |
| | | | 1 | 3773 | I | | | |
| | | | | | .75 | 2830 | II | |
| | | | | | .50 | 1886 | III | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 204.
 † For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 □ Indicates Triple Reduction



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 13 | 132 | 1270 | 0.42 | S833BR-132K-M1 (F01222) | .33 .25 .16 | 966 724 483 | I II III | SF833BR-132K-B5-M1 (F01436) |
| | | 1953 | 0.66 | S843BR-132K-M1 (F01267) | .50 .33 | 1478 986 | I III | SF843BR-132K-B5-M1 (F01497) |
| | | 4596 | 1.42 | S853BR-132K-M1 (F01313) | 1 .75 .50 | 3235 2426 1617 | I II III | SF853BR-132K-B5-M1 (F01565) |
| | | 7410 | 2.21 | S863BR-132K-M1 (F01358) | 2 1.5 | 6739 5054 | I II | SF863BR-132K-B7-M1 (F01631) |
| | | | | | 1 | 3370 | III | SF863BR-132K-B5-M1 (F01630) |
| 12 | 140 | 1310 | 0.4 | S832BR-140K-M1 (F01198) | .33 .25 .16 | 1090 818 545 | I II III | SF832BR-140K-B5-M1 (F01408) |
| | | 2117 | 0.64 | S842BR-140K-M1 (F01243) | .50 .33 .25 | 1653 1102 826 | I II III | SF842BR-140K-B5-M1 (F01457) |
| | | 4143 | 1.3 | S852BR-140K-M1 (F01288) | 1 .75 .50 | 3186 2389 1592 | I II III | SF852BR-140K-B5-M1 (F01521) |
| | | 7520 | 2.02 | S862BR-140K-M1 (F01334) | 2 1.5 | 7448 5586 | I I | SF862BR-140K-B7-M1 (F01590) |
| | | | | | 1 | 3724 | III | SF862BR-140K-B5-M1 (F01589) |
| 11 | 150 | 1237 | 0.4 | S833BR-150K-M1 (F01223) | .33 .25 .16 | 1030 773 515 | I II III | SF833BR-150K-B5-M1 (F01437) |
| | | 1980 | 0.63 | S843BR-150K-M1 (F01268) | .50 .33 .25 | 1570 1047 785 | I II III | SF843BR-150K-B5-M1 (F01498) |
| | | 4604 | 1.35 | S853BR-150K-M1 (F01314) | 1 .75 .50 | 3409 2557 1705 | I II III | SF853BR-150K-B5-M1 (F01566) |
| | | 7143 | 2.00 | S863BR-150K-M1 (F01359) | 2 1.5 | 7143 5382 | I I | SF863BR-150K-B7-M1 (F01633) |
| | | | | | 1 | 3571 | III | SF863BR-150K-B5-M1 (F01632) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 204.

† For Base / Projecting Shaft / Output Flange see How to Order Page 201.

☐ Indicates Triple Reduction

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------------|------------------------|----------|-------------------------|----------------------|-----------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 10 | 160 | 1364 | 0.37 | S832BR-160K-M1 (F01200) | .33 .25 .16 | 1228 921 614 | I II III | SF832BR-160K-B5-M1 (F01411) |
| | | 2216 | 0.59 | S842BR-160K-M1 (F01245) | .50 .33 .25 | 1877 1251 939 | I II III | SF842BR-160K-B5-M1 (F01460) |
| | | 4738 | 1.19 | S852BR-160K-M1 (F01290) | 1 .75 .50 | 3978 2984 1989 | I II III | SF852BR-160K-B5-M1 (F01524) |
| | | 7504 | 1.86 | S862BR-160K-M1 (F01336) | 1.5 | 6049 | I | SF862BR-160K-B7-M1 (F01594) |
| 1 .75 | 4033 3024 | | | | II III | SF862BR-160K-B5-M1 (F01593) | | |
| 10 | 160 | 1320 | 0.33 | S833BR-160K-M1 (F01224) | .33 .25 .16 | 1320 1030 687 | I I II | SF833BR-160K-B5-M1 (F01438) |
| | | 1693 | 0.41 | S843BR-160K-M1 (F01269) | .33 .25 .16 | 1376 1032 688 | I II III | SF843BR-160K-B5-M1 (F01499) |
| | | 3406 | 0.79 | S853BR-160K-M1 (F01315) | .75 .50 .33 | 3233 2792 1437 | I II III | SF853BR-160K-B5-M1 (F01567) |
| | | 7431 | 1.51 | S863BR-160K-M1 (F01360) | 1.5 | 7378 | I | SF863BR-160K-B7-M1 (F01635) |
| 1 .75 | 4919 3689 | | | | II III | SF863BR-160K-B5-M1 (F01634) | | |
| 9.1 | 180 | 1247 | 0.27 | S833BR-180K-M1 (F01225) | .25 .16 | 1153 769 | I II | SF833BR-180K-B5-M1 (F01439) |
| | | 1545 | 0.35 | S843BR-180K-M1 (F01270) | .33 .25 .16 | 1471 1103 735 | I I III | SF843BR-180K-B5-M1 (F01500) |
| | | 3161 | 0.68 | S853BR-180K-M1 (F01316) | .50 .33 | 2323 1549 | I III | SF853BR-180K-B5-M1 (F01568) |
| | | 7427 | 1.39 | S863BR-180K-M1 (F01361) | 1 .75 .50 | 5341 4006 2670 | I II III | SF863BR-180K-B5-M1 (F01636) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.
☐ Indicates Triple Reduction



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|-------------------------|----------|-------------------------|----------------------|-----------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 8.8 | 200 | 1346 | 0.33 | S833BR-200K-M1 (F01226) | .33 | 1346 | I | SF833BR-200K-B5-M1 (F01440) |
| | | | | | .25 | 1085 | I | |
| | | | | | .16 | 723 | II | |
| | | 2267 | 0.5 | S843BR-200K-M1 (F01271) | .50 | 2264 | I | SF843BR-200K-B5-M1 (F01501) |
| .33 | 1510 | | | | I | | | |
| .25 | 1133 | | | | III | | | |
| 5139 | 1.08 | S853BR-200K-M1 (F01317) | 1 | 4756 | I | SF853BR-200K-B5-M1 (F01569) | | |
| | | | .75 | 3567 | II | | | |
| | | | .50 | 2378 | III | | | |
| 7443 | 1.49 | S863BR-200K-M1 (F01362) | 1 | 4789 | II | SF863BR-200K-B5-M1 (F01637) | | |
| | | | .75 | 3745 | III | | | |
| | | | | | | | | |
| | | | | | | | | |
| 8.2 | 212 | 1333 | 0.28 | S832BR-212K-M1 (F01204) | .25 | 1190 | I | SF832BR-212K-B5-M1 (F01417) |
| | | | | | .16 | 793 | II | |
| | | 2352 | 0.47 | S842BR-212K-M1 (F01249) | .33 | 1667 | I | SF842BR-212K-B5-M1 (F01467) |
| | | | | | .25 | 1250 | II | |
| | | | .16 | 833 | III | | | |
| 5021 | 0.97 | S852BR-212K-M1 (F01295) | .75 | 3880 | I | SF852BR-212K-B5-M1 (F01530) | | |
| | | | .50 | 2587 | II | | | |
| 7607 | 1.39 | S862BR-212K-M1 (F01340) | 1 | 5470 | I | SF862BR-212K-B5-M1 (F01599) | | |
| | | | .75 | 4103 | II | | | |
| | | | .50 | 2735 | III | | | |
| 7.8 | 225 | 1311 | 0.27 | S833BR-225K-M1 (F01227) | .25 | 1213 | I | SF833BR-225K-B5-M1 (F01441) |
| | | | | | .16 | 809 | II | |
| | | 2346 | 0.46 | S843BR-225K-M1 (F01272) | .33 | 1700 | I | SF843BR-225K-B5-M1 (F01502) |
| | | | | | .25 | 1274 | II | |
| | | | .16 | 850 | III | | | |
| 5260 | 0.97 | S853BR-225K-M1 (F01318) | .75 | 4095 | I | SF853BR-225K-B5-M1 (F01570) | | |
| | | | .50 | 2803 | II | | | |
| | | | .33 | 1869 | III | | | |
| 7405 | 1.32 | S863BR-225K-M1 (F01363) | 1 | 5608 | I | SF863BR-225K-B5-M1 (F01638) | | |
| | | | .75 | 4206 | II | | | |
| | | | .50 | 2804 | III | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.

** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service Class III (S.F. = 2.00)

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 204.

† For Base / Projecting Shaft / Output Flange see How to Order Page 201.

☐ Indicates Triple Reduction

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 7.0 | 250 | 1382 | 0.25 | S832BR-250K-M1 (F01206) | .25 .16 | 1382 920 | I II | SF832BR-250K-B5-M1 (F01419) |
| | | 2050 | 0.36 | S842BR-250K-M1 (F01251) | .33 .25 .16 | 1898 1423 949 | I II III | SF842BR-250K-B5-M1 (F01471) |
| | | 4566 | 0.75 | S852BR-250K-M1 (F01297) | .75 .50 .33 | 4566 3043 2197 | I II III | SF852BR-250K-B5-M1 (F01533) |
| | | 7676 | 1.25 | S862BR-250K-M1 (F01342) | 1 .75 .50 | 6139 4604 3069 | I II III | SF862BR-250K-B5-M1 (F01602) |
| 6.6 | 265 | 1297 | 0.20 | S833BR-265K-M1 (F01228) | .16 | 1150 | I | SF833BR-265K-B5-M1 (F01442) |
| | | 1588 | 0.25 | S843BR-265K-M1 (F01273) | .25 .16 | 1588 1058 | I II | SF843BR-265K-B5-M1 (F01503) |
| | | 3351 | 0.49 | S853BR-265K-M1 (F01319) | .33 .25 .16 | 2279 1709 1139 | I II III | SF853BR-265K-B5-M1 (F01571) |
| | | 6895 | 0.98 | S863BR-265K-M1 (F01364) | .75 .50 .33 | 5274 3516 2344 | I II III | SF863BR-265K-B5-M1 (F01639) |
| 6.2 | 280 | 1357 | 0.18 | S833BR-280K-M1 (F01229) | .16 | 1256 | I | SF833BR-280K-B5-M1 (F01443) |
| | | 1590 | 0.23 | S843BR-280K-M1 (F01274) | .16 | 1151 | I | SF843BR-280K-B5-M1 (F01504) |
| | | 3356 | 0.44 | S853BR-280K-M1 (F01320) | .33 .25 .16 | 2541 1906 1270 | I II III | SF853BR-280K-B5-M1 (F01572) |
| | | 7671 | 0.88 | S863BR-280K-M1 (F01365) | .75 .50 .33 | 6535 4357 2904 | I II III | SF863BR-280K-B5-M1 (F01640) |
| 5.6 (CONT.) | 315 | 1311 | 0.20 | S833BR-315K-M1 (F01230) | .16 | 1092 | I | SF833BR-315K-B5-M1 (F01444) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.
□ Indicates Triple Reduction



800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
 ORDER BY CATALOG NUMBER OR ITEM CODE
 FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 5.6 (CONT.) | 315 | 2620 | 0.39 | S843BR-315K-M1 (F01275) | .33 .25 .16 | 2238 1679 1119 | I II III | SF843BR-315K-B5-M1 (F01505) |
| | | 5252 | 0.75 | S853BR-315K-M1 (F01321) | .75 .50 .33 | 5252 3595 2397 | I II III | SF853BR-315K-B5-M1 (F01573) |
| | | 7490 | 0.94 | S863BR-315K-M1 (F01366) | .75 .50 .33 | 5973 3982 2655 | I I II | SF863BR-315K-B5-M1 (F01641) |
| 4.9 | 360 | 1177 | 0.18 | S833BR-360K-M1 (F01231) | .16 | 1089 | I | SF833BR-360K-B5-M1 (F01445) |
| | | 2496 | 0.35 | S843BR-360K-M1 (F01276) | .33 .25 .16 | 2376 1782 1188 | I I III | SF843BR-360K-B5-M1 (F01506) |
| | | 4862 | 0.63 | S853BR-360K-M1 (F01322) | .50 .33 .25 | 3857 2571 1928 | I II III | SF853BR-360K-B5-M1 (F01574) |
| | | 7382 | 0.87 | S863BR-360K-M1 (F01367) | .75 .50 .33 | 6361 4240 2827 | I II III | SF863BR-360K-B5-M1 (F01642) |
| 4.4 | 400 | 1296 | 0.13 | S833BR-400K-M1 (F01232) | .16 | 1296 | I | SF833BR-400K-B5-M1 (F01446) |
| | | 1647 | 0.16 | S843BR-400K-M1 (F01277) | .16 | 1647 | I | SF843BR-400K-B5-M1 (F01507) |
| | | 3368 | 0.32 | S853BR-400K-M1 (F01323) | .25 .16 | 2630 1753 | I II | SF853BR-400K-B5-M1 (F01575) |
| | | 7686 | 0.67 | S863BR-400K-M1 (F01368) | .50 .33 | 5733 3822 | I III | SF863BR-400K-B5-M1 (F01643) |
| 3.9 | 450 | 1279 | 0.11 | S833BR-450K-M1 (F01233) | .16 | 1279 | I | SF833BR-450K-B5-M1 (F01447) |
| | | 1572 | 0.14 | S843BR-450K-M1 (F01278) | .16 | 1572 | I | SF843BR-450K-B5-M1 (F01508) |
| | | 3305 | 0.28 | S853BR-450K-M1 (F01324) | .25 .16 | 2950 1966 | I II | SF853BR-450K-B5-M1 (F01576) |
| | | 7692 | 0.59 | S863BR-450K-M1 (F01369) | .50 .33 .25 | 6516 4344 3258 | I II III | SF863BR-450K-B5-M1 (F01644) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Overhung Load Ratings refer to Page 204.
 † For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 □ Indicates Triple Reduction

800 Series Right Angle Helical Worm Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 222-231.
ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS†

| Approx. Output RPM | Ratio* | Non-Flanged | | | Flanged (Gearmotors) | | | |
|--------------------|--------|------------------------|----------|-------------------------|----------------------|------------------------|-----------------|-----------------------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog No. (Item Code) |
| | | Output Torque (LB-IN.) | Input HP | | Motor HP | Output Torque (LB-IN.) | Service Class** | |
| 3.5 | 500 | 1354 | 0.13 | S833BR-500K-M1 (F01234) | .16 | 1354 | I | SF833BR-500K-B5-M1 (F01448) |
| | | 2647 | 0.25 | S843BR-500K-M1 (F01279) | .25 | 2641 | I | SF843BR-500K-B5-M1 (F01509) |
| | | 5146 | 0.46 | S853BR-500K-M1 (F01325) | .33 .25 .16 | 3728 2796 1864 | I I II | SF853BR-500K-B5-M1 (F01577) |
| | | 6913 | 0.62 | S863BR-500K-M1 (F01370) | .50 .33 .25 | 5573 3715 2786 | I II III | SF863BR-500K-B5-M1 (F01645) |
| 3.1 | 560 | 1384 | 0.12 | S833BR-560K-M1 (F01235) | .16 | 1384 | I | SF833BR-560K-B5-M1 (F01449) |
| | | 2745 | 0.23 | S843BR-560K-M1 (F01280) | .16 | 1988 | I | SF843BR-560K-B5-M1 (F01510) |
| | | 5296 | 0.42 | S853BR-560K-M1 (F01326) | .33 .25 .16 | 4201 3151 2100 | I II III | SF853BR-560K-B5-M1 (F01578) |
| | | 7200 | 0.55 | S863BR-560K-M1 (F01371) | .50 .33 .25 | 6543 4362 3272 | I II III | SF863BR-560K-B5-M1 (F01646) |
| 2.2 | 800 | 1274 | 0.08 | S833BR-800K-M1 (F01236) | -- | -- | -- | -- |
| | | 2591 | 0.16 | S843BR-800K-M1 (F01281) | .16 | 2591 | I | SF843BR-800K-B5-M1 (F01511) |
| | | 5308 | 0.31 | S853BR-800K-M1 (F01327) | .25 .16 | 4279 2852 | I II | SF853BR-800K-B5-M1 (F01579) |
| | | 7734 | 0.43 | S863BR-800K-M1 (F01372) | .33 .25 .16 | 5993 4495 2997 | I II III | SF863BR-800K-B5-M1 (F01647) |
| 1.9 | 900 | 1247 | 0.07 | S833BR-900K-M1 (F01237) | -- | -- | -- | -- |
| | | 2494 | 0.14 | S843BR-900K-M1 (F01282) | .16 | 2494 | I | SF843BR-900K-B5-M1 (F01512) |
| | | 5099 | 0.27 | S853BR-900K-M1 (F01328) | .25 .16 | 4719 3146 | I II | SF853BR-900K-B5-M1 (F01580) |
| | | 7659 | 0.38 | S863BR-900K-M1 (F01373) | .33 .25 .16 | 6715 5036 3358 | I II III | SF863BR-900K-B5-M1 (F01648) |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 222-231.
** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 204.
† For Base / Projecting Shaft / Output Flange see How to Order Page 201.
□ Indicates Triple Reduction



800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832BR-8K | 218 | 689 | 2.65 | 181 | 717 | 2.30 | 145 | 751 | 1.95 |
| 842BR-8K | 218 | 1100 | 4.39 | 181 | 1152 | 3.81 | 145 | 1209 | 3.23 |
| 852BR-8K | 218 | 1678 | 6.66 | 181 | 1829 | 6.00 | 145 | 1991 | 5.28 |
| 862BR-8K | 218 | 2910 | 11.40 | 181 | 3292 | 10.20 | 145 | 3607 | 8.98 |
| 832BR-11K | 159 | 742 | 2.14 | 131 | 777 | 1.86 | 105 | 820 | 1.58 |
| 842BR-11K | 159 | 1194 | 3.57 | 131 | 1258 | 3.10 | 105 | 1316 | 2.63 |
| 852BR-11K | 159 | 1929 | 5.52 | 131 | 2090 | 4.95 | 105 | 2279 | 4.33 |
| 862BR-11K | 159 | 3479 | 9.38 | 131 | 3781 | 8.39 | 105 | 4112 | 7.34 |
| 832BR-12K | 145 | 787 | 1.95 | 120 | 816 | 1.70 | 96 | 865 | 1.44 |
| 842BR-12K | 145 | 1264 | 3.25 | 120 | 1324 | 2.83 | 96 | 1382 | 2.39 |
| 852BR-12K | 145 | 2010 | 5.22 | 120 | 2165 | 4.67 | 96 | 2351 | 4.09 |
| 862BR-12K | 145 | 3646 | 8.77 | 120 | 3952 | 7.84 | 96 | 4292 | 6.85 |
| 832BR-14K | 125 | 790 | 1.79 | 103 | 831 | 1.56 | 82 | 870 | 1.32 |
| 842BR-14K | 125 | 1288 | 2.99 | 103 | 1344 | 2.60 | 82 | 1400 | 2.19 |
| 852BR-14K | 125 | 2060 | 4.85 | 103 | 2212 | 4.33 | 82 | 2398 | 3.79 |
| 862BR-14K | 125 | 3827 | 8.20 | 103 | 4118 | 7.32 | 82 | 4472 | 6.38 |
| 832BR-16K | 109 | 737 | 1.70 | 90 | 768 | 1.49 | 72 | 808 | 1.27 |
| 842BR-16K | 109 | 1218 | 2.72 | 90 | 1273 | 2.38 | 72 | 1343 | 2.03 |
| 852BR-16K | 109 | 2710 | 5.92 | 90 | 2922 | 5.33 | 72 | 3162 | 4.68 |
| 862BR-16K | 109 | 4191 | 9.03 | 90 | 4583 | 8.09 | 72 | 4990 | 7.10 |
| 832BR-18K | 97 | 864 | 1.50 | 80 | 898 | 1.30 | 64 | 944 | 1.10 |
| 842BR-18K | 97 | 1388 | 2.50 | 80 | 1445 | 2.17 | 64 | 1512 | 1.83 |
| 852BR-18K | 97 | 2162 | 4.21 | 80 | 2319 | 3.75 | 64 | 2497 | 3.27 |
| 862BR-18K | 97 | 4208 | 7.10 | 80 | 4502 | 6.33 | 64 | 4882 | 5.51 |
| 832BR-20K | 87 | 860 | 1.43 | 72 | 895 | 1.24 | 58 | 941 | 1.05 |
| 842BR-20K | 87 | 1391 | 2.37 | 72 | 1450 | 2.06 | 58 | 1514 | 1.74 |
| 852BR-20K | 87 | 2345 | 3.90 | 72 | 2492 | 3.47 | 58 | 2688 | 3.02 |
| 862BR-20K | 87 | 4400 | 6.58 | 72 | 4698 | 5.86 | 58 | 5077 | 5.10 |
| 832BR-22K | 79 | 804 | 1.39 | 65 | 826 | 1.22 | 52 | 887 | 1.04 |
| 842BR-22K | 79 | 1321 | 2.23 | 65 | 1383 | 1.95 | 52 | 1453 | 1.66 |
| 852BR-22K | 79 | 3086 | 4.90 | 65 | 3265 | 4.34 | 52 | 3443 | 3.72 |
| 862BR-22K | 79 | 4784 | 7.41 | 65 | 5142 | 6.64 | 52 | 5585 | 5.82 |
| 832BR-25K | 70 | 843 | 1.28 | 58 | 883 | 1.12 | 46 | 929 | 0.95 |
| 842BR-25K | 70 | 1389 | 2.04 | 58 | 1464 | 1.79 | 46 | 1328 | 1.52 |
| 852BR-25K | 70 | 3177 | 4.62 | 58 | 3339 | 4.06 | 46 | 3516 | 3.47 |
| 862BR-25K | 70 | 5022 | 6.94 | 58 | 5435 | 6.21 | 46 | 5873 | 5.45 |
| 832BR-28K | 62 | 862 | 1.17 | 51 | 891 | 1.03 | 41 | 943 | 0.87 |
| 842BR-28K | 62 | 1363 | 1.88 | 51 | 1430 | 1.65 | 41 | 1491 | 1.39 |
| 852BR-28K | 62 | 3200 | 4.24 | 51 | 3339 | 3.72 | 41 | 3496 | 3.17 |
| 862BR-28K | 62 | 5290 | 6.49 | 51 | 5359 | 5.81 | 41 | 6043 | 5.06 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.

800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832BR-8K | 86 | 799 | 1.25 | 12 | 1056 | .25 | 24 | 8.591 |
| 842BR-8K | 86 | 1296 | 2.06 | 12 | 1403 | .34 | 32 | 8.182 |
| 852BR-8K | 86 | 2232 | 3.52 | 12 | 2683 | .63 | 39 | 8.043 |
| 862BR-8K | 86 | 4013 | 6.01 | 12 | 5265 | 1.18 | 70 | 8.232 |
| 832BR-11K | 63 | 879 | 1.02 | 9.1 | 1200 | .21 | 24 | 11.605 |
| 842BR-11K | 63 | 1388 | 1.67 | 9.1 | 1541 | .28 | 32 | 11.053 |
| 852BR-11K | 63 | 2496 | 2.86 | 9.1 | 3511 | .61 | 39 | 11.282 |
| 862BR-11K | 63 | 4563 | 4.90 | 9.1 | 6820 | 1.10 | 70 | 11.573 |
| 832BR-12K | 57 | 928 | 0.93 | 8.3 | 1310 | .20 | 24 | 13.500 |
| 842BR-12K | 57 | 1470 | 1.53 | 8.3 | 1580 | .25 | 32 | 12.857 |
| 852BR-12K | 57 | 2598 | 2.72 | 8.3 | 3491 | .55 | 39 | 12.432 |
| 862BR-12K | 57 | 4739 | 4.55 | 8.3 | 7019 | 1.01 | 70 | 12.972 |
| 832BR-14K | 49 | 942 | 0.85 | 7.1 | 1306 | .18 | 24 | 14.954 |
| 842BR-14K | 49 | 1426 | 1.39 | 7.1 | 1610 | .23 | 32 | 14.242 |
| 852BR-14K | 49 | 2627 | 2.50 | 7.1 | 3388 | .49 | 39 | 13.714 |
| 862BR-14K | 49 | 4916 | 4.22 | 7.1 | 7254 | .93 | 70 | 14.560 |
| 832BR-16K | 43 | 865 | 0.82 | 6.2 | 1225 | .18 | 24 | 16.364 |
| 842BR-16K | 43 | 1437 | 1.31 | 6.2 | 1866 | .27 | 32 | 16.364 |
| 852BR-16K | 43 | 3408 | 3.04 | 6.2 | 4329 | .61 | 39 | 16.087 |
| 862BR-16K | 43 | 5625 | 4.82 | 6.2 | 7183 | .98 | 70 | 15.932 |
| 832BR-18K | 38 | 997 | 0.70 | 5.5 | 1419 | .15 | 24 | 19.500 |
| 842BR-18K | 38 | 1606 | 1.17 | 5.5 | 1622 | .18 | 32 | 18.571 |
| 852BR-18K | 38 | 2740 | 2.16 | 5.5 | 3174 | .38 | 39 | 16.774 |
| 862BR-18K | 38 | 5375 | 3.65 | 5.5 | 7537 | .77 | 70 | 18.490 |
| 832BR-20K | 34 | 996 | 0.67 | 5.0 | 1382 | .14 | 24 | 20.610 |
| 842BR-20K | 34 | 1619 | 1.12 | 5.0 | 1715 | .18 | 32 | 19.630 |
| 852BR-20K | 34 | 2927 | 1.98 | 5.0 | 3325 | .34 | 39 | 19.643 |
| 862BR-20K | 34 | 5542 | 3.35 | 5.0 | 7546 | .68 | 70 | 20.962 |
| 832BR-22K | 31 | 933 | 0.66 | 4.5 | 1268 | .14 | 24 | 22.105 |
| 842BR-22K | 31 | 1539 | 1.06 | 4.5 | 2115 | .23 | 32 | 22.105 |
| 852BR-22K | 31 | 3685 | 2.40 | 4.5 | 4642 | .48 | 39 | 22.564 |
| 862BR-22K | 31 | 6101 | 3.83 | 4.5 | 7423 | .74 | 70 | 22.105 |
| 832BR-25K | 28 | 989 | 0.61 | 4.0 | 1348 | .13 | 24 | 25.714 |
| 842BR-25K | 28 | 1634 | 0.98 | 4.0 | 2212 | .21 | 32 | 25.714 |
| 852BR-25K | 28 | 3702 | 2.25 | 4.0 | 4689 | .44 | 39 | 24.865 |
| 862BR-25K | 28 | 6332 | 3.54 | 4.0 | 7527 | .67 | 70 | 25.106 |
| 832BR-28K | 25 | 1023 | 0.57 | 3.6 | 1379 | .12 | 24 | 28.485 |
| 842BR-28K | 25 | 1630 | 0.90 | 3.6 | 2135 | .19 | 32 | 27.428 |
| 852BR-28K | 25 | 3611 | 2.03 | 3.6 | 4633 | .40 | 39 | 27.428 |
| 862BR-28K | 25 | 6402 | 3.23 | 3.6 | 7566 | .60 | 70 | 28.182 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.



800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832BR-32K | 54 | 971 | 1.00 | 45 | 995 | 0.86 | 36 | 1056 | 0.73 |
| 842BR-32K | 54 | 1560 | 1.66 | 45 | 1618 | 1.44 | 36 | 1702 | 1.22 |
| 852BR-32K | 54 | 2813 | 2.98 | 45 | 2986 | 2.64 | 36 | 3214 | 2.29 |
| 862BR-32K | 54 | 5184 | 4.93 | 45 | 5526 | 4.37 | 36 | 5913 | 3.78 |
| 832BR-36K | 48 | 936 | 0.99 | 40 | 969 | 0.87 | 32 | 1030 | 0.74 |
| 842BR-36K | 48 | 1525 | 1.59 | 40 | 1600 | 1.38 | 32 | 1653 | 1.17 |
| 852BR-36K | 48 | 3262 | 3.59 | 40 | 3397 | 3.14 | 32 | 3553 | 2.67 |
| 862BR-36K | 48 | 5768 | 5.65 | 40 | 6174 | 5.03 | 32 | 6491 | 4.24 |
| 832BR-40K | 43 | 933 | 0.94 | 36 | 972 | 0.82 | 29 | 1015 | 0.70 |
| 842BR-40K | 43 | 1527 | 1.51 | 36 | 1587 | 1.31 | 29 | 1672 | 1.12 |
| 852BR-40K | 43 | 3453 | 3.28 | 36 | 3587 | 2.87 | 29 | 3734 | 2.43 |
| 862BR-40K | 43 | 6045 | 5.25 | 36 | 6292 | 4.58 | 29 | 6569 | 3.87 |
| 832BR-45K | 38 | 1032 | 0.80 | 32 | 1088 | 0.70 | 25 | 1157 | 0.60 |
| 842BR-45K | 38 | 1669 | 1.34 | 32 | 1752 | 1.16 | 25 | 1767 | 0.95 |
| 852BR-45K | 38 | 3165 | 2.37 | 32 | 3308 | 2.06 | 25 | 3297 | 1.65 |
| 862BR-45K | 38 | 5810 | 3.95 | 32 | 6151 | 3.49 | 25 | 6555 | 3.00 |
| 832BR-50K | 35 | 1000 | 0.71 | 29 | 1032 | 0.62 | 23 | 1118 | 0.54 |
| 842BR-50K | 35 | 1612 | 1.19 | 29 | 1639 | 1.01 | 23 | 1618 | 0.81 |
| 852BR-50K | 35 | 3248 | 2.24 | 29 | 3427 | 1.98 | 23 | 3492 | 1.63 |
| 862BR-50K | 35 | 5930 | 3.79 | 29 | 6278 | 3.34 | 23 | 6696 | 2.87 |
| 832BR-56K | 31 | 1033 | 0.74 | 25 | 1050 | 0.64 | 20 | 1125 | 0.55 |
| 842BR-56K | 31 | 1670 | 1.18 | 25 | 1733 | 1.03 | 20 | 1806 | 0.87 |
| 852BR-56K | 31 | 3820 | 2.63 | 25 | 3951 | 2.28 | 20 | 4129 | 1.93 |
| 862BR-56K | 31 | 6500 | 4.20 | 25 | 6718 | 3.65 | 20 | 6992 | 3.08 |
| 832BR-63K | 27 | 1040 | 0.67 | 23 | 1088 | 0.59 | 18 | 1151 | 0.50 |
| 842BR-63K | 27 | 1716 | 1.07 | 23 | 1787 | 0.94 | 18 | 1898 | 0.80 |
| 852BR-63K | 27 | 3899 | 2.39 | 23 | 4050 | 2.08 | 18 | 4193 | 1.75 |
| 862BR-63K | 27 | 6720 | 3.76 | 23 | 6954 | 3.27 | 18 | 7217 | 2.77 |
| 832BR-71K | 24 | 1192 | 0.59 | 20 | 1246 | 0.51 | 16 | 1353 | 0.44 |
| 842BR-71K | 24 | 1739 | 0.88 | 20 | 1704 | 0.73 | 16 | 1799 | 0.58 |
| 852BR-71K | 24 | 3225 | 1.71 | 20 | 3216 | 1.42 | 16 | 3275 | 1.13 |
| 862BR-71K | 24 | 6645 | 2.94 | 20 | 6972 | 2.58 | 16 | 7420 | 2.20 |
| 832BR-80K | 21 | 1250 | 0.54 | 18 | 1296 | 0.47 | 14 | 1368 | 0.40 |
| 842BR-80K | 21 | 1619 | 0.74 | 18 | 1611 | 0.61 | 14 | 1596 | 0.49 |
| 852BR-80K | 21 | 3453 | 1.50 | 18 | 3436 | 1.24 | 14 | 3494 | 0.99 |
| 862BR-80K | 21 | 6783 | 2.77 | 18 | 7143 | 2.42 | 14 | 7483 | 2.05 |
| 832BR-90K | 19 | 1187 | 0.57 | 16 | 1243 | 0.50 | 12 | 1285 | 0.42 |
| 842BR-90K | 19 | 1934 | 0.91 | 16 | 1997 | 0.79 | 12 | 2113 | 0.68 |
| 852BR-90K | 19 | 4178 | 1.82 | 16 | 4294 | 1.57 | 12 | 4455 | 1.33 |
| 862BR-90K | 19 | 7514 | 3.05 | 16 | 7520 | 2.56 | 12 | 7555 | 2.08 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.

800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832BR-32K | 21 | 1129 | .47 | 3.1 | 1360 | .09 | 24 | 33.710 |
| 842BR-32K | 21 | 1761 | .76 | 3.1 | 1692 | .11 | 32 | 32.105 |
| 852BR-32K | 21 | 3496 | 1.50 | 3.1 | 3407 | .22 | 39 | 31.500 |
| 862BR-32K | 21 | 6446 | 2.48 | 3.1 | 7440 | .43 | 70 | 33.480 |
| 832BR-36K | 19 | 1107 | .48 | 2.8 | 1327 | .09 | 24 | 37.143 |
| 842BR-36K | 19 | 1756 | .75 | 2.8 | 2547 | .17 | 32 | 37.143 |
| 852BR-36K | 19 | 3751 | 1.70 | 2.8 | 4745 | .34 | 39 | 33.548 |
| 862BR-36K | 19 | 6469 | 2.57 | 2.8 | 7105 | .45 | 70 | 35.790 |
| 832BR-40K | 17 | 1081 | .45 | 2.5 | 1381 | .09 | 24 | 39.259 |
| 842BR-40K | 17 | 1781 | .72 | 2.5 | 2534 | .16 | 32 | 39.259 |
| 852BR-40K | 17 | 3949 | 1.55 | 2.5 | 4902 | .30 | 39 | 39.286 |
| 862BR-40K | 17 | 6928 | 2.46 | 2.5 | 7518 | .42 | 70 | 40.571 |
| 832BR-45K | 15 | 1312 | .41 | 2.2 | 1360 | .06 | 24 | 45.500 |
| 842BR-45K | 15 | 1821 | .59 | 2.2 | 1639 | .08 | 32 | 43.333 |
| 852BR-45K | 15 | 3346 | 1.01 | 2.2 | 3080 | .14 | 39 | 45.333 |
| 862BR-45K | 15 | 7018 | 2.03 | 2.2 | 7488 | .31 | 70 | 47.316 |
| 832BR-50K | 14 | 1271 | .37 | 2.0 | 1366 | .06 | 24 | 49.500 |
| 842BR-50K | 14 | 1691 | .51 | 2.0 | 1539 | .07 | 32 | 47.143 |
| 852BR-50K | 14 | 3556 | 1.00 | 2.0 | 3349 | .14 | 39 | 49.286 |
| 862BR-50K | 14 | 7481 | 1.93 | 2.0 | 7489 | .29 | 70 | 50.518 |
| 832BR-56K | 12 | 1287 | .38 | 1.8 | 1296 | .06 | 24 | 56.190 |
| 842BR-56K | 12 | 2063 | .60 | 1.8 | 2677 | .12 | 32 | 56.190 |
| 852BR-56K | 12 | 4645 | 1.31 | 1.8 | 5225 | .23 | 39 | 55.454 |
| 862BR-56K | 12 | 7514 | 2.14 | 1.8 | 7402 | .31 | 70 | 55.714 |
| 832BR-63K | 11 | 1296 | .34 | 1.6 | 1481 | .06 | 24 | 64.210 |
| 842BR-63K | 11 | 2161 | .55 | 1.6 | 2760 | .11 | 32 | 64.210 |
| 852BR-63K | 11 | 4765 | 1.20 | 1.6 | 5336 | .21 | 39 | 63.000 |
| 862BR-63K | 11 | 7526 | 1.87 | 1.6 | 7498 | .27 | 70 | 64.800 |
| 832BR-71K | 10 | 1378 | .27 | 1.4 | 1353 | .04 | 24 | 73.500 |
| 842BR-71K | 10 | 1749 | .36 | 1.4 | 1632 | .05 | 32 | 70.000 |
| 852BR-71K | 10 | 3264 | .70 | 1.4 | 3135 | .10 | 39 | 65.454 |
| 862BR-71K | 10 | 7420 | 1.39 | 1.4 | 7454 | .20 | 70 | 73.923 |
| 832BR-80K | 9.0 | 1419 | .25 | 1.2 | 1504 | .04 | 24 | 82.833 |
| 842BR-80K | 9.0 | 1621 | .30 | 1.2 | 1815 | .04 | 32 | 78.889 |
| 852BR-80K | 9.0 | 3573 | .61 | 1.2 | 3498 | .09 | 39 | 82.222 |
| 862BR-80K | 9.0 | 7511 | 1.27 | 1.2 | 7346 | .18 | 70 | 80.944 |
| 832BR-90K | 8.0 | 1360 | .29 | 1.1 | 1360 | .04 | 24 | 86.667 |
| 842BR-90K | 8.0 | 2230 | .46 | 1.1 | 2720 | .08 | 32 | 86.667 |
| 852BR-90K | 8.0 | 4730 | .91 | 1.1 | 5110 | .14 | 39 | 90.667 |
| 862BR-90K | 8.0 | 7520 | 1.36 | 1.1 | 7520 | .20 | 70 | 91.579 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.



800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 832BR-100K | 17 | 1120 | 0.51 | 14 | 1188 | 0.44 | 11 | 1256 | 0.38 |
| 842BR-100K | 17 | 1835 | 0.81 | 14 | 1926 | 0.71 | 11 | 1998 | 0.60 |
| 852BR-100K | 17 | 4225 | 1.71 | 14 | 4365 | 1.47 | 11 | 4552 | 1.25 |
| 862BR-100K | 17 | 7539 | 2.87 | 14 | 7518 | 2.41 | 11 | 7500 | 1.96 |
| 833BR-100K | 17 | 1302 | 0.47 | 14 | 1346 | 0.40 | 11 | 1326 | 0.32 |
| 843BR-100K | 17 | 1700 | 0.63 | 14 | 1667 | 0.52 | 11 | 1656 | 0.42 |
| 853BR-100K | 17 | 3477 | 1.22 | 14 | 3452 | 1.01 | 11 | 3443 | 0.81 |
| 863BR-100K | 17 | 7173 | 2.34 | 14 | 7455 | 2.02 | 11 | 7455 | 1.63 |
| 832BR-112K | 15 | 1360 | 0.44 | 12 | 1342 | 0.36 | 10 | 1351 | 0.29 |
| 842BR-112K | 15 | 1412 | 0.48 | 12 | 1427 | 0.40 | 10 | 1464 | 0.33 |
| 852BR-112K | 15 | 3088 | 0.99 | 12 | 3076 | 0.83 | 10 | 3138 | 0.68 |
| 862BR-112K | 15 | 6594 | 1.97 | 12 | 6533 | 1.63 | 10 | 6533 | 1.30 |
| 833BR-118K | 14 | 1321 | 0.42 | 12 | 1334 | 0.35 | 9 | 1346 | 0.28 |
| 843BR-118K | 14 | 1698 | 0.55 | 12 | 1666 | 0.46 | 9 | 1649 | 0.37 |
| 853BR-118K | 14 | 3436 | 1.07 | 12 | 3446 | 0.88 | 9 | 3369 | 0.71 |
| 863BR-118K | 14 | 7434 | 2.14 | 12 | 7450 | 1.79 | 9 | 7410 | 1.44 |
| 832BR-125K | 14 | 1311 | 0.36 | 11 | 1299 | 0.31 | 9 | 1324 | 0.25 |
| 842BR-125K | 14 | 1248 | 0.36 | 11 | 1237 | 0.31 | 9 | 1261 | 0.25 |
| 852BR-125K | 14 | 2630 | 0.75 | 11 | 2636 | 0.63 | 9 | 2692 | 0.52 |
| 862BR-125K | 14 | 4832 | 1.28 | 11 | 4829 | 1.06 | 9 | 4794 | 0.85 |
| 833BR-132K | 13 | 1217 | 0.42 | 10 | 1300 | 0.37 | 8 | 1340 | 0.31 |
| 843BR-132K | 13 | 1953 | 0.66 | 10 | 2088 | 0.58 | 8 | 2259 | 0.51 |
| 853BR-132K | 13 | 4596 | 1.42 | 10 | 4856 | 1.26 | 8 | 5196 | 1.09 |
| 863BR-132K | 13 | 7410 | 2.21 | 10 | 7520 | 1.87 | 8 | 7520 | 1.52 |
| 832BR-140K | 12 | 1310 | 0.40 | 10 | 1338 | 0.35 | 8 | 1342 | 0.28 |
| 842BR-140K | 12 | 2117 | 0.64 | 10 | 2191 | 0.56 | 8 | 2337 | 0.48 |
| 852BR-140K | 12 | 4143 | 1.30 | 10 | 4321 | 1.13 | 8 | 4460 | 0.95 |
| 862BR-140K | 12 | 7520 | 2.02 | 10 | 7525 | 1.69 | 8 | 7561 | 1.37 |
| 833BR-150K | 11 | 1237 | 0.40 | 9 | 1313 | 0.35 | 7 | 1342 | 0.29 |
| 843BR-150K | 11 | 1580 | 0.63 | 9 | 2151 | 0.56 | 7 | 2516 | 0.49 |
| 853BR-150K | 11 | 4604 | 1.35 | 9 | 4888 | 1.20 | 7 | 5192 | 1.04 |
| 863BR-150K | 11 | 7143 | 1.99 | 9 | 7161 | 1.66 | 7 | 7187 | 1.35 |
| 832BR-160K | 10 | 1364 | 0.37 | 9 | 1372 | 0.32 | 7 | 1382 | 0.26 |
| 842BR-160K | 10 | 2216 | 0.59 | 9 | 2264 | 0.52 | 7 | 2430 | 0.45 |
| 852BR-160K | 10 | 4736 | 1.19 | 9 | 4925 | 1.03 | 7 | 5130 | 0.87 |
| 862BR-160K | 10 | 7504 | 1.86 | 9 | 7489 | 1.56 | 7 | 7508 | 1.26 |
| 833BR-160K | 10 | 1320 | 0.32 | 9 | 1316 | 0.26 | 7 | 1326 | 0.21 |
| 843BR-160K | 10 | 1693 | 0.41 | 9 | 1647 | 0.34 | 7 | 1648 | 0.27 |
| 853BR-160K | 10 | 3406 | 0.79 | 9 | 3368 | 0.66 | 7 | 3394 | 0.53 |
| 863BR-160K | 10 | 7431 | 1.51 | 9 | 7290 | 1.26 | 7 | 7461 | 1.01 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349. Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 201.

For Overhung Load Ratings refer to Page 204.

□ Indicates Triple Reduction

800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 832BR-100K | 6.9 | 1356 | .25 | 1.0 | 1360 | .04 | 24 | 94.286 |
| 842BR-100K | 6.9 | 2260 | .41 | 1.0 | 2496 | .07 | 32 | 94.286 |
| 852BR-100K | 6.9 | 5128 | .85 | 1.0 | 5260 | .13 | 39 | 98.571 |
| 862BR-100K | 6.9 | 7588 | 1.28 | 1.0 | 7520 | .18 | 70 | 97.778 |
| 833BR-100K | 6.9 | 1377 | .20 | 1.0 | 1386 | .03 | 32 | 103.250 |
| 843BR-100K | 6.9 | 1700 | .26 | 1.0 | 1710 | .04 | 40 | 98.333 |
| 853BR-100K | 6.9 | 3597 | .51 | 1.0 | 3283 | .07 | 47 | 100.551 |
| 863BR-100K | 6.9 | 7596 | 1.00 | 1.0 | 7157 | .14 | 83 | 102.668 |
| 832BR-112K | 6.2 | 1391 | .18 | .89 | 1360 | .03 | 24 | 114.333 |
| 842BR-112K | 6.2 | 1766 | .23 | .89 | 1710 | .03 | 32 | 108.889 |
| 852BR-112K | 6.2 | 3170 | .42 | .89 | 3370 | .07 | 39 | 108.889 |
| 862BR-112K | 6.2 | 6592 | .80 | .89 | 6160 | .11 | 70 | 111.370 |
| 833BR-118K | 5.8 | 1356 | .17 | .85 | 1360 | .03 | 32 | 117.987 |
| 843BR-118K | 5.8 | 1656 | .22 | .85 | 1530 | .03 | 40 | 112.368 |
| 853BR-118K | 5.8 | 3385 | .43 | .85 | 3370 | .06 | 47 | 114.903 |
| 863BR-118K | 5.8 | 7505 | .89 | .85 | 7390 | .13 | 83 | 116.637 |
| 832BR-125K | 5.5 | 1405 | .16 | .80 | 1360 | .02 | 24 | 129.937 |
| 842BR-125K | 5.5 | 1338 | .16 | .80 | 1410 | .02 | 32 | 123.750 |
| 852BR-125K | 5.5 | 2835 | .33 | .80 | 2990 | .05 | 39 | 123.750 |
| 862BR-125K | 5.5 | 4870 | .52 | .80 | 4470 | .07 | 70 | 126.583 |
| 833BR-132K | 5.2 | 1430 | .20 | .78 | 1360 | .03 | 32 | 130.000 |
| 843BR-132K | 5.2 | 2638 | .36 | .78 | 2670 | .06 | 40 | 130.000 |
| 853BR-132K | 5.2 | 5260 | .72 | .78 | 5260 | .10 | 47 | 132.932 |
| 863BR-132K | 5.2 | 7520 | .99 | .78 | 7520 | .14 | 83 | 130.000 |
| 832BR-140K | 4.9 | 1360 | .18 | .71 | 1360 | .03 | 24 | 140.000 |
| 842BR-140K | 4.9 | 2739 | .34 | .71 | 2603 | .05 | 32 | 140.000 |
| 852BR-140K | 4.9 | 4897 | .63 | .71 | 4604 | .09 | 39 | 130.909 |
| 862BR-140K | 4.9 | 7520 | .89 | .71 | 7520 | .13 | 70 | 143.077 |
| 833BR-150K | 4.6 | 1378 | .18 | .67 | 1380 | .03 | 32 | 137.407 |
| 843BR-150K | 4.6 | 2659 | .34 | .67 | 2660 | .05 | 40 | 137.407 |
| 853BR-150K | 4.6 | 5192 | .59 | .67 | 5260 | .09 | 47 | 140.507 |
| 863BR-150K | 4.6 | 7674 | .87 | .67 | 7550 | .14 | 83 | 140.774 |
| 832BR-160K | 4.3 | 1407 | .16 | .62 | 1360 | .02 | 24 | 157.778 |
| 842BR-160K | 4.3 | 2770 | .31 | .62 | 2470 | .04 | 32 | 157.778 |
| 852BR-160K | 4.3 | 5200 | .58 | .62 | 5690 | .09 | 39 | 164.444 |
| 862BR-160K | 4.3 | 7515 | .82 | .62 | 7520 | .12 | 70 | 156.667 |
| 833BR-160K | 4.3 | 1362 | .13 | .62 | 1360 | .02 | 32 | 159.250 |
| 843BR-160K | 4.3 | 1719 | .17 | .62 | 1720 | .02 | 40 | 151.667 |
| 853BR-160K | 4.3 | 3400 | .32 | .62 | 3470 | .05 | 47 | 155.089 |
| 863BR-160K | 4.3 | 7500 | .62 | .62 | 7500 | .09 | 83 | 167.859 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.
 □ Indicates Triple Reduction



800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 833BR-180K | 9.7 | 1247 | 0.27 | 8.1 | 1205 | 0.23 | 6.4 | 1205 | 0.18 |
| 843BR-180K | 9.7 | 1554 | 0.35 | 8.1 | 1539 | 0.29 | 6.4 | 1599 | 0.23 |
| 853BR-180K | 9.7 | 3161 | 0.68 | 8.1 | 3154 | 0.56 | 6.4 | 3200 | 0.45 |
| 863BR-180K | 9.7 | 7427 | 1.39 | 8.1 | 7453 | 1.16 | 6.4 | 7455 | 0.93 |
| 833BR-200K | 8.7 | 1346 | 0.31 | 7.2 | 1367 | 0.26 | 5.8 | 1367 | 0.21 |
| 843BR-200K | 8.7 | 2267 | 0.50 | 7.2 | 2393 | 0.45 | 5.8 | 2584 | 0.39 |
| 853BR-200K | 8.7 | 5139 | 1.08 | 7.2 | 5243 | 0.92 | 5.8 | 5248 | 0.75 |
| 863BR-200K | 8.7 | 7443 | 1.49 | 7.2 | 7428 | 1.25 | 5.8 | 7428 | 1.01 |
| 832BR-212K | 8.2 | 1333 | 0.28 | 6.8 | 1324 | 0.23 | 5.5 | 1371 | 0.19 |
| 842BR-212K | 8.2 | 2352 | 0.47 | 6.8 | 2365 | 0.40 | 5.5 | 2421 | 0.33 |
| 852BR-212K | 8.2 | 5021 | 0.97 | 6.8 | 5107 | 0.83 | 5.5 | 5230 | 0.68 |
| 862BR-212K | 8.2 | 7607 | 1.39 | 6.8 | 7586 | 1.17 | 5.5 | 7666 | 0.95 |
| 833BR-225K | 7.8 | 1311 | 0.27 | 6.4 | 1366 | 0.23 | 5.1 | 1319 | 0.18 |
| 843BR-225K | 7.8 | 2346 | 0.46 | 6.4 | 2539 | 0.41 | 5.1 | 2725 | 0.36 |
| 853BR-225K | 7.8 | 5298 | 0.97 | 6.4 | 5291 | 0.82 | 5.1 | 5295 | 0.66 |
| 863BR-225K | 7.8 | 7405 | 1.32 | 6.4 | 7461 | 1.11 | 5.1 | 7506 | 0.90 |
| 832BR-250K | 7.0 | 1382 | 0.25 | 5.8 | 1398 | 0.21 | 4.6 | 1398 | 0.17 |
| 842BR-250K | 7.0 | 2050 | 0.36 | 5.8 | 2041 | 0.31 | 4.6 | 2080 | 0.25 |
| 852BR-250K | 7.0 | 4566 | 0.75 | 5.8 | 4768 | 0.63 | 4.6 | 4800 | 0.52 |
| 862BR-250K | 7.0 | 7676 | 1.25 | 5.8 | 7671 | 1.05 | 4.6 | 7625 | 0.85 |
| 833BR-265K | 6.6 | 1297 | 0.20 | 5.5 | 1342 | 0.16 | 4.4 | 1308 | 0.13 |
| 843BR-265K | 6.6 | 1588 | 0.25 | 5.5 | 1597 | 0.21 | 4.4 | 1629 | 0.17 |
| 853BR-265K | 6.6 | 3351 | 0.49 | 5.5 | 3267 | 0.40 | 4.4 | 3267 | 0.32 |
| 863BR-265K | 6.6 | 6895 | 0.98 | 5.5 | 6850 | 0.82 | 4.4 | 6866 | 0.66 |
| 833BR-280K | 6.2 | 1357 | 0.18 | 5.2 | 1386 | 0.15 | 4.1 | 1360 | 0.12 |
| 843BR-280K | 6.2 | 1590 | 0.23 | 5.2 | 1681 | 0.19 | 4.1 | 1680 | 0.15 |
| 853BR-280K | 6.2 | 3356 | 0.44 | 5.2 | 3313 | 0.36 | 4.1 | 3392 | 0.29 |
| 863BR-280K | 6.2 | 7671 | 0.88 | 5.2 | 7671 | 0.73 | 4.1 | 7710 | 0.59 |
| 833BR-315K | 5.6 | 1311 | 0.20 | 4.6 | 1318 | 0.17 | 3.7 | 1360 | 0.14 |
| 843BR-315K | 5.6 | 2620 | 0.39 | 4.6 | 2770 | 0.34 | 3.7 | 2770 | 0.27 |
| 853BR-315K | 5.6 | 5252 | 0.73 | 4.6 | 5255 | 0.61 | 3.7 | 5309 | 0.50 |
| 863BR-315K | 5.6 | 7490 | 0.94 | 4.6 | 7475 | 0.79 | 3.7 | 7474 | 0.64 |
| 833BR-360K | 4.9 | 1177 | 0.18 | 4.0 | 1269 | 0.15 | 3.2 | 1269 | 0.12 |
| 843BR-360K | 4.9 | 2496 | 0.35 | 4.0 | 2537 | 0.29 | 3.2 | 2537 | 0.23 |
| 853BR-360K | 4.9 | 4862 | 0.63 | 4.0 | 4897 | 0.53 | 3.2 | 4900 | 0.43 |
| 863BR-360K | 4.9 | 7382 | 0.87 | 4.0 | 7509 | 0.73 | 3.2 | 7512 | 0.59 |
| 833BR-400K | 4.4 | 1296 | 0.13 | 3.6 | 1391 | 0.11 | 2.9 | 1391 | 0.09 |
| 843BR-400K | 4.4 | 1647 | 0.16 | 3.6 | 1656 | 0.14 | 2.9 | 1653 | 0.11 |
| 853BR-400K | 4.4 | 3368 | 0.32 | 3.6 | 3215 | 0.26 | 2.9 | 3290 | 0.21 |
| 863BR-400K | 4.4 | 7686 | 0.67 | 3.6 | 7704 | 0.56 | 2.9 | 7718 | 0.44 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 354 & 355.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 201.
 For Overhung Load Ratings refer to Page 204.
 □ Indicates Triple Reduction

800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 833BR-180K | 3.8 | 1205 | .11 | .55 | 1260 | .70 | 32 | 173.250 |
| 843BR-180K | 3.8 | 1600 | .14 | .55 | 1700 | .71 | 40 | 165.000 |
| 853BR-180K | 3.8 | 3400 | .27 | .55 | 3440 | .73 | 47 | 168.723 |
| 863BR-180K | 3.8 | 7500 | .57 | .55 | 7500 | .78 | 83 | 182.494 |
| 833BR-200K | 3.4 | 1360 | .13 | .50 | 1360 | .57 | 32 | 196.667 |
| 843BR-200K | 3.4 | 2620 | .26 | .50 | 2620 | .58 | 40 | 196.667 |
| 853BR-200K | 3.4 | 5555 | .48 | .50 | 5260 | .60 | 47 | 201.103 |
| 863BR-200K | 3.4 | 7520 | .65 | .50 | 7520 | .63 | 83 | 198.712 |
| 832BR-212K | 3.2 | 1432 | .12 | .47 | 1360 | .57 | 24 | 217.778 |
| 842BR-212K | 3.2 | 2548 | .21 | .47 | 2610 | .58 | 32 | 217.778 |
| 852BR-212K | 3.2 | 5602 | .44 | .47 | 5260 | .60 | 39 | 217.778 |
| 862BR-212K | 3.2 | 7700 | .61 | .47 | 7700 | .63 | 70 | 215.555 |
| 833BR-225K | 3.1 | 1355 | .11 | .44 | 1360 | .57 | 32 | 224.737 |
| 843BR-225K | 3.1 | 2880 | .23 | .44 | 2610 | .58 | 40 | 224.737 |
| 853BR-225K | 3.1 | 5554 | .42 | .44 | 5260 | .60 | 47 | 229.806 |
| 863BR-225K | 3.1 | 7520 | .57 | .44 | 7520 | .63 | 83 | 225.750 |
| 832BR-250K | 2.8 | 1360 | .11 | .40 | 1360 | .57 | 24 | 247.500 |
| 842BR-250K | 2.8 | 2206 | .16 | .40 | 2150 | .58 | 32 | 247.500 |
| 852BR-250K | 2.8 | 4800 | .33 | .40 | 4680 | .60 | 39 | 247.500 |
| 862BR-250K | 2.8 | 7770 | .54 | .40 | 7427 | .62 | 70 | 245.000 |
| 833BR-265K | 2.6 | 1335 | .08 | .38 | 1360 | .70 | 32 | 257.250 |
| 843BR-265K | 2.6 | 1589 | .10 | .38 | 1680 | .70 | 40 | 245.000 |
| 853BR-265K | 2.6 | 3387 | .20 | .38 | 3310 | .72 | 47 | 250.526 |
| 863BR-265K | 2.6 | 7080 | .41 | .38 | 7260 | .76 | 83 | 242.367 |
| 833BR-280K | 2.5 | 1360 | .07 | .36 | 1360 | .01 | 32 | 289.917 |
| 843BR-280K | 2.5 | 1712 | .09 | .36 | 1670 | .01 | 40 | 276.111 |
| 853BR-280K | 2.5 | 3382 | .18 | .36 | 3310 | .02 | 47 | 282.339 |
| 863BR-280K | 2.5 | 7710 | .36 | .36 | 7250 | .05 | 83 | 304.445 |
| 833BR-315K | 2.2 | 1446 | .09 | .32 | 1360 | .01 | 32 | 303.333 |
| 843BR-315K | 2.2 | 2782 | .17 | .32 | 2580 | .02 | 40 | 303.333 |
| 853BR-315K | 2.2 | 5445 | .31 | .32 | 5220 | .05 | 47 | 310.175 |
| 863BR-315K | 2.2 | 7520 | .41 | .32 | 7520 | .06 | 83 | 324.889 |
| 833BR-360K | 1.9 | 1270 | .07 | .28 | 1360 | .01 | 32 | 330.000 |
| 843BR-360K | 1.9 | 2537 | .14 | .28 | 2570 | .02 | 40 | 330.000 |
| 853BR-360K | 1.9 | 5079 | .27 | .28 | 5190 | .04 | 47 | 337.444 |
| 863BR-360K | 1.9 | 7520 | .38 | .28 | 7520 | .05 | 83 | 353.214 |
| 833BR-400K | 1.7 | 1391 | .05 | .25 | 1360 | .01 | 32 | 400.167 |
| 843BR-400K | 1.7 | 1730 | .07 | .25 | 1660 | .01 | 40 | 381.111 |
| 853BR-400K | 1.7 | 3378 | .13 | .25 | 3290 | .02 | 47 | 389.708 |
| 863BR-400K | 1.7 | 7798 | .27 | .25 | 7718 | .04 | 83 | 403.190 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 354 & 355.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 201.

For Overhung Load Ratings refer to Page 204.

□ Indicates Triple Reduction



800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 1750, 1450 and 1160 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | | | |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|
| | 1750 RPM | | | 1450 RPM | | | 1160 RPM | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) |
| 833BR-450K | 3.9 | 1279 | 0.11 | 3.2 | 1263 | 0.09 | 2.6 | 1403 | 0.08 |
| 843BR-450K | 3.9 | 1572 | 0.14 | 3.2 | 1627 | 0.12 | 2.6 | 1671 | 0.10 |
| 853BR-450K | 3.9 | 3303 | 0.28 | 3.2 | 3276 | 0.23 | 2.6 | 3380 | 0.19 |
| 863BR-450K | 3.9 | 7692 | 0.59 | 3.2 | 7612 | 0.49 | 2.6 | 7612 | 0.39 |
| 833BR-500K | 3.5 | 1354 | 0.13 | 2.9 | 1359 | 0.11 | 2.3 | 1390 | 0.09 |
| 843BR-500K | 3.5 | 2647 | 0.25 | 2.9 | 2684 | 0.21 | 2.3 | 2690 | 0.17 |
| 853BR-500K | 3.5 | 5146 | 0.46 | 2.9 | 5266 | 0.39 | 2.3 | 5266 | 0.31 |
| 863BR-500K | 3.5 | 6913 | 0.62 | 2.9 | 6892 | 0.52 | 2.3 | 6892 | 0.42 |
| 833BR-560K | 3.1 | 1384 | 0.12 | 2.6 | 1392 | 0.10 | 2.0 | 1392 | 0.08 |
| 843BR-560K | 3.1 | 2745 | 0.23 | 2.6 | 2691 | 0.19 | 2.0 | 2691 | 0.15 |
| 853BR-560K | 3.1 | 5296 | 0.42 | 2.6 | 5240 | 0.35 | 2.0 | 5240 | 0.28 |
| 863BR-560K | 3.1 | 7200 | 0.55 | 2.6 | 7156 | 0.46 | 2.0 | 7200 | 0.37 |
| 833BR-800K | 2.2 | 1274 | 0.08 | 1.8 | 1322 | 0.07 | 1.4 | 1416 | 0.06 |
| 843BR-800K | 2.2 | 2591 | 0.16 | 1.8 | 2737 | 0.14 | 1.4 | 2740 | 0.11 |
| 853BR-800K | 2.2 | 5308 | 0.31 | 1.8 | 5373 | 0.26 | 1.4 | 5376 | 0.21 |
| 863BR-800K | 2.2 | 7734 | 0.43 | 1.8 | 7734 | 0.36 | 1.4 | 7774 | 0.29 |
| 833BR-900K | 1.9 | 1247 | 0.07 | 1.6 | 1490 | 0.06 | 1.3 | 1490 | 0.05 |
| 843BR-900K | 1.9 | 2494 | 0.14 | 1.6 | 2621 | 0.12 | 1.3 | 2630 | 0.10 |
| 853BR-900K | 1.9 | 5099 | 0.27 | 1.6 | 5402 | 0.23 | 1.3 | 5420 | 0.18 |
| 863BR-900K | 1.9 | 7659 | 0.38 | 1.6 | 7771 | 0.32 | 1.3 | 7775 | 0.26 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 201.

For Overhung Load Ratings refer to Page 204.

□ Indicates Triple Reduction

H

800 Series Right Angle Helical Worm Ratings

Non-Flanged; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number | Input Speed | | | | | | Approx. Wt. (LB) | Actual Gear Ratio |
|----------------|--------------------|-----------------------------|-----------------|--------------------|-----------------------------|-----------------|------------------|-------------------|
| | 690 RPM | | | 100 RPM | | | | |
| | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | | |
| 833BR-450K | 1.5 | 1454 | .05 | .22 | 1454 | .01 | 32 | 454.781 |
| 843BR-450K | 1.5 | 1662 | .06 | .22 | 1660 | .01 | 40 | 433.125 |
| 853BR-450K | 1.5 | 3360 | .11 | .22 | 3280 | .02 | 47 | 442.895 |
| 863BR-450K | 1.5 | 7612 | .24 | .22 | 7190 | .03 | 83 | 458.217 |
| 833BR-500K | 1.4 | 1390 | .05 | .20 | 1360 | .01 | 32 | 490.000 |
| 843BR-500K | 1.4 | 2650 | .10 | .20 | 2540 | .01 | 40 | 490.000 |
| 853BR-500K | 1.4 | 5270 | .20 | .20 | 5410 | .03 | 47 | 501.053 |
| 863BR-500K | 1.4 | 7288 | .27 | .20 | 7520 | .04 | 83 | 469.091 |
| 833BR-560K | 1.2 | 1412 | .05 | .18 | 1360 | .01 | 32 | 552.222 |
| 843BR-560K | 1.2 | 2700 | .09 | .18 | 2530 | .01 | 40 | 552.222 |
| 853BR-560K | 1.2 | 5260 | .18 | .18 | 5130 | .02 | 47 | 564.678 |
| 863BR-560K | 1.2 | 7520 | .24 | .18 | 7520 | .03 | 83 | 589.250 |
| 833BR-800K | .86 | 1453 | .03 | .12 | 1360 | .01 | 32 | 762.222 |
| 843BR-800K | .86 | 2778 | .07 | .12 | 2510 | .01 | 40 | 762.222 |
| 853BR-800K | .86 | 5460 | .13 | .12 | 5080 | .02 | 47 | 779.415 |
| 863BR-800K | .86 | 7734 | .18 | .12 | 7520 | .03 | 83 | 780.370 |
| 833BR-900K | .78 | 1490 | .03 | .11 | 1360 | .00 | 32 | 866.250 |
| 843BR-900K | .78 | 2630 | .06 | .11 | 2500 | .01 | 40 | 866.250 |
| 853BR-900K | .78 | 5450 | .11 | .11 | 5060 | .02 | 47 | 885.789 |
| 863BR-900K | .78 | 7775 | .16 | .11 | 7520 | .02 | 83 | 886.875 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348 & 349.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 201.

For Overhung Load Ratings refer to Page 204.

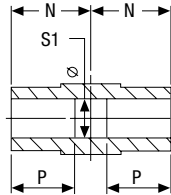
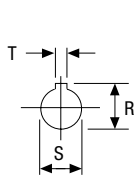
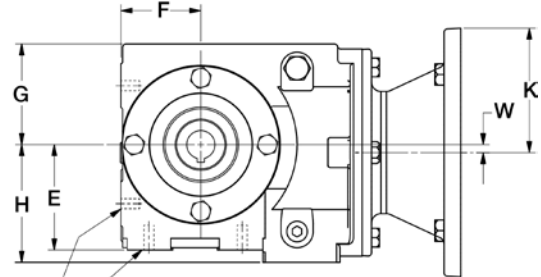
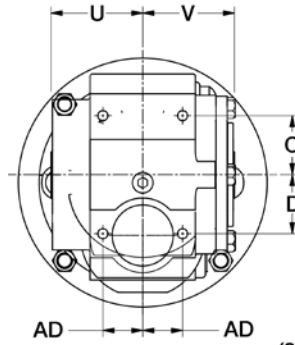
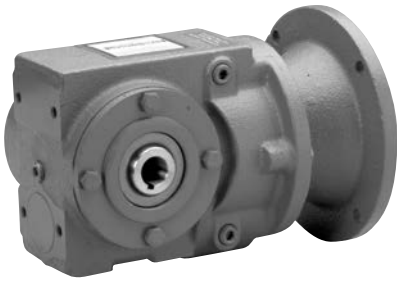
☐ Indicates Triple Reduction



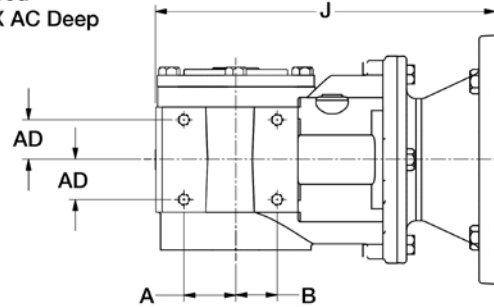
800 Series Right Angle Helical Worm Gear Drives

SF800BR Series; NEMA C-Face Input; Double Reduction

Basic Model



(8) Holes Tapped AB X AC Deep



| Size | A | B | C | D | E | F | G | H | J | | | | K | | | |
|---------|------|------|------|------|------|------|------|------|---------------|-------|-------|-------|---------------|-------|-------|-------|
| | | | | | | | | | NEMA Mounting | | | | NEMA Mounting | | | |
| | | | | | | | | | 56C | 140TC | 180TC | 210TC | 56C | 140TC | 180TC | 210TC |
| | | | | | | | | | B5 | B7 | B9 | B11 | B5 | B7 | B9 | B11 |
| SF832BR | 1.38 | 1.10 | 1.57 | 1.57 | 2.80 | 2.13 | 2.68 | 3.13 | 9.04 | 9.04 | — | — | 3.31 | 3.31 | — | — |
| SF842BR | 1.38 | 1.77 | 2.09 | 2.56 | 3.39 | 2.52 | 2.95 | 3.66 | 9.79 | 9.79 | 10.61 | — | 3.31 | 3.31 | 4.63 | — |
| SF852BR | 1.77 | 2.17 | 2.56 | 3.03 | 3.78 | 2.68 | 3.46 | 4.36 | 10.57 | 10.57 | 11.40 | — | 3.31 | 3.31 | 4.63 | — |
| SF862BR | 2.20 | 2.60 | 2.99 | 3.78 | 4.72 | 3.54 | 3.94 | 5.49 | 12.29 | 12.29 | 14.65 | 14.65 | 3.31 | 3.31 | 4.63 | 4.63 |

| Size | N | P | R | S +.001 -.000 | S1 | T | U | V | W | AB | AC | AD |
|---------|------|------|------|---------------------|------|-----|------|------|-----|---------|-----|------|
| SF832BR | 2.44 | 1.25 | .84 | .7500 | .76 | .19 | 2.76 | 2.24 | .21 | 5/16-18 | .50 | 1.06 |
| SF842BR | 2.56 | 1.25 | 1.37 | 1.250 | 1.26 | .25 | 2.93 | 2.56 | .59 | 3/8-16 | .56 | 1.10 |
| SF852BR | 2.76 | 1.38 | 1.53 | 1.375* | 1.39 | .31 | 2.76 | 2.76 | .53 | 3/8-16 | .75 | 1.34 |
| SF862BR | 3.54 | 3.00 | 1.67 | 1.500* | 1.51 | .38 | 3.54 | 3.17 | .67 | 7/16-14 | .75 | 1.57 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

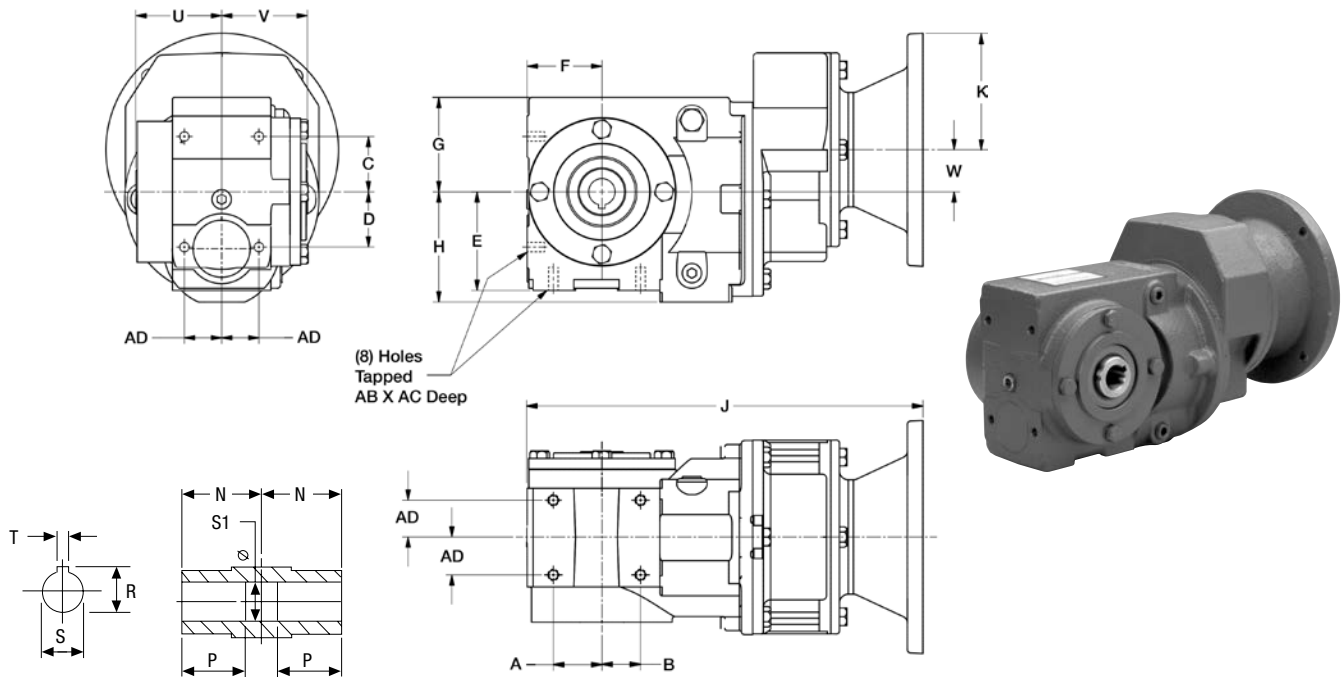
Option kit dimensions on pages 236 & 237.

* Maximum bore size is 1.625, contact factory for availability.

800 Series Right Angle Helical Worm Gear Drives

SF800BR Series; NEMA C-Face Input; Triple Reduction

Basic Model



| Size | A | B | C | D | E | F | G | H | J | | K | |
|---------|------|------|------|------|------|------|------|------|---------------|-------|---------------|-------|
| | | | | | | | | | NEMA Mounting | | NEMA Mounting | |
| | | | | | | | | | 56C | 140TC | 56C | 140TC |
| | | | | | | | | | B5 | B7 | B5 | B7 |
| SF833BR | 1.38 | 1.10 | 1.57 | 1.57 | 2.80 | 2.13 | 2.68 | 3.13 | 11.24 | 11.24 | 3.31 | 3.31 |
| SF843BR | 1.38 | 1.77 | 2.09 | 2.56 | 3.39 | 2.52 | 2.95 | 3.66 | 12.00 | 12.00 | 3.31 | 3.31 |
| SF853BR | 1.77 | 2.17 | 2.56 | 3.03 | 3.78 | 2.68 | 3.46 | 4.41 | 13.17 | 13.17 | 3.31 | 3.31 |
| SF863BR | 2.20 | 2.60 | 2.99 | 3.78 | 4.72 | 3.54 | 3.94 | 5.49 | 16.00 | 16.00 | 3.31 | 3.31 |

| Size | N | P | R | S +.001 -.000 | S1 | T | U | V | W | AB | AC | AD |
|---------|------|------|------|---------------------|------|-----|------|------|------|---------|-----|------|
| SF833BR | 2.44 | 1.25 | .84 | .7500 | .76 | .19 | 2.76 | 2.24 | 1.20 | 5/16-18 | .50 | 1.06 |
| SF843BR | 2.56 | 1.25 | 1.37 | 1.250 | 1.26 | .25 | 2.93 | 2.56 | .81 | 3/8-16 | .56 | 1.10 |
| SF853BR | 2.76 | 1.35 | 1.47 | 1.375* | 1.39 | .31 | 2.76 | 2.76 | .89 | 3/8-16 | .75 | 1.34 |
| SF863BR | 3.54 | 3.00 | 1.62 | 1.500* | 1.51 | .38 | 3.54 | 3.17 | 1.16 | 7/16-14 | .75 | 1.57 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

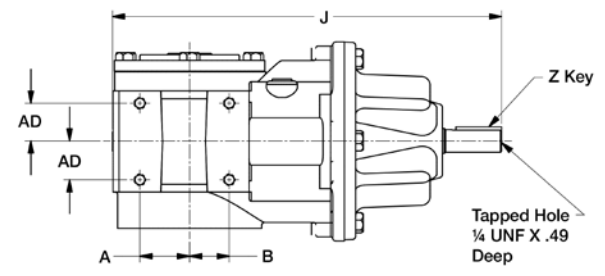
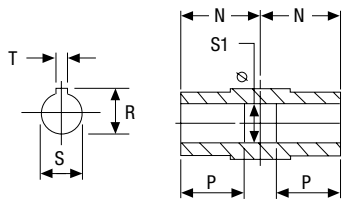
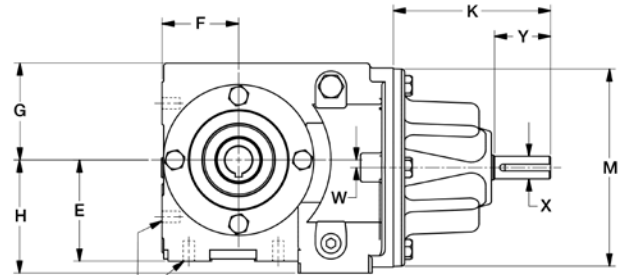
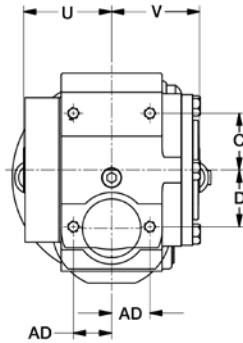
Option kit dimensions on pages 236 & 237.

* Maximum bore size is 1.625, contact factory for availability.

800 Series Right Angle Helical Worm Gear Drives

S800BR Series; Non-Flanged; Double Reduction

Basic Model



| Size | A | B | C | D | E | F | G | H | J | K | M | N | P |
|--------|------|------|------|------|------|------|------|------|-------|------|------|------|------|
| S832BR | 1.38 | 1.10 | 1.57 | 1.57 | 2.80 | 2.13 | 2.68 | 3.13 | 10.79 | 4.37 | 5.51 | 2.44 | 1.25 |
| S842BR | 1.38 | 1.77 | 2.09 | 2.56 | 3.39 | 2.52 | 2.95 | 3.66 | 11.54 | 4.37 | 5.51 | 2.56 | 1.25 |
| S852BR | 1.77 | 2.17 | 2.56 | 3.03 | 3.78 | 2.68 | 3.46 | 4.36 | 12.32 | 4.37 | 5.51 | 2.76 | 1.38 |
| S862BR | 2.20 | 2.60 | 2.99 | 3.78 | 4.72 | 3.54 | 3.94 | 5.49 | 14.57 | 4.37 | 7.09 | 3.54 | 3.00 |

| Size | R | S +.001 -.000 | S1 | T | U | V | W | X +.000 -.001 | Y | Z - KEY | | AB | AC | AD |
|--------|------|---------------------|------|-----|------|------|-----|---------------------|------|---------|-------|---------|-----|------|
| | | | | | | | | | | Sq. | Lgth. | | | |
| S832BR | .84 | .7500 | .76 | .19 | 2.76 | 2.24 | .21 | .625 | 1.57 | .19 | 1.28 | 5/16-18 | .56 | 1.06 |
| S842BR | 1.37 | 1.250 | 1.26 | .25 | 2.93 | 2.56 | .59 | .625 | 1.57 | .19 | 1.28 | 3/8-16 | .56 | 1.10 |
| S852BR | 1.53 | 1.375* | 1.39 | .31 | 2.76 | 2.76 | .53 | .625 | 1.57 | .19 | 1.28 | 3/8-16 | .75 | 1.34 |
| S862BR | 1.67 | 1.500* | 1.51 | .38 | 3.54 | 3.17 | .67 | .750 | 1.57 | .19 | 1.28 | 7/16-14 | .75 | 1.57 |

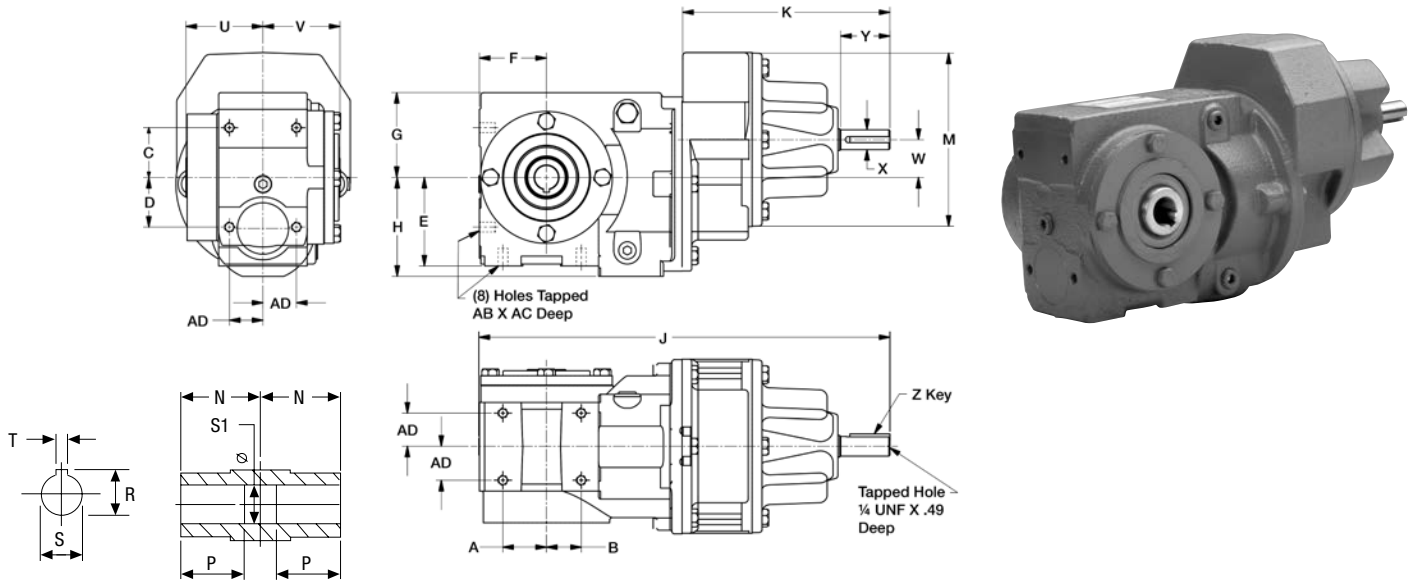
Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.
 Option kit dimensions on pages 236 & 237.
 * Maximum bore size is 1.625, contact factory for availability.



800 Series Right Angle Helical Worm Gear Drives

S800BR Series; Non-Flanged; Triple Reduction

Basic Model



| Size | A | B | C | D | E | F | G | H | J | K | M | N | P |
|--------|------|------|------|------|------|------|------|------|-------|------|------|------|------|
| S833BR | 1.38 | 1.10 | 1.57 | 1.57 | 2.80 | 2.13 | 2.68 | 3.13 | 12.99 | 6.57 | 5.51 | 2.44 | 1.25 |
| S843BR | 1.38 | 1.77 | 2.09 | 2.56 | 3.39 | 2.52 | 2.95 | 3.66 | 13.74 | 6.57 | 5.51 | 2.56 | 1.25 |
| S853BR | 1.77 | 2.17 | 2.56 | 3.03 | 3.78 | 2.68 | 3.46 | 4.36 | 14.53 | 6.57 | 5.51 | 2.76 | 1.38 |
| S863BR | 2.20 | 2.60 | 2.99 | 3.78 | 4.72 | 3.54 | 3.94 | 5.49 | 17.17 | 6.97 | 5.51 | 3.54 | 2.00 |

| Size | R | S +.001 -.000 | S1 | T | U | V | W | X +.000 -.001 | Y | Z - KEY | | AB | AC | AD |
|--------|------|---------------------|------|-----|------|------|------|---------------------|------|---------|-------|---------|-----|------|
| | | | | | | | | | | Sq. | Lgth. | | | |
| S833BR | .84 | .7500 | .76 | .19 | 2.76 | 2.24 | 1.20 | .625 | 1.57 | .19 | 1.28 | 5/16-18 | .59 | 1.06 |
| S843BR | 1.37 | 1.250 | 1.26 | .25 | 2.93 | 2.56 | .89 | .625 | 1.57 | .19 | 1.28 | 3/8-16 | .79 | 1.10 |
| S853BR | 1.53 | 1.375* | 1.39 | .31 | 2.76 | 2.76 | .89 | .625 | 1.57 | .19 | 1.28 | 3/8-16 | .79 | 1.34 |
| S863BR | 1.67 | 1.500* | 1.51 | .38 | 3.54 | 3.17 | 1.16 | .625 | 1.57 | .19 | 1.28 | 7/16-14 | .79 | 1.57 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction.

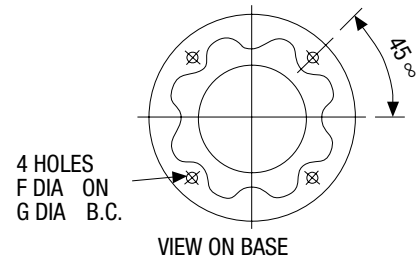
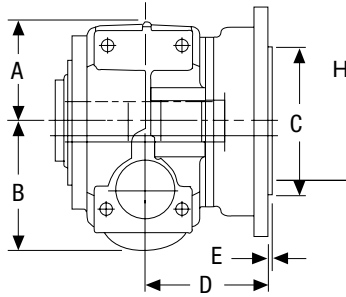
Option kit dimensions on pages 236 & 237.

* Maximum bore size is 1.625, contact factory for availability.

800 Series Right Angle Helical Worm Gear Drives

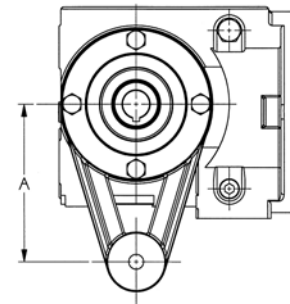
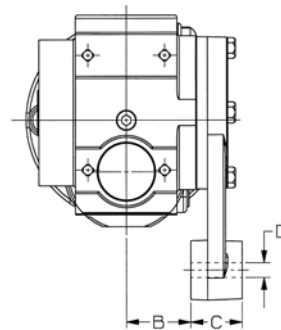
Accessories

Output Flange Kits



| Size | A | B | C | D | E | F | G | H | Catalog No. (Item Code) |
|-------|------|------|--------|------|-----|-----|------|------|-------------------------|
| 832BR | 2.66 | 3.13 | 4.3312 | 2.95 | .16 | .35 | 5.12 | 6.30 | XS830BR-11VK (59611) |
| 833BR | | | 4.3304 | | | | | | |
| 842BR | 2.95 | 3.36 | 4.3312 | 3.39 | .16 | .35 | 5.12 | 6.30 | XS840BR-11VK (59523) |
| 843BR | | | 4.3304 | | | | | | |
| 852BR | 3.43 | 4.41 | 5.1187 | 4.21 | .14 | .43 | 6.50 | 7.88 | XS850BR-11VK (59528) |
| 853BR | | | 5.1177 | | | | | | |
| 862BR | 4.04 | 5.49 | 5.1187 | 4.72 | .14 | .43 | 6.50 | 7.88 | XS860BR-11VK (59533) |
| 863BR | | | 5.1177 | | | | | | |

Torque Arm Kits

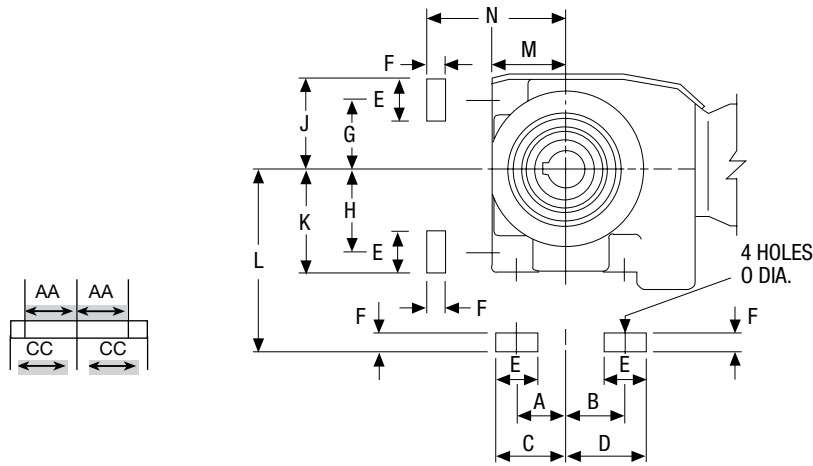


| Size | A | B | C | D | Catalog No. (Item Code) |
|-------|------|------|------|-----|-------------------------|
| 832BR | 4.33 | 1.85 | 1.42 | .41 | XS830BR-76K (59612) |
| 833BR | | | | | |
| 842BR | 5.12 | 2.05 | 1.42 | .41 | XS840BR-76K (59524) |
| 843BR | | | | | |
| 852BR | 6.30 | 2.05 | 1.42 | .41 | XS850BR-76K (59529) |
| 853BR | | | | | |
| 862BR | 7.87 | 2.81 | 1.73 | .65 | XS860BR-76K (59534) |
| 863BR | | | | | |

*Available on carrier side only (left side when facing flange input).

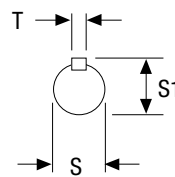
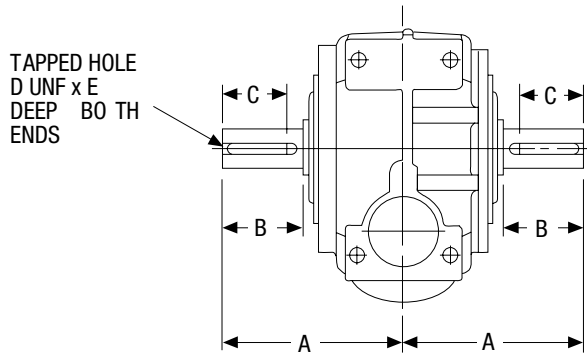
800 Series Right Angle Helical Worm Gear Drives

Accessories Base Kits



| Size | A | B | C | D | E | F | G | H | J | K | L | M | N | O | AA | CC | Catalog No. (Item Code) |
|----------------|------|------|------|------|------|-----|------|------|------|------|------|------|------|-----|------|------|-------------------------|
| 832BR 833BR | 1.38 | 1.10 | 1.85 | 1.61 | .98 | .35 | 1.57 | 1.57 | 2.07 | 2.07 | 3.15 | 2.13 | 2.48 | .35 | 1.77 | 2.17 | XS830BR-11K (59610) |
| 842BR 843BR | 1.38 | 1.77 | 2.09 | 2.44 | 1.38 | .55 | 2.09 | 2.56 | 2.78 | 3.25 | 3.94 | 2.52 | 3.07 | .43 | 1.97 | 2.44 | XS840BR-11K (59522) |
| 852BR 853BR | 1.77 | 2.17 | 2.56 | 2.95 | 1.57 | .63 | 2.56 | 3.03 | 3.35 | 3.82 | 4.41 | 2.68 | 3.31 | .43 | 2.17 | 2.68 | XS850BR-11K (59527) |
| 862BR 863BR | 2.36 | 2.76 | 3.19 | 3.58 | 1.97 | .79 | 3.15 | 3.94 | 3.98 | 4.76 | 5.51 | 3.54 | 4.33 | .55 | 2.56 | 3.15 | XS860BR-11K (59532) |

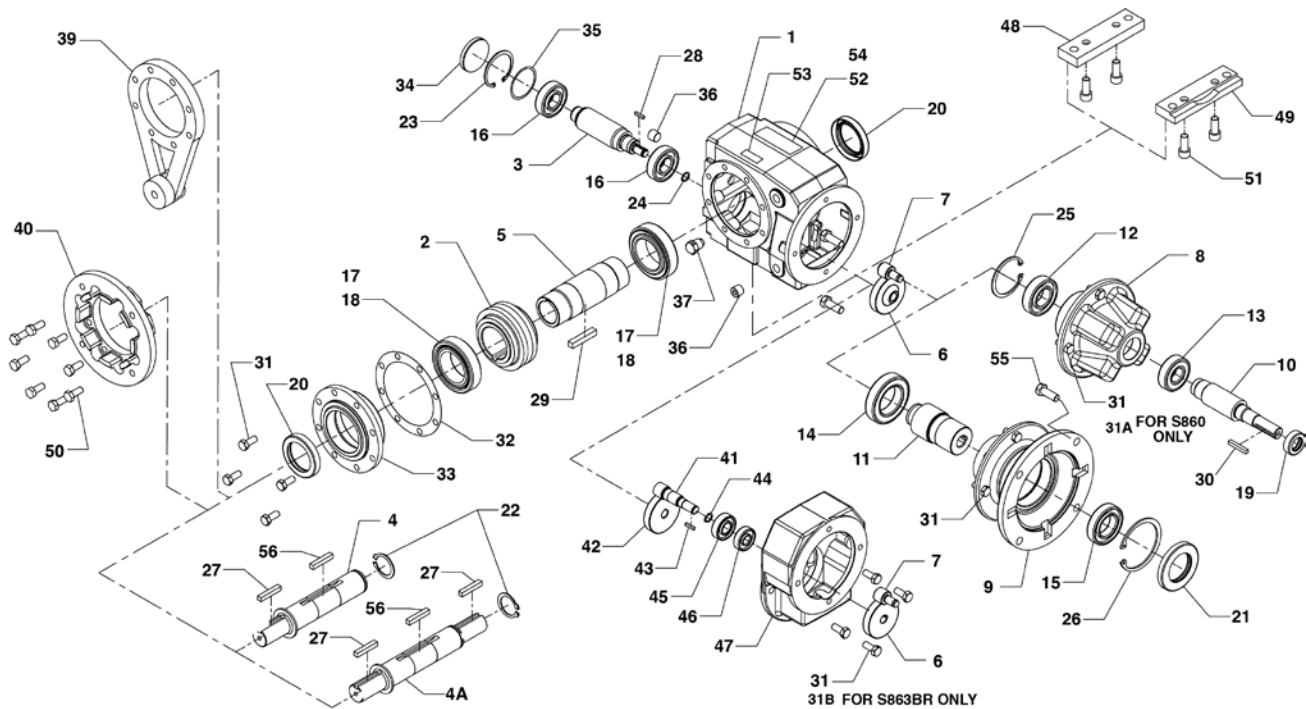
Output Shaft Kits



| Size | A | B | C | D | E | S +.000 -.001 | S1 | T | Catalog No. (Item Code) | |
|----------------|------|------|------|-----|------|---------------------|------|-----|-------------------------|----------------------|
| | | | | | | | | | Single Projection | Double Projection |
| 832BR 833BR | 3.94 | 1.38 | 1.28 | 1/4 | .63 | .750 | .83 | .19 | XS830BR-3PAK (59608) | XS830BR-3PBK (59609) |
| 842BR 843BR | 4.53 | 1.81 | 1.69 | 1/4 | .63 | 1.000 | 1.10 | .25 | XS840BR-3PAK (59520) | XS840BR-3PBK (59521) |
| 852BR 853BR | 5.28 | 2.36 | 2.12 | 3/4 | .87 | 1.250 | 1.36 | .25 | XS850BR-3PAK (59525) | XS850BR-3PBK (59526) |
| 862BR 863BR | 6.30 | 2.48 | 2.34 | 1/2 | 1.12 | 1.375 | 1.51 | .31 | XS860BR-3PAK (59530) | XS860BR-3PBK (59531) |

Single left / right or double projection shafts.

800 Series Parts List – Right Angle Helical Worm Gear Drives



| Part No. | Description of Part |
|----------|---|
| 1 | HOUSING |
| 2 | O/P WORM GEAR |
| 3 | O/P WORM |
| 4 | OUTPUT SHAFT, PROJECTION (SINGLE) |
| 4A | OUTPUT SHAFT, PROJECTION (DOUBLE) |
| 5 | OUTPUT SHAFT, HOLLOW |
| 6 | HELICAL GEAR, 1ST REDUCTOR |
| 7 | HELICAL PINION, 1ST REDUCTOR |
| 8 | INPUT BEARING CARRIER |
| 9 | MOTOR FLANGE (B5/B7-B9/B11) |
| 10 | INPUT REDUCTOR SHAFT |
| 11 | INPUT MOTOR SHAFT |
| 12 | BEARING, INPUT SHAFT (INBOARD) |
| 13 | BEARING, INPUT SHAFT (OUTBOARD) |
| 14 | BEARING, MOTOR SHAFT (INBOARD) |
| 15 | BEARING, MOTOR SHAFT (OUTBOARD) |
| 16 | BEARING, OUTPUT PINION |
| 17 | BEARING, OUTPUT SHAFT (CUP) |
| 18 | BEARING, OUTPUT SHAFT (CONE) |
| 19 | OIL SEAL, INPUT REDUCTOR SHAFT |
| 20 | OIL SEAL, OUTPUT SHAFT |
| 21 | OIL SEAL, INPUT MOTOR SHAFT |
| 22 | RETAINING RING, OUTPUT SHAFT |
| 23 | RETAINING RING, OUTPUT PINION (HOUSING) |
| 24 | RETAINING RING, 1ST REDUCTOR GEAR |
| 25 | RETAINING RING, INPUT CARRIER |
| 26 | RETAINING RING, B5/B7-B9/B11 FLANGE |
| 27 | KEY, OUTPUT SHAFT PROJECTION |

| Part No. | Description of Part |
|----------|---|
| 28 | KEY, 1ST REDUCTION GEAR |
| 29 | KEY, OUTPUT SHAFT HOLLOW |
| 30 | KEY, INPUT REDUCTOR |
| 31 | HEX HEAD CAP SCREWS |
| 32 | OUTPUT SHIM |
| 33 | OUTPUT BEARING CARRIER |
| 34 | BORE PLUG, OUTPUT PINION |
| 35 | OUTPUT PINION SHIM |
| 36 | PLUG, PIPE |
| 37 | PLUG, OIL VENT |
| 39 | TORQUE ARM |
| 40 | OUTPUT FLANGE 11V BASE |
| 41 | HELICAL PINION, 2ND REDUCTOR (TRIPLE) |
| 42 | HELICAL GEAR, 2ND REDUCTOR (TRIPLE) |
| 43 | KEY, HELICAL PINION (TRIPLE) |
| 44 | RETAINING RING, HELICAL PINION |
| 45 | BEARING, HELICAL PINION (TRPL) OUTBOARD |
| 46 | BEARING, HELICAL GEAR (TRPL) |
| 47 | HOUSING, TRIPLE REDUCTION |
| 48 | MOUNTING FOOT |
| 49 | MOUNTING FOOT |
| 50 | SOCKET HEAD CAPSCREW |
| 51 | ALLEN HEAD CAPSCREWS |
| 52 | NAMEPLATE |
| 53 | SYNTHETIC OIL LEVEL |
| 54 | NAMEPLATE TAPE |
| 55 | MOTOR BOLTS |
| 56 | HOLLOW-TO-SOLID SHAFT KEY |

H



Section Contents

| | |
|---|----------------|
| HM Series Features / How to Order | 240 |
| HM Series standard products | 241 |
| Mounting Assemblies | 242 |
| Lubrication / Operating Instructions | 242-243 |
| Helical Multiplier Ratings | 244 |
| Helical Multiplier Dimensions | 245 |

Features / How to Order

Use alone as either a speed reducer or increaser or in combination with a 700 Series worm gear reducer to create an efficient right angle double reduction speed reducer.

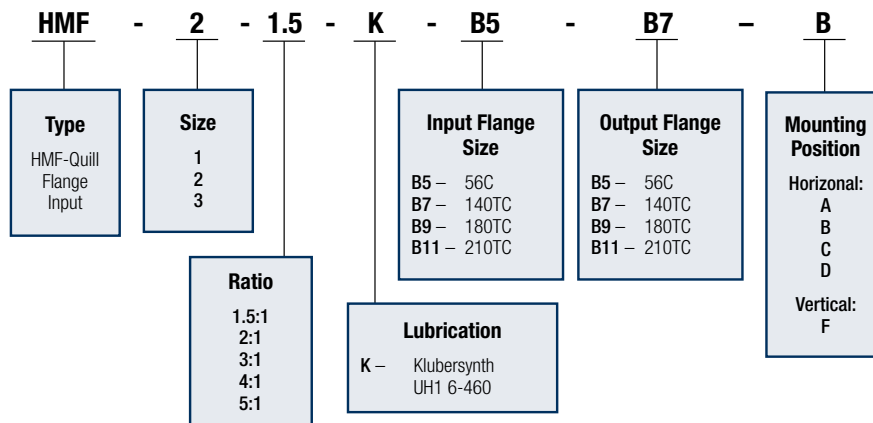
- Close grained cast iron housing and flanges
- Hardened steel helical gearing for long life
- Anti-friction bearings
- Double lip seals guard against oil leakage
- Brass spring loaded breather plug keeps out dirt and water
- Optional steel bolt on base
- Double bearing design on input and output shaftt



Flanged

| Unit Size | Optional Base Kits | |
|-----------|---------------------|-----------|
| | Catalog Description | Item Code |
| 1 | HMF1 Base Kit | 83501 |
| 2 | HMF2 Base Kit | 83502 |
| 3 | HMF3 Base Kit | 83503 |

Numbering System



Available Styles

| Model | Input | Output |
|-------|-------|--------|
| HMF1 | B5 | B5 |
| HMF 2 | B5 | B5 |
| | B7 | B5 |
| HMF3 | B7 | B7 |
| | B9 | B9 |
| | B9 | B11 |
| | B11 | B9 |
| | B11 | B11 |

Helical Multiplier Series Reducer

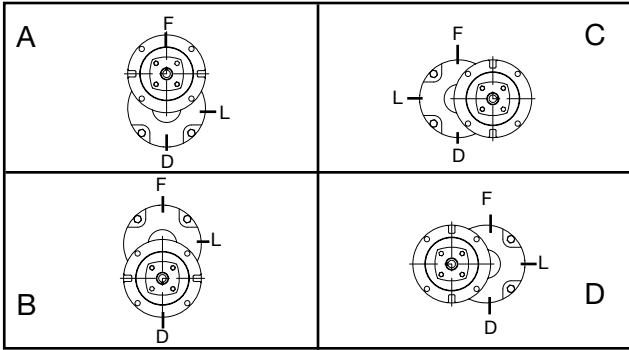
NEMA C-Face Models

| Catalog Number | Item Code |
|-----------------|-----------|
| HMF1-1.5K-B5-B5 | F05001 |
| HMF1-2K-B5-B5 | F05002 |
| HMF1-3K-B5-B5 | F05003 |
| HMF1-4K-B5-B5 | F05004 |
| HMF1-5K-B5-B5 | F05005 |
| HMF2-1.5K-B5-B5 | F05006 |
| HMF2-1.5K-B5-B7 | F05007 |
| HMF2-1.5K-B7-B5 | F05008 |
| HMF2-1.5K-B7-B7 | F05009 |
| HMF2-2K-B5-B5 | F05010 |
| HMF2-2K-B5-B7 | F05011 |
| HMF2-2K-B7-B5 | F05012 |
| HMF2-2K-B7-B7 | F05013 |
| HMF2-3K-B5-B5 | F05014 |
| HMF2-3K-B5-B7 | F05015 |
| HMF2-3K-B7-B5 | F05016 |
| HMF2-3K-B7-B7 | F05017 |
| HMF2-4K-B5-B5 | F05018 |
| HMF2-4K-B5-B7 | F05019 |
| HMF2-4K-B7-B5 | F05020 |
| HMF2-4K-B7-B7 | F05021 |
| HMF2-5K-B5-B5 | F05022 |
| HMF2-5K-B5-B7 | F05023 |
| HMF2-5K-B7-B5 | F05024 |
| HMF2-5K-B7-B7 | F05025 |

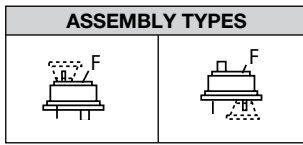
| Catalog Number | Item Code |
|-------------------|-----------|
| HMF3-1.5K-B11-B11 | F05026 |
| HMF3-1.5K-B11-B9 | F05027 |
| HMF3-1.5K-B9-B11 | F05028 |
| HMF3-1.5K-B9-B9 | F05029 |
| HMF3-2K-B11-B11 | F05030 |
| HMF3-2K-B11-B9 | F05031 |
| HMF3-2K-B9-B11 | F05032 |
| HMF3-2K-B9-B9 | F05033 |
| HMF3-3K-B11-B11 | F05034 |
| HMF3-3K-B11-B9 | F05035 |
| HMF3-3K-B9-B11 | F05036 |
| HMF3-3K-B9-B9 | F05037 |
| HMF3-4K-B11-B11 | F05038 |
| HMF3-4K-B11-B9 | F05039 |
| HMF3-4K-B9-B11 | F05040 |
| HMF3-4K-B9-B9 | F05041 |
| HMF3-5K-B11-B11 | F05042 |
| HMF3-5K-B11-B9 | F05043 |
| HMF3-5K-B9-B11 | F05044 |
| HMF3-5K-B9-B9 | F05045 |

Helical Multiplier Lubrication

Horizontal Mounting



Vertical Mounting



Recommended Lubricants

The following tables indicate the type and viscosity of lubricant suitable for reducers operating at various temperatures.

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the proper type of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil. Under normal environmental conditions oil changes, are suggested after the initial 250 hours of operation, and thereafter, at regular intervals of 2500 hours or every 6 months. Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Helical Gear Reducers may reach 160°F.

Enclosed Helical

| Ambient (Room) Temperature | Recommended Oil (or equivalent) | Viscosity Range S&S @ 100°F | Oil Type | ISO Viscosity Grade No. |
|-------------------------------------|---------------------------------|-----------------------------|----------|-------------------------|
| -20° to 225°F ‡ (-29°C to 107°C) | Klubersynth* UH1 6-460 | 1950/2500 | PAG | 460 |
| -30° to 225°F ‡ (-34°C to 107°C) | Mobile SHC634 | 1950/2500 | PAO | 320/460 |

| Recommended Lubricant | Boston Gear Item Code |
|-----------------------|-----------------------|
| | Quart |
| Klubersynth UH1 6-460 | 65159 |
| Mobile SHC634 | 51493 |

CAUTION: Relubricate more frequently, if drive is operated in high ambient temperatures or unusually contaminated atmospheres. High loads and operating temperatures will also require more frequent relubrication.

*Synthetic recommendation is exclusively for Klubersynth UH1 6-460.

‡The UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.

Drain Plug must be installed in the lower most location of the housing. This plug will be on the input shaft side of the housing for positions B, C, D and A, may be either side for A.

The **Vented Filler Plug** should be installed in the uppermost location. This plug will be on the input shaft side for positions A, C, or D, on either side for B and must be tightened into position.

Level Plug position will be as indicated for horizontal positions. For vertical positions the oil level is established by an oil level distance measured from the outer surface of the housing from the oil filler hole.

| Size | Flanged | | Non-Flanged | |
|------|---------------|----------------|---------------|----------------|
| | Weight (lbs.) | Capacity (ozs) | Weight (lbs.) | Capacity (ozs) |
| 1 | 18 | 11 | 14 | 11 |
| 2 | 25 | 14 | 21 | 14 |
| 3 | 50 | 28 | 43 | 28 |

Installation, Lubrication and Operation Instructions

Warning: *Boston Gear speed reducers are normally shipped without lubricant. They must be filled to the proper level with the recommended lubricant before operation.*

These instructions must be read thoroughly before installing or operating speed reducers. File instructions for future reference.

CAUTION

- For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards. You must consider overall operational system safety at all times.
- When using a gear drive to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.
- Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

General Instructions

1. When mounting, use maximum possible bolt size and secure gear drive to a rigid foundation. Periodic inspection of all bolts is recommended.
2. Align all shafts accurately. Improper alignment can result in failure. Use of flexible couplings is recommended to compensate for slight misalignment.
3. Arrange the drain and breather plug per your mounting position as indicated on page 230. The breather plug should also be located in the Fill position.
4. Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.
5. Gear drives are nameplated for 1750 RPM Input Speed and Class I Service. For lower Input Speeds and other Service Class, refer to catalog rating information.
6. Input speeds of 1750 and lower are shown in catalog rating tables for speed reducing applications. This does not represent the maximum speed. Since speed limitation is based on pitching velocity and varies with size and ratio.

Instructions for Flanged Models

HMF (Quill Type Input)

1. Assemble the key to the motor shaft and coat the quill bore with anti-seize compound. Insert the motor shaft into the reducer input shaft.
2. Rotate the motor to proper position and firmly secure to flange with four hex-head cap screws.

CAUTION - If the motor does not readily seat itself, check to determine if key has moved axially along motor shaft, causing interference. Staking of the keyway adjacent to the motor key will facilitate this procedure.

Location of Filler, Level and Drain Plugs

Helical-Multiplier reducers may be mounted in any position shown.

Filler, level and drain plugs are completely interchangeable and should be arranged to suit the required mounting positions.

Helical Multiplier Series Ratio & Capacity Selection Tables

Horsepower and Torque Capacities (Service Factor 1.0)

| Series Size | | | HMF Size 1 | | | HMF Size 2 | | | HMF Size 3 | | |
|-------------|-----------|------------|------------|--------|------------------|------------|--------|------------------|------------|--------|------------------|
| Ratio | Input RPM | Output RPM | Input HP | Output | | Input HP | Output | | Input HP | Output | |
| | | | | HP | Torque (Lb. In.) | | HP | Torque (Lb. In.) | | HP | Torque (Lb. In.) |
| 1.5 | 1750 | 1167 | 3.29 | 3.19 | 172 | 13.60 | 13.19 | 712 | 17.79 | 17.26 | 932 |
| 2 | 1750 | 875 | 2.74 | 2.66 | 192 | 11.76 | 11.41 | 822 | 15.38 | 14.92 | 1075 |
| 3 | 1750 | 583 | 2.06 | 2.00 | 216 | 9.48 | 9.20 | 944 | 12.39 | 12.02 | 1299 |
| 4 | 1750 | 437 | 1.45 | 1.41 | 203 | 6.88 | 6.67 | 962 | 8.99 | 8.72 | 1258 |
| 5 | 1750 | 350 | 1.05 | 1.02 | 183 | 5.06 | 4.91 | 884 | 6.61 | 6.41 | 1155 |

Output Shaft Thrust Rating (lbs.)

| | 1.5:1 | 2:1 | 3:1 | 4:1 | 5:1 |
|------|-------|-----|-----|-----|-----|
| HMF1 | 153 | 169 | 193 | 213 | 230 |
| HMF2 | 230 | 253 | 289 | 319 | 345 |
| HMF3 | 313 | 345 | 394 | 435 | 470 |

Overhung Loads (lbs.)

| | HMF Size 1 | HMF Size 2 | | HMF Size 3 | |
|--------|------------|------------|-----------|------------|-------------|
| Input | 200 | 200 | | 350 | |
| Output | 315 | B5 375 | B7 750 | B9 1100 | B11 1135 |

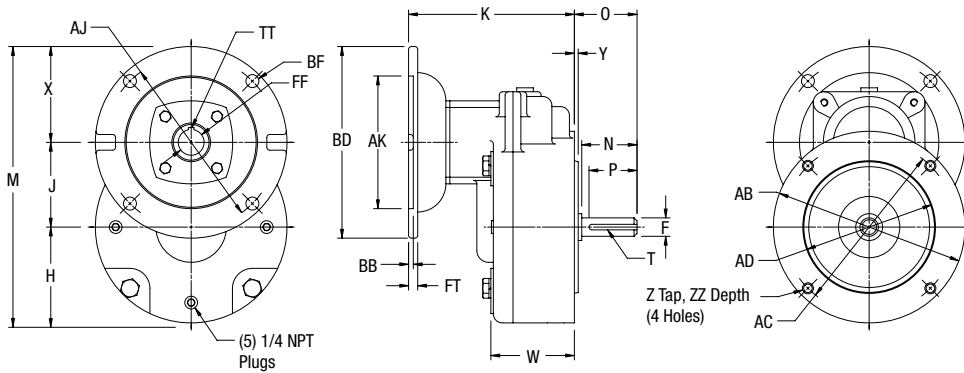
Ratings Shown Reflect Maximum Gear Capacity With KLUBERSYNTH UH1 6-460 Lubricant.

Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

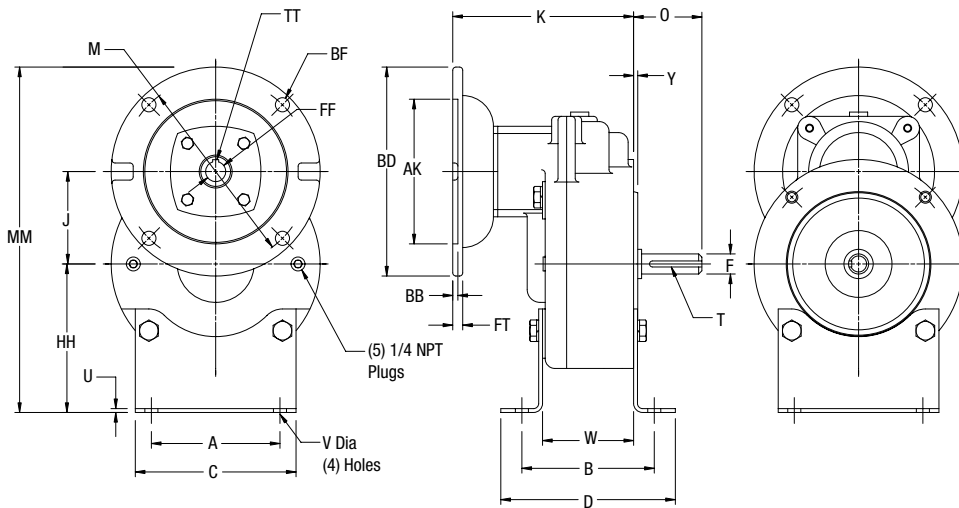
Maximum Input Speed 1750 RPM

Helical Multiplier Dimensions

HMF Basic



HMF with Base



ALL DIMENSIONS IN INCHES

| Size | Output Flange | Foot | | | | Main Dimensions | | | | | | | | | | |
|------|---------------|------|------|------|------|-----------------|------|------|-------|------|-------|-------|------|------|------|-----------|
| | | A | B | C | D | F | H | HH | J | K | M | MM | N | O | P | T |
| 1 | B5 | 4.00 | 3.87 | 5.00 | 5.18 | 0.625 | 2.39 | 4.62 | 1.675 | 4.19 | 7.31 | 9.54 | 1.89 | 2.04 | 1.57 | 3/16X3/32 |
| | B5 | 4.00 | 4.12 | 5.00 | 5.44 | 0.625 | 3.37 | 4.62 | 2.875 | 5.00 | 9.49 | 10.74 | 1.84 | 1.90 | 1.57 | 3/16X3/32 |
| 2 | B7 | 4.00 | 4.12 | 5.00 | 5.44 | 0.875 | 3.37 | 4.62 | 2.875 | 5.00 | 9.49 | 10.74 | 1.84 | 1.90 | 1.57 | 3/16X3/32 |
| | B9 | 5.13 | 4.74 | 6.37 | 6.15 | 1.125 | 4.25 | 4.81 | 2.875 | 6.44 | 11.63 | 12.19 | 2.50 | 3.31 | 1.97 | 1/4X1/8 |
| 3 | B11 | 5.13 | 4.74 | 6.37 | 6.15 | 1.375 | 4.25 | 4.81 | 2.875 | 6.44 | 11.63 | 12.19 | 2.50 | 3.31 | 1.97 | 5/16X5/32 |

| Size | Main Dimensions | | | | | Output Flange | | | | | |
|------|-----------------|-------|------|------|------|---------------|------|-----|-------|-----|--|
| | U | V | W | X | Y | Z | ZZ | AB | AC | AD | |
| 1 | 0.12 | 0.406 | 1.95 | 3.25 | 0.16 | 3/8 - 16 | Thru | 6.5 | 5.875 | 4.5 | |
| 2 | 0.12 | 0.406 | 3.00 | 3.25 | 0.16 | 3/8 - 16 | 0.75 | 6.5 | 5.875 | 4.5 | |
| 3 | 0.16 | 0.500 | 3.35 | 4.50 | 0.31 | 1/2 - 13 | Thru | -- | 7.250 | 8.5 | |

| Size | Input Flange | Input Flange | | | | | | | |
|------|--------------|--------------|-----|-----|------|------|-------|------|-----------|
| | | AJ | AK | BD | BF | BB | FF | FT | TT |
| 1 | B5 | 5.875 | 4.5 | 6.5 | 0.43 | 0.16 | 0.625 | 0.35 | 3/16x3/32 |
| | B5 | 5.875 | 4.5 | 6.5 | 0.41 | 0.16 | 0.625 | 0.43 | 3/16x3/32 |
| 2 | B7 | 5.875 | 4.5 | 6.5 | 0.41 | 0.16 | 0.875 | 0.43 | 3/16x3/32 |
| | B9 | 7.250 | 8.5 | 9.0 | 0.59 | 0.24 | 1.125 | 0.59 | 1/4x1/8 |
| 3 | B11 | 7.250 | 8.5 | 9.0 | 0.59 | 0.24 | 1.375 | 0.59 | 5/16x5/32 |

Hollow Shaft



Section Contents

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200 Series Optimount® Product Reference Guide

F200 Series Optimount® Helical Gear Flanged Reducers

Ordering Information – Pages 249-251

Selection/Rating Information – Pages 253-256

Lubrication – Pages 267-268

Motor Selection – Pages 334, 337-341



Basic Model
Dimensions – Page 259



F200H Series
Horizontal Base Model
Dimensions – Page 260



F200V Series
Vertical Base Model
Dimensions – Page 260

200 Series Optimount® Helical Gear Non-Flanged Reducers

Ordering Information – Pages 249-251

Selection/Rating Information – Pages 253-256

Lubrication – Pages 267-268

Motor Selection – Pages 334, 337-341



Basic Model
Dimensions – Pages 261



200H Series
Horizontal Base Model
Dimensions – Page 262



200V Series
Vertical Base Model
Dimensions – Page 262

200 Series Optimount® Helical Gear Accessories and Options

Ordering Information – Page 249



Shaft Kits / Reaction Rods
Dimensions – Pages 264



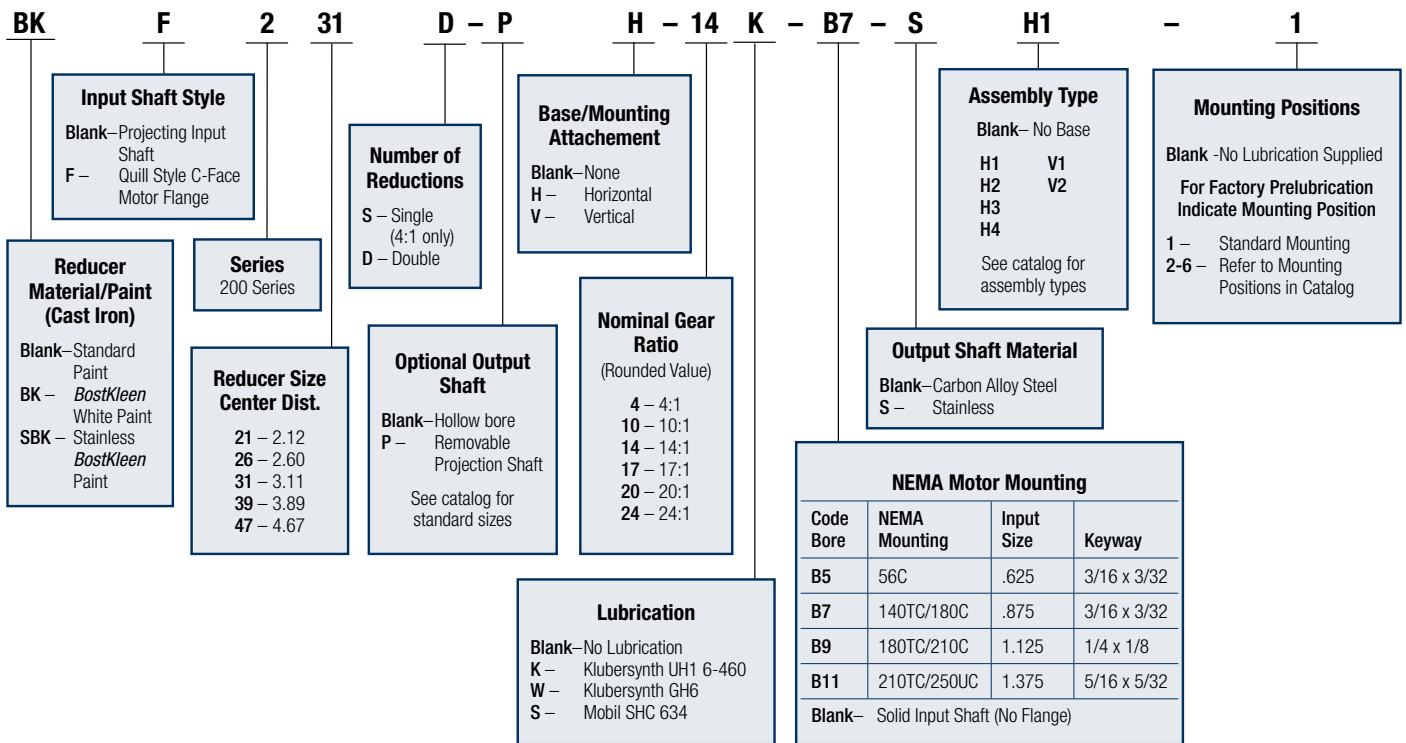
Base Kits
Vertical/Horizontal
Dimensions – Page 265

200 Series Optimount® Numbering System / How to Order

Catalog Numbering System

When ordering please note the complete catalog number and/or the (5-digit) item code. With either of these two numbers your local Boston Distributor will have several alternatives to enter your order into the Boston Gear system.

200 Series Catalog Number



How to Order

Specify Model Number (Basic Hollow Output Shaft Reducer), Ratio, Input Bore Code, Horizontal or Vertical Base Kit and Output Shaft Kit.

EXAMPLE:

F239DPH-14-B9**

Order:

1 Pc. F239D-14-B9 (Basic Flanged Reducer) (39272)

1 Pc. X239-3PK (Output Shaft Kit) (23904)

1 Pc. X239-11HK (Horizontal Base Kit) (68658)

*Shipped separately unless otherwise specified.

**If components are to be factory assembled, specify Assembly Type and Mounting Position, see Page 240

200 Series Optimount® Helical Gear Speed Reducers

To properly select a speed reducer, the following application information should be known.

1. Service Factor or AGMA Service Class.
2. Output Horsepower or Torque
3. Output RPM or Ratio

Non-Motorized Speed Reducer

1. Determine application service factor from table 1 or from application classification tables on pages 348-349.
2. Determine design Horsepower or Torque.
 - Design HP = Application HP x S.F.
 - Design Torque = Application Torque x S.F.
3. Select a Speed reducer that satisfies output RPM, service class and/or output torque requirement. Ref. rating tables pages 257-258.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 251 for calculations.

Example

Select a parallel shaft helical speed reducer for a uniformly loaded assembly belt conveyor to operate 12 hrs/day, to be driven at 1150 RPM input. Output RPM Approx. 80, Torque requirement is 2200 lb-in.

1. Application Service Factor = 1.25
2. Design Torque = 2200 x 1.25 = 2750 LB-IN.
3. Select at speed and torque level of at least 2750 LB-IN or greater
4. Order 239D-14 (Item Code 39052)

NOTE: The use of an auxiliary drive between the speed reducer and the driven machine reduces the torque required at the output shaft in direct proportion to the auxiliary drive ratio.

A 3:1 chain ratio would reduce the torque requirement at the output shaft of the reducer to one-third, resulting in a smaller unit size selection.

Service Factor Table

| AGMA CLASS OF SERVICE | SERVICE FACTOR | OPERATING CONDITIONS |
|-----------------------|----------------|---|
| I | 1.00 | Moderate Shock-not more than 15 minutes in 2 hours. Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. Uniform Load-more than 10 hours per day. |
| | 1.50 | Heavy Shock-not more than 15 minutes in 2 hours. Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day. |

For complete AGMA Service Factors and Load Classifications, see Engineering Pages 348-349.

200 Series Ratio and Capacity Selection Tables

(Service Factor 1.0)

| Catalog Number | Item Code | INPUT RPM | | | | | | | | Gear Ratio | O.H.L. (LB.)* | Weight (Lb.) |
|----------------|-----------|-----------|-----------------------|-------|--------|---------|-----------------------|-------|--------|------------|---------------|--------------|
| | | 1750 | | | | 1150 | | | | | | |
| | | O/P RPM | Output Torque (LB-IN) | HP | | O/P RPM | Output Torque (LB-IN) | HP | | | | |
| | | | | Input | Output | | | Input | Output | | | |
| 221D-14 | 39004 | 121 | 403 | 0.80 | 0.77 | 80 | 403 | 0.53 | 0.51 | 14.45 | 490 | 23 |
| 226D-14 | 39020 | | 711 | 1.43 | 1.37 | | 772 | 1.02 | 0.97 | | 660 | 38 |
| 231D-14 | 39036 | | 1500 | 3.00 | 2.88 | | 1781 | 2.34 | 2.25 | | 780 | 57 |
| 239D-14 | 39052 | | 2842 | 5.69 | 5.46 | | 3168 | 4.17 | 4.00 | | 875 | 96 |
| 247D-14 | 39068 | | 4736 | 9.48 | 9.10 | | 5662 | 7.45 | 7.15 | | 1070 | 140 |
| 221D-17 | 39006 | 101 | 410 | 0.69 | 0.66 | 67 | 410 | 0.45 | 0.43 | 17.28 | 500 | 23 |
| 226D-17 | 39022 | | 754 | 1.26 | 1.21 | | 805 | 0.89 | 0.85 | | 675 | 38 |
| 231D-17 | 39038 | | 1644 | 2.75 | 2.64 | | 1857 | 2.04 | 1.96 | | 800 | 57 |
| 239D-17 | 39054 | | 2959 | 5.00 | 4.80 | | 3219 | 3.54 | 3.40 | | 900 | 96 |
| 247D-17 | 39070 | | 5071 | 8.49 | 8.15 | | 5775 | 6.34 | 6.10 | | 1100 | 135 |

Ref. Page 257

200 Series Optimount® Helical Gear Speed Reducers

Motorized Speed Reducer

1. Determine application service factor from the table on page 250 or from pages 348-349.
2. Determine output speed required.
3. Determine HP or output torque requirement.
4. Select based on output speed and horsepower requirement for given service class.
5. Check overhung load Ref. calculation.

Example

Select a Parallel Shaft Helical Gear Flanged Speed Reducer and motor to drive a uniformly loaded line shaft 12 hours/day, requiring approximately 1 1/2 HP at 100 RPM.

Power Requirement

230/460 volt
3 phase
60 Hz

1. Select service factor class from pages 348-349 or from Table 1.
Service class = II
2. Output RPM = 100
3. 1 1/2 HP
4. Select a 1 1/2 HP drive that will satisfy service class II.
5. O.H.L = 800 LBS. Ref. pg. 257
6. Order: 1 – F231D-17-B7 (39250)
1 – JUTF Motor Ref. page 339 for specific manufacturer.

Overhung Load

If the output shaft of a speed reducer is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

- OHL = Overhung Load (LB.)
T = Shaft Torque (LB.-INS.)
D = PD of Sprocket, Pinion or Pulley (IN.)
K = Load Connection Factor

Load Connection Factor (K)

| | |
|---------------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive..... | 1.50 |
| Pulley and Flat Belt Drive..... | 2.50 |

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley of a larger PD. Relocation of the load closer to the center of reducer will also increase OHL capacity.

Permissible Overhung Loads and Output Shaft Thrust Loads are listed for each reducer in the Tables on Pages 257-258.

200 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

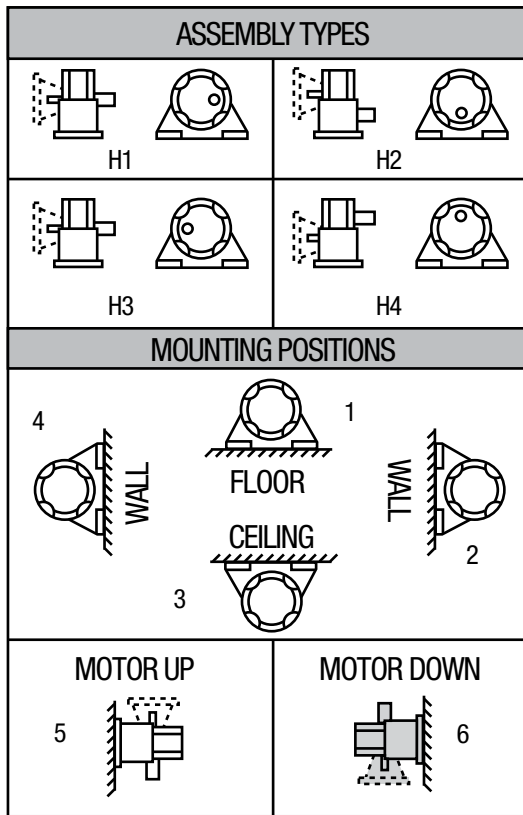
| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotors) | | | | | AC Motor† | DC Motor†† | | |
|-------------|-------|------------------------|--------|------|----------------|-----------|-------------------------------|------------------------|---------------|----------------|-----------|--------------|--------------------|----------|---------------------------|
| | | Gear Capacity | | | Catalog Number | Item Code | Ratings | | | Catalog Number | Item Code | | | | |
| | | Output Torque (LB-IN.) | HP | | | | Motor HP | Output Torque (LB-IN.) | Service Class | | | | | | |
| | | Input | Output | | | | | | | | | | | | |
| 101 (Cont.) | 17.28 | 1644 | 2.75 | 2.64 | 231D-17 | 39038 | 3 | *1644 | * | F231D-17-B9 | 47227 | LUTF | PM18300 | | |
| | | | | | | | 2 | 1194 | I | F231D-17-B7 | 39250 | KUTF JUTF | PM18200 PM18150 | | |
| | | | | | | | 1 1/2 | 896 | II | | | | | | |
| | | | | 2959 | 4.96 | 4.76 | 239D-17 | 39054 | 1 | 597 | III | F231D-17-B5 | 39246 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 |
| | | 5 | *2956 | | | | | | * | F239D-17-B9 | 39276 | MUTF LUTF | PM18500 PM18300 | | |
| | | 3 | 1498 | | | | | | II | | | | | | |
| | | 2 | 1194 | | | | | | III | F239D-17-B7 | 39274 | KUTF | PM18200 | | |
| | | | | | | | 7 1/2 | 4478 | I | F247D-17-B11 | 47233 | NUTF | — | | |

Reference Page 255



200 Series Optimount® Mounting Positions

200 SERIES—HORIZONTAL BASE



NOTE: Shaded positions are not recommended when used as a motorized reducer and should be avoided if possible.

Mountings are designated by combining identification for assembly type and mounting position (Example Mtg. H1).

Mounting H1 is standard and will be furnished unless otherwise specified.

SIZES 221 TO 247

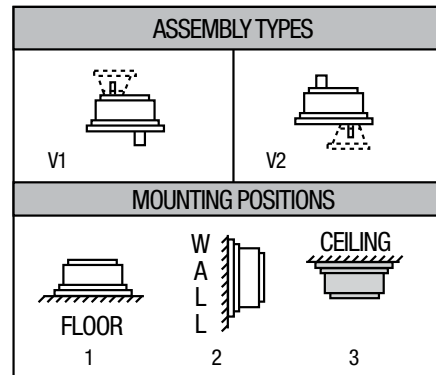
All other assemblies are available at no additional charge. The assembly types shown indicate the four possible arrangements of the Reductor in the base.

Any of these assemblies may be installed in the various floor sidewall or ceiling mounting positions shown by relocating oil plugs in proper positions. *Reference pages 267-268.*

CAUTION

Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

200 SERIES—VERTICAL BASE



Mountings are designated by combining identification for assembly type and mounting position (Example Mtg. V1).

Mounting V1 is standard and will be furnished unless otherwise specified. All other mountings are available at no additional charge.

SIZES 221 TO 247

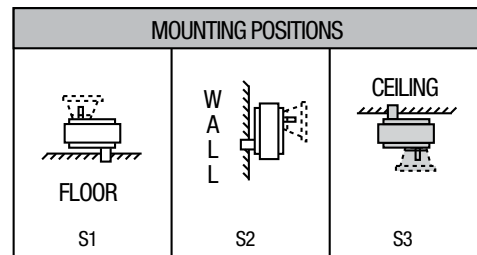
Assemblies V1 & V2 may be installed in the various floor, side-wall or ceiling mounting positions shown.

Sidewall Mounted Reducers must be located with one edge of the base parallel to the floor so that oil plugs can be properly located.

Mounting designations other than standard must be included with each Reductor order.

200 SERIES

SHAFT MOUNTING



Mounting S2 is standard and will be furnished unless otherwise specified. Mountings S1 & S3 are available at a slight additional charge.

SIZES 221 TO 247

Shaft Mounted Reducers may be installed in floor, sidewall or ceiling mounting positions by proper relocation of oil plugs. *Reference to pages 267-268.*

200 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 257-258
ORDER BY CATALOG NUMBER OR ITEM CODE

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† | |
|------------|-------|------------------------|-------|--------|----------------|-----------|-------------------------------|------------------------|---------------|----------------|-------------|-------------|---------------------------|----------|
| | | Gear Capacity | | | Catalog Number | Item Code | Ratings | | | Catalog Number | Item Code | | | |
| | | Output Torque (LB-IN.) | HP | | | | Motor HP | Output Torque (LB-IN.) | Service Class | | | | | |
| | | | Input | Output | | | | | | | | | | |
| 431 | 4.06 | 289 | 2.02 | 1.98 | 221S-4 | 39012 | 1 | 142 | III | F221S-4-B5 | 39214 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 | |
| | | | | | | | 3/4 | 106 | III | | | GUTF | PM975 | |
| | | 455 | 3.17 | 3.11 | 226S-4 | 39028 | 2 | 284 | II | F226S-4-B7 | 39236 | KUTF | PM18200 | |
| | | | | | | | 1 1/2 | 213 | III | | | JUTF | PM18150 | |
| | | 950 | 6.63 | 6.50 | 231S-4 | 39044 | 5 | 716 | I | F231S-4-B9 | 39264 | MUTF | PM18500 | |
| | | | | | | | 3 | 423 | III | | | LUTF | PM18300 | |
| | | 1900 | 13.26 | 12.99 | 239S-4 | 39060 | 10 | 1432 | I | F239S-4-B11 | 39290 | PUTF | — | |
| | | | | | | | 7 1/2 | 1074 | II | | | NUTF | — | |
| | | 2851 | 19.90 | 19.50 | 247S-4 | 39076 | 5 | 716 | III | F239S-4-B9 | 39288 | MUTF | PM18500 | |
| | | | | | | | 10 | 1432 | II | | | PUTF | — | |
| | | | | | | | | 7 1/2 | 1074 | III | F247S-4-B11 | 39308 | NUTF | — |
| | | 178 | 9.84 | 390 | 1.15 | 1.10 | 221D-10 | 39002 | 1 | 340 | I | F221D-10-B5 | 39202 | HUTF-5/8 |
| 3/4 | 255 | | | | | | | | II | GUTF | PM975 | | | |
| 1/2 | 170 | | | | | | | | III | FUTF | PM950 | | | |
| 672 | 2.00 | | | 1.90 | 226D-10 | 39018 | 2 | 660 | I | F226D-10-B7 | 39220 | KUTF | PM18200 | |
| | | | | | | | 1 1/2 | 510 | I | | | JUTF | PM18150 | |
| 1322 | 3.89 | | | 3.73 | 231D-10 | 39034 | 1 | 340 | II | F226D-10-B5 | 39218 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 | |
| | | | | | | | 3/4 | 255 | III | | | GUTF | PM975 PM1875 | |
| 2426 | 7.12 | | | 6.84 | 239D-10 | 39050 | 3 | 1020 | I | F231D-10-B9 | 39242 | LUTF | PM18300 | |
| | | | | | | | 2 | 680 | II | F231D-10-B7 | 39240 | KUTF | PM18200 | |
| | | | | | | | 1 1/2 | 510 | III | | | JUTF | PM18150 | |
| | | | | | | | | 5 | 1700 | I | F239D-10-B9 | 39268 | MUTF | PM18500 |
| | | | | | | | | 3 | 1020 | III | | | LUTF | PM18300 |

Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

††DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 340 and 341.

200 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 245-246
ORDER BY CATALOG NUMBER OR ITEM CODE

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† |
|----------------|-------|------------------------|-------|--------|----------------|-----------|-------------------------------|---|---------------|----------------|-----------|--------------------------|---|
| | | Gear Capacity | | | Catalog Number | Item Code | Ratings | | | Catalog Number | Item Code | | |
| | | Output Torque (LB-IN.) | HP | | | | Motor HP | Output Torque (LB-IN.) | Service Class | | | | |
| | | | Input | Output | | | | | | | | | |
| 178 (Cont.) | 9.84 | 4641 | 13.64 | 13.09 | 247D-10 | 39066 | 10 | 3400 | I | F247D-10-B11 | 39296 | PUTF NUTF | — |
| | | | | | | | 7 1/2 | 2550 | II | | | | — |
| 121 | 14.45 | 403 | .80 | .77 | 221D-14 | 39004 | 3/4 | 374 | I | F221D-14-B5 | 39204 | GUTF FUTF EUTF | PM975 PM950 PM933 |
| | | | | | | | 1/2 | 250 | II | | | | |
| | | | | | 1/3 | 166 | III | | | | | | |
| | | | | | 226D-14 | 39020 | 1 1/2 | *711 | * | F226D-14-B7 | 39224 | JUTF | PM18150 |
| | | | | | | | 1 | 500 | I | | | | |
| | | | | | 231D-14 | 39036 | 3/4 | 374 | II | F226D-14-B5 | 39222 | HUTF-5/8 GUTF FUTF | PM9100 5/8 PM18100 5/8 PM975 PM950 |
| | | | | | | | 1/2 | 250 | III | | | | |
| | | | | | | | 3 | 1500 | I | | | | |
| | | | | | 239D-14 | 39052 | 2 | 998 | II | F231D-14-B9 | 47226 | LUTF | PM18300 |
| | | | | | | | 1 1/2 | 750 | III | | | | |
| | | | | | | | 1 | 500 | III | | | | |
| | | | | | 247D-14 | 39068 | 5 | 2497 | I | F231D-14-B7 | 39248 | KUTF JUTF | PM18200 PM18150 |
| | | | | | | | 3 | 1498 | II | | | | |
| | | | | | | | 2 | 998 | III | | | | |
| 247D-14 | 39068 | 10 | *4736 | * | F239D-14-B9 | 39272 | MUTF LUTF | PM18500 PM18300 | | | | | |
| | | 7 1/2 | 3745 | I | | | | | | | | | |
| | | 5 | 2497 | II | | | | | | | | | |
| 247D-14 | 39068 | 3 | 1498 | III | F239D-14-B7 | 39270 | KUTF | PM18200 | | | | | |
| | | 3 | 1498 | III | | | | | | | | | |
| 101 | 17.28 | 410 | .69 | .66 | 221D-17 | 39006 | 3/4 | *410 | * | F221D-17-B5 | 39206 | GUTF FUTF EUTF | PM975 PM950 PM933 |
| | | | | | | | 1/2 | 298 | I | | | | |
| 1/3 | 199 | III | | | | | | | | | | | |
| 226D-17 | 39022 | 1 1/2 | *754 | * | F226D-17-B7 | 47220 | JUTF | PM18150 | | | | | |
| | | 1 | 597 | I | | | | | | | | | |
| | | 3/4 | 448 | II | | | | | | | | | |
| 226D-17 | 39022 | 1/2 | 298 | III | F226D-17-B5 | 39226 | HUTF-5/8 GUTF FUTF | PM9100 5/8 PM18100 5/8 PM975 PM950 | | | | | |
| | | 1/2 | 298 | III | | | | | | | | | |

Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 340 and 341.

*Rating Limited to Gear Capacity.

200 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 245-246
ORDER BY CATALOG NUMBER OR ITEM CODE

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors‡ |
|-------------|-------|------------------------|-------|--------|----------------|-----------|-------------------------------|------------------------|---------------|----------------|-----------|--------------|---------------------------|
| | | Gear Capacity | | | Catalog Number | Item Code | Ratings | | | Catalog Number | Item Code | | |
| | | Output Torque (LB-IN.) | HP | | | | Motor HP | Output Torque (LB-IN.) | Service Class | | | | |
| | | | Input | Output | | | | | | | | | |
| 101 (Cont.) | 17.28 | 1644 | 2.75 | 2.64 | 231D-17 | 39038 | 3 | *1644 | * | F231D-17-B9 | 47227 | LUTF | PM18300 |
| | | | | | | | 2 | 1194 | I | F231D-17-B7 | 39250 | KUTF JUTF | PM18200 PM18150 |
| | | | | | | | 1 1/2 | 896 | II | | | | |
| | | 2959 | 4.96 | 4.76 | 239D-17 | 39054 | 1 | 597 | III | F231D-17-B5 | 39246 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 |
| | | | | | | | 5 | *2956 | * | F239D-17-B9 | 39276 | MUTF LUTF | PM18500 PM18300 |
| | | | | | | | 3 | 1498 | II | F239D-17-B7 | 39274 | KUTF | PM18200 |
| | | 5071 | 8.49 | 8.15 | 247D-17 | 39070 | 7 1/2 | 4478 | I | F247D-17-B11 | 47233 | NUTF | — |
| | | | | | | | 5 | 2986 | II | F247D-17-B9 | 39300 | MUTF LUTF | PM18500 PM18300 |
| | | | | | | | 3 | 1791 | III | | | | |
| | | | | | | | | | | | | | |
| 87.4 | 20.03 | 398 | .57 | .55 | 221D-20 | 39008 | 1/2 | 346 | I | F221D-20-B5 | 39208 | FUTF | PM950 |
| | | | | | | | 1/3 | 230 | II | | | EUTF | PM933 |
| | | | | | | | 1/4 | 173 | III | | | DUTF | PM925 |
| | | 758 | 1.09 | 1.05 | 226D-20 | 39024 | 1 | 692 | I | F226D-20-B5 | 39228 | HUTF-5/8 | PM9100 5/8 |
| | | | | | | | 3/4 | 519 | II | | | GUTF | PM18100 5/8 |
| | | | | | | | 1/2 | 346 | III | | | FUTF | PM975 PM950 |
| | | 1679 | 2.43 | 2.33 | 231D-20 | 39040 | 3 | *1679 | * | F231D-20-B9 | 47228 | LUTF | PM18300 |
| | | | | | | | 2 | 1384 | I | F231D-20-B7 | 39254 | KUTF JUTF | PM18200 PM18150 |
| | | | | | | | 1 1/2 | 1038 | II | | | | |
| | | 3022 | 4.36 | 4.19 | 239D-20 | 39056 | 1 | 692 | III | F231D-20-B5 | 39252 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 |
| | | | | | | | 5 | *3022 | * | F239D-20-B9 | 39280 | MUTF LUTF | PM18500 PM18300 |
| | | | | | | | 3 | 2076 | I | F239D-20-B7 | 39278 | KUTF | PM18200 |
| | | 5198 | 7.51 | 7.21 | 247D-20 | 39072 | 7 1/2 | 5192 | I | F247D-20-B11 | 47234 | NUTF | — |
| | | | | | | | 5 | 3461 | II | F247D-20-B9 | 39302 | MUTF LUTF | PM18500 PM18300 |
| 3 | 2076 | | | | | | III | | | | | | |
| | | | | | | | | | | | | | |

Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

‡ DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 340 and 341.

*Rating Limited to Gear Capacity.

200 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 245-246
ORDER BY CATALOG NUMBER OR ITEM CODE

| Output RPM | Ratio | Non-Flanged Reducers | | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† |
|------------|-------|------------------------|-------|--------|----------------|-----------|-------------------------------|------------------------|---------------|----------------|-----------|-------------|---------------------------|
| | | Gear Capacity | | | Catalog Number | Item Code | Ratings | | | Catalog Number | Item Code | | |
| | | Output Torque (LB-IN.) | HP | | | | Motor HP | Output Torque (LB-IN.) | Service Class | | | | |
| | | | Input | Output | | | | | | | | | |
| 73 | 23.95 | 414 | .50 | .48 | 221D-24 | 39010 | 1/2 | 414 | I | F221D-24-B5 | 39210 | FUTF | PM950 |
| | | | | | | | 1/3 | 275 | I | | | EUTF | PM933 |
| | | | | | | | 1/4 | 206 | III | | | DUTF | PM925 |
| | | 809 | .98 | .94 | 226D-24 | 39026 | 1 | 809 | I | F226D-24-B5 | 39230 | HUTF-5/8 | PM9100 5/8 PM18100 5/8 |
| | | | | | | | 3/4 | 620 | II | | | GUTF | PM975 |
| | | | | | | | 1/2 | 414 | III | | | FUTF | PM950 |
| | | 1791 | 2.17 | 2.08 | 231D-24 | 39042 | 2 | 1655 | I | F231D-24-B7 | 39258 | KUTF | PM18200 |
| | | | | | | | 1 1/2 | 1242 | II | | | JUTF | PM18150 |
| | | | | | | | 1 | 828 | III | | | F231D-24-B5 | 39256 |
| | | 3175 | 3.83 | 3.68 | 239D-24 | 39058 | 5 | *3175 | * | F239D-24-B9 | 39284 | MUTF | PM18500 |
| | | | | | | | 3 | 2483 | I | | | LUTF | PM18300 |
| | | | | | | | 2 | 1655 | II | F239D-24-B7 | 39282 | KUTF | PM18200 |
| | | | | | | | | | | | | 1 1/2 | 1241 |
| | | 5478 | 6.61 | 6.35 | 247D-24 | 39074 | 7 1/2 | *5478 | * | F247D-24-B11 | 47235 | NUTF | — |
| | | | | | | | 5 | 4138 | I | F247D-24-B9 | 39304 | MUTF | PM18500 |
| | | | | | | | 3 | 2483 | III | | | LUTF | PM18300 |

Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 340 and 341.

* Rating Limited to Gear Capacity.

200 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 1750 and 1150 RPM

Service Factor 1.0

ORDER BY CATALOG NUMBER OR ITEM CODE

| Catalog Number | Item Code | INPUT RPM | | | | | | | | Gear Ratio | O.H.L. (LB.)* | Weight (Lb.) |
|----------------|-----------|-----------|-----------------------|-------|--------|---------|-----------------------|-------|--------|------------|---------------|--------------|
| | | 1750 | | | | 1150 | | | | | | |
| | | O/P RPM | Output Torque (LB-IN) | HP | | O/P RPM | Output Torque (LB-IN) | HP | | | | |
| | | | | Input | Output | | | Input | Output | | | |
| 221S-4 | 39012 | 431 | 289 | 2.02 | 1.98 | 283 | 300 | 1.38 | 1.35 | 4.06 | 350 | 25 |
| 226S-4 | 39028 | | 455 | 3.17 | 3.11 | | 552 | 2.53 | 2.48 | | 475 | 40 |
| 231S-4 | 39044 | | 959 | 6.63 | 6.56 | | 1144 | 5.24 | 5.14 | | 575 | 58 |
| 239S-4 | 39060 | | 1900 | 13.26 | 12.99 | | 2545 | 11.67 | 11.44 | | 650 | 96 |
| 247S-4 | 39076 | | 2851 | 19.90 | 19.50 | | 3557 | 16.32 | 15.99 | | 800 | 137 |
| 221D-10 | 39002 | 178 | 390 | 1.15 | 1.10 | 117 | 404 | 0.78 | 0.75 | 9.84 | 460 | 23 |
| 226D-10 | 39018 | | 672 | 2.90 | 1.90 | | 723 | 1.40 | 1.34 | | 615 | 38 |
| 231D-10 | 39034 | | 1322 | 3.89 | 3.73 | | 1581 | 3.05 | 2.93 | | 720 | 60 |
| 239D-10 | 39050 | | 2426 | 7.12 | 6.85 | | 2860 | 5.52 | 5.30 | | 800 | 99 |
| 247D-10 | 39066 | | 4641 | 13.64 | 13.10 | | 5071 | 9.79 | 9.40 | | 980 | 140 |
| 221D-14 | 39004 | 121 | 403 | 0.80 | 0.77 | 80 | 403 | 0.53 | 0.51 | 14.45 | 490 | 23 |
| 226D-14 | 39020 | | 711 | 1.43 | 1.37 | | 772 | 1.02 | 0.97 | | 660 | 38 |
| 231D-14 | 39036 | | 1500 | 3.00 | 2.88 | | 1781 | 2.34 | 2.25 | | 780 | 57 |
| 239D-14 | 39052 | | 2842 | 5.69 | 5.46 | | 3168 | 4.17 | 4.00 | | 875 | 96 |
| 247D-14 | 39068 | | 4736 | 9.48 | 9.10 | | 5662 | 7.45 | 7.15 | | 1070 | 140 |
| 221D-17 | 39006 | 101 | 410 | 0.69 | 0.66 | 67 | 410 | 0.45 | 0.43 | 17.28 | 500 | 23 |
| 226D-17 | 39022 | | 754 | 1.26 | 1.21 | | 805 | 0.89 | 0.85 | | 675 | 38 |
| 231D-17 | 39038 | | 1644 | 2.75 | 2.64 | | 1857 | 2.04 | 1.96 | | 800 | 57 |
| 239D-17 | 39054 | | 2959 | 5.00 | 4.80 | | 3219 | 3.54 | 3.40 | | 900 | 96 |
| 247D-17 | 39070 | | 5071 | 8.49 | 8.15 | | 5775 | 6.34 | 6.10 | | 1100 | 135 |
| 221D-20 | 39008 | 87 | 398 | 0.57 | 0.55 | 57 | 411 | 0.39 | 0.37 | 20.03 | 510 | 23 |
| 226D-20 | 39024 | | 758 | 1.09 | 1.05 | | 838 | 0.79 | 0.76 | | 695 | 38 |
| 231D-20 | 39040 | | 1679 | 2.43 | 2.33 | | 1916 | 1.81 | 1.75 | | 825 | 57 |
| 239D-20 | 39056 | | 3022 | 4.36 | 4.19 | | 3299 | 3.12 | 3.01 | | 925 | 96 |
| 247D-20 | 39072 | | 5198 | 7.51 | 7.21 | | 5862 | 5.56 | 5.34 | | 1125 | 135 |
| 221D-24 | 39010 | 73 | 414 | 0.50 | 0.48 | 48 | 404 | 0.31 | 0.31 | 23.95 | 525 | 23 |
| 226D-24 | 39026 | | 809 | 0.98 | 0.94 | | 819 | 0.65 | 0.62 | | 715 | 38 |
| 231D-24 | 39042 | | 1791 | 2.17 | 2.08 | | 1886 | 1.50 | 1.44 | | 850 | 57 |
| 239D-24 | 39058 | | 3175 | 3.83 | 3.68 | | 3353 | 2.66 | 2.55 | | 950 | 96 |
| 247D-24 | 39074 | | 5478 | 6.61 | 6.35 | | 5760 | 4.57 | 4.39 | | 1150 | 135 |

* Overhung Load (O.H.L.) in (LB's) is at center of Output Shaft Extension and with no Thrust Load.

| Size | Shaft Dia. (Ins.) | Input Shaft | | Output Shaft |
|------|-------------------|--|-----|--|
| | | Allowable Overhung Load in Lbs. (No Thrust) at 1 and 2 Shaft diameters from Oil Seal | | Allowable Thrust Load In Lbs. (No Overhung Load) |
| | | 1 | 2 | |
| 221 | 1/2 | 80 | 60 | 700 |
| 226 | 5/8 | 100 | 80 | 1000 |
| 231 | 15/16 | 160 | 120 | 1100 |
| 239 | 1-3/8 | 325 | 225 | 1200 |
| 247 | 1-9/16 | 400 | 300 | 1300 |



200 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 690 and 100 RPM

Service Factor 1.0

ORDER BY CATALOG NUMBER OR ITEM CODE

| Catalog Number | Item Code | INPUT RPM | | | | | | | | Gear Ratio | O.H.L. (LB.)* | Weight (Lb.) |
|----------------|-----------|-----------|-----------------------|-------|--------|---------|-----------------------|-------|--------|------------|---------------|--------------|
| | | 690 | | | | 100 | | | | | | |
| | | O/P RPM | Output Torque (LB-IN) | HP | | O/P RPM | Output Torque (LB-IN) | HP | | | | |
| | | | | Input | Output | | | Input | Output | | | |
| 221S-4 | 39012 | 170 | 313 | .86 | 0.84 | 25 | 343 | 0.14 | 0.13 | 4.06 | 465 | 25 |
| 226S-4 | 39028 | | 624 | 1.71 | 1.68 | | 682 | 0.28 | 0.27 | | 620 | 40 |
| 231S-4 | 39044 | | 1275 | 3.51 | 3.44 | | 1417 | 0.56 | 0.55 | | 730 | 58 |
| 239S-4 | 39060 | | 2795 | 7.69 | 7.54 | | 3113 | 1.24 | 1.22 | | 810 | 96 |
| 247S-4 | 39076 | | 4045 | 11.14 | 10.91 | | 4670 | 1.86 | 1.83 | | 995 | 137 |
| 221D-10 | 39002 | 70 | 405 | .47 | 0.45 | 10 | 426 | 0.07 | 0.07 | 9.84 | 530 | 23 |
| 226D-10 | 39018 | | 798 | .93 | 0.89 | | 985 | 0.17 | 0.16 | | 720 | 38 |
| 231D-10 | 39034 | | 1834 | 2.12 | 2.04 | | 2140 | 0.36 | 0.35 | | 860 | 60 |
| 239D-10 | 39050 | | 3202 | 3.71 | 3.56 | | 3624 | 0.61 | 0.58 | | 860 | 99 |
| 247D-10 | 39066 | | 5605 | 6.49 | 6.24 | | 6012 | 1.01 | 0.97 | | 1160 | 140 |
| 221D-14 | 39004 | 48 | 413 | .32 | 0.31 | 7 | 431 | 0.50 | 0.05 | 14.45 | 550 | 23 |
| 226D-14 | 39020 | | 821 | .65 | 0.62 | | 1051 | 0.13 | 0.12 | | 750 | 38 |
| 231D-14 | 39036 | | 1898 | 1.50 | 1.44 | | 2148 | 0.25 | 0.24 | | 900 | 57 |
| 239D-14 | 39052 | | 3360 | 2.66 | 2.55 | | 3780 | 0.43 | 0.42 | | 1000 | 96 |
| 247D-14 | 39068 | | 5868 | 4.64 | 4.45 | | 6060 | 0.69 | 0.67 | | 1200 | 140 |
| 221D-17 | 39006 | 40 | 403 | .27 | 0.26 | 6 | 432 | 0.04 | 0.04 | 17.28 | 550 | 23 |
| 226D-17 | 39022 | | 834 | .56 | 0.53 | | 1068 | 0.10 | 0.10 | | 750 | 38 |
| 231D-17 | 39038 | | 1986 | 1.30 | 1.26 | | 2153 | 0.21 | 0.20 | | 900 | 57 |
| 239D-17 | 39054 | | 3421 | 2.26 | 2.17 | | 3790 | 0.36 | 0.35 | | 1000 | 96 |
| 247D-17 | 39070 | | 5904 | 3.90 | 3.74 | | 6076 | 0.58 | 0.56 | | 1200 | 135 |
| 221D-20 | 39008 | 34 | 406 | .23 | 0.22 | 5 | 434 | 0.03 | 0.03 | 20.03 | 550 | 23 |
| 226D-20 | 39024 | | 878 | .50 | 0.48 | | 1072 | 0.09 | 0.08 | | 750 | 38 |
| 231D-20 | 39040 | | 2005 | 1.14 | 1.10 | | 2158 | 0.18 | 0.17 | | 900 | 57 |
| 239D-20 | 39056 | | 3446 | 1.96 | 1.88 | | 3800 | 0.31 | 0.30 | | 1000 | 96 |
| 247D-20 | 39072 | | 5958 | 3.39 | 3.26 | | 6094 | 0.50 | 0.48 | | 1200 | 135 |
| 221D-24 | 39010 | 29 | 409 | .20 | 0.19 | 4 | 436 | 0.03 | 0.03 | 23.95 | 550 | 23 |
| 226D-24 | 39026 | | 893 | .43 | 0.41 | | 1080 | 0.08 | 0.07 | | 750 | 38 |
| 231D-24 | 39042 | | 2046 | .97 | 0.94 | | 2162 | 0.15 | 0.14 | | 900 | 57 |
| 239D-24 | 39058 | | 3492 | 1.67 | 1.60 | | 3811 | 0.26 | 0.25 | | 1000 | 96 |
| 247D-24 | 39074 | | 5988 | 2.85 | 2.74 | | 6109 | 0.43 | 0.40 | | 1200 | 135 |

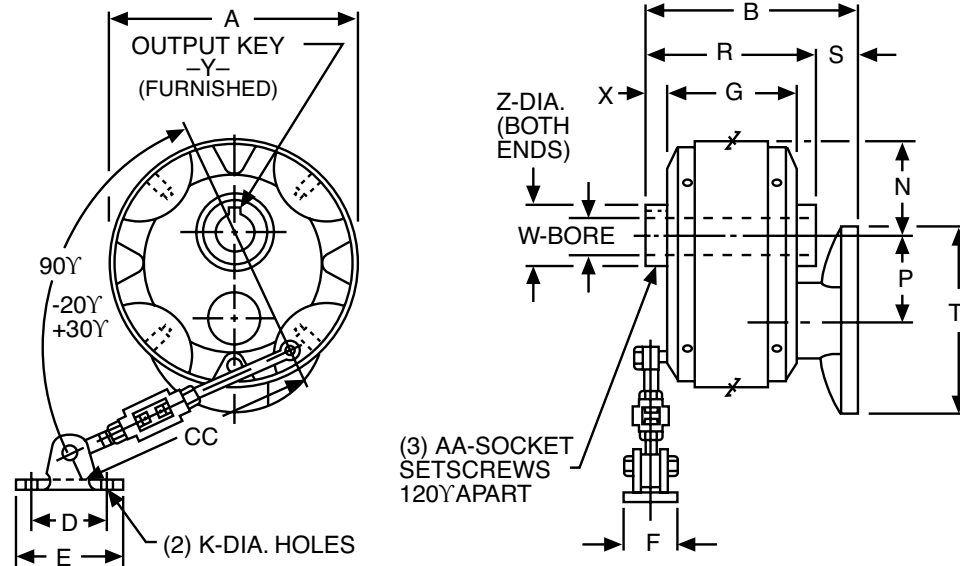
* Overhung Load (O.H.L.) in (LB's) is at center of Output Shaft Extension and with no Thrust Load.

| Size | Shaft Dia. (Ins.) | Input Shaft | | Output Shaft |
|------|-------------------|--|-----|--|
| | | Allowable Overhung Load in Lbs. (No Thrust) at 1 and 2 Shaft diameters from Oil Seal | | Allowable Thrust Load In Lbs. (No Overhung Load) |
| | | 1 | 2 | |
| 221 | 1/2 | 80 | 60 | 700 |
| 226 | 5/8 | 100 | 80 | 1000 |
| 231 | 15/16 | 160 | 120 | 1100 |
| 239 | 1-3/8 | 325 | 225 | 1200 |
| 247 | 1-9/16 | 400 | 300 | 1300 |

200 Series Flanged Reducer Dimensions

F200 Series; F221-247 Sizes Hollow Shaft

For ordering information See Page 249.



ALL DIMENSIONS IN INCHES

| Size | A | B | | | D | E | F | G | K | N | P | R | S | | |
|------|-------|---------------|-------|-------|------|------|------|------|-----|------|------|------|---------------|-------|-------|
| | | NEMA Mounting | | | | | | | | | | | NEMA Mounting | | |
| | | 56C 140TC | 180TC | 210TC | | | | | | | | | 56C 140TC | 180TC | 210TC |
| 221 | 6.19 | 6.13 | — | — | 2.25 | 3.31 | 1.06 | 3.31 | .41 | 2.19 | 2.12 | 4.31 | 1.81 | — | — |
| 226 | 7.50 | 6.69 | — | — | 2.25 | 3.31 | 1.06 | 4.06 | .41 | 2.81 | 2.60 | 5.19 | 1.50 | — | — |
| 231 | 8.88 | 7.19 | 8.06 | — | 2.63 | 3.69 | 1.06 | 4.75 | .41 | 3.44 | 3.11 | 5.88 | 1.31 | 2.19 | — |
| 239 | 11.19 | 7.94 | 9.06 | 9.06 | 2.63 | 3.69 | 1.06 | 5.44 | .41 | 4.03 | 3.89 | 6.69 | 1.25 | 2.38 | 2.38 |
| 247 | 12.88 | — | 9.56 | 10.31 | 3.00 | 4.31 | 1.31 | 5.94 | .94 | 4.88 | 4.67 | 7.31 | — | 2.25 | 3.00 |

| Size | T | | | W +.001 -.000 | Output | | | Z | AA | CC | Optional Reaction Rod Kit | |
|------|---------------|-------|-------|---------------------|--------|------------|-------|--------|---------|-------|---------------------------|-------|
| | NEMA Mounting | | | | X | Y | | | | | Item Catalog # | Code |
| | 56C 140TC | 180TC | 210TC | | | Sq. | LGTH. | | | | | |
| 221 | 6.56 | — | — | 1.0000 | .50 | 1/4 x 7/32 | 1-3/8 | 1.3750 | 10-32 | 18-12 | X221-76K | 24188 |
| 226 | 6.56 | — | — | 1.2500 | .56 | 1/4 x 7/32 | 1-1/2 | 1.7702 | 1/4-28 | 30-24 | X226-76K | 24190 |
| 231 | 6.56 | 9.25 | — | 1.4375 | .56 | 3/8 x 5/16 | 1-3/4 | 2.1638 | 1/4-28 | 30-24 | X231-76K | 24192 |
| 239 | 6.56 | 9.25 | 10.13 | 1.9375 | .63 | 1/2 x 3/8 | 2 | 2.5575 | 5/16-24 | 30-24 | X239-76K | 24194 |
| 247 | — | 9.25 | 10.13 | 2.1875 | .69 | 1/2 x 3/8 | 2-1/4 | 2.9512 | 3/8-24 | 30-24 | X247-76K | 24196 |

Refer to Page 264 for Shaft Kit and for Reaction Rod Kit.
Note: For external reference surfaces, refer to page 265.



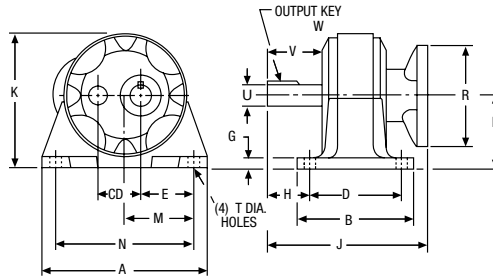
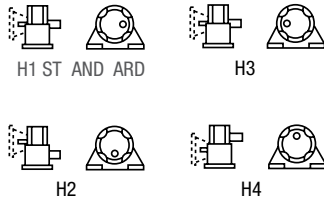
200 Series Flanged Reducer Dimensions

F200 Series; Horizontal Base Projecting Shaft

For ordering information See Page 249.

Parallel Shafts

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| NEMA Mounting | Input | |
|---------------|--------------------------|-------------|
| | Bore +.0015 -.0000 | Keyway |
| 56C | .625 | 3/16 × 3/32 |
| 140TC | .875 | 3/16 × 3/32 |
| 180TC | 1.125 | 1/4 × 1/8 |
| 210TC | 1.375 | 5/16 × 5/32 |

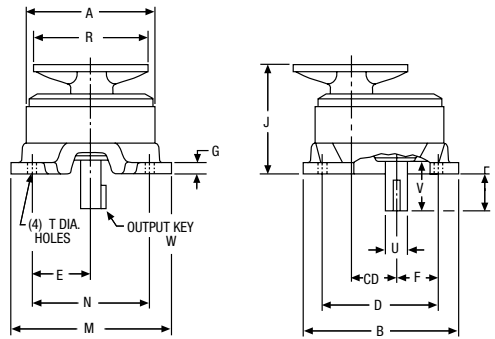
| Size | C.D. | A | B | D | E | G | H | J | | | | K | M | N |
|------|------|-------|-------|------|------|------|------|---------------|-------|-------|-------|-------|------|-------|
| | | | | | | | | NEMA Mounting | | | | | | |
| | | | | | | | | 56C | 140TC | 180TC | 210TC | | | |
| 221 | 2.12 | 8.75 | 6.00 | 4.75 | 2.72 | .50 | 2.16 | 8.50 | — | — | — | 6.84 | 3.63 | 7.25 |
| 226 | 2.60 | 11.00 | 7.38 | 5.75 | 3.56 | .63 | 2.59 | 9.56 | 9.56 | — | — | 8.38 | 4.50 | 9.00 |
| 231 | 3.11 | 12.50 | 8.50 | 6.75 | 4.13 | .75 | 2.72 | 10.34 | 10.84 | 11.22 | — | 9.88 | 5.13 | 10.25 |
| 239 | 3.89 | 15.50 | 9.75 | 7.75 | 4.94 | .88 | 3.38 | — | 11.84 | 12.97 | 12.97 | 12.34 | 6.50 | 13.00 |
| 247 | 4.67 | 17.50 | 10.75 | 8.50 | 5.94 | 1.00 | 3.81 | — | 13.97 | 13.53 | 14.72 | 14.19 | 7.50 | 15.00 |

| Size | P | R | | | | T Holes | Low Speed Shaft | | | | Approx. Weight (Lbs.) | Optional | |
|------|------|---------------|-------|-------|-------|---------|---------------------|------|-------|--------|-----------------------|----------------------------|--------------------------------|
| | | NEMA Mounting | | | | | U +.000 -.001 | V | W-Key | | | Base Kit No. (Ref. Pg 249) | Output Shaft Kit (Ref. Pg 248) |
| | | 56C | 140TC | 180TC | 210TC | | | | Sq. | LENGTH | | | |
| 221 | 3.75 | 6.56 | — | — | — | 13/32 | 1.0000 | 2.25 | 1/4 | 1-1/4 | 28 | X221-11HK | X221-3PK |
| 226 | 4.62 | 6.56 | 6.56 | — | — | 15/32 | 1.2500 | 2.75 | 1/4 | 1-5/8 | 43 | X226-11HK | X226-3PK |
| 231 | 5.44 | 6.56 | 6.56 | 9.25 | — | 17/32 | 1.3750 | 3.00 | 5/16 | 1-3/4 | 69 | X231-11HK | X231-3PK |
| 239 | 6.75 | — | 6.96 | 9.25 | 10.13 | 19/32 | 1.8750 | 3.75 | 1/2 | 2 | 124 | X239-11HK | X239-3PK |
| 247 | 7.75 | — | 9.25 | 10.13 | 10.13 | 21/32 | 2.1250 | 4.25 | 1/2 | 2-1/2 | 166 | X247-11HK | X247-3PK |

F200 Series; Vertical Base Projecting Shaft

Parallel Shafts

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| NEMA Mounting | Input | |
|---------------|--------------------------|-------------|
| | Bore +.0015 -.0000 | Keyway |
| 56C | .625 | 3/16 × 3/32 |
| 140TC | .875 | 3/16 × 3/32 |
| 180TC | 1.125 | 1/4 × 1/8 |
| 210TC | 1.375 | 5/16 × 5/32 |

| Size | C.D. | A | B | D | E | F | G | J | | | | M | N |
|------|------|-------|-------|-------|------|------|------|---------------|-------|-------|-------|-------|-------|
| | | | | | | | | NEMA Mounting | | | | | |
| | | | | | | | | 56C | 140TC | 180TC | 210TC | | |
| 221 | 2.12 | 6.19 | 8.00 | 5.75 | 2.88 | 1.97 | .50 | 6.53 | — | — | — | 8.25 | 5.75 |
| 226 | 2.60 | 7.50 | 9.63 | 7.00 | 3.50 | 2.56 | .63 | 7.13 | 7.13 | — | — | 9.88 | 7.00 |
| 231 | 3.11 | 8.88 | 11.00 | 8.25 | 4.13 | 3.13 | .75 | 7.69 | 8.19 | 8.88 | — | 11.25 | 8.25 |
| 239 | 3.89 | 11.19 | 13.63 | 10.25 | 5.13 | 3.56 | .88 | — | 8.75 | 9.88 | 9.88 | 13.88 | 10.25 |
| 247 | 4.67 | 12.88 | 15.50 | 11.75 | 5.88 | 4.31 | 1.00 | — | — | 10.31 | 9.88 | 16.00 | 11.75 |

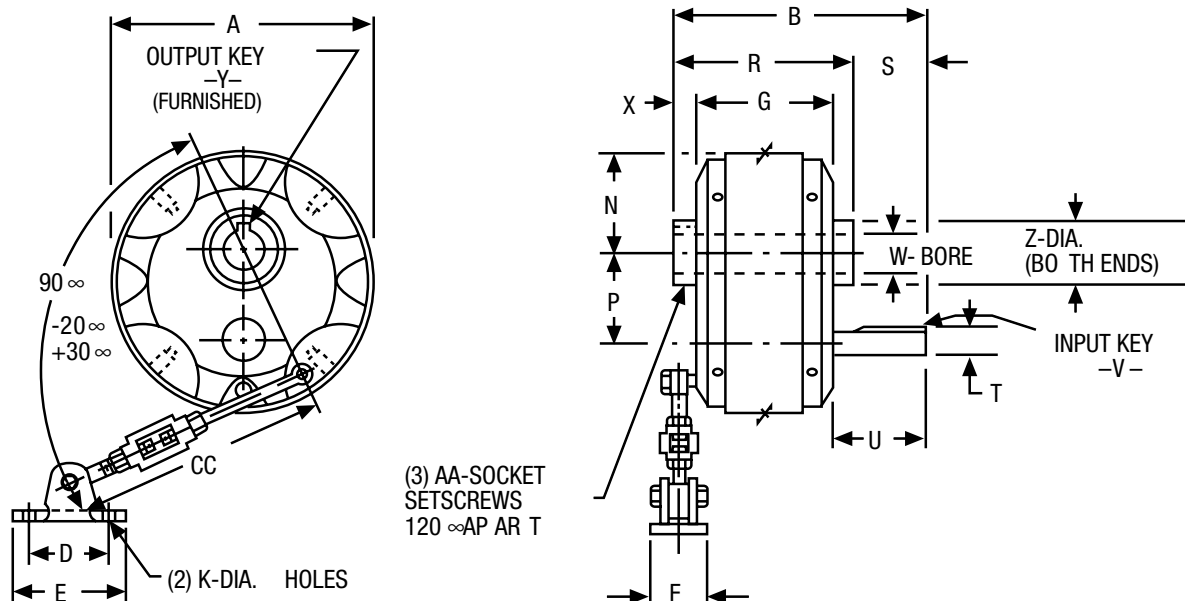
| Size | P | R | | | | T Holes | Low Speed Shaft | | | | Approx. Weight (Lbs.) | Optional | |
|------|------|---------------|-------|-------|-------|---------|---------------------|------|-------|--------|-----------------------|----------------------------|--------------------------------|
| | | NEMA Mounting | | | | | U +.000 -.001 | V | W-Key | | | Base Kit No. (Ref. Pg 249) | Output Shaft Kit (Ref. Pg 248) |
| | | 56C | 140TC | 180TC | 210TC | | | | Sq. | LENGTH | | | |
| 221 | 1.97 | 6.56 | — | — | — | 13/32 | 1.0000 | 2.25 | 1/4 | 1-1/4 | 28 | X221-11VK | X221-3PK |
| 226 | 2.44 | 6.56 | 6.56 | — | — | 15/32 | 1.2500 | 2.75 | 1/4 | 1-5/8 | 43 | X226-11VK | X226-3PK |
| 231 | 2.66 | 6.56 | 6.56 | 9.25 | — | 17/32 | 1.3750 | 3.00 | 5/16 | 1-3/4 | 69 | X231-11VK | X231-3PK |
| 239 | 3.09 | — | 6.96 | 9.25 | 10.13 | 19/32 | 1.8750 | 3.75 | 1/2 | 2 | 124 | X239-11VK | X239-3PK |
| 247 | 3.66 | — | 9.25 | 10.13 | 10.13 | 21/32 | 2.1250 | 4.25 | 1/2 | 2-1/2 | 166 | X247-11VK | X247-3PK |

*Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surface, viewed from end of output shaft. Input may be rotated clockwise or counterclockwise. Input and Output shafts of Single reduction (S) units rotate in opposite directions, Double reduction (D) units in the same direction.

200 Series Non-Flanged Reducer Dimensions

200 Series; 221-247 Sizes Hollow Shaft

For ordering information See Page 249.



ALL DIMENSIONS IN INCHES

| Size | A | B | D | E | F | G | K | N | P | R | S |
|------|-------|-------|------|------|------|------|-----|------|------|------|------|
| 221 | 6.19 | 5.88 | 2.25 | 3.31 | 1.06 | 3.31 | .41 | 2.19 | 2.12 | 4.31 | 1.50 |
| 226 | 7.50 | 7.50 | 2.25 | 3.31 | 1.06 | 4.06 | .41 | 2.19 | 2.60 | 5.18 | 2.31 |
| 231 | 8.88 | 8.37 | 2.62 | 3.69 | 1.06 | 4.75 | .41 | 3.44 | 3.11 | 5.88 | 2.50 |
| 239 | 11.19 | 10.25 | 2.62 | 3.69 | 1.06 | 5.44 | .41 | 4.03 | 3.89 | 6.69 | 3.56 |
| 247 | 12.88 | 10.88 | 3.00 | 4.31 | 1.31 | 5.94 | .41 | 4.88 | 4.67 | 7.31 | 3.56 |

| Size | High Speed Shaft | | | | Low Speed Shaft | | | | Z | AA | CC Max-Min | Optional* Reaction Rod Kit | |
|------|---------------------|------|------|--------|---------------------|-----|------------|-------|--------|---------|---------------|-------------------------------|--------------|
| | T +.000 -.001 | U | V | | W +.001 -.000 | X | Y | | | | | Catalog Number | Item Code |
| | | | Sq. | Lgth. | | | Sq. | Lgth. | | | | | |
| 221 | .5000 | 2.00 | 1/8 | 7/8 | 1.0000 | .50 | 1/4 x 7/32 | 1-3/8 | 1.3750 | #10-32 | 18-12 | X221-76K | 24188 |
| 226 | .6250 | 2.88 | 3/16 | 1 | 1.2500 | .56 | 1/4 x 7/32 | 1-1/2 | 1.7702 | 1/4-28 | 30-24 | X226-76K | 24190 |
| 231 | .9375 | 3.06 | 1/4 | 1-1/4 | 1.4375 | .56 | 3/8 x 5/16 | 1-3/4 | 2.1638 | 1/4-28 | 30-24 | X231-76K | 24192 |
| 239 | 1.3750 | 4.19 | 5/16 | 2-7/16 | 1.9375 | .62 | 1/2 x 3/8 | 2 | 2.5575 | 5/16-24 | 30-24 | X239-76K | 24194 |
| 247 | 1.5675 | 4.25 | 3/8 | 2-1/4 | 2.1875 | .69 | 1/2 x 3/8 | 2-1/4 | 2.9512 | 3/8-24 | 30-24 | X247-76K | 24196 |

* See page 264 for dimensions



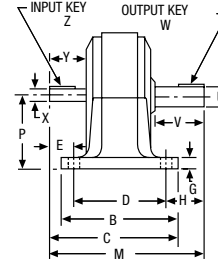
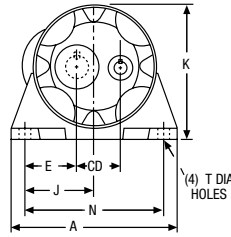
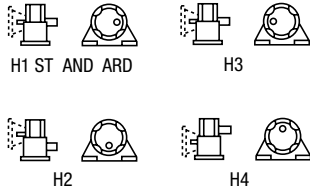
200 Series Non-Flanged Reducer Dimensions

200 Series; Horizontal Base Projecting Shaft

Parallel Shafts

For ordering information See Page 249.

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

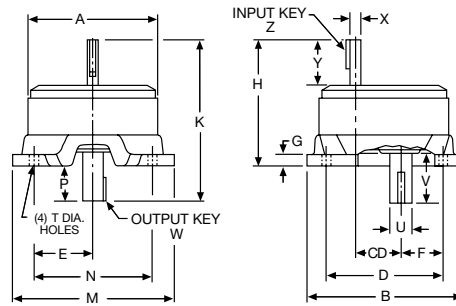
| Size | C.D. | A | B | C | D | E | G | H | J | K | M | N | P |
|------|------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|------|
| 221 | 2.12 | 8.75 | 6.00 | 6.72 | 4.75 | 2.72 | .50 | 2.16 | 3.63 | 6.84 | 8.25 | 7.25 | 3.75 |
| 226 | 2.60 | 11.00 | 7.38 | 8.59 | 5.75 | 3.56 | .63 | 2.59 | 4.50 | 8.38 | 10.38 | 9.00 | 4.62 |
| 231 | 3.11 | 12.50 | 8.50 | 9.69 | 6.75 | 4.13 | .75 | 2.72 | 5.13 | 9.88 | 11.53 | 10.25 | 5.44 |
| 239 | 3.89 | 15.50 | 9.75 | 11.78 | 7.75 | 4.94 | .88 | 3.38 | 6.50 | 12.34 | 14.16 | 13.00 | 6.75 |
| 247 | 4.67 | 17.50 | 10.75 | 12.59 | 8.50 | 5.94 | 1.00 | 3.81 | 7.50 | 14.19 | 15.28 | 15.00 | 7.75 |

| Size | C.D. | T Holes | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) | Optional | |
|------|------|---------|---------------------|------|-------|-------|---------------------|------|-------|--------|-----------------------|---------------------------------|---|
| | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | Base Kit No. (Ref. page 251) | Output Shaft Kit No. (Ref. page 250) |
| | | | | | Sq. | Lgth. | | | Sq. | Lgth. | | | |
| 221 | 2.12 | 13/32 | 1.0000 | 2.25 | 1/4 | 1-1/4 | .5000 | 2.06 | 1/8 | 7/8 | 22 | X221-11HK | X221-3PK |
| 226 | 2.60 | 15/32 | 1.2500 | 2.75 | 1/4 | 1-1/4 | .6250 | 2.88 | 3/16 | 1 | 39 | X226-11HK | X226-3PK |
| 231 | 3.11 | 17/32 | 1.3750 | 3.00 | 5/16 | 1-3/4 | .9375 | 3.06 | 1/4 | 1-1/4 | 60 | X231-11HK | X231-3PK |
| 239 | 3.89 | 19/32 | 1.8750 | 3.75 | 1/2 | 2 | 1.3750 | 4.19 | 5/16 | 2-7/16 | 104 | X239-11HK | X239-3PK |
| 247 | 4.67 | 21/32 | 2.1250 | 4.25 | 1/2 | 2-1/2 | 1.5625 | 4.25 | 3/8 | 2-1/4 | 148 | X247-11HK | X247-3PK |

200 Series; Vertical Base Projecting Shaft

Parallel Shafts

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

| Size | C.D. | A | B | D | E | F | G | H | K | M | N | P |
|------|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|
| 221 | 2.12 | 6.19 | 8.00 | 5.75 | 2.88 | 1.97 | .50 | 6.28 | 8.25 | 8.25 | 5.75 | 1.97 |
| 226 | 2.60 | 7.50 | 9.63 | 7.00 | 3.50 | 2.56 | .63 | 7.94 | 10.38 | 9.88 | 7.00 | 2.44 |
| 231 | 3.11 | 8.88 | 11.00 | 8.25 | 4.13 | 3.13 | .75 | 8.88 | 11.53 | 11.25 | 8.25 | 2.66 |
| 239 | 3.89 | 11.19 | 13.63 | 10.25 | 5.13 | 3.56 | .88 | 11.06 | 14.16 | 13.88 | 10.25 | 3.09 |
| 247 | 4.67 | 12.88 | 15.50 | 11.75 | 5.88 | 4.31 | 1.00 | 11.63 | 15.28 | 16.00 | 11.75 | 3.66 |

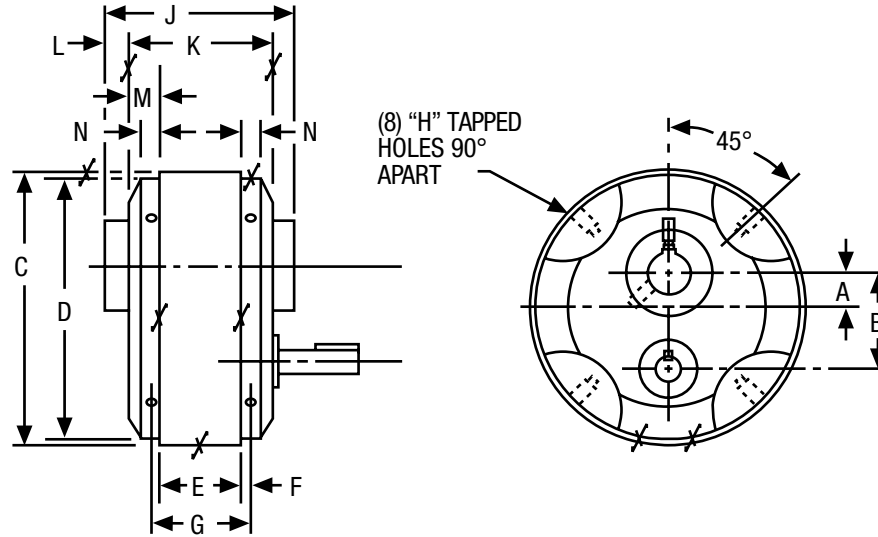
| Size | C.D. | T Holes | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (Lbs.) | Optional | |
|------|------|---------|---------------------|------|-------|-------|---------------------|------|-------|--------|-----------------------|---------------------------------|---|
| | | | U +.000 -.001 | V | W-Key | | X +.000 -.001 | Y | Z-Key | | | Base Kit No. (Ref. page 251) | Output Shaft Kit No. (Ref. page 250) |
| | | | | | Sq. | Lgth. | | | Sq. | Lgth. | | | |
| 221 | 2.12 | 13/32 | 1.0000 | 2.25 | 1/4 | 1-1/4 | .5000 | 2.06 | 1/8 | 7/8 | 22 | X221-11VK | X221-3PK |
| 226 | 2.60 | 15/32 | 1.2500 | 2.75 | 1/4 | 1-1/4 | .6250 | 2.88 | 3/16 | 1 | 39 | X226-11VK | X226-3PK |
| 231 | 3.11 | 17/32 | 1.3750 | 3.00 | 5/16 | 1-3/4 | .9375 | 3.06 | 1/4 | 1-1/4 | 60 | X231-11VK | X231-3PK |
| 239 | 3.89 | 19/32 | 1.8750 | 3.75 | 1/2 | 2 | 1.3750 | 4.19 | 5/16 | 2-7/16 | 104 | X239-11VK | X239-3PK |
| 247 | 4.67 | 21/32 | 2.1250 | 4.25 | 1/2 | 2-1/2 | 1.5625 | 4.25 | 3/8 | 2-1/4 | 148 | X247-11VK | X247-3PK |

* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surface, viewed from end of output shaft. Input may be rotated clockwise or counterclockwise.

• Input and Output shafts of Single reduction (S) units rotate in opposite directions, Double reduction (D) units in the same direction.

200 Series Optimount® Dimensions

200 Series; 221-247 Sizes External Reference Surfaces



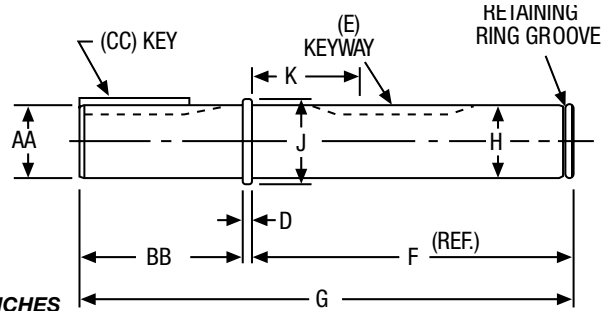
ALL DIMENSIONS IN INCHES

| Size | A ±.005 | B +.002 -.000 | C* +.000 -.010 | D* +.000 -.003 | E* +.000 -.004 | F | G | H | | J | K | L | M | N |
|------|------------|---------------------|----------------------|----------------------|----------------------|-----|------|---------|-------|------|------|-----|------|-----|
| | | | | | | | | Size | Depth | | | | | |
| 221 | .904 | 2.123 | 6.193 | 5.998 | 2.000 | .19 | 2.38 | 1/4-20 | 9/16 | 4.31 | 3.31 | .50 | .66 | .44 |
| 226 | .936 | 2.595 | 7.495 | 7.248 | 2.062 | .38 | 2.81 | 5/16-18 | 5/8 | 5.19 | 4.06 | .56 | 1.00 | .69 |
| 231 | 1.000 | 3.114 | 8.870 | 8.624 | 2.625 | .34 | 3.31 | 3/8-16 | 3/4 | 5.88 | 4.75 | .56 | 1.06 | .69 |
| 239 | 1.560 | 3.893 | 11.182 | 10.936 | 3.312 | .34 | 4.00 | 3/8-16 | 3/4 | 6.69 | 5.44 | .62 | 1.06 | .69 |
| 247 | 1.560 | 4.671 | 12.870 | 12.624 | 3.687 | .38 | 4.44 | 7/16-14 | 7/8 | 7.31 | 5.94 | .69 | 1.12 | .75 |

*Tolerance on Dimensions Apply Only to Housing before Painting.

200 Series Shaft Kits / Reaction Rod Kits

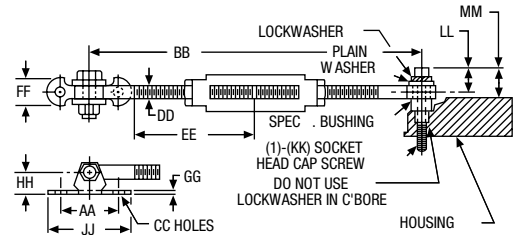
Steel Projecting Output Shafts (Insertable)



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| Size | AA | BB | CC | | D | E | F | G | H | J | K | Kit Catalog Number | Item Code |
|------|------------------|-------|------|-------|-----|----------------------|------|-------|------------------|------|------|--------------------|-----------|
| | | | Sq. | Lgth. | | | | | | | | | |
| 221 | .9995 .9985 | 2-1/4 | 1/4 | 1-1/4 | .12 | 1/4 x 1/8 x 1-13/32 | 4.47 | 6.84 | .9998 .9988 | 1.16 | 1.45 | X221-3PK | 23888 |
| 226 | 1.2495 1.2485 | 2-3/4 | 1/4 | 1-1/4 | .12 | 1/4 x 1/8 x 1-17/32 | 5.38 | 8.25 | 1.2498 1.2488 | 1.41 | 1.83 | X226-3PK | 23892 |
| 231 | 1.3745 1.3735 | 3 | 5/16 | 1-3/4 | .16 | 3/8 x 3/16 x 1-25/32 | 6.09 | 9.25 | 1.4373 1.4363 | 1.62 | 2.75 | X231A-3PK | 63124 |
| 239 | 1.8745 1.8735 | 3-3/4 | 1/2 | 2 | .16 | 1/2 x 1/4 x 2-1/32 | 7.00 | 10.91 | 1.9373 1.9363 | 2.12 | 2.33 | X239-3PK | 23904 |
| 247 | 2.1245 2.1235 | 4-1/4 | 1/2 | 2-1/2 | .16 | 1/2 x 1/4 x 2-9/32 | 7.26 | 12.03 | 2.1873 2.1863 | 2.44 | 2.51 | X247-3PK | 23910 |

Reaction Rod Kits



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| Size | AA | BB* | | CC | DD | EE | FF | GG | HH | JJ | KK | LL | MM | Kit Catalog Number | Item Code |
|------|------|------|------|-----|-----|------|------|-----|------|------|---------------------|------|------|--------------------|-----------|
| | | Max. | Min. | | | | | | | | | | | | |
| 221 | 2.25 | 18 | 12 | .41 | .38 | 4.50 | 1.06 | .16 | .78 | 3.31 | 1/4-20 x 1-3/4 lg. | .62 | .64 | X221-76K | 24188 |
| 226 | 2.25 | 30 | 24 | .41 | .50 | 10 | 1.06 | .16 | .78 | 3.31 | 1/4-20 x 2-1/4 lg. | .66 | .94 | X226-76K | 24190 |
| 231 | 2.62 | 30 | 24 | .41 | .62 | 10 | 1.06 | .19 | .94 | 3.69 | 5/16-18 x 2-1/2 lg. | .81 | 1.12 | X231-76K | 24192 |
| 239 | 2.62 | 30 | 24 | .41 | .62 | 10 | 1.06 | .19 | .94 | 3.69 | 3/8-16 x 2-3/4 lg. | .91 | 1.44 | X239-76K | 24194 |
| 247 | 3.00 | 30 | 24 | .47 | .75 | 10 | 1.31 | .21 | 1.12 | 4.21 | 7/16-14 x 3 lg. | 1.03 | 1.41 | X247-76K | 24196 |

* BB dimension can be reduced by cutting off threaded rods.

INSTALLATION INFORMATION

The ideal position of the reaction rod is at 90° from a line drawn through the center of the hollow shaft and the point where reaction rod is attached to the housing or bracket.

This is illustrated in Figure 1, along with allowable angular deviations.

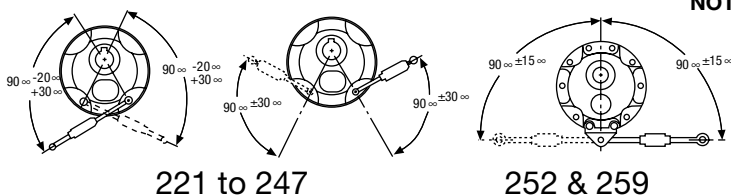
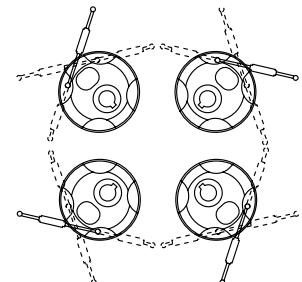


Figure 1

Figure 2 illustrates in a typical manner the possible reaction rod positions for shaft mounted reducers in horizontal or vertical positions.

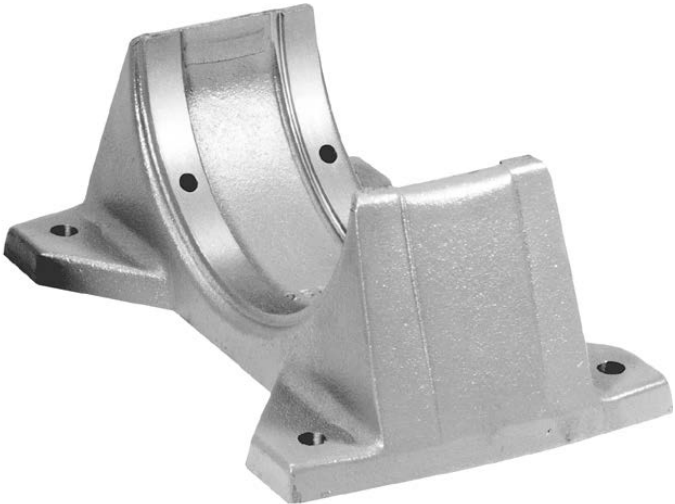
NOTE: The reaction rod must be attached to the housing only at the screw locations identified by the spot faced surfaces or to the reaction rod bracket attached to the housing.

Figure 2



200 Series Base Kits

Base Kits (Cast Iron)



HORIZONTAL

| Kit Catalog No. | Item Code |
|-----------------|-----------|
| X221-11HK | 68643 |
| X226-11HK | 68654 |
| X231-11HK | 68656 |
| X239-11HK | 68658 |
| X247-11HK | 68660 |



VERTICAL

| Kit Catalog No. | Item Code |
|-----------------|-----------|
| X221-11VK | 68644 |
| X226-11VK | 68655 |
| X231-11VK | 68657 |
| X239-11VK | 68659 |
| X247-11VK | 68661 |



200 Series Optimount® Washdown Duty



200 SERIES – BOST-KLEEN™

- Washable and Scrubbable
- Durable, Non-Absorbent, Non-Toxic White Epoxy Finish, USDA Approved
- Corrosion Resistant
- 1/4 to 20 Horsepower Range
- Single and Double Reducton Rations – 4:1 to 24:1
- Standard NEMA C-Face and Projecting Input Shaft Configurations
- Parallel Shafts
- Horizontal and Vertical Mounting Kits
- Projecting and Hollow Output Shafts

STAINLESS BOST-KLEEN™

- Includes all features of the Standard WHITE BOST-KLEEN Reducers
- U.S.D.A. Approved for use in Food Processing and Handling Industry where incidental food contact may occur
- Durable Stainless Steel Epoxy Coating System Utilizes a unique #316L Stainless Steel Leafing Pigment. This catalyzed system creates a HARD, NON-TOXIC METALLIC FINISH

BISSC Certified Basic Model Numbers, Dimensions And Available Ratios

| White BOST-KLEEN | | Stainless BOST-KLEEN | | Center Distance | NEMA Mounting | Input Shaft Dia. +.000 -.001 | Output Shaft Dia. +.000 -.001 | Available Ratios |
|------------------|------------|----------------------|------------|-----------------|--------------------|------------------------------------|-------------------------------------|------------------|
| NON-FLANGED Type | Quill Type | NON-FLANGED Type | Quill Type | | | | | |
| BK221 | BKF221 | SBK221 | SBKF221 | 2.12 | 56C | .500 | 1.000 | 4,10,14,17,20,24 |
| BK226 | BKF226 | SBK226 | SBKF226 | 2.60 | 56C,140TC | .625 | 1.2500 | 4,10,14,17,20,24 |
| BK231 | BKF231 | SBK231 | SBKF231 | 3.11 | 56C,140TC,180TC | .9375 | 1.3750 | 4,10,14,17,20,24 |
| BK239 | BKF239 | SBK239 | SBKF239 | 3.89 | 140TC,180TC, 210TC | 1.375 | 1.8750 | 4,10,14,17,20,24 |
| BK247 | BKF247 | SBK247 | SBKF247 | 4.67 | 180TC,210TC | 1.5625 | 2.1250 | 4,10,14,17,20,24 |

J

Warning: Boston Gear speed reducers are normally shipped without lubricant. They must be filled to the proper level with the recommended lubricant before operation.

CAUTION

- For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards. You must consider overall operational system safety at all times.
- When using a gear drive to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.
- Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

General Instructions

1. When mounting, use maximum possible bolt size and secure gear drive to a rigid foundation. Periodic inspection of all bolts is recommended.
2. Align all shafts accurately. Improper alignment can result in failure. Use of flexible couplings is recommended to compensate for slight misalignment.
3. Arrange the drain and breather plug per your mounting position as indicated on page 268. The breather plug should also be located in the *Fill* position.
4. Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.
5. Gear drives are nameplated for 1750 RPM Input Speed and Class I Service. For lower Input Speeds and other Service Class, refer to catalog rating information.
6. Input Speeds of 1750 and lower are shown in catalog rating tables for speed reducing applications. This does not represent the maximum speed. Since speed limitation is based on pitching velocity and varies with size and ratio.

Shaft Mounted Installation

Mount reducer on the shaft to be driven, as close to the supporting bearing as possible, and tighten end setscrews. For installations requiring an adapter bushing, the setscrews must pass through clearance holes in the bushing. For severe applications, the driven shaft should be spot drilled for these setscrews.

Instructions for Flanged Models

F200 (Quill Type Input)

1. Assemble the key to the motor shaft and coat the shaft with anti-seize compound. Insert the motor shaft into the reducer input shaft.
2. Rotate the motor to proper position and firmly secure to flange with four hex-head cap screws.

CAUTION - If the motor does not readily seat itself, check to determine if key has moved axially along motor shaft, causing interference. Staking of the keyway adjacent to the motor key will facilitate this procedure.

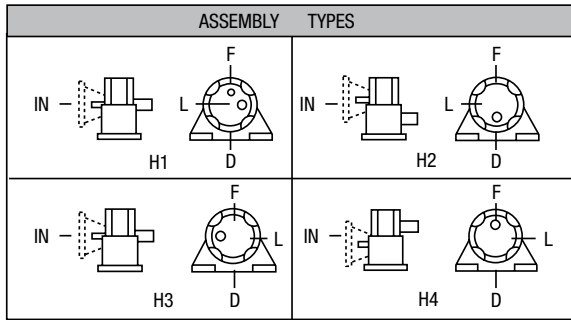
Location of Filler, Level and Drain Plugs

Optimount reducers may be mounted in any position shown with the following exceptions:

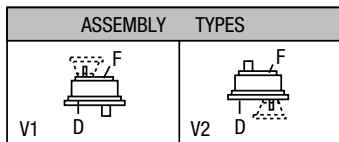
Filler, level and drain plugs are completely interchangeable and should be arranged to suit the required mounting positions. Four (4) pipe tapped holes for these plugs are located on the input shaft side of the housing and one (1) on the opposite side.

200 Series Optimount® Assembly Types & Lubrication

200 SERIES HORIZONTAL BASE



200 SERIES VERTICAL BASE



Recommended Lubricants

The following tables indicate the type and viscosity of lubricant suitable for reducers operating at various temperatures.

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the proper type of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil. Under normal environmental conditions oil changes, are suggested after the initial 250 hours of operation, and thereafter, at regular intervals of 2500 hours or every 6 months. Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Helical Gear Reducers may reach 160°F.

Enclosed Helical

| Ambient (Room) Temperature | Recommended Oil (or equivalent) | Viscosity Range S&S @ 100°F | Oil Type | ISO Viscosity Grade No. |
|----------------------------------|---------------------------------|-----------------------------|----------|-------------------------|
| -20° to 225°F ‡ (-29°C to 107°C) | Klubersynth* UH1 6-460 | 1950/2500 | PAG | 460 |
| -30° to 225°F ‡ (-34°C to 107°C) | Mobile SHC634 | 1950/2500 | PAO | 320 / 460 |

| Recommended Lubricant | Boston Gear Item Code Quart |
|-----------------------|-----------------------------|
| Klubersynth UH1 6-460 | 65159 |
| Mobile SHC634 | 51493 |

CAUTION: Relubricate more frequently, if drive is operated in high ambient temperatures or unusually contaminated atmospheres. High loads and operating temperatures will also require more frequent relubrication.
 * Synthetic recommendation is exclusively for Klubersynth UH1 6-460.
 ‡ The UH1 6-460 lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.

Drain Plug must be installed in the lower most location of the housing. This plug will be on the input shaft side of the housing for positions H1, H3, H4 and V2. The opposite for position V1 and may be either side for H2.

The **Vented Filler Plug** should be installed in the uppermost location. This plug will be on the input shaft side for positions H1, H2, or H3, on either side for H4 and must be tightened into position with the arrow pointing upward.

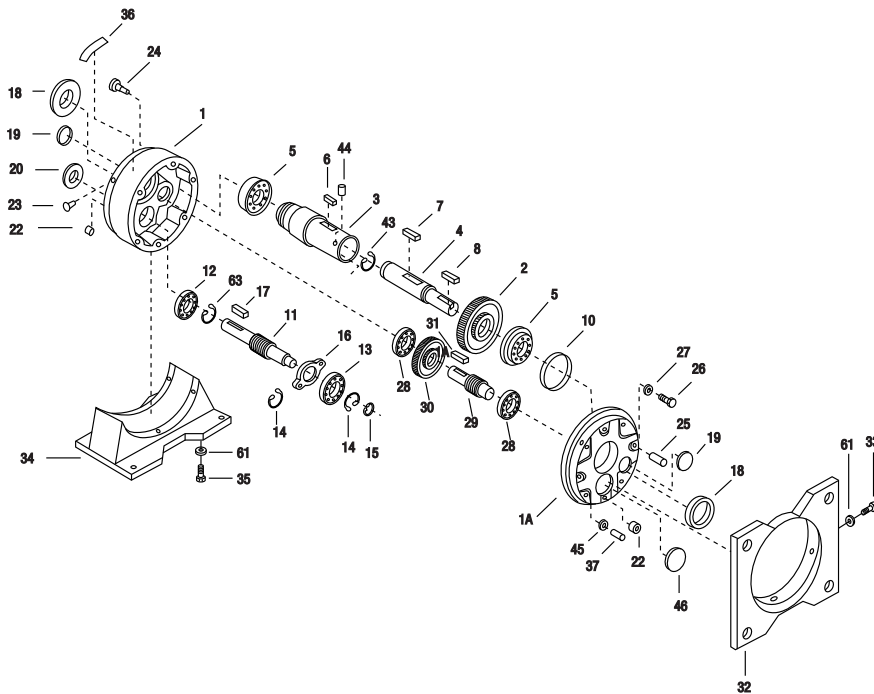
For vertical mounting (V1 and V2), this plug must be tightened with arrow pointing toward the center.

Level Plug position will be as indicated for horizontal positions. For vertical positions the oil level is established by an oil level distance measured from the outer surface of the housing from the oil filler hole.

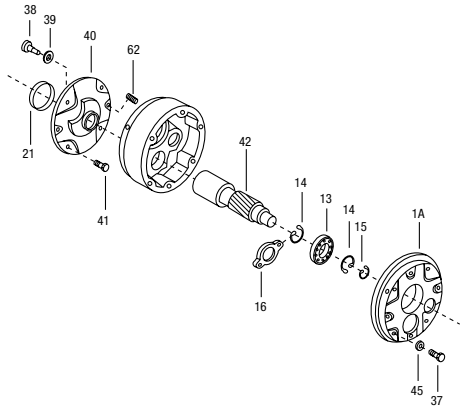
| Size | Single Reduction | | Double Reduction | |
|------|--------------------|----------------|--------------------|----------------|
| | Oil Dist. (Inches) | Capacity (Qts) | Oil Dist. (Inches) | Capacity (Qts) |
| 221 | 1.25 | .38 | 1.00 | .50 |
| 226 | 1.62 | .75 | 1.38 | 1.00 |
| 231 | 2.00 | 1.25 | 1.62 | 1.50 |
| 239 | 2.12 | 2.75 | 1.88 | 3.00 |
| 247 | 2.25 | 4.00 | 1.88 | 4.25 |

200 Series Parts List – Single and Double Reduction

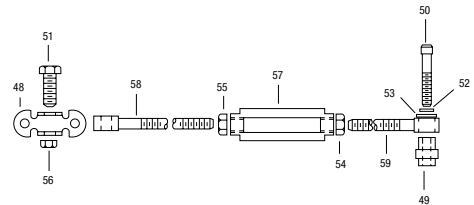
Models 221-247



Models F221-F247



Reaction Arm Kit



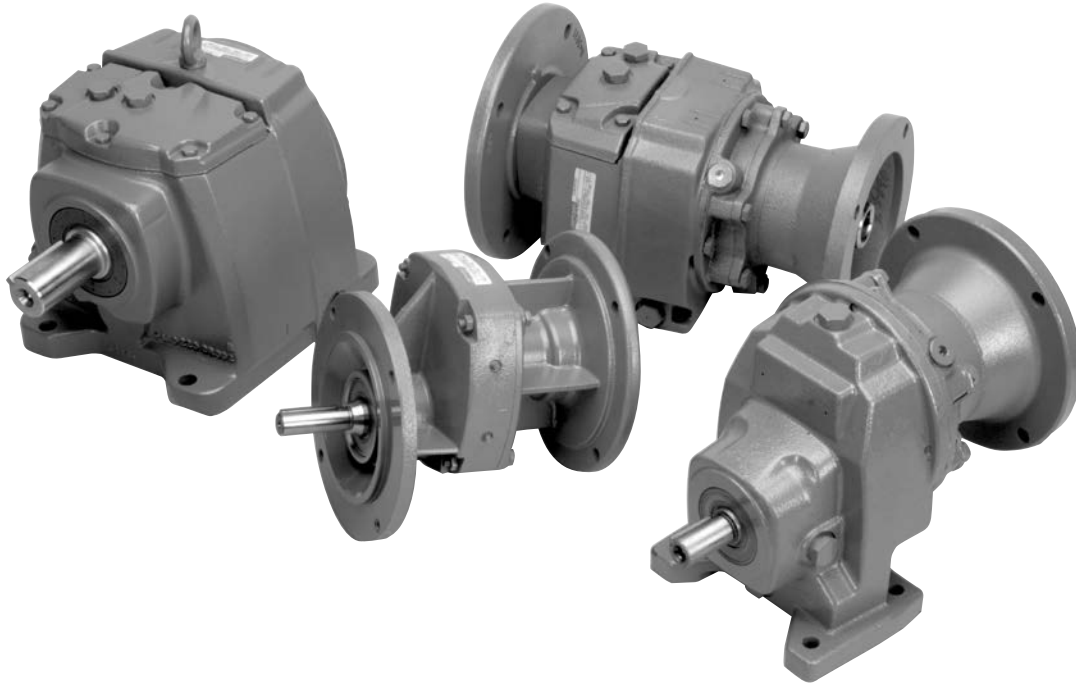
| Part No. | Description of Part |
|----------|--------------------------------|
| 1 | HOUSING, BODY |
| 1A | HOUSING, COVER |
| 2 | HELICAL GEAR (OUTPUT) |
| 3 | HOLLOW OUTPUT SHAFT |
| 4 | SOLID OUTPUT SHAFT, INSERT |
| 4A | N/A |
| 5 | BALL BEARING |
| 6 | KEY, OUTPUT GEAR |
| 7 | KEY |
| 8 | KEY |
| 9 | N/A |
| 10 | SHIM |
| 11 | INPUT HELICAL PINION |
| 12 | BALL BEARING |
| 13 | BALL BEARING |
| 14 | RETAINING RING (FOR 221 ONLY) |
| 15 | RETAINING RING |
| 16 | BEARING RETAINER (FOR 226-247) |
| 17 | KEY |
| 18 | OIL SEAL |
| 19 | BORE PLUG |
| 20 | OIL SEAL |
| 21 | OIL SEAL |

| Part No. | Description of Part |
|----------|-----------------------------------|
| 22 | PIPE PLUG |
| 23 | PLASTIC PLUG |
| 24 | VENTED OIL FILLER |
| 25 | DOWEL PIN |
| 26 | SOC. HEAD CAPSCREW |
| 27 | LOCKWASHER |
| 28 | BALL BEARING |
| 29 | INTERM. HELICAL PINION |
| 30 | INTERM. HELICAL GEAR |
| 31 | KEY, INTERM. GEAR |
| 32 | VERTICAL BASE |
| 33 | SOC. HEAD CAPSCREW |
| 34 | HORIZONTAL BASE |
| 35 | SOC. HEAD CAPSCREW |
| 36 | NAMEPLATE |
| 37 | BUTTON HD. CAPSCREW (FOR 226-247) |
| 38 | SOC. HEAD CAPSCREW |
| 39 | LOCKWASHER |
| 40 | MOTOR FLANGE |
| 41 | HEX HEAD CAPSCREW |
| 42 | MOTOR SHAFT (INPUT) |
| 43 | RETAINING RING |
| 44 | HEX. SOC. SETSCREW |

| Part No. | Description of Part |
|----------|------------------------------|
| 45 | ROLLED WASHER (FOR 226-247) |
| 46 | BORE PLUG |
| 47 | N/A |
| 48 | CLEVIS |
| 49 | BUSHING |
| 50 | SOC. HEAD CAPSCREW |
| 51 | HEX HEAD CAPSCREW |
| 52 | LOCKWASHER |
| 53 | FLATWASHER |
| 54 | NUT |
| 55 | NUT, LEFT HAND |
| 56 | NUT, LOCK |
| 57 | TURNBUCKLE |
| 58 | EYEBOLT, ROD END (LEFT HAND) |
| 59 | EYEBOLT, ROD END |
| 61 | LOCKWASHER |
| 62 | HEX. SOC. SETSCREW |
| 63 | RETAINING RING |

PART ORDERING INFORMATION: Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number.





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| Dimensions | .297-302 |
| Washdown Duty | .303 |

600 Series Product Reference Guide

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F600B Series Helical Gear Flanged Reducers

Ordering Information – Page 273

Lubrication – Page 276

Selection/Rating Information – Pages 278-290

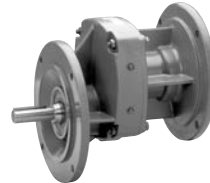
Motor Selection – Pages 340 and 342



**Single Reduction
Foot Mounted, Flange Input**
Dimensions - Page 297



**Double & Triple Reduction
Foot Mounted, Flange Input**
Dimensions - Page 298



**Single Reduction
Output Flange Mounted**
Dimensions - Page 299



**Double & Triple Reduction
Output Flange Mounted**
Dimensions - Page 300

600B Series Helical Gear Non-Flanged Reducers

Ordering Information – Page 273

Lubrication – Page 276

Selection/Rating Information – Pages 278-290

Motor Selection – Pages 340 and 342



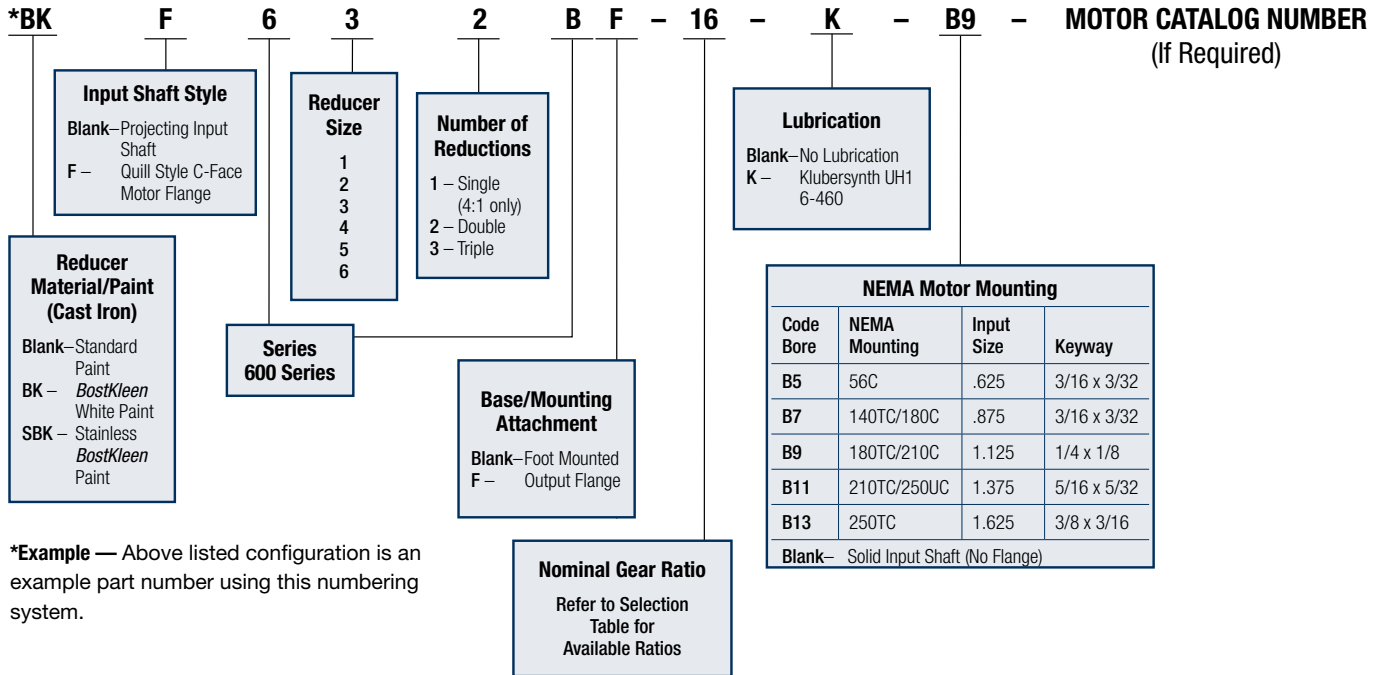
**Single Reduction
Foot Mounted**
Dimensions - Page 301



**Double & Triple Reduction
Foot Mounted**
Dimensions - Page 302

600 Series How to Order / Numbering System

600 Series Catalog Number



***Example** — Above listed configuration is an example part number using this numbering system.

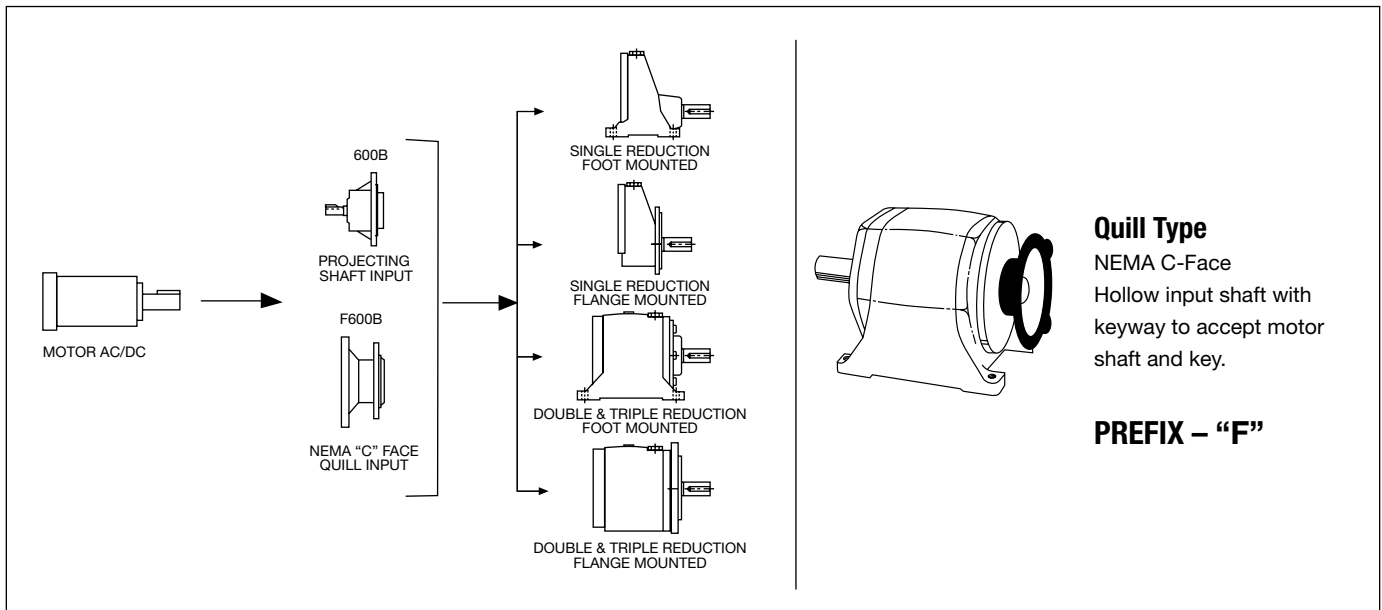
How to Order

When ordering please note the complete catalog number and/or item code. With either of these two numbers your local distributor will have several alternatives to enter your order into the Boston Gear system.

Example: Required flanged input, reducer size 3, 16:1 ratio, double reduction, no lubrication, NEMA mounting 182TC motor to be 3 HP, 1750 RPM, 230/460 volt, 3 phase, 60 Hz totally enclosed fan cooled

Order: 1 pc F632B-16-B9 or 5 digit item code 28300
1 pc LUTF, ref page 334.

Available Configurations



Note: For applications requiring backstop or other special considerations, please consult factory.

600 Series Helical Gear Speed Reducers

To properly select a speed reducer, the following application information should be known.

1. Service Factor or AGMA Service class.
2. Output Horsepower or Torque
3. Output RPM or Ratio

Non-Motorized Speed Reducer

1. Determine application service factor from table 1 or from application classification tables on pages 348-349.
2. Determine design Horsepower or Torque.
 - Design HP = Application HP x S.F.
 - Design Torque = Application Torque x S.F.
3. Select a Speed reducer that satisfies output RPM, service class and/or output torque requirement. Ref. rating tables pages 291-296.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 275 for calculations.

Example

Select an in-line 600B Series Speed Reducer for a continuous duty concrete mixer requiring 8000 lb-in. of torque at approx. 35 RPM, to operate up to 8 hrs/day. The Speed Reducer will be driven at 1160 input RPM.

1. Application Service Factor = 1.25
2. Design Torque = 8000 x 1.25 = 10,000 lb-in.
3. Select at speed and torque level of 10,000 lb-ins. or greater
4. Order 652B-32 (Item Code 28698)

NOTE: The use of an auxiliary drive between the speed reducer and the driven machine reduces the torque required at the output shaft in direct proportion to the auxiliary drive ratio.

A 3:1 chain ratio would reduce the torque requirement at the output shaft of the reducer to one-third, resulting in a smaller unit size selection.

SERVICE FACTOR TABLE 1

| AGMA CLASS OF SERVICE | SERVICE FACTOR | OPERATING CONDITIONS |
|-----------------------|----------------|---|
| I | 1.00 | Moderate Shock-not more than 15 minutes in 2 hours. Uniform Load-not more than 10 hours per day. |
| II | 1.25 | Moderate Shock-not more than 10 hours per day. Uniform Load-more than 10 hours per day. |
| | 1.50 | Heavy Shock-not more than 15 minutes in 2 hours. Moderate Shock-more than 10 hours per day. |
| III | 1.75 | Heavy Shock-not more than 10 hours per day. |
| | 2.00 | Heavy Shock-more than 10 hours per day. |

For complete AGMA Service Factors and Load Classifications, see Engineering Pages 348-349.

600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 1750 and 1150 RPM Service Factor 1.0*

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|-----------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 1750 RPM | | | 1160 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 612C-32 | 28682 | 55 | 791 | 0.7 | 36 | 821 | .42 | 33.48 |
| 622B-32 | 28685 | 55 | 1780 | 1.68 | 36 | 1799 | 1.13 | 30.55 |
| 632B-32 | 28690 | 55 | 3977 | 3.79 | 36 | 4023 | 2.54 | 30.29 |
| 642B-32 | 28695 | 55 | 5910 | 5.4 | 36 | 6416 | 3.93 | 32.32 |
| 652B-32 | 28698 | 55 | 13826 | 12.52 | 36 | 14014 | 8.41 | 31.9 |
| 662B-32 | 28703 | 55 | 26088 | 25 | 36 | 26487 | 16.82 | 30.14 |
| 612C-40 | 28707 | 44 | 794 | 0.57 | 29 | 799 | 0.38 | 40.32 |
| 622B-40 | 28710 | 44 | 1790 | 1.33 | 29 | 1804 | 0.89 | 38.84 |
| 632B-40 | 28713 | 44 | 4002 | 2.95 | 29 | 4038 | 1.97 | 39.2 |

Reference Page 295

600 Series Helical Gear Speed Reducers



Motorized Speed Reducer

1. Determine application service factor from table 1 page 274 or from pages 348-349.
2. Determine output speed required
3. Determine HP or output torque requirement.
4. Select based on output speed and horsepower requirement for given service class.
5. Check overhung load (Reference calculation).

Example

Select an in-line motorized helical speed reducer and motor to drive a uniformly loaded line conveyor 24 hours/day requiring 3 HP at 35 RPM.

Power Requirement

230/460 volt
3 phase
60 hertz

1. Select Service Factor class pages 348-349 or from Table 1 page 274. Service Class = II
2. Output RPM = 35
3. 5 HP
4. Select a 5 HP drive that will satisfy min. of II service class.
5. O.H.L = 3670 # page 277
6. Order: 1 – F652B-50-B11 (28748) Ref. Pg. 287
1 – NUTF Motor Ref. page 337 for specific motor mfg.

Overhung Load

If the output shaft of a speed reducer is connected to the driven machine by other than a flexible coupling, an overhung load is imposed on the shaft. This load may be calculated as follows:

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

- OHL = Overhung Load (LB.)
T = Shaft Torque (LB.-INS.)
D = PD of Sprocket, Pinion or Pulley (IN.)
K = Load Connection Factor

Load Connection Factor (K)

- Sprocket or Timing Belt 1.00
Pinion and Gear Drive 1.25
Pulley and V-Belt Drive 1.50
Pulley and Flat Belt Drive 2.50

An overhung load greater than permissible load value may be reduced to an acceptable value by the use of a sprocket, pinion or pulley of a larger PD. Relocation of the load closer to the center of reducer will also increase OHL capacity.

Permissible Overhung Loads and Output Shaft Thrust Loads are listed for each reducer in the Tables on Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|------|-------------------------|-----------------|-------------------------------|--------|-----------------------------|-----------------------|-----------------------|------------|-------------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| 35 | 50 | 6100 | 3.46 | 3.25 | 643B-50 (28742) | 3 | 5288 | I | F643B-50-B9 (28743) | F643BF-50-B9 (28744) | LUTF | PM18300 |
| | | | | | | 2 | 3525 | II | F643B-50-B7 (28745) | F643BF-50-B7 (28746) | KUTF | PM18200 |
| | | | | | | 1.5 | 2644 | III | | | JUTF | PM18150 |
| | | 14004 | 8.03 | 7.71 | 652B-50 (28747) | 7.5 | 13048 | I | F652B-50-B11 (28748) | F652BF-50-B11 (28749) | NUTF | — |
| | | | | | | 5 | 8699 | II | F652B-50-B9 (28750) | F652BF-50-B9 (28751) | MUTF | — |
| | | | | | | 3 | 5219 | III | | | LUTF | PM18300 |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

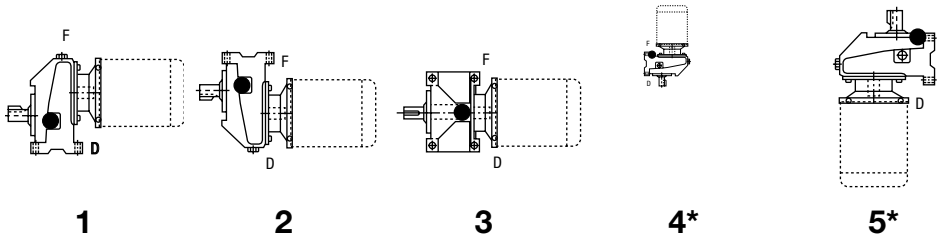
†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Mounting Positions & Lubrication

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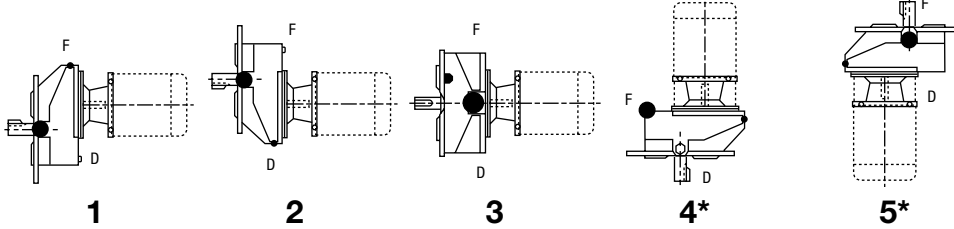
Foot Mounted



CAUTION

Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

Output Flange Mounted



Mounting positions are the same for multiple reduction units, and for non-flanged reducers.

F - Fill • - Oil Level, D - Drain.

* Position 4 and 5, Level Should be 1/2" Below Top Fill.

Recommended Lubricant

Synthetic lubricants are recommended for 600B Series reducers, and at all times, the lubricant must remain free from contamination. During the initial break-in of the gear set, higher than normal operating temperatures may result.

An initial oil change should be made after the first 1,500-hours of operation and at 5,000-hour intervals thereafter. Relubrication should be performed at shorter intervals if the reducer operates in high ambient temperatures or unusually contaminated environments.

For operating temperatures in excess of 225°F special seal considerations may be necessary.

| Recommended Lubricant | Ambient (Room) Temperature | ISO Viscosity Grade No. | Boston Gear Item Code |
|-----------------------|-------------------------------|-------------------------|-----------------------|
| | | | Quart |
| Klubersynth UH1 6-460 | -20° to 225°F (-29° TO 107°C) | 460 | 65159 |
| Mobil SHC634 | -30° to 225°F (-34° TO 107°C) | 320/460 | 51493 |

FOOT MOUNTED REDUCERS†

| Frame Size | Quarts per Mounting Position | | | | |
|------------|------------------------------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 611C | * | * | * | * | * |
| 621B | 0.37 | 0.74 | 0.53 | 0.58 | 1.06 |
| 631B | 0.26 | 1.06 | 0.63 | 0.69 | 1.27 |
| 641B | 0.95 | 2.01 | 1.48 | 2.22 | 2.22 |
| 651B | 2.09 | 4.42 | 3.33 | 4.05 | 3.15 |
| 661B | 3.38 | 7.71 | 6.34 | 6.13 | 8.03 |
| 612C/613C | * | * | * | * | * |
| 622B/623B | 0.63 | 1.16 | 0.90 | 1.22 | 1.48 |
| 632B/633B | 1.00 | 2.38 | 2.43 | 2.38 | 2.85 |
| 642B/643B | 1.69 | 4.76 | 4.62 | 4.76 | 4.65 |
| 652B/653B | 3.49 | 7.08 | 7.08 | 7.93 | 7.93 |
| 662B/663B | 5.49 | 13.95 | 13.21 | 15.53 | 14.48 |

OUTPUT FLANGE MOUNTED REDUCERS†

| Frame Size | Quarts per Mounting Position | | | | |
|-------------|------------------------------|------|------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 611CF | * | * | * | * | * |
| 621BF | 0.37 | 0.74 | 0.53 | 0.58 | 1.06 |
| 631BF | 0.26 | 1.06 | 0.63 | 0.69 | 1.27 |
| 641BF | 0.95 | 2.01 | 1.48 | 2.22 | 2.22 |
| 651BF | 2.09 | 4.42 | 3.33 | 4.05 | 3.15 |
| 661BF | 3.38 | 7.71 | 6.34 | 6.13 | 8.03 |
| 612CF/613CF | * | * | * | * | * |
| 622BF/623BF | 0.63 | †† | †† | 1.22 | 1.48 |
| 632BF/633BF | 1.00 | †† | †† | 2.38 | 2.85 |
| 642BF/643BF | 1.69 | †† | †† | 4.76 | 4.65 |
| 652BF/653BF | 3.49 | †† | †† | 7.93 | 7.93 |
| 662BF/663BF | 5.49 | †† | †† | 15.53 | 14.48 |

* Prelubricated for life.

† Oil capacities apply to non-flanged reducers as well.

†† Use mounting position number 1. Cannot use on mounting position 2 & 3.

600 Series Overhung Load Capacities

Single Reduction Overhung Load (lbs.)*

| Output RPM | Reducer Size | | | | | |
|------------|--------------|-----|-----|-----|------|------|
| | 611 | 621 | 631 | 641 | 651 | 661 |
| >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 |

* Load is assumed to be in the center of the shaft extension

Multiple Reduction Overhung Load (lbs.)

| Output RPM | Reducer Size | | | | | |
|------------|--------------|------|------|------|------|------|
| | 610 | 620 | 630 | 640 | 650 | 660 |
| 301-450 | ---- | 455 | 460 | 890 | 1755 | 1983 |
| 201-300 | ---- | 469 | 557 | 1200 | 1829 | 2065 |
| 151-200 | 129 | 591 | 670 | 1233 | 2013 | 2065 |
| 101-150 | 138 | 603 | 685 | 1296 | 2015 | 2163 |
| 51-100 | 388 | 701 | 850 | 1305 | 2472 | 2213 |
| 31-50 | 600 | 1030 | 1105 | 1305 | 3424 | 3733 |
| 16-30 | 600 | 1297 | 1357 | 1905 | 3670 | 4580 |
| <15 | 600 | 1345 | 1610 | 1905 | 4340 | 4580 |

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600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|----------------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|------------------------|--------------------|---------------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 1094 | 1.6 | 338 | 6.15 | 6.03 | 621B-1.6 (28000) | 5 | 275 | I | F621B-1.6-B9 (28001) | F621BF-1.6-B9 (28002) | MUTF | PM18500 | |
| | | | | | | 3 | 165 | III | F621B-1.6-B7 (28003) | F621BF-1.6-B7 (28004) | LUTF | PM18300 | |
| | | 623 | 11.39 | 11.16 | 631B-1.6 (28005) | 10 | 547 | I | F631B-1.6-B11 (28006) | F631BF-1.6-B11 (28007) | PUTF | — | |
| | | | | | | 7.5 | 410 | II | F631B-1.6-B9 (28008) | F631BF-1.6-B9 (28009) | NUTF | — | |
| | | 761 | 13.43 | 13.16 | 641B-1.6 (28010) | 10 | 568 | I | F641B-1.6-B11 (28011) | F641BF-1.6-B11 (28012) | PUTF | — | |
| | | | | | | 7.5 | 426 | II | F641B-1.6-B9 (28013) | F641BF-1.6-B9 (28014) | NUTF | — | |
| | | | | | | 5 | 284 | III | F641B-1.6-B9 (28013) | F641BF-1.6-B9 (28014) | MUTF | PM18500 | |
| | | 2292 | 41.74 | 40.91 | 651B-1.6 (28015) | 20 | 1101 | III | F651B-1.6-B13 (28016) | — | SUTF | — | |
| | | 3230 | 57.18 | 56.03 | 661B-1.6 (28017) | 20 | 1129 | III | F661B-1.6-B13 (28018) | — | SUTF | — | |
| | | 875 | 2.0 | 212 | 3.06 | 3.00 | 611C-2 (28019) | 2 | 138 | II | F611C-2-B7 (28020) | F611CF-2-B7 (28021) | KUTF |
| 1.5 | 104 | | | | | | | III | F621B-2-B9 (28023) | F621BF-2-B9 (28024) | JUTF | PM18150 | |
| 399 | 5.65 | | | 5.54 | 621B-2 (28022) | 5 | 353 | I | F621B-2-B9 (28023) | F621BF-2-B9 (28024) | MUTF | PM18500 | |
| | | | | | | 3 | 212 | II | F621B-2-B7 (28025) | F621BF-2-B7 (28026) | KUTF | PM18300 | |
| | | | | | | 2 | 141 | III | F621B-2-B7 (28025) | F621BF-2-B7 (28026) | KUTF | PM18200 | |
| 708 | 10.35 | | | 10.14 | 631B-2 (28027) | 10 | 684 | I | F631B-2-B11 (28028) | F631BF-2-B11 (28029) | PUTF | — | |
| | | | | | | 7.5 | 513 | II | F631B-2-B9 (28030) | F631BF-2-B9 (28031) | NUTF | — | |
| 1030 | 14.33 | | | 14.04 | 641B-2 (28032) | 5 | 342 | III | F641B-2-B11 (28033) | F641BF-2-B11 (28034) | MUTF | PM18500 | |
| | | | | | | 10 | 720 | I | F641B-2-B9 (28035) | F641BF-2-B9 (28036) | PUTF | — | |
| | | | | | | 7.5 | 540 | II | F641B-2-B9 (28035) | F641BF-2-B9 (28036) | NUTF | — | |
| 2521 | 36.29 | 35.56 | 651B-2 (28037) | 20 | 1390 | II | F651B-2-B13 (28038) | — | MUTF | PM18500 | | | |
| | | | | 15 | 1043 | III | F651B-2-B13 (28038) | — | RUTF | — | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|------------------------|----------------------|-----------------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 875 (Cont) | 2.0 | 3735 | 52.88 | 51.82 | 661B-2 (28039) | 20 | 1411 | III | F661B-2-B13 (28040) | — | SUTF | — | |
| 700 | 2.5 | 275 | 3.06 | 3.00 | 611C-2.5 (28041) | 2 | 180 | II | F611C-2.5-B7 (28042) | F611CF-2.5-B7 (28043) | KUTF | PM18200 | |
| | | | | | | 1.5 | 135 | III | — | — | JUTF | PM18150 | |
| | | 442 | 4.86 | 4.76 | 621B-2.5 (28044) | 3 | 273 | II | F621B-2.5-B9 (28045) | F621BF-2.5-B9 (28046) | LUTF | PM18300 | |
| | | | | | | 2 | 182 | III | F621B-2.5-B7 (28047) | F621BF-2.5-B7 (28048) | KUTF | PM18200 | |
| | | 708 | 7.88 | 7.22 | 631B-2.5 (28049) | 7.5 | 675 | I | F631B-2.5-B11 (28050) | F631BF-2.5-B11 (28051) | NUTF | — | |
| | | | | | | 5 | 450 | II | F631B-2.5-B9 (28052) | F631BF-2.5-B9 (28053) | MUTF | PM18500 | |
| | | | | | | 3 | 270 | III | — | — | LUTF | PM18300 | |
| | | 1273 | 13.96 | 13.68 | 641B-2.5 (28054) | 10 | 910 | I | F641B-2.5-B11 (28055) | F641BF-2.5-B11 (28056) | PUTF | — | |
| | | | | | | 7.5 | 683 | II | — | — | NUTF | — | |
| | | | | | | 5 | 455 | III | F641B-2.5-B9 (28057) | F641BF-2.5-B9 (28058) | MUTF | PM18500 | |
| | | 4152 | 48.17 | 47.21 | 661B-2.5 (28062) | 20 | 1722 | III | F661B-2.5-B13 (28063) | — | SUTF | — | |
| | | 557 | 3.2 | 340 | 2.98 | 2.92 | 611C-3.2 (28064) | 2 | 229 | II | F611C-3.2-B7 (28065) | F611CF-3.2-B7 (28066) | KUTF |
| 1.5 | 171 | | | | | | | III | — | — | JUTF | PM18150 | |
| 442 | 3.86 | | | 3.78 | 621B-3.2 (28067) | 3 | 344 | I | F621B-3.2-B9 (28069) | F621BF-3.2-B9 (28070) | LUTF | PM18300 | |
| | | | | | | 2 | 229 | II | F621B-3.2-B7 (28071) | F621BF-3.2-B7 (28072) | KUTF | PM18200 | |
| 708 | 6.50 | | | 6.37 | 631B-3.2 (28073) | 5 | 545 | I | F631B-3.2-B9 (28074) | F631BF-3.2-B9 (28075) | MUTF | PM18500 | |
| | | | | | | 3 | 327 | III | — | — | LUTF | PM18300 | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.



600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|------------------|--------|-------------------------|-------------------------------|------------------------|------------------------|-----------------------------|------------------------|----------|-----------------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 557 (Cont) | 3.2 | 1127 | 10.10 | 9.90 | 641B-3.2 (28076) | 10 | 1115 | I | F641B-3.2-B11 (28077) | F641BF-3.2-B11 (28078) | PUTF | — | |
| | | | | | | 7.5 | 836 | II | | | LUTF | — | |
| | | 2894 | 25.76 | 25.24 | 651B-3.2 (28081) | 5 | 557 | III | F641B-3.2-B9 (28079) | F641BF-3.2-B9 (28080) | MUTF | PM18500 | |
| | | | | | | 20 | 2244 | I | F651B-3.2-B13 (28082) | — | SUTF | — | |
| | | | | | | 15 | 1683 | II | | | RUTF | — | |
| 4655 | 42.96 | 42.10 | 661B-3.2 (28086) | 10 | 1122 | III | F651B-3.2-B11 (28084) | F651BF-3.2-B11 (28085) | PUTF | — | | | |
| | | | | 20 | 2166 | III | F661B-3.2-B13 (28087) | — | SUTF | — | | | |
| 438 | 4.0 | 372 | 2.58 | 2.53 | 611C-4 (28088) | 2 | 288 | I | F611C-4-B7 (28089) | F611CF-4-B7 (28092) | KUTF | PM18200 | |
| | | | | | | 1.5 | 216 | II | | | JUTF | PM18150 | |
| | | | | | | 1 | 144 | III | F611C-4-B5 (28091) | F611CF-4-B5 (28090) | HUTF-5/8 | PM18100 PM9100-5/8 | |
| | | 442 | 3.19 | 3.1262 | 621B-4 (28093) | 3 | 416 | I | F621B-4-B9 (28094) | F621BF-4-B9 (28095) | LUTF | PM18300 | |
| | | | | | | 2 | 277 | II | F621B-4-B7 (28096) | F621BF-4-B7 (28097) | KUTF | PM18200 | |
| | | | | | | 1.5 | 208 | III | | | JUTF | PM18150 | |
| | | 708 | 5.15 | 5.05 | 631B-4 (28098) | 5 | 686 | I | F631B-4-B9 (28099) | F631BF-4-B9 (28100) | MUTF | PM18500 | |
| | | | | | | 3 | 412 | II | | | LUTF | PM18300 | |
| | | | | | | 2 | 274 | III | F631B-4-B7 (28106) | F631BF-4-B7 (28107) | JUTF | PM18150 | |
| | | 1315 | 9.42 | 9.23 | 641B-4 (28108) | 7.5 | 1045 | I | F641B-4-B11 (28109) | F641BF-4-B11 (28110) | NUTF | — | |
| | | | | | | 5 | 697 | II | F641B-4-B9 (28111) | F641BF-4-B9 (28112) | MUTF | PM18500 | |
| | | | | | | 3 | 418 | III | | | LUTF | PM18300 | |
| | | 2903 | 20 | 19.60 | 651B-4 (28113) | 20 | 2900 | I | F651B-4-B13 (28114) | F651BF-4-B13 (28115) | SUTF | — | |
| 15 | 2175 | | | | | II | | | RUTF | — | | | |
| 10 | 1450 | | | | | III | F651B-4-B11 (28116) | F651BF-4-B11 (28118) | PUTF | — | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|------------------|--------|-------------------------|-------------------------------|------------------------|------------------------|-----------------------------|-----------------------|--------------------------|---|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 438 (Cont) | 4.0 | 5221 | 38.16 | 37.40 | 661B-4 (28119) | 20 15 | 2738 2053 | II III | F661B-4-B13 (28120) | — | SUTF RUTF | — — | |
| 350 | 5.0 | 192 | 1.05 | 1.03 | 611C-5 (28121) | 1 | 182 | I | F611C-5-B5 (28122) | F611CF-5-B5 (28123) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 PM950 | |
| | | | | | | .75 | 137 | II | | | | | |
| | | | | | | .5 | 91 | III | | | | | |
| | | 442 | 2.55 | 2.50 | 621B-5 (28124) | 2 | 347 | I | F621B-5-B7 (28125) | F621BF-5-B7 (28126) | KUTF JUTF | PM18200 PM18150 | |
| | | | | | | 1.5 | 260 | II | | | | | |
| | | 708 | 4.11 | 4.03 | 631B-5 (28129) | 1 | 174 | III | F621B-5-B5 (28127) | F621BF-5-B5 (28128) | HUTF-5/8 | PM9100-5/8 PM18100-5/8 | |
| | | | | | | 3 | 516 | II | | | | | |
| | | 1327 | 7.73 | 7.575 | 641B-5 (28134) | 2 | 344 | III | F631B-5-B7 (28132) | F631BF-5-B7 (28133) | KUTF | PM18200 | |
| | | | | | | 7.5 | 1289 | I | | | | | |
| | | 2903 | 16.01 | 15.69 | 651B-5 (28140) | 3 | 516 | II | F641B-5-B11 (28135) | F641BF-5-B11 (28137) | NUTF | — | |
| | | | | | | 5 | 859 | II | | | | | |
| | | | | | | 3 | 515 | III | | | | | |
| | | 5221 | 30.49 | 29.88 | 661B-5 (28145) | 15 | 2715 | I | F651B-5-B13 (28141) | — | RUTF | — | |
| | | | | | | 10 | 1810 | II | | | | | |
| 7.5 | 1357 | | | | | III | | | | | | | |
| 278 | 6.3 | 1251 | 5.63 | 5.52 | 622B-6.3 (28147) | 20 | 3422 | II | F661B-5-B13 (28146) | — | SUTF RUTF | — — | |
| | | | | | | 15 | 2567 | III | | | | | |
| | | | | | | 5 | 1109 | I | | | | | |
| | | 2208 | 10.45 | 10.03 | 632B-6.3 (28152) | 3 | 666 | II | F622B-6.3-B7 (28150) | F622BF-6.3-B7 (28151) | KUTF | PM18200 | |
| | | | | | | 2 | 444 | III | | | | | |
| | | | | | | 10 | 2108 | I | | | | | |
| 5 | 1054 | 1054 | 632B-6.3 (28155) | 7.5 | 1581 | II | F632B-6.3-B11 (28153) | F632BF-6.3-B11 (28154) | PUTF NUTF | — — | | | |
| | | | | 5 | 1054 | III | | | | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.



600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|----------------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|------------------------|----------|---------------------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 278 (Cont) | 6.3 | 3615 | 16.28 | 15.63 | 642B-6.3 (28157) | 15 | 3323 | I | F642B-6.3-B13 (28158) | — | SUTF | — | |
| | | | | | | 10 | 2215 | II | F642B-6.3-B11 (28160) | F642BF-6.3-B11 (28161) | PUTF | — | |
| | | 7883 | 36.83 | 35.36 | 652B-6.3 (28162) | 20 | 4292 | II | F652B-6.3-B13 (28163) | — | SUTF | — | |
| | | 15 | 3219 | III | — | — | RUTF | — | | | | | |
| | | 11903 | 53.87 | 51.72 | 662B-6.3 (28164) | 20 | 4410 | III | F662B-6.3-B13 (28165) | — | SUTF | — | |
| 219 | 8 | 762 | 2.69 | 2.58 | 612C-8 (28166) | 2 | 564 | I | F612C-8-B7 (28167) | F612CF-8-B7 (28168) | KUTF | PM18200 | |
| | | | | | | 1.5 | 423 | II | — | — | JUTF | PM181500 | |
| | | | | | | 1 | 282 | III | F612C-8-B5 (28169) | F612CF-8-B5 (28170) | HUTF-5/8 | PM9100-5/8 PM18100-5/8 | |
| | | 1252 | 4.37 | 4.20 | 622B-8 (28171) | 3 | 858 | I | F622B-8-B9 (28172) | F622BF-8-B9 (28173) | LUTF | PM18300 | |
| | | | | | | 2 | 572 | III | F622B-8-B7 (28174) | F622BF-8-B7 (28175) | KUTF | PM18200 | |
| | | 2208 | 7.95 | 7.63 | 632B-8 (28176) | 7.5 | 2079 | I | F632B-8-B11 (28177) | F632BF-8-B11 (28178) | NUTF | — | |
| | | | | | | 5 | 1386 | II | F632B-8-B9 (28179) | F632BF-8-B9 (28180) | MUTF | PM18500 | |
| | | | | | | 3 | 832 | III | — | — | LUTF | PM18300 | |
| | | 3615 | 12.83 | 12.32 | 642B-8 (28181) | 10 | 2813 | I | F642B-8-B11 (28184) | F642BF-8-B11 (28185) | PUTF | — | |
| | | | | | | 7.5 | 2110 | II | — | — | NUTF | — | |
| | | | | | | 5 | 1407 | III | F642B-8-B9 (28182) | F642BF-8-B9 (28183) | MUTF | PM18500 | |
| | | 10329 | 38.77 | 37.22 | 652B-8 (28186) | 20 | 5315 | II | F652B-8-B13 (28187) | — | SUTF | — | |
| 15 | 3986 | | | | | III | — | — | RUTF | — | | | |
| 20 | 5474 | | | | | III | F662B-8-B13 (28199) | — | SUTF | — | | | |
| 18252 | 66.63 | 63.96 | 662B-8 (28188) | 20 | 5474 | III | — | — | SUTF | — | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 175 | 10 | 768 | 2.17 | 2.08 | 612C-10 (28190) | 2 | 705 | I | F612C-10-B7 (28191) | F612CF-10-B7 (28192) | KUTF | PM18200 | |
| | | | | | | 1.5 | 529 | II | — | — | JUTF | PM18150 | |
| | | | | | | 1 | 353 | III | F612C-10-B5 (28193) | F612CF-10-B5 (28194) | HUTF-5/8 | PM9100-5/8 PM18100-5/8 | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|---------|-----------------------------|-------------------------|------------------|--|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | |
| | | | Input | Output | | | | | | | | |
| 175 (Cont) | 10 | 1252 | 3.46 | 3.32 | 622B-10 (28195) | 3 | 1081 | I | F622B-10-B9 (28196) | F622BF-10-B9 (28198) | LUTF | PM18300 |
| | | | | | | 2 | 721 | II | F622B-10-B7 (28199) | F622BF-10-B7 (28200) | KUTF JUTF | PM18200 PM18150 |
| | | | | | | 1.5 | 541 | III | | | | |
| | | 2208 | 6.56 | 6.30 | 632B-10 (28201) | 5 | 1680 | II | F632B-10-B9 (28202) | F632BF-10-B9 (28203) | MUTF LUTF | PM18500 PM18300 |
| | | | | | | 3 | 1008 | III | | | | |
| | | 3615 | 10.49 | 10.07 | 642B-10 (28204) | 10 | 3449 | I | F642B-10-B11 (28207) | F642BF-10-B11 (28208) | PUTF NUTF | — — |
| | | | | | | 7.5 | 2587 | II | | | | |
| | | 5 | 1719 | III | F642B-10-B9 (28861) | F642BF-10-B5 (28862) | MUTF | PM18500 | | | | |
| | | | | | | | | | | | | |
| | | 11933 | 35.65 | 34.22 | 652B-10 (28209) | 20 | 6684 | II | F652B-10-B13 (28210) | — | SUTF RUTF | — — |
| | | | | | | 15 | 5013 | III | | | | |
| | | 20956 | 60.86 | 58.43 | 662B-10 (28211) | 20 | 6871 | III | F662B-10-B13 (28212) | — | SUTF | — |
| 140 | 12.5 | 772 | 1.82 | 1.75 | 612C-12.5 (28213) | 1.5 | 634 | I | F612C-12.5-B7 (28214) | F612CF-12.5-B7 (28215) | JUTF | PM18150 |
| | | | | | | 1 | 423 | II | F612C-12.5-B5 (28216) | F612CF-12.5-B5 (28217) | HUTF-5/8 GUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 |
| | | | | | | .75 | 317 | III | | | | |
| | | 1252 | 2.87 | 2.76 | 622B-12.5 (28218) | 2 | 872 | I | F622B-12.5-B7 (28219) | F622BF-12.5-B7 (28220) | KUTF JUTF | PM18200 PM18150 |
| | | | | | | 1.5 | 654 | II | | | | |
| | | | | | | 1 | 436 | III | F622B-12.5-B5 (28221) | F622BF-12.5-B5 (28222) | HUTF-5/8 | PM9100 5/8 PM18100 5/8 |
| | | 2208 | 5.2 | 4.99 | 632B-12.5 (28223) | 5 | 2120 | I | F632B-12.5-B9 (28224) | F632BF-12.5-B9 (28225) | MUTF LUTF | PM18500 PM18300 |
| | | | | | | 3 | 1272 | II | | | | |
| | | | | | | 2 | 848 | III | F632B-12.5-B7 (28226) | F632BF-12.5-B7 (28227) | KUTF | PM18200 |
| | | 3615 | 8.39 | 8.05 | 642B-12.5 (28228) | 7.5 | 3227 | I | F642B-12.5-B11 (28231) | F642BF-12.5-B11 (28863) | NUTF | — |
| | | | | | | 5 | 2151 | II | F642B-12.5-B9 (28876) | F642BF-12.5-B9 (28864) | MUTF LUTF | PM18500 PM18300 |
| | | | | | | 3 | 1291 | III | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.



600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motor† | DC Motor†† |
|------------|--------|------------------------|-----------------|--------|-------------------------|-------------------------------|------------------------|----------------------|-----------------------------|--|--------------------------|---|------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 140 (Cont) | 12.5 | 12844 | 30.33 | 29.12 | 652B-12.5 (28232) | 20 | 8453 | II | F652B-12.5-B13 (28234) | — | SUTF | — | |
| | | | | | | 15 | 6340 | III | | | RUTF | — | |
| | | 23128 | 47.77 | 45.86 | 662B-12.5 (28235) | 20 | 8592 | III | F662B-12.5-B13 (28236) | — | SUTF | — | |
| 109 | 16 | 777 | 1.46 | 1.40 | 612C-16 (28251) | 1 | 530 | I | F612C-16-B5 (28252) | F612CF-16-B5 (28254) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 PM950 | |
| | | | | | | .75 | 398 | II | | | | | |
| | | | | | | .5 | 265 | III | | | | | |
| | | 1252 | 2.29 | 2.20 | 622B-16 (28256) | 2 | 1091 | I | F622B-16-B7 (28265) | F622BF-16-B7 (28276) | KUTF JUTF | PM18200 PM18150 | |
| | | | | | | 1.5 | 819 | II | | | | | |
| | | 2208 | 4.15 | 3.98 | 632B-16 (28291) | 1 | 546 | III | F622B-16-B5 (28277) | F622BF-16-B5 (28284) | HUTF-5/8 | PM9100 5/8 PM18100 5/8 | |
| | | | | | | 3 | 1593 | II | | | | | |
| | | 3615 | 6.81 | 6.54 | 642B-16 (28330) | 2 | 1062 | III | F632B-16-B7 (28306) | F632BF-16-B7 (28328) | KUTF | PM18200 | |
| | | | | | | 5 | 2649 | I | | | | | |
| | | 13452 | 24.63 | 23.64 | 652B-16 (28366) | 3 | 1589 | III | F642B-16-B9 (28355) | F642BF-16-B9 (28360) | MUTF LUTF | PM18500 PM18300 | |
| 20 | 10900 | | | | | I | | | | | | | |
| 23788 | 45.28 | 43.47 | 662B-16 (28390) | 15 | 8175 | II | F652B-16-B13 (28384) | — | SUTF RUTF | — — | | | |
| | | | | 10 | 5450 | III | | | | | | | |
| | | | | 20 | 10486 | III | | | | | | | |
| 88 | 20 | 783 | 1.12 | 1.08 | 612C-20 (28396) | 1 | 699 | I | F612C-20-B5 (28538) | F612CF-20-B5 (28564) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 PM950 | |
| | | | | | | .75 | 525 | II | | | | | |
| | | | | | | .5 | 350 | III | | | | | |
| | | 1252 | 1.80 | 1.73 | 622B-20 (28570) | 1.5 | 1040 | I | F622B-20-B7 (28573) | F622BF-20-B7 (28586) | JUTF | PM18150 | |
| 1 | 694 | | | | | II | | | | | | | |
| | | | | .75 | 520 | III | F622B-20-B5 (28587) | F622BF-20-B5 (28588) | HUTF-5/8 GUTF | PM9100 5/8 PM18100 5/8 PM975 PM1875 | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|-----------------------|---------------------|----------------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 88 (Cont) | 20 | 2208 | 3.21 | 3.08 | 632B-20 (28589) | 3 | 2060 | I | F632B-20-B9 (28590) | F632BF-20-B9 (28591) | LUTF | PM18300 | |
| | | | | | | 2 | 1373 | II | F632B-20-B7 (28592) | F632BF-20-B7 (28593) | KUTF | PM18200 | |
| | | | | | | 1.5 | 1030 | III | F632B-20-B9 (28597) | F632BF-20-B9 (28598) | JUTF | PM18150 | |
| | | 3615 | 6 | 5.76 | 642B-20 (28594) | 5 | 2995 | I | F642B-20-B9 (28597) | F642BF-20-B9 (28598) | MUTF | PM18500 | |
| | | | | | | 3 | 1797 | III | F642B-20-B9 (28597) | F642BF-20-B9 (28598) | LUTF | PM18300 | |
| | | | | | | 15 | 10249 | I | F652B-20-B13 (28651) | — | RUTF | — | |
| | | 13601 | 19.86 | 19.07 | 652B-20 (28650) | 10 | 6833 | II | F652B-20-B11 (28652) | F652BF-20-B11 (28653) | PUTF | — | |
| | | | | | | 7.5 | 5124 | III | F652B-20-B11 (28652) | F652BF-20-B11 (28653) | NUTF | — | |
| | | | | | | 20 | 13181 | II | F662B-20-B13 (28655) | — | SUTF | — | |
| | | 24111 | 36.51 | 35.05 | 662B-20 (28654) | 15 | 9886 | III | F662B-20-B13 (28655) | — | RUTF | — | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 70 | 25 | 787 | .89 | 0.85 | 612C-25 (28656) | .75 | 663 | I | F612C-25-B5 (28657) | F612CF-25-B5 (28658) | GUTF | PM975 | |
| | | | | | | .5 | 442 | II | | | FUTF | PM1875 | |
| | | | | | | .33 | 292 | III | | | EUTF | PM950 | |
| | | 877 | 1 | 0.96 | 622B-25 (28659) | 1 | 877 | I | F622B-25-B5 (28660) | F622BF-25-B5 (28662) | HUTF-5/8 | PM9100 5/8 | |
| | | | | | | .75 | 658 | II | | | GUTF | PM18100 5/8 | |
| | | | | | | .5 | 439 | III | | | FUTF | PM975 | |
| | | 2208 | 2.51 | 2.41 | 632B-25 (28663) | 2 | 1758 | I | F632B-25-B7 (28664) | F632BF-25-B7 (28665) | KUTF | PM18200 | |
| | | | | | | 1.5 | 1319 | II | | | JUTF | PM18150 | |
| | | | | | | 1 | 879 | III | | | F632B-25-B5 (28666) | F632BF-25-B5 (28667) | HUTF-5/8 |
| | | 3615 | 4.23 | 4.23 | 642B-25 (28668) | 3 | 2559 | I | F642B-25-B9 (28672) | F642BF-25-B9 (28673) | LUTF | PM18300 | |
| | | | | | | 2 | 1706 | III | F642B-25-B7 (28877) | F642BF-25-B7 (28878) | KUTF | PM18200 | |
| | | | | | | 15 | 13245 | I | F652B-25-B13 (28675) | — | RUTF | — | |
| | | 13727 | 15.52 | 14.90 | 652B-25 (28674) | 10 | 8830 | II | F652B-25-B11 (28676) | F652BF-25-B11 (28677) | PUTF | — | |
| | | | | | | 7.5 | 6623 | III | F652B-25-B11 (28676) | F652BF-25-B11 (28677) | NUTF | — | |
| | | | | | | | | | | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.



600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|----------------------|-----------------------------|-----------------------|------------------|---|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 70 (Cont) | 25 | 25876 | 31.03 | 29.79 | 662B-25 (28679) | 20 15 | 16644 12483 | II III | F662B-25-B13 (28681) | — | SUTF RUTF | — — | |
| 55 | 32 | 791 | .7 | 0.67 | 612C-32 (28682) | .5 .33 | 579 382 | II III | F612C-32-B5 (28683) | F612CF-32-B5 (28684) | FUTF DUTF | PM950 PM925 | |
| | | 1780 | 1.68 | 1.61 | 622B-32 (28685) | 1.5 | 1584 | I | F622B-32-B7 (28686) | F622BF-32-B7 (28687) | JUTF | PM18150 | |
| | | | | | | 1 .75 | 1056 792 | II III | F622B-32-B5 (28688) | F622BF-32-B5 (28689) | HUTF-5/8 GUTF | PM9100-5/8 PM1800-5/8 PM975 PM1875 | |
| | | 3977 | 3.79 | 3.64 | 632B-32 (28690) | 3 | 3140 | I | F632B-32-B9 (28691) | F632BF-32-B9 (28692) | LUTF | PM18300 | |
| | | | | | | 2 1.5 | 2094 1570 | II III | F632B-32-B7 (28693) | F632BF-32-B7 (28694) | KUTF DUTF | PM18200 PM18150 | |
| | | | | | | 5 3 | 5585 3351 | I II | F643B-32-B9 (28696) | F642BF-32-B9 (28697) | MUTF LUTF | PM18500 PM18300 | |
| | | 5910 | 5.40 | 5.18 | 642B-32 (28695) | 2 | 2234 | III | F643B-32-B7 (28879) | F643BF-32-B7 (28880) | KUTF | PM18200 | |
| | | | | | | 10 7.5 | 11025 8268 | I II | F652B-32-B11 (28699) | F652BF-32-B11 (28700) | PUTF NUTF | — — | |
| | | 13826 | 12.52 | 12.02 | 652B-32 (28698) | 5 | 5512 | III | F652B-32-B9 (28701) | F652BF-32-B9 (28702) | MUTF | PM18500 | |
| | | | | | | 20 15 | 20833 15625 | I II | F662B-32-B13 (28704) | — | SUTF RUTF | — — | |
| | | | | | | 10 | 10416 | III | F662B-32-B11 (28705) | F662BF-32-B11 (28706) | PUTF | — | |
| | | 26088 | 25 | 24.00 | 662B-32 (28703) | .5 | 697 | I | F612C-40-B5 (28708) | F612CF-40-B5 (28709) | FUTF | PM950 | |
| | | | | | | .33 | 460 | II | | | EUTF | PM933 | |
| | | | | | | .25 | 348 | III | | | DUTF | PM925 | |
| 1 | 1342 | | | | | I | F622B-40-B5 (28711) | F622BF-40-B5 (28712) | | | HUTF-5/8 | PM9100-5/8 | |
| .75 | 1007 | | | | | II | | | | | GUTF | PM18100-5/8 | |
| .5 | 671 | | | | | III | | | | | FUTF | PM975 PM1875 PM950 | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† | |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|-----------------------|--------------------------|--|--------------|--------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | | |
| | | | Input | Output | | | | | | | | | | |
| 44 (Cont) | 40 | 4002 | 2.95 | 2.83 | 632B-40 (28713) | 2 | 2710 | I | F632B-40-B7 (28714) | F632BF-40-B7 (28715) | KUTF JUTF | PM18200 PM18150 | | |
| | | | | | | 1.5 | 2032 | III | | | | | | |
| | | 6010 | 4.3 | 4.04 | 643B-40 (28716) | 3 | 4172 | II | F643B-40-B9 (28717) | F643BF-40-B9 (28718) | LUTF | PM18300 | | |
| | | | | | | 2 | 2782 | III | | | | | | |
| | | 13901 | 10.5 | 10.08 | 652B-40 (28721) | 10 | 13216 | I | F652B-40-B11 (28722) | F652BF-40-B11 (28723) | PUTF NUTF | — — | | |
| | | | | | | 7.5 | 9912 | II | | | | | | |
| | | | | | | 5 | 6608 | III | | | | | | |
| | | 26314 | 19.37 | 18.60 | 662B-40 (28726) | 15 | 20337 | II | F662B-40-B13 (28727) | — | RUTF | — | | |
| | | | | | | 10 | 13558 | III | | | | | | |
| | | | | | | 7.5 | 10168 | | | | | | | |
| 35 | 50 | 796 | .45 | 0.42 | 613C-50 (28730) | .33 | 549 | II | F613C-50-B5 (28731) | F613CF-50-B5 (28732) | EUTF DUTF | PM933 PM925 | | |
| | | | | | | .25 | 416 | III | | | | | | |
| | | 1699 | 1 | 0.96 | 622B-50 (28733) | 1 | 1699 | I | F622B-50-B5 (28734) | F622BF-50-B5 (28735) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975/PM1875 PM950 | | |
| | | | | | | .75 | 1274 | II | | | | | | |
| | | | | | | .5 | 849 | III | | | | | | |
| | | 4024 | 2.32 | 2.23 | 632B-50 (28736) | 2 | 3469 | I | F632B-50-B7 (28737) | F632BF-50-B7 (28738) | KUTF JUTF | PM18200 PM18150 | | |
| | | | | | | 1.5 | 2602 | II | | | | | | |
| | | 6100 | 3.46 | 3.25 | 643B-50 (28742) | 3 | 5288 | I | F643B-50-B9 (28743) | F643BF-50-B9 (28744) | LUTF | PM18300 | | |
| | | | | | | 2 | 3525 | II | | | | | | |
| | | 14004 | 8.03 | 7.71 | 652B-50 (28747) | 1.5 | 2644 | III | F652B-50-B11 (28748) | F652BF-50-B11 (28749) | KUTF JUTF | PM18200 PM18150 | | |
| | | | | | | 7.5 | 13048 | I | | | | | | |
| | | | | | | 5 | 8699 | II | | | | | | |
| | | | | | | | | 3 | 5219 | III | F652B-50-B9 (28750) | F652BF-50-B9 (28751) | MUTF LUTF | — PM18300 |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.



600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-----------------|--------|-------------------------|-------------------------------|------------------------|-----------------------|-----------------------------|-----------------------|----------|-------------|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 35 (Cont) | 50 | 26496 | 15.39 | 14.77 | 662B-50 (28752) | 15 | 25770 | I | F662B-50-B13 (28753) | — | RUTF | — | |
| | | | | | | 10 | 17180 | II | F662B-50-B11 (28754) | F662BF-50-B11 (28755) | PUTF | — | |
| | | | | | | 7.5 | 12885 | III | | | NUTF | PM18500 | |
| 28 | 63 | 800 | .4 | 0.38 | 613C-63 (28756) | .33 | 715 | I | F613C-63-B5 (28757) | F613CF-63-B5 (28758) | EUTF | PM933 | |
| | | | | | | .25 | 542 | II | | | DUTF | PM925 | |
| | | 1406 | .63 | 0.59 | 623B-63 (28759) | .5 | 1104 | I | F623B-63-B5 (28760) | F623BF-63-B5 (28761) | FUTF | PM950 | |
| | | | | | | .33 | 729 | II | | | EUTF | PM933 | |
| | | 4038 | 1.85 | 1.74 | 633B-63 (28762) | .25 | 552 | III | | | DUTF | PM925 | |
| | | | | | | 1.5 | 3259 | I | F633B-63-B7 (28763) | F633BF-63-B7 (28764) | JUTF | PM18150 | |
| | | 6100 | 2.73 | 2.57 | 643B-63 (28767) | 1 | 2173 | II | F633B-63-B5 (28765) | F633BF-63-B5 (28766) | HUTF-5/8 | PM9100-5/8 | |
| | | | | | | .75 | 1629 | III | | | GUTF | PM18100-5/8 | |
| | | 14084 | 6.48 | 6.09 | 653B-63 (28772) | 2 | 4474 | I | F643B-63-B7 (28768) | F643BF-63-B7 (28769) | KUTF | PM18200 | |
| | | | | | | 1.5 | 3356 | II | | | JUTF | PM18150 | |
| | | 23239 | 11.13 | 10.46 | 663B-63 (28775) | 1 | 2237 | III | F643B-63-B5 (28770) | F643BF-63-B5 (28771) | HUTF-5/8 | PM9100 5/8 | |
| | | | | | | 5 | 10817 | II | F653B-63-B9 (28773) | F653BF-63-B9 (28774) | MUTF | PM18500 | |
| 4038 | 1.53 | 1.44 | 633B-80 (28783) | 3 | 6490 | III | | | LUTF | PM18300 | | | |
| | | | | 10 | 20791 | I | F663B-63-B11 (28776) | F663BF-63-B11 (28777) | PUTF | — | | | |
| 22 | 80 | 1519 | .54 | 0.51 | 623B-80 (28780) | 7.5 | 15593 | II | | | NUTF | — | |
| | | | | | | 5 | 10396 | II | F663B-63-B9 (28778) | F663BF-63-B9 (28779) | MUTF | PM18500 | |
| 4038 | 1.53 | 1.44 | 633B-80 (28783) | .5 | 1375 | I | F623B-80-B5 (28781) | F623BF-80-B5 (28782) | FUTF | PM950 | | | |
| | | | | .33 | 908 | II | | | EUTF | PM933 | | | |
| 4038 | 1.53 | 1.44 | 633B-80 (28783) | .25 | 688 | III | | | DUTF | PM925 | | | |
| | | | | 1.5 | 3952 | I | F633B-80-B7 (28784) | F633BF-80-B7 (28785) | JUTF | PM18150 | | | |
| 4038 | 1.53 | 1.44 | 633B-80 (28783) | 1 | 2635 | II | F633B-80-B5 (28786) | F633BF-80-B5 (28787) | HUTF-5/8 | PM9100-5/8 | | | |
| | | | | .75 | 1976 | III | | | GUTF | PM18100-5/8 | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.



| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | AC Motors† | DC Motors†† | | |
|------------|--------|------------------------|-------|-------------------------|------------------|-------------------------------|------------------|-----------------------------|-----------------------|------------------------|----------------------|---------------------------|------|-------|
| | | Gear Capacity | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | | | |
| | | Output Torque (LB-IN.) | HP | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | | | |
| | | | Input | | | | | | | Output | | | | |
| 22 (Cont) | 80 | 6100 | 2.2 | 2.07 | 643B-80 (28788) | 2 | 5473 | I | F643B-80-B7 (28789) | F643BF-80-B7 (28790) | KUTF | PM18200 | | |
| | | | | | | 1.5 | 4104 | II | | | JUTF | PM18150 | | |
| | | 14152 | 5.2 | 4.89 | 653B-80 (28793) | 1 | 2736 | III | F643B-80-B5 (28791) | F643BF-80-B5 (28792) | HUTF-5/8 | PM9100-5/8 PM18100-5/8 | | |
| | | | | | | 5 | 13558 | I | F653B-80-B9 (28794) | F653BF-80-B9 (28796) | MUTF | PM18500 | | |
| | | 25562 | 9.74 | 9.16 | 663B-80 (28799) | 3 | 8135 | II | | | LUTF | PM18300 | | |
| | | | | | | 2 | 5423 | III | F653B-80-B7 (28797) | F653BF-80-B7 (28798) | KUTF | PM18200 | | |
| | | | | | | 7.5 | 19604 | I | F663B-80-B11 (28800) | F663BF-80-B11 (28801) | MUTF | PM18500 | | |
| | | | | | | 5 | 13069 | III | F663B-80-B9 (28802) | F663BF-80-B9 (28803) | LUTF | PM18300 | | |
| | | 18 | 100 | 1618 | .48 | 0.45 | 623B-100 (28804) | .33 | 1110 | I | F623B-100-B5 (28805) | F623BF-100-B5 (28806) | EUTF | PM933 |
| | | | | | | | | .25 | 841 | III | | | DUTF | PM925 |
| 4038 | 1.21 | | | 1.14 | 633B-100 (28808) | 1 | 3324 | I | F633B-100-B5 (28809) | F633BF-100-B5 (28810) | HUTF-5/8 | PM9100-5/8 | | |
| | | | | | | .75 | 2493 | II | | | GUTF | PM18100-5/8 | | |
| | | | | | | .5 | 1662 | III | | | FUTF | PM975/PM1875 PM950 | | |
| 6100 | 1.78 | | | 1.67 | 643B-100 (28811) | 1.5 | 5133 | I | F643B-100-B7 (28812) | F643BF-100-B7 (28813) | JUTF | PM18150 | | |
| | | | | | | 1 | 3422 | II | F643B-100-B5 (28814) | F643BF-100-B5 (28815) | HUTF-5/8 | PM9100-5/8 | | |
| | | | | | | .75 | 2567 | III | | | GUTF | PM18100-5/8 | | |
| | | | | | | 2 | 7008 | I | F653B-100-B7 (28817) | F653BF-100-B7 (28818) | KUTF | PM18200 | | |
| 14222 | 4.04 | | | 3.80 | 653B-100 (28816) | 1.5 | 5256 | II | | | JUTF | PM18150 | | |
| | | | | | | 1 | 3504 | III | F653B-100-B5 (28819) | F653BF-100-B5 (28820) | HUTF-5/8 | PM9100-5/8 PM18100-5/8 | | |
| 26602 | 8.03 | | | 7.55 | 663B-100 (28821) | 7.5 | 24753 | I | F663B-100-B11 (28822) | F663BF-100-B11 (28823) | NUTF | — | | |
| | | | | | | 5 | 16502 | II | F663B-100-B9 (28824) | F663BF-100-B9 (28825) | MUTF | PM18500 | | |
| | | | | | | 3 | 9901 | III | | | LUTF | PM18300 | | |
| 14 | 125 | 1744 | .41 | 0.39 | 623B-125 (28826) | .33 | 1389 | I | F623B-125-B5 (28827) | F623BF-125-B5 (28828) | EUTF | PM933 | | |
| | | | | | | .25 | 1052 | II | | | DUTF | PM925 | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Output RPM and Capacity Selection Tables

@ 1750 RPM Input

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 291-296.
ORDER BY CATALOG NUMBER OR ITEM CODE.

| Output RPM | Ratio* | Non-Flanged Reducers | | | | Flanged Reducers (Gearmotors) | | | | | | AC Motors† | DC Motors†† |
|------------|--------|------------------------|-------|--------|-------------------------|-------------------------------|------------------------|--------|-----------------------------|-----------------------|--------------------------|---|-------------|
| | | Gear Capacity | | | Catalog No. (Item Code) | Ratings | | | Catalog Numbers (Item Code) | | | | |
| | | Output Torque (LB-IN.) | HP | | | Motor HP | Output Torque (LB-IN.) | S.C.** | Foot Mounted | Output Flange Mounted | | | |
| | | | Input | Output | | | | | | | | | |
| 14 | 125 | 4038 | .97 | 0.91 | 633B-125 (28829) | .75 | 3121 | I | F633B-125-B5 (28830) | F633BF-125-B5 (28831) | GUTF FUTF EUTF | PM975 PM1875 PM950 PM933 | |
| | | | | | | .5 | 2080 | II | | | | | |
| | | | | | | .33 | 1373 | III | | | | | |
| | | 6100 | 1.45 | 1.36 | 643B-125 (28832) | 1 | 4214 | I | F643B-125-B5 (28833) | F643BF-125-B5 (28834) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 PM950 | |
| | | | | | | .75 | 3161 | II | | | | | |
| | | | | | | .5 | 2107 | III | | | | | |
| | | 14277 | 3.25 | 3.06 | 653B-125 (28835) | 3 | 13125 | I | F653B-125-B9 (28836) | F653BF-125-B9 (28839) | LUTF KUTF | PM18300 PM18200 | |
| | | | | | | 2 | 8750 | II | | | | | |
| | | | | | | 1.5 | 6562 | III | | | | | |
| | | 27049 | 6.52 | 6.13 | 663B-125 (28842) | 5 | 20653 | II | F663B-125-B9 (28843) | F663BF-125-B9 (28844) | MUTF | PM18500 | |
| | | | | | | 3 | 12392 | III | | | | | |
| | | | | | | | | | | | | | |
| 11 | 160 | 6100 | 1.10 | 1.03 | 643B-160 (28847) | 1 | 5485 | I | F643B-160-B5 (28848) | F643BF-160-B5 (28849) | HUTF-5/8 GUTF FUTF | PM9100-5/8 PM18100-5/8 PM975 PM1875 PM950 | |
| | | | | | | .75 | 4114 | II | | | | | |
| | | | | | | .5 | 2743 | III | | | | | |
| | | 14317 | 2.72 | 2.56 | 653B-160 (28850) | 2 | 10489 | I | F653B-160-B7 (28851) | F653BF-160-B7 (28853) | KUTF JUTF | PM18200 PM18150 | |
| | | | | | | 1.5 | 7867 | II | | | | | |
| | | | | | | 1 | 5245 | III | | | | | |
| | | 27173 | 5.03 | 4.73 | 663B-160 (28856) | 5 | 26881 | I | F663B-160-B9 (28857) | F663BF-160-B9 (28858) | MUTF LUTF | PM18500 PM18300 | |
| | | | | | | 3 | 16128 | II | | | | | |
| | | | | | | 2 | 10752 | III | | | | | |

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 291-296.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 337-339.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 334, 340 and 341.

Overhung Load Ratings refer to Pages 277.

600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 1750 and 1160 RPM

Service Factor 1.0*

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|-----------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 1750 RPM | | | 1160 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 621B-1.6 | 28000 | 1094 | 338 | 6.15 | 725 | 399 | 4.8 | 1.56 |
| 631B-1.6 | 28005 | 1094 | 623 | 11.39 | 725 | 708 | 8.58 | 1.55 |
| 641B-1.6 | 28010 | 1094 | 761 | 13.43 | 725 | 897 | 10.49 | 1.61 |
| 651B-1.6 | 28015 | 1094 | 2292 | 41.74 | 725 | 2378 | 28.7 | 1.56 |
| 661B-1.6 | 28017 | 1094 | 3230 | 57.18 | 725 | 3677 | 43.14 | 1.6 |
| 611C-2 | 28019 | 875 | 212 | 3.06 | 580 | 212 | 2.03 | 1.96 |
| 621B-2 | 28022 | 875 | 399 | 5.65 | 580 | 442 | 4.14 | 2 |
| 631B-2 | 28027 | 875 | 708 | 10.35 | 580 | 708 | 6.86 | 1.94 |
| 641B-2 | 28032 | 875 | 1030 | 14.33 | 580 | 1214 | 11.2 | 2.04 |
| 651B-2 | 28037 | 875 | 2521 | 36.29 | 580 | 2610 | 24.9 | 1.97 |
| 661B-2 | 28039 | 875 | 3735 | 52.88 | 580 | 4256 | 39.95 | 2 |
| 611C-2.5 | 28041 | 700 | 275 | 3.06 | 464 | 276 | 2.03 | 2.55 |
| 621B-2.5 | 28044 | 700 | 442 | 4.86 | 464 | 442 | 3.22 | 2.58 |
| 631B-2.5 | 28049 | 700 | 708 | 7.88 | 464 | 708 | 5.22 | 2.55 |
| 641B-2.5 | 28054 | 700 | 1273 | 13.96 | 464 | 1327 | 9.65 | 2.58 |
| 651B-2.5 | 28059 | 700 | 2745 | 30.62 | 464 | 2835 | 20.96 | 2.54 |
| 661B-2.5 | 28062 | 700 | 4152 | 48.17 | 464 | 4731 | 36.38 | 2.44 |
| 611C-3.2 | 28064 | 557 | 340 | 2.98 | 368 | 348 | 2.02 | 3.24 |
| 621B-3.2 | 28067 | 557 | 442 | 3.86 | 368 | 442 | 2.56 | 3.25 |
| 631B-3.2 | 28073 | 557 | 708 | 6.50 | 368 | 708 | 4.31 | 3.09 |
| 641B-3.2 | 28076 | 557 | 1127 | 10.10 | 368 | 1327 | 7.89 | 3.16 |
| 651B-3.2 | 28081 | 557 | 2894 | 25.76 | 368 | 2903 | 17.13 | 3.18 |
| 661B-3.2 | 28086 | 557 | 4655 | 42.96 | 368 | 5221 | 31.94 | 3.07 |
| 611C-4 | 28088 | 438 | 372 | 2.58 | 290 | 380 | 1.75 | 4.08 |
| 621B-4 | 28093 | 438 | 442 | 3.19 | 290 | 442 | 2.11 | 3.93 |
| 631B-4 | 28098 | 438 | 708 | 5.15 | 290 | 708 | 3.41 | 3.89 |
| 641B-4 | 28108 | 438 | 1315 | 9.42 | 290 | 1327 | 6.31 | 3.95 |
| 651B-4 | 28113 | 438 | 2903 | 20 | 290 | 2903 | 13.26 | 4.11 |
| 661B-4 | 28119 | 438 | 5221 | 38.16 | 290 | 5221 | 25.3 | 3.88 |
| 611C-5 | 28121 | 350 | 192 | 1.05 | 230 | 179 | 0.65 | 5.17 |
| 621B-5 | 28124 | 350 | 442 | 2.55 | 230 | 442 | 1.69 | 4.92 |
| 631B-5 | 28129 | 350 | 708 | 4.11 | 230 | 708 | 2.73 | 4.88 |
| 641B-5 | 28134 | 350 | 1327 | 7.73 | 230 | 1327 | 5.12 | 4.87 |
| 651B-5 | 28140 | 350 | 2903 | 16.01 | 230 | 2903 | 10.62 | 5.13 |
| 661B-5 | 28145 | 350 | 5221 | 30.49 | 230 | 5221 | 20.21 | 4.85 |
| 622B-6.3 | 28147 | 278 | 1251 | 5.63 | 183 | 1252 | 3.73 | 6.43 |
| 632B-6.3 | 28152 | 278 | 2208 | 10.45 | 183 | 2208 | 6.92 | 6.1 |
| 642B-6.3 | 28157 | 278 | 3615 | 16.28 | 183 | 3615 | 10.79 | 6.41 |
| 652B-6.3 | 28162 | 278 | 7883 | 36.83 | 183 | 8159 | 25.13 | 6.21 |
| 662B-6.3 | 28164 | 278 | 11903 | 53.87 | 183 | 12354 | 37.06 | 6.38 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.



600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 690 and 100 RPM

Service Factor 1.0*

K

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|-----------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 690 RPM | | | 100 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 621B-1.6 | 28000 | 431 | 425 | 3.04 | 63 | 425 | 0.44 | 1.56 |
| 631B-1.6 | 28005 | 431 | 708 | 5.10 | 63 | 708 | 0.74 | 1.55 |
| 641B-1.6 | 28010 | 431 | 959 | 6.65 | 63 | 959 | 0.96 | 1.61 |
| 651B-1.6 | 28015 | 431 | 2411 | 17.27 | 63 | 2411 | 2.50 | 1.56 |
| 661B-1.6 | 28017 | 431 | 3677 | 25.67 | 63 | 3677 | 3.72 | 1.6 |
| 611C-2 | 28019 | 345 | 210 | 1.20 | 50 | 210 | 0.17 | 1.96 |
| 621B-2 | 28022 | 345 | 442 | 2.47 | 50 | 442 | 0.36 | 2 |
| 631B-2 | 28027 | 345 | 708 | 4.08 | 50 | 708 | 0.59 | 1.94 |
| 641B-2 | 28032 | 345 | 1327 | 7.27 | 50 | 1327 | 1.05 | 2.04 |
| 651B-2 | 28037 | 345 | 2870 | 16.28 | 50 | 2870 | 2.36 | 1.97 |
| 661B-2 | 28039 | 345 | 4731 | 26.43 | 50 | 4731 | 3.83 | 2 |
| 611C-2.5 | 28041 | 276 | 276 | 1.21 | 40 | 276 | 0.18 | 2.55 |
| 621B-2.5 | 28044 | 276 | 442 | 1.91 | 40 | 442 | 0.28 | 2.58 |
| 631B-2.5 | 28049 | 276 | 708 | 3.10 | 40 | 708 | 0.45 | 2.55 |
| 641B-2.5 | 28054 | 276 | 1327 | 5.75 | 40 | 1327 | 0.83 | 2.58 |
| 651B-2.5 | 28059 | 276 | 2870 | 12.62 | 40 | 2870 | 1.83 | 2.54 |
| 661B-2.5 | 28062 | 276 | 4731 | 21.66 | 40 | 4731 | 3.14 | 2.44 |
| 611C-3.2 | 28064 | 240 | 350 | 1.21 | 31 | 350 | 0.17 | 3.24 |
| 621B-3.2 | 28067 | 216 | 442 | 1.52 | 31 | 442 | 0.22 | 3.25 |
| 631B-3.2 | 28073 | 216 | 708 | 2.56 | 31 | 708 | 0.37 | 3.09 |
| 641B-3.2 | 28076 | 216 | 1327 | 4.69 | 31 | 1327 | 0.68 | 3.16 |
| 651B-3.2 | 28081 | 216 | 2903 | 10.20 | 31 | 2903 | 1.48 | 3.18 |
| 661B-3.2 | 28086 | 216 | 5221 | 19.00 | 31 | 5221 | 2.75 | 3.07 |
| 611C-4 | 28088 | 173 | 375 | 1.03 | 25 | 375 | 0.15 | 4.08 |
| 621B-4 | 28093 | 173 | 442 | 1.26 | 25 | 442 | 0.18 | 3.93 |
| 631B-4 | 28098 | 173 | 708 | 2.03 | 25 | 708 | 0.29 | 3.89 |
| 641B-4 | 28108 | 173 | 1327 | 3.75 | 25 | 1327 | 0.54 | 3.95 |
| 651B-4 | 28113 | 173 | 2903 | 7.89 | 25 | 2903 | 1.14 | 4.11 |
| 661B-4 | 28119 | 173 | 5221 | 15.03 | 25 | 5221 | 2.18 | 3.88 |
| 611C-5 | 28121 | 138 | 178 | 0.38 | 20 | 178 | 0.06 | 5.17 |
| 621B-5 | 28124 | 138 | 442 | 1.00 | 20 | 442 | 0.15 | 4.92 |
| 631B-5 | 28129 | 138 | 708 | 1.62 | 20 | 708 | 0.23 | 4.88 |
| 641B-5 | 28134 | 138 | 1327 | 3.04 | 20 | 1327 | 0.44 | 4.87 |
| 651B-5 | 28140 | 138 | 2903 | 6.32 | 20 | 2903 | 0.92 | 5.13 |
| 661B-5 | 28145 | 138 | 5221 | 12.03 | 20 | 5221 | 1.74 | 4.85 |
| 622B-6.3 | 28147 | 110 | 1252 | 2.22 | 16 | 1252 | 0.32 | 6.43 |
| 632B-6.3 | 28152 | 110 | 2208 | 4.13 | 16 | 2208 | 0.60 | 6.1 |
| 642B-6.3 | 28157 | 110 | 3615 | 6.43 | 16 | 3615 | 0.93 | 6.41 |
| 652B-6.3 | 28162 | 110 | 8267 | 15.18 | 16 | 8267 | 2.20 | 6.21 |
| 662B-6.3 | 28164 | 110 | 12531 | 22.40 | 16 | 12531 | 3.25 | 6.38 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 1750 and 1160 RPM

Service Factor 1.0*

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|------------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 1750 RPM | | | 1160 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 612C-8 | 28166 | 219 | 762 | 2.69 | 144 | 775 | 1.82 | 8.16 |
| 622B-8 | 28171 | 219 | 1252 | 4.37 | 144 | 1252 | 2.89 | 8.28 |
| 632B-8 | 28176 | 219 | 2208 | 7.95 | 144 | 2208 | 5.27 | 8.02 |
| 642B-8 | 28181 | 219 | 3615 | 12.83 | 144 | 3615 | 8.5 | 8.14 |
| 652B-8 | 28186 | 219 | 10329 | 38.77 | 144 | 10729 | 26.69 | 7.69 |
| 662B-8 | 28188 | 219 | 18252 | 66.63 | 144 | 18254 | 44.17 | 7.92 |
| 612C-10 | 28190 | 175 | 768 | 2.17 | 115 | 777 | 1.46 | 10.2 |
| 622B-10 | 28195 | 175 | 1252 | 3.46 | 115 | 1252 | 2.3 | 10.43 |
| 632B-10 | 28201 | 175 | 2208 | 6.56 | 115 | 2208 | 4.35 | 9.72 |
| 642B-10 | 28204 | 175 | 3615 | 10.49 | 115 | 3615 | 6.95 | 9.95 |
| 652B-10 | 28209 | 175 | 11933 | 35.65 | 115 | 13476 | 26.68 | 9.67 |
| 662B-10 | 28211 | 175 | 20956 | 60.86 | 115 | 22907 | 44.17 | 9.94 |
| 612C-12.5 | 28213 | 140 | 772 | 1.82 | 92 | 776 | 1.22 | 12.23 |
| 622B-12.5 | 28218 | 140 | 1252 | 2.87 | 92 | 1252 | 1.9 | 12.61 |
| 632B-12.5 | 28223 | 140 | 2208 | 5.2 | 92 | 2208 | 3.44 | 12.27 |
| 642B-12.5 | 28228 | 140 | 3615 | 8.39 | 92 | 3615 | 5.56 | 12.45 |
| 652B-12.5 | 28232 | 140 | 12844 | 30.33 | 92 | 13603 | 21.29 | 12.23 |
| 662B-12.5 | 28235 | 140 | 23128 | 47.77 | 92 | 24062 | 37.06 | 12.43 |
| 612C-16 | 28251 | 109 | 777 | 1.46 | 72 | 785 | 0.98 | 15.35 |
| 622B-16 | 28256 | 109 | 1252 | 2.29 | 72 | 1252 | 1.52 | 15.79 |
| 632B-16 | 28291 | 109 | 2208 | 4.15 | 72 | 2208 | 2.75 | 15.36 |
| 642B-16 | 28330 | 109 | 3615 | 6.81 | 72 | 3615 | 4.51 | 15.33 |
| 652B-16 | 28366 | 109 | 13452 | 24.63 | 72 | 13728 | 16.66 | 15.77 |
| 662B-16 | 28390 | 109 | 23788 | 45.28 | 72 | 25221 | 31.82 | 15.17 |
| 612C-20 | 28396 | 88 | 783 | 1.12 | 58 | 792 | 0.75 | 20.24 |
| 622B-20 | 28570 | 88 | 1252 | 1.8 | 58 | 1252 | 1.19 | 20.07 |
| 632B-20 | 28589 | 88 | 2208 | 3.21 | 58 | 2208 | 2.13 | 19.87 |
| 642B-20 | 28594 | 88 | 3615 | 6 | 58 | 3615 | 3.47 | 17.33 |
| 652B-20 | 28650 | 88 | 13601 | 19.86 | 58 | 13829 | 13.39 | 19.77 |
| 662B-20 | 28654 | 88 | 24111 | 36.51 | 58 | 24929 | 25.02 | 19.07 |
| 612C-25 | 28656 | 70 | 787 | 0.89 | 46 | 787 | 0.59 | 25.59 |
| 622B-25 | 28659 | 70 | 877 | 1 | 46 | 867 | 0.65 | 25.39 |
| 632B-25 | 28663 | 70 | 2208 | 2.51 | 46 | 2208 | 1.66 | 25.44 |
| 642B-25 | 28668 | 70 | 3615 | 4.23 | 46 | 3615 | 2.8 | 24.68 |
| 652B-25 | 28674 | 70 | 13727 | 15.52 | 46 | 13932 | 10.44 | 25.55 |
| 662B-25 | 28679 | 70 | 25876 | 31.03 | 46 | 26310 | 20.91 | 24.08 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.



600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 690 and 100 RPM

Service Factor 1.0*

K

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|------------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 690 RPM | | | 100 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 612C-8 | 28166 | 86 | 779 | 1.09 | 13 | 779 | 0.16 | 8.16 |
| 622B-8 | 28171 | 86 | 1252 | 1.72 | 13 | 1252 | 0.25 | 8.28 |
| 632B-8 | 28176 | 86 | 2208 | 3.14 | 13 | 2208 | 0.46 | 8.02 |
| 642B-8 | 28181 | 86 | 3615 | 5.06 | 13 | 3615 | 0.73 | 8.14 |
| 652B-8 | 28186 | 86 | 10887 | 16.15 | 13 | 10887 | 2.34 | 7.69 |
| 662B-8 | 28188 | 86 | 18250 | 26.28 | 13 | 18250 | 3.81 | 7.92 |
| 612C-10 | 28190 | 69 | 783 | 0.88 | 10 | 783 | 0.13 | 10.2 |
| 622B-10 | 28195 | 69 | 1252 | 1.37 | 10 | 1252 | 0.20 | 10.43 |
| 632B-10 | 28201 | 69 | 2208 | 2.59 | 10 | 2208 | 0.38 | 9.72 |
| 642B-10 | 28204 | 69 | 3615 | 4.14 | 10 | 3615 | 0.60 | 9.95 |
| 652B-10 | 28209 | 69 | 13589 | 16.03 | 10 | 13589 | 2.32 | 9.67 |
| 662B-10 | 28211 | 69 | 22902 | 26.28 | 10 | 22902 | 3.81 | 9.94 |
| 612C-12.5 | 28213 | 55 | 786 | 0.73 | 8 | 786 | 0.11 | 12.23 |
| 622B-12.5 | 28218 | 55 | 1252 | 1.13 | 8 | 1252 | 0.16 | 12.61 |
| 632B-12.5 | 28223 | 55 | 2208 | 2.05 | 8 | 2208 | 0.30 | 12.27 |
| 642B-12.5 | 28228 | 55 | 3615 | 3.31 | 8 | 3615 | 0.48 | 12.45 |
| 652B-12.5 | 28232 | 55 | 13706 | 12.78 | 8 | 13706 | 1.85 | 12.23 |
| 662B-12.5 | 28235 | 55 | 24410 | 22.40 | 8 | 24410 | 3.25 | 12.43 |
| 612C-16 | 28251 | 43 | 790 | 0.59 | 6 | 790 | 0.09 | 15.35 |
| 622B-16 | 28256 | 43 | 1252 | 0.90 | 6 | 1252 | 0.13 | 15.79 |
| 632B-16 | 28291 | 43 | 2208 | 1.64 | 6 | 2208 | 0.24 | 15.36 |
| 642B-16 | 28330 | 43 | 3615 | 2.69 | 6 | 3615 | 0.39 | 15.33 |
| 652B-16 | 28366 | 43 | 13821 | 9.99 | 6 | 13821 | 1.45 | 15.77 |
| 662B-16 | 28390 | 43 | 25563 | 19.22 | 6 | 25563 | 2.79 | 15.17 |
| 612C-20 | 28396 | 35 | 794 | 0.45 | 5 | 794 | 0.06 | 20.24 |
| 622B-20 | 28570 | 35 | 1252 | 0.71 | 5 | 1252 | 0.10 | 20.07 |
| 632B-20 | 28589 | 35 | 2208 | 1.27 | 5 | 2208 | 0.18 | 19.87 |
| 642B-20 | 28594 | 35 | 3615 | 2.38 | 5 | 3615 | 0.34 | 17.33 |
| 652B-20 | 28650 | 35 | 13914 | 8.03 | 5 | 13914 | 1.16 | 19.77 |
| 662B-20 | 28654 | 35 | 25248 | 15.10 | 5 | 25248 | 2.19 | 19.07 |
| 612C-25 | 28656 | 28 | 798 | 0.36 | 4 | 798 | 0.05 | 25.59 |
| 622B-25 | 28659 | 28 | 861 | 0.39 | 4 | 861 | 0.06 | 25.39 |
| 632B-25 | 28663 | 28 | 2208 | 0.99 | 4 | 2208 | 0.14 | 25.44 |
| 642B-25 | 28668 | 28 | 3615 | 1.67 | 4 | 3615 | 0.24 | 24.68 |
| 652B-25 | 28674 | 28 | 14008 | 6.25 | 4 | 14008 | 0.91 | 25.55 |
| 662B-25 | 28679 | 28 | 26475 | 12.54 | 4 | 26475 | 1.82 | 24.08 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 1750 and 1160 RPM

Service Factor 1.0*

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|-----------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 1750 RPM | | | 1160 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 612C-32 | 28682 | 55 | 791 | 0.7 | 36 | 821 | .42 | 33.48 |
| 622B-32 | 28685 | 55 | 1780 | 1.68 | 36 | 1799 | 1.13 | 30.55 |
| 632B-32 | 28690 | 55 | 3977 | 3.79 | 36 | 4023 | 2.54 | 30.29 |
| 642B-32 | 28695 | 55 | 5910 | 5.4 | 36 | 6416 | 3.93 | 32.32 |
| 652B-32 | 28698 | 55 | 13826 | 12.52 | 36 | 14014 | 8.41 | 31.9 |
| 662B-32 | 28703 | 55 | 26088 | 25 | 36 | 26487 | 16.82 | 30.14 |
| 612C-40 | 28707 | 44 | 794 | 0.57 | 29 | 799 | 0.38 | 40.32 |
| 622B-40 | 28710 | 44 | 1790 | 1.33 | 29 | 1804 | 0.89 | 38.84 |
| 632B-40 | 28713 | 44 | 4002 | 2.95 | 29 | 4038 | 1.97 | 39.2 |
| 643B-40 | 28716 | 44 | 6010 | 4.3 | 29 | 6100 | 2.9 | 41.1 |
| 652B-40 | 28721 | 44 | 13901 | 10.5 | 29 | 14074 | 7.04 | 38.24 |
| 662B-40 | 28726 | 44 | 26314 | 19.37 | 29 | 26673 | 13.02 | 39.23 |
| 613C-50 | 28730 | 35 | 796 | 0.45 | 23 | 803 | 0.32 | 49.16 |
| 622B-50 | 28733 | 35 | 1699 | 1 | 23 | 1666 | 0.65 | 49.15 |
| 632B-50 | 28736 | 35 | 4024 | 2.32 | 23 | 4038 | 1.54 | 50.19 |
| 643B-50 | 28742 | 35 | 6100 | 3.46 | 23 | 6100 | 2.29 | 52.09 |
| 652B-50 | 28747 | 35 | 14004 | 8.03 | 23 | 14158 | 5.38 | 50.34 |
| 662B-50 | 28752 | 35 | 26496 | 15.39 | 23 | 26823 | 10.33 | 49.71 |
| 613C-63 | 28756 | 28 | 800 | 0.4 | 18 | 785 | 0.24 | 64.07 |
| 623B-63 | 28759 | 28 | 1406 | 0.63 | 18 | 1657 | 0.5 | 65.25 |
| 633B-63 | 28762 | 28 | 4038 | 1.85 | 18 | 4038 | 1.23 | 64.2 |
| 643B-63 | 28767 | 28 | 6100 | 2.73 | 18 | 6100 | 1.9 | 66.11 |
| 653B-63 | 28772 | 28 | 14084 | 6.48 | 18 | 14223 | 4.34 | 63.93 |
| 663B-63 | 28775 | 28 | 23239 | 11.13 | 18 | 26947 | 8.56 | 61.44 |
| 623B-80 | 28780 | 22 | 1519 | 0.54 | 14 | 1790 | 0.42 | 81.29 |
| 633B-80 | 28783 | 22 | 4038 | 1.53 | 14 | 4038 | 1.01 | 77.86 |
| 643B-80 | 28788 | 22 | 6100 | 2.2 | 14 | 6100 | 1.52 | 80.86 |
| 653B-80 | 28793 | 22 | 14152 | 5.2 | 14 | 14278 | 3.48 | 80.13 |
| 663B-80 | 28799 | 22 | 25562 | 9.74 | 14 | 27062 | 6.84 | 77.24 |
| 623B-100 | 28804 | 18 | 1618 | 0.48 | 12 | 1804 | 0.35 | 99.4 |
| 633B-100 | 28808 | 18 | 4038 | 1.21 | 12 | 4038 | 0.8 | 98.24 |
| 643B-100 | 28811 | 18 | 6100 | 1.78 | 12 | 6100 | 1.23 | 101.13 |
| 653B-100 | 28816 | 18 | 14222 | 4.04 | 12 | 14334 | 2.7 | 103.54 |
| 663B-100 | 28821 | 18 | 26602 | 8.03 | 12 | 27177 | 5.44 | 97.53 |
| 623B-125 | 28826 | 14 | 1744 | 0.41 | 9 | 1804 | 0.28 | 124.4 |
| 633B-125 | 28829 | 14 | 4038 | 0.97 | 9 | 4038 | 0.64 | 122.96 |
| 643B-125 | 28832 | 14 | 6100 | 1.45 | 9 | 6100 | 0.96 | 124.53 |
| 653B-125 | 28835 | 14 | 14277 | 3.25 | 9 | 14378 | 2.17 | 129.28 |
| 663B-125 | 28842 | 14 | 27049 | 6.52 | 9 | 27265 | 4.36 | 122.06 |
| 643B-160 | 28847 | 11 | 6100 | 1.1 | 7 | 6100 | 0.77 | 162.1 |
| 653B-160 | 28850 | 11 | 14317 | 2.72 | 7 | 14410 | 1.81 | 154.98 |
| 663B-160 | 28856 | 11 | 27173 | 5.03 | 7 | 27372 | 3.36 | 158.87 |

* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.



600 Series Ratio and Capacity Selection Tables

Non-Flanged Reducers; Input Speeds 690 and 100 RPM

Service Factor 1.0*

| Catalog Number† | Item Code | Input Speed | | | | | | Gear Ratio†† |
|-----------------|-----------|--------------------|-----------------------------|-----------------|--------------------|------------------------------|-----------------|--------------|
| | | 690 RPM | | | 100 RPM | | | |
| | | Approx. Output RPM | Output Torque (LB-IN)(Max.) | Input HP (Max.) | Approx. Output RPM | Output Torque (LB-IN) (Max.) | Input HP (Max.) | |
| 612C-32 | 28682 | 22 | 800 | 0.27 | 3 | 800 | 0.04 | 33.48 |
| 623B-32 | 28685 | 22 | 1804 | 0.67 | 3 | 1804 | 0.10 | 30.55 |
| 633B-32 | 28690 | 22 | 4023 | 1.51 | 3 | 4023 | 0.22 | 30.29 |
| 642B-32 | 28695 | 22 | 6100 | 2.15 | 3 | 6100 | 0.31 | 32.32 |
| 652B-32 | 28698 | 22 | 14083 | 5.03 | 3 | 14083 | 0.73 | 31.9 |
| 662B-32 | 28703 | 22 | 26634 | 10.08 | 3 | 26634 | 1.46 | 30.14 |
| 613C-40 | 28707 | 17 | 800 | 0.23 | 2.5 | 800 | 0.03 | 40.32 |
| 623B-40 | 28710 | 17 | 1804 | 0.54 | 2.5 | 1804 | 0.08 | 38.84 |
| 633B-40 | 28713 | 17 | 4038 | 1.20 | 2.5 | 4038 | 0.17 | 39.2 |
| 643B-40 | 28716 | 17 | 6100 | 1.73 | 2.5 | 6100 | 0.25 | 41.1 |
| 653B-40 | 28721 | 17 | 14138 | 4.31 | 2.5 | 14138 | 0.62 | 38.24 |
| 663B-40 | 28726 | 17 | 26802 | 7.96 | 2.5 | 26802 | 1.15 | 39.23 |
| 613C-50 | 28730 | 14 | 796 | 0.19 | 2 | 796 | 0.03 | 49.16 |
| 623B-50 | 28733 | 14 | 1804 | 0.43 | 2 | 1804 | 0.06 | 49.15 |
| 633B-50 | 28736 | 14 | 4038 | 0.94 | 2 | 4038 | 0.14 | 50.19 |
| 643B-50 | 28742 | 14 | 6100 | 1.36 | 2 | 6100 | 0.20 | 52.09 |
| 653B-50 | 28747 | 14 | 14215 | 3.29 | 2 | 14215 | 0.48 | 50.34 |
| 663B-50 | 28752 | 14 | 26941 | 6.31 | 2 | 26941 | 0.91 | 49.71 |
| 613C-63 | 28756 | 11 | 800 | 0.15 | 1.6 | 800 | 0.02 | 64.07 |
| 623B-63 | 28759 | 11 | 1804 | 0.32 | 1.6 | 1804 | 0.05 | 65.25 |
| 633B-63 | 28762 | 11 | 4038 | 0.73 | 1.6 | 4038 | 0.11 | 64.2 |
| 643B-63 | 28767 | 11 | 6100 | 1.07 | 1.6 | 6100 | 0.16 | 66.11 |
| 653B-63 | 28772 | 11 | 14274 | 2.60 | 1.6 | 14274 | 0.38 | 63.93 |
| 663B-63 | 28775 | 11 | 27053 | 5.13 | 1.6 | 27053 | 0.74 | 61.44 |
| 623B-80 | 28780 | 9 | 1804 | 0.26 | 1.3 | 1804 | 0.04 | 81.29 |
| 633B-80 | 28783 | 9 | 4038 | 0.60 | 1.3 | 4038 | 0.09 | 77.86 |
| 643B-80 | 28788 | 9 | 6100 | 0.88 | 1.3 | 6100 | 0.13 | 80.86 |
| 653B-80 | 28793 | 9 | 14324 | 2.08 | 1.3 | 14324 | 0.30 | 80.13 |
| 663B-80 | 28799 | 9 | 27162 | 4.10 | 1.3 | 27162 | 0.59 | 77.24 |
| 623B-100 | 28804 | 7 | 1804 | 0.21 | 1 | 1804 | 0.03 | 99.4 |
| 633B-100 | 28808 | 7 | 4038 | 0.48 | 1 | 4038 | 0.07 | 98.24 |
| 643B-100 | 28811 | 7 | 6100 | 0.70 | 1 | 6100 | 0.10 | 101.13 |
| 653B-100 | 28816 | 7 | 14375 | 1.62 | 1 | 14375 | 0.23 | 103.54 |
| 663B-100 | 28821 | 7 | 27260 | 3.26 | 1 | 27260 | 0.47 | 97.53 |
| 623B-125 | 28826 | 6 | 1380 | 0.13 | 0.8 | 1380 | 0.02 | 124.4 |
| 633B-125 | 28829 | 6 | 4038 | 0.38 | 0.8 | 4038 | 0.06 | 122.96 |
| 643B-125 | 28832 | 6 | 6100 | 0.57 | 0.8 | 6100 | 0.08 | 124.53 |
| 653B-125 | 28835 | 6 | 14415 | 1.30 | 0.8 | 14415 | 0.19 | 129.28 |
| 663B-125 | 28842 | 6 | 27348 | 2.61 | 0.8 | 27348 | 0.38 | 122.06 |
| 643B-160 | 28847 | 4 | 6100 | 0.44 | 0.6 | 6100 | 0.06 | 162.1 |
| 653B-160 | 28850 | 4 | 14444 | 1.09 | 0.6 | 14444 | 0.16 | 154.98 |
| 663B-160 | 28856 | 4 | 27442 | 2.01 | 0.6 | 27442 | 0.29 | 158.87 |

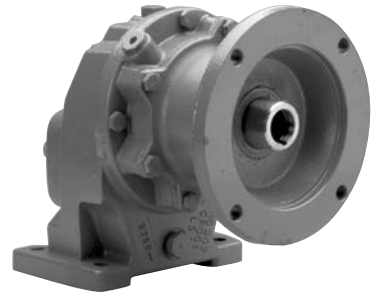
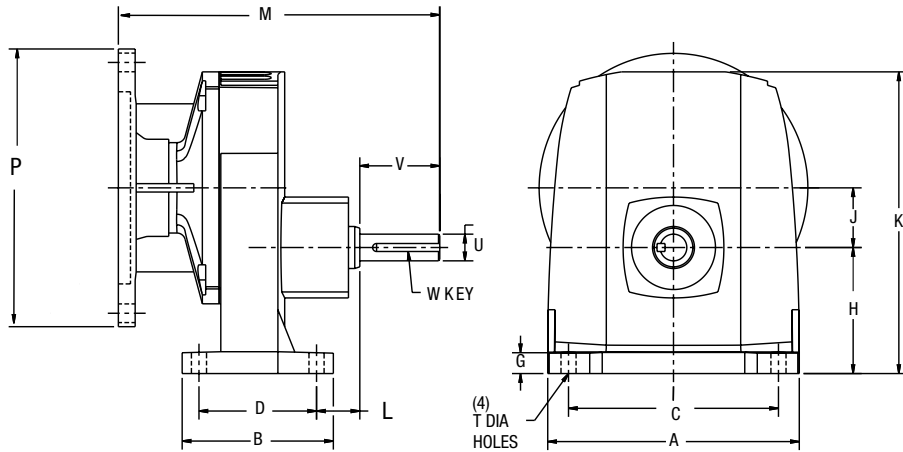
* For applications requiring a service factor greater than 1.0, multiply the design torque or horsepower by the application factor, found on pages 348-349, before selection.

† Reducer dimensions can be found on pages 297-302.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

600 Series Single Reduction Flanged Reducer Dimensions

F600B Series – Flanged Quill Type Foot Mounted



| Size | A | B | C | D | G | H | J | K | L |
|------|-------|------|-------|------|------|------|------|-------|------|
| 611C | 5.90 | 3.54 | 4.92 | 2.76 | .48 | 2.95 | 1.40 | 7.07 | 1.01 |
| 621B | 6.14 | 4.13 | 4.72 | 2.95 | .71 | 3.15 | 1.83 | 8.24 | .71 |
| 631B | 7.08 | 4.48 | 5.52 | 3.15 | .77 | 3.54 | 2.48 | 9.76 | .75 |
| 641B | 9.69 | 5.30 | 7.48 | 3.94 | 1.00 | 4.41 | 2.76 | 11.69 | 1.08 |
| 651B | 11.02 | 6.59 | 8.50 | 4.92 | 1.33 | 5.20 | 3.43 | 13.90 | 1.10 |
| 661B | 13.65 | 7.76 | 10.24 | 6.30 | 1.71 | 6.30 | 4.33 | 17.36 | 1.18 |

| Size | M | | | | | T | Low Speed Shaft | | | | Approx. Weight (lb.) |
|------|---------------|-------------|-------------|--------------|--------------|-----|-----------------|------|-------|--------|----------------------|
| | NEMA Mounting | | | | | | *U | V | W-Key | | |
| | B5 56C | B7 140TC | B9 180TC | B11 210TC | B13 250TC | | | | Sq. | Length | |
| 611C | 8.50 | 8.50 | -- | -- | -- | .35 | .625 | 1.88 | 3/16 | 1.48 | 11 |
| 621B | 10.43 | 10.43 | 12.15 | -- | -- | .43 | .750 | 1.50 | 3/16 | 1.28 | 30 |
| 631B | 11.05 | 11.05 | 12.77 | 12.77 | -- | .55 | 1.000 | 2.00 | 1/4 | 1.56 | 40 |
| 641B | -- | -- | 14.17 | 14.17 | -- | .63 | 1.375 | 2.75 | 5/16 | 2.40 | 62 |
| 651B | -- | -- | -- | 15.54 | 16.75 | .71 | 1.500 | 3.00 | 3/8 | 2.56 | 68 |
| 661B | -- | -- | -- | -- | 17.48 | .79 | 1.750 | 3.50 | 3/8 | 3.06 | 89 |
| P | 9.00 | 9.00 | 9.00 | | | | | | | | |

Output shaft rotation is opposite input shaft rotation.

* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

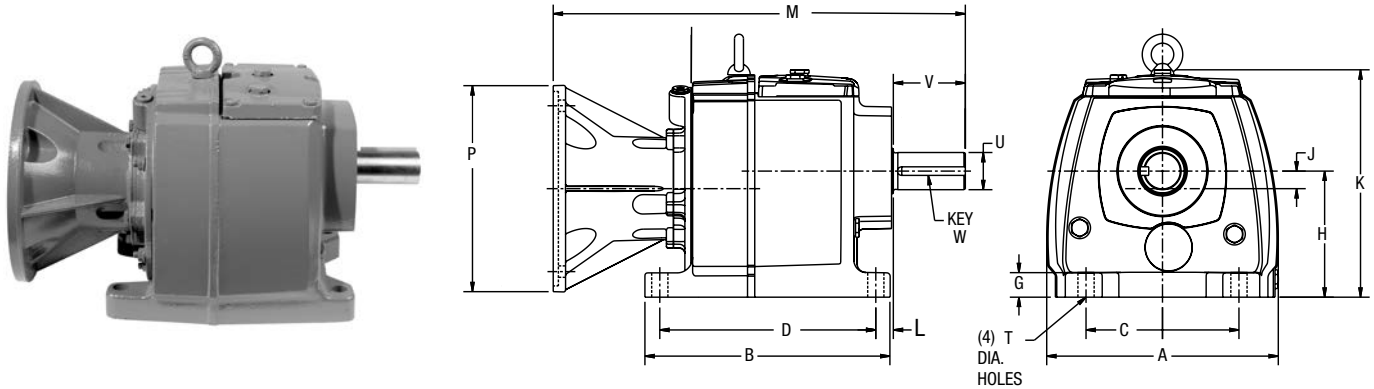
Dimensions to rough casting are approximate.

600 Series Double & Triple Reduction Flanged Reducer Dimensions

F600B Series – Flanged Quill Type

Foot Mounted

K



| Size | A | B | C | D | G | H | J | K | L |
|-----------|-------|-----------|-------|-----------|------|------|------|-------|------|
| 612C/613C | 5.90 | 4.92/5.71 | 4.92 | 4.13/4.92 | .48 | 2.95 | .28* | 6.00 | .87 |
| 622B/623B | 6.76 | 7.68 | 4.33 | 6.50 | .71 | 3.54 | .33 | 6.60 | .59 |
| 632B/633B | 8.72 | 8.50 | 5.32 | 7.56 | .84 | 4.53 | .39 | 7.97 | .51 |
| 642B/643B | 10.13 | 10.72 | 6.68 | 9.45 | 1.07 | 5.51 | .77 | 9.94 | .77 |
| 652B/653B | 12.00 | 10.86 | 9.06 | 9.25 | 1.37 | 7.09 | 1.02 | 11.89 | .98 |
| 662B/663B | 14.19 | 12.89 | 11.02 | 11.02 | 1.73 | 8.86 | 1.14 | 14.84 | 1.10 |

* 612/613 Only "J" is Higher than "H".

| Size | M | | | | | T | Low Speed Shaft | | | | Approx. Weight (lb.) |
|-----------|---------------|-------|-------|-------|-------|-----|-----------------|------|-------|--------|----------------------|
| | NEMA Mounting | | | | | | *U | V | W-Key | | |
| | B5 | B7 | B9 | B11 | B13 | | | | Sq. | Length | |
| | 56C | 140TC | 180TC | 210TC | 250TC | | | | | | |
| 612C/613C | 9.29/10.08 | -- | -- | -- | -- | .35 | .750 | 1.75 | 3/16 | 1.48 | 17 |
| 622B/623B | 13.00 | 13.00 | 14.72 | -- | -- | .35 | 1.000 | 2.00 | 1/4 | 1.56 | 45 |
| 632B/633B | 14.17 | 14.17 | 15.89 | 15.89 | -- | .55 | 1.250 | 2.50 | 1/4 | 2.16 | 61 |
| 642B/643B | 16.31 | 16.31 | 18.03 | 18.03 | 18.66 | .71 | 1.500 | 3.00 | 3/8 | 2.56 | 90 |
| 652B/653B | 17.88 | 17.88 | 19.60 | 19.60 | 20.81 | .71 | 2.125 | 3.50 | 1/2 | 3.06 | 95 |
| 662B/663B | -- | 20.29 | 22.01 | 22.01 | 23.24 | .87 | 2.375 | 4.72 | 5/8 | 4.19 | 165 |
| P | 6.50 | 6.50 | 9.00 | 9.00 | 9.00 | | | | | | |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction reducers.

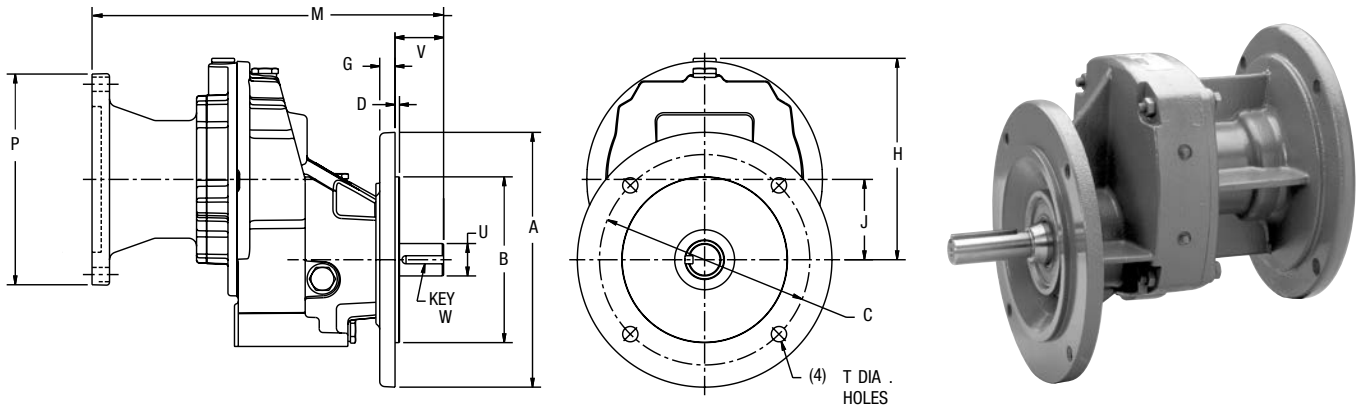
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 Series Single Reduction Flanged Reducer Dimensions

F600B Series – Flanged Quill Type Output Flange Mounted

K



| Size | A | B | C | D | G | H | J |
|--------|-------|------|-------|-----|-----|------|------|
| 611CF* | 6.50 | 4.50 | 5.88 | .12 | .39 | 4.65 | 1.40 |
| 621BF | 6.30 | 4.33 | 5.12 | .14 | .39 | 4.82 | 1.83 |
| 631BF | 7.87 | 5.12 | 6.50 | .14 | .47 | 6.22 | 2.48 |
| 641BF | 9.83 | 7.09 | 8.46 | .16 | .47 | 7.28 | 2.76 |
| 651BF | 11.80 | 9.06 | 10.43 | .16 | .59 | 8.70 | 3.43 |

* Output flange to NEMA 56C dimensions. (611CF only)

| Size | M | | | | T | Low Speed Shaft | | | | Approx. Weight (lb.) |
|-------|---------------|-------|-------|-------|------------|-----------------|------|-------|--------|----------------------|
| | NEMA Mounting | | | | | *U | V | W-Key | | |
| | B5 | B7 | B9 | B11 | | | | Sq. | Length | |
| 611CF | 8.51 | 8.51 | -- | -- | 3/8-16 UNC | .625 | 2.06 | 3/16 | 1.48 | 13 |
| 621BF | 10.74 | 10.74 | 12.46 | -- | .35 | .750 | 1.50 | 3/16 | 1.28 | 33 |
| 631BF | 10.86 | 10.86 | 12.58 | 12.58 | .47 | 1.000 | 1.50 | 1/4 | 1.16 | 44 |
| 641BF | -- | -- | 14.56 | 14.56 | .55 | 1.375 | 2.75 | 5/16 | 2.40 | 68 |
| 651BF | -- | -- | -- | 16.31 | .55 | 1.500 | 3.00 | 3/8 | 2.56 | 76 |
| P | 6.50 | 6.50 | 9.00 | 9.00 | | | | | | |

Output shaft rotation is opposite input shaft rotation.

* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

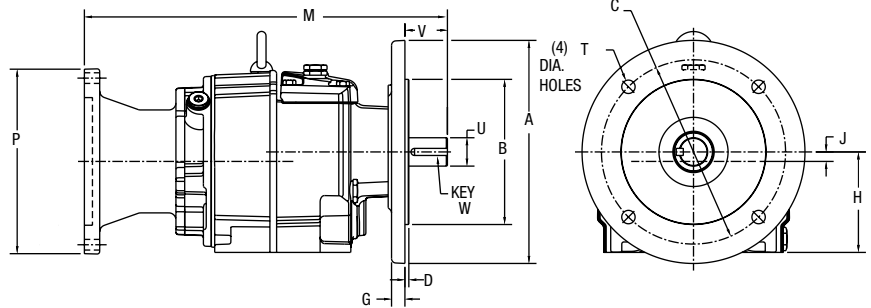
Dimensions to rough casting are approximate.

600 Series Double & Triple Reduction Flanged Reducer Dimensions

F600B Series – Flanged Quill Type

Output Flange Mounted

K



| Size | A | B | C | D | G | H | J |
|--------------|-------|-------|-------|-----|-----|------|------|
| 612CF/613CF* | 6.50 | 4.50 | 5.88 | .12 | .39 | 2.48 | .28‡ |
| 622BF/623BF | 7.87 | 5.12 | 6.50 | .14 | .47 | 3.54 | .33 |
| 632BF/633BF | 9.83 | 7.09 | 8.46 | .16 | .47 | 4.53 | .39 |
| 642BF/643BF | 11.80 | 9.06 | 10.43 | .16 | .47 | 5.51 | .77 |
| 652BF/653BF | 13.77 | 9.84 | 11.81 | .16 | .59 | 7.09 | 1.02 |
| 662BF/663BF | 15.75 | 11.81 | 13.78 | .20 | .71 | 8.86 | 1.14 |

* Output flange to NEMA 56C dimensions. (612CF/613CF only)

‡ 612/613 "J" is higher than "H"

| Size | M | | | | T | Low Speed Shaft | | | | Approx. Weight (lb.) |
|-------------|---------------|-------------|-------------|--------------|------------|-----------------|------|-------|--------|----------------------|
| | NEMA Mounting | | | | | *U | V | W-Key | | |
| | B5 56C | B7 140TC | B9 180TC | B11 210TC | | | | Sq. | Length | |
| 612CF/613CF | 9.60/10.39 | 9.60/10.39 | -- | -- | 3/8-16 UNC | .625 | 2.06 | 3/16 | 1.48 | 18 |
| 622BF/623BF | 12.81 | 12.81 | 14.53 | -- | .47 | 1.000 | 1.50 | 1/4 | 1.16 | 47 |
| 632BF/633BF | 14.56 | 14.56 | 16.28 | 16.28 | .55 | 1.250 | 2.50 | 1/4 | 2.16 | 65 |
| 642BF/643BF | 17.18 | 17.18 | 18.90 | 18.90 | .55 | 1.500 | 3.00 | 3/8 | 2.56 | 98 |
| 652BF/653BF | 18.63 | 18.63 | 20.35 | 20.35 | .71 | 2.125 | 3.50 | 1/2 | 3.06 | 103 |
| 662BF/663BF | -- | 21.26 | 22.99 | 22.99 | .71 | 2.375 | 4.72 | 5/8 | 4.19 | 174 |
| P | 6.50 | 6.50 | 9.00 | 9.00 | | | | | | |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction reducers.

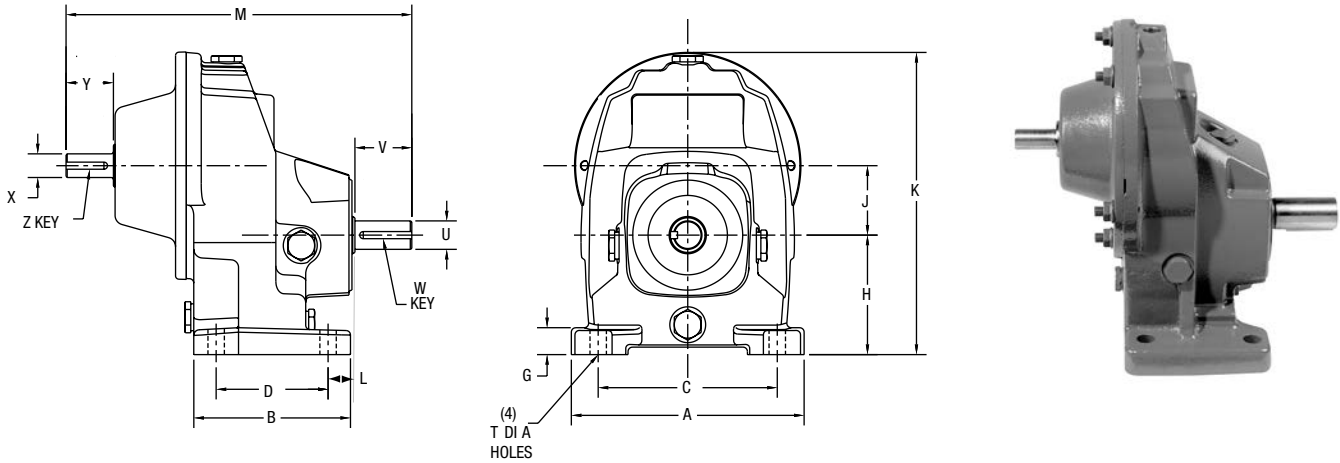
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 Series Single Reduction Non-Flanged Reducer Dimensions

600B Series
Foot Mounted

K



| Size | A | B | C | D | G | H | J | K | L | M |
|------|-------|------|-------|------|------|------|------|-------|------|-------|
| 611C | 5.90 | 3.54 | 4.92 | 2.76 | .48 | 2.95 | 1.40 | 7.07 | 1.01 | 8.77 |
| 621B | 6.14 | 4.13 | 4.72 | 2.95 | .71 | 3.15 | 1.83 | 7.97 | .71 | 9.12 |
| 631B | 7.28 | 4.48 | 5.52 | 3.15 | .77 | 3.54 | 2.48 | 9.67 | .75 | 9.74 |
| 641B | 9.69 | 5.30 | 7.48 | 3.94 | 1.00 | 4.41 | 2.76 | 11.69 | 1.08 | 12.88 |
| 651B | 11.02 | 6.59 | 8.50 | 4.92 | 1.34 | 5.20 | 3.43 | 13.90 | 1.10 | 14.35 |
| 661B | 13.65 | 7.76 | 10.24 | 6.30 | 1.61 | 6.30 | 4.33 | 17.37 | 1.18 | 16.73 |

| Size | T | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (lb.) |
|------|-----|-----------------|------|-------|--------|------------------|------|-----------|--------|----------------------|
| | | *U | V | W-Key | | *X | Y | Z-Key | | |
| | | | | Sq. | Length | | | Sq. | Length | |
| 611C | .35 | .625 | 1.88 | 3/16 | 1.48 | .500 | 1.00 | 9/32 Flat | | 9 |
| 621B | .43 | .750 | 1.50 | 3/16 | 1.28 | .625 | 1.25 | 3/16 | 1.00 | 23 |
| 631B | .55 | 1.000 | 2.00 | 1/4 | 1.56 | .625 | 1.25 | 3/16 | 1.00 | 28 |
| 641B | .63 | 1.375 | 2.75 | 5/16 | 2.40 | 1.125 | 2.25 | 1/4 | 1.94 | 55 |
| 651B | .71 | 1.500 | 3.00 | 3/8 | 2.56 | 1.125 | 2.25 | 1/4 | 1.94 | 66 |
| 661B | .79 | 1.750 | 3.50 | 3/8 | 3.06 | 1.375 | 2.75 | 5/16 | 2.31 | 89 |

Output shaft rotation is opposite input shaft rotation.

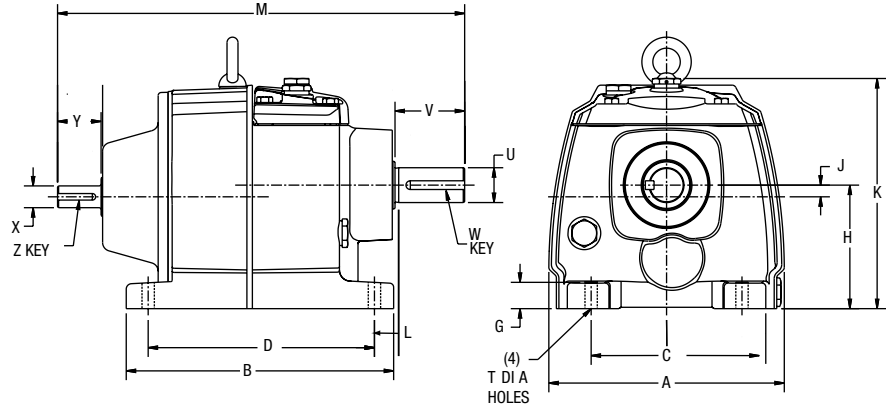
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 Series Double & Triple Reduction Non-Flanged Reducer Dimensions

600B Series Foot Mounted

K



| Size | A | B | C | D | G | H | J | K | L | M |
|-----------|-------|-----------|-------|-----------|------|------|------|-------|------|------------|
| 612C/613C | 5.90 | 4.92/5.71 | 4.92 | 4.13/4.92 | .48 | 2.95 | .28* | 6.00 | .87 | 9.56/10.35 |
| 622B/623B | 6.76 | 7.68 | 4.33 | 6.50 | .71 | 3.54 | .33 | 6.60 | .59 | 11.69 |
| 632B/633B | 8.72 | 8.50 | 5.32 | 7.56 | .84 | 4.53 | .39 | 7.97 | .51 | 12.86 |
| 642B/643B | 10.13 | 10.72 | 6.68 | 9.45 | 1.07 | 5.51 | .77 | 9.94 | .77 | 16.59 |
| 652B/653B | 12.00 | 10.86 | 9.06 | 9.25 | 1.37 | 7.09 | 1.02 | 11.89 | .98 | 18.41 |
| 662B/663B | 14.19 | 12.89 | 11.02 | 11.02 | 1.73 | 8.86 | 1.14 | 14.84 | 1.10 | 22.45 |

* 612C/613C Only "J" is higher than "H".

| Size | T | Low Speed Shaft | | | | High Speed Shaft | | | | Approx. Weight (lb.) |
|-----------|-----|-----------------|------|-------|--------|------------------|------|-----------|--------|----------------------|
| | | *U | V | W-Key | | *X | Y | Z-Key | | |
| | | | | Sq. | Length | | | Sq. | Length | |
| 612C/613C | .35 | .750 | 1.75 | 3/16 | 1.48 | .500 | 1.00 | 9/32 Flat | | 15 |
| 622B/623B | .35 | 1.000 | 2.00 | 1/4 | 1.56 | .625 | 1.25 | 3/16 | 1.00 | 37 |
| 632B/633B | .55 | 1.250 | 2.50 | 1/4 | 2.16 | .625 | 1.25 | 3/16 | 1.00 | 50 |
| 642B/643B | .71 | 1.500 | 3.00 | 3/8 | 2.56 | 1.125 | 2.25 | 1/4 | 1.94 | 87 |
| 652B/653B | .71 | 2.125 | 3.50 | 1/2 | 3.06 | 1.125 | 2.25 | 1/4 | 1.94 | 99 |
| 662B/663B | .87 | 2.375 | 4.72 | 5/8 | 4.15 | 1.375 | 2.75 | 5/16 | 2.31 | 198 |

Output shaft rotation, relative to input shaft rotation, is identical for double reduction and opposite for triple reduction reducers.

* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.



K

600B SERIES – BOST-KLEEN™

- Washable and Scrubbable
- Durable, Non-Absorbent, Non-Toxic White Epoxy Finish, USDA Approved
- Standard NEMA C-Face and Projecting Input Shaft Configurations
- Single, Double and Triple Reducton Ratios – 1:6 TO 160:1
- Helical Gearing
- Output Mounting Flange Mount Attachment Available

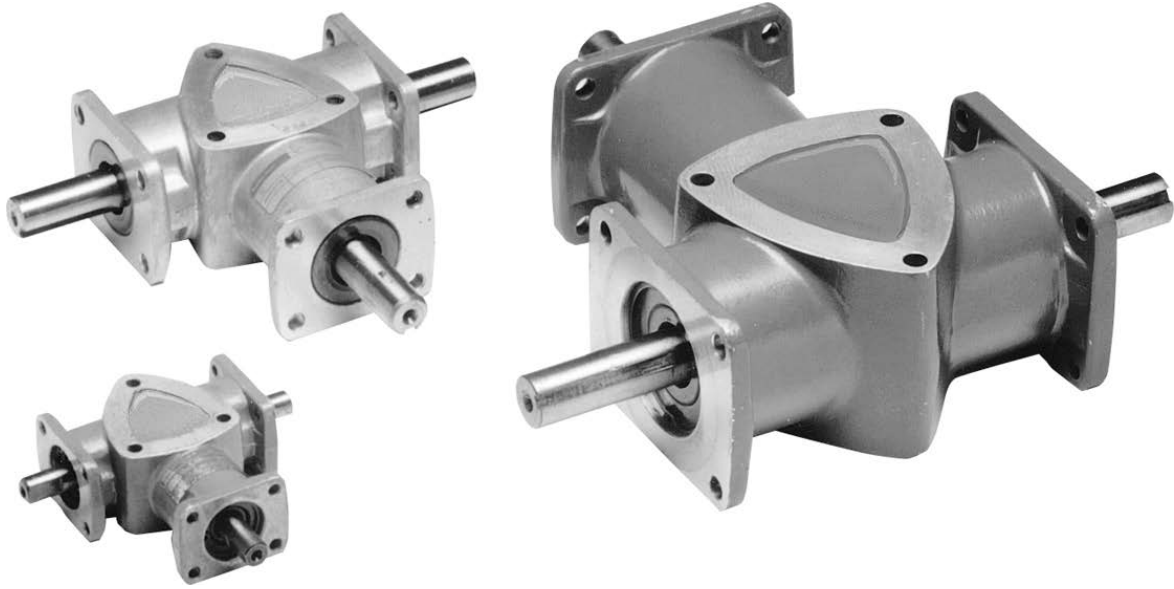
BISCC Certified Basic Model Numbers, Dimensions and Available Ratios

| WHITE BOST-KLEEN | | STAINLESS BOST-KLEEN | | NEMA Mounting | INPUT SHAFT DIA. +.000 -.001* | OUTPUT SHAFT DIA. +.000 -.001* | AVAILABLE RATIOS |
|------------------|------------|----------------------|-------------|-------------------------|-------------------------------------|--------------------------------------|------------------|
| NON-FLANGED TYPE | QUILL TYPE | NON-FLANGED TYPE | QUILL TYPE | | | | |
| BK611 | BKF611 | SBK611 | SBKF611 | 56C | .500 | .625 | ALL |
| BK621 | BKF621 | SBK621 | SBKF621 | 56C,140TC,180TC | .625 | .750 | ALL |
| BK631 | BKF631 | SBK631 | SBKF631 | 56C,140TC,180TC,210TC | .625 | 1.000 | ALL |
| BK641 | BKF641 | SBK641 | SBKF641 | 140TC,180TC,210TC,250TC | 1.125 | 1.375 | ALL |
| BK651 | BKF651 | SBK651 | SBKF651 | 180TC,210TC,250TC | 1.125 | 1.500 | ALL |
| BK661 | BKF661 | SBK661 | SBKF661 | 210TC,250TC | 1.375 | 1.750 | ALL |
| BK612/613 | BKF612/613 | SBK612/613 | SBKF612/613 | 56C | .500 | .625 | ALL |
| BK622/623 | BKF622/623 | SBK622/623 | SBKF622/623 | 56C,140TC,180TC | .625 | 1.000 | ALL |
| BK632/633 | BKF632/633 | SBK632/633 | SBKF632/633 | 56C,140TC,180TC,210TC | .625 | 1.250 | ALL |
| BK642/643 | BKF642/643 | SBK642/643 | SBKF642/643 | 56C,140TC,180TC,210TC | 1.125 | 1.500 | ALL |
| BK652/653 | BKF652/653 | SBK652/653 | SBKF652/653 | 56C,140TC,180TC,210TC | 1.125 | 1.750 | ALL |
| BK662/663 | BKF662/663 | SBK662/663 | SBKF662/663 | 140TC,180TC,210TC | 1.375 | 2.375 | ALL |

* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".



Right-90 Series Spiral Bevel Gear Drives



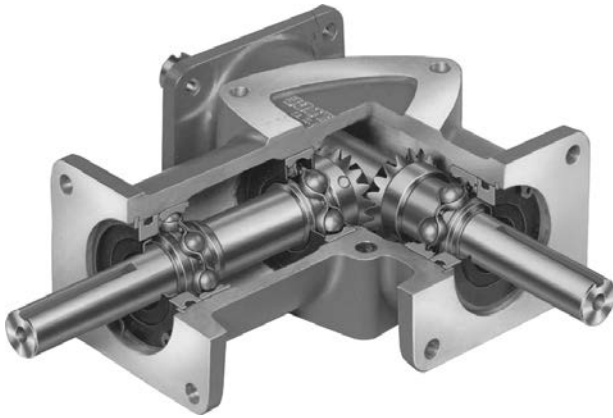
Section Contents

| | |
|-------------------------------|---------|
| Features / How To Order | 306 |
| Selection Procedure | 306-307 |
| Dimensions | 307 |
| Parts List | 308 |

Right-90 Series Features / How to Order

Spiral Bevel Gear

1:1 and 2:1 Ratios



Boston Right-90 Bevel Gear Drives are available with single or double output shaft projections in three sizes with Horsepowers ranging from .13 to 3.5.

Features

- Spiral Bevel Gear Drives are designed for high efficiency, quiet operation and long service life. Gears are made of hardened alloy steel
- Precision ground alloy steel shafts are mounted on precision ball bearings
- Housings are made of aluminum alloy, with all mounting surfaces precision machined
- All shaft projections have high quality oil seals
- **Prelubricated for life**

Selection Procedure

Catalog ratings are based on Class I service (uniform—no shock—load, operating no more than 10 hours/day). For applications meeting these conditions selection may be made by comparing the actual load to be transmitted with the appropriate catalog rating. For other conditions selection must be made, based on an equivalent horsepower or torque, obtained by multiplying actual load by the proper service factor.

Selection Procedure:

1. Determine the correct service factor using Applications Classification Chart—Pages 348 & 349. If the application is not listed, obtain service factor from Service Factor Chart, Page 349.
2. Multiply the actual output horsepower or torque by the service factor to obtain the equivalent rating required.
3. Establish input and output speed and/or gear ratio required for the enclosed drive.
4. Selection of all bevel gear drives should be based on Steps 1 through 3 using Selection Chart for desired input and output speeds (including speed increasing drives) that satisfy the required equivalent horsepower or torque.

Reference

Lubrication—Prelubricated for Ambient
Temperature Range of 50° to 125°F.

How to Order

These units may be mounted in any position. When mounting by Flanges only, at least two Flanges must be secured.

TO ORDER: Specify Catalog Number and/or Item Code

EXAMPLE: RA1021 (49420)

Order By Catalog Number or Item Code

| 2-Way SHAFT | | 3-Way SHAFT | | Ratios |
|----------------|-----------|----------------|-----------|--------|
| Catalog Number | Item Code | Catalog Number | Item Code | |
| RA621 | 49416 | RA631 | 49418 | 1:1 |
| RA622 | 49417 | RA632 | 49419 | 2:1 |
| RA1021 | 49420 | RA1031 | 49422 | 1:1 |
| RA1022 | 49421 | RA1032 | 49423 | 2:1 |
| RA1521 | 49424 | RA1531 | 49426 | 1:1 |
| RA1522 | 49425 | RA1532 | 49427 | 2:1 |

| Thrust Load | | Overhung Load (No Thrust) |
|-------------|-------------|---------------------------|
| RA6 | 50 lb max. | 25 lb |
| RA10 | 100 lb max. | 50 lb |
| RA15 | 200 lb max. | 100 lb |

Right-90 Series Selection Chart / Dimensions

Right-90 Series

BEVEL GEAR - RIGHT ANGLE SELECTION TABLES

(RATINGS FOR SERVICE FACTOR 1.0)

| | RATIO | X-SHAFT INPUT RPM | OUTPUT RPM | RA621/631 | | RA1021/1031 | | RA1521/1531 | |
|------------------|-------|-------------------------|---------------|-----------|---------|-------------|---------|-------------|---------|
| | | | | OUTPUT | | OUTPUT | | OUTPUT | |
| | | | | HP | TORQUE† | HP | TORQUE† | HP | TORQUE† |
| | 1:1 | 1750 | 1750 | .91 | 31.1 | 2.19 | 74.9 | 3.5 | 125 |
| | | | 1150 | .61 | 31.8 | 1.47 | 76.5 | 2.5 | 135 |
| | | | 690 | .37 | 32.1 | 0.9 | 78.1 | 1.6 | 142 |
| | | | 100 | .06 | 35.9 | 0.14 | 83.8 | .28 | 174 |
| | | | | RA622/632 | | RA1022/1032 | | RA1522/1532 | |
| Reducer | 2:1 | 1750 | 875 | .26 | 17.8 | 1.07 | 73.2 | 1.8 | 132 |
| | | | 1150 | .176 | 18.3 | .72 | 75.0 | 1.4 | 150 |
| | | | 690 | .108 | 18.7 | .44 | 76.4 | .89 | 162 |
| | | | 100 | .016 | 19.2 | .07 | 73.8 | .14 | 175 |
| Increase* | 1:2 | 1750 | 3500 | .13 | 2.4 | .55 | 10 | 1.8 | 33.0 |
| | | | 1150 | .10 | 2.6 | .40 | 11.2 | 1.4 | 37.5 |
| | | | 690 | .06 | 2.8 | .25 | 11.7 | .89 | 40.5 |
| | | | 100 | .01 | 3.0 | .04 | 12.5 | .14 | 43.8 |



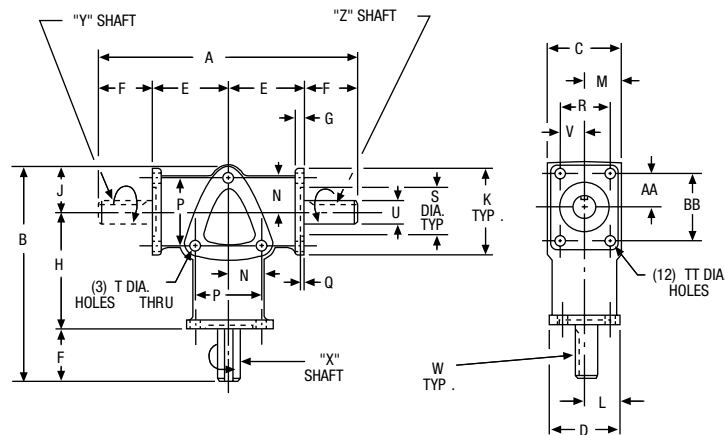
NOTE: See page 306 for features and how to order information.

* Applicable ratings when used as a speed increaser, and driven by "Y" or "Z" shaft only.

† Torque (LB-IN.)

Input Horsepower approximately 5% higher than output horsepower shown above.

Dimensions



ALL DIMENSIONS IN INCHES

"Y" shaft omitted in 2-way sizes

| Size | A | B | C | D | E | F | G | H | J | K | L | M |
|------|-------|------|------|------|------|------|-----|------|------|------|------|------|
| RA6 | 3.95 | 3.66 | 1.25 | 1.22 | 1.38 | .59 | .19 | 2.16 | .91 | 1.56 | .61 | .63 |
| RA10 | 7.25 | 6.03 | 2.00 | 1.94 | 2.13 | 1.50 | .25 | 3.25 | 1.28 | 2.44 | .97 | 1.00 |
| RA15 | 10.00 | 8.88 | 3.00 | 2.94 | 3.00 | 2.00 | .31 | 5.00 | 1.88 | 3.75 | 1.47 | 1.50 |

| Size | N | P | Q | R | S | T Holes | TT Holes | U +.000 -.001 | ALL SHAFTS | | AA | BB | Approx. Weight (Lbs.) |
|------|------|------|-----|------|------|---------|----------|---------------------|------------|-------------|------|------|-----------------------|
| | | | | | | | | | V | W Keyway | | | |
| RA6 | .66 | 1.31 | .09 | .88 | .88 | .194 | .166 | .375 | .44 | Flat | .59 | 1.19 | 3/4 |
| RA10 | .94 | 1.88 | .09 | 1.38 | 1.38 | .266 | .266 | .625 | .69 | 3/16 3/32 | .94 | 1.88 | 2-3/4 |
| RA15 | 1.50 | 3.00 | .13 | 2.25 | 2.13 | .323 | .323 | .750 | 1.13 | 3/16 3/32 | 1.50 | 3.00 | 8 |

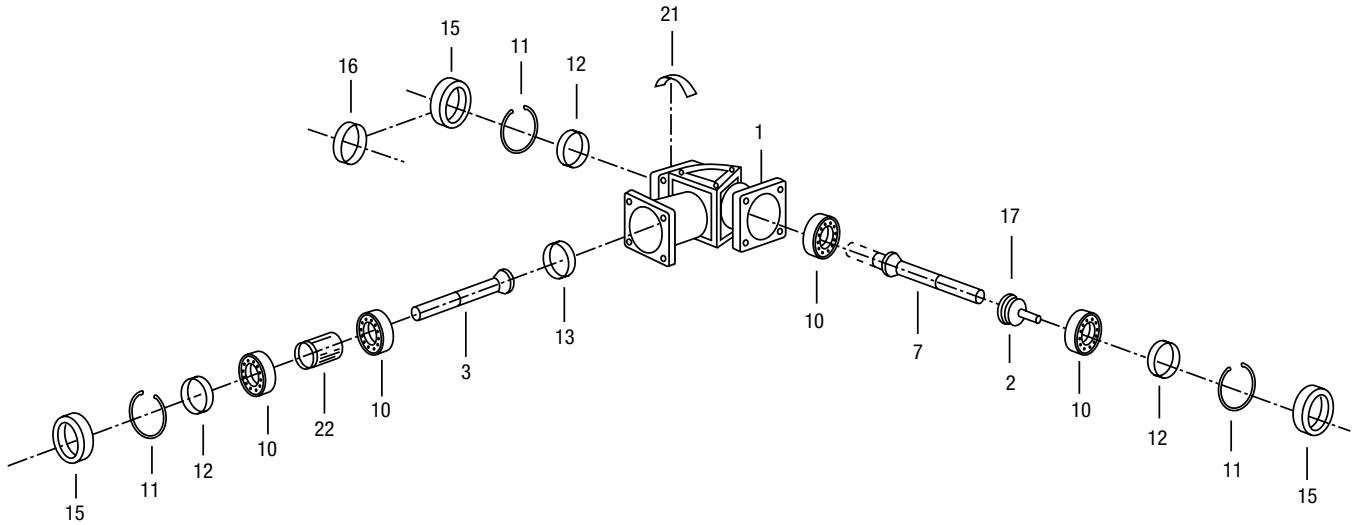
The letters X, Y and Z are used to designate specific shaft projections when ordering units with special shaft requirements.

NOTE: On 2:1 or 1:2 ratio's pinion will always be on X shaft.

No time relation between keyways on X, Y, or Z shafts.

Right-90 Series Parts List

RA600*/RA1000/RA1500 Series



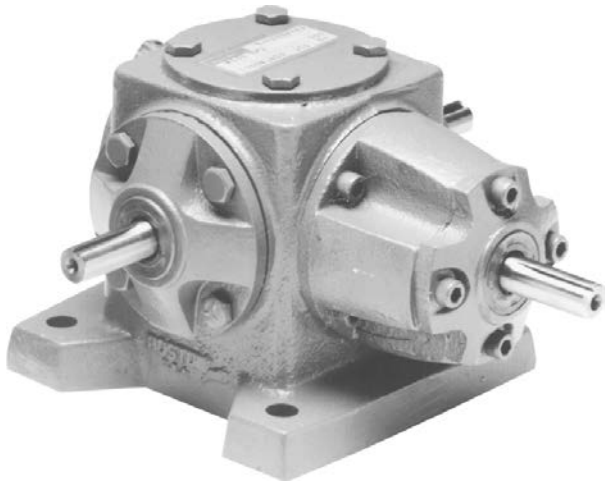
| Part No. | Description of Part |
|----------|----------------------|
| 1 | HOUSING |
| 2 | OUTPUT GEAR |
| 3 | INPUT GEAR AND SHAFT |
| 7 | OUTPUT SHAFT |
| 10 | BALL BEARING |
| 11 | RETAINING RING |
| 12 | ADJUSTMENT SHIM |
| 13 | ADJUSTMENT SHIM |
| 15 | OIL SEAL |
| 16 | BORE PLUG |
| 17 | PIN |
| 21 | NAMEPLATE |
| 22 | SPACER |

Part Ordering Information

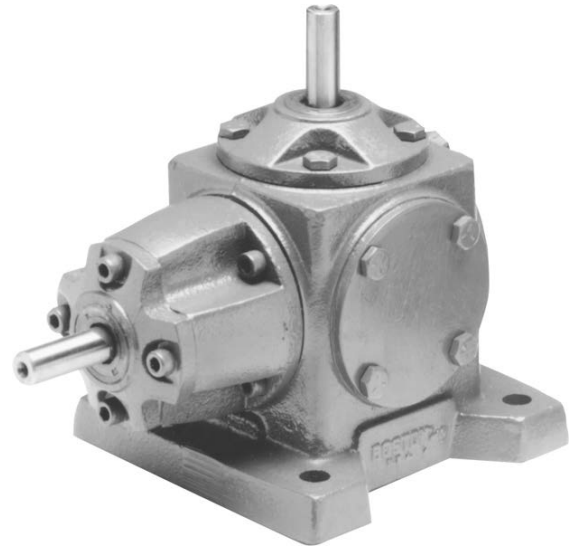
Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number.

* No replacement parts available.

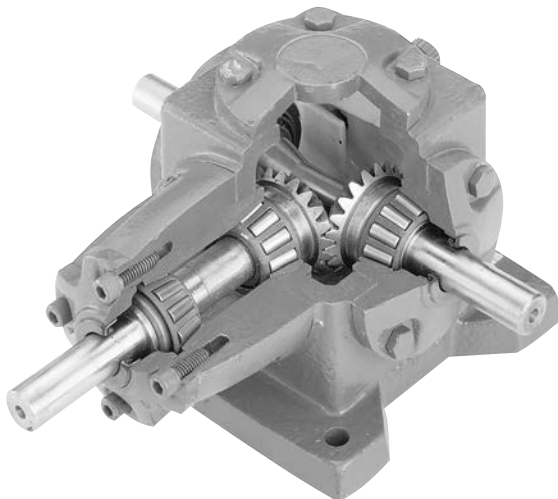
R100/R200 Series & VR100/VR200 Series Spiral Bevel Gear Drives



R100/R200



VR100/VR200



SPIRAL BEVEL GEAR

Boston “R” and “VR” 100 and 200 Series Spiral Bevel Gear Boxes are available in four sizes with horsepowers ranging from 2.19 to 50.92.

Features

- Spiral Bevel Gear Drives are designed for high efficiency, quiet operation and long service life. Gears are made of case-hardened alloy steel
- Shafts are heat treated, alloy steel mounted on heavy duty, tapered roller bearings
- Housings are made of cast iron, precision machined to assure accurate, permanent alignment of the gears

Section Contents

| | |
|---------------------------------------|---------|
| Numbering System / How To Order | 310 |
| Lubrication/Mounting..... | 310-311 |
| Selection Charts..... | 312 |
| Dimensions | 313 |
| Parts List..... | 314 |

R100/R200 Series & VR100/VR200 Series Spiral Bevel Gear Drives

Selection Procedure

Catalog ratings are based on Class I service (uniform load, operating no more than 10 hours/day). For applications meeting these conditions selection may be made by comparing the actual load to be transmitted with the appropriate catalog rating. For other conditions selection must be made, based on an equivalent horsepower or torque, obtained by multiplying actual load by the proper service factor.

Selection Procedure:

1. Determine the correct service factor using the Applications Classification Chart—Pages 348 & 349. If the application is

not listed, obtain service factor from Service Factor Chart, Page 349.

2. Multiply the actual output horsepower or torque by the service factor to obtain the equivalent rating required.
3. Establish input and output speed and/or gear ratio required for the enclosed drive.
4. Selection of all bevel gear drives should be based on Steps 1 through 3 using Selection Chart for desired input and output speeds (including speed increasing drives) that satisfy the required equivalent horsepower or torque.

How to Order

R/VR Series Catalog Number

EXAMPLE: R137-BM1 (40346)

| | | | | | | | | | |
|--|------------------------|---------------------------------|--|--|--|--|--|----------|-----------|
| SBK | VR | 1 | 37 | K | - | N | 0 | - | M5 |
| Reducer Material/ Paint (Cast Iron) | Ratio | Housing Type | Frame Size | Lubrication | Assembly Type | Rotation | Mounting Position | | |
| Blank—Standard Paint BK—White <i>BostKleen</i> Paint SBK—Stainless <i>Bost-Kleen</i> Paint | 1 – 1:1 2 – 2:1/1:2 | R – Horizontal VR – Vertical | 31 – Size 31 37 – Size 37 46 – Size 46 58 – Size 58 | Blank—No Lubrication K – Klubersynth UH1 6-460 S – Mobil SHC 634 | A – R G – VR B – R H – VR Standard J – VR C – R N – VR D – VR Standard E – VR Q – VR F – VR P – VR | Blank—Standard Rotation 0 – Opposite Relative Rotation See catalog for details | Horizontal (R) Vertical (VR) M1 V1 M1 M7 M2 V2 M2 M8 M3 M3 V1 M4 M4 V3 M5 V4 M6 See catalog for details | | |

TO ORDER: Specify Catalog Number and or Item Code, Assembly Type and Mounting Position. (Ref. Page 314 for Item Code, Order Information)

Lubrication

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the proper type of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris since only a very thin film of oil stands between efficient operation and failure. To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil. Under normal environmental conditions oil changes are suggested after the initial 250 hours of operation, and therefore, at regular intervals of 2500 hours or every 6 months. Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Bevel Gear Reducers may reach approximately 225°F.

| Recommended Lubricant | Boston Gear Item Code |
|-----------------------|-----------------------|
| | Quart |
| Klubersynth UH1 6-460 | 65159 |
| Mobil SHC634 | 51493 |

Bevel Gear Reducers

| Ambient (Room) Temperature | Recommended Oil (or equivalent) | Viscosity Range S&S @ 100°F | Lubricant AGMA No. | ISO Viscosity Grade No. |
|----------------------------------|---------------------------------|-----------------------------|--------------------|-------------------------|
| -20° to 225°F ± (-29°C to 107°C) | Klubersynth* UH1 6-460 | 1950/2500 | ----- | 460 |
| -30° to 225°F (-34°C to 107°C) | Mobil SHC634 | 1950/2500 | ----- | 320/460 |

| Model No. | | Quantity Per Unit |
|-----------|-------------|-------------------|
| R131/R231 | VR131/VR231 | 1/2 Pint |
| R137/R237 | VR137/VR237 | 1/2 Pint |
| R146/R246 | VR146/VR246 | 1-1/2 Pints |
| R158/R258 | VR158/VR258 | 2-1/2 Pints |

CAUTION: Relubricate more frequently if drive is operated in high ambient temperatures or unusually contaminated atmospheres. High loads and operating temperatures will also require more frequent relubrication.

* Synthetic recommendation is exclusively for Klubersynth UH1 6-460.

‡The Synthetic lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.

R100/R200 Series & VR100/VR200 Series Spiral Bevel Gear Drives

R100/R200 Series Mountings

Mountings are designated by combining identification for Assembly Type and Mounting Position.

Example: Mtg. AM1.

Assembly B is standard for Type R and Assembly N is standard for Type VR and will be furnished unless otherwise specified.

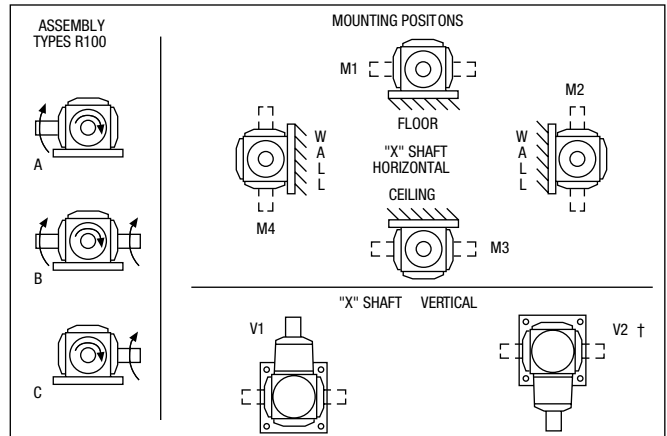
All assemblies can be mounted in any position shown with "X" Shaft horizontal by re-locating Oil Plugs in proper position.

Mountings with "X" Shaft vertical available at a slight extra charge.

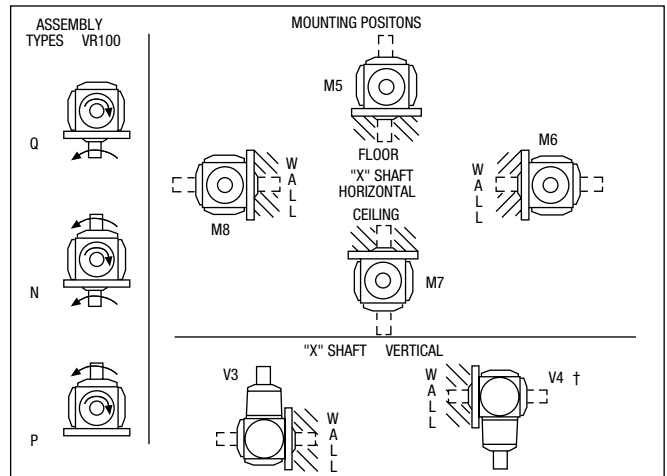
Shafts can rotate in either direction, arrows show standard relative rotation. Opposite relative rotation available at no additional charge.

To order with opposite relative rotation, insert letter "O" between Assembly and Mounting code.

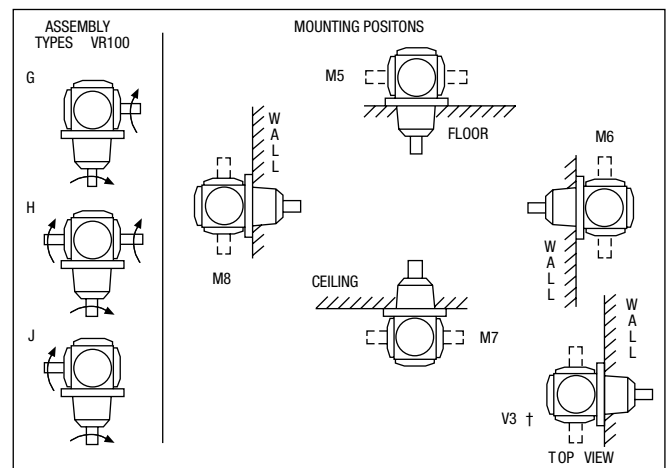
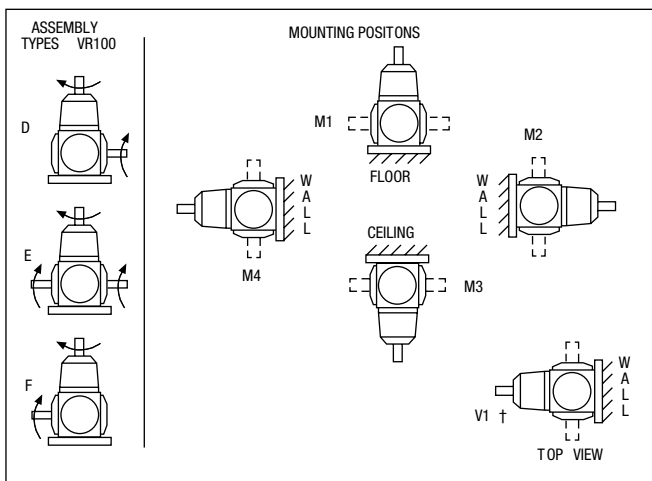
Example: AOM1.



VR100/VR200 Series



Mountings shown below are available on an assembled to order basis.



Filler, level and drain plugs are located on the back side of views shown.

† Special filler, level and drain plugs provided.



R100/R200 Series & VR100/VR200 Series Spiral Bevel Gear Drives

R100/R200, VR100/VR200 Series

Selection Charts

| Ratio | Input RPM | Output RPM | R/VR131 | | R/VR137 | | R/VR146 | | R/VR158 | |
|------------|-----------|------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | | Output | | Output | | Output | | Output | |
| | | | HP | Torque† | HP | Torque† | HP | Torque† | HP | Torque† |
| 1:1 | 1750 | 1750 | 4.2 | 151 | 8.8 | 318 | 25.1 | 905 | 50.9 | 1834 |
| | 1150 | 1150 | 3.1 | 164 | 5.8 | 318 | 18.5 | 1012 | 40.9 | 2242 |
| | 690 | 690 | 1.9 | 174 | 3.5 | 318 | 11.4 | 1044 | 25.4 | 2324 |
| | 100 | 100 | .40 | 252 | .60 | 378 | 1.8 | 1145 | 4.0 | 2546 |
| Reducer | 2:1 | 1750 | R/VR231 | | R/VR237 | | R/VR246 | | R/VR258 | |
| | | 1150 | 2.2 | 158 | 3.7 | 267 | 12.2 | 878 | 22.6 | 1620 |
| | | 690 | 1.5 | 161 | 2.5 | 272 | 8.2 | 900 | 15.2 | 1670 |
| | | 100 | .90 | 164 | 1.5 | 280 | 5.1 | 924 | 9.4 | 1717 |
| | 50 | .15 | 189 | .23 | 290 | .77 | 970 | 1.5 | 1870 | |
| Increaser* | 1:2 | 1750 | 2.2 | 39.5 | 3.7 | 67 | 12.2 | 220 | – | – |
| | | 1150 | 1.5 | 40.2 | 2.5 | 68 | 8.2 | 225 | 15.2 | 418 |
| | | 690 | .90 | 41.0 | 1.5 | 70 | 5.1 | 231 | 9.4 | 429 |
| | | 100 | .15 | 47.2 | .23 | 72 | .77 | 242 | 1.5 | 468 |

* NOTE: On 2:1 or 1:2 ratios, pinion will always be on X shaft.

† Torque (LB-INS)

I/P H.P. approx. 5% higher.

M

| Suggested Maximum Input Speeds** | |
|----------------------------------|----------|
| R & VR131, R & VR231 | 4000 RPM |
| R & VR137, R & VR237, R & VR246 | 3600 RPM |
| R & VR146, R & VR158, R & VR258 | 2500 RPM |

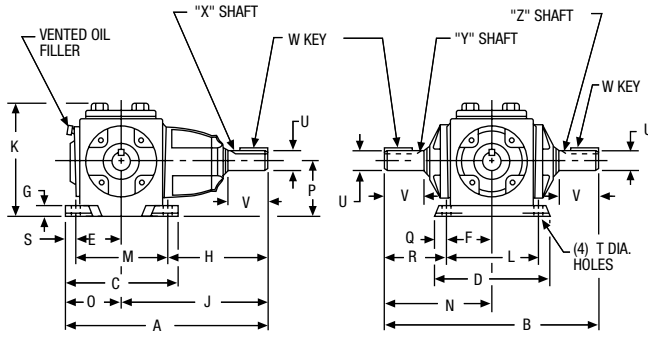
** Sound level, operating temperature and venting are usually affected at high operating speeds.

ORDER BY CATALOG NUMBER OR ITEM CODE

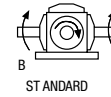
| Horizontal Model R100/200 | | | | | Vertical Model VR100/200 | | | | |
|---------------------------|-------|---------------|-------|-------|--------------------------|-------|---------------|-------|-------|
| Series | Ratio | Item Code | | | Series | Ratio | Item Code | | |
| | | Assembly Type | | | | | Assembly Type | | |
| | | AM1 | BM1 | CM1 | | | QM5 | NM5 | PM5 |
| R131 | 1:1 | 40328 | 40332 | 40336 | VR131 | 1:1 | 42220 | 42212 | 42216 |
| R231 | 2:1 | 42860 | 42864 | 42868 | VR231 | 2:1 | 42928 | 42920 | 42924 |
| R137 | 1:1 | 40342 | 40346 | 40350 | VR137 | 1:1 | 42238 | 42230 | 42234 |
| R237 | 2:1 | 42874 | 42878 | 42882 | VR237 | 2:1 | 42946 | 42938 | 42942 |
| R146 | 1:1 | 40356 | 40360 | 40364 | VR146 | 1:1 | 42256 | 42248 | 42252 |
| R246 | 2:1 | 42888 | 42892 | 42896 | VR246 | 2:1 | 42964 | 42956 | 42960 |
| R158 | 1:1 | 40370 | 40374 | 40378 | VR158 | 1:1 | 42274 | 42266 | 42270 |
| R258 | 2:1 | 42902 | 42906 | 42910 | VR258 | 2:1 | 42982 | 42974 | 42978 |

R100/R200 Series & VR100/VR200 Series Spiral Bevel Gear Drives

R100/R200, VR100/VR200 Series Dimensions – Horizontal Base Models



ASSEMBLY TYPES



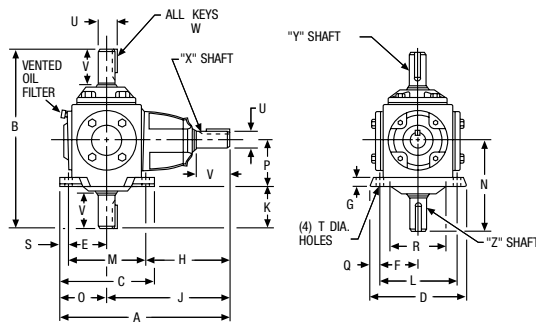
For mounting positions see page 311.

ALL DIMENSIONS IN INCHES

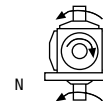
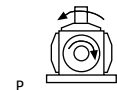
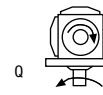
| Model No. | A | B | C | D | E | F | G | H | J | K | L | M |
|-----------|-------|-------|------|------|------|------|-----|------|-------|------|------|------|
| R131/231 | 8.16 | 7.81 | 5.31 | 5.25 | 2.03 | 2.03 | .63 | 3.47 | 5.50 | 4.78 | 4.06 | 4.06 |
| R137/237 | 10.16 | 9.28 | 6.19 | 6.13 | 2.44 | 2.44 | .63 | 4.63 | 7.06 | 5.72 | 4.88 | 4.88 |
| R146/246 | 12.50 | 11.66 | 7.50 | 7.38 | 3.00 | 3.00 | .75 | 5.75 | 8.75 | 6.75 | 6.00 | 6.00 |
| R158/258 | 16.47 | 16.84 | 9.25 | 9.00 | 3.75 | 3.75 | .88 | 8.09 | 11.84 | 8.56 | 7.50 | 7.50 |

| Model No. | N | O | P | Q | R | S | T Holes | U +0.000 -0.001 | V | W-Key | | Approx. Weight (Lbs.) |
|-----------|------|------|------|-----|------|-----|---------|-----------------------|------|-------|-------|-----------------------|
| | | | | | | | | | | Sq. | Lgth. | |
| R131/231 | 3.91 | 2.66 | 2.63 | .59 | 1.88 | .63 | .44 | .500 | 1.31 | 1/8 | 7/8 | 14 |
| R137/237 | 4.64 | 3.09 | 3.00 | .63 | 2.20 | .66 | .44 | .750 | 1.69 | 3/16 | 1 | 27 |
| R146/246 | 5.83 | 3.75 | 3.50 | .69 | 2.83 | .75 | .53 | 1.000 | 1.94 | 1/4 | 1-1/4 | 51 |
| R158/258 | 8.42 | 4.63 | 4.50 | .75 | 4.67 | .88 | .56 | 1.500 | 3.44 | 3/8 | 2-1/4 | 104 |

Dimensions – Vertical Base Models



ASSEMBLY TYPES



For mounting positions see page 311.

ALL DIMENSIONS IN INCHES

| Model No. | A | B | C | D | E | F | G | H | J | K | L | M |
|-----------|-------|-------|------|------|------|------|-----|------|-------|------|------|------|
| VR131/231 | 8.16 | 7.81 | 5.31 | 5.25 | 2.03 | 2.03 | .63 | 3.47 | 5.50 | 1.28 | 4.06 | 4.06 |
| VR137/237 | 10.16 | 9.28 | 6.19 | 6.13 | 2.44 | 2.44 | .63 | 4.63 | 7.06 | 1.64 | 4.88 | 4.88 |
| VR146/246 | 12.50 | 11.66 | 7.50 | 7.38 | 3.00 | 3.00 | .75 | 5.75 | 8.75 | 2.33 | 6.00 | 6.00 |
| VR158/258 | 16.47 | 16.84 | 9.25 | 9.00 | 3.75 | 3.75 | .88 | 8.09 | 11.84 | 3.92 | 7.50 | 7.50 |

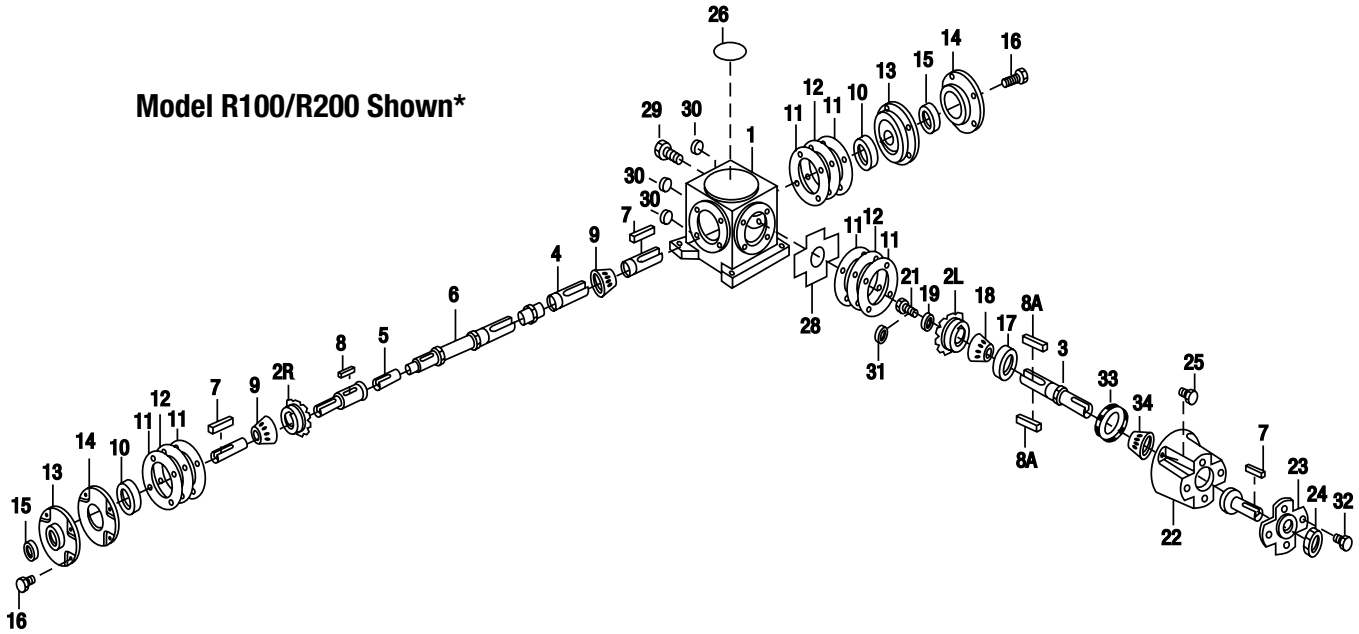
| Model No. | N | O | P | Q | R | S | T Holes | U +0.000 -0.001 | V | W-Key | | Approx. Weight (Lbs.) |
|-----------|------|------|------|-----|------|-----|---------|-----------------------|------|-------|-------|-----------------------|
| | | | | | | | | | | Sq. | Lgth. | |
| VR131/231 | 3.91 | 2.66 | 2.63 | .59 | - | .63 | .44 | .500 | 1.31 | 1/8 | 7/8 | 14 |
| VR137/237 | 4.64 | 3.09 | 3.00 | .63 | - | .66 | .44 | .750 | 1.69 | 3/16 | 1 | 27 |
| VR146/246 | 5.83 | 3.75 | 3.50 | .69 | 3.75 | .75 | .53 | 1.000 | 1.94 | 1/4 | 1-1/4 | 51 |
| VR158/258 | 8.42 | 4.63 | 4.50 | .75 | 4.50 | .88 | .56 | 1.500 | 3.44 | 3/8 | 2-1/4 | 104 |

The letters X, Y and Z are used to designate specific shaft projections when ordering units with special shaft requirements.



R100/R200 Series & VR100/VR200 Series Parts List

Model R100/R200 Shown*



M

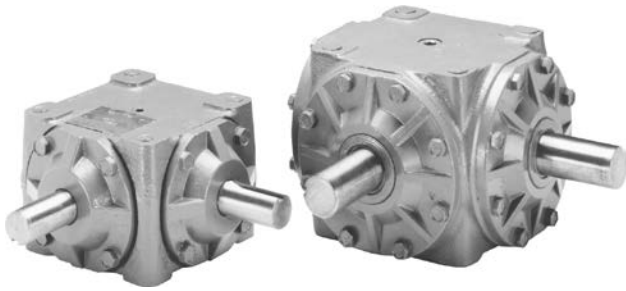
Part Ordering Information

Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number.

* **Note:** Models R100/R200 parts common to VR100/VR200.

| Item No. | Description of Part | Item No. | Description of Part | Item No. | Description of Part |
|----------|--|----------|------------------------------|----------|------------------------|
| 1 | Basic Housing | 10 | Bearing Cup, Output | 23 | Input Bearing Retainer |
| 1A | Basic Housing - VR Series | 11 | Shim | 24 | Oil Seal, Input |
| 2R | Spiral Miter or Bevel Gear (RH) | 12 | Shim | 25 | Soc. Head Capscrew |
| 2L | Spiral Miter Gear or Bevel Pinion (LH) | 13 | Output Bearing Carrier (O/E) | 26 | Small Nameplate |
| 3 | Input Shaft | 14 | Output Bearing Carrier (C/E) | 28 | Baffle |
| 4 | Output Shaft-Double Proj | 15 | Oil Seal, Output | 29 | Vented Oil Filler |
| 5 | Output Shaft-Single Proj | 16 | Hex Head Capscrews | 30 | Socket Pipe Plug |
| 6 | Output Shaft-Single Proj | 17 | Bearing Cup, Input | 31 | Locknut-R & VR 231 |
| 7 | Key | 18 | Bearing Cone, Input | 32 | Socket Head Capscrew |
| 8 | Key, Gear | 19 | Input Shaft Washer | 33 | Bearing Cup, Input |
| 8A | Key, Gear or Pinion | 21 | Input Shaft Hex Hd Capscrew | 34 | Bearing Cone, Input |
| 9 | Bearing Cone, Output | 22 | Input Shaft Bearing Carrier | | |

Selection Procedure



MODEL NUMBERS AND RATIOS
 Assembly types shown with
 Dimensions on the following pages.

| Model No. | Overhung Load (No Thrust) | |
|-----------|----------------------------|---------------|
| | From End of Shaft (Inches) | Load (Pounds) |
| R1200 | – | – |
| R1210 | 1 | 500 |
| R1400 | 1-1/4 | 900 |
| R1500 | 1-1/2 | 1300 |

Catalog ratings are based on Class I service (uniform load, operating no more than 10 hours/day). For applications meeting these conditions selection may be made by comparing the actual load to be transmitted with the appropriate catalog rating. For other conditions selection must be made, based on an equivalent horsepower or torque, obtained by multiplying actual load by the proper service factor.

Selection Procedure:

1. Determine the correct service factor using the Applications Classification Chart—Pages 348 & 349. If the application is not listed, obtain service factor from Service Factor Chart on page 349.
2. Multiply the actual output torque or HP by the service factor to obtain the equivalent rating required.
3. Establish input and output speed and/or gear ratio required for the enclosed drive.
4. Selection of all bevel gear drives should be based on Steps 1 through 3 using Selection Chart for desired input and output speeds (including speed increasing drives) that satisfy the required equivalent horsepower or torque.

TO ORDER: Specify Model Number,
 Ratio and Assembly Type

EXAMPLE: R1211-1.5-A, Item Code (61037)

Section Contents

Selection Procedure / How To Order315

R1000 Series - Item Codes316

Mountings / Lubricants317

Selection Charts 318-320

Dimensions 321-327



R1000 Series Bevel Gear Drives Item Codes

| Series | Ratio | Assembly Type | | | | | | | | |
|--------|-------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | A | B | D | F | H | I | J | K | L |
| R1200 | 1 | | 54998 | 54999 | 06111 | | | | | |
| | 1.35 | | 06112 | 06113 | 06114 | | | | | |
| | 1.5 | | 06115 | 54995 | 06116 | | | | | |
| | 2 | | 54996 | 54997 | 06117 | | | | | |
| | 3 | | 06118 | 06119 | 06120 | | | | | |
| R1211 | 1 | 61035 | | | | | | | | |
| | 1.35 | 61036 | | | | | | | | |
| | 1.5 | 61037 | | | | | | | | |
| R1214 | 1 | | 61038 | 61042 | 61046 | | | | | |
| | 1.35 | | 61039 | 61043 | 61047 | | | | | |
| | 1.5 | | 61040 | 61044 | 61048 | | | | | |
| | 2 | | 61041 | 61045 | 61049 | | | | | |
| R1215 | 1 | | 61083 | 61086 | 61089 | | | 61092 | | |
| | 1.35 | | 61084 | 61087 | 61090 | | | 61093 | | |
| | 1.5 | | 61085 | 61088 | 61091 | | | 61094 | | |
| R1216 | 1 | | | | | 61105 | 61108 | | 61111 | 61115 |
| | 1.35 | | | | | 61106 | 61109 | | 61113 | 61116 |
| | 1.5 | | | | | 61107 | 61110 | | 61114 | 61117 |
| R1412 | 1 | | 61127 | 61130 | 61133 | | | | | |
| | 1.35 | | 61128 | 61131 | 61134 | | | | | |
| | 1.5 | | 61129 | 61132 | 61135 | | | | | |
| R1413 | 1 | | 61357 | 61361 | 61365 | | | | | |
| | 1.35 | | 61358 | 61362 | 61366 | | | | | |
| | 1.5 | | 61359 | 61363 | 61367 | | | | | |
| | 2 | | 61360 | 61364 | 61368 | | | | | |
| R1414 | 1 | | 61082 | 61103 | 61155 | | | 61228 | | |
| | 1.35 | | 61172 | 61214 | 61226 | | | | | |
| | 1.5 | | 61229 | 61236 | 61240 | | | 61260 | | |
| | 2 | | 61261 | 61263 | 61268 | | | 61273 | | |
| R1416 | 1 | | | | | 61369 | | | 61372 | 61375 |
| | 1.35 | | | | | 61370 | | | 61373 | 61376 |
| | 1.5 | | | | | 61371 | | | 61374 | 61377 |
| R1511 | 1 | 61378 | | | | | | | | |
| | 1.35 | 61379 | | | | | | | | |
| | 1.5 | 61380 | | | | | | | | |
| R1514 | 1 | | 61381 | 61385 | 61392 | | | | | |
| | 1.35 | | 61382 | 61386 | 61393 | | | | | |
| | 1.5 | | 61383 | 61387 | 61394 | | | | | |
| | 2 | | 61384 | 61388 | 61395 | | | | | |
| R1515 | 1 | | 61713 | 61716 | 61719 | | | 61728 | | |
| | 1.35 | | 61714 | 61717 | 61720 | | | 61729 | | |
| | 1.5 | | 61715 | 61718 | 61727 | | | 61730 | | |
| R1516 | 1 | | | | | 61025 | | | 61028 | 61031 |
| | 1.35 | | | | | 61026 | | | 61029 | 61032 |
| | 1.5 | | | | | 61027 | | | 61030 | 61033 |

Item code listed for most commonly requested assembly models. Others may be available on request.
 Assembly C, E, or G can be easily converted from assembly B, D or F respectively. See Page 317.

N

R1000 Series Bevel Gear Drives Features / Mountings

Mountings

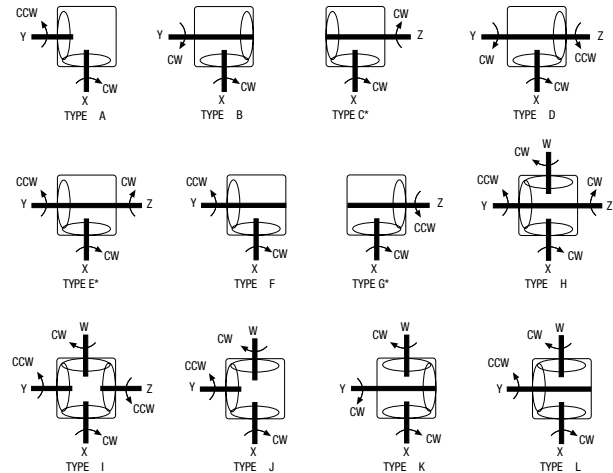
Standard mounting is with all shafts horizontal to the floor. R1200 series units are provided with two pipe plugs and are non-vented. This allows the R1200 series to be mounted in any position without the need of moving plugs. Models R1211, R1216, R1416, and R1516 have (2) pipe plugs, oil vent-filler and oil drain, and should only be mounted in the horizontal position. All other models have (3) pipe plugs, oil vent-filler, level, drain, and are horizontal mount also. They may also be mounted with "X" shaft vertical down but are limited to oil vent-filler and oil level control – no oil drain plugs. Drives used in a vertical mounting application may require additional pipe plugs and/or grease fittings for proper lubrication and are considered special.

The R1000 Series right angle drives with forged gear teeth may have a somewhat higher noise level at the higher speed range and also more backlash as compared with our "R" and "VR" 100 and 200 Series right angle spiral gear drives.

On models where types "B", "D" & "F" are stocked, these can be easily converted, by the customer to types "C," "E" & "G" respectively by simply rotating the unit 180° to its opposite mounting surface and also switching the pipe plugs for vent and drain on all series except R1200. The R1200 unit is sealed and does not have a vented plug.

* **Note:** Top and bottom of housings are both machined surfaces. By interchanging vent plug and drain plug you can convert B to C, D to E, F to G. On R1200 series, the plugs do not require changing.

- 1- CLOCKWISE (CW) AND COUNTERCLOCKWISE (CCW) NOTATIONS INDICATE DIRECTION OF ROTATION OF SHAFTS WHEN FACING OUTER END OF SHAFT EXTENSIONS.
- 2- ARROWS SHOWN ON DRAWINGS ARE OVER THE TOP OF SHAFT EXTENSIONS.
- 3- THE LETTERS W, X, Y, Z SHOWN ADJACENT TO THE SHAFT EXTENSIONS ARE USED TO DESIGNATE SPECIFIC SHAFT EXTENSIONS WHEN ORDERING BOXES WITH SPECIAL SHAFTS.



Lubrication

Lubrication and maintenance instructions are provided with each speed reducer. These instructions should be followed for best results. It is important that the proper type of oil be used since many oils are not suitable for the lubrication of gears. Various types of gearing require different types of lubricants.

The lubricant must remain free from oxidation and contamination by water or debris, since only a very thin film of oil stands between efficient operation and failure.

To assure long service life, the reducer should be periodically drained (preferably while warm) and refilled to the proper level with a recommended gear oil. Under normal environmental conditions oil changes are suggested after the initial 250 hours of operation, and thereafter, at regular intervals of 2500 hours or every 6 months. Synthetic lubricants will allow extended lubrication intervals due to its increased resistance to thermal and oxidation degradation. It is suggested that the initial oil change be made at 1500 hours and, thereafter, at 5000 hour intervals.

During the initial period of operation, higher than normal operating temperatures may be seen. This is due to the initial break-in of the gear set. The temperature of Bevel Gear Reducers may reach approximately 225°F.

Bevel Gear Reducers

| Ambient (Room Temperature) | Recommended Oil (or equivalent) | Viscosity Range S&S @ 100°F | Oil Type | ISO Viscosity Grade No. |
|----------------------------------|---------------------------------|-----------------------------|----------|-------------------------|
| -20° to 225°F ± (-29°C to 107°C) | Klubersynth* UH1 6-460 | 1950/2500 | PAG | 460 |
| -30° to 225°F (-34°C to 107°C) | Mobil SHC634 | 1950/2500 | PAO | 320/460 |

| Recommended Lubricant | Boston Gear Item Code |
|-----------------------|-----------------------|
| | Quart |
| Klubersynth UH1 6-460 | 65159 |
| Mobil SHC634 | 51493 |

CAUTION: Relubricate more frequently if drive is operated in high ambient temperatures or unusually contaminated atmospheres. High loads and operating temperatures will also require more frequent relubrication.

- * Synthetic recommendation is exclusively for Klubersynth UH1 6-460.
- ‡ The synthetic lubricant will perform at temperatures considerably higher than 225°F. However, the factory should always be consulted prior to operating at higher temperatures, as damage may occur to oil seals and other components.
- ** Model R1200 unit only is pre-lubricated with 5 oz of AGMA 5 EP Gear Lubricant.

R1000 Series Bevel Gear Drives

R1200 Series

Selection Chart – Ratings For Service Factor (1.0)

| Ratio | Input RPM | Output RPM | R1200** | | R1211 R1215 R1216 | | R1214 | |
|--------|-----------|------------|---------|---------|-------------------------|---------|--------|---------|
| | | | Output | | Output | | Output | |
| | | | HP | Torque* | HP | Torque* | HP | Torque* |
| 1:1 | 1750 | 1750 | 4.58 | 165 | 31.15 | 1122 | 28.33 | 1021 |
| | 1150 | 1150 | 3.58 | 196 | 22.71 | 1245 | 20.65 | 1132 |
| | 690 | 690 | 2.67 | 241 | 15.20 | 1390 | 14.08 | 1268 |
| | 100 | 100 | .79 | 500 | 3.09 | 1945 | 2.81 | 1769 |
| 1.35:1 | 1750 | 1296 | 3.44 | 124 | 14.46 | 703 | 13.14 | 639 |
| | 1150 | 852 | 2.70 | 148 | 10.48 | 776 | 9.53 | 706 |
| | 690 | 511 | 2.02 | 185 | 7.11 | 864 | 6.46 | 785 |
| | 100 | 74 | .62 | 390 | 1.45 | 1230 | 1.31 | 1118 |
| 1.5:1 | 1750 | 1167 | 3.14 | 113 | 13.17 | 712 | 11.98 | 647 |
| | 1150 | 767 | 2.49 | 136 | 9.54 | 785 | 8.67 | 713 |
| | 690 | 460 | 1.75 | 158 | 6.46 | 873 | 5.87 | 793 |
| | 100 | 67 | .35 | 222 | 1.26 | 1196 | 1.15 | 1087 |
| 2:1 | 1750 | 875 | 2.33 | 84 | / | | 7.80 | 563 |
| | 1150 | 575 | 1.81 | 99 | 6.36 | 697 | | |
| | 690 | 345 | 1.22 | 109 | 4.88 | 879 | | |
| | 100 | 50 | .24 | 152 | .85 | 1070 | | |
| 3:1 | 1750 | 583 | 1.25 | 45 | / | | / | |
| | 1150 | 383 | .87 | 48 | | | | |
| | 690 | 230 | .60 | 54 | | | | |
| | 100 | 33 | .52 | 74 | | | | |
| 1:1.35 | 1750 | 2362 | / | | 14.46 | 366 | 13.14 | 333 |
| | 1150 | 1552 | 10.48 | 404 | 9.53 | 364 | | |
| | 690 | 932 | 7.11 | 457 | 6.46 | 415 | | |
| | 100 | 135 | 1.45 | 663 | 1.31 | 580 | | |
| 1:1.5 | 1750 | 2625 | / | | 13.17 | 300 | 11.98 | 273 |
| | 1150 | 1750 | 9.54 | 326 | 8.67 | 297 | | |
| | 690 | 1032 | 6.46 | 375 | 5.87 | 340 | | |
| | 100 | 150 | 1.26 | 503 | 1.15 | 459 | | |
| 1:2 | 1750 | 3500 | / | | / | | 7.80 | 133 |
| | 1150 | 2300 | | | 6.36 | 165 | | |
| | 690 | 1380 | | | 4.88 | 212 | | |
| | 100 | 200 | | | .85 | 254 | | |

Note: On other than 1:1 ratios pinion will always be on X shaft.

* Torque (lb-ins)

** R1200 is prelubricated with 5 oz. of AGMA 5 EP Gear lubricant.

Input Horsepower approximately 5% higher than output horsepower shown above.

N

R1000 Series Bevel Gear Drives

R1400 Series Selection Chart – Ratings For Service Factor (1.0)

| | | | R1412 R1416 | | R1413 R1414 | | |
|-----------|--------------|---------------|----------------|---------|----------------|---------|------|
| Ratio | Input RPM | Output RPM | Output | | Output | | |
| | | | HP | Torque* | HP | Torque* | |
| 1:1 | 1750 | 1750 | — | — | — | — | |
| | 1150 | 1150 | 52.26 | 2864 | 37.36 | 2022 | |
| | 690 | 690 | 35.82 | 3225 | 27.13 | 2442 | |
| | 100 | 100 | 6.53 | 4115 | 5.94 | 3741 | |
| Reducer | 1.35:1 | 1750 | 1296 | 38.39 | 1867 | 34.91 | 1698 |
| | | 1150 | 850 | 27.97 | 2070 | 25.43 | 1882 |
| | | 690 | 511 | 19.06 | 2317 | 17.34 | 2107 |
| | | 100 | 74 | 3.59 | 3051 | 3.26 | 2775 |
| | 1.5:1 | 1750 | 1167 | 35.56 | 1922 | 32.34 | 1747 |
| | | 1150 | 767 | 25.74 | 2117 | 23.41 | 1925 |
| | | 690 | 460 | 16.77 | 2265 | 15.25 | 2060 |
| | | 100 | 67 | 2.90 | 2745 | 2.64 | 2496 |
| | 2:1 | 1750 | 875 | / | / | 18.98 | 1367 |
| | | 1150 | 575 | / | / | 14.55 | 1596 |
| | | 690 | 345 | / | / | 10.58 | 1905 |
| | | 100 | 50 | / | / | 1.81 | 2279 |
| Increaser | 1:1.35 | 1750 | 2362 | — | — | — | — |
| | | 1150 | 1552 | 27.97 | 1079 | 25.43 | 981 |
| | | 690 | 932 | 19.06 | 1224 | 17.34 | 1114 |
| | | 100 | 135 | 3.59 | 1592 | 3.26 | 1446 |
| | 1:1.5 | 1750 | 2625 | — | — | — | — |
| | | 1150 | 1750 | 25.74 | 880 | 23.40 | 800 |
| | | 690 | 1032 | 16.77 | 973 | 15.25 | 885 |
| | | 100 | 150 | 2.90 | 1158 | 2.64 | 1053 |
| | 1:2 | 1750 | 3500 | / | / | — | — |
| | | 1150 | 2300 | / | / | 14.55 | 379 |
| | | 690 | 1380 | / | / | 10.58 | 459 |
| | | 100 | 200 | / | / | 1.81 | 542 |

* Output Torque (lb-ins)
Input Horsepower approximately 5% higher than output horsepower shown above.

N

R1000 Series Bevel Gear Drives

R1500 Series

Selection Chart – Ratings For Service Factor (1.0)

| | | | R1511 R1515 R1516 | | R1514 | |
|--------|--------------|---------------|-------------------------|---------|--------|---------|
| Ratio | Input RPM | Output RPM | Output | | Output | |
| | | | HP | Torque* | HP | Torque* |
| 1:1 | 690 | 690 | 94.54 | 8511 | 66.77 | 6011 |
| | 300 | 300 | 46.99 | 9872 | 39.28 | 8251 |
| | 100 | 100 | 17.60 | 11092 | 14.71 | 9270 |
| 1.35:1 | 1150 | 852 | 79.29 | 5867 | 49.60 | 3679 |
| | 690 | 511 | 52.10 | 6332 | 47.38 | 5759 |
| | 300 | 222 | 24.89 | 7080 | 22.64 | 6421 |
| | 100 | 74 | 9.24 | 7885 | 8.41 | 7153 |
| 1.5:1 | 1150 | 767 | 58.90 | 4843 | 23.20 | 1907 |
| | 690 | 460 | 38.62 | 5216 | 15.90 | 2147 |
| | 300 | 200 | 18.40 | 5797 | 8.16 | 2570 |
| | 100 | 67 | 6.81 | 6438 | 3.33 | 3145 |
| 2:1 | 1750 | 875 | / | / | 26.71 | 1925 |
| | 1150 | 575 | / | / | 19.45 | 2134 |
| | 690 | 345 | / | / | 13.26 | 2388 |
| | 300 | 150 | / | / | 6.76 | 2838 |
| 100 | 50 | / | / | 2.57 | 3242 | |
| 1:1.35 | 690 | 932 | 52.10 | 3342 | 47.38 | 3044 |
| | 300 | 222 | 24.89 | 6713 | 22.64 | 6106 |
| | 100 | 135 | 9.24 | 4098 | 8.41 | 3730 |
| 1:1.5 | 690 | 1032 | 38.62 | 2241 | 15.90 | 922 |
| | 300 | 450 | 18.40 | 2448 | 8.16 | 1086 |
| | 100 | 150 | 6.81 | 2718 | 3.33 | 1329 |
| 1:2 | 1150 | 2300 | / | / | 19.45 | 506 |
| | 690 | 1380 | / | / | 13.26 | 575 |
| | 300 | 600 | / | / | 6.76 | 674 |
| | 100 | 200 | / | / | 2.57 | 769 |

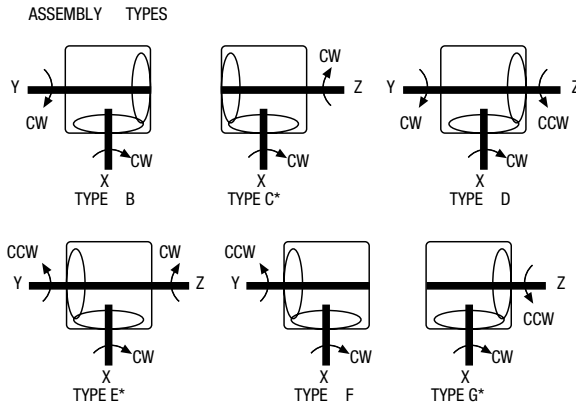
* Torque (lb-ins)

Input Horsepower approximately 5% higher than output horsepower shown above.

N

R1000 Series Bevel Gear Drives Dimensions

R1200 Series Dimensions

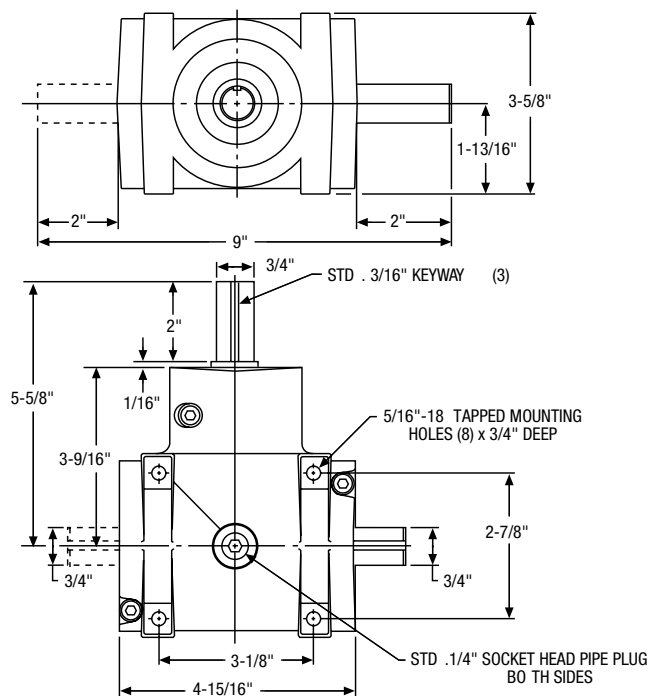


* Types "C," "E" and "G" can be accomplished by rotating types "B," "D" and "F" respectively 180°. No change in plugs are required.

Approx. Wt. – 7 Lbs

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

CW and CCW notations indicate direction of shaft rotation when facing out end of shaft extensions. The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

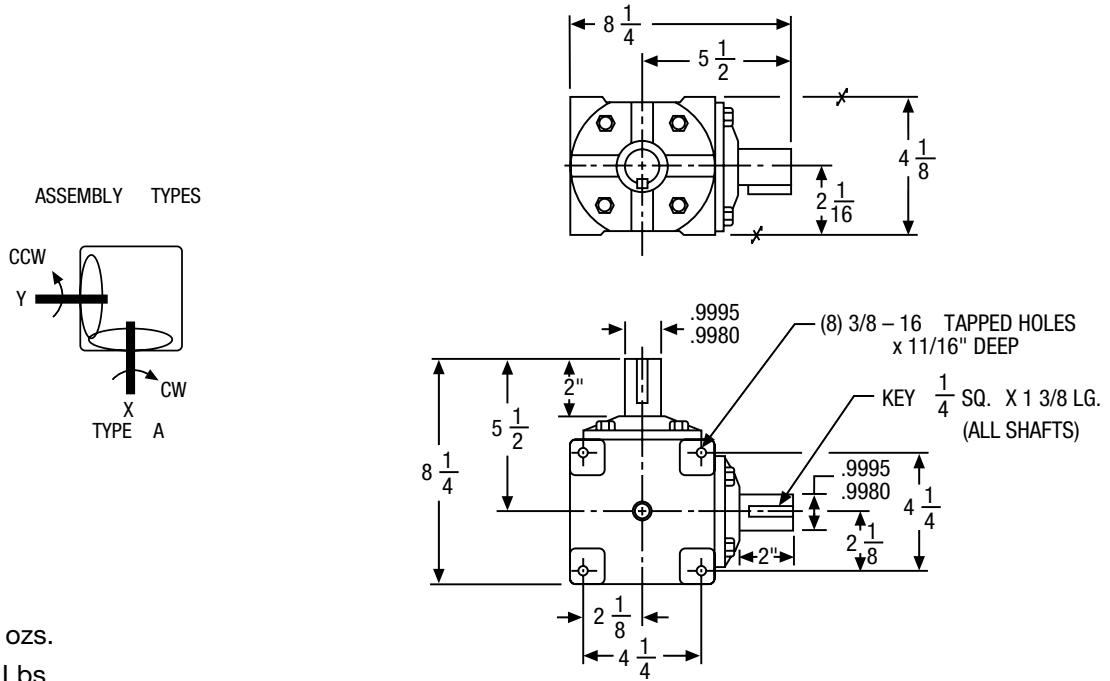


N

R1000 Series Bevel Gear Drives Dimensions

R1211 Series

Dimensions

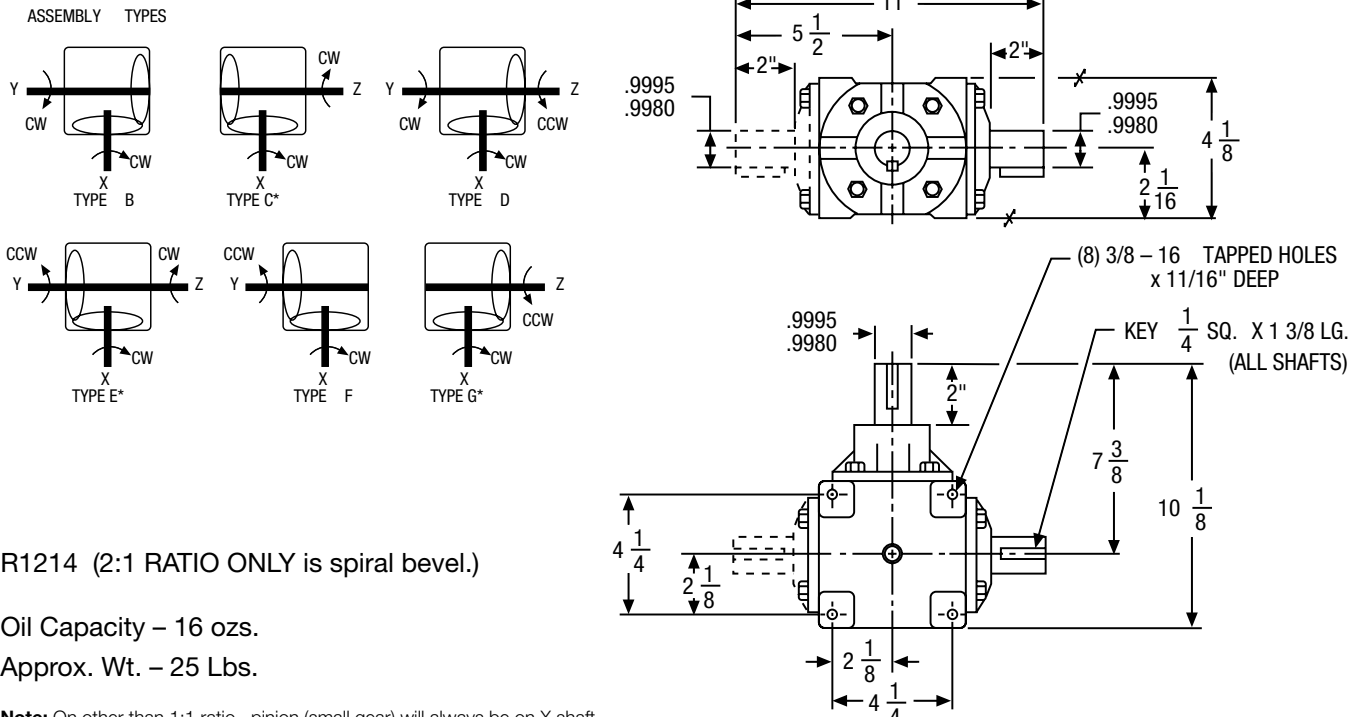


Oil Capacity – 16 ozs.
Approx. Wt. – 22 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1214 Series

Dimensions



R1214 (2:1 RATIO ONLY is spiral bevel.)

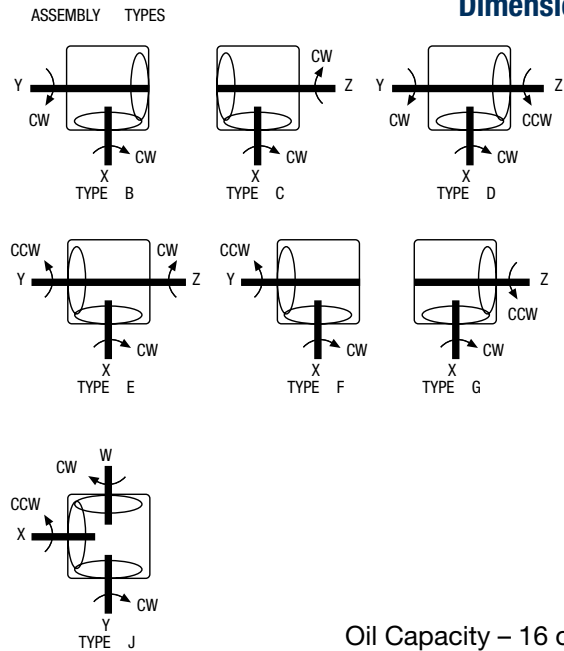
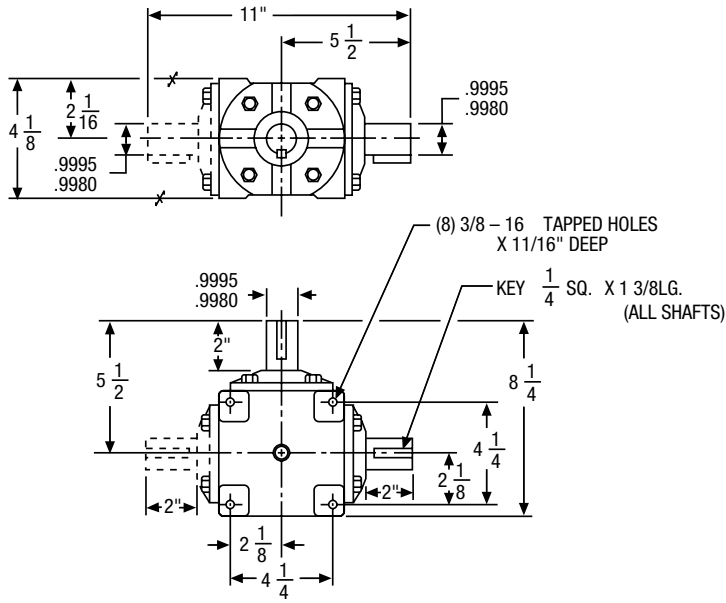
Oil Capacity – 16 ozs.
Approx. Wt. – 25 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions. The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 Series Bevel Gear Drives Dimensions

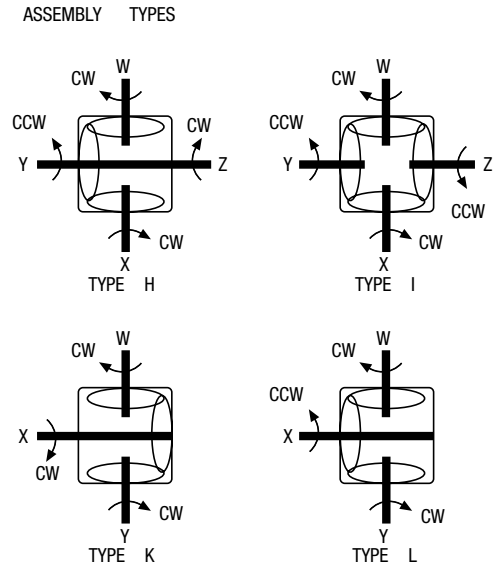
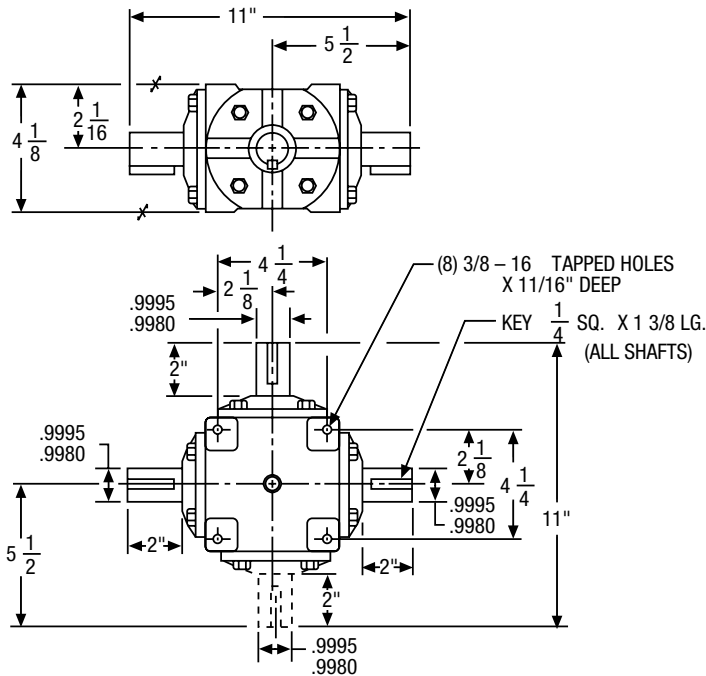
R1215 Series Dimensions



Oil Capacity – 16 ozs.
Approx. Wt. – 27 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1216 Series Dimensions



Oil Capacity – 16 ozs.
Approx. Wt. – 28 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on Y/Z shaft.

CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions. The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

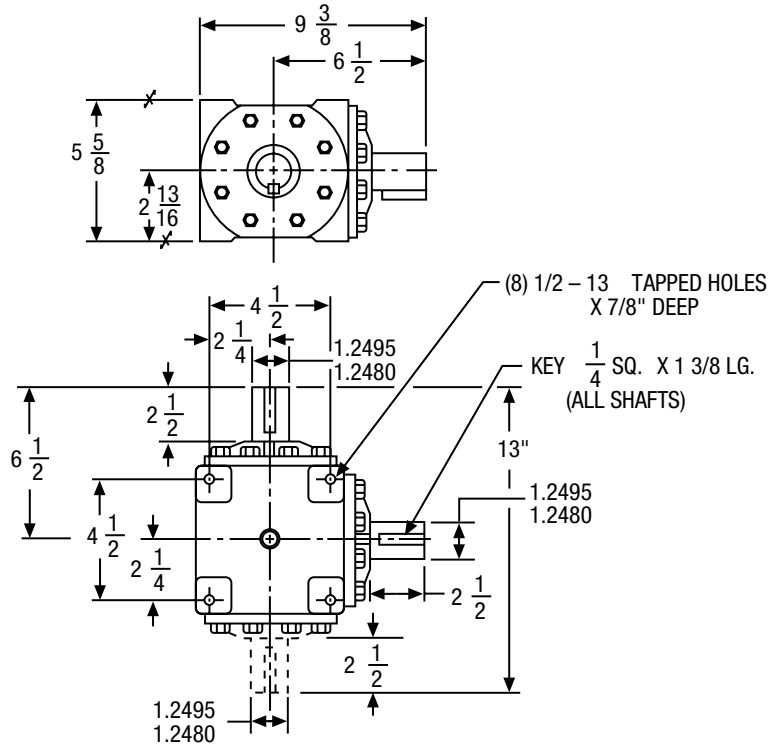
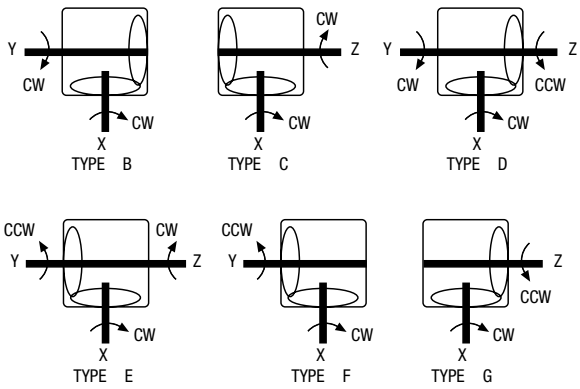


R1000 Series Bevel Gear Drives Dimensions

R1412 Series

Dimensions

ASSEMBLY TYPES



Oil Capacity – 24 ozs.

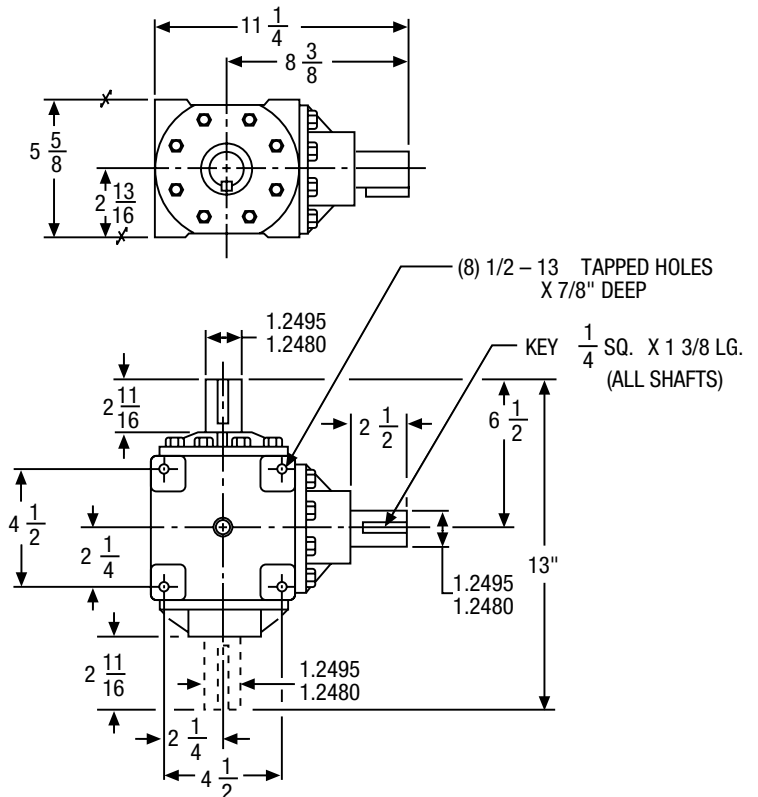
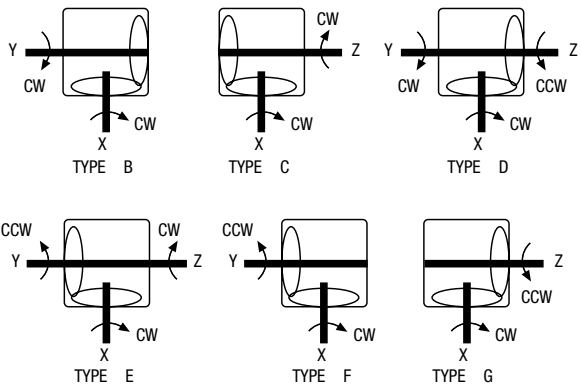
Approx. Wt. – 39 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1413 Series

Dimensions

ASSEMBLY TYPES



Oil Capacity – 32 ozs.

Approx. Wt. – 39 Lbs.

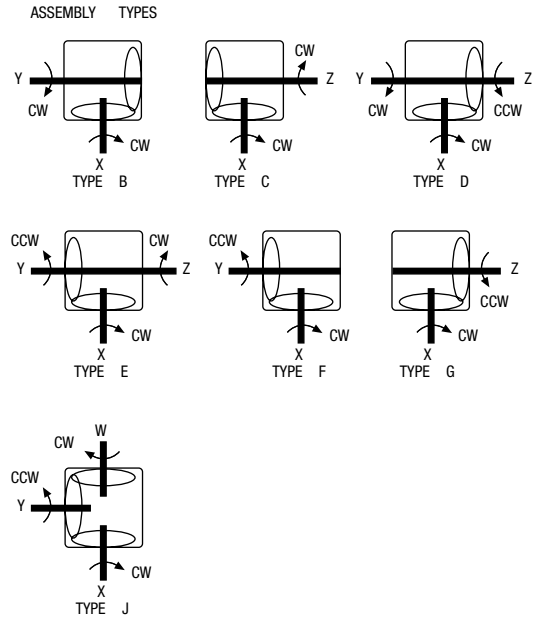
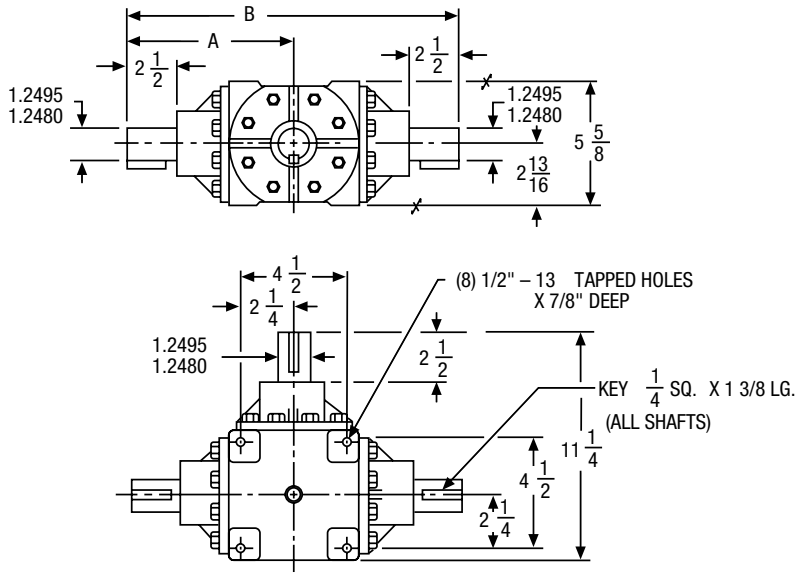
Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions.

The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 Series Bevel Gear Drives Dimensions

R1414 Series Dimensions



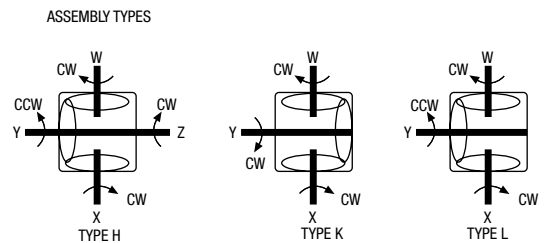
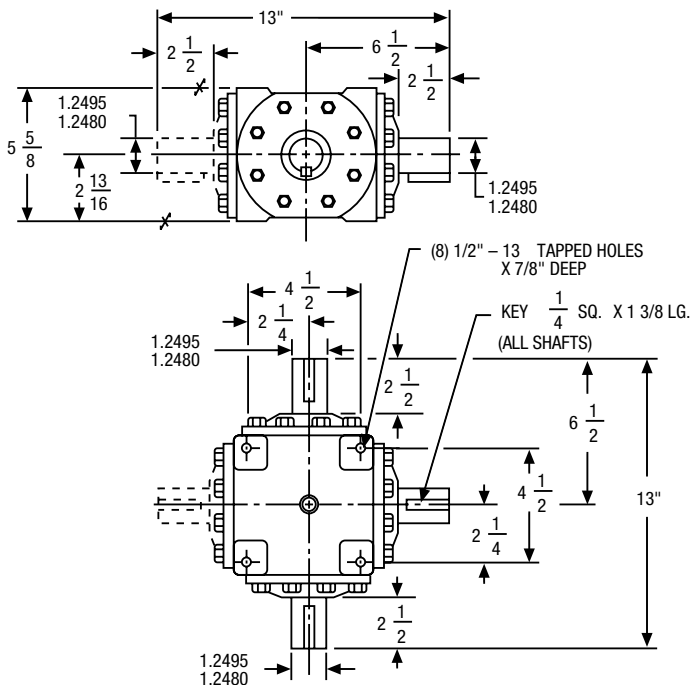
Note: Type J illustrated.

| A | B | MTG. TYPE |
|-------|--------|------------|
| 8 3/8 | 16 3/4 | J |
| 6 1/2 | 13 | All Others |

Oil Capacity – 32 ozs.
Approx. Wt. – 50 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1416 Series Dimensions



Oil Capacity – 24 ozs.
Approx. Wt. – 50 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

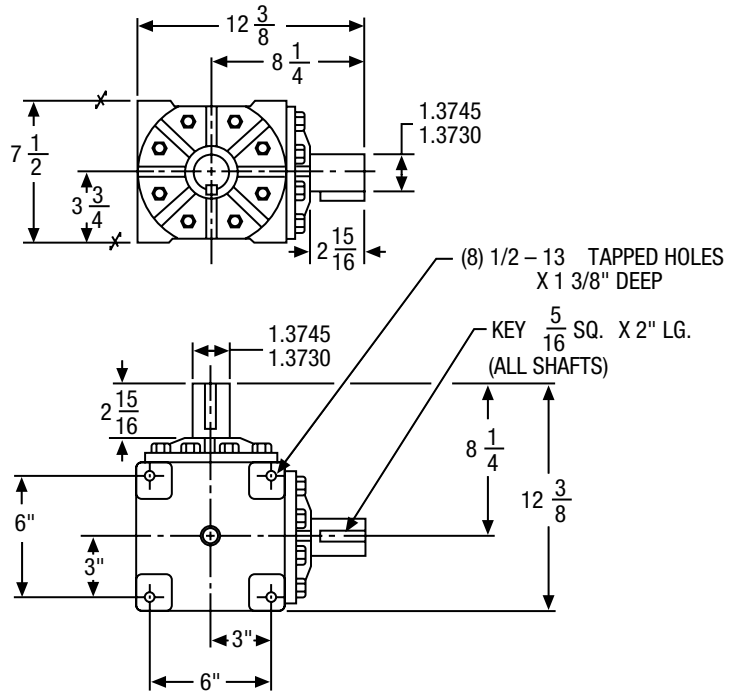
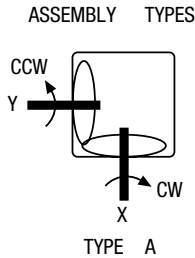
CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions. The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.



R1000 Series Bevel Gear Drives Dimensions

R1511 Series

Dimensions



Oil Capacity – 64 ozs.

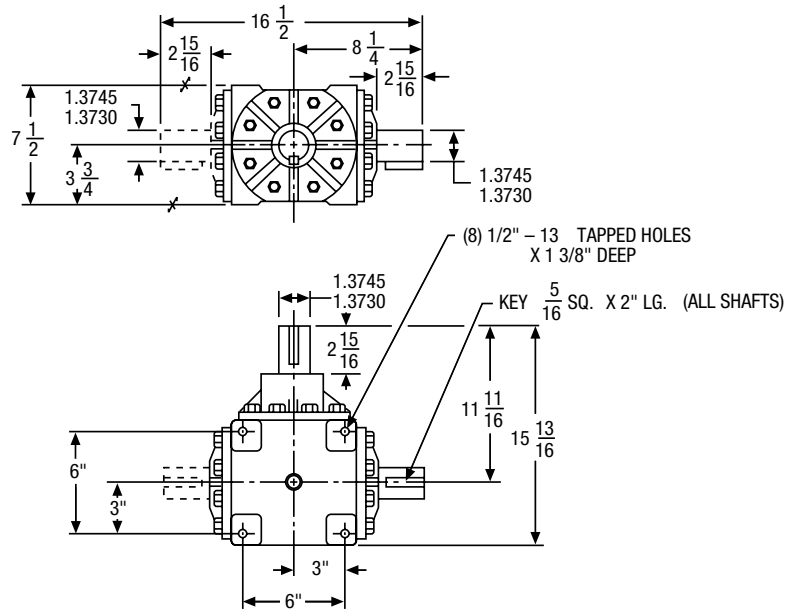
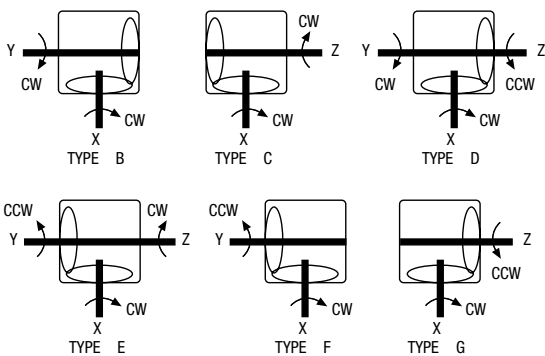
Approx. Wt. – 73 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1514 Series

Dimensions

ASSEMBLY TYPES



Oil Capacity – 88 ozs.

Approx. Wt. – 78 Lbs.

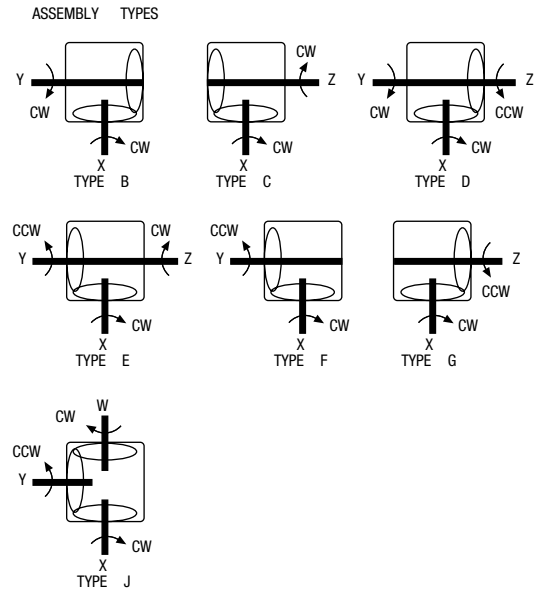
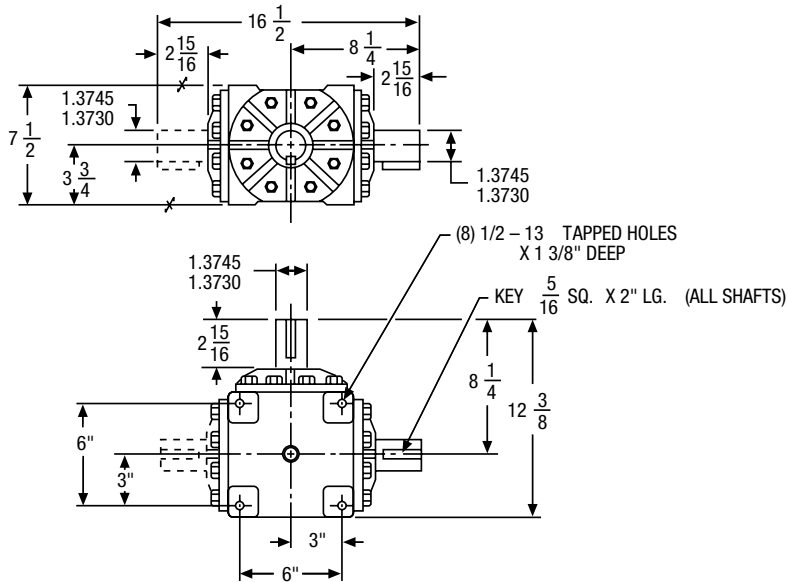
Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions.

The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 Series Bevel Gear Drives Dimensions

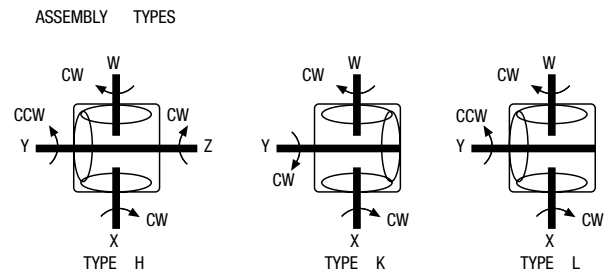
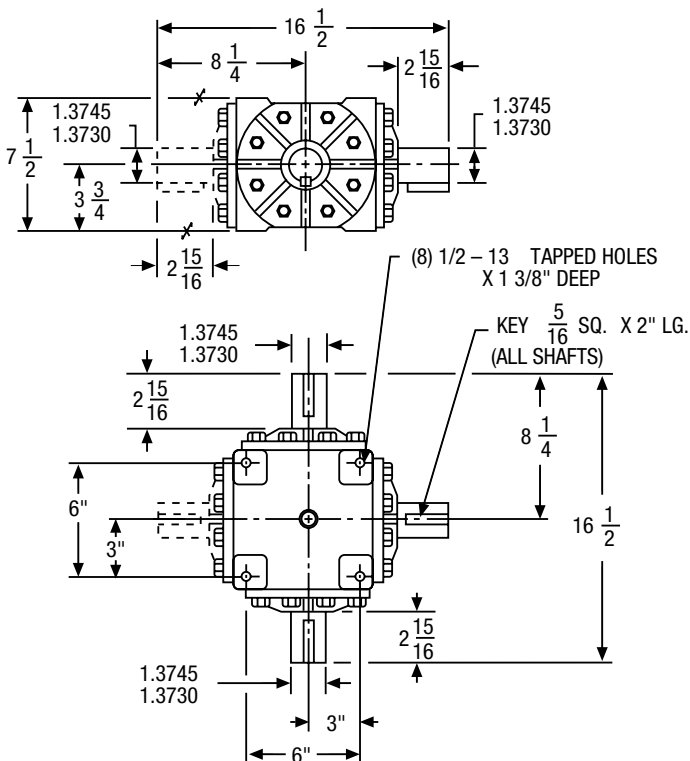
R1515 Series Dimensions



Oil Capacity – 72 ozs.
Approx. Wt. – “J” type – 85 Lbs. – All others – 72 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

R1516 Series Dimensions



Oil Capacity – 72 ozs.
Approx. Wt. – 87 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions. The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

An economical alternative to a multi-reduction Reducer

THE MOTOR MULTIPLIER®

Multiplies your gear reducer ratio 5 times
Multiplies your savings with efficient planetary gearing



Planetary Ratio Multiplier



With Optional Base Kit



With 200 Series Helical Reducer



With 700 Series Worm Gear Speed Reducer

Features

- Multiplies Motor torque
- Rugged aluminum housing
- 5/8" and 7/8" shaft sizes (output)
- 3/4 maximum input horsepower (NEMA 56c face mounted motors)
- Efficient 5 to 1 ratio
- Easy to install
- Lubricated for Life

Applications

- Provides additional ratios for inventory flexibility
- Use with existing Gearbox To Create Double Reduction Ratios or Alone as a 5 to 1 reducer
- Compatible with most worm or helical gear flanged reducers, NEMA 56c design

Section Contents

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| Features / Applications | 329 |
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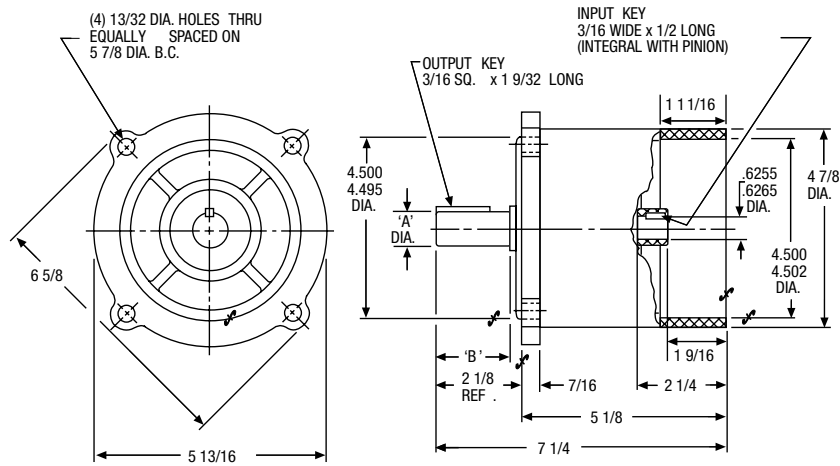


Planetary Ratio Multiplier

Order by catalog number

| Output RPM | Ratio | Motor HP (1750 RPM Input) | OUTPUT | | Multiplier Catalog Number |
|------------|-------|---------------------------|--------|------------------|---------------------------|
| | | | HP | Torque (LB. INS) | |
| 350 | 5 | 1/6 | .14 | 25 | FSP-5 OR FSP-5A |
| | | 1/4 | .21 | 38 | |
| | | 1/3 | .29 | 53 | |
| | | 1/2 | .45 | 81 | |
| | | 3/4 | .69 | 124 | |

Dimensions

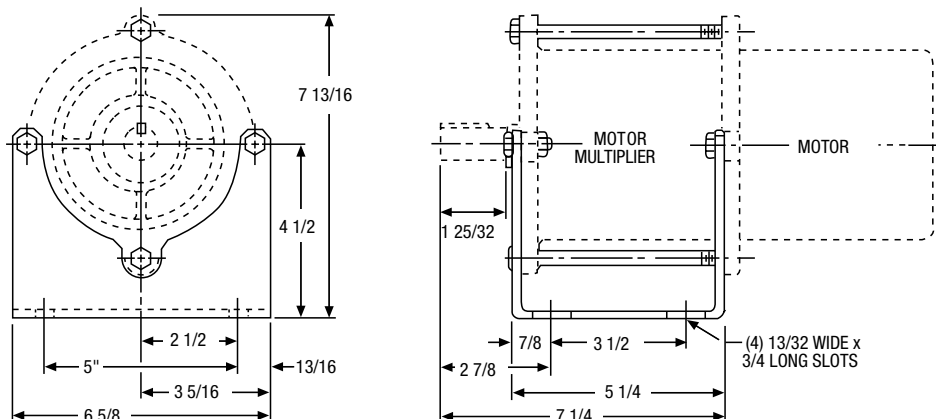


ALL DIMENSIONS IN INCHES

| Item Code | Catalog Number | A Shaft Dia. | B Shaft Length |
|-----------|----------------|--------------|----------------|
| 60634 | FSP-5A | .6245 | 1-15/16 |
| | | .6240 | |
| 60632 | FSP-5 | .8745 | 2 |
| | | .8740 | |

Motor Multiplier Base Kit

Catalog Number - 47849



Output shaft may rotate in either direction. Rotation will be the same as the rotation of the motor shaft.

Planetary Ratio Multiplier

Torque Selection and Ratings for Motor Multiplier and Single Reduction Worm Gear Flanged Reducer Combinations

| Output RPM | Total Ratio | Motor HP 1750 RPM | Flanged Reducer Output Rating | | | | | | Motor Multiplier Catalog Number | Basic Flanged Reducer Size and Ratio |
|------------|-------------|-------------------|-------------------------------|-------------------|------------|-------------------|------------|-------------------|---------------------------------|--------------------------------------|
| | | | S.F. 1.0 | | S. F. 1.25 | | S. F. 1.75 | | | |
| | | | HP | Torque (LB. INS.) | HP | Torque (LB. INS.) | HP | Torque (LB. INS.) | | |
| 70 | 25 | 1/6 | .09 | 78 | .09 | 78 | .09 | 78 | FSP-5A | F713-5-B5 |
| | | 1/4 | .16 | 140 | .16 | 140 | .12 | 106 | FSP-5A | F713-5-B5 |
| | | 1/3 | .23 | 207 | .16 | 142 | .12 | 106 | FSP-5A | F713-5-B5 |
| | | 1/3 | .23 | 207 | .23 | 204 | .17 | 153 | FSP-5A | F715-5-B5 |
| | | 1/2 | .34 | 306 | .23 | 204 | .17 | 153 | FSP-5 | F715-5-B7 |
| | | 1/2 | .34 | 306 | .23 | 204 | .17 | 153 | FSP-5A | F715-5-B5 |
| | | 1/2 | .38 | 342 | .29 | 257 | .21 | 193 | FSP-5 | F718-5-B7 |
| | | 1/2 | .38 | 342 | .38 | 342 | .31 | 276 | FSP-5 | F721-5-B7 |
| | | 3/4 | .43 | 386 | .29 | 257 | .21 | 193 | FSP-5 | F718-5-B7 |
| 3/4 | .61 | 552 | .41 | 368 | .31 | 276 | FSP-5 | F721-5-B7 | | |
| 35 | 50 | 1/6 | .08 | 152 | .08 | 15 | .07 | 133 | FSP-5A | F713-10-B5 |
| | | 1/4 | .15 | 266 | .10 | 177 | .07 | 133 | FSP-5A | F713-10-B5 |
| | | 1/4 | .15 | 266 | .14 | 255 | .11 | 192 | FSP-5A | F715-10-B5 |
| | | 1/3 | .21 | 373 | .14 | 255 | .11 | 192 | FSP-5A | F715-10-B5 |
| | | 1/3 | .22 | 396 | .20 | 365 | .15 | 274 | FSP-5 | F718-10-B7 |
| | | 1/2 | .30 | 548 | .20 | 365 | .15 | 274 | FSP-5 | F718-10-B7 |
| | | 1/2 | .37 | 662 | .32 | 581 | .24 | 436 | FSP-5 | F721-10-B7 |
| | | 3/4 | .48 | 872 | .32 | 581 | .24 | 436 | FSP-5 | F721-10-B7 |
| | | 3/4 | .59 | 1058 | .39 | 705 | .29 | 529 | FSP-5 | F724-10-B7 |
| 3/4 | .59 | 1058 | .39 | 705 | .29 | 529 | FSP-5 | F726-10-B7 | | |
| 23.3 | 75 | 1/6 | .08 | 217 | .07 | 183 | .05 | 137 | FSP-5A | F713-15-B5 |
| | | 1/6 | .08 | 217 | .08 | 217 | .07 | 198 | FSP-5A | F715-15-B5 |
| | | 1/4 | .10 | 274 | .07 | 183 | .05 | 137 | FSP-5A | F713-15-B5 |
| | | 1/4 | .15 | 395 | .10 | 263 | .07 | 198 | FSP-5A | F715-15-B5 |
| | | 1/4 | .15 | 395 | .14 | 376 | .10 | 282 | FSP-5A | F718-15-B5 |
| | | 1/3 | .21 | 564 | .14 | 376 | .10 | 282 | FSP-5A | F718-15-B5 |
| | | 1/3 | .21 | 572 | .22 | 599 | .17 | 450 | FSP-5A | F721-15-B5 |
| | | 1/2 | .33 | 898 | .22 | 599 | .17 | 450 | FSP-5A | F721-15-B5 |
| | | 1/2 | .34 | 927 | .33 | 889 | .25 | 667 | FSP-5 | F724-15-B7 |
| | | 3/4 | .49 | 1334 | .33 | 889 | .25 | 667 | FSP-5 | F724-15-B7 |
| 3/4 | .57 | 1542 | .38 | 1028 | .29 | 771 | FSP-5 | F726-15-B7 | | |
| 17.5 | 100 | 1/6 | .08 | 283 | .06 | 207 | .04 | 156 | FSP-5A | F713-20-B5 |
| | | 1/6 | .08 | 283 | .08 | 283 | .06 | 227 | FSP-5A | F715-20-B5 |
| | | 1/4 | .13 | 454 | .08 | 303 | .06 | 227 | FSP-5A | F715-20-B5 |
| | | 1/4 | .14 | 493 | .12 | 426 | .09 | 320 | FSP-5A | F718-20-B5 |
| | | 1/3 | .18 | 639 | .12 | 426 | .09 | 320 | FSP-5A | F718-20-B5 |
| | | 1/3 | .21 | 748 | .17 | 628 | .13 | 471 | FSP-5A | F721-20-B5 |
| | | 1/2 | .34 | 1238 | .25 | 896 | .19 | 672 | FSP-5 | F724-20-B7 |
| | | 1/2 | .34 | 1238 | .33 | 1191 | .25 | 893 | FSP-5 | F726-20-B7 |
| | | 3/4 | .56 | 1786 | .33 | 1191 | .25 | 893 | FSP-5 | F726-20-B7 |
| | | 3/4 | .59 | 1893 | .37 | 1262 | .28 | 945 | FSP-5 | F730-20-B7 |
| 3/4 | .56 | 2000 | .37 | 1333 | .28 | 1000 | FSP-5 | F732-20-B7 | | |



Planetary Ratio Multiplier

Torque Selection and Ratings for Motor Multiplier and Single Reduction Worm Gear Flanged Reducer Combinations

| Output RPM | Total Ratio | Motor HP 1750 RPM | Flanged Reducer Output Rating | | | | | | Motor Multiplier Catalog Number | Basic Flanged Reducer Size and Ratio |
|------------|-------------|-------------------|-------------------------------|-------------------|------------|-------------------|------------|-------------------|---------------------------------|--------------------------------------|
| | | | S.F. 1.0 | | S. F. 1.25 | | S. F. 1.75 | | | |
| | | | HP | Torque (LB. INS.) | HP | Torque (LB. INS.) | HP | Torque (LB. INS.) | | |
| 11.7 | 150 | 1/6 | .06 | 320 | .039 | 213 | .029 | 160 | FSP-5A | F713-30-B5 |
| | | 1/6 | .07 | 398 | .06 | 312 | .043 | 234 | FSP-5A | F715-30-B5 |
| | | 1/4 | .12 | 660 | .08 | 440 | .06 | 330 | FSP-5A | F718-30-B5 |
| | | 1/4 | .13 | 714 | .12 | 628 | .09 | 471 | FSP-5A | F721-30-B5 |
| | | 1/3 | .18 | 972 | .12 | 648 | .09 | 486 | FSP-5A | F721-30-B5 |
| | | 1/3 | .20 | 1056 | .17 | 924 | .13 | 693 | FSP-5A | F724-30-B5 |
| | | 1/2 | .32 | 1733 | .23 | 1227 | .17 | 920 | FSP-5 | F726-30-B7 |
| | | 3/4 | .52 | 2281 | .28 | 1520 | .21 | 1140 | FSP-5 | F730-30-B7 |
| | | 3/4 | .52 | 2830 | .35 | 1887 | .26 | 1415 | FSP-5 | F732-30-B7 |
| 8.8 | 200 | 1/6 | .06 | 454 | .042 | 303 | .031 | 227 | FSP-5A | F715-40-B5 |
| | | 1/6 | .07 | 500 | .06 | 426 | .044 | 319 | FSP-5A | F718-40-B5 |
| | | 1/4 | .12 | 893 | .09 | 628 | .07 | 471 | FSP-5A | F721-40-B5 |
| | | 1/4 | .12 | 893 | .12 | 893 | .09 | 672 | FSP-5A | F724-40-B5 |
| | | 1/3 | .18 | 1320 | .12 | 896 | .09 | 672 | FSP-5A | F724-40-B5 |
| | | 1/3 | .18 | 1320 | .17 | 1191 | .12 | 893 | FSP-5A | F726-40-B5 |
| | | 1/2 | .25 | 1786 | .17 | 1191 | .12 | 893 | FSP-5 | F726-40-B7 |
| | | 1/2 | .25 | 1786 | .17 | 1191 | .12 | 893 | FSP-5A | F726-40-B5 |
| | | 1/2 | .28 | 1984 | .18 | 1322 | .14 | 992 | FSP-5A | F730-40-B5 |
| | | 1/2 | .30 | 2183 | .26 | 1887 | .20 | 1415 | FSP-5 | F732-40-B7 |
| | | 3/4 | .37 | 2667 | .25 | 1778 | .19 | 1332 | FSP-5 | F730-40-B7 |
| | | 3/4 | .49 | 3543 | .26 | 1887 | .20 | 1415 | FSP-5 | F732-40-B7 |
| 7 | 250 | 1/6 | .06 | 556 | .041 | 371 | .031 | 278 | FSP-5A | F718-50-B5 |
| | | 1/6 | .07 | 590 | .06 | 584 | .05 | 438 | FSP-5A | F721-50-B5 |
| | | 1/4 | .10 | 876 | .06 | 584 | .05 | 438 | FSP-5A | F721-50-B5 |
| | | 1/4 | .12 | 1054 | .10 | 865 | .07 | 649 | FSP-5A | F724-50-B5 |
| | | 1/4 | .12 | 848 | .12 | 1054 | .09 | 848 | FSP-5A | F726-50-B5 |
| | | 1/3 | .14 | 1298 | .10 | 865 | .07 | 649 | FSP-5A | F724-50-B5 |
| | | 1/3 | .17 | 1549 | .13 | 1130 | .09 | 848 | FSP-5A | F726-50-B5 |
| | | 1/2 | .22 | 2060 | .15 | 1373 | .11 | 1030 | FSP-5A | F730-50-B5 |
| | | 3/4 | .22 | 2313 | .17 | 1542 | .15 | 1156 | FSP-5 | F730-50-B7 |
| | | 1/2 | .28 | 2566 | .27 | 2459 | .20 | 1844 | FSP-5 | F732-50-B7 |
| | | 3/4 | .41 | 3688 | .27 | 2459 | .20 | 1844 | FSP-5 | F732-50-B7 |
| | | 3/4 | .46 | 4165 | .31 | 2777 | .23 | 2082 | FSP-5 | F738-50-B7 |
| 5.8 | 300 | 1/6 | .049 | 534 | .032 | 356 | .024 | 267 | FSP-5A | F721-60-B5 |
| | | 1/6 | .06 | 656 | .05 | 560 | .039 | 420 | FSP-5A | F721-60-B5 |
| | | 1/4 | .08 | 841 | .05 | 560 | .039 | 420 | FSP-5A | F721-60-B5 |
| | | 1/4 | .11 | 1177 | .08 | 831 | .06 | 623 | FSP-5A | F724-60-B5 |
| | | 1/4 | .11 | 1177 | .10 | 1085 | .08 | 814 | FSP-5A | F726-60-B5 |
| | | 1/3 | .15 | 1638 | .10 | 1092 | .08 | 819 | FSP-5A | F726-60-B5 |
| | | 1/2 | .20 | 2248 | .14 | 1500 | .10 | 1125 | FSP-5A | F730-60-B5 |
| | | 1/2 | .27 | 2858 | .22 | 2360 | .16 | 1770 | FSP-5 | F732-60-B7 |
| | | 3/4 | .43 | 4646 | .29 | 3097 | .22 | 2323 | FSP-5 | F738-60-B7 |



Boston Gear's application engineers are readily available to assist with the initial planning and application analysis and specification of components. Combinations of options, interfacing with equipment external to the drives and proper selection of reducers and other auxiliary components are typical of the possibilities available to satisfy the most complex applications.

NOTE: All performance specifications listed in this catalog are based on steady state operating conditions; i.e. ambient temperature, line voltage, motor frame temperature, etc.

Section Contents

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| Bost-Kleen Speed Reducers/Motors | .342 |

NEMA C-Face Motors

Catalog Numbering System

P

AC MOTORS

| HP | VOLTAGE | ENCL | SUFFIX | MANUFACTURER |
|-----------|------------------|-----------|---------------|--------------|
| A - 1/20 | R - 115/230-1-60 | T - TENV | B - BRAKE | B - BALDOR |
| AA - 1/12 | S - 115-1-60 | TF - TEFC | 35 - 3450 RPM | W - WEG |
| C - 1/6 | T - 230-1-60 | | 11 - 1150 RPM | |
| D - 1/4 | U - 230/460-3-60 | | | |
| E - 1/3 | Y - 575-3-60 | | | |
| F - 1/2 | | | | |
| G - 3/4 | | | | |
| H - 1 | | | | |
| J - 1-1/2 | | | | |
| K - 2 | | | | |
| L - 3 | | | | |
| M - 5 | | | | |
| N - 7-1/2 | | | | |
| P - 10 | | | | |
| R - 15 | | | | |
| S - 20 | | | | |

PM MOTORS

| SERIES DESIGNATION | VOLTAGE | HP | ENCL | MANUFACTURER |
|-----------------------|-------------|-------------|----------------|---------------------|
| PM - Permanent Magnet | 9 - 90VDC | 16 - 1/6 | T, A - TENV | B - BALDOR |
| | 18 - 180VDC | 25 - 1/4 | TF, ATF - TEFC | BLANK - Boston Gear |
| | | 33 - 1/3 | | |
| | | 50 - 1/2 | | |
| | | 75 - 3/4 | | |
| | | 100 - 1 | | |
| | | 150 - 1-1/2 | | |
| | | 200 - 2 | | |
| | | 300 - 3 | | |
| | | 500 - 5 | | |

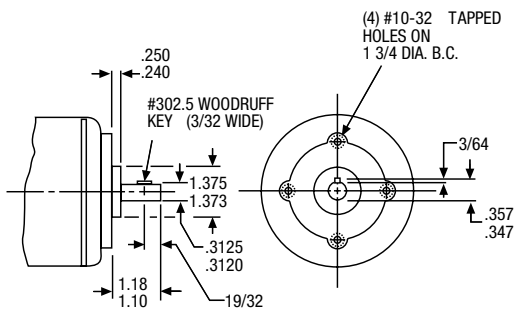
Letters after dash indicate manufacturer:

B = Baldor
W = WEG
Blank = Boston Gear

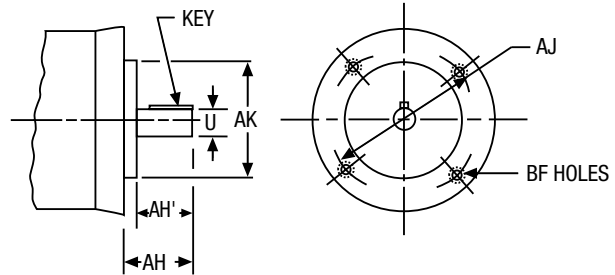
Catalog Number Example: FUTF-W
 1/2 HP, 230/460-3-60, TEFC, Boston Gear

Catalog Number Example: PM916AT-B
 Permanent Magnet, 90VDC, 1/6 HP, TENV, Baldor

NEMA Motor Bolt Circle Dimensions (Special) End Mounted



All Listed NEMA Frames



ALL DIMENSIONS IN INCHES

| Bore Code | NEMA Mounting. | U | AK | MAX. AH | MAX. AH1 | KEY | | AJ | BF |
|-----------|----------------|------------------|----------------|---------|----------|------|-------|-------|--------|
| | | | | | | SQ. | LG. | | |
| B4 | 42CZ | .5000 .4995 | 3.000 2.997 | 1 5/16 | — | 1/8 | 3/4 | 3 3/4 | 1/4-20 |
| B5 | 56C | .6250 .6245 | 4.500 4.497 | 2 5/32 | — | 3/16 | 1 3/8 | 5 7/8 | 3/8-16 |
| B7 | 182C 184C | .8750 .8745 | 4.500 4.497 | 2 5/32 | — | 3/16 | 1 3/8 | 5 7/8 | 3/8-16 |
| | 143TC 145TC | | | | | | | | |
| B9 | 213C 215C | 1.1250 1.1245 | 8.500 8.497 | — | 2 25/32 | 1/4 | 1 3/4 | 7 1/4 | 1/2-13 |
| | 182TC 184TC | | | | | | | | |
| B11 | 254UC 256UC | 1.3750 1.3745 | 8.500 8.497 | — | 3 17/32 | 5/16 | 2 3/8 | 7 1/4 | 1/2-13 |
| | 213TC 215TC | | | | | | | | |
| B13 | 254TC 256TC | 1.6250 1.6240 | 8.500 8.497 | — | 3 13/16 | 3/8 | 2 7/8 | 7 1/4 | 1/2-13 |

Flanged reducers are designed for use with motors having NEMA "C" face and shaft dimensions as shown. AH and AH' must not be exceeded.

Adjustable Speed Control Motors Quick Selection Chart

@ 1750 RPM Input

| HP (Motor) | RPM † (Range) | Torque (Maximum) (LB. IN.) | Flange Reducers** | Motors | |
|---------------|------------------|----------------------------------|----------------------|----------------|------------------|
| | | | | AC † | DC † |
| 1/6 | 350-12 | 27 | F710-5 | ACUT* CUTF | APM916 PM916 |
| | 175-6 | 53 | F710-10 | | |
| | 117-4 | 77 | F710-15 | | |
| | 88-3 | 98 | F710-20 | | |
| | 70-2.5 | 117 | F713-25 | | |
| | | 132 | F713-30 | | |
| | 58-2 | 139 | F710-30 | | |
| | | 128 | F710-40 | | |
| | 44-1.5 | 178 | F713-40 | | |
| | | 120 | F710-50 | | |
| 35-1.2 | 210 | F715-50 | | | |
| | 29-1 | 223 | F718-60 | | |
| 1/4 | 350-12 | 41 | F710-5 | ADUFT* DUFT | APM925 PM925 |
| | 175-6 | 80 | F710-10 | | |
| | 117-4 | 116 | F710-15 | | |
| | 88-3 | 130 | F710-20 | | |
| | | 148 | F713-20 | | |
| | 70-2.5 | 175 | F713-25 | | |
| | 58-2 | 208 | F713-30 | | |
| | 44-1.5 | 266 | F715-40 | | |
| | 35-1.2 | 315 | F715-50 | | |
| 29-1 | 335 | F718-60 | | | |
| 1/3 | 350-12 | 55 | F710-5 | AEUTF* EUTF | APM933* PM933 |
| | 175-6 | 107 | F710-10 | | |
| | 117-4 | 155 | F713-15 | | |
| | 88-3 | 197 | F713-20 | | |
| | 70-2.5 | 234 | F713-25 | | |
| | 58-2 | 277 | F715-30 | | |
| | 44-1.5 | 355 | F715-40 | | |
| | 35-1.2 | 420 | F718-50 | | |
| 29-1 | 440 | F718-60 | | | |
| 1/2 | 350-12 | 82 | F713-5 | FUTF | PM950 |
| | 175-6 | 160 | F713-10 | | |
| | 117-4 | 232 | F713-15 | | |
| | 88-3 | 295 | F715-20 | | |
| | 70-2.5 | 350 | F715-25 | | |
| | 58-2 | 416 | F718-30 | | |
| | 44-1.5 | 533 | F721-40 | | |
| | 35-1.2 | 630 | F721-50 | | |
| | 29-1 | 670 | F721-60 | | |
| 3/4 | 350-12 | 123 | F713-5 | GUTF | PM975 |
| | 175-6 | 240 | F715-10 | | |
| | 117-4 | 348 | F715-15 | | |
| | 88-3 | 443 | F718-20 | | |
| | 70-2.5 | 526 | F721-25 | | |

** For Flanged Reducer w/coupling specify RF Model.

† Speed range shown demonstrates a 30 to 1 speed range which is typical when using a single phase DC Controller and Permanent Magnet Motor. Consult your Boston Gear distributor for your particular application.



Adjustable Speed Control Motors Quick Selection Chart

P

| HP (Motor) | RPM † (Range) | Torque (Maximum) (LB. IN.) | Flange Reducers** | Motors | |
|----------------|------------------|----------------------------------|----------------------|--------|---------|
| | | | | AC † | DC † |
| 3/4 (CONT.) | 58-2 | 624 | F721-30 | GUTF | PM975 |
| | 44-1.5 | 800 | F724-40 | | |
| | 35-1.2 | 945 | F724-50 | | |
| | 29-1 | 1004 | F726-60 | | |
| 1 | 350-12 | 165 | F713-5 | HUTF | PM9100 |
| | 175-6 | 320 | F718-10 | | |
| | 117-4 | 422 | F718-15 | | |
| | 88-3 | 590 | F721-20 | | |
| | 70-2.5 | 702 | F721-25 | | |
| | 58-2 | 832 | F724-30 | | |
| | 44-1.5 | 1066 | F726-40 | | |
| | 35-1.2 | 1260 | F726-50 | | |
| 29-1 | 1340 | F730-60 | | | |
| 1-1/2 | 350-12 | 256 | F715-5 | JUTF | PM18150 |
| | 175-6 | 460 | F718-10 | | |
| | 117-4 | 646 | F721-15 | | |
| | 88-3 | 886 | F724-20 | | |
| | 70-2.5 | 1056 | F724-25 | | |
| | 58-2 | 1247 | F726-30 | | |
| | 44-1.5 | 1598 | F730-40 | | |
| | 35-1.2 | 1890 | F732-50 | | |
| 29-1 | 2009 | F732-60 | | | |
| 2 | 350-12 | 328 | F718-5 | KUTF | PM18200 |
| | 175-6 | 640 | F721-10 | | |
| | 117-4 | 929 | F724-15 | | |
| | 88-3 | 1180 | F726-20 | | |
| | 70-2.5 | 1440 | F730-25 | | |
| | 58-2 | 1663 | F732-30 | | |
| | 44-1.5 | 2131 | F732-40 | | |
| | 35-1.2 | 2520 | F732-50F | | |
| 29-1 | 2678 | F738-60 | | | |
| 3 | 350-12 | 491 | F724-5 | LUTF | PM18300 |
| | 175-6 | 960 | F726-10 | | |
| | 117-4 | 1393 | F730-15 | | |
| | 88-3 | 1771 | F730-20 | | |
| | 70-2.5 | 2150 | F732-25F | | |
| | 58-2 | 2495 | F732-30F | | |
| | 44-1.5 | 3196 | F738-40 | | |
| | 35-1.2 | 4016 | F738-50F | | |
| 29-1 | 4020 | RF752-60 | | | |
| 5 | 175-6 | 1602 | F732-10 | MUTF | PM18500 |
| | 117-4 | 2230 | F732-15F | | |
| | 88-3 | 2952 | F738-20 | | |
| | 58-2 | 4180 | RF752-30 | | |
| | 44-1.5 | 5328 | RF752-40 | | |
| | 35-1.2 | 6300 | RF752-50F | | |
| | 29-1 | 7392 | RF760-60F | | |

** For Flanged Reducer w/coupling specify RF Model.

† Speed range shown demonstrates a 30 to 1 speed range which is typical when using a single phase DC Controller and Permanent Magnet Motor. Consult your Boston Gear distributor for your particular application.

AC Motors Totally Enclosed and Open Dripproof

@ 1750 RPM Input

ORDER BY CATALOG NUMBER OR ITEM CODE

| HP | NEMA Mounting | Bore Code † | Totally Enclosed* | | | | | | Open Dripproof | | | |
|----------|---------------|-------------|-------------------|-----------|------------------|-----------|----------------|-----------|----------------|-----------|------------------|-----------|
| | | | 115/230-1-60 | | 208-230/460-3-60 | | 575-3-60 | | 115/230-1-60 | | 208-230/460-3-60 | |
| | | | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/20 | SP | — | AST-B** | 65403 | — | — | — | — | — | — | — | — |
| 1/12 | SP | — | AAST-B** | 65402 | — | — | — | — | — | — | — | — |
| 1/6 | 42CZ | B4 | ACRT-W | 65320 | ACUT-W | 65368 | — | — | — | — | — | — |
| | 42CZ | B4 | ACRTF-B | 69725 | ACUT-B | 69728 | — | — | — | — | — | — |
| | 56C | B5 | CRTF-W | 65316 | CUTF-W | 65371 | — | — | — | — | — | — |
| | 56C | B5 | CRT-B | 85775 | CUT-B | 85776 | — | — | CR-B | 85773 | CU-B | 85774 |
| 56C | B5 | CRTF-B | 85777 | CUTF-B | 85778 | — | — | — | — | — | — | |
| 1/4 | 42CZ | B4 | ADRT-W | 65325 | ADUT-W | 65374 | — | — | — | — | — | — |
| | 42CZ | B4 | ADRTF-B | 69726 | ADUTF-B | 69729 | — | — | — | — | — | — |
| | 56C | B5 | DRTF-W | 65326 | DUTF-W | 65380 | — | — | — | — | — | — |
| | | | DRTF-B | 66199 | DUTF-B | 66205 | DYTF-B | 66208 | DR-B | 66109 | DU-B | 66115 |
| DSTF-B** | | | 66202 | — | — | — | — | DS-B** | 66112 | — | — | |
| — | — | — | — | — | — | — | — | — | — | — | | |
| 1/3 | 42CZ | B4 | AERT-W | 65346 | AEUT-W | 65381 | — | — | — | — | — | — |
| | 42CZ | B4 | AERTF-B | 69727 | AEUTF-B | 69730 | — | — | — | — | — | — |
| | 56C | B5 | ERTF-W | 65348 | EUTF-W | 65383 | — | — | — | — | — | — |
| 56C | B5 | ERTF-B | 66211 | EUTF-B | 66214 | EYTF-B | 66217 | ER-B | 66121 | EU-B | 66124 | |
| 1/2 | 56C | B5 | FRTF-W | 65350 | FUTF-W | 65404 | — | — | — | — | — | — |
| 56C | B5 | FRTF-B | 66219 | FUTF-B | 66223 | FYTF-B | 66226 | FR-B | 66130 | FU-B | 66133 | |
| 3/4 | 56C | B5 | GRTF-W | 65351 | GUTF-W | 65405 | — | — | — | — | — | — |
| 56C | B5 | GRTF-B | 66228 | GUTF-B | 66231 | GYTF-B | 66831 | GR-B | 66139 | GU-B | 66142 | |
| 1 | 56C | B5 | HRTF-5/8-W | 65354 | HUTF-5/8-W | 65406 | — | — | — | — | — | — |
| | 56C | B5 | HRTF-5/8-B | 19178 | HUTF-5/8-B | 50428 | HYTF-5/8-B | 19179 | HR-5/8-B | 19183 | HU-5/8-B | 50427 |
| 1-1/2 | 143TC | B7 | — | — | HUTF-W | 65412 | — | — | — | — | HU-W | 65249 |
| | 143TC | B7 | HRTF-B | 66234 | HUTF-B | 66237 | HYTF-B | 66240 | HR-B | 66145 | HU-B | 66148 |
| 2 | 56C | B5 | — | — | JUTF-5/8-W | 65407 | — | — | — | — | — | — |
| | 56C | B5 | — | — | JUTF-5/8-B | 19784 | — | — | — | — | — | — |
| 2 | 145TC | B7 | — | — | JUTF-W | 65437 | — | — | — | — | JU-W | 65251 |
| | 145TC | B7 | JRTF-B | 66243 | JUTF-B | 66246 | JYTF-B | 66249 | JR-B | 66154 | JU-B | 66157 |
| 2 | 56C | B5 | — | — | KUTF-5/8-W | 65440 | — | — | — | — | — | — |
| | 56C | B5 | — | — | KUTF-5/8-B | 19785 | — | — | — | — | — | — |
| 2 | 145TC | B7 | — | — | KUTF-W | 65445 | — | — | — | — | KU-W | 65256 |
| | 145TC | B7 | — | — | KUTF-B | 66252 | KYTF-B | 66255 | — | — | KU-B | 66163 |
| 3 | 182TC | B9 | — | — | LUTF-W | 65446 | — | — | — | — | LU-W | 65257 |
| 3 | 182TC | B9 | — | — | LUTF-B | 66258 | LYTF-B | 66260 | — | — | LU-B | 66166 |
| 5 | 184TC | B9 | — | — | MUTF-W | 65448 | — | — | — | — | MU-W | 65258 |
| 5 | 184TC | B9 | — | — | MUTF-B | 66262 | MYTF-B | 66264 | — | — | MU-B | 66170 |
| 7-1/2 | 213TC | B11 | — | — | NUTF-B | 66266 | — | — | — | — | — | — |
| 10 | 215TC | B11 | — | — | PUTF-B | 66270 | — | — | — | — | — | — |
| 15 | 254TC | B13 | — | — | RUTF-B | 66274 | — | — | — | — | — | — |
| 20 | 256TC | B13 | — | — | SUTF-B | 66278 | — | — | — | — | — | — |

* T = TENV – Totally Enclosed, Non-ventilated.

** 115 Volt only.

TF = TEFC – Totally Enclosed, Fan Cooled.

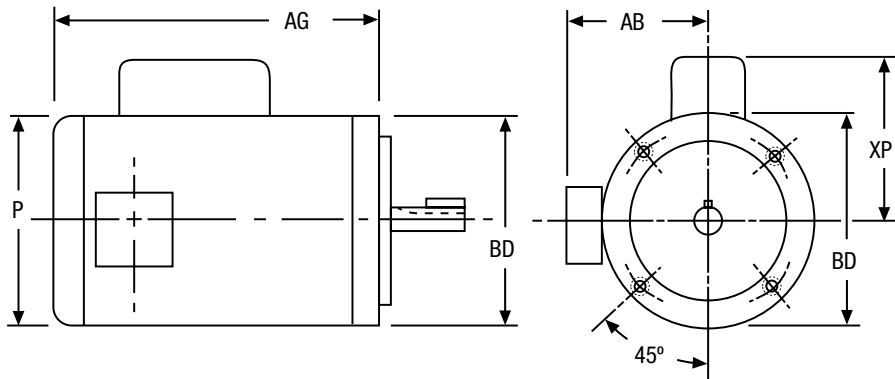
† See Page 334 for Bore Code explanation.

Letters after dash indicate manufacturer – W = WEG.; B = Baldor

FOR DIMENSIONS OF THESE MOTORS, SEE PAGES 338 AND 339
 FOR OTHER AVAILABLE MOTORS, CONSULT FACTORY OR REFER TO
 BOSTON GEAR'S COMPLETE ELECTRICAL PRODUCTS CATALOG P-1525-BG.

AC Open Dripproof Motor

Dimensions



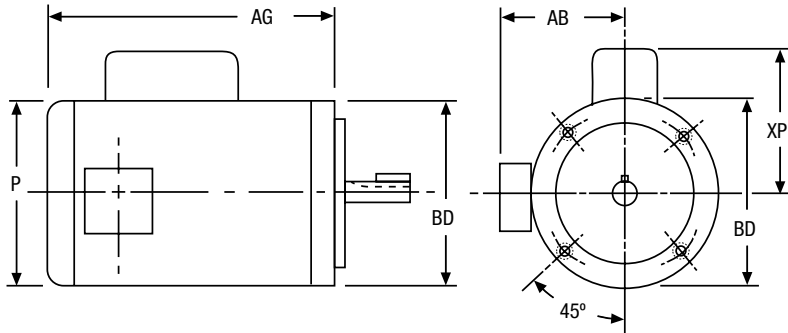
ALL DIMENSIONS IN INCHES

| HP | NEMA MTG. | BORE CODE | -B (BALDOR) MOTORS | | | | | | |
|-------|-----------|-----------|--------------------|-----------|------|-------|------|------|------|
| | | | CATALOG NUMBER | ITEM CODE | AB | AG | BD | XP | P |
| 1/20 | SPL | SPL | AST-B | 65403 | — | 6.56 | 4.51 | — | 4.62 |
| 1/12 | SPL | SPL | AAS-B | 65402 | — | 6.56 | 4.51 | — | 4.62 |
| 1/6 | 56C | B5 | CR-B | 85773 | 4.41 | 8.03 | 5.87 | 4.34 | 5.69 |
| | 56C | B5 | CU-B | 85774 | 4.41 | 8.03 | 5.87 | — | 5.69 |
| 1/4 | 56C | B5 | DR-B | 66109 | 4.41 | 8.68 | 5.87 | 4.34 | 5.69 |
| | 56C | B5 | DS-B | 66112 | 4.41 | 8.68 | 5.87 | 4.34 | 5.69 |
| | 56C | B5 | DU-B | 66115 | 4.41 | 8.68 | 5.87 | — | 5.69 |
| 1/3 | 56C | B5 | ER-B | 66121 | 4.41 | 8.68 | 5.87 | 4.34 | 5.69 |
| | 56C | B5 | EU-B | 66124 | 4.41 | 8.68 | 5.87 | — | 5.69 |
| 1/2 | 56C | B5 | FR-B | 66130 | 4.41 | 8.68 | 5.87 | 4.34 | 5.69 |
| | 56C | B5 | FU-B | 66133 | 4.41 | 8.68 | 5.87 | — | 5.69 |
| 3/4 | 56C | B5 | GR-B | 66139 | 5.62 | 10.00 | 6.50 | 5.02 | 6.62 |
| | 56C | B5 | GU-B | 66142 | 5.62 | 9.00 | 6.50 | — | 6.62 |
| 1 | 56C | B5 | HR-5/8-B | 19183 | 5.62 | 9.00 | 6.50 | 5.49 | 6.62 |
| | 56C | B5 | HU-5/8-B | 50427 | 5.62 | 9.00 | 6.50 | — | 6.62 |
| | 143TC | B7 | HR-B | 66145 | 5.09 | 9.00 | 6.50 | 5.49 | 6.62 |
| | 143TC | B7 | HU-B | 66148 | 5.12 | 9.00 | 6.50 | — | 6.62 |
| 1-1/2 | 145TC | B7 | JR-B | 66154 | 5.09 | 9.00 | 6.50 | 5.49 | 6.62 |
| | 145TC | B7 | JU-B | 66157 | 5.09 | 9.00 | 6.50 | — | 6.62 |
| 2 | 145TC | B7 | KU-B | 66163 | 5.09 | 10.00 | 6.50 | — | 6.62 |
| 3 | 182TC | B9 | LU-B | 66166 | 5.88 | 11.00 | 6.50 | — | 7.88 |

Note: See Page 334 for mounting and shaft dimensions.

AC Totally Enclosed Motor

Dimensions



ALL DIMENSIONS IN INCHES

| HP | NEMA MTG. | BORE CODE | WEG MOTORS | | | | | | | -B (BALDOR) MOTORS | | | | | | |
|-------|-----------|-----------|-------------------|-----------|------|-------|------|------|------|--------------------|-----------|------|-------|------|------|------|
| | | | CATALOG NUMBER | ITEM CODE | AB | AG | BD | XP | P | CATALOG NUMBER | ITEM CODE | AB | AG | BD | XP | P |
| 1/6 | 56C | B5 | CRTF-W | 65316 | 5.43 | 9.04 | 6.54 | 4.13 | 7.32 | CRTF-B | 85777 | 4.90 | 9.29 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | CUTF-W | 65371 | 5.43 | 9.04 | 6.54 | — | 7.32 | CUTF-B | 85778 | 4.90 | 9.29 | 5.81 | — | 5.68 |
| 1/4 | 56C | B5 | DRTF-W | 65326 | 5.43 | 9.04 | 6.54 | 4.13 | 7.32 | DRTF-B | 66199 | 5.18 | 9.29 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | — | — | — | — | — | — | — | DSTF-B | 66202 | 4.51 | 9.29 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | DUTF-W | 65380 | 5.43 | 9.04 | 6.54 | — | 7.32 | DUTF-B | 66205 | 4.51 | 9.29 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | — | — | — | — | — | — | — | DYTF-B | 66208 | 4.53 | 9.29 | 5.81 | — | 5.68 |
| 1/3 | 56C | B5 | ERTF-W | 65348 | 5.43 | 9.04 | 6.54 | 4.13 | 7.32 | ERTF-B | 66211 | 4.51 | 9.29 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | EUTF-W | 65383 | 5.43 | 9.04 | 6.54 | — | 7.32 | EUTF-B | 66214 | 4.51 | 9.29 | 5.81 | — | 5.68 |
| | 56C | B5 | EYTF-W | 65454 | 5.43 | 9.04 | 6.54 | — | 7.32 | EYTF-B | 66217 | 4.51 | 9.29 | 5.81 | — | 5.68 |
| 1/2 | 56C | B5 | FRTF-W | 65350 | 5.43 | 9.04 | 6.54 | 4.13 | 7.32 | FRTF-B | 66219 | 4.51 | 9.94 | 5.81 | 4.41 | 5.68 |
| | 56C | B5 | FUTF-W | 65404 | 5.43 | 9.04 | 6.54 | — | 7.32 | FUTF-B | 66223 | 4.51 | 9.32 | 5.81 | — | 5.68 |
| | 56C | B5 | FYTF-W | 65455 | 5.43 | 9.04 | 6.54 | — | 7.32 | FYTF-B | 66226 | 4.51 | 9.32 | 5.81 | — | 5.68 |
| 3/4 | 56C | B5 | GRTF-W | 65351 | 5.43 | 9.04 | 6.54 | 4.13 | 7.32 | GRTF-B | 66228 | 4.51 | 11.29 | 5.81 | 5.08 | 5.68 |
| | 56C | B5 | GUTF-W | 65405 | 5.43 | 9.04 | 6.54 | — | 7.32 | GUTF-B | 66231 | 4.51 | 9.32 | 5.81 | — | 5.68 |
| | 56C | B5 | GYTF-W | 65457 | 5.43 | 9.04 | 6.54 | — | 7.32 | GYTF-B | 66831 | 5.22 | 10.19 | 6.50 | — | 6.62 |
| 1 | 56C | B5 | HRTF-5/8-W | 65354 | 5.43 | 10.22 | 6.54 | — | 7.32 | HRTF-5/8-B | 19178 | 4.90 | 11.29 | 5.81 | 5.56 | 5.68 |
| | 56C | B5 | HUTF-5/8-W | 65406 | 5.43 | 10.22 | 6.54 | — | 7.32 | HUTF-5/8-B | 50428 | 5.22 | 10.82 | 6.50 | — | 5.68 |
| | 56C | B5 | — | — | — | — | — | — | — | HYTF-5/8-B | 19179 | 5.22 | 10.19 | 6.50 | — | 6.62 |
| | 143TC | B7 | — | — | — | — | — | — | — | HRTF-B | 66234 | 5.22 | 11.19 | 6.50 | 5.56 | 6.62 |
| | 143TC | B7 | HUTF-W | 65412 | 5.43 | 10.95 | 6.54 | — | 7.32 | HUTF-B | 66237 | 4.51 | 10.19 | 5.81 | — | 6.62 |
| | 143TC | B7 | — | — | — | — | — | — | — | HYTF-B | 66240 | 5.22 | 10.19 | 6.50 | — | 6.62 |
| 1-1/2 | 56C | B5 | JUTF-5/8-W | 65407 | 5.43 | 10.22 | 6.54 | — | 7.32 | JUTF-5/8-B | 19784 | 5.22 | 10.19 | 6.50 | — | 6.62 |
| | 145TC | B7 | — | — | — | — | — | — | — | JRTF-B | 66243 | 5.22 | 11.17 | 6.50 | 5.56 | 6.62 |
| | 145TC | B7 | JUTF-W | 65437 | 5.43 | 10.95 | 6.54 | — | 7.32 | JUTF-B | 66246 | 5.22 | 11.17 | 6.50 | — | 6.62 |
| | 145TC | B7 | JYTF-W | 65475 | 5.43 | 10.95 | 6.54 | — | 7.32 | JYTF-B | 66249 | 5.22 | 11.17 | 6.50 | — | 6.62 |
| 2 | 56C | B5 | KUTF-5/8-W | 65440 | 5.43 | 11.40 | 6.54 | — | 7.32 | — | — | — | — | — | — | — |
| | 145TC | B7 | KUTF-W | 65445 | 5.43 | 12.13 | 6.54 | — | 7.32 | KUTF-B | 66252 | 5.22 | 11.17 | 6.50 | — | 6.62 |
| | 145TC | B7 | — | — | — | — | — | — | — | KYTF-B | 66255 | 5.22 | 11.17 | 6.50 | — | 6.62 |
| 3 | 182TC | B9 | LUTF-W | 65446 | 6.61 | 13.24 | 8.88 | — | 8.75 | LUTF-B | 66258 | 6.00 | 13.93 | 8.86 | — | 7.88 |
| | | | — | — | — | — | — | — | — | LYTF-B | 66260 | 6.00 | 13.93 | 8.86 | — | 7.88 |
| 5 | 184TC | B9 | MUTF-W | 65448 | 6.61 | 13.24 | 8.88 | — | 8.75 | MUTF-B | 66262 | 6.00 | 15.43 | 8.86 | — | 7.88 |
| 7-1/2 | 213TC | B11 | — | — | — | — | — | — | — | NUTF-B | 66266 | 7.45 | 15.53 | 9.04 | — | 9.56 |
| 10 | 215TC | B11 | — | — | — | — | — | — | — | PUTF-B | 66270 | 7.45 | 16.67 | 9.04 | — | 9.56 |
| 15 | 254TC | B13 | — | — | — | — | — | — | — | RUTF-B | 66274 | 9.22 | 16.67 | 9.10 | — | 9.56 |

Note: See page 334 for mounting and shaft dimensions.

T = Totally-enclosed, non-ventilated.

TF = Totally-enclosed, fan cooled.

DC NEMA C-Face Motors Quick Selection Guide

Permanent Magnet Totally Enclosed 1750 RPM Motors

P

ORDER BY CATALOG NUMBER OR ITEM CODE

| HP | NEMA MTG. | BORE CODE † | CATALOG NUMBER* | ITEM CODE |
|-----|-----------|-------------|-----------------|-----------|
| 1/6 | 56C | B5 | PM916AT-B | 19120 |
| | | | PM916T | 59476 |
| 1/4 | 56C | B5 | PM925AT-B | 19121 |
| | | | PM925T | 59478 |
| 1/3 | 56C | B5 | PM933AT-B | 19122 |
| | | | PM933T | 59480 |
| 1/2 | 56C | B5 | PM950AT-B | 19123 |
| | | | PM950TF | 59481 |
| | | | PM1850TF-B | 19186 |
| | | | PM1850TF | 59482 |

* AT, T = TENV – Totally Enclosed, Non-ventilated.

TF = TEFC – Totally Enclosed, Fan Cooled.

† See Page 334 for Bore Code explanation.

PM9-90 VDC (Armature Voltage)

PM18-180 VDC (Armature Voltage)

Letters after dash indicate manufacturer – B = Baldor
Blank = Boston Gear

ORDER BY CATALOG NUMBER OR ITEM CODE

| HP | NEMA MTG. | BORE CODE † | CATALOG NUMBER* | ITEM CODE | |
|-------------|-----------|-------------|-----------------|---------------|-------|
| 3/4 | 56C | B5 | PM975TF-B | 69853 | |
| | | | PM975TF | 59483 | |
| | | | PM1875TF-B | 69866 | |
| | | | PM1875TF | 59484 | |
| 1 | 56C | B5 | PM9100TF-5/8-B | 50421 | |
| | | | PM9100TF-5/8 | 59486 | |
| | | | PM18100TF-5/8-B | 50424 | |
| | | | | PM18100TF-5/8 | 59488 |
| | 56CZ | B7 | PM9100TF-B | 69867 | |
| | | | PM9100TF | 59485 | |
| PM18100TF-B | | | 69869 | | |
| | | | PM18100TF | 59487 | |
| 1-1/2 | 56CZ | B7 | PM18150TF-B | 69870 | |
| | 140TC | B7 | PM18150TF | 59489 | |
| 2 | 56CZ | B7 | PM18200TF-B | 68783 | |
| | 140TC | B7 | PM18200TF | 59490 | |
| 3 | 184TC | B9 | PM18300TF-B | 69411 | |
| 5 | 1810ATC | B9 | PM18500TF-B | 69412 | |

ENCLOSURES—Most applications can utilize open dripproof motors; other enclosures are listed. For information purposes, the various enclosures are defined below.

OPEN, DRIPPROOF—Same as open, except the construction of motor prevents the entrance of drops of liquid or particles falling on the motor at any angle not greater than 15 degrees from vertical.

TOTALLY-ENCLOSED—A motor so constructed as to prevent free exchange of air between the inside and outside of the motor case, but not air-tight.

TOTALLY-ENCLOSED, NON-VENTILATED (TENV)—A totally-enclosed motor with openings closed and of sufficient size and mass to permit the necessary heat dissipation to eliminate the need for external cooling.

TOTALLY-ENCLOSED, FAN-COOLED (TEFC)—Basically a TENV motor which has an external fan to blow cooling air over the motor. The additional cooling eliminates the necessity of a more costly oversized TENV motor.

NOTE: TENV and TEFC construction are equal in all respects regarding application, temperature capabilities and performance.

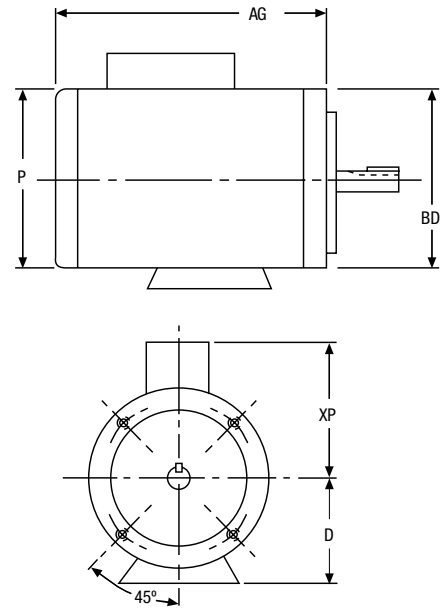
FOR DIMENSIONS OF THESE MOTORS, SEE PAGE 346.
FOR OTHER AVAILABLE MOTORS, CONSULT FACTORY.

DC Permanent Magnet Motor

Dimensions

ALL DIMENSIONS IN INCHES

| HP | NEMA MTG. | BORE CODE | CATALOG NUMBER | AG | BD | XP | P | D |
|-------|-----------|-----------|----------------|-------|------|------|------|------|
| 1/6 | 56C | B5 | PM916T | 7.13 | 6.50 | 4.47 | 4.87 | 3.50 |
| 1/4 | 56C | B5 | PM925T | 7.66 | 6.50 | 4.47 | 4.87 | 3.50 |
| 1/3 | 56C | B5 | PM933T | 8.13 | 6.50 | 4.47 | 4.87 | 3.50 |
| 1/2 | 56C | B5 | PM950TF | 9.75 | 6.50 | 4.47 | 4.87 | 3.50 |
| | 56C | B5 | PM1850TF | 9.75 | 6.50 | 4.47 | 4.87 | 3.50 |
| 3/4 | 56C | B5 | PM975TF | 12.25 | 6.50 | 4.47 | 4.87 | 3.50 |
| | 56C | B5 | PM1875TF | 11.75 | 6.50 | 4.47 | 4.87 | 3.50 |
| 1 | 56CZ | B7 | PM9100TF | 14.25 | 6.50 | 4.87 | 5.61 | 3.50 |
| | 56C | B5 | PM9100TF-5/8 | 14.25 | 6.50 | 4.87 | 5.61 | 3.50 |
| | 56CZ | B7 | PM18100TF | 13.25 | 6.50 | 4.87 | 5.61 | 3.50 |
| | 56C | B5 | PM18100TF-5/8 | 13.25 | 6.50 | 4.87 | 5.61 | 3.50 |
| 1-1/2 | 140TC | B7 | PM18150TF | 16.21 | 6.50 | 5.31 | 6.50 | 3.50 |
| 2 | 140TC | B7 | PM18200TF | 17.21 | 6.50 | 5.31 | 6.50 | 3.50 |



Note: See page 334 for mounting and shaft dimensions.

ALL DIMENSIONS IN INCHES

| HP | NEMA MTG. | BORE CODE | -B (BALDOR) MOTORS | | | | | |
|-------|-----------|-----------|--------------------|-------|------|------|------|------|
| | | | CATALOG NUMBER | AG | BD | XP | P | D |
| 1/6 | 56C | B5 | PM916AT-B | 8.25 | 6.50 | 4.56 | 4.69 | 3.50 |
| 1/4 | 56C | B5 | PM925AT-B | 9.19 | 6.50 | 4.56 | 4.69 | 3.50 |
| 1/3 | 56C | B5 | PM933AT-B | 10.13 | 6.50 | 4.56 | 4.69 | 3.50 |
| 1/2 | 56C | B5 | PM950AT-B | 11.88 | 6.50 | 4.56 | 4.69 | 3.50 |
| | 56C | B5 | PM1850TF-B | 10.56 | 6.63 | 4.00 | 4.87 | 3.50 |
| 3/4 | 56C | B5 | PM975TF-B | 11.69 | 6.63 | 4.00 | 5.81 | 3.50 |
| | 56C | B5 | PM1875TF-B | | | | | |
| 1 | 56CZ | B7 | PM9100TF-B | 12.57 | 6.63 | 4.00 | 5.81 | 3.50 |
| | 56C | B5 | PM9100TF-5/8-B | | | | | |
| | 56CZ | B7 | PM18100TF-B | | | | | |
| | 56C | B5 | PM18100TF-5/8-B | | | | | |
| 1-1/2 | 56CZ | B7 | PM18150TF-B | 15.06 | 6.63 | 4.25 | 6.50 | 3.50 |
| 2 | 56CZ | B7 | PM18200TF-B | 16.06 | 6.63 | 4.25 | 6.50 | 3.50 |
| 3 | 184TC | B9 | PM18300TF-B | 21.46 | 9.00 | 6.06 | 7.88 | 4.50 |
| 5 | 1810ATC | B9 | PM18500TF-B | 25.46 | 9.00 | 6.06 | 7.88 | 4.50 |

AC Bost-Kleen Washdown Duty Motors

P

White Bost-Kleen Motors

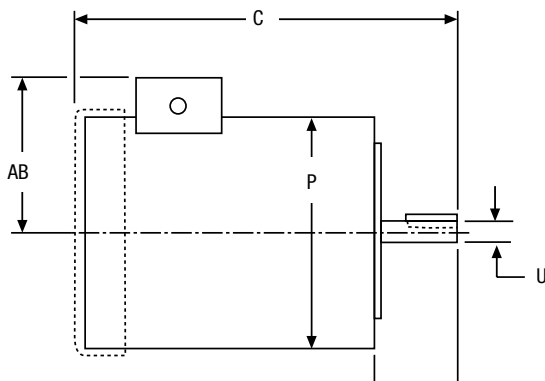
- AC Motors 1/2 - 5 HP
- DC Motors 1/4 - 3/4 HP
- Durable White Epoxy Finish
- Gasketed Thru Bolts
- Weep Holes
- NEMA C-Face Mounting
- BISSC certified



Designed for food processing and other corrosive applications where the motor is constantly exposed to an environment requiring high pressure washdown to maintain cleanliness.

| WHITE BISSC CERTIFIED MOTORS | HP | Catalog Number | Item Code | NEMA Mounting | Enclosure |
|--|-------|---------------------|-----------|---------------|-----------|
| AC MOTORS 230/460 VAC 3 PHASE 60 HZ | 1/2 | FUT-WB-B | 69105 | 56C | TENV |
| | 3/4 | GUT-WB-B | 69106 | 56C | TENV |
| | 1 | HUT-5/8-WB-B | 69123 | 56C | TENV |
| | 1 | HUT-WB-B | 69107 | 143TC | TENV |
| | 1-1/2 | JUTF-WB-B | 69110 | 145TC | TEFC |
| | 2 | KUTF-WB-B | 69111 | 145TC | TEFC |
| | 3 | LUTF-WB-B | 69112 | 182TC | TEFC |
| | 5 | MUTF-WB-B | 69113 | 184TC | TEFC |

Dimensions



| HP | Catalog Number | U +.0000 -.0005 | C | AH | P | AB |
|-------|---------------------|-----------------------|-------|------|------|------|
| 1/2 | FUT-WB-B | .6250 | 11.06 | 2.06 | 6.62 | 5.25 |
| 3/4 | GUT-WB-B | .6250 | 12.12 | 2.06 | 6.62 | 5.25 |
| 1 | HUT-5/8-WB-B | .6250 | 12.12 | 2.06 | 6.62 | 5.25 |
| 1 | HUT-WB-B | .8750 | 12.12 | 2.13 | 6.62 | 5.25 |
| 1-1/2 | JUTF-WB-B | .8750 | 13.30 | 2.13 | 6.62 | 5.25 |
| 2 | KUTF-WB-B | .8750 | 12.30 | 2.13 | 6.62 | 5.25 |
| 3 | LUTF-WB-B | 1.1250 | 16.55 | 2.63 | 7.88 | 5.88 |
| 5 | MUTF-WB-B | 1.1250 | 16.55 | 2.63 | 7.88 | 5.88 |

Double C-Face AC Brakes CMBA Series

These double C-Face Brakes are direct acting with only one moving part. They are spring set and electro-magnetically released. Movement is limited to a spring loaded pressure plate. Release is instantaneous. If power fails, the brake will immediately set and hold.



Operation

Friction discs rotate with the motor shaft and are free to move axially on the hub. When the magnet coil is de-energized, a spring loaded pressure plate (magnet armature) presses against the rotating discs. Friction force stops and holds the motor shaft.

The pressure plate retracts against torque springs by magnetic force when the magnet is energized. Friction discs are then released and free to rotate with the hub and motor shaft. A manual release is also provided.

Brake coil leads connect directly to motor leads so that power is simultaneously supplied to both brake and motor. No control equipment is required. An instruction bulletin on mounting and hookup are included with each brake.

Splined Hub

These C-Face brakes use splined hubs and internally splined friction discs as standard equipment. The spline design virtually eliminates back lash which is a delayed action effect caused by excessive clearances between hub and discs.

Splines increase disc life because the many contact points between hub and discs reduce the concentration of stresses encountered with non-splined hubs having only a few contact points.

Features

- Automatic Reset
- Compact
- Continuous Duty
- Dependable
- Full Torque Stop
- Horizontal/Vertical Mount
- Instant Magnetic Release
- One Moving Part
- Ready to Mount
- Shock Mounted Magnet
- Direct Acting
- Flange/Foot Mounting
- Splined Hub
- Standard NEMA Voltages/Frequencies
- Superior Disc Life
- Superior Thermal Capacity
- Double C-Face

ORDER BY CATALOG NUMBER OR ITEM CODE

| Torque (Lb. Ft.) | NEMA Frame | Bore Code | Mounting | Coil Voltage | | | | | |
|------------------|------------|-----------|---------------------|---------------------|-----------|--|-----------|--------------------|-----------|
| | | | | 115/230 VAC, 60 Hz | | 208-230/460 VAC, 60 Hz 190/380 VAC, 50 Hz | | 575 VAC, 60 Hz | |
| | | | | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| 3 | 56C | B5 | Horizontal/Vertical | CMBA56R-3 | 67545 | CMBA56U-3 | 67546 | CMBA56Y-3 | 67547 |
| | | B5 | Horizontal | CMBA56R-6 | 67548 | CMBA56U-6 | 67549 | CMBA56Y-6 | 67550 |
| 6 | 140TC | B7 | Horizontal | CMBA140TR-6 | 67551 | CMBA140TU-6 | 67552 | CMBA140TY-6 | 67553 |
| | | B7 | Vertical Shaft Up | CMBA140TR-6U | 67554 | CMBA140TU-6U | 67556 | — | — |
| | | B7 | Vertical Shaft Down | CMBA140TR-6D | 67555 | CMBA140TU-6D | 67557 | — | — |

ALL DIMENSIONS IN INCHES

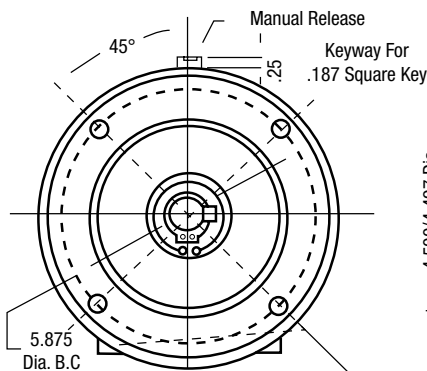
| Size | AC | C | G | X | U | Housing O.D. | Approx. Weight |
|--------|------|---------|--------|-----|-----|--------------|----------------|
| 56-3 | | | | | 5/8 | 6-7/8 | 12 Lbs. |
| 56-6 | 9/16 | 4-15/16 | 1-3/16 | 7/8 | 5/8 | | |
| 140T-6 | | | | | 7/8 | | |

PARTS (ORDER BY ITEM CODE)

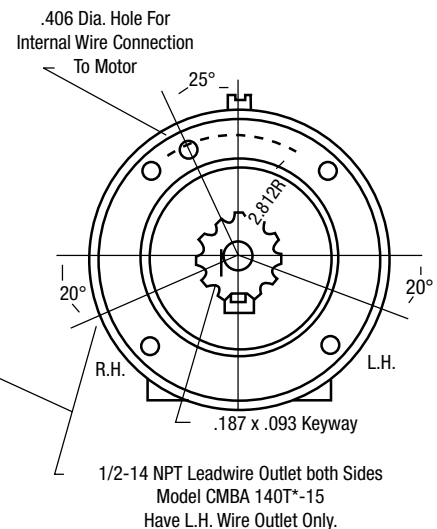
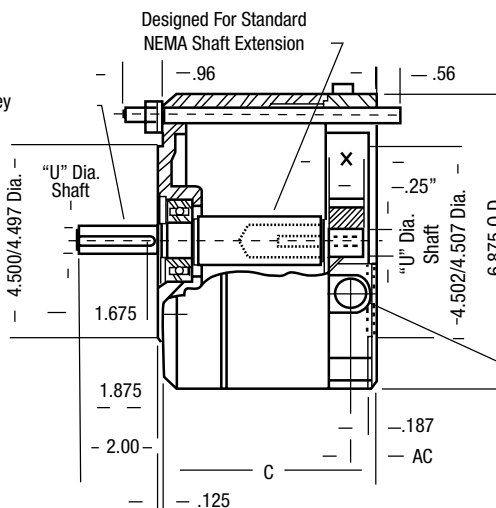
| Description | Item Code |
|--------------------------|-----------|
| Base Kit | 67561 |
| Coil-115/230 VAC 60 Hz | 67558 |
| Coil-208-200-380-440 VAC | 67559 |
| Coil-575 VAC 60 Hz | 67560 |
| Disc-Stationary | 67562 |
| Disc-Rotating | 67563 |

Dimensions

** Included In Parts Package



** (4) Mounting Holes Equally Spaced For 3/8-16 Threaded Studs, Lockwashers And Nuts







Section Contents

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| Horsepower and Torque | 347 |
| AGMA Service Factors & Load Classifications | 348-349 |
| Application Considerations | 350-352 |
| Application Formulas | 353 |

Speed Reducer Nomenclature

AXIAL MOVEMENT – Endwise movement of input or output shafts, sometimes called endplay, is usually expressed in thousands of an inch.

EFFICIENCY – The amount of output power of the reducer as compared to the amount of input power. It is usually stated as a percentage.

Example:

Input HP = 1
Output HP = .75 $(75/100) \times (100) = 75\%$ Efficiency

BACKLASH – Rotational movement of the output shaft when holding the input shaft stationary and rotating the output shaft alternately clockwise and counter clockwise. Backlash may be expressed in thousands of an inch measured at a specific radius at the output shaft.

CENTER DISTANCE – On a single reduction reducer, this is the distance between the center lines of the input and output shafts. Shaft center lines may be parallel or at right angles to one another. The center distance of multiple stage reducers usually refers to the lowest speed stage (last reduction).

THRUST LOAD – Forces imposed on a shaft parallel to the shaft axis. Such a force is called a thrust load. It is often encountered on shafts driving mixers, fans, blowers and similar machines. When a thrust load acts on a speed reducer, you must be sure that the thrust load rating of the reducer is high enough that its shafts and bearings can absorb the load.

MECHANICAL RATING – The maximum power or torque that a speed reducer can transmit, based on the strength and durability of its components, is its mechanical rating. Obviously, the reducer may be rated no higher than the strength or durability of its weakest component. Reducers typically have a safety margin of two to three on their mechanical ratings. Thus, a reducer can withstand momentary overloads of 200-300% of its mechanical rating during a startup or other brief overload situations.

THERMAL RATING – The maximum power or torque that a speed reducer can transmit continuously, based on its ability to dissipate heat generated by friction, is called its thermal rating.

PRIME MOVER – The machine that provides power to a drive is its prime mover. The most frequently encountered prime movers include electric motors, internal combustion engines, hydraulic motors and air motors. The type of prime mover used can affect the speed reducer during operation. For example, an electric motor runs relatively smoothly in comparison to an internal combustion engine.

MOUNTING POSITION – The relationship of the input and output shafts relative to the floor line.

INPUT HORSEPOWER – The amount of power applied to the input shaft of a reducer by the prime mover is its input horsepower. It is often used as a selection basis for power transmission components, and it appears in the rating tables of drive manufacturer's published data. Remember that input horsepower ratings represent the maximum amount of power that the reducer can safely handle.

OUTPUT HORSEPOWER – The amount of power available at the output shaft of a reducer is its output horsepower. Due to losses caused by inefficiency, output horsepower is always less than input horsepower.

OVERHUNG LOAD – The input or the output shaft of a speed reducer can be subject to an overhung load; that is, to a force applied at right angles to the shaft, beyond its outermost bearing. Such a force is a shaft bending load resulting from a gear, pulley, sprocket or other external drive member. Besides the tendency to bend the shaft, the overhung load (that is, the radial force on the shaft) is reacted to by the shaft in its bearings. Therefore, the overhung load creates loads that the bearings must be able to support without damage.

SERVICE FACTORS – Numbers which modify the loads which must be considered in selecting a speed reducer are called service factors. They vary with the type of service in which the reducer is to be used, the kind of prime mover involved and the duty cycle. The service factor can be a multiplier applied to the known load, which redefines the load in accordance with the conditions at which the drive will be used, or it can be a divisor applied to catalog reducer ratings, thus redefining the rating in accordance with drive conditions. The service factor is usually applied to the speed reducer, but can also be applied to the name plate rating of the prime mover.

REDUCTOR® – Boston Gear's registered trademark for a speed reducer having a projecting input shaft suitable for mounting a coupling, sprocket, pulley or gear.

FLANGED REDUCTOR – Boston Gear's name for a reductor furnished with an input flange suitable for attaching a face mounted motor.

RATIOMOTOR® – Boston Gear's registered trademark for a motorized reducer consisting of a flanged reductor and face mounted motor assembled, sometimes referred to as a gearmotor.

SELF-LOCKING ABILITY – Boston 700 Series reducers, under no conditions should be considered to hold a load when at rest.

BACK-DRIVING – This is the converse of self-locking. Depending upon ratio and many variables, it is difficult to predict the back-driving capability of a 700 Series reducer. Worm gear reducers are not intended to be used as speed increasers. Consult factory for back-driving applications.



Horsepower and Torque

POWER is the rate of doing work.

WORK is the exerting of a FORCE through a DISTANCE.

ONE FOOT POUND is a unit of WORK. It is the WORK done in exerting a FORCE OF ONE POUND through a DISTANCE OF ONE FOOT.

THE AMOUNT OF WORK done (Foot Pounds) is the FORCE (Pounds) exerted multiplied by the DISTANCE (Feet) through which the FORCE acts.

THE AMOUNT OF POWER used (Foot Pounds per Minute) is the WORK (Foot Pounds) done divided by the TIME (Minutes) required.

$$\text{POWER (Foot Pounds per Minute)} = \frac{\text{WORK (Ft. Lbs.)}}{\text{TIME (Minutes)}}$$

POWER is usually expressed in terms of HORSEPOWER.

HORSEPOWER is POWER (Foot Pounds per Minute) divided by 33,000.

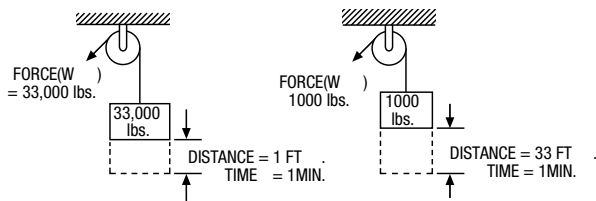
HORSEPOWER (HP)

$$= \frac{\text{POWER (Ft. Lbs. per Minute)}}{33,000}$$

$$= \frac{\text{WORK (Ft. Pounds)}}{33,000 \times \text{TIME (Min.)}}$$

$$= \frac{\text{FORCE (Lbs.)} \times \text{DISTANCE (Feet)}}{33,000 \times \text{TIME (Min.)}}$$

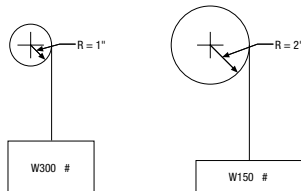
Illustration of horsepower



$$\text{HP} = \frac{33,000 \times 1}{33,000 \times 1} = 1 \text{ HP}$$

$$\text{HP} = \frac{1000 \times 33}{33,000 \times 1} = 1 \text{ HP}$$

TORQUE (T) is the product of a FORCE (W) in pounds, times a RADIUS (R) in inches from the center of shaft (Lever Arm) and is expressed in Inch Pounds.



$$T = WR \\ = 300 \times 1 = 300 \text{ In. Lbs.}$$

$$T = WR \\ = 150 \times 2 = 300 \text{ In. Lbs.}$$

If the shaft is revolved, the FORCE (W) is moved through a distance, and WORK is done.

$$\text{WORK (Ft. Lbs.)} = W \times \frac{2\pi R}{12} \times \text{No. of Rev. of shaft}$$

When WORK is done in a specified TIME, POWER is used.

$$\text{POWER (Ft. Pounds per Minute)} = W \times \frac{2\pi R}{12} \times \text{RPM}$$

Since (1) HORSEPOWER = 33,000 Ft. Pounds per Minute

$$\text{Horsepower (HP)} = W \times \frac{2\pi R}{12} \times \frac{\text{RPM}}{33,000} = \frac{W \times R \times \text{RPM}}{63,025}$$

but TORQUE (Inch Pounds) = FORCE (W) x RADIUS (R)

$$\text{Therefore HORSEPOWER (HP)} = \frac{\text{TORQUE (T)} \times \text{RPM}}{63,025}$$

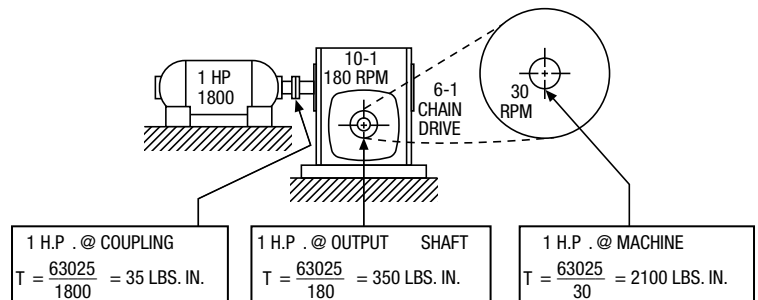
Where total reductions are small, 50 to 1 or less, HP figures are commonly used. Higher reductions require that TORQUE figures be used to select drive components, because with large reductions, a small motor can produce extremely high TORQUE at the final low speed. For example, 1/12 HP reduced to 1 RPM using the formula below and neglecting friction:

$$\text{HP} = \frac{\text{TORQUE} \times \text{RPM}}{63,025} \text{ or } \text{TORQUE} = \frac{63,025 \times \text{HP}}{\text{RPM}}$$

$$\text{TORQUE} = \frac{63,025 \times 1/12}{1} = 5,252 \text{ In. Lbs.}$$

Therefore, motors for use with large reductions should be carefully selected. Even a small motor, if stalled, can produce enough Torque to ruin the drive, unless it is protected by a shear pin or some similar device.

Neglecting frictional losses, this sketch illustrates the manner in which Torque increases as speed decreases.



Q

AGMA Service Factors and Load Classifications

Q

| Type of Machine To Be Driven | Non-Motor Reducer (Service Factors) | | Motorized Reducer (Class of Service) | |
|---|-------------------------------------|---------|--------------------------------------|---------|
| | Hours Per Day | | Hours Per Day | |
| | 3 to 10 | Over 10 | 3 to 10 | Over 10 |
| AGITATORS | | | | |
| Pure Liquid | 1.00 | 1.25 | I | II |
| Semi-Liquids, Variable Density | 1.25 | 1.50 | II | II |
| BLOWERS | | | | |
| Centrifugal and Vane | 1.00 | 1.25 | — | — |
| Lobe | 1.25 | 1.50 | — | — |
| BREWING AND DISTILLING | | | | |
| Bottling Machinery | 1.00 | 1.25 | I | II |
| Brew Kettles - Continuous Duty | — | 1.25 | — | II |
| Cookers - Continuous Duty | — | 1.25 | — | II |
| Mash Tubs - Continuous Duty | — | 1.25 | — | II |
| Scale Hopper - Frequent Starts | 1.25 | 1.50 | II | II |
| CAN FILLING MACHINES | | | | |
| Can Knives | 1.50 | — | — | — |
| Car Dumpers | 1.75 | — | III | — |
| Car Pullers | 1.25 | — | * | — |
| Clarifiers | 1.00 | 1.25 | I | II |
| Classifiers | 1.25 | 1.50 | II | II |
| CLAY WORKING MACHINERY | | | | |
| Brick Press & Briquette Machine | 1.75 | 2.00 | III | III |
| Extruders and Mixers | 1.25 | 1.50 | II | III |
| COMPRESSORS | | | | |
| Centrifugal | 1.00 | 1.25 | — | — |
| Lobe - Reciprocating, Multi-Cycle | 1.25 | 1.50 | — | — |
| Reciprocating - Single Cycle | 1.75 | 2.00 | — | — |
| CONVEYORS - UNIFORMLY LOADED & FED | | | | |
| Apron | 1.00 | 1.25 | II | III |
| Assembly Belt - Bucket or Pan | 1.00 | 1.25 | II | II |
| Chain - Flight | 1.00 | 1.25 | II | II |
| Oven - Live Roll - Screw | 1.00 | 1.25 | I | II |
| CONVEYORS - HEAVY DUTY NOT UNIFORMLY FED | | | | |
| Apron | 1.25 | 1.50 | II | III |
| Assembly Belt - Bucket or Pan | 1.25 | 1.50 | II | II |
| Chain - Flight | 1.25 | 1.50 | II | II |
| Live Roll | — | — | * | * |
| Oven - Screw | 1.25 | 1.50 | I | II |
| Reciprocating - Shaker | 1.75 | 2.00 | III | III |
| CRANES AND HOISTS | | | | |
| Main Hoists | 1.00 | 1.25 | I | II |
| Bridge and Trolley Drive | * | * | II | II |
| CRUSHER | | | | |
| Ore, Stone | 1.75 | 2.00 | — | — |
| Sugar | 1.50 | 1.50 | — | — |
| ELEVATORS | | | | |
| Bucket - Uniform Load | 1.00 | 1.25 | I | II |
| Bucket - Heavy Load | 1.25 | 1.50 | II | III |
| Centrifugal Discharge | 1.25 | 1.50 | I | II |
| Freight | 1.25 | 1.50 | II | II |
| Gravity Discharge | 1.00 | 1.25 | I | II |
| FANS | | | | |
| Centrifugal - Light (Small Dia.) | 1.00 | 1.25 | — | — |
| Large Industrial | 1.25 | 1.50 | — | — |

*Consult Manufacturer.

| Type of Machine To Be Driven | Non-Motor Reducer (Service Factors) | | Motorized Reducer (Class of Service) | |
|---|-------------------------------------|---------|--------------------------------------|---------|
| | Hours Per Day | | Hours Per Day | |
| | 3 to 10 | Over 10 | 3 to 10 | Over 10 |
| FEEDERS | | | | |
| Apron - Belt - Screw | 1.25 | 1.50 | — | — |
| Disc | 1.00 | 1.25 | — | — |
| Reciprocating | 1.75 | 2.00 | — | — |
| FOOD INDUSTRY | | | | |
| Beet Slicer | 1.25 | 1.50 | II | II |
| Bottling, Can Filling Machines | 1.00 | 1.25 | — | — |
| Cereal Cooker | 1.00 | 1.25 | I | II |
| Dough Mixer - Meat Grinder | 1.25 | 1.50 | II | II |
| Generators (Not Welding) | 1.00 | 1.25 | — | — |
| Hammer Mills | 1.75 | 2.00 | — | — |
| Slicers | 1.00 | 1.25 | — | — |
| HOISTS | | | | |
| Heavy Duty | 1.75 | 2.00 | — | — |
| Medium Duty and Skip Type | 1.25 | 1.50 | — | — |
| Laundry Tumblers | 1.25 | 1.50 | II | III |
| LINE SHAFTS | | | | |
| Uniform Load | 1.00 | 1.25 | I | II |
| Heavy Load | 1.25 | 1.50 | II | II |
| MACHINE TOOLS | | | | |
| Auxiliary Drive | 1.00 | 1.25 | I | II |
| Main Drive - Uniform Load | 1.25 | 1.50 | II | II |
| Main Drive - Heavy Duty | 1.75 | 2.00 | III | III |
| METAL MILLS | | | | |
| Draw Bench Carriers & Main Drive | 1.25 | 1.50 | — | — |
| Slitters | 1.25 | 1.50 | — | — |
| TABLE CONVEYORS - NON REVERSING | | | | |
| Group Drives | 1.25 | 1.50 | II | III |
| Individual Drives | 1.75 | 2.00 | III | III |
| Wire Drawing, Flattening or Winding | 1.25 | 1.50 | II | III |
| MILLS ROTARY TYPE BALL & ROD | | | | |
| Spur Ring Gear and Direct Connected | — | 2.00 | — | — |
| Cement Kilns, Pebble | — | 1.50 | — | — |
| Dryers and Coolers | — | 1.50 | — | — |
| Plain and Wedge Bar | — | 1.50 | — | — |
| Tumbling Barrels | — | 2.00 | — | — |
| MIXERS | | | | |
| Concrete - Continuous | 1.25 | 1.50 | II | III |
| Concrete - Intermittent | 1.25 | 1.50 | II | — |
| Constant Density | 1.00 | 1.25 | I | II |
| Semi-Liquid | 1.25 | 1.50 | II | II |
| OIL INDUSTRY | | | | |
| Oil Well Pumping | — | * | — | — |
| Chillers, Paraffin Filter | 1.25 | 1.50 | — | — |
| Press Rotary Kilns | 1.25 | 1.50 | — | — |
| PAPER MILLS | | | | |
| Agitator (Mixer) | 1.25 | 1.50 | II | II |
| Agitator - Pure Liquids | 1.00 | 1.25 | — | — |
| Barking Drums - Mechanical Barkers | 1.75 | 2.00 | — | — |
| Bleacher | 1.00 | 1.25 | I | II |
| Beater | 1.25 | 1.50 | — | — |
| Calendar - Heavy Duty | — | 2.00 | — | — |

AGMA Service Factors and Load Classifications

| Type of Machine To Be Driven | Non-Motor Reducer (Service Factors) | | Motorized Reducer (Class of Service) | |
|--|-------------------------------------|---------|--------------------------------------|---------|
| | Hours Per Day | | Hours Per Day | |
| | 3 to 10 | Over 10 | 3 to 10 | Over 10 |
| PAPER MILLS (Continued) | | | | |
| Calendar - Anti-Friction Bearings | 1.00 | 1.25 | — | II |
| Cylinders | 1.25 | 1.50 | — | II |
| Chipper | — | 2.00 | — | III |
| Chip Feeder | 1.25 | 1.50 | — | — |
| Coating Rolls - Couch Rolls | 1.00 | 1.25 | — | — |
| Conveyors - Chips - Bark - Chemical | 1.00 | 1.25 | — | — |
| Conveyors - Log and Slab | — | 2.00 | — | — |
| Cutter | — | 2.00 | — | — |
| Cylinder Molds, Dryers - Anti-Friction | — | 1.25 | — | — |
| Felt Stretcher | 1.25 | 1.50 | — | II |
| Screens - Chip and Rotary | 1.25 | 1.50 | — | — |
| Thickener (AC) | 1.25 | 1.50 | — | — |
| Washer (AC) | 1.25 | 1.50 | — | — |
| Winder - Surface Type | — | 1.25 | — | II |
| PLASTICS INDUSTRY | | | | |
| Intensive Internal Mixers | | | | |
| Batch Type | — | 1.75 | — | — |
| Continuous Type | — | 1.50 | — | — |
| Batch Drop Mill - 2 Rolls | — | 1.25 | — | — |
| Compounding Mills | — | 1.25 | — | — |
| Calendars | — | 1.50 | — | — |
| Extruder - Variable Speed | — | 1.50 | — | — |
| Extruder - Fixed Speed | — | 1.75 | — | — |
| PULLERS | | | | |
| Barge Haul | — | 2.00 | — | — |
| PUMPS | | | | |
| Centrifugal | — | 1.25 | — | — |
| Proportioning | — | 1.50 | * | * |
| Reciprocating | | | | |
| Single Acting, 3 or More Cycles | 1.25 | 1.50 | II | III |
| Double Acting, 2 or More Cycles | 1.25 | 1.50 | II | III |
| Rotary - Gear or Lube | 1.00 | 1.25 | I | II |
| RUBBER INDUSTRY | | | | |
| Batch Mixers | — | 1.75 | — | — |
| Continuous Mixers | — | 1.50 | — | — |

*Consult Manufacturer.

| Type of Machine To Be Driven | Non-Motor Reducer (Service Factors) | | Motorized Reducer (Class of Service) | |
|------------------------------------|-------------------------------------|---------|--------------------------------------|---------|
| | Hours Per Day | | Hours Per Day | |
| | 3 to 10 | Over 10 | 3 to 10 | Over 10 |
| RUBBER INDUSTRY (Continued) | | | | |
| Continuous Mixers | — | 1.50 | — | — |
| Calendars | — | 1.50 | — | — |
| Extruders - Continuous | — | 1.50 | — | — |
| Extruders - Intermittent | — | 1.75 | — | — |
| Tire Building Machines | — | — | II | II |
| Tire and Tube Press Operators | — | — | I | I |
| SEWAGE DISPOSAL EQUIPMENT | | | | |
| Bar Screens | 1.00 | 1.25 | I | II |
| Chemical Feeders | 1.00 | 1.25 | I | II |
| Collectors | 1.00 | 1.25 | I | II |
| Dewatering Screws | 1.25 | 1.50 | II | II |
| Scum Breakers | 1.25 | 1.50 | II | II |
| Slow or Rapid Mixers | 1.25 | 1.50 | II | II |
| Thickeners | 1.25 | 1.50 | II | II |
| Vacuum Filters | 1.25 | 1.50 | II | II |
| SCREENS | | | | |
| Air Washing | 1.00 | 1.25 | I | II |
| Rotary - Stone or Gravel | 1.25 | 1.50 | II | II |
| Traveling Water Intake | 1.00 | 1.25 | I | II |
| Skip Hoists | — | — | II | — |
| Slab Pushers | 1.25 | 1.50 | — | — |
| Stokers | — | 1.25 | — | II |
| TEXTILE INDUSTRY | | | | |
| Batchers or Calendars | 1.25 | 1.50 | II | II |
| Cards | 1.25 | 1.50 | I | II |
| Card Machines | 1.75 | 2.00 | III | III |
| Dry Cans and Dryers | 1.25 | 1.50 | II | II |
| Dyeing Machines | 1.25 | 1.50 | II | II |
| Looms | 1.25 | 1.50 | * | * |
| Mangles, Nappers and Pads | 1.25 | 1.50 | II | II |
| Soapers, Tenner Frames | 1.25 | 1.50 | II | II |
| Spinners, Washers, Winders | 1.25 | 1.50 | II | II |
| Tumbling Barrels | 1.75 | 2.00 | III | III |
| Windlass | 1.25 | 1.50 | II | III |



This list is not all-inclusive and each application should be checked to determine if any unusual operating conditions will be encountered.

SERVICE FACTOR CHART

| AGMA Class of Service | Service Factor | Operating Conditions |
|-----------------------|----------------|---|
| I | 1.00 | Moderate Shock - not more than 15 minutes in 2 hours. Uniform Load - not more than 10 hours per day. |
| II | 1.25 | Moderate Shock - not more than 10 hours per day. Uniform Load - more than 10 hours per day. |
| | 1.50 | Heavy Shock - not more than 15 minutes in 2 hours. Moderate Shock - more than 10 hours per day. |
| III | 1.75 | Heavy Shock - not more than 10 hours per day. |
| | 2.00 | Heavy Shock - more than 10 hours per day. |

Application Considerations

For most applications, select for running torque rather than starting torque. The AC motor will normally produce a 200 percent starting torque. The speed reducer is built to take at least 200% momentary overload to overcome normal starting inertia. The difference in the resulting cost can be startling.

A 20% safety factor in selection can double the life ... of the speed reducer for more economy in the long run. This rule of thumb will help compensate for unexpected shock and vibration, and add substantially to wear life.

Consider “auxiliary drives” whenever possible for economy. A properly selected gear or chain drive reduction from the reducer output to the driven shaft can produce substantial savings in space and drive cost.

Avoid auxiliary drives to the input shaft ... unless absolutely necessary. Auxiliary reduction from the motor to the input shaft can increase the size and cost of the drive.

Hoists

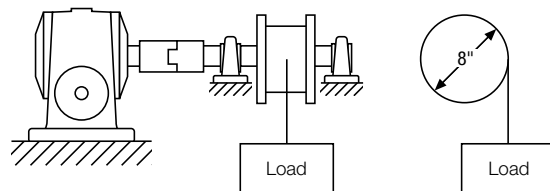
Worm gear reducers are ideal for many hoist applications. There are, however, certain precautions which should be exercised with what are thought to be self-locking characteristics of this reducer type.

A worm gear is generally said to be self-locking or irreversible when the gear cannot drive the worm – when the lead angle of the worm is less than the friction angle and hence, reverse drive efficiency is zero. This static condition can be upset by vibrations from nearby machinery or other sources. Many worm gear reducers are not self-locking, and even a particular size and ratio, which may appear to be, cannot be depended upon for this purpose. Also, a reducer which holds the load when upward movement is stopped may not when the load inertia is moving downward and the motor is stopped. For complete locking assurance, it is recommended that a fail-safe brake be used for such an application.

Finding the required torque and drum RPM...

$$\text{Torque (Lb. Ins.)} = (\text{Load}) \times (\text{Drum Radius})$$

$$\text{RPM} = (\text{Velocity}) \div .2618 \times (\text{Drum Dia.})$$



Belt Conveyors

Belt conveyor applications are one of those wherein the speed reducer is commonly overspecified. Proper application can, in many instances, result in substantial system economies.

To determine the torque required here, first determine the belt pull, since this is the principal force. In calculating this, the effects of sliding friction and/or angle or inclination must be considered. Table 1 shows Application Factors which may be used in determining belt pull based upon common combinations of materials and various angles.

TABLE 1. CONVEYOR APPLICATION FACTORS

| Material Combinations | Angle From The Horizontal | | | | | | | | | |
|---------------------------|---------------------------|-----|-----|-----|------|------|------|------|------|------|
| | 0° | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| Pivoting bucket conveyor | .025 | .19 | .36 | .52 | .66 | .78 | .88 | .95 | .99 | 1.00 |
| Belt on rollers | .025 | .19 | .36 | .52 | .66 | .78 | .88 | .95 | .99 | 1.00 |
| Metal on metal (finished) | .20 | .37 | .53 | .67 | .80 | .89 | .97 | 1.01 | 1.02 | 1.00 |
| Fabric on steel | .27 | .44 | .60 | .74 | .85 | .94 | 1.00 | 1.03 | 1.03 | 1.00 |
| Fabric on wood | .32 | .49 | .63 | .77 | .88 | .97 | 1.02 | 1.04 | 1.04 | 1.00 |
| Leather on wood | .35 | .52 | .67 | .80 | .91 | .99 | 1.04 | 1.06 | 1.05 | 1.00 |
| Wood on wood | .35 | .52 | .67 | .80 | .91 | .99 | 1.04 | 1.06 | 1.05 | 1.00 |
| Plastic on steel | .35 | .52 | .67 | .80 | .91 | .99 | 1.04 | 1.06 | 1.05 | 1.00 |
| Metal on wood | .40 | .57 | .72 | .85 | .95 | 1.02 | 1.07 | 1.08 | 1.05 | 1.00 |
| Rubber on wood | .45 | .62 | .76 | .89 | .99 | 1.05 | 1.09 | 1.09 | 1.06 | 1.00 |
| Rubber on steel | .50 | .67 | .81 | .93 | 1.03 | 1.09 | 1.12 | 1.11 | 1.07 | 1.00 |
| Leather on metal | .56 | .72 | .87 | .98 | 1.06 | 1.12 | 1.14 | 1.13 | 1.08 | 1.00 |

Interpolation in the table above is permissible.

The procedure involves selection of the proper Application Factor for the calculations:

$$\text{Belt Pull} = (\text{Total weight on conveyor}) \times (\text{Application Factor})$$

$$\text{Torque} = (\text{Belt Pull}) \times (\text{Radius of Head Pulley})$$

Example:

An inclined belt conveyor is to carry cases of canned fruit. The belt is leather on a wood conveyor bed. Ten cases will be on the conveyor at a time, and each weighs 30 Lbs. The conveyor is inclined at 20° to the horizontal, and the head pulley diameter is 9”.

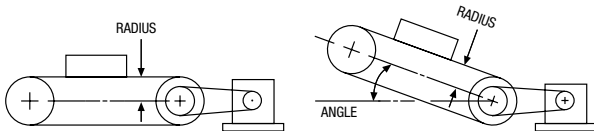
How much torque is required at the head pulley?

Select .67 as the Application Factor (Table 1)

Determine weight: 10 x 30 = 300 Lbs.

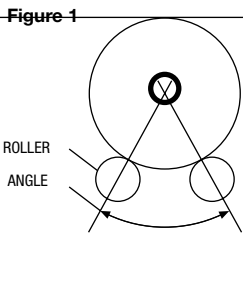
Determine belt pull: 300 x .67 = 201 Lbs.

Determine Torque: 201 x 9/2 = 201 x 4.5
= 904 Lb. Ins.



Cylinders

These applications deal principally with rotation of weight about a horizontal centerline. Again, they are commonly subject to reducer overspecification. The table of Rolling Friction Factors in the section on turntables may be used, since the supporting members will be essentially the same.



For **Roller Supported** cylinders (Figure 1), the torque required will depend on the rolling friction factor and the angle between the rollers, in addition to the weight. Assuming that the load in the cylinder is non-solid and tends to remain essentially central (or balanced). The Table below lists angle factors to be used in the calculations.

Table 2. Angle Factors For Roller Supported Cylinders

| Angle | 0° | 20° | 40° | 50° | 60° | 70° | 80° | 90° |
|--------------|------|------|------|------|------|------|------|------|
| Angle Factor | 1.00 | 1.02 | 1.06 | 1.10 | 1.15 | 1.22 | 1.31 | 1.41 |

The friction force acts at the point of contact between the rollers and the cylinder, and will be:

$$\text{Friction Force} = (\text{Weight}) \times (\text{Friction Factor}) \times (\text{Angle Factor})$$

Assuming the cylinder is to be driven by one of the rollers:

$$\text{Torque} = (\text{Friction Force}) \times (\text{Radius of Roller})$$

Example:

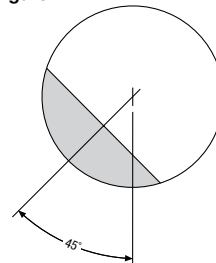
A 1200 Lb. steel cylinder is resting on two pairs of steel rollers which are 4” in diameter. The cylinder is empty. The angle between rollers is 50°. How much torque is required at the roller to turn the cylinder?

Select 1.10 as Angle Factor (Table 2), and .025 as Rolling Friction Factor (Table 3).

Determine Friction Force: 1200 x .025 x 1.10 = 33 Lbs.

Determine Torque: 33 x 2 = 66 Lb. Ins.

Figure 2



Horizontal Axis Supported cylinders (Figure 2), with unbalanced loads require a different approach. Assuming that the cylinder is not full, and that the material is rotated to a position about 45° from the vertical, the torque is equal to the Material Weight x “Effective Radius”.

$$\begin{aligned} \text{Effective Radius} &= \text{Cylinder Diameter (D)} \times 0.23 \text{ (1/4 full)} \\ &0.15 \text{ (1/2 full)} \\ &0.08 \text{ (3/4 full)} \end{aligned}$$

Example:

An axis supported cylinder is 3 Ft. in diameter and is half full of semi-solids mixture weighing 400 Lbs. How much torque is required (at the axis) to rotate the cylinder?

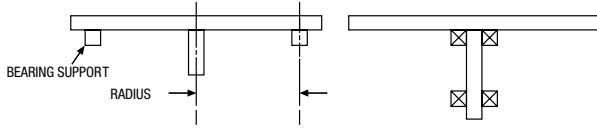
Determine the Effective Radius: .15 x (3 x 12) = 5.4 In.

Calculate Torque: 400 x 5.4 = 2160 Lb. Ins.



Application Considerations

Turntables



Here, too, turntable applications appear to lend themselves to overspecification of the speed reducer.

This type of problem involves rotation of weight in a horizontal plane, and in most cases the torque must only overcome the friction between the turntable and its supporting bearings. Assuming that the speed of rotation will be slow, the bearing loads caused by centrifugal forces (resulting from eccentric loading) may be ignored. Since in most applications, the turntable is supported by anti-friction bearings or rollers, a Table of Rolling Friction Factors is provided to be used in the following calculations.

Table 3. Rolling friction factors

| | |
|-------------------------|-------|
| Radial Ball Bearings | .001 |
| Roller Bearings | .0015 |
| Thrust Ball Bearings | .0034 |
| Steel Wheels on Steel | .025 |
| Iron Rollers on Wood | .13 |
| Iron Rollers on Asphalt | .14 |

In rim supported turntables, a friction factor should be selected on the basis of the type of supporting bearings. The load on the bearings will be the sum of the weight of the turntable itself plus the load; the friction force at the bearings is the product of the total weight and the friction factor.

$$\text{Force} = (\text{Total Weight} \times \text{Friction Factor})$$

$$\text{Torque} = (\text{Force}) \times (\text{Radius})$$

Example:

A turntable 20 feet in diameter is to rotate a 4500 Lb. automobile. A ring of steel casters (riding on steel) supports the turntable, the casters are located at a radius of 8 feet. The turntable weights 1500 Lbs. How much torque is required to drive the turntable at the axis?

Select .025 as Rolling Friction Factor (Table 3).

Determine weight: $4500 + 1500 = 6000$ Lbs.

Determine Friction Force: $6000 \times .025 = 150$ Lbs.

Determine Torque: $150 \times (8 \times 12) = 14,400$ Lb. Ins.

Center supported turntables do not lend themselves well to calculation because the bearings are on the supporting shaft. The scale measurement of the torque will provide the most accurate value. If this is not possible, the mean radius of the bearing may be used in the above formulas with some degree of accuracy.

Q

| TO OBTAIN | HAVING | FORMULA |
|--|--|---|
| Velocity (V) Feet Per Minute | Pitch Diameter (D) of Gear or Sprocket - Inches and Revolutions Per Minute (RPM) | $V = .2618 \times D \times \text{RPM}$ |
| Revolutions Per Minute (RPM) | Velocity (V) Feet Per Minute and Pitch Diameter (D) of Gear or Sprocket - Inches | $\text{RPM} = \frac{V}{.2618 \times D}$ |
| Pitch Diameter (D) of Gear or Sprocket | Velocity (V) Feet Per Minute and Revolutions Per Minute (RPM) | $D = \frac{V}{.2618 \times \text{RPM}}$ |
| Torque (T) In. Lbs. | Force (W) Lbs. and Radius (R) Inches | $T = W \times R$ |
| Horsepower (HP) | Force (W) Lbs. and Velocity (V) Feet Per Minute | $\text{HP} = \frac{W \times V}{33000}$ |
| Horsepower (HP) | Torque (T) In. Lbs. and Revolutions Per Minute (RPM) | $\text{HP} = \frac{T \times \text{RPM}}{63025}$ |
| Torque (T) | Horsepower (HP) and Revolutions Per Minute (RPM) | $T = \frac{63025 \times \text{HP}}{\text{RPM}}$ |
| Force (W) Lbs. | Horsepower (HP) and Velocity (V) Feet Per Minute | $W = \frac{33000 \times \text{HP}}{V}$ |
| Revolutions Per Minute (RPM) | Horsepower (HP) and Torque (T) In. Lbs. | $\text{RPM} = \frac{63025 \times \text{HP}}{T}$ |

Terms and Conditions

All Quotations And Sales By Boston Gear, The Contracting Party Hereto, A Division Of Altra Industrial Motion. Hereafter Called "Company" Are Made On The Following Terms And Conditions.

1. Quotations and Their Acceptance

Unless otherwise specified, quotations on stock products are for immediate acceptance, subject to prior sales. Quotations on special products are made subject to acceptance within sixty (60) days from date thereof, but in making such quotations, the Company reserves the right to change or cancel them at any time prior to the receipt of the customers' written acceptance. All quotations for special products are based upon supplying up to plus or minus 5% of quantity ordered unless otherwise stated in the quotation. All quotations are made F.O.B. shipping point.

2. Prices

Prices are in accordance with current Company price lists, are based on quantity specified and are subject to minimum order requirements of the Company. In the event the Company consents to the cancellation or suspension of orders, it shall be entitled to charge for work done and material ordered or used up to the time of giving its written consent to such cancellation or suspension. When work is to be done on material furnished by the customer, prices are based on the quantity specified being delivered by the customer at one time within a reasonable time after acceptance of order. Quotations will be made on special products of all types or on cutting only. Prices, specifications, and terms and conditions, as well as all statements appearing in the Company's catalogs and advertisements, and made elsewhere by the Company are subject to change without notice. Changes by the customer in specifications or delivery requirements will be subject to change in price. Whenever the net price of an order amounts to less than \$25.00, a minimum charge of \$25.00 will be made.

3. Credit Terms

To those customer and prospective customers whose credit is satisfactory to the Company, terms are net thirty (30) days, from date of invoice, with the option of paying semi-monthly. The Company may at any time when, in its opinion, the financial condition of the customer or prospective customer warrants it, either alter or suspend credit, or discontinue deliveries, and render a charge covering the value of any partially finished special products which are then being manufactured for the customer. In those instances where credit is not established, and in cases where satisfactory references are not given, the terms are cash with order. For special products in those instances where credit is not established to the satisfaction of the Company, a deposit of at least 50% of total value of the order is required. Remittances should be made by check or money order, payable to the Boston Gear, P.O. Box 521 South Beloit, IL 61080, U.S.A. Delays in transportation shall not exceed the terms of payment.

4. Material Furnished by The Customer

Unless otherwise specified, quotations are based on material furnished by the customer being of ordinary hardness, normal allowance for finish, uniform specification, and machine work being of ordinary commercial accuracy. If material furnished by the customer involves the Company in expense not contemplated by the contract, the customer will be charged for all such additional expense. If serious defects are found in the material furnished by the customer, the customer will be charged for the actual work done. The Company assumes no responsibility for, and will not be liable for loss of or damage to samples, blueprints, diagrams, and other material of any nature submitted or furnished by the customer or prospective customer, provided the Company has exercised reasonable care in the handling of the same. The Company does not assume transportation and insurance costs on any of the foregoing items. In all cases where the customer or prospective customer makes no statement in writing, concerning the disposition of any of the foregoing material when submitted, the Company reserves the right to dispose of such material according to its best judgement.

5. Dimensions

When dimensions of rims, bores, and hubs are not clearly specified, quotations are based on ordinary dimensions. Before the customer's blanks are accepted by the Company for cutting, the diameter, holes, rims, and ends of holes must be finished; for bevel gears, hubs, must be of uniform length. There should also be an allowance of extra blanks to cover possible spoilage. Unless otherwise specified, dimensions are in inches.

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6. Samples

In no case are samples furnished free. If agreed to by the Company, a few products in advance of a regular quantity order will be furnished but only at an agreed upon price over the regular quantity price.

7. Taxes

If any tax is at any time levied or imposed by the federal or any state or local government, or any other taxing authority, upon the products covered hereby, or in respect of the production, processing, manufacture, storage, sale, use, or consumption thereof, or, in the case of goods delivered at the Company's expense, upon the transportation thereof, including freight charges thereon, the amount of such tax shall be added to the purchase price above specified and shall be borne by the customer. The Company will accept a valid exemption certificate from the customer if applicable; however, if any exemption certificate previously accepted is not recognized by the taxing authority involved and the Company is required to pay the tax covered by such exemption certificate, the customer shall be required to promptly reimburse the Company for the taxes so paid.

8. Shipments

All shipments are made F.O.B. shipping point (subject to freight allowance under conditions stated in separate price schedules). When ordering, the customer's desired method of shipment must be clearly stated. Where instructions for shipping do not appear on the order, shipment will be made according to the Company's best judgment. Full risk of loss (including transportation delays and losses) shall pass the customer upon delivery of the products to F.O.B. point. Unless otherwise instructed, all Parcel Post shipments are insured at the customers' expense. Parcel Post shipments without insurance are at the customer's risk. Deliveries by Messenger Service to a terminal are made at the customer's risk and expense. Partial shipments shall be permitted and the Company may invoice each shipment separately.

9. Refusal of Shipment

In case of the refusal or inability of the customer to accept any shipment in accordance with the terms of the order, the customer shall be liable for freight, express, storage, extra cost of handling and all other expenses incurred by the Company as a result of such refusal or inability.

10. Delay or Nonperformance

The Company shall not be liable for any delay or loss of any nature or failure in performance due to or caused by fire, flood, strike, or other differences with workmen, accidents, labor or material or transportation shortages, war (declared or undeclared), insurrection, riot, or by any governmental orders or regulations, legal interferences or prohibitions, defaults on the part of suppliers or other causes beyond the Company's reasonable control.

11. Claims and Rejected Material

Any products which have been altered or damaged are not returnable except with the Company's written consent. To reject products on inspection as defective, customer must notify the Company in writing within ten (10) days from receipt of the products. Before allowing or rejecting claim, the Company shall then have the option of reinspection at the customer's plant or its own. Defects that do not impair service shall not be a cause for rejection. The Company shall have the right to replace within a reasonable time any product or products which in its opinion do not conform to the order. No claim will be allowed for any products damaged by the customer or damaged in transit. Expenses incurred in connection with claims for which the Company is not liable, will be charged to the customer. The Company will not be responsible for any work done to correct errors unless such work is authorized by the written consent of the Company. The Company assumes no liability for any claim for infringement of any foreign or domestic patent.

12. Limited Warranty

The Company warrants that products manufactured or sold by it shall be free from defects in material and workmanship. Any products which shall within two (2) years of delivery, be proved to the Company's satisfaction to have been defective at the time of delivery in these respects will be replaced or repaired by the Company at its option. Freight is the responsibility of the customer. The Company's liability under this limited warranty is limited to such replacement or repair and it shall not be held liable in any form of action for direct or consequential damages to property or person. THE FOREGOING LIMITED WARRANTY IS EXPRESSLY MADE IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY AND INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.

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13. Waiver of Breach

No waiver by the Company of any breach of these provisions shall constitute a waiver of any other breach.

14. Consequential Damages

The Company shall not be liable to the customer or others claiming through the customer for special or consequential charges for any reason whatsoever.

15. Laws

To the best of the Company's knowledge and belief it is in compliance with all local, state and federal laws. All orders are subject to the condition that the Company's obligation under such local, state and federal laws and Executive Orders, Rules and Regulations issued thereunder, whether now in force or hereafter made effective, shall be no greater as a result of this agreement and no greater than required by such laws and the Company expressly disclaims assumptions of any of the customer's obligations under such laws.

16. General

Any terms and conditions of a customer's order which are inconsistent with or additional to the terms and conditions hereof shall not be binding on the Company and shall not be considered applicable to any sale or shipment of the Company's products. All such terms and conditions are hereby expressly rejected. No waiver, alteration or modification of any of the Company's terms and conditions shall be binding on the Company unless made in writing and agreed to by a duly authorized official of the Company.

17. Printers, Stenographic, and Clerical Errors

The Company is not responsible for printers' errors made in any of its publications and other forms of printed matter, or for any stenographic and clerical errors. All such errors are subject to correction.

18. Reducer Express

- Quantities of reducers covered as part of this program are a maximum of:
6 pieces for any 710-726 or 221-231 and 832-843
2 pieces for any 730-760 or 239-247 and 852-873
- Bost-Kleen, Stainless Bost-Kleen and modified reducers are not included as part of this program.
- Boston Gear will utilize any major courier to handle air shipments.
- Consult Boston Gear for details.

19. Guaranteed Same Day Shipment

- Products must be available from stock.
- Does not apply to WOG or scheduled release shipments.
- Same day shipment available Monday through Friday excluding U.S. holidays. For emergency service, please call 704-688-7350.
- In the event your freight carrier is unable to meet your requirements, we reserve the right to substitute a carrier of equivalent quality.
- If a shipment is missed and Boston Gear pays the freight, we'll pay for the freight charges as they were originally specified on the order.
- Brokerage and export fees still apply to shipments outside the U.S.
- Video Terminal Orders entered up to 8 p.m. Eastern Time will be shipped the same day.

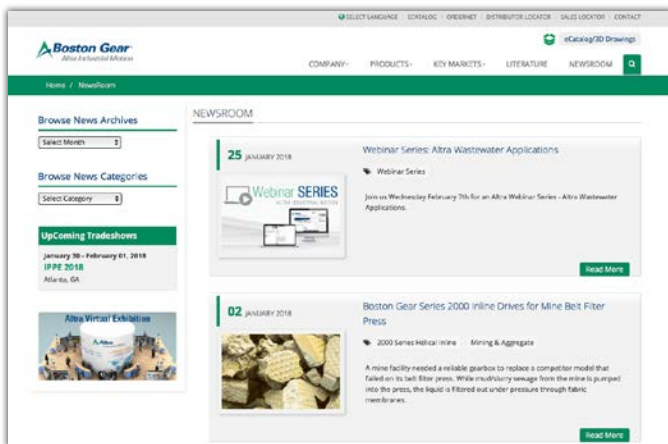
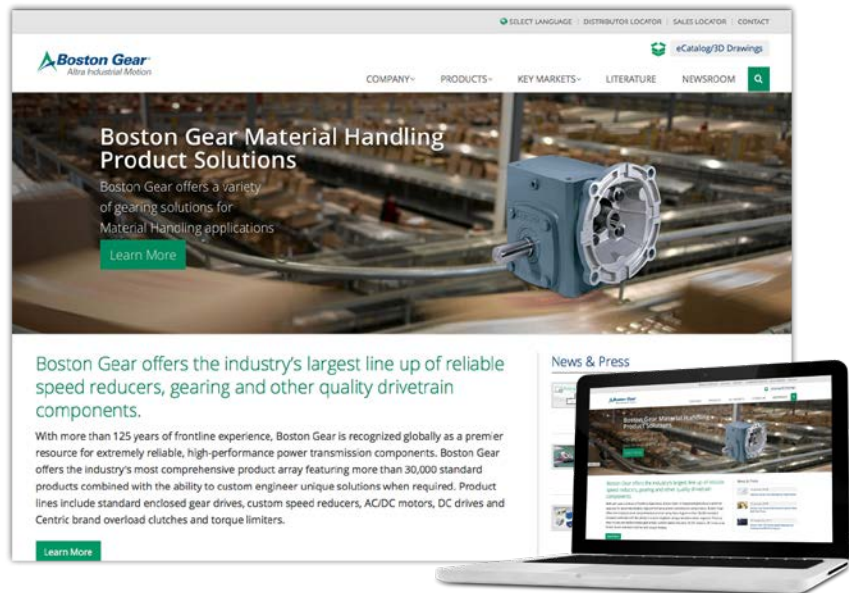
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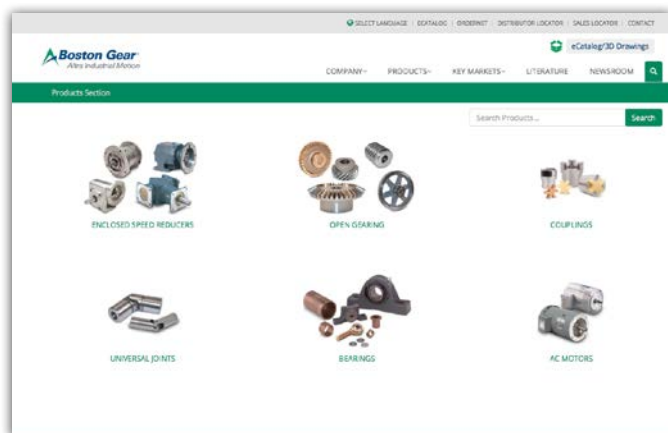
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