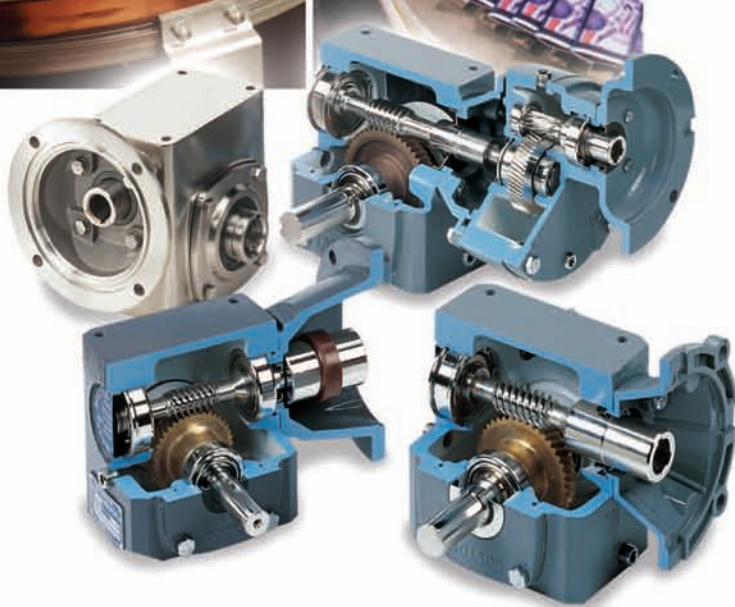


Worm, Helical and Bevel Gear Drives

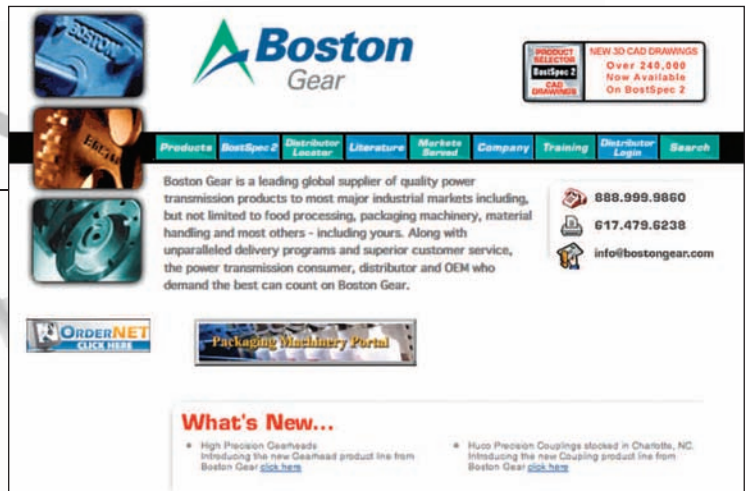
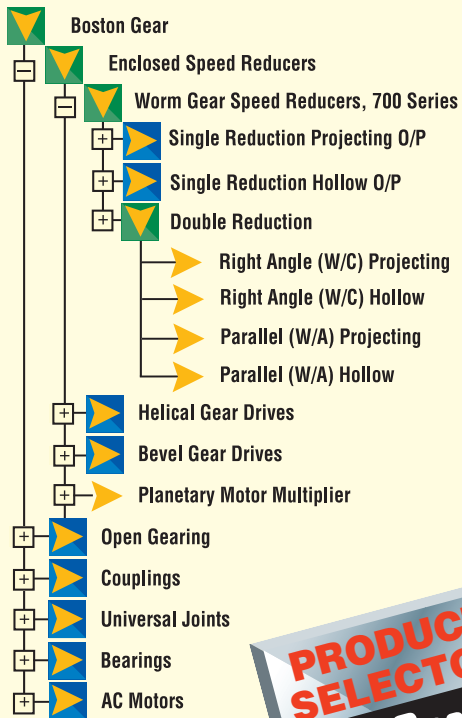


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700 Series Features

- 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 BostSpec2 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 BostSpec2 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 ISO9002 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 BostSpec2 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 9002-certified facility to ensure precise quality control.
- Available in White BK and Stainless Steel Bost-Kleen™ options.
- And because the 600 Series is available through Boston Gear's Guaranteed Same Day Shipment, your needs will be met in the timeliest way possible.

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 as 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-type 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:

- **BostSpec2 – 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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PRODUCT SELECTION/REFERENCE GUIDE

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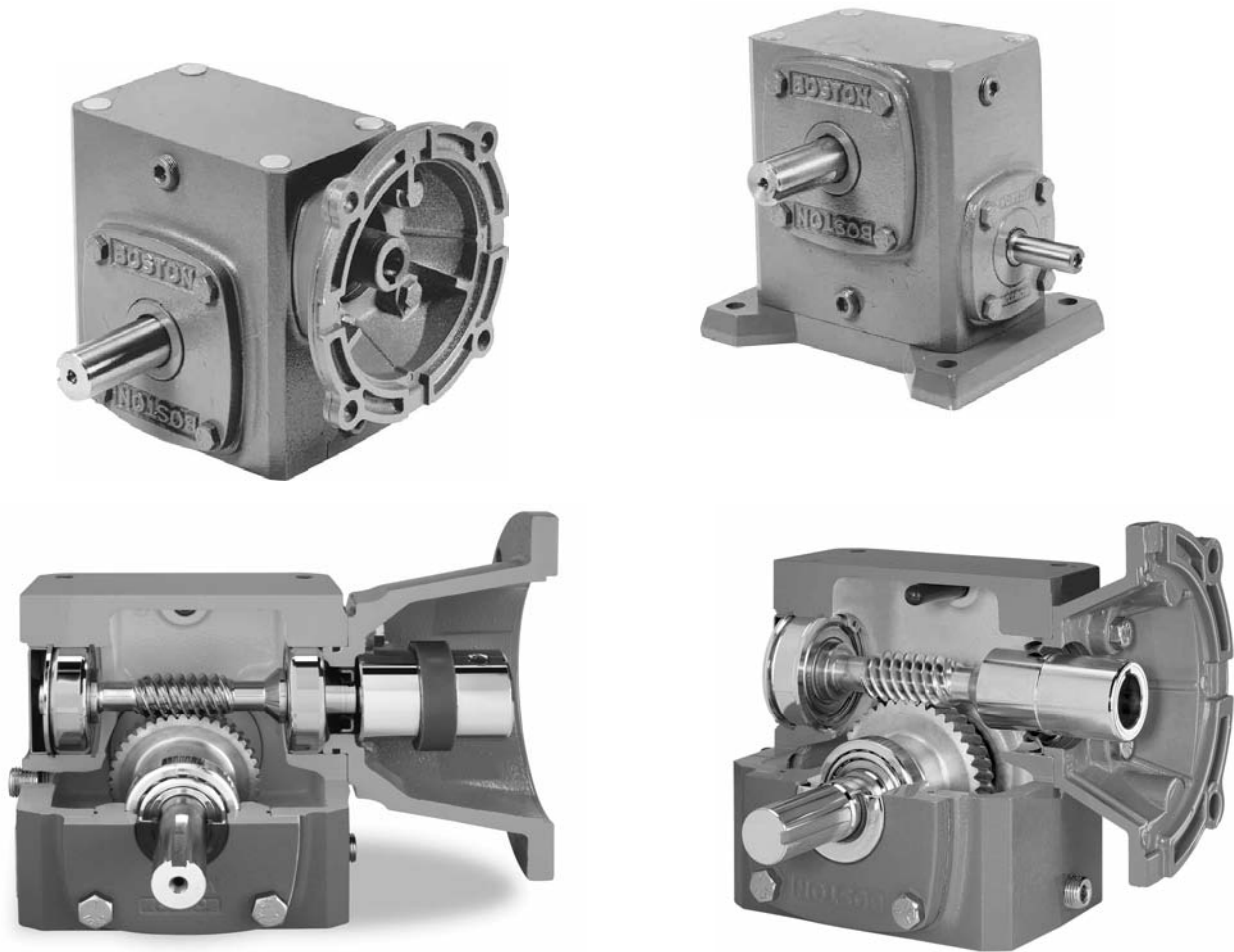
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A



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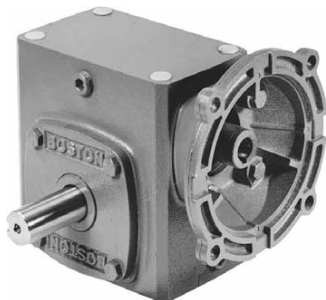
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A

SINGLE REDUCTION FLANGED REDUCERS & NON-FLANGED REDUCERS

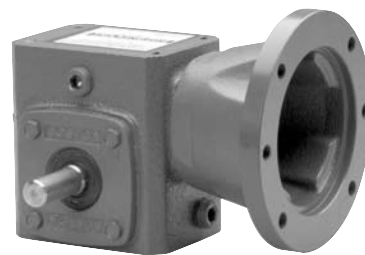
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F700 BASIC



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QC700 BASIC



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F/QC700B



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F/QC700BRB



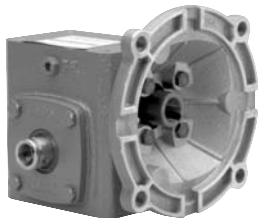
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700 BASIC



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700B



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700C/D



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H/S700



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H700R/L



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S700V/W



Dimensions — Pages 50

700 SERIES WORM GEAR SPEED REDUCERS

700 SERIES SINGLE REDUCTION CATALOG NUMBER EXPLANATION

HQC 7 32 R - 30 Z F P T - B7 - H 3 - P20

700 SERIES

CENTER DISTANCE (inches)

10 - 1.00	26 - 2.62
13 - 1.33	30 - 3.00
15 - 1.54	32 - 3.25
18 - 1.75	38 - 3.75
21 - 2.06	52 - 5.16
24 - 2.38	60 - 6.00

REDUCTION RATIO TO 1

5
10
15
20
25
30
40
50
60

FAN
(732-760 sizes only)
Blank - No fan
F - Fan kit
E - End cap available 732 and 738 only, when no fan is used.

P-Pressure Relief

Oil Seal
T - Indicates two input seals

H SERIES OUTPUT BORE CODE

For H700 Series only Specified in 1/16" increments. See Page 114 for complete offering.
Example:
1 1/4" = P20

STYLE

Blank - Projecting I/P & O/P shafts (No flange)
H - Projecting I/P, BostMount hollow O/P shaft, (No flange)
S - Projecting I/P, hollow O/P shaft (No flange)
F - Flanged reducer (Quill type), projecting O/P shaft
HF - Flanged reducer (Quill type), BostMount hollow O/P shaft
SF - Flanged reducer (Quill type), hollow O/P shaft
QC - Flanged reducer (Coupling type), projecting O/P shaft
HQC - Flanged reducer (Coupling type), BostMount hollow O/P shaft
RF - Flanged reducer (Coupling type), Projecting O/P shaft, 752-760 Sizes Only
SSF* - Stainless flanged reducer (Quill type) projecting O/P shaft
SSH* - Stainless flanged reducer (Quill type) BostMount hollow O/P shaft
C Prefix - Cast iron flange and base (* SSF/SSH sizes 718, 721, 726 only)

LUBRICATION

Z - PosiVent® (factory filled with Klubersynth UH1 6-460)
Blank - No Lube
K - Klubersynth UH1 6-460

MOUNTING POSITIONS

Blank -No Lubrication Supplied
For Factory Prelubrication Indicate Mounting Position
1 -Standard Mounting
2-6 -Refer to Mounting Positions in Catalog

OUTPUT SHAFT ASSEMBLY
(When facing Input)

G - O/P Projection - Left
H - Double O/P Projection
J - O/P Projection - Right
GS - Stainless O/P Projection - Left
HS - Stainless Double O/P Projection
JS - Stainless O/P Projection - Right

NEMA 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

BASE

Blank - No base kit required
A - Horizontal base - Worm under
B - Horizontal base - Worm over
C - Vertical High base - I/P right
D - Vertical Low base - I/P right
E - Vertical High base - I/P left
F - Vertical Low base - I/P left
R/L - BostMount Output Bracket
X - Input Vertical Up
Y - Input Vertical Down
V - Hollow O/P with base - I/P left
W - Hollow O/P with base - I/P right
M - Hollow O/P with CFA-I/P left
N - Hollow O/P with CFA-I/P right
BRB - Riser Block with Base



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700 Series

SINGLE REDUCTION NUMBERING SYSTEM / HOW TO ORDER

STYLE - **SIZE** - **BASE** - **RATIO** - **FAN** - **LUBRI-CATION** - **NEMA MOUNTING** - **SHAFT ASSEMBLY** - **MOUNTING POSITION** - **OUTPUT BORE CODE**

A

STYLE

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

- C- Prefix 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 type) with projecting output shaft.
- HF- Single reduction flanged reducer (Quill type) with BostMount hollow output shaft. (Sizes 713-738)
- SF- Single reduction flanged reducer (Quill type) with hollow output shaft. (Sizes 718, 721, 726 and 732)
- QC- Single reduction flanged reducer (Coupling type) with projecting output shaft.
- HQC- Single reduction flanged reducer (Coupling type) with BostMount hollow output shaft. (Sizes 713-738)
- RF- Single reduction flanged reducer (Coupling type) with Projecting output shaft. 752 - 760 Size Only
- *SSF- Stainless Steel Single reduction flanged reducer (Quill type) with projecting output shaft.
- *SSHF- Stainless steel single reduction flanged reducer with projecting input BostMount hollow output shaft (*718, 721, 726 only)

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 115.

- 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 16, 17.

RATIO

See Selection Tables for available ratios.

FAN

Optional fan available on sizes 732-760 single reduction only. Shipped separately as Fan Kit. See Page 116.

- Blank - No Fan Kit. F -Fan Kit

LUBRICATION

Optional prelubrication.

- Blank - No Lubrication supplied.
- K - Klubersynth UH1 6-460
- S - Mobil SHC634 Synthetic Lubricant

When specifying optional prelubrication, include mounting position after shaft assembly, except for PosiVent®

P

Pressure Relief.

Z

PosiVent®-Factory Filled with Klubersynth UH1 6-460

NEMA MOUNTING

Designates flange size and input bore diameter. Flanged reducers only. Leave blank for standard reducer.

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 16 and 17.

- 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 16 and 17.

OUTPUT BORE CODE

Specified in 1/16" increments. See page 114 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 type 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** - **GU**

1.Reducer, Base and Motor Shipped separately:

ORDER: Reducer - F721-30-B5-G
Base Kit - 56587
Motor - GU

2. Reducer, Base and Motor assembled:
ORDER: F721B-30-B5-G-GU



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

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 340 and 341.

SINGLE REDUCTION SELECTION TABLES

Capacity Selection Tables on pages 20-27 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 28-31. 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 Page 14.

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 28-31.

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 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.

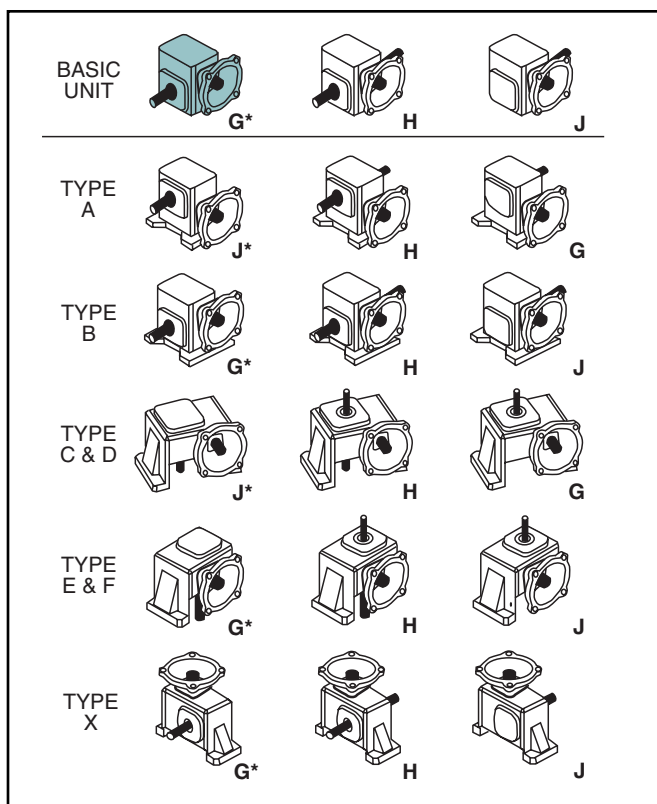
Types "C" and "E" are vertical high bases and Types "D" and "F" are vertical low bases. Type "X" is input vertical up.

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

See Page 14 for complete ordering instructions.

Input may rotate clockwise or counter clockwise.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



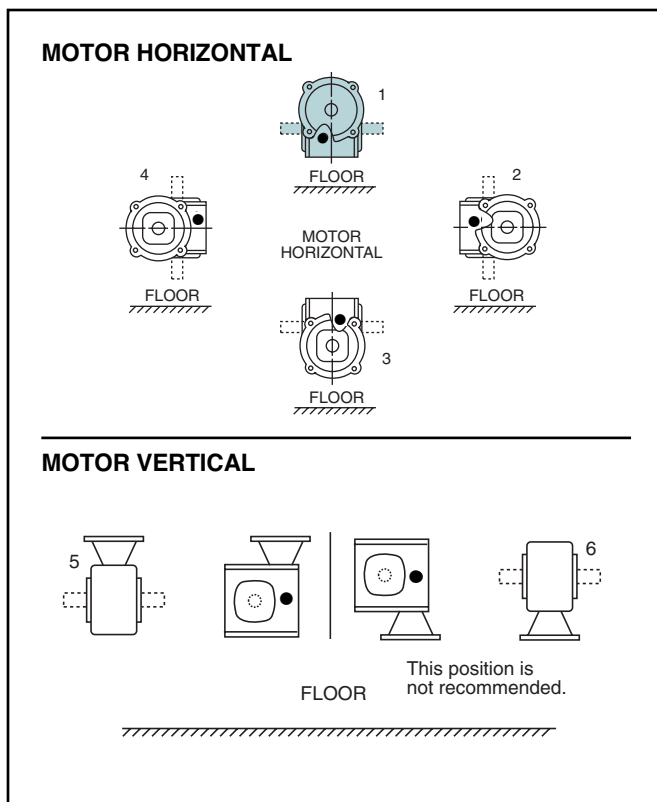
* Standard assemblies

MOUNTING POSITIONS - F/QC - SF - HF/HQC 700 Series

Standard assemblies are for Position 1. The design permits any type 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.

CAUTION

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

NON-FLANGED REDUCER ASSEMBLIES AND MOUNTING POSITIONS

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.

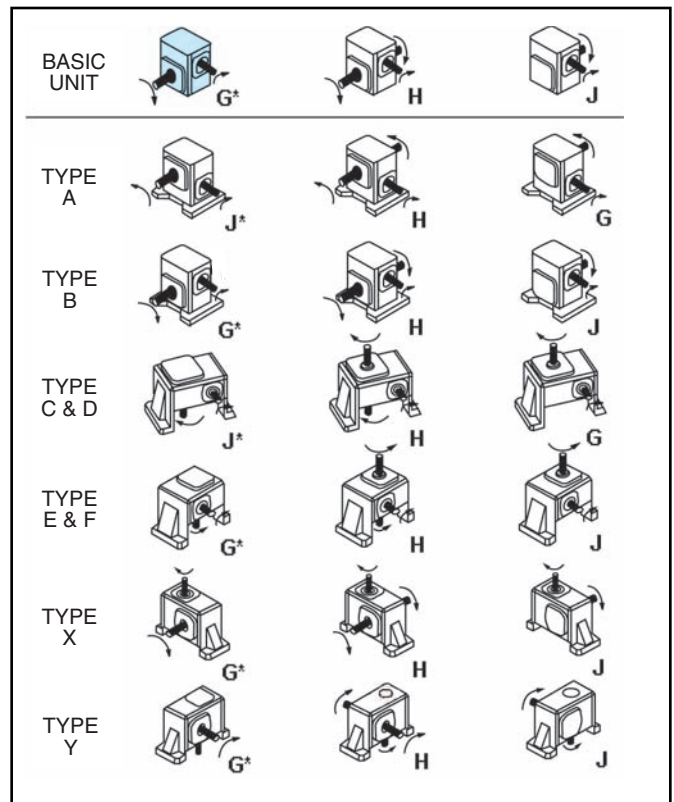
Types "C" and "E" are vertical high bases and Types "D" and "F" are vertical low bases. Type "X" is input vertical up. Type "Y" is input vertical down.

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

See Page 14 for complete ordering instructions.

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

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



* Standard assemblies

MOUNTING POSITIONS - 700 - S700 - H700 Series

Standard assemblies are for Position 1. The design permits any type 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.

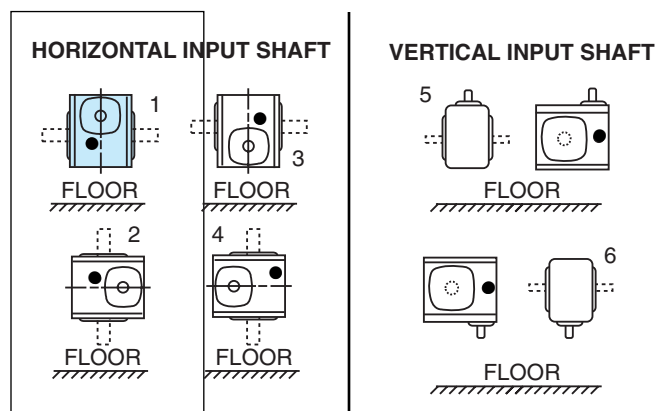
For production orders Boston Gear will assemble units for the specified mounting position desired at no additional charge.

CAUTION

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

TYPICAL MOUNTING POSITIONS

(Examples shown for single-reduction models only)



● Indicates proper oil level.

When specifying position 6, use the three piece input oil seal. See page 13.

Example: F715-15V-B5-G6

RECOMMENDED LUBRICANTS & CAPACITIES

The following table indicates the type 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 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 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	Lubricant AGMA No.	ISO Viscosity Grade No.+
-30° to 225°F** (-34° to 107°C)	Klubersynth* UH1 6-460 Synthetic	1950/2500	—	460
-30° to 225°F (-34° to 107°C)	Mobil SHC634 Synthetic	1950/2500	—	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.

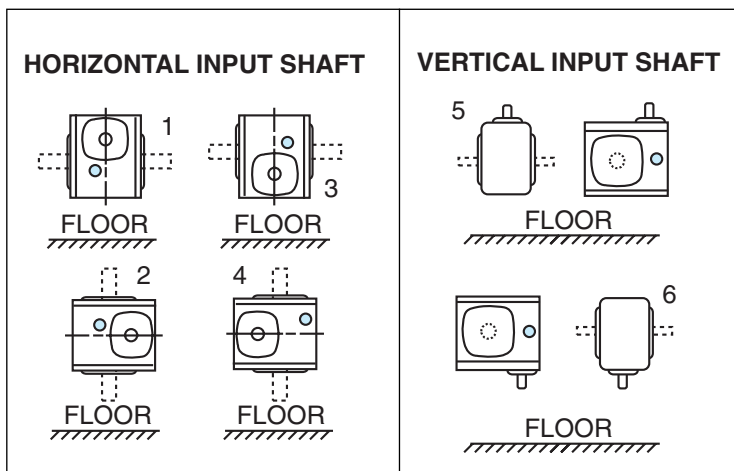
* Synthetic recommendation is exclusively Klubersynth UH1 6-460, other lubrications will void warranty.

+ Other lubricants corresponding to AGMA/ISO numbers are available from all major oil companies. See Page 119 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.

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.

OIL CAPACITY IN FLUID OUNCES

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

ENGINEERING DATA

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 20-31.

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 20-31.

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 20-31.

700 SERIES SINGLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

FOR RATINGS AT OTHER SPEEDS, SEE TABLES ON PAGES 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											Motors* 230/460 VAC 3 Phase 60 Hz				
		Gear Capacity			Efficiency	Size	Ratings			Available Styles†									Bore Code			
		Output Torque (lb.in.)	HP				Motor HP	Output Torque (lb.in.)	Service Class	F	QC	FAN	HF	SF	HOC	RF	SS					
			Input	Output																		
350	5	113	.69	.63	.91	710-5	.50	82	II										B5	FUTF		
							.33	55	III											B4	AEUTF	
							.33	55	III											B5	EUTF	
							.25	41	III											B4	ADUTF	
							.25	41	III											B5	DUTF	
							.17	27	III											B4	ACUT	
							.17	27	III											B5	CUTF	
		235	1.39	1.31	.94	713-5	1	169	II											B5	HUTF-5/8	
							.75	127	III										B5	GUTF		
	291	1.72	1.62	.94	715-5	.50	85	III											B5	FUTF		
						1.5	254	I										B7	JUTF			
	432	2.55	2.40	.94	718-5	1	169	II											B5	HUTF-5/8		
						.75	127	III										B5	GUTF			
	620	3.66	3.44	.94	721-5	2	338	II											B7	KUTF		
						1.5	254	III										B7	JUTF			
	838	4.95	4.65	.94	724-5	1	169	III											B5	HUTF-5/8		
						2	338	II										B7	KUTF			
	1034	6.11	5.74	.94	726-5	5	838	I											B9	MUTF		
						3	508	II										B9	LUTF			
	1408	8.32	7.82	.94	730-5	5	846	I											B9	MUTF		
						3	508	III										B9	LUTF			
	250	7	644	2.80	2.56	.91	721-7	2	460	II										B7	KUTF	
								1.5	345	III										B7	JUTF	
	175	10	138	.44	.38	.87	710-10	.33	104	II										B4	AEUTF	
.33								104	II										B5	EUTF		
.25								78	III											B4	ADUTF	
.25								78	III											B5	DUTF	
281			.86	.78	.91	713-10	.75	245	I											B5	GUTF	
							.50	163	II										B5	FUTF		
397			1.20	1.10	.92	715-10	.33	109	III											B5	EUTF	
							1	330	I										B5	HUTF-5/8		
536			1.61	1.49	.92	718-10	.75	249	III											B5	GUTF	
							1	333	II										B7	JUTF		
789			2.34	2.19	.94	721-10	2	674	I												B5	HUTF-5/8
							1.5	505	II										B7	JUTF		
							1	337	III										B5	HUTF-5/8		

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

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

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 28-31

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	1069	3.18	2.97	.93	724-10	3	1008	I										B9	LUT		
							2	672	II											B7	KUTF	
							1.5	504	III											B7	JUTF	
		1345	3.94	3.74	.95	726-10	3	1024	II											B9	LUTF	
							2	683	III											B7	KUTF	
		1787	5.28	4.96	.94	730-10	1.5	512	III											B7	JUTF	
							5	1692	I											B9	MUTF	
		2106	6.22	5.85	.94	732-10	3	1015	III											B9	LUTF	
							2	677	III											B7	KUTF	
		2532	7.75	7.03	.91	732-10F	5	1692	II											B9	MUTF	
							3	1015	III											B9	LUTF	
		2834	8.37	7.87	.94	738-10	5	1633	II											B9	MUTF	
3	980						III										B9	LUTF				
7.5	2538						I											B11	NUTF			
3221	9.96	8.94	.90	738-10F	5	1692	II											B9	MUTF			
					3	1015	III										B9	LUTF				
					10	3221	I											B11	PUTF			
5860	17.31	16.27	.94	752-10	7.5	2425	II											B11	NUTF			
					5	1616	III										B9	LUTF				
					15	5076	I											B13	RUTF			
7182	21.63	19.94	.92	752-10F	10	3384	II											B11	PUTF			
					7.5	2538	III										B11	SUTF				
					20	6640	I											B13	SUTF			
8067	23.83	22.40	.94	760-10	15	4979	II											B13	RUTF			
					10	3319	III										B11	PUTF				
					20	6768	I											B13	SUTF			
8658	26.13	24.04	.92	760-10F	15	5076	II											B13	RUTF			
					10	3384	III										B11	PUTF				
					20	6624	II											B13	SUTF			
145.8	12	693	1.76	1.60	.91	721-12	1.5	590	I										B7	JUTF		
							1	394	III											B7	HUTF	
		984	2.50	2.28	.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	.33	.27	.82	710-15	.33	146	I										B4	AEUTF		
							.33	146	I											B5	EUTF	
							.25	111	II											B4	ADUTF	
							.25	111	II											B5	DUTF	
							.17	74	III											B4	ACUTF	
							.17	74	III											B5	CUTF	
		305	.66	.56	.86	713-15	.50	231	II											B5	FUTF	
							.33	154	III											B5	EUTF	
		429	.91	.79	.87	715-15	.75	353	I											B5	GUTF	
							.50	235	II											B5	FUTF	
									.33	157	III									B5	EUTF	

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

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

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



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com



A

700 SERIES SINGLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

FOR RATINGS AT OTHER SPEEDS, SEE TABLES ON PAGES 28-31

A

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)										Motors* 230/460 VAC 3 Phase 60 Hz								
		Gear Capacity		Efficiency	Size	Ratings			Available Styles†							Bore Code									
		Output Torque (lb.in.)	HP Input			HP Output	Motor HP	Output Torque (lb.in.)	Service Class	F	QC	FAN	HF	SF	HQC			RF	SS						
116.7	15	552	1.13	1.02	.90	718-15	1	489	I										B5	HUTF-5/8					
							.75	367	II													B5	GUTF		
							.50	244	III														B5	FUTF	
		841	1.72	1.56	.90	721-15	1.5	733	I												B7	JUTF			
							1	489	II													B7	HUTF		
							.75	367	III														B5	GUTF	
		1159	2.34	2.15	.92	724-15	2	990	I												B7	KUTF			
							1.5	743	II														B7	JUTF	
							1	495	III															B7	HUTF
		1466	2.95	2.71	.92	726-15	3	1466	I												B9	LUTF			
							2	994	II															B7	KUTF
							1.5	745	III															B7	JUTF
		1969	3.97	3.64	.92	730-15	3	1487	II												B9	LUTF			
							2	991	III															B7	KUTF
		2344	4.65	4.34	.93	732-15	3	1511	II												B9	LUTF			
2	1008						III															B7	KUTF		
2782	5.80	5.15	.89	732-15F	5	2519	I												B9	MUTF					
					3	1511	III															B9	LUTF		
3155	6.28	5.84	.93	738-15	5	2511	II												B9	MUTF					
					3	1507	III															B9	LUTF		
3543	7.47	6.56	.88	738-15F	7.5	3556	I												B11	NUTF					
					5	2371	II															B9	MUTF		
					3	1422	III															B9	LUTF		
6618	13.06	12.25	.94	752-15	10	5065	II												B11	PUTF					
					7.5	3799	II															B11	NUTF		
					5	2533	III															B9	MUTF		
7829	16.32	14.49	.89	752-15F	15	7193	I												B13	RUTF					
					10	4795	II															B11	PUTF		
					7.5	3596	III															B11	NUTF		
9055	17.87	16.76	.94	760-15	15	7598	I												B13	RUTF					
					10	5065	III															B11	PUTF		
10712	22.33	19.83	.89	760-15F	20	9590	I												B13	SUTF					
					15	7193	II															B13	RUTF		
						10	4795	III											B11	PUTF					
87.5	20	149	.27	.21	.77	710-20	.25	138	I										B4	ADUTF					
							.25	138	I														B5	DUTF	
							.17	92	II															B4	ACUTF
							.17	92	II																B5
		308	.52	.43	.82	713-20	.50	296	I												B5	FUTF			
							.33	197	II															B5	EUTF
							.25	148	III															B5	DUTF
		435	.72	.60	.84	715-20	.75	435	I												B5	GUTF			
							.50	302	II															B5	FUTF
						.33	201	III											B5	EUTF					

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

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

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 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											Motors* 230/460 VAC 3 Phase 60 Hz								
		Gear Capacity			Efficiency	Size	Ratings			Available Styles†									Bore Code							
		Output Torque (lb.in.)	HP				Motor HP	Output Torque (lb.in.)	Service Class	F	QC	FAN	HF	SE	HQC	RF	SS									
			Input	Output						Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded			Shaded						
87.5	20	590	.97	.82	.84	718-20	1	590	I										B5	HUTF-5/8						
							.75	456	II													B5	GUTF			
							.50	304	III														B5	FUTF		
		892	1.40	1.24	.88	721-20	1	637	II												B5	HUTF-5/8				
							.75	478	III														B7	GUTF		
		1233	1.95	1.71	.88	724-20	2	1233	I													B7	KUTF			
							1.5	948	II														B7	JUTF		
							1	632	III														B5	HUTF-5/8		
		1483	2.34	2.06	.88	726-20	2	1267	I														B7	KUTF		
							1.5	950	II															B7	JUTF	
							1	634	III															B5	HUTF-5/8	
		2024	3.14	2.81	.89	730-20	3	1933	I														B9	LUTF		
							2	1289	II															B7	KUTF	
							1.5	967	III																B7	JUTF
		2413	3.71	3.35	.90	732-20	3	1950	II														B9	LUTF		
2	1300						III																B7	KUTF		
2858	4.63	3.97	.86	732-20F	3	1851	II														B9	LUTF				
					2	1234	III																B7	KUTF		
3285	5.00	4.56	.91	738-20	5	3283	I														B9	MUTF				
					3	1970	II															B9	LUTF			
					2	1313	III																B7	KUTF		
3707	5.95	5.15	.86	738-20F	5	3114	I														B9	MUTF				
					3	1868	III																B9	LUTF		
6833	10.19	9.49	.93	752-20	10	6703	I														B11	PUTF				
					7.5	5027	II																B11	NUTF		
					5	3352	III																B9	MUTF		
8075	12.74	11.21	.88	752-20F	10	6336	II														B11	PUTF				
					7.5	4752	II																B11	NUTF		
9412	14.02	13.07	.93	760-20	10	6710	II														B11	PUTF				
					7.5	5033	III																B11	NUTF		
11080	17.52	15.38	.88	760-20F	15	9482	I														B13	RUTF				
					10	6322	III																B11	PUTF		
70	25	307	.43	.34	.79	713-25	.33	238	II												B5	EUTF				
							.25	178	II															B5	DUTF	
							.17	119	III																B5	CUTF
		437	.60	.49	.81	715-25	.50	364	I														B5	FUTF		
							.33	243	II																B5	EUTF
		574	.76	.64	.84	718-25	.75	566	I														B5	GUTF		
							.50	378	II																B5	FUTF
		875	1.16	.97	.84	721-25	.33	252	III														B5	EUTF		
							1	754	I																B5	HUTF-5/8
							.75	566	II																B5	GUTF
								.50	377	III												B5	FUTF			

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.
 † Shaded areas denote which styles are available for a given center distance and ratio. See Page 14 for style descriptions.
 752 & 760 SIZES AVAILABLE ONLY IN RF-FLANGED COUPLING TYPE.
 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 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											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	OC	FAN	HF	SF	HQC	RF	S	Bore Code				
70	25	1199	1.55	1.33	.86	724-25	1.5	1160	I										B7	JUTF	
							1	773	II										B5	HUTF-5/8	
							.75	580	III										B5	GUTF	
		1514	1.94	1.68	.87	726-25	2	1514	I											B7	KUTF
							1.5	1170	II										B7	JUTF	
							1	780	III										B7	HUTF-5/8	
		2051	2.61	2.28	.87	730-25	2	1571	II											B7	KUTF
							1.5	1179	III										B7	JUTF	
							3	2379	I										B9	LUTF	
		2443	3.08	2.71	.88	732-25	2	1586	II											B7	KUTF
							1.5	1189	III										B7	JUTF	
							3	2252	II										B9	LUTF	
2891	3.85	3.21	.84	732-25F	3	2252	II											B9	LUTF		
					2	1501	III										B7	KUTF			
58.3	30	150	.20	.14	.69	710-30	.17	125	I										B4	ACUT	
							.17	125	I										B5	CUTF	
		311	.39	.29	.74	713-30	.33	265	I										B5	EUTF	
							.25	199	II										B5	DUTF	
		445	.54	.41	.76	715-30	.17	133	III											B5	CUTF
							.50	411	I										B5	FUTF	
							.33	274	II										B5	EUTF	
		573	.65	.53	.82	718-30	.25	206	III											B5	DUTF
							.50	441	II										B5	FUTF	
							.33	294	III										B5	EUTF	
		871	.99	.81	.81	721-30	.25	220	III											B5	DUTF
							1	871	I										B5	HUTF-5/8	
							.75	659	II										B5	GUTF	
		1200	1.33	1.11	.83	724-30	.50	440	III											B5	FUTF
							1	902	II										B5	HUTF-5/8	
							.75	676	III										B5	GUTF	
		1521	1.68	1.41	.84	726-30	1.5	1358	I											B7	JUTF
							1	905	II										B5	HUTF-5/8	
							.75	679	III										B5	GUTF	
		2045	2.27	1.89	.83	730-30	2	1801	I											B7	KUTF
							1.5	1351	II										B7	JUTF	
							1	901	III										B5	HUTF-5/8	
		2456	2.64	2.27	.86	732-30	2	1860	II											B7	KUTF
							1.5	1395	III										B7	JUTF	
3	2637						I										B9	LUTF			
2902	3.30	2.69	.81	732-30F	2	1758	II											B7	KUTF		
					1.5	1319	III										B7	JUTF			
					3	2825	I										B9	LUTF			
3354	3.56	3.10	.87	738-30	2	1884	III											B9	KUTF		
					3	2663	II										B9	LUTF			
3757	4.23	3.48	.82	738-30F	2	1776	III											B9	KUTF		
					3	2663	II										B9	LUTF			
6964	7.30	6.45	.88	752-30	5	4768	II											B11	PUTF		
					3	2861	III										B11	NUTF			

* Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

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



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700 SERIES SINGLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

FOR RATINGS AT OTHER SPEEDS, SEE TABLES ON PAGES 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											Motors* 230/460 VAC 3 Phase 60 Hz			
		Gear Capacity			Efficiency	Size	Ratings			Available Styles†									Bore Code		
		Output Torque (lb.in.)	HP				Motor HP	Output Torque (lb.in.)	Service Class	F	OC	FAN	HF	SF	HQC	RF	SS				
			Input	Output																	
58.3	30	8336	9.12	7.72	.85	752-30F	7.5 5	6853 4568	I III										B11 B9	NUTF MUTF	
		9603	9.81	8.89	.91	760-30	7.5 5	7339 4892	II III										B11 B9	NUTF MUTF	
		11219	12.26	10.38	.85	760-30F	10 7.5 5	9148 6861 4574	I II III										B11 B11 B9	PUTF NUTF MUTF	
43.8	40	151	.17	.10	.62	710-40	.17 .17	148 148	I I										B4 B5	ACUT CUTF	
		307	.31	.21	.69	713-40	.25 .17	248 165	II III										B5 B5	DUTF CUTF	
		442	.43	.31	.71	715-40	.33 .25 .17	342 257 171	II II III										B5 B5 B5	EUTF DUTF CUTF	
		609	.57	.42	.74	718-40	.50 .33 .25	534 356 267	I II III											B5 B5 B5	FUTF EUTF DUTF
		876	.81	.61	.75	721-40	.75 .50 .33	811 541 360	I II III											B5 B5 B5	GUTF FUTF EUTF
		1206	1.08	.84	.77	724-40	1 .75 .50	1116 837 558	I II III											B5 B5 B5	HUTF-5/8 GUTF FUTF
		1512	1.33	1.05	.79	726-40	1 .75	1136 852	II III											B5 B5	HUTF-5/8 GUTF
		2041	1.78	1.42	.80	730-40	1.5 1 .75	1719 1146 860	I II III											B7 B5 B5	JUTF HUTF-5/8 GUTF
		2444	2.10	1.70	.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	.78	732-40F	2 1.5	2246 1685	II III											B7 B7	KUTF JUTF
		3320	2.80	2.30	.82	738-40	2 1.5	2370 1778	II III											B7 B7	KUTF JUTF
		3747	3.33	2.60	.78	738-40F	3 2	3374 2249	I II											B9 B7	LUTF KUTF
		6889	5.60	4.78	.85	752-40	5 3	6149 3689	I III											B9 B9	MUTF LUTF
		8178	7.00	5.68	.81	752-40F	5 3	5839 3504	II III											B9 B9	MUTF LUTF
		9566	7.65	6.64	.87	760-40	7.5 5	9374 6250	I II											B11 B9	NUTF MUTF
		11197	9.56	7.77	.81	760-40F	7.5 5	8780 5854	II III											B11 B9	NUTF MUTF
		35	50	153	.15	.09	.57	710-50	.17 .17	153 153	I I										B4 B5

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

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700 SERIES SINGLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

FOR RATINGS AT OTHER SPEEDS, SEE TABLES ON PAGES 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											Motors* 230/460 VAC 3 Phase 60 Hz			
		Gear Capacity			Efficiency	Size	Ratings			Available Styles†									Bore Code		
		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			Shaded	
35	50	297	.25	.17	.66	713-50	.25 .17	297 198	I II										B5 B5	DUTF CUTF	
		429	.35	.24	.68	715-50	.33 .25 .17	409 306 204	I II III										B5 B5 B5	EUTF DUTF CUTF	
		573	.44	.32	.72	718-50	.33 .25	434 325	II III										B5 B5	EUTF DUTF	
		857	.66	.48	.72	721-50	.50 .33	649 433	II III										B5 B5	FUTF EUTF	
		1177	.87	.65	.75	724-50	.75 .50 .33	1014 676 451	I II III										B5 B5 B5	GUTF FUTF EUTF	
		1484	1.08	.82	.76	726-50	1 .75 .50	1373 1030 687	I II III										B5 B5 B5	HUTF-5/8 GUTF FUTF	
		2016	1.45	1.12	.77	730-50	1.5 1 .75	2016 1390 1042	I II III										B7 B5 B5	JUTF HUTF-5/8 GUTF	
		2403	1.70	1.33	.78	732-50	1.5 1 .75	2120 1413 1060	I II III										B7 B5 B5	JUTF HUTF-5/8 GUTF	
		2791	2.12	1.55	.73	732-50F	2 1.5 1	2632 1974 1316	I II III										B7 B7 B7	KUTF JUTF HUTF	
		3280	2.28	1.82	.80	738-50	2 1.5 1	2876 2157 1438	I II III										B7 B7 B7	KUTF JUTF HUTF	
		3626	2.71	2.01	.74	738-50F	2 1.5	2675 2006	II III										B9 B7	KUTF JUTF	
		6751	4.49	3.75	.83	752-50	3	4509	II										B9	LUTF	
		7678	5.61	4.26	.76	752-50F	5 3	6840 4104	I III										B9 B9	MUTF LUTF	
		9378	6.12	5.21	.85	760-50	5 3	7659 4595	I III										B9 B9	MUTF LUTF	
		9836	7.65	5.46	.71	760-50F	7.5 5 3	9639 6426 3856	I II III										B11 B9 B9	NUTF MUTF LUTF	
		29.2	60	144	.12	.07	.55	710-60	.17 .17	144 144	I I									B4 B5	ACUT CUTF
				271	.22	.13	.57	713-60	.17	201	II									B5	CUTF
				399	.28	.18	.66	715-60	.25 .17	356 238	I II									B5 B5	DUTF EUTF

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700 SERIES SINGLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

FOR RATINGS AT OTHER SPEEDS, SEE TABLES ON PAGES 28-31

Output RPM	Ratio	Non-Flanged Reducers					Flanged Reducers (Gearmotor)											Motors* 230/460 VAC 3 Phase 60 Hz			
		Gear Capacity		Efficiency	Size	Ratings			Available Styles†								Bore Code				
		Output Torque (lb.in.)	HP			Motor HP	Output Torque (lb.in.)	Service Class	F	OC	FAN	HF	SF	HOC	RF	SS					
			Input																Output		
29.2	60	527	.35	.24	.70	718-60	.33	502	I										B5	EUTF	
							.25	376	II											B5	DUTF
							.17	251	III											B5	CUTF
		826	.55	.38	.69	721-60	.50	751	I											B5	FUTF
							.33	500	II										B5	EUTF	
							.25	375	III											B5	DUTF
		1128	.73	.52	.71	724-60	.75	1128	I											B5	GUTF
							.50	772	II										B5	FUTF	
							.33	515	III											B5	EUTF
		1385	.89	.64	.72	726-60	.75	1166	I											B5	GUTF
							.50	778	III											B5	FUTF
							1	1601	I											B5	HUTF-5/8
		1921	1.20	.89	.74	730-60	.75	1200	II											B5	GUTF
							.50	800	III											B5	FUTF
1.5	2281						I											B7	JUTF		
2281	1.40	1.06	.75	732-60	1	1629	II											B7	HUTF		
					.75	1221	III											B5	GUTF		
					1.5	2184	I											B7	JUTF		
2549	1.75	1.18	.67	732-60F	1	1456	III											B7	HUTF		
					1.5	2495	II											B7	JUTF		
					1	1633	III											B7	HUTF		
3128	1.88	1.45	.77	738-60	1.5	2495	II											B7	JUTF		
					1	1633	III											B7	HUTF		
					2	2925	I											B7	KUTF		
3277	2.24	1.52	.68	738-60F	1.5	2193	II											B7	JUTF		
					3	5242	I											B9	LUTF		
					5	6953	I											B9	MUTF		
6416	3.67	2.97	.81	752-60	3	4542	II											B9	LUTF		
					5	8878	I											B9	MUTF		
					3	5327	II											B9	LUTF		
6953	4.59	3.22	.70	752-60F	5	8878	I											B9	MUTF		
					3	5327	II											B9	LUTF		
					5	7571	II											B9	MUTF		
8934	5.03	4.13	.82	760-60	5	8878	I											B9	MUTF		
					3	5327	II											B9	LUTF		
					5	7571	II											B9	MUTF		
9528	6.29	4.41	.70	760-60F	5	7571	II											B9	MUTF		
					.25	375	I											B5	DUTF		
					.17	268	II											B5	CUTF		
21.9	80	1094	.76	.38	.56	726-80	.75	1080	I									B5	GUTF		
		17.5	100	144	.08	.04	.50	713-100	.17	138	I								B5	CUTF	

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

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

A

700 SERIES SINGLE REDUCTION RATIO & CAPACITY SELECTION TABLES

HORSEPOWER AND TORQUE CAPACITIES AT LISTED RPM INPUTS

(SERVICE FACTOR 1.0)

SERIES SIZE			710			713			715			718		
RATIO	INPUT RPM	OUT-PUT RPM	OUTPUT			OUTPUT			OUTPUT			OUTPUT		
			INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)
5	1750	350	.69	.63	113	1.39	1.31	235	1.72	1.62	291	2.55	2.40	432
	1150	230	.40	.36	98	.84	.73	200	1.15	1.04	285	1.42	1.28	350
	690	138	.26	.23	105	.50	.45	205	.80	.72	330	.97	.87	400
	100	20	.044	.036	115	.091	.076	240	.14	.12	370	.17	.14	460
10	1750	175	.44	.38	138	.86	.78	281	1.20	1.10	397	1.61	1.49	536
	1150	115	.23	.21	118	.51	.44	243	.73	.64	350	.98	.87	480
	690	69	.16	.14	128	.33	.29	266	.47	.42	384	.66	.58	534
	100	10	.03	.022	140	.060	.047	296	.086	.068	432	.12	.097	610
15	1750	116.7	.33	.27	146	.66	.58	305	.91	.79	428	1.13	1.02	552
	1150	77.7	.17	.15	125	.37	.32	262	.53	.46	376	.67	.57	472
	690	46	.12	.10	134	.26	.21	288	.36	.30	415	.46	.39	534
	100	6.7	.023	.016	147	.049	.034	322	.070	.050	468	.086	.063	597
20	1750	87.5	.27	.21	149	.52	.43	308	.72	.60	435	.97	.82	590
	1150	57.5	.14	.12	129	.29	.24	265	.43	.35	380	.58	.48	525
	690	34.5	.091	.074	136	.19	.16	286	.28	.23	420	.38	.32	580
	100	5.0	.017	.012	150	.040	.026	330	.056	.038	485	.080	.055	690
25	1750	70	—	—	—	.43	.34	307	.60	.49	437	.76	.64	574
	1150	46	—	—	—	.24	.19	260	.35	.27	375	.48	.36	500
	690	27.6	—	—	—	.15	.12	280	.22	.18	410	.30	.24	540
	100	4.0	—	—	—	.031	.020	310	.043	.028	451	.063	.042	660
30	1750	58.3	.20	.14	150	.39	.29	311	.54	.41	446	.65	.53	573
	1150	38.3	.10	.081	133	.21	.16	270	.31	.23	388	.40	.32	530
	690	23	.068	.051	140	.14	.11	300	.20	.17	460	.29	.22	600
	100	3.3	.013	.008	155	.029	.018	340	.040	.026	496	.057	.037	710
40	1750	43.8	.17	.10	151	.31	.21	307	.43	.31	441	.57	.42	609
	1150	28.8	.081	.059	129	.18	.12	265	.24	.17	380	.33	.24	525
	690	17.3	.051	.037	130	.10	.078	286	.15	.11	420	.22	.16	580
	100	2.5	.011	.006	150	.025	.013	330	.036	.019	485	.052	.027	690
50	1750	35	.15	.090	153	.25	.17	297	.35	.24	429	.44	.32	573
	1150	23	.060	.042	114	.12	.090	248	.18	.13	360	.24	.17	470
	690	13.8	.041	.029	130	.083	.058	265	.12	.085	390	.17	.12	520
	100	2.0	.008	.004	140	.018	.009	300	.027	.014	440	.038	.019	590
60	1750	29.2	.12	.070	144	.22	.13	271	.28	0.18	399	.35	.24	527
	1150	19.2	.065	.032	105	.171	.093	201	.164	.095	312	.21	.13	440
	690	11.5	.044	.020	112	.101	.046	253	.114	.061	338	.14	.084	480
	100	1.7	.008	.003	121	.021	.007	285	.022	.009	371	.030	.014	530
80	1750	21.9	—	—	—	—	—	—	—	—	—	.23	.13	375
	1150	14.4	—	—	—	—	—	—	—	—	—	.16	.089	390
	690	8.6	—	—	—	—	—	—	—	—	—	.10	.048	350
	100	1.3	—	—	—	—	—	—	—	—	—	.020	.009	470
100	1750	17.5	—	—	—	.080	.040	144	—	—	—	—	—	—
	1150	11.5	—	—	—	.070	.028	152	—	—	—	—	—	—
	690	6.9	—	—	—	.050	.018	164	—	—	—	—	—	—
	100	1	—	—	—	.010	.003	180	—	—	—	—	—	—
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.



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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	OUT-PUT RPM	OUTPUT			OUTPUT			OUTPUT			OUTPUT		
			INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	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	.30	.26	820	.43	.38	1200	.58	.51	1600	1.06	.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	.89	814	1.46	1.31	1200	1.97	1.75	1600	3.15	2.79	2548
	100	10	.19	.15	968	.27	.23	1430	.37	.31	1960	.63	.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	.91	752	1.51	1.29	1060	2.01	1.73	1425	3.41	2.95	2425
	690	46.0	.72	.61	832	1.05	.90	1239	1.41	1.22	1675	2.55	2.14	2928
	100	6.7	.13	.10	968	.19	.15	1463	.28	.22	2057	.51	.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	.86	.72	782	1.27	1.06	1160	1.63	1.36	1500	2.68	2.23	2470
	690	35	.57	.48	875	.83	.70	1280	1.11	.94	1725	1.67	1.52	2739
	100	5.0	.11	.080	1018	.17	.12	1550	.20	.16	2050	.41	.38	3584
25	1750	70	1.16	.97	875	1.55	1.33	1199	1.94	1.68	1514	2.61	2.28	2051
	1150	46	.72	.58	790	1.03	.84	1150	1.31	1.11	1525	2.3	1.86	2560
	690	27.6	.47	.38	875	.69	.56	1280	.93	.77	1750	1.5	1.26	2830
	100	4.0	.094	.062	975	.14	.095	1500	.18	.13	2075	.30	.21	3400
30	1750	58.3	.99	.81	871	1.33	1.11	1200	1.68	1.41	1521	2.27	1.89	2045
	1150	38.3	.62	.48	795	.89	.70	1170	1.20	.96	1575	1.99	1.53	2510
	690	23	.41	.32	880	.60	.47	1300	.81	.65	1790	1.51	1.09	3000
	100	3.3	.086	.055	1050	.12	.078	1500	.16	.11	2100	.32	.20	3702
40	1750	43.8	.81	.61	876	1.08	.84	1206	1.33	1.05	1512	1.78	1.43	2041
	1150	28.8	.49	.36	785	.70	.53	1160	.89	.68	1500	1.46	1.14	2470
	690	17.3	.33	.24	875	.46	.35	1280	.61	.47	1725	.99	.78	2900
	100	2.5	.074	.040	1018	.11	.061	1550	.14	.081	2050	.23	.14	3600
50	1750	35	.66	.48	857	.87	.65	1177	1.08	.82	1484	1.45	1.12	2016
	1150	23	.38	.27	750	.56	.40	1100	.75	.54	1482	1.2	.87	2400
	690	13.8	.26	.18	840	.37	.26	1225	.51	.37	1675	.87	.61	2750
	100	2.0	.057	.031	970	.084	.045	1425	.11	.063	1975	.19	.10	3200
60	1750	29.2	.55	.38	826	.73	.52	1128	.89	.64	1385	1.20	.89	1921
	1150	19.2	.34	.22	730	.49	.32	1040	.64	.42	1390	1.01	.68	2285
	690	11.5	.23	.15	805	.33	.21	1154	.44	.29	1570	.27	.45	2580
	100	1.7	.055	.025	930	.073	.036	1330	.10	.050	1840	.13	.080	3080
80	1750	21.9	—	—	—	—	—	—	.76	.38	1100	—	—	—
	1150	14.4	—	—	—	—	—	—	.47	.29	1252	—	—	—
	690	8.6	—	—	—	—	—	—	.35	.18	1340	—	—	—
	100	1.3	—	—	—	—	—	—	.07	.030	1600	—	—	—
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 339).

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SINGLE REDUCTION RATIO & CAPACITY SELECTION TABLES

HORSEPOWER AND TORQUE CAPACITIES AT LISTED RPM INPUTS (SERVICE FACTOR 1.0)

SERIES SIZE			732			732F			738			738F		
RATIO	INPUT RPM	OUT-PUT RPM	OUTPUT			OUTPUT			OUTPUT			OUTPUT		
			INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)	INPUT HP	HP	TORQUE (lb-in)
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	.62	.52	3300	.62	.52	3300	.87	.47	4700	.87	.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	46.0	2.35	2.04	2800	2.52	2.19	3000	3.25	2.85	3900	3.50	3.06	4200
	100	6.7	.48	.39	3700	.48	.39	3700	.68	.55	5200	.68	.55	5200
20	1750	87.5	3.71	3.35	2413	4.63	3.97	2558	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	.41	.30	3846	.41	.30	3846	.61	.46	5800	.61	.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	.31	.22	3500	.31	.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	2.80	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	.30	.21	4000	.30	.21	4000	.42	.29	5600	.42	.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	.85	3100	1.17	.91	3350	1.58	1.25	4600	1.68	1.33	4900
	100	2.5	.25	.15	3846	.25	.15	3846	.37	.23	5800	.37	.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	.89	2450	1.41	1.04	2850	1.67	1.24	3400	1.96	1.46	4000
	690	13.8	.87	.61	2800	.95	.67	3050	1.19	.85	3900	1.28	.92	4200
	100	2.0	.19	.10	3325	.19	.10	3325	.25	.14	4500	.25	.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	3277
	1150	19.2	1.05	.70	2300	1.23	.82	2700	1.50	1.02	3350	1.72	1.17	3850
	690	11.5	.71	.48	2650	.78	.53	2900	1.02	.69	3800	1.10	.75	4100
	100	1.7	.16	.083	3100	.16	.083	3100	.22	.12	4400	.22	.12	4400
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 339).

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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	OUT-PUT RPM	OUTPUT			OUTPUT			OUTPUT			OUTPUT		
			INPUT HP	HP	TORQUE (lb- in)	INPUT HP	HP	TORQUE (lb- in)	INPUT HP	HP	TORQUE (lb- in)	INPUT HP	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	46.0	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	4325	10.63	9.35	10250	11.93	10.49	11500
	690	34.5	5.59	4.93	9000	5.97	5.25	4900	7.83	6.89	12600	8.54	7.53	13750
	100	5.0	1.18	.92	11585	1.18	.92	5800	1.63	1.34	17000	1.63	1.34	17000
25	1750	70	—	—	—	—	—	—	—	—	—	—	—	—
	1150	46	—	—	—	—	—	—	—	—	—	—	—	—
	690	27.6	—	—	—	—	—	—	—	—	—	—	—	—
	100	4.0	—	—	—	—	—	—	—	—	—	—	—	—
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	.93	.64	12250	.93	.64	12250	1.24	.92	17500	1.24	.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	.71	.46	11585	.71	.46	11585	1.00	.67	17000	1.00	.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	.46	.28	9000	.46	.28	9000	.80	.51	16000	.80	.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	.43	.24	9000	.43	.24	9000	.74	.43	16000	.74	.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 339).



700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)

F700 SERIES - FLANGED QUILL TYPE

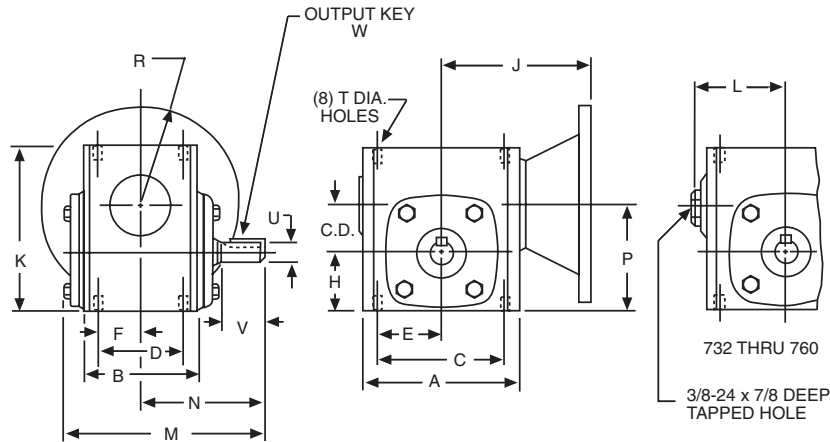
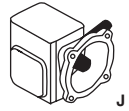
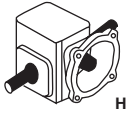
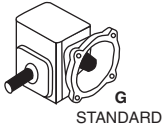
QC700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 14

FOR RATING INFORMATION, See Pages 15, 20-31

A

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

SIZE	C.D.	A	B	C	D	E	F	H	J-NEMA MOUNTING							K	L	M
									F700			QC700						
									42CZ	56C 140TC	180TC 210C	42CZ	56C 140TC	180TC 210TC	250TC			
710	1.00	3.25	2.50	2.63	1.69	1.31	.84	1.31	3.16	3.97	—	4.15	5.01	—	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	—	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	—	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	—	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	—	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	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	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	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	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	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				APPROX. WEIGHT (LBS.)		FAN KIT NO.**
			42CZ	56C 140TC	180TC 210TC 250TC	TAP SIZE	DEPTH	U +0.000 -0.001	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 16.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.



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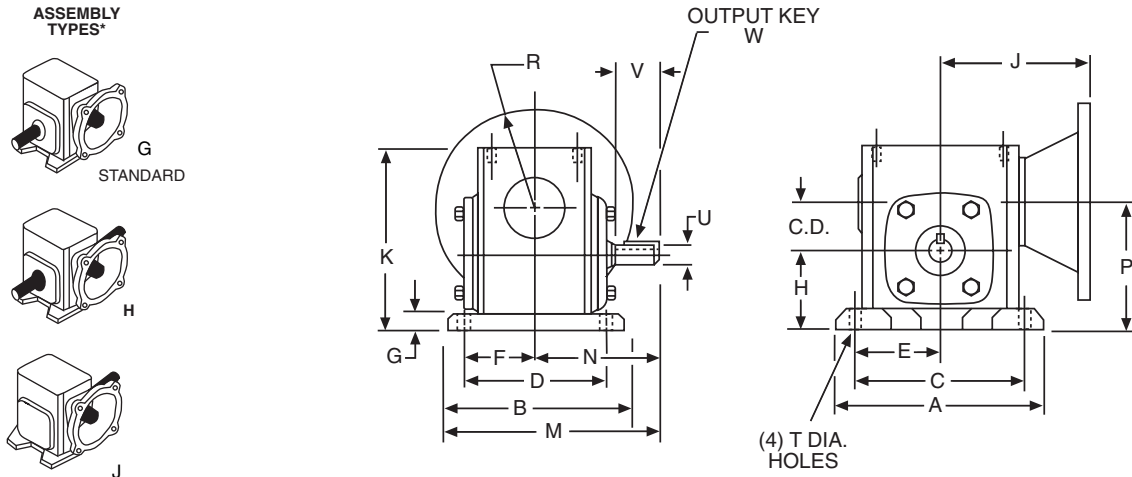
700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

B POSITION HORIZONTAL BASE

F700 SERIES - FLANGED QUILL TYPE QC700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 14.

FOR RATING INFORMATION, See Pages 15, 20-31.



ALL DIMENSIONS IN INCHES

SIZE	C.D.	A	B	C	D	E	F	G	H	J-NEMA MOUNTING						K	M
										F700			QC700				
										42CZ	56C 140TC	180TC 210C	42CZ	56C 140TC	180TC 250TC		
710	1.00	4.63	3.69	3.75	2.88	1.88	1.44	.44	1.75	3.16	3.97	—	4.15	5.01	—	4.06	4.72
713	1.33	5.38	4.19	4.38	3.31	2.19	1.66	.53	2.25	—	3.94	—	—	5.46	—	5.19	6.09
715	1.54	6.44	5.44	5.25	4.31	2.63	2.16	.59	2.50	—	4.50	—	—	6.11	—	5.97	7.03
718	1.75	7.00	5.69	5.75	4.50	2.88	2.25	.69	2.75	—	4.69	—	—	6.29	—	6.44	7.16
721	2.06	7.75	5.94	6.38	4.69	3.19	2.34	.72	3.00	—	5.06	—	—	6.76	—	7.09	7.66
724	2.38	8.50	6.19	7.06	4.88	3.53	2.44	.75	3.25	—	5.25	5.69	—	6.95	7.81	7.69	8.19
726	2.62	9.63	6.66	8.00	5.25	4.00	2.63	.75	3.69	—	5.75	6.19	—	7.39	8.31	8.75	8.97
730	3.00	10.00	7.50	8.44	5.88	4.22	2.94	.75	4.00	—	6.20	6.64	—	7.84	8.77	9.63	10.50
732	3.25	11.19	7.66	9.50	6.13	4.75	3.06	.88	4.38	—	6.56	7.00	—	8.20	9.13	10.25	10.94
738	3.75	12.13	8.66	10.38	7.00	5.19	3.50	.94	4.81	—	7.06	7.50	—	8.70	10.28	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				APPROX. WEIGHT (LBS.)		BASE KIT NO.†	FAN KIT NO.**
			42CZ	56C 140TC	180TC 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 16.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.

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

700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

A POSITION HORIZONTAL BASE

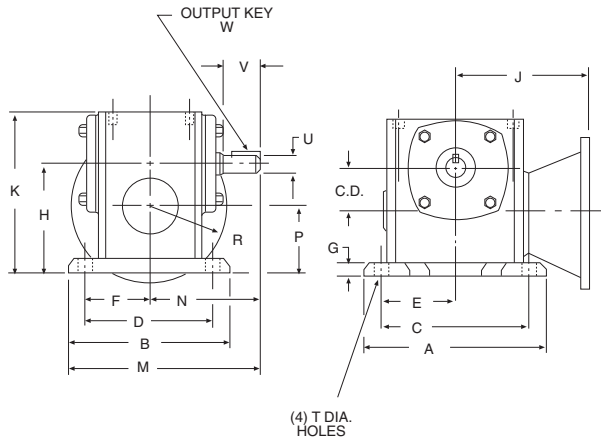
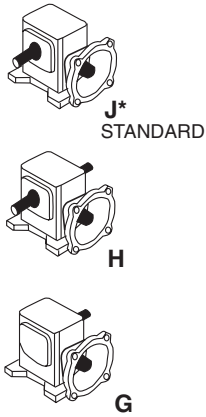
F700 SERIES - FLANGED QUILL TYPE

QC700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 14

FOR RATING INFORMATION, See Pages 15, 20-31

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

NEMA Mounting	Input	
	Bore +.0015 -.0000	Keyway
42CZ	.500	1/8 x 1/16
56C	.625	3/16 x 3/32
140TC	.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				
										42CZ	56C 140TC	180TC 210C	42CZ	56C 140TC	180TC 210TC 250TC		
710	1.00	4.62	3.69	3.75	2.88	1.88	1.44	.44	2.75	3.16	3.97	—	4.15	5.01	—	4.06	4.72
713	1.33	5.38	4.19	4.38	3.31	2.19	1.66	.53	3.47	—	3.94	—	—	5.46	—	5.19	6.09
715	1.54	6.44	5.44	5.25	4.31	2.63	2.16	.59	4.06	—	4.50	—	—	6.11	—	5.97	7.03
718	1.75	7.00	5.69	5.75	4.50	2.88	2.25	.69	4.38	—	4.69	—	—	6.29	—	6.44	7.16
721	2.06	7.75	5.94	6.37	4.69	3.19	2.34	.72	4.81	—	5.06	—	—	6.76	—	7.09	7.66
724	2.37	8.50	6.19	7.06	4.88	3.53	2.44	.75	5.19	—	5.25	5.69	—	6.95	7.81	7.69	8.19
726	2.62	9.63	6.66	8.00	5.25	4.00	2.62	.75	5.81	—	5.75	6.19	—	7.39	8.31	8.75	8.97
730	3.00	10.00	7.50	8.44	5.88	4.22	2.94	.75	6.38	—	6.20	6.64	—	7.84	8.77	9.63	10.50
732	3.25	11.19	7.66	9.50	6.12	4.75	3.06	.88	6.75	—	6.56	7.00	—	8.20	9.13	10.25	10.89
738	3.75	12.13	8.66	10.37	7.00	5.19	3.50	.94	7.50	—	7.06	7.50	—	8.70	10.28	11.38	12.09

SIZE	N	P	R					T HOLES	LOW SPEED SHAFT				APPROX. WEIGHT (LBS.)		BASE KIT NO.†	FAN KIT NO.**
			NEMA MOUNTING						U +.000/-0.001	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	54150
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	54151

* See Assemblies and Mounting Positions, Page 16.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.

700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

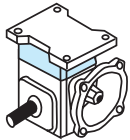
BRB POSITION HORIZONTAL
BASE WITH RISER BLOCK

FOR ORDERING INFORMATION, see Page 14.

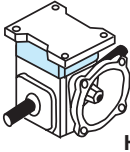
F700 SERIES - FLANGED QUILL TYPE
QC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 15, 20-31.

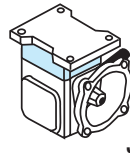
ASSEMBLY
TYPES*



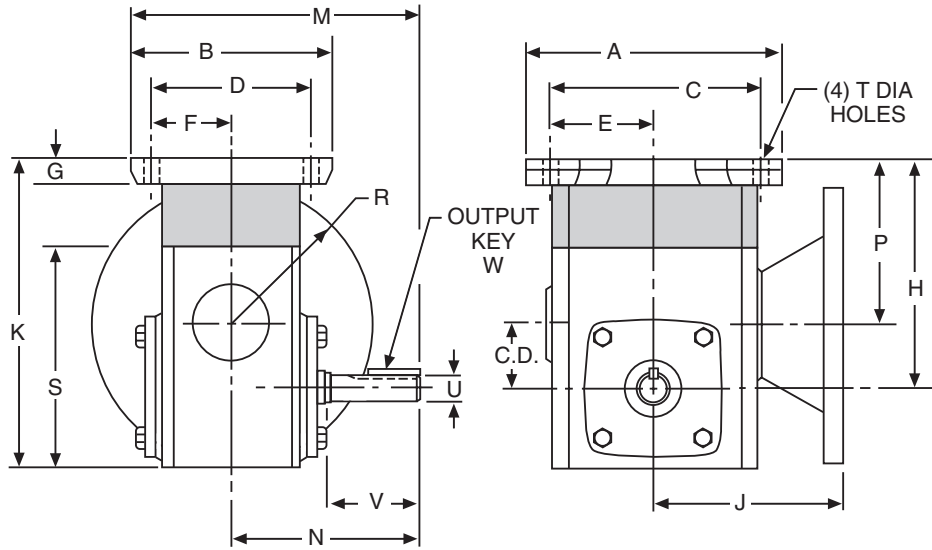
G
STANDARD



H



J



ALL DIMENSIONS IN INCHES

SIZE	C.D.	H										J-NEMA MOUNTING						K		
		NEMA MOUNTING					F700					QC700			42CZ	56C	80TC			
		42CZ	56C	180TC	210C	42CZ	56C	180TC	210C	42CZ	56C	180TC								
710	1.00	4.63	3.69	3.75	2.88	1.88	1.44	.44	3.94	5.13	—	3.16	3.97	—	4.15	5.01	—	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	—	—	7.19	—
715	1.54	6.44	5.44	5.25	4.31	2.63	2.16	.59	—	5.66	—	—	4.50	—	—	6.11	—	—	7.57	—
718	1.75	7.00	5.69	5.75	4.50	2.88	2.25	.69	—	6.06	—	—	4.69	—	—	6.29	—	—	8.13	—
721	2.06	7.75	5.94	6.38	4.69	3.19	2.34	.72	—	6.34	—	—	5.06	—	—	6.76	—	—	8.63	—
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	—	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	—	10.00	11.27
730	3.00	10.00	7.50	8.44	5.88	4.22	2.94	.75	—	7.44	8.51	—	6.20	6.64	—	7.84	8.77	—	10.69	11.76
732	3.25	11.19	7.66	9.50	6.13	4.75	3.06	.88	—	7.94	9.13	—	6.56	7.00	—	8.20	9.13	—	11.44	12.63

SIZE	M	N	P			R			S	T	LOW SPEED SHAFT				APPROX. WEIGHT (LBS.)		BASE KIT NO.†	FAN KIT NO.**
			NEMA MOUNTING			NEMA MOUNTING					U +.000 -.001	V	W-KEY		F	QC		
			42CZ	56C	180TC	42CZ	56C	180TC					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	54150

* See Assemblies and Mounting Positions, Page 16.

** For Riser Block Kits and Fan Kits, see Page 116.

† For Base Kits, see Page 115.

700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

C/D POSITION VERTICAL BASE
C/E HIGH BASE D/F LOW BASE

F700 SERIES - FLANGED QUILL TYPE
QC700 SERIES - FLANGED COUPLING TYPE

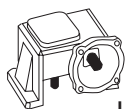
FOR ORDERING INFORMATION, see Page 14

FOR RATING INFORMATION, See Pages 15, 20-31

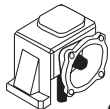
ASSEMBLY TYPES*

C/D BASES

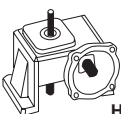
E/F BASES



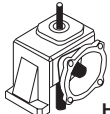
J STANDARD



G STANDARD



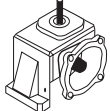
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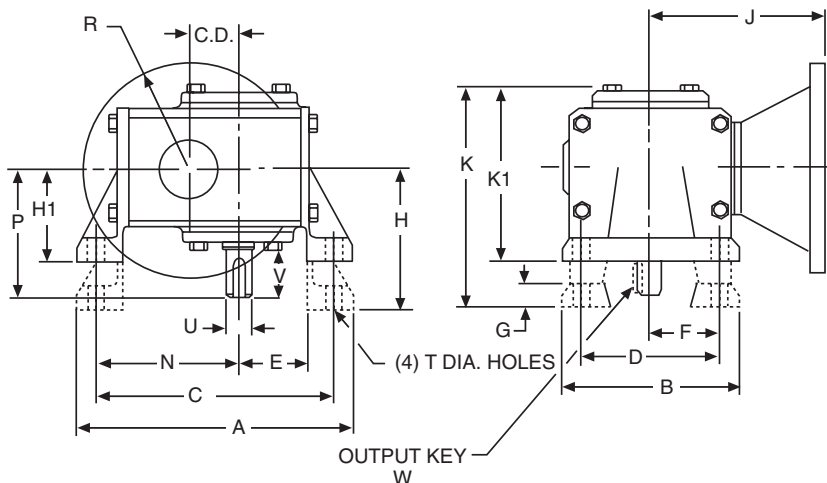
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G



J



ALL DIMENSIONS IN INCHES

SIZE	C.D.	A	B	C	D	E	F	G	H	H1	J - NEMA MOUNTING						K	K1
											F700			QC700				
											42CZ	56C 140TC	180TC 210C	42CZ	56C 140TC	180TC 210TC 250TC		
710	1.00	6.06	3.22	5.13	2.31	1.38	1.16	.44	2.94	—	3.16	3.97	—	4.15	5.01	—	4.59	—
713	1.33	7.09	4.13	6.16	3.25	1.78	1.63	.53	3.56	2.31	—	3.94	—	—	5.46	—	5.59	4.34
715	1.54	8.03	5.16	6.97	4.00	1.97	2.00	.69	4.38	3.00	—	4.50	—	—	6.11	—	6.91	5.53
718	1.75	8.44	5.16	7.38	4.00	2.13	2.00	.69	4.38	3.00	—	4.69	—	—	6.29	—	6.88	5.50
721	2.06	9.50	6.03	8.38	4.88	2.34	2.44	.72	4.88	3.13	—	5.06	—	—	6.76	—	7.50	5.75
724	2.38	10.06	6.31	8.94	4.88	2.56	2.44	.75	5.25	3.38	—	5.25	5.69	—	6.95	7.81	7.97	6.09
726	2.62	11.69	7.38	10.13	5.75	3.00	2.88	.88	5.59	3.63	—	5.75	6.19	—	7.39	8.31	8.50	6.53
730	3.00	12.50	8.00	11.13	6.00	3.34	3.00	.94	5.88	3.94	—	6.20	6.64	—	7.84	8.77	9.13	7.20
732	3.25	13.38	9.00	11.88	6.13	3.56	3.06	.88	6.25	4.69	—	6.56	7.00	—	8.20	9.13	10.00	8.56
738	3.75	15.69	10.00	13.94	8.00	4.00	4.00	.94	7.00	5.25	—	7.06	7.50	—	8.70	10.28	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 NEMA MOUNTING				LOW SPEED SHAFT					HIGH BASE		LOW BASE		FAN KIT NO.**	
			42CZ	180TC 56C 140TC	210TC 250TC	T HOLES	U + .000 - .001	V	W - KEY		APPROX. WEIGHT (LBS.) F QC	BASE KIT NO.†	APPROX. WEIGHT (LBS.) F QC	BASE KIT NO.†			
									SQ.	LENGTH							
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 16.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 116.



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700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

X POSITION VERTICAL BASE

X = INPUT VERTICAL UP

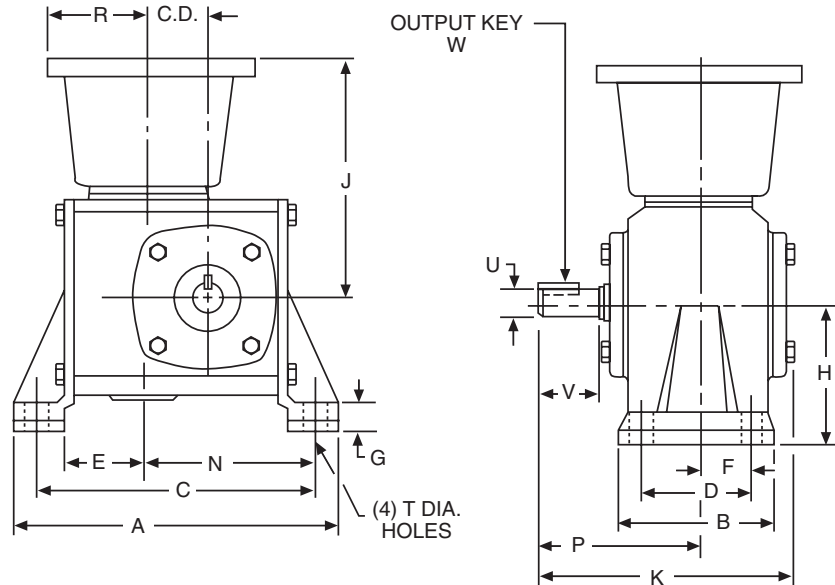
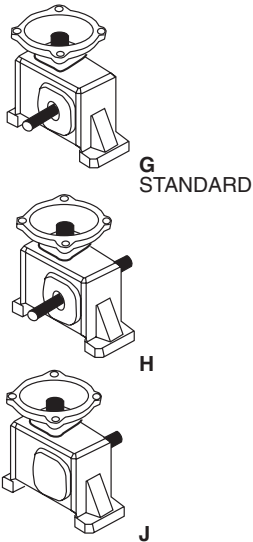
FOR ORDERING INFORMATION, see Page 14.

F700 SERIES - FLANGED QUILL TYPE

QC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 15, 20-31.

ASSEMBLY
TYPES*



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	.53	2.94	3.94	—	5.46	—	6.03	3.92
715	1.54	8.25	3.72	7.25	2.50	2.00	1.25	.69	3.50	4.50	—	6.11	—	6.84	4.37
718	1.75	8.62	3.72	7.63	2.50	2.00	1.25	.69	3.50	4.69	—	6.29	—	6.81	4.75
721	2.06	9.75	3.84	8.63	2.63	2.09	1.31	.72	3.94	5.06	—	6.76	—	7.28	5.47
724	2.37	10.31	4.13	9.19	2.88	2.13	1.44	.75	4.06	5.25	5.69	6.95	7.81	7.81	6.00
726	2.62	11.88	4.53	10.38	3.13	2.50	1.56	.88	4.75	5.75	6.19	7.39	8.31	8.53	6.75

SIZE	P	R-NEMA MOUNTING		T HOLES	LOW SPEED SHAFT				APPROXIMATE WEIGHT (LBS.)		BASE KIT NO. †
		56C 140TC	180TC		U +.001 -.000	V	W-KEY		F	QC	
							SQUARE	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 16.

† For Base Kits, see Page 115.

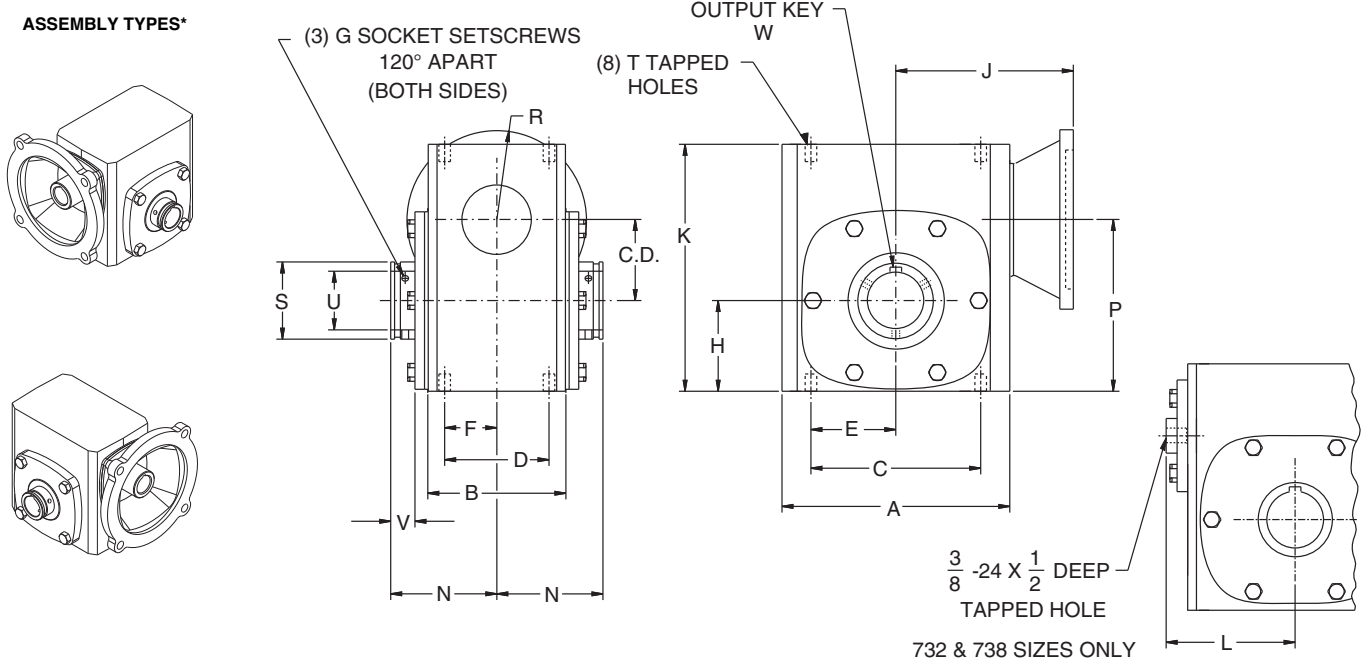


700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
BORED TO SIZE HOLLOW OUTPUT SHAFT
 FOR ORDERING INFORMATION, see Page 14.

HF700 SERIES - FLANGED QUILL TYPE
HQC700 SERIES - FLANGED COUPLING TYPE
 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 - NEMA MOUNTING				K	L	N
										HF700		HQC700				
										56C 140TC	180TC 210C	56C 140TC	180TC 1210C			
713	1.33	4.25	2.88	3.25	2.00	1.63	1.00	#10-32	1.72	3.97	—	5.46	—	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	—	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	—	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	—	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	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	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	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	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	10.44	5.50	4.81

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		114 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

* See Assemblies and Mounting Positions, Page 16.

** For Fan Kits, see Page 116.

Input may be rotated clockwise or counterclockwise. The "SF" style is recommended for direct replacement only.
 See Page 114 for available bore sizes

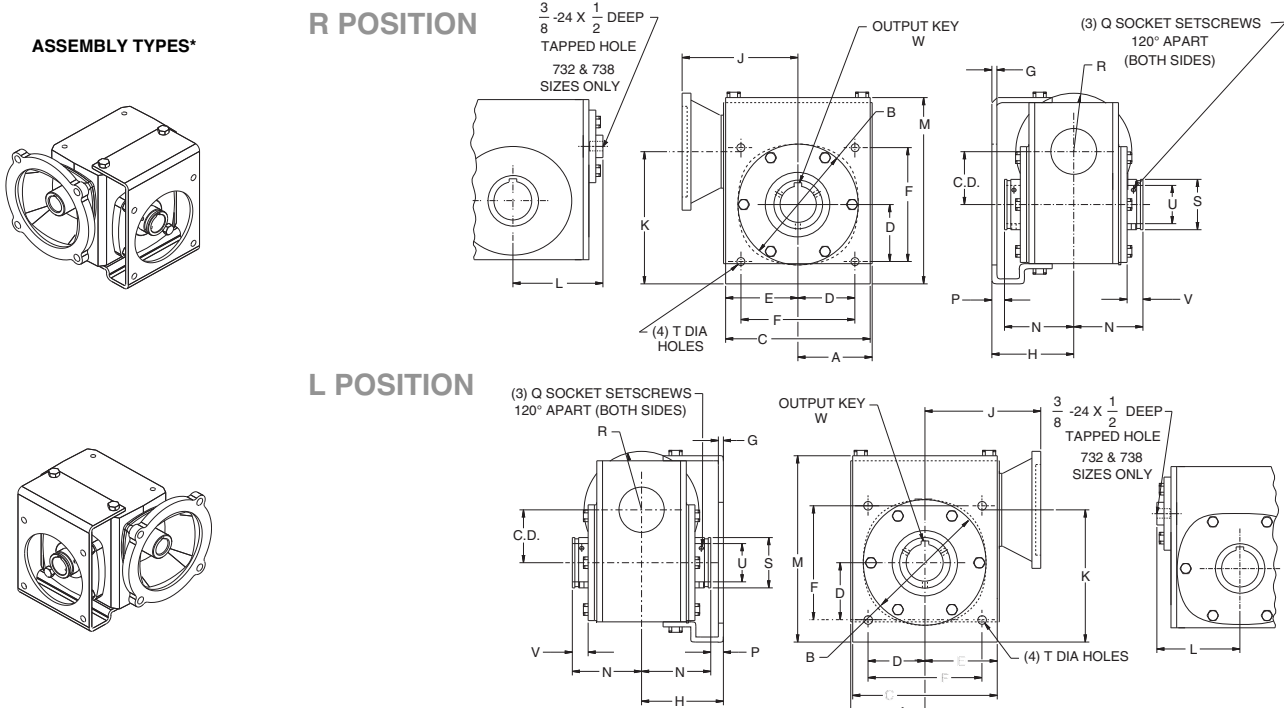


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700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

R/L POSITION MOUNTING BRACKET
BORED TO SIZE HOLLOW OUTPUT SHAFT
FOR ORDERING INFORMATION, see Page 14.

HF700 SERIES - FLANGED QUILL TYPE
HQC700 SERIES - FLANGED COUPLING TYPE
FOR RATING INFORMATION, See Pages 15, 20-31.



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	3.94	—	5.46	—	3.70	—
715	1.54	2.56	3.62	4.75	1.77	2.38	3.54	.19	3.56	4.50	—	6.11	—	4.07	—
718	1.75	2.75	4.06	5.00	2.08	2.41	4.16	.19	3.50	4.69	—	6.29	—	4.53	—
721	2.06	3.00	4.50	5.75	2.30	2.88	4.60	.19	3.75	5.06	—	6.76	—	5.18	—
724	2.38	3.19	5.00	5.75	2.65	2.88	5.30	.25	3.72	5.25	5.69	6.95	7.81	5.98	—
726	2.62	3.69	6.00	7.18	2.83	3.59	5.66	.25	4.06	5.75	6.19	7.39	8.31	6.56	—
730	3.00	4.06	7.00	8.00	3.18	4.00	6.36	.25	4.50	6.20	6.64	7.84	8.77	7.51	—
732	3.25	4.50	7.00	8.50	3.54	4.25	7.08	.25	5.25	6.56	7.00	8.20	9.13	8.00	4.94
738	3.75	5.00	8.00	9.50	4.06	4.75	8.12	.25	5.47	7.06	7.50	8.70	10.28	8.78	5.50

SIZE	M	N	P	Q	R - NEMA MOUNTING		S	T HOLES	LOW SPEED SHAFT			APPROX. WEIGHT (LBS.)		FAN KIT NO.**	
					56C 140TC	180TC 210C			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		16	20	—	
715	6.16	3.03	.44	#10-32	3.31	—	1.38	11/32	1.000	.84		22	28	—	
718	6.66	3.03	.47	#10-32	3.31	—	1.38	11/32	1.000	.74	See Page	29	31	—	
721	7.47	3.22	.53	1/4-28	3.31	—	1.94	13/32	1.4375	.87	114 For	36	36	—	
724	8.30	3.22	.50	1/4-28	3.31	4.63	1.94	13/32	1.4375	.75	Key Information	41	47	—	
726	9.25	3.44	.62	5/16-24	3.31	4.63	2.50	13/32	1.9375	.78		52	52	—	
730	10.38	4.19	.31	5/16-24	3.31	4.63	2.88	13/32	2.1875	1.12		76	80	—	
732	10.91	4.31	.94	5/16-24	3.31	4.63	2.88	9/16	2.1875	.93		95	107	51450	
738	11.84	4.81	.66	3/8-24	3.31	4.63	3.25	9/16	2.4375	1.11		147	150	51451	

* See Assemblies and Mounting Positions, Page 16.

** For Fan Kits, see Page 116. See Page 114 for available bore sizes.

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

700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE) HOLLOW OUTPUT SHAFT

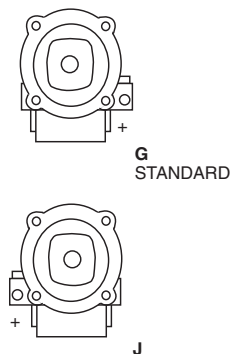
FOR ORDERING INFORMATION, see Page 14.

SF700 SERIES - FLANGED QUILL TYPE

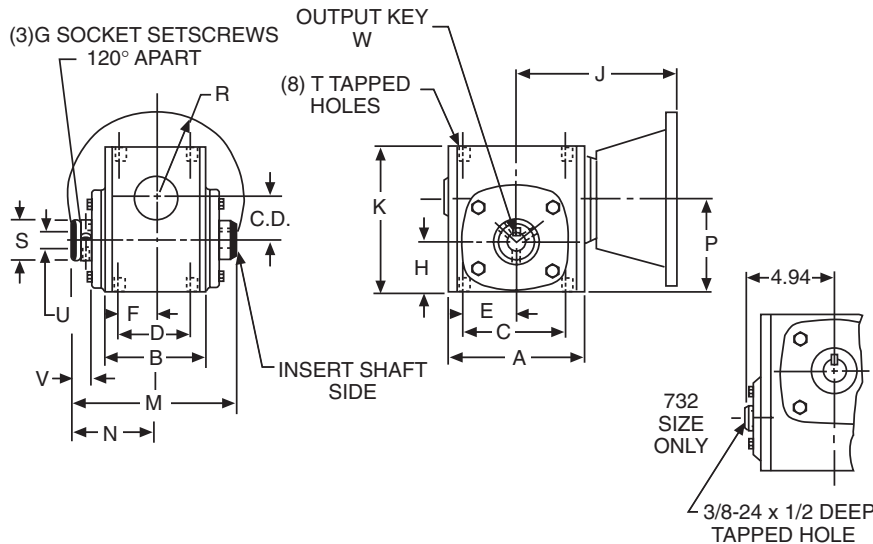
FOR ADDITIONAL SIZES, See the H Series Page 38.
FOR RATING INFORMATION, See Pages 15, 20-31.

A

ASSEMBLY TYPES*



+HOLLOW SHAFT SETSCREW ON THIS SIDE.



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

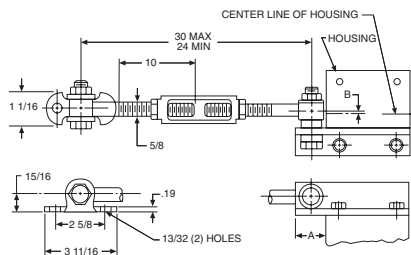
SIZE	P	R-NEMA MOUNTING		S	T		LOW SPEED SHAFT			APPROX. WEIGHT (LBS.) SF	FAN KIT NO.**	
		56C 140TC	180TC 210C		TAP SIZE	DEPTH	U†† +.001 -.001	V	W-KEY			
		SIZE	LENGTH									
718	3.81	3.31	—	1.38	5/16-18	.50	1.000	.78	See Page		23	—
721	4.34	3.31	—	1.50	3/8-16	.56	1.125	.88	114 For		27	—
726	5.56	3.31	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 116.

†† For additional output bore diameters, refer to the H Series, Page 114.

* 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 16.

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.



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700 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

V/W POSITION MOUNTING FLANGE HOLLOW OUTPUT SHAFT

FOR ORDERING INFORMATION, see Page 14.

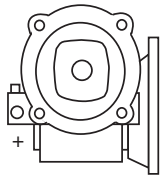
SF700 SERIES - FLANGED QUILL TYPE

FOR ADDITIONAL SIZES, See the H Series Page 39.

FOR RATING INFORMATION, See Pages 15, 20-31.



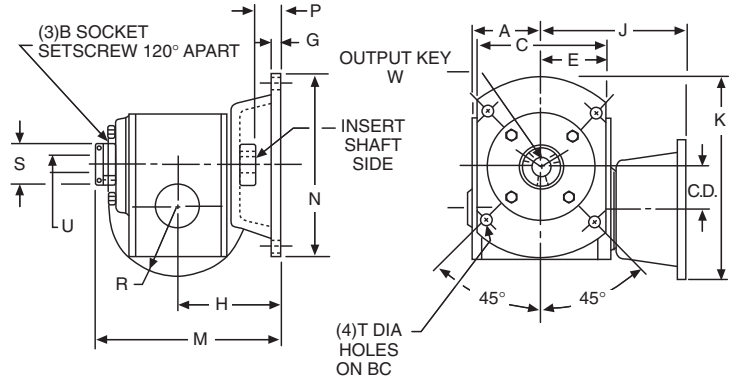
ASSEMBLY TYPES*



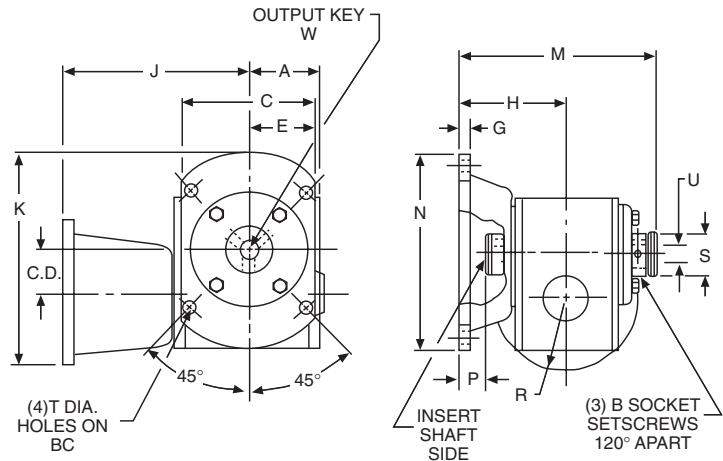
J
STANDARD

+HOLLOW SHAFT
SETSCREW ON
THIS SIDE.

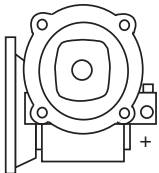
V POSITION



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 +0.01 -0.000	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	114 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 116.

* 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 16.

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

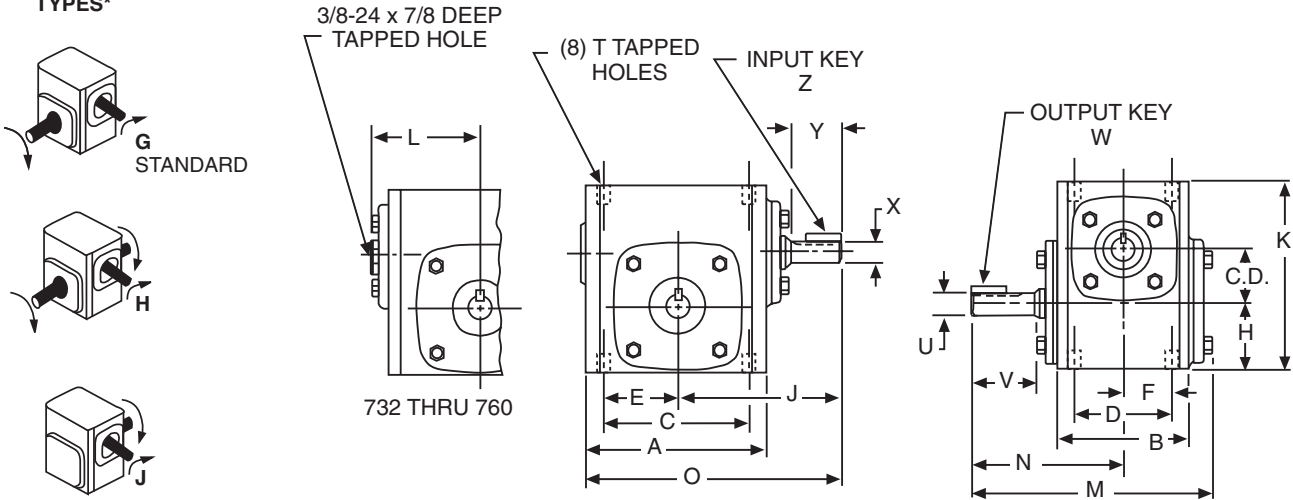
BASIC MODELS (NO BASE)

700 SERIES

FOR ORDERING INFORMATION, see Page 14

FOR RATING INFORMATION, See Pages 15, 20-31

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 17.

** For Fan Kits, see Page 116.

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

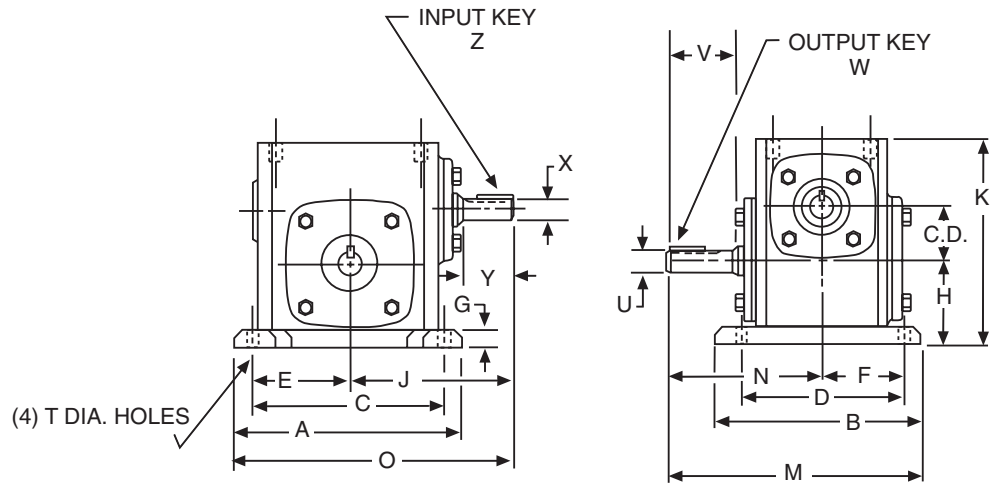
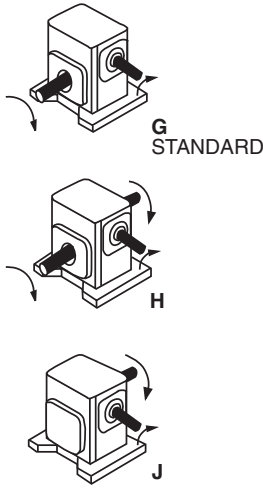
B POSITION HORIZONTAL BASE

700 SERIES

FOR ORDERING INFORMATION, see Page 14

FOR RATING INFORMATION, See Pages 15, 20-31

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	2.25	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	.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	2.75	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	.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	.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	.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	.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	.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	.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 17.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

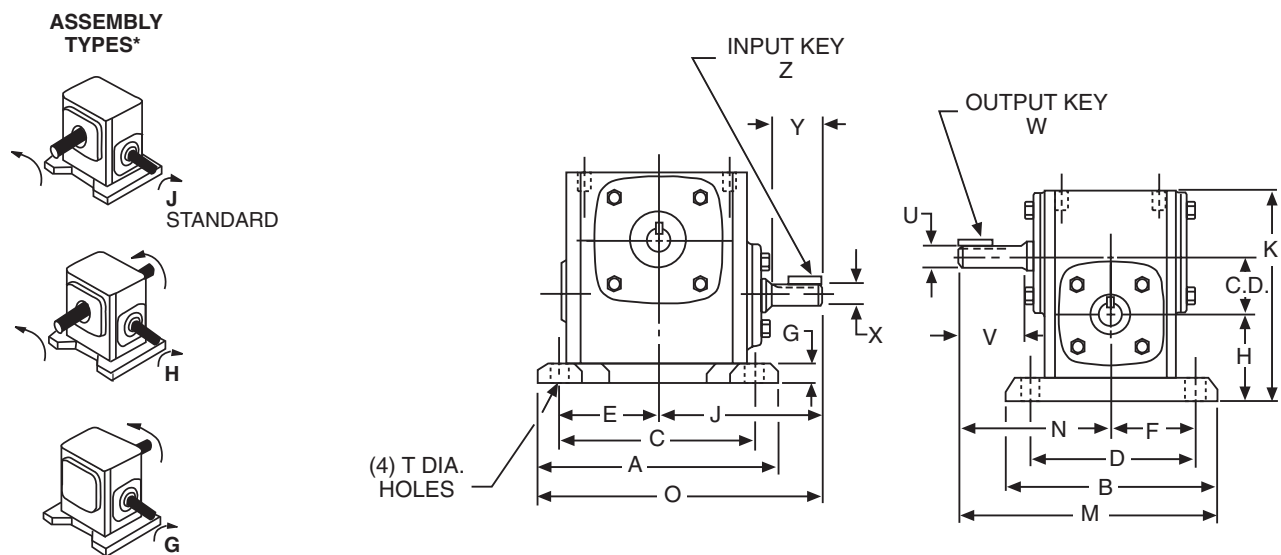
A POSITION HORIZONTAL BASE

700 SERIES

FOR ORDERING INFORMATION, see Page 14

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	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 17.

** For Fan Kits, see Page 116.
† For Base Kits, see Page 115.

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

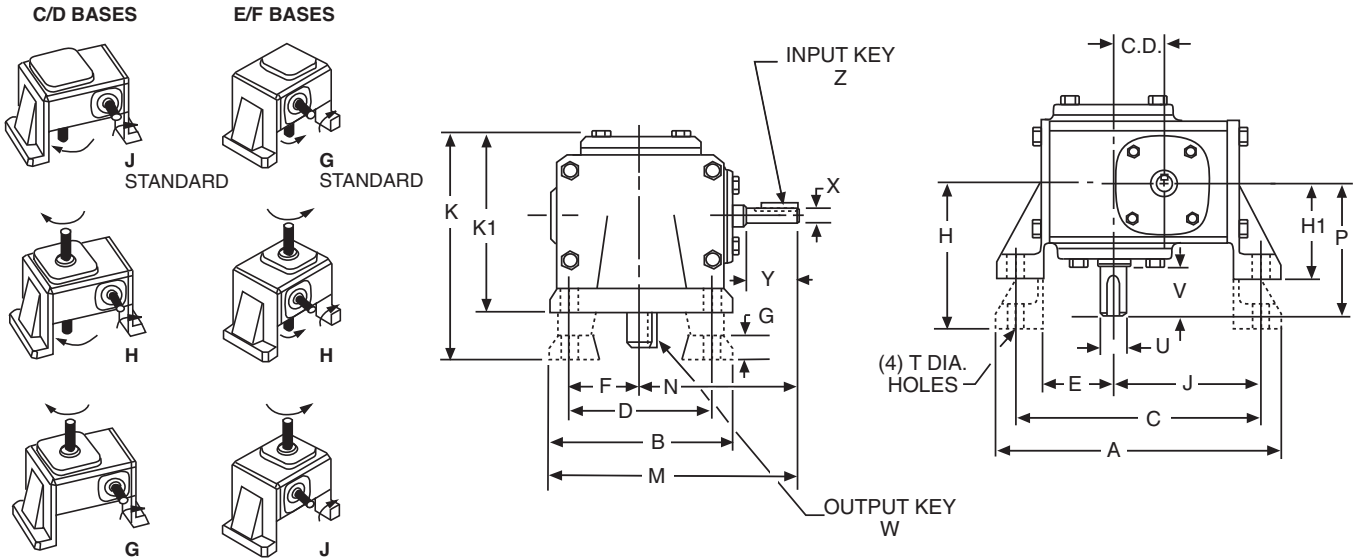
C/D POSITION VERTICAL BASE
C/E HIGH BASE D/F LOW BASE

700 SERIES

FOR ORDERING INFORMATION, see Page 14.

FOR RATING INFORMATION, See Pages 15, 20-31.

ASSEMBLY TYPES*



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		APP. WT. (LBS.)	BASE KIT NO.+	APP. WT. (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 17.
 ** For Fan Kits, see Page 116.
 † For Base Kits, see Page 115.

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

X/Y POSITION VERTICAL BASE

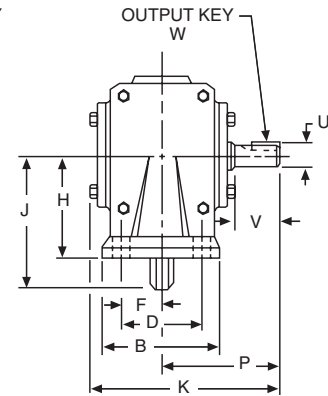
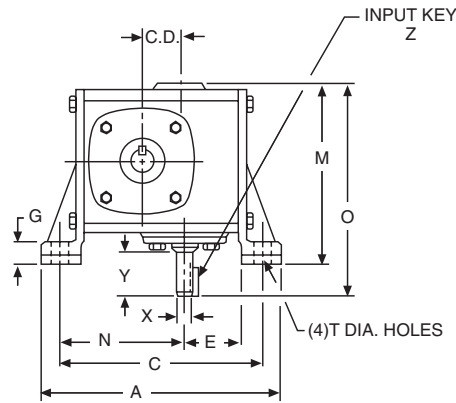
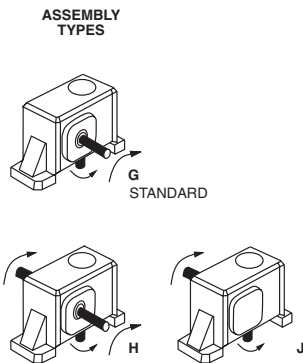
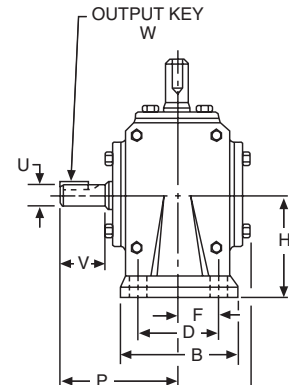
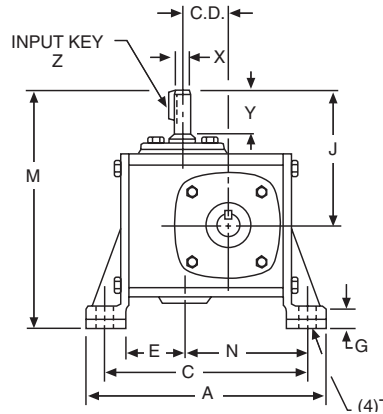
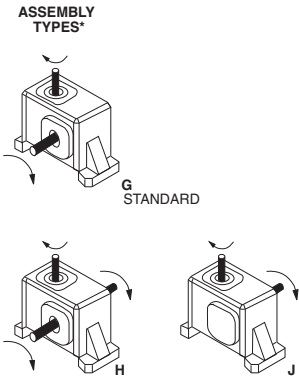
700 SERIES

X = INPUT VERTICAL UP
Y = INPUT VERTICAL DOWN

FOR ORDERING INFORMATION, see Page 14.

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 17.

† For Base Kits, see Page 115.

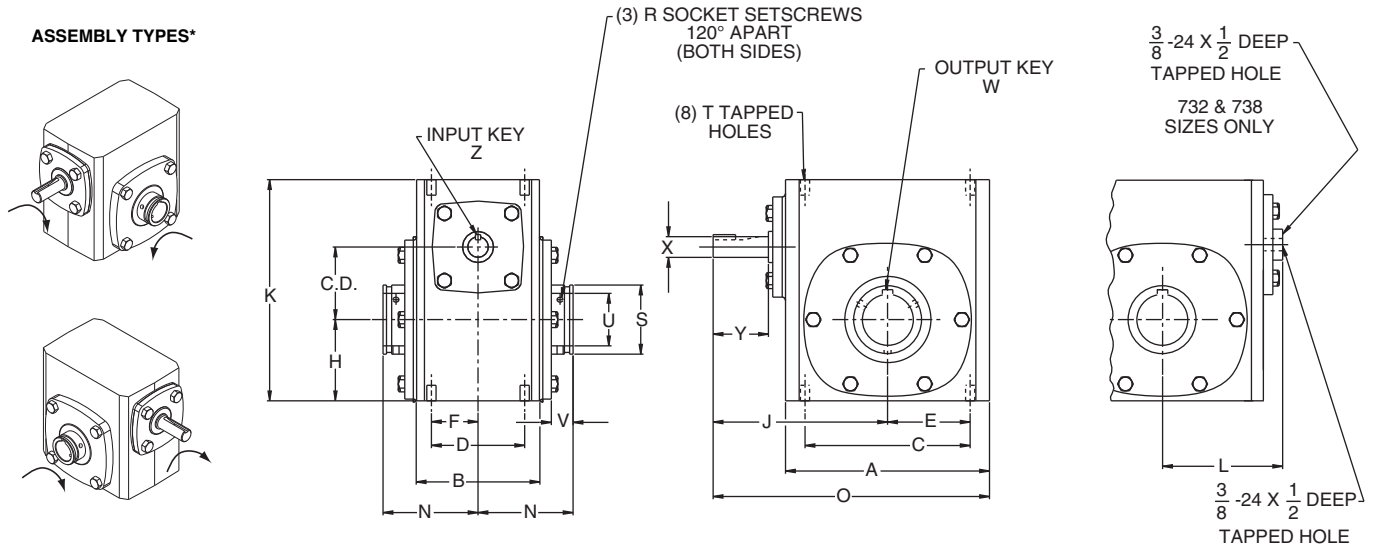
700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
BORED TO SIZE HOLLOW OUTPUT SHAFT

H700 SERIES

FOR ORDERING INFORMATION, see Page 14.

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

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		See Page 114 For	.6245	1.56	3/16	13/16	26	—
724	3/8-16	.56	1.4375	.75		Key Information	.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

* See Assemblies and Mounting Positions, Page 17.

** For Fan Kits, see Page 116.

See Page 114 for available bore sizes.

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

700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

R/L POSITION MOUNTING BRACKET HOLLOW OUTPUT SHAFT

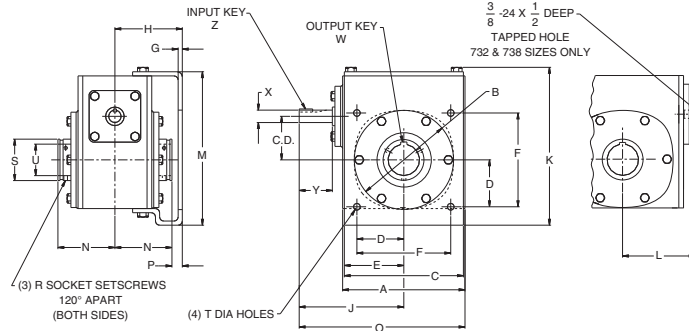
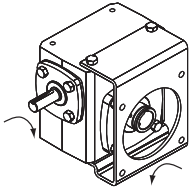
H700 SERIES

FOR ORDERING INFORMATION, see Page 14.

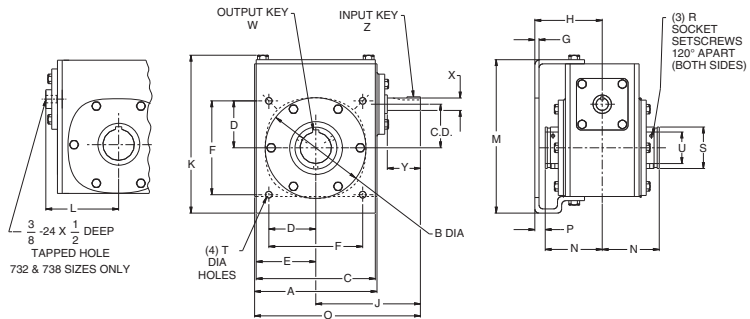
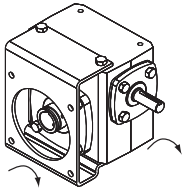
FOR RATING INFORMATION, See Pages 15, 20-31.

R POSITION

ASSEMBLY TYPES*



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 114 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			.7495	2.00	3/16	1	54	—	
730	5/16-24	2.88	13/32	2.1875			.8745	2.24	3/16	1	67	—	
732	5/16-24	2.88	9/16	2.1875			.8745	2.31	3/16	1	89	51450	
738	3/8-24	3.25	9/16	2.4375			.9995	2.75	1/4	1-1/4	132	51451	

* See Assemblies and Mounting Positions, Page 17.

** For Fan Kits, see Page 116. See Page 114 for available bore sizes.

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

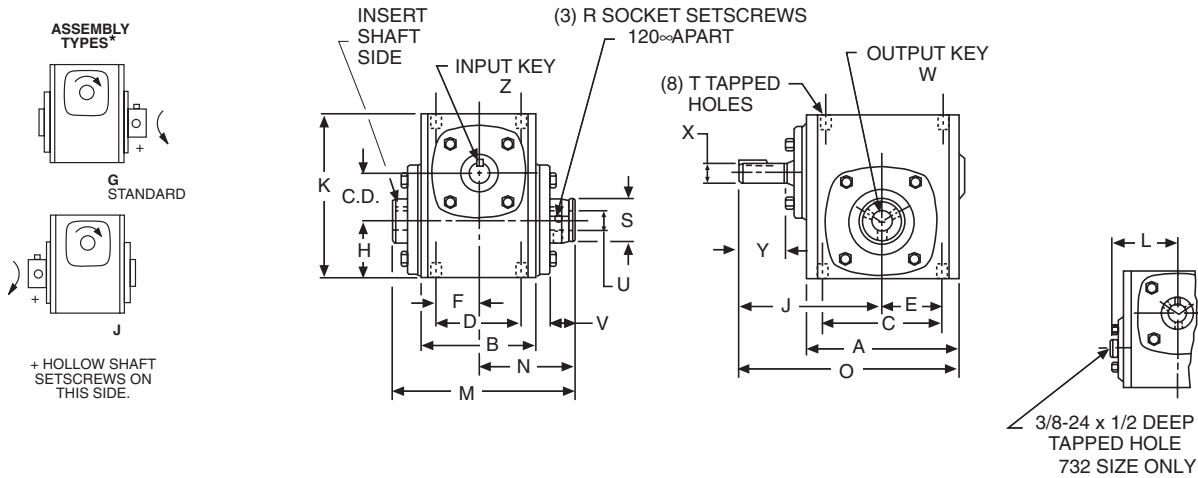
700 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE) HOLLOW OUTPUT SHAFT

S700 SERIES

FOR ORDERING INFORMATION, see Page 14.

FOR ADDITIONAL SIZES, See the H Series Page 47.
FOR RATING INFORMATION, See Pages 15, 20-31.



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

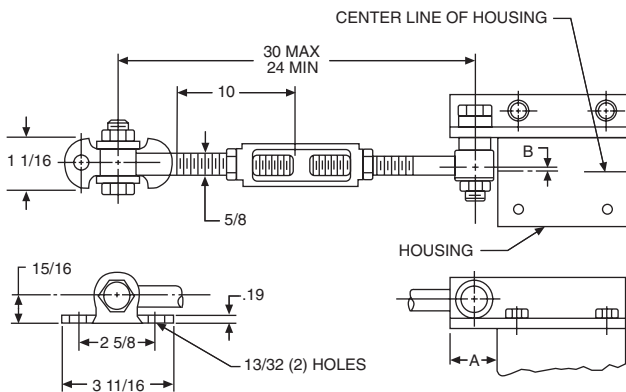
SIZE	T		LOW SPEED SHAFT				HIGH SPEED SHAFT				APPROX. WEIGHT (LBS.)	FAN KIT NO.**
	TAP SIZE	DEPTH	U†† +.000 -.001	V	W - KEY		X +.000 -.001	Y	Z - KEY			
					SQ.	LENGTH			SQ.	LENGTH		
718	5/16-18	.50	1.000	.78	See Page		.6245	1.56	3/16	13/16	19	—
721	3/8-16	.56	1.125	.88	114 For		.6245	1.56	3/16	13/16	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 17. 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 116.

†† For additional Output Bore Diameters, refer to the H Series, Page 114.

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

V/W POSITION MOUNTING FLANGE HOLLOW OUTPUT SHAFT

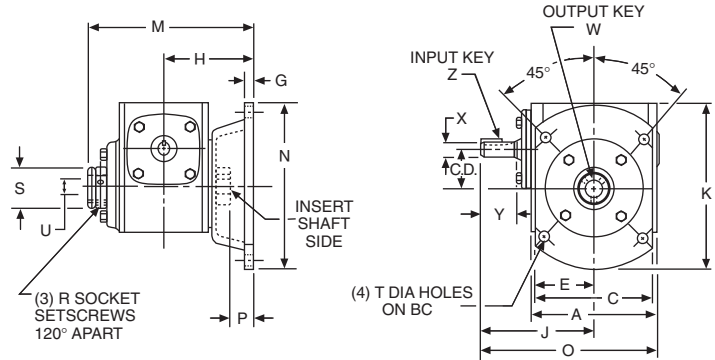
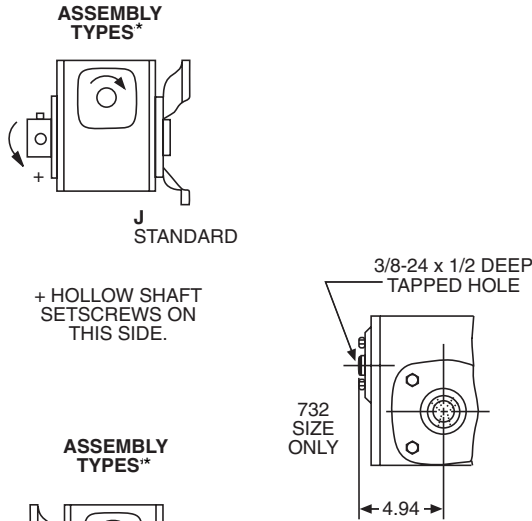
FOR ORDERING INFORMATION, see Page 14.

S700 SERIES

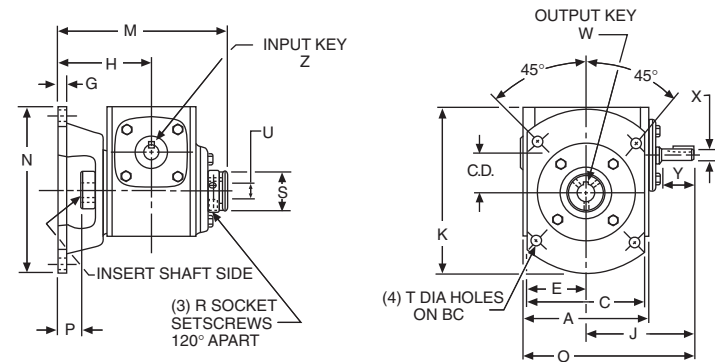
FOR ADDITIONAL SIZES, See the H Series Page 48.
FOR RATING INFORMATION, See Pages 15, 20-31.

A

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 +.000 -.001	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	114 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 17.

** For Fan Kits, see Page 116.

700 SERIES STAINLESS STEEL WASHDOWN DUTY REDUCERS

BASIC MODELS (NO BASE)

FOR ORDERING INFORMATION, see page 14.

SSF700/SSHF700 SERIES

FOR RATING INFORMATION, See Pages 15, 20-31



APPLICATIONS:

- Washdown
- Food Processing
- Chemical Processing
- Pharmaceutical Industry

STANDARD FEATURES:

- 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
- NSF National Sanitation Foundation certified
- Laser marked nameplate

700 SERIES STAINLESS STEEL WASHDOWN DUTY REDUCERS

BASIC MODELS (NO BASE)

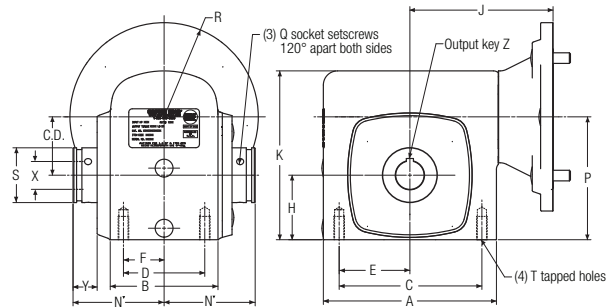
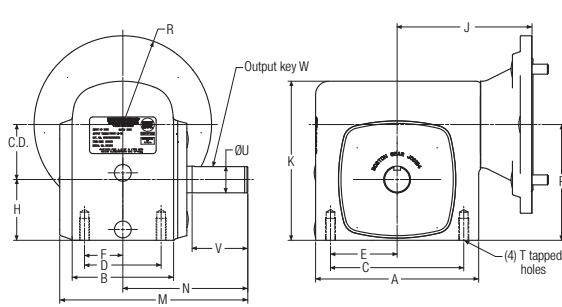
SSF700/SSHF700 SERIES

FOR ORDERING INFORMATION, see page 14.

FOR RATING INFORMATION, See Pages 15, 20-31

SSF700

SSHF700



SIZE	C.D.	A	A	B	B	C	C	D	D	E	E	F	F	G	H	H	J
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	0.69	2.06	2.75	4.69
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	0.72	2.28	3.00	5.06
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	0.75	2.94	3.69	5.75
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	0.88	3.50	4.38	6.56

SIZE	K	K	M	M	N	N	P	P	Q	R	S	T	T	U	V	W
718	5.31	6.00	6.74	7.19	4.31	3.03	3.81	4.50	#10-32	3.33	1.38	5/16-18	.60/.41	0.875	1.78	3/16 x 1 lg
721	5.97	6.69	7.09	7.66	4.69	3.22	4.34	5.06	1/4-28	3.33	2.00	3/8-16	.78/.47	1.000	2.09	1/4 x 1-1/4 lg
726	7.50	8.25	8.33	8.87	5.63	3.44	5.56	6.31	5/16-24	3.33	2.50	3/8-16	.78/.53	1.125	2.63	1/4 x 1-15/16 lg
732	9.25	10.13	10.49	10.99	7.06	4.31	6.75	7.63	5/16-24	3.33	2.88	7/16-14	.78/.53	1.375	3.25	5/16 x 2-7/16

SIZE	X	Y	Approx Z SSF700	Approx Weight SSHF700	Approx Weight SSF700B	Approx Weight SSHF700B	Weight
718	•	0.60	•	22	25	25	28
721	•	0.82	•	27	30	30	33
726	•	0.73	•	40	47	43.5	50.5
732	•	0.89	•	63	76	70	83

HOLLOW OUTPUT SHAFT BORE CODES

Fraction Size	Output Bore Code	718	721	726	732	Decimal Size*	Key Size †
1	P16	S	•	•		1.0000	.25x.25x1.63
1-1/8	P18		•	•		1.1250	.25x.25x1.63
1-3/16	P19		•	•	•	1.1875	.25x.25x1.63
1-1/4	P20		S	•	•	1.2500	.25x.25x1.63
1-7/16	P23		•	S	•	1.4375	.38x.31x2.00
1-1/2	P24			•	•	1.5000	.38x.31x2.00
1-15/16	P31			•	•	1.9375	.50x.38x2.00
2	P32				•	2.0000	.50x.38x2.00
2 3/16	P36				•	2.1875	.50 x .38 x 2

* Bore tolerance +.0015-.0000

S Standard Bore

• Optional Bore

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



B

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FOR OTHER BOSTON GEAR REDUCERS, CONTACT FACTORY.

700 SERIES WORM GEAR REFERENCE GUIDE

700 SERIES DOUBLE REDUCTION FLANGED & NON-FLANGED REDUCERS

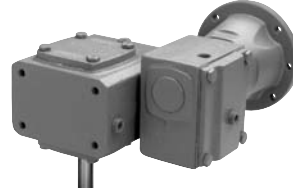
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 Lubrication - Page 62
 Motor Selection - Pages 327 and 330

FWA/QCWA700 BASIC



Dimensions - Page 68

FWC/QCWC700 BASIC



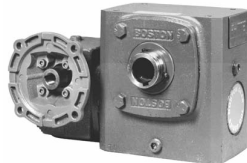
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HFWA/HQCWA700 BASIC



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 HFWC/QCWC700 - Page 74
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SFWA700 BASIC



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 SFWA700V - Page 72
 SFWC700 - Page 76
 SFWC700V/W - Page 77

WA700 BASIC



Dimensions - Page 78

WC700 BASIC



Dimensions - Page 83

HWA/HWC700 BASIC



Dimensions -
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 HWA700R/L - Page 80
 HWC700 - Page 84
 HWC700R/L - Page 85

SWA/SWC700 BASIC



Dimensions -
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 SWA700V - Page 82
 SWC700 - Page 86
 SWC700V/W - Page 87

B

700 SERIES WORM GEAR SPEED REDUCERS

700 SERIES DOUBLE REDUCTION CATALOG NUMBER EXPLANATION

HQCWA 7 26 B - 100 Z F P - B5 - H 3 - P20

700 SERIES

STYLE

- WA - Parallel shafts, projecting I/P & O/P
- HWA - Parallel shafts, projecting I/P, BostMount Hollow O/P
- SWA - Parallel shafts, projecting I/P, hollow O/P
- WC - Right Angle shafts, projecting I/P & O/P
- HWC - Right Angle shafts, projecting input, BostMount hollow output shaft.
- SWC - Right Angle shafts, projecting I/P, hollow O/P
- FWA - Parallel shafts, Quill type I/P, projecting O/P
- HFWA - Parallel shafts, Quill type I/P, BostMount Hollow O/P
- SFWA - Parallel shafts, Quill type I/P, hollow O/P
- FWC - Right Angle shafts Quill type I/P, projecting O/P
- HFWC - Right Angle shafts, Quill type input, BostMount hollow output shaft
- SFWC - Right Angle shafts, Quill type I/P, hollow O/P
- QCWA - Parallel shafts, Coupling type I/P, projecting O/P
- HQCWA - Parallel shafts, Coupling type I/P, BostMount hollow O/P
- QCWC - Right Angle shafts, Coupling type I/P, projecting O/P
- HQCWC - Right Angle shafts, Coupling type input, BostMount hollow output shaft
- C Prefix - Cast iron flange and base

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 - 5.16
60 - 6.00

REDUCTION RATIO TO 1

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

P-PRESSURE RELIEF

FAN
(732-760 Sizes only)

- Blank - No Fan
- F - Fan Kit
- E - End cap available 732 & 738 only, when no fan is used

LUBRICATION

- Z - PosiVent[®] (factory filled with Klubersynth UH1 6-460)
- Blank - No Lube
- K - Klubersynth UH1 6-460

BASE

- 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

NEMA 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

H SERIES OUTPUT BORE CODE*

For H700 Series only Specified in 1/16" increments See Page 114 for complete offering. Example: 1 1/4" - P20

*H Series Only

MOUNTING POSITIONS

- Blank - No Lubrication Supplied
- For Factory Prelubrication Indicate Mounting Position
- 1 - Standard Mounting
- 2-6 - Refer to Mounting Positions in Catalog

OUTPUT SHAFT ASSEMBLY
(When facing Input)

- G* - O/P Projection - Left
- H* - Double O/P Projection
- J* - O/P Projection - Right
- * Add "S" after letter for Stainless Steel Shaft (ex. GS, HS, JS)

NOTE: Contact factory for other model numbers.



DOUBLE REDUCTION NUMBERING SYSTEM/HOW TO ORDER



B

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

C- Prefix 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 type) with projecting output shaft.

HFWA- Double reduction, parallel shaft flanged reducer (Quill type) with BostMount hollow output shaft.

SFWA- Double reduction, parallel shaft flanged reducer (Quill type) with hollow output shaft.

FWC- Double reduction, right angle shaft flanged reducer (Quill type) with projecting output shaft.

HFWC- Double reduction, right angle shaft flanged reducer (Quill type) with BostMount hollow output shaft.

SFWC- Double reduction, right angle shaft flanged reducer (Quill type) with hollow output shaft.

QCWA- Double reduction, parallel shaft flanged reducer (Coupling type) with projecting output shaft.

HQCWA- Double reduction, parallel shaft flanged reducer (Coupling type) with BostMount hollow output shaft.

QCWC- Double reduction, right angle shaft flanged reducer (Coupling type) with projecting output shaft.

HQCWC- Double reduction, right angle shaft flanged reducer (Coupling type) with projecting 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 115.

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

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

P Pressure Relief.

Z PosiVent® -Factory Filled with Klubersynth UH1 6-460

NEMA MOUNTING Designates flange size and input bore diameter. Flanged reducers only. Leave Blank for standard reducer.

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 255 for Mounting Dimensions.

SHAFT ASSEMBLY Assembly shaft arrangements. See Assemblies, Pages 58-61.

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 type 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** - **GU**

ORDER: FWA726-100-B5-G-GU

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 340 and 341.

DOUBLE REDUCTION SELECTION TABLES

Capacity selection tables on Pages 63-67 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 56.

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 28-31.

MAXIMUM INPUT SPEEDS

W713, W718, W721, W726	4500 RPM
W730 through W760	3600 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—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.

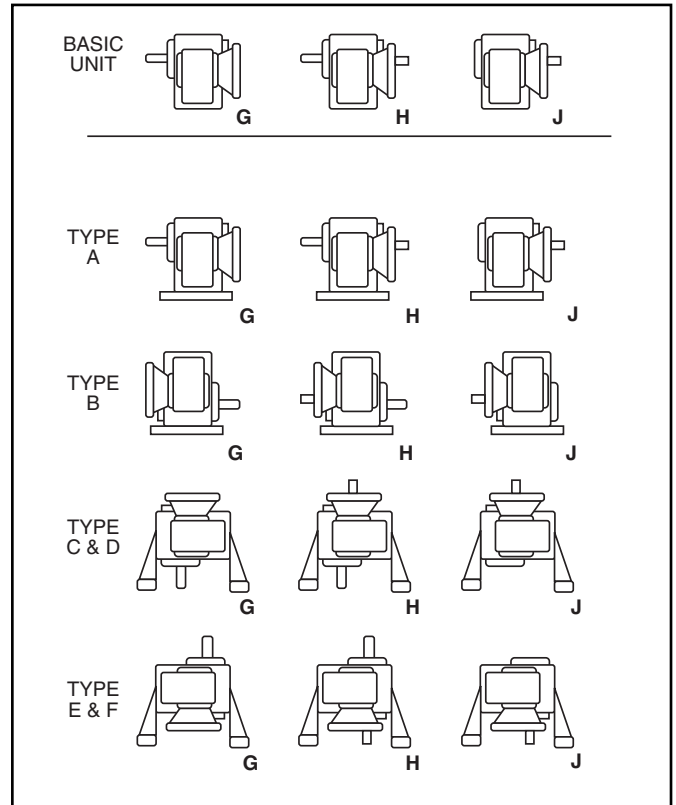
Types “C” and “E” are vertical high bases and Types “D” and “F” are vertical low bases.

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

See Page 56 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 type 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.

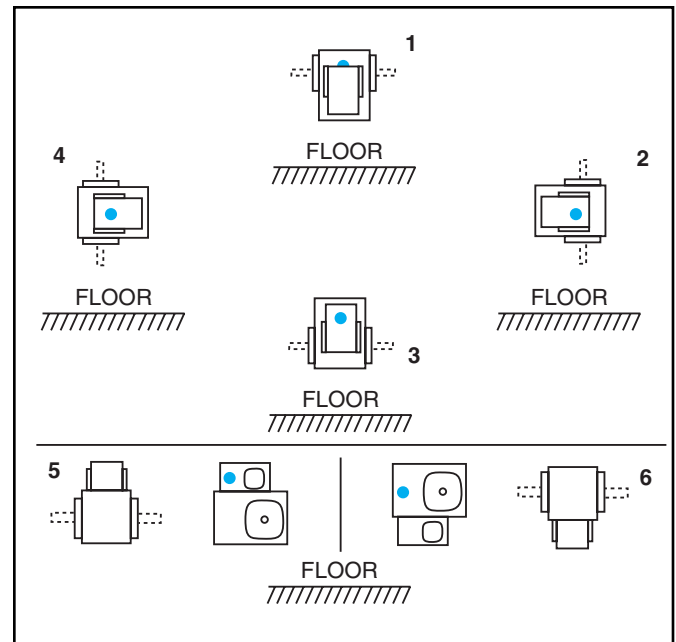
For other than Position 1, order standard and relocate vented oil filler, level and drain plugs.

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.



● 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.

Type “B” is a horizontal base.

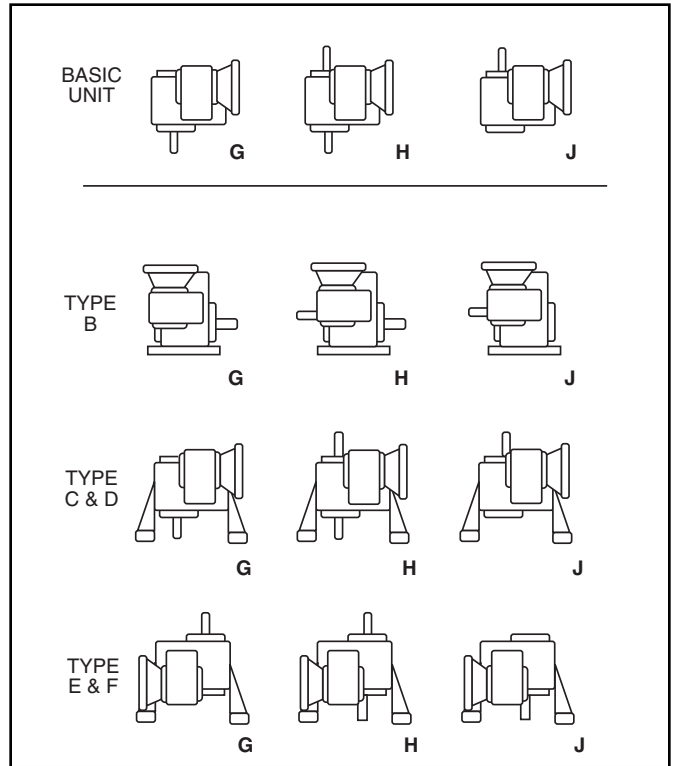
Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

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

See Page 56 for complete ordering instructions.

Input may rotate clockwise or counter clockwise.

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



MOUNTING POSITIONS – FWC/QCWC – HFWC/HQCWC – SFWC700 SERIES

Standard assemblies are for Position 1. The design permits any type 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.

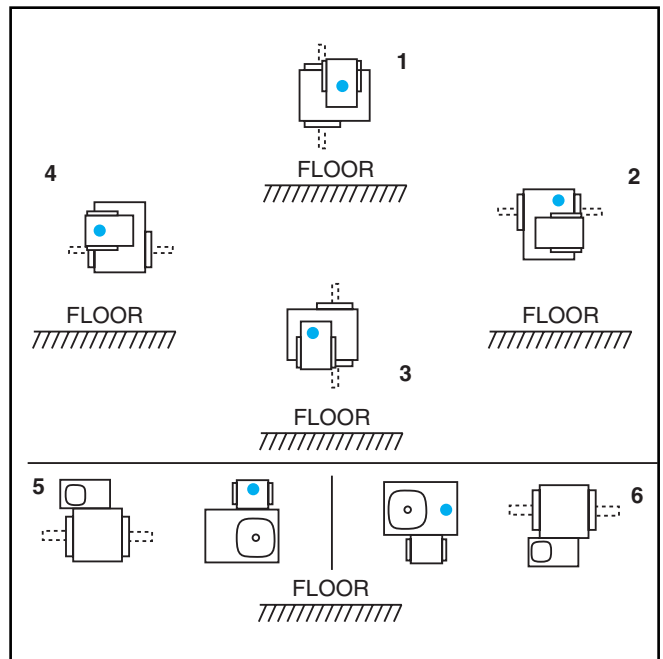
For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

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.



● Indicates proper oil level.

CAUTION

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

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.

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

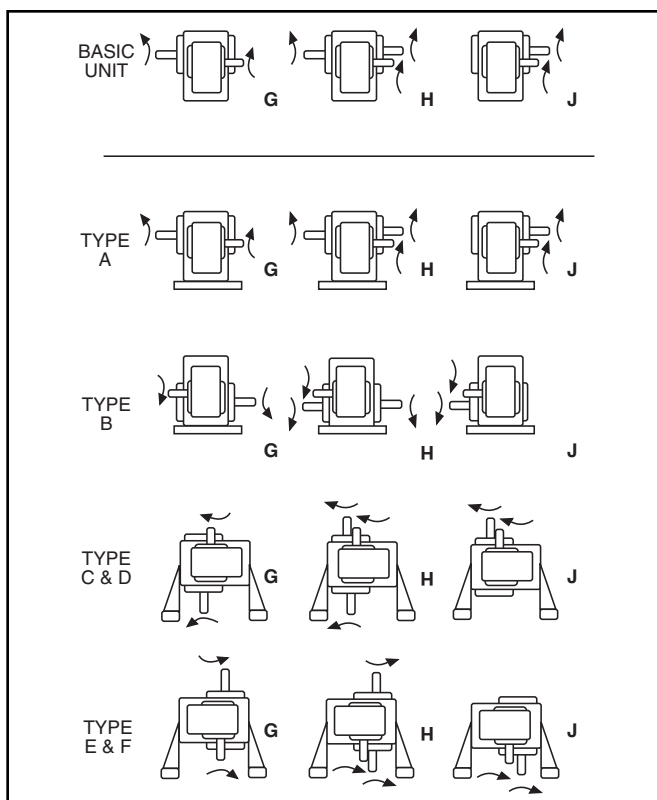
Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

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

See Page 56 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 type 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.

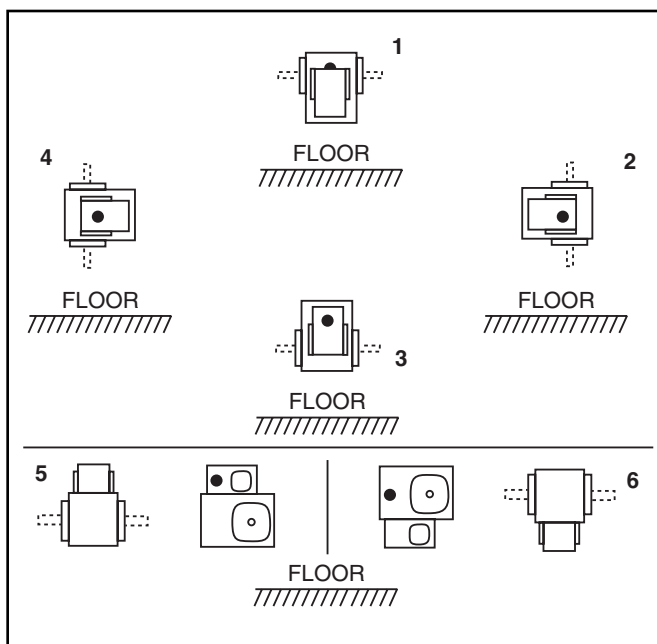
For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

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.



● 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.

Type “B” is a horizontal base.

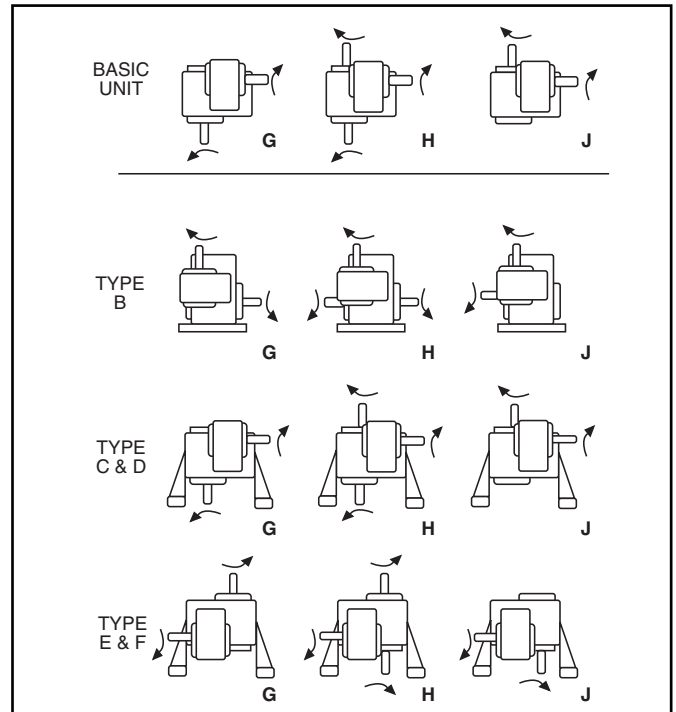
Types “C” and “E” are vertical high bases and types “D” and “F” are vertical low bases.

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

See Page 56 for complete ordering instructions.

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

FOR OTHER CONFIGURATIONS NOT SHOWN, CONTACT FACTORY.



MOUNTING POSITIONS – WC – HWC – SWC 700 SERIES

Standard assemblies are for Position 1. The design permits any type 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.

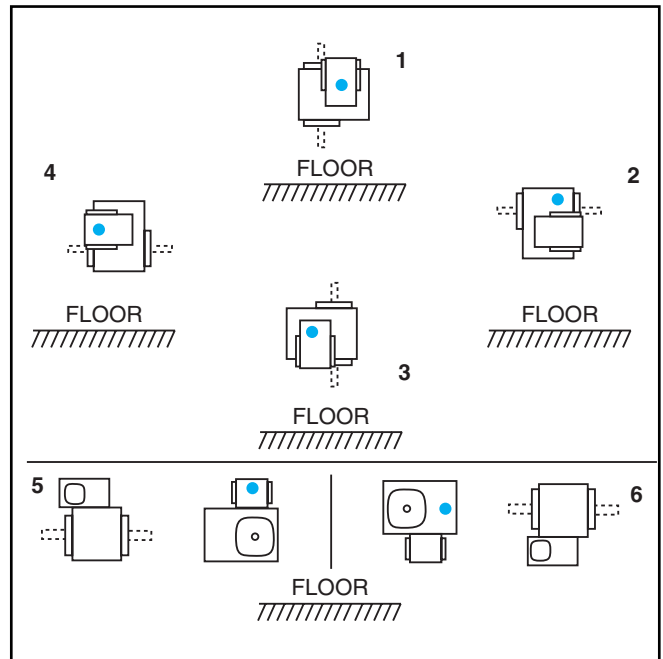
For other than Position 1, order standard and relocate vented oil filler, level and drain plug.

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.



• Indicates proper oil level.

CAUTION

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

700 SERIES RECOMMENDED LUBRICANTS

The following table indicates the type 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 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 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	Lubricant AGMA No.	ISO Viscosity Grade No.†
-30° to 225°F** (-34° to 107°C)	Klubersynth UH1 6-460* Synthetic	1950/2500	—	460
-30° to 225°F** (-34° to 107°C)	Mobil SHC634 Synthetic	1950/2500	7 or 7C	320/460

WORM GEAR LUBRICANT AVAILABLE FROM BOSTON GEAR

TYPE	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 121 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.

700 SERIES DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

OUT-PUT RPM	RATIO	NON-FLANGED REDUCERS				GEARMOTOR								MOTORS**		
		GEAR CAPACITY		SIZE*	RATINGS			AVAILABLE STYLES†					BORE CODE	CAT. NOS.		
		OUTPUT TORQUE (LB.IN.)	HP INPUT		HP OUTPUT	MTR. HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	F	QC	HF	SF		HQC	230/460 VAC 3 Phase 60 Hz	
17.5	100 TO 1	275	.16	.076	W713-100	1/6	275	I							B4	ACUT
						1/6	275	I							B5	CUTF
		570	.23	.16	W718-100	1/4	570	I							B4	ADUTF
						1/4	570	I						B5	DUTF	
						1/6	414	II						B4	ACUT	
						1/6	414	II						B5	CUTF	
		910	.41	.25	W721-100	1/2	910	I							B5	FUTF
						1/3	750	II						B5	EUTF	
						1/4	585	II						B5	DUTF	
		1785	.75	.50	W726-100	1/6	390	III							B5	CUTF
3/4	1785					I						B5	GUTF			
1/2	1206					II						B5	FUTF			
3250	1.24	.90	W730-100	1/3	804	III							B5	EUTF		
				1	2844	I						B5	HUTF-5/8			
				3/4	2138	II						B5	GUTF			
3450	1.33	.96	W732-100	1/2	1426	III							B5	FUTF		
				1-1/2	3450	I						B7	JUTF			
				1	2592	II						B5	HUTF-5/8			
4910	1.84	1.36	W738-100	3/4	1944	III							B5	GUTF		
				2	4910	I						B7	KUTF			
				1-1/2	3995	II						B7	JUTF			
8000	2.97	2.22	W752-100	1	2664	III							B7	HUTF		
				3	8000	I						B9	LUTF			
				2	5400	II						B7	KUTF			
16500	5.75	4.58	W760-100	1-1/2	4050	III							B7	JUTF		
				5	14200	I						B9	MUTF			
				3	8500	III						B9	LUTF			
11.7	150 TO 1	280	.13	.052	W713-150	1/6	280	I						B4	ACUT	
						1/6	280	I						B5	CUTF	
		580	.23	.11	W718-150	1/4	580	I							B4	ADUTF
						1/4	580	I						B5	DUTF	
						1/6	433	II						B4	ACUT	
						1/6	433	II						B5	CUTF	
		940	.30	.17	W721-150	1/3	940	I							B5	EUTF
						1/4	770	II						B5	DUTF	
						1/6	513	III						B5	CUTF	
		1840	.56	.34	W726-150	3/4	1840	I							B5	GUTF
1/2	1647					I						B5	FUTF			
1/3	1095					II						B5	EUTF			
3523	.98	.65	W730-150	1/4	823	III							B5	DUTF		
				3/4	2592	II						B5	GUTF			
				1/2	1728	III						B5	FUTF			
3600	1.00	.67	W732-150	1	3600	I							B5	HUTF-5/8		
				3/4	2713	II						B5	GUTF			
				1/2	1800	III							B5	FUTF		

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 56.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

B

700 SERIES DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

OUT-PUT RPM	RATIO	NON-FLANGED REDUCERS				GEARMOTOR							MOTORS**			
		GEAR CAPACITY			SIZE*	RATINGS			AVAILABLE STYLES†					BORE CODE	CAT. NOS.	
		OUTPUT TORQUE (LB.IN.)	HP			MTR. HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	F	QC	HF	SF	HQC		230/460 VAC 3 Phase 60 Hz	
			INPUT	OUT-PUT												
11.7 TO 1	150	5100	1.35	.94	W738-150	1-1/2	5100	I						B7		JUTF
						1	3725	II						B7	HUTF	
						3/4	2974	III						B5	GUTF	
	11750	2.99	2.18	W752-150	3	11750	I							B9	LUTF	
					2	7884	II						B7	KUTF		
					1-1/2	5913	III						B7	JUTF		
	17000	4.22	3.15	W760-150	5	17000	I							B9	MUTF	
					3	11200	II						B9	LUTF		
					2	7992	III						B9	KUTF		
8.8 TO 1	200	320	.12	.045	W713-200	1/6	320	I						B4	ACUT	
						1/6	320	I						B5	CUTF	
		660	.19	.09	W718-200	1/4	660	I							B4	ADUTF
						1/4	660	I						B5	DUTF	
		990	.25	.14	W721-200	1/4	990	I							B5	DUTF
						1/6	720	II						B5	CUTF	
	1875	.47	.26	W726-200	1/2	1875	I							B5	FUTF	
					1/3	1440	II						B5	EUTF		
					1/4	1080	III						B5	DUTF		
	3477	.76	.48	W730-200	3/4	3402	I							B5	GUTF	
					1/2	2268	III						B5	FUTF		
					1/4	1134	III						B5	DUTF		
	3800	.81	.53	W732-200	3/4	3510	I							B5	GUTF	
					1/2	2340	II						B5	FUTF		
					1/3	1560	III						B5	EUTF		
	5500	1.14	.77	W738-200	1	4824	I							B5	HUTF-5/8	
					3/4	3618	II						B5	GUTF		
					1/2	2412	III						B5	FUTF		
12250	2.40	1.70	W752-200	3	12250	I							B9	LUTF		
				2	10080	II						B7	KUTF			
				1	5040	III						B5	HUTF-5/8			
18000	3.43	2.50	W760-200	5	18000	I							B9	MUTF		
				3	15768	I						B9	LUTF			
				2	10512	II						B7	KUTF			
5.8 TO 1	300	335	.10	.031	W713-300	1/6	335	I						B4	ACUT	
						1/6	335	I						B5	CUTF	
		690	.16	.063	W718-300	1/6	690	I							B4	ACUT
						1/6	690	I						B5	CUTF	
		1025	.20	.094	W721-300	1/4	1025	I							B5	DUTF
						1/6	900	I						B5	CUTF	
	1950	.37	.18	W726-300	1/3	1800	I							B5	EUTF	
					1/4	1350	II						B5	DUTF		
					1/6	900	III						B5	CUTF		
	3612	.57	.33	W730-300	1/2	3132	I							B5	FUTF	
					1/3	2088	II						B5	EUTF		
					1/4	1566	III						B5	DUTF		
3950	.61	.36	W732-300	3/4	3950	I							B5	GUTF		
				1/2	2700	II						B5	FUTF			

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 56.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

**700 SERIES DOUBLE REDUCTION
OUTPUT RPM & CAPACITY SELECTION TABLES**

@ 1750 RPM INPUT

OUT-PUT RPM	RATIO	NON-FLANGED REDUCERS				GEARMOTOR							BORE CODE	MOTORS**		
		GEAR CAPACITY		SIZE*	RATINGS			AVAILABLE STYLES†				CAT. NOS.				
		OUTPUT TORQUE (LB.IN.)	HP INPUT		OUT-PUT	MTR. HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	F	QC	HF	SF		HQC	230/460 VAC 3 Phase 60 Hz	
5.8	300 TO 1	3950	.61	.36	W732-300	1/3	1800	III						B5	EUTF	
		5800	.84	.53	W738-300	1	5800	I						B5	HUTF-5/8	
						3/4	4050	II					B5	GUTF		
						1/2	2700	III					B5	FUTF		
		12500	1.72	1.15	W752-300	2	12500	I						B7	KUTF	
						1-1/2	10850	II					B7	JUTF		
						1	7236	III					B5	HUTF-5/8		
		18500	2.45	1.70	W760-300	3	18500	I						B9	LUTF	
						2	14904	II					B7	KUTF		
						1-1/2	11180	II					B7	JUTF		
1	7452					III					B5	HUTF				
4.4	400 TO 1	330	.089	.023	W713-400	1/6	330	I					B4	ACUT		
		690	.12	.048	W718-400	1/6	330	I						B5	CUTF	
						1/6	360	II					B4	ACUT		
		1025	.17	.071	W721-400	1/6	360	II						B5	CUTF	
						1/6	984	I					B5	CUTF		
		1950	.31	.14	W726-400	1/4	1620	I						B5	DUTF	
						1/6	1080	III					B5	CUTF		
		3602	.40	.25	W730-400	1/3	2856	I							B5	EUTF
						1/4	2142	II					B5	DUTF		
						1/6	1428	III					B5	CUTF		
		3900	.48	.27	W732-400	1/2	3900	I							B5	FUTF
						1/3	2688	II					B5	EUTF		
						1/4	2016	III					B5	DUTF		
		5700	.66	.40	W738-400	3/4	5700	I							B5	GUTF
						1/2	4320	II					B5	FUTF		
1/3	2880					III					B5	EUTF				
12600	1.39	.88	W752-400	1-1/2	12610	I							B7	JUTF		
				1	9072	II					B5	HUTF-5/8				
				3/4	6804	III					B5	GUTF				
18430	1.94	1.29	W760-400	2	18430	I							B7	KUTF		
				1-1/2	13824	II					B7	JUTF				
				1	9216	II					B7	HUTF				
2.9	600 TO 1	340	.081	.016	W713-600	1/6	340	I					B4	ACUT		
		710	.095	.032	W718-600	1/6	340	I						B5	CUTF	
						1/6	710	I					B4	ACUT		
		1025	.13	.047	W721-600	1/6	710	I						B5	CUTF	
						1/6	1025	I					B5	CUTF		
		2000	.25	.092	W726-600	1/4	2000	I							B5	DUTF
						1/6	1332	II					B5	CUTF		
3717	.32	.17	W730-600	1/4	2862	II							B5	DUTF		
				1/6	1908	III					B5	EUTF				
4025	.36	.18	W732-600	1/3	3600	I							B5	EUTF		
				1/4	2700	II					B5	DUTF				
					1/6	1800	III						B5	CUTF		

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 56

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

B

700 SERIES DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

OUT-PUT RPM	RATIO	NON-FLANGED REDUCERS				GEARMOTOR							MOTORS**		
		GEAR CAPACITY		SIZE*	RATINGS			AVAILABLE STYLES†				BORE CODE	CAT. NOS. 230/460 VAC 3 Phase 60 Hz		
		OUTPUT TORQUE (LB.IN.)	HP INPUT		HP OUTPUT	MTR. HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	F	QC	HF			SF	HQC
2.9	600 TO 1	5900	.49	.27	W738-600	1/2	5900	I					B5	FUTF	
						1/3	3960	II					B5	EUTF	
						1/4	2970	III					B5	DUTF	
	13000	1.00	.60	W752-600	1	13000	I						B5	HUTF-5/8	
					3/4	9720	II					B5	GUTF		
					1/2	6480	III					B5	FUTF		
	19000	1.40	.88	W760-600	1-1/2	19000	I						B7	JUTF	
					1	13608	II					B7	HUTF		
					3/4	10206	III					B7	GUTF		
1.9	900 TO 1	340	.071	.010	W713-900	1/6	340	I					B4	ACUT	
						1/6	340	I					B5	CUTF	
		710	.079	.021	W718-900	1/6	710	I						B4	ACUT
						1/6	710	I					B5	CUTF	
		1050	.11	.032	W721-900	1/6	1050	I						B5	CUTF
						1/6	2000	I					B5	CUTF	
		2000	.21	.06	W726-900	1/6	2000	I						B5	CUTF
						1/6	2700	II					B5	CUTF	
		3752	.23	.11	W730-900	1/6	2700	II						B5	CUTF
						1/4	3483	I					B5	DUTF	
		4025	.28	.12	W732-900	1/6	2322	III						B5	CUTF
						1/2	5900	I					B5	FUTF	
		5900	.37	.18	W738-900	1/3	5292	I						B5	EUTF
						1/4	3969	II					B5	DUTF	
		13000	.74	.40	W752-900	1/6	2646	III						B5	CUTF
						3/4	13000	I					B5	GUTF	
		19000	1.00	.59	W760-900	1/2	8748	II						B5	FUTF
						1/3	5832	III					B5	EUTF	
19000	1.00	.59	W760-900	1	19000	I						B5	HUTF-5/8		
				3/4	14337	II					B5	GUTF			
19000	1.00	.59	W760-900	1/2	9558	III						B5	FUTF		
				1/2	9558	III					B5	FUTF			
1.5	1200 TO 1	330	.068	.008	W713-1200	1/6	330	I					B4	ACUT	
						1/6	330	I					B5	CUTF	
		690	.071	.016	W718-1200	1/6	690	I						B4	ACUT
						1/6	690	I					B5	CUTF	
		1025	.10	.024	W721-1200	1/6	1025	I						B5	CUTF
						1/6	1728	I					B5	CUTF	
		1950	.19	.045	W726-1200	1/6	1728	I						B5	CUTF
						1/6	3168	I					B5	CUTF	
		3650	.19	.084	W730-1200	1/4	3900	I						B5	DUTF
						1/6	2880	II					B5	CUTF	
		3900	.23	.092	W732-1200	1/3	5700	I						B5	EUTF
						1/4	4536	II					B5	DUTF	
5700	.31	.13	W738-1200	1/6	3024	III						B5	CUTF		
				3/4	12610	I					B5	GUTF			
12610	.62	.29	W752-1200	1/2	10152	II						B5	FUTF		
				1/3	6768	III					B5	EUTF			

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 56.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

700 SERIES DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES

@ 1750 RPM INPUT

OUT-PUT RPM	RATIO	NON-FLANGED REDUCERS				GEARMOTOR							MOTORS**		
		GEAR CAPACITY		SIZE*	RATINGS			AVAILABLE STYLES†				BORE CODE	CAT. NOS. 230/460 VAC 3 Phase 60 Hz		
		OUTPUT TORQUE (LB.IN.)	HP INPUT		HP OUTPUT	MTR. HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	F	QC	HF			SF	HQC
1.5	1200 TO 1	18430	.81	.43	W760-1200	1	18430	I					B5	HUTF-5/8	
						3/4	17172	II				B5	GUTF		
						1/2	11448	II				B5	FUTF		
						1/3	7632	III				B5	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	5400	I						B5	DUTF
						1/6	3672	II					B5	CUTF	
		11760	.47	.18	W752-1800	1/2	11760	I						B5	FUTF
						1/3	8208	II					B5	EUTF	
						1/4	6156	III					B5	DUTF	
						1/2	14900	I					B5	FUTF	
17280	.59	.27	W760-1800	1/3	9936	III						B5	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	12610	I						B5	FUTF
						1/3	8810	II					B5	EUTF	
						1/4	5985	III					B5	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	5725	I					B5	DUTF	
						1/6	4320	II					B5	CUTF	
.58	3000 TO 1	1800	.14	.016	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	

B

* Add "A" (for PARALLEL SHAFTS) or "C" (for RIGHT ANGLE SHAFTS) after "W" in Model Numbers. See Numbering System, Page 56.

** Totally Enclosed, Fan Cooled. For complete motor Catalog Numbers and additional motors, see Pages 327 and 330.

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

700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

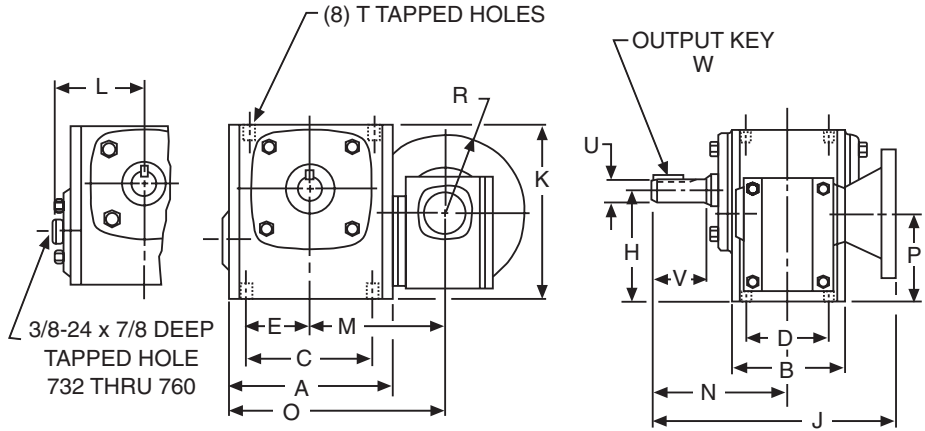
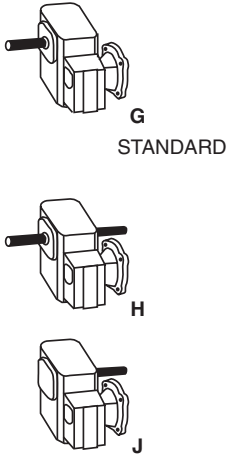
BASIC MODELS (NO BASE)
PARALLEL SHAFTS

FWA700 SERIES - FLANGED QUILL TYPE
QCWA700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

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 +0.000 -0.001	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	140	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 58.

† For Base Kits, see Page 115.

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

700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

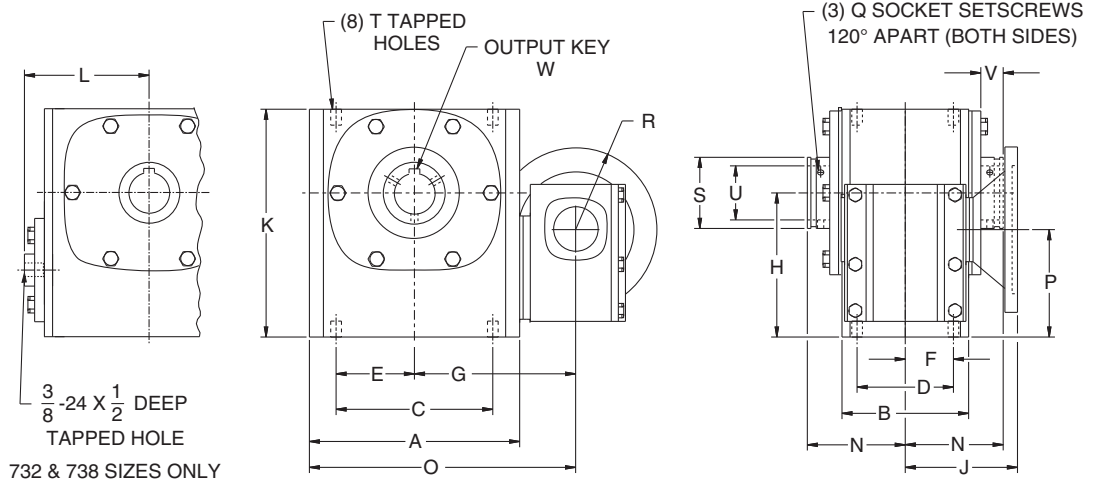
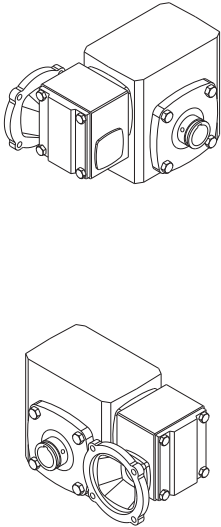
BASIC MODELS (NO BASE)
PARALLEL SHAFTS
BORED TO SIZE HOLLOW OUTPUT

HFVA700 SERIES - FLANGED QUILL TYPE
HQCWA700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

SIZE	A	B	C	D	E	F	G	H	J-NEMA MOUNTING				K	L	N
									HFVA		HQCWA				
									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		S	T		LOW SPEED SHAFT				APPROX. WEIGHT (LBS.)	
				42CZ	56C 140TC		TAP SIZE	DEPTH	MAX U +.0015 -.0000	V	W-KEY		HFVA	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 114 For		37	39
726	9.35	3.78	5/16-24	—	3.31	2.50	3/8-16	.56	1.9375	.78	Key Information		60	67
730	10.18	4.38	5/16-24	—	3.31	2.88	7/16-14	.88	2.1875	1.11			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 58.

Input may be rotated clockwise or counterclockwise.

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

See Page 114 for available bore sizes.



700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

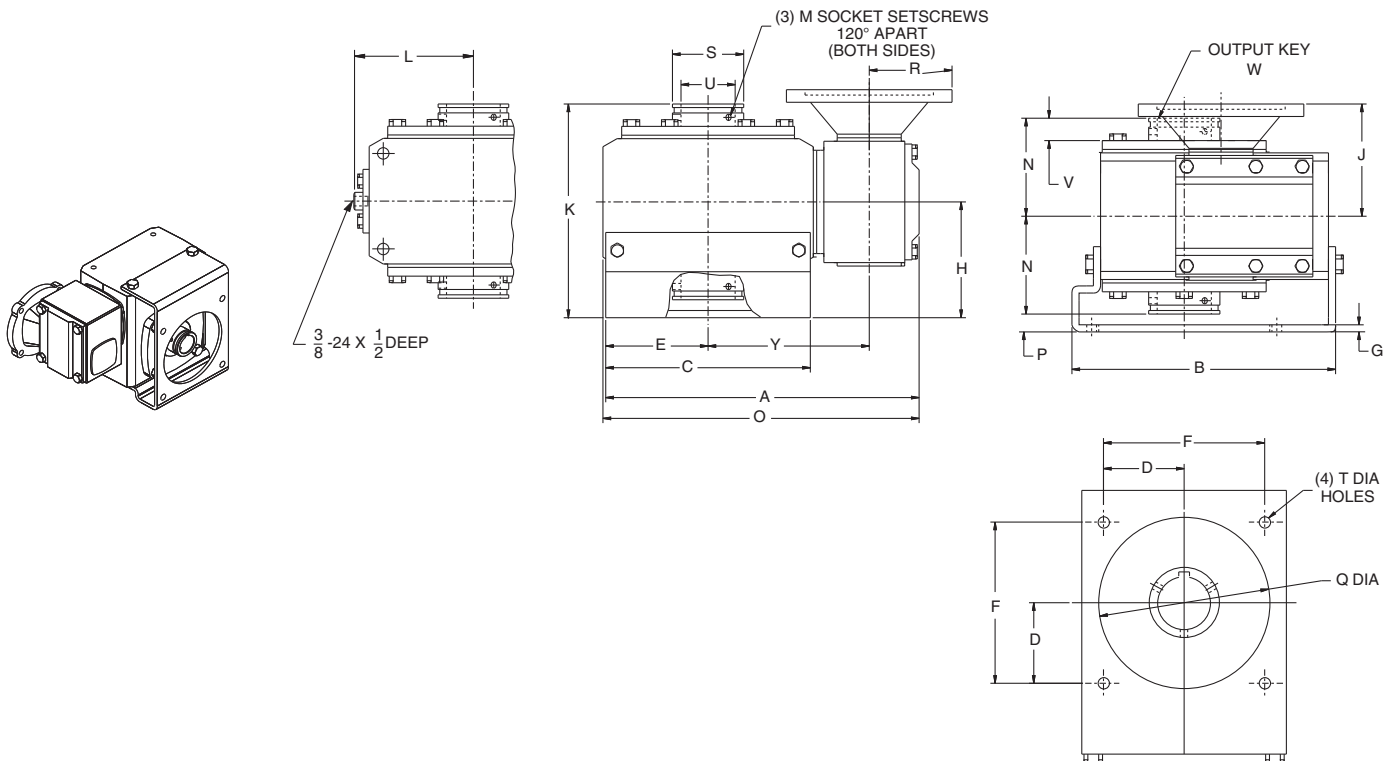
R POSITION MOUNTING BRACKET
PARALLEL SHAFTS
BORED TO SIZE HOLLOW OUTPUT

FOR ORDERING INFORMATION, see Page 56.

HF7A700 SERIES - FLANGED QUILL TYPE
HQCWA700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 57, 63-67.

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

SIZE	A	B	C	D	E	F	G	H	J-NEMA MOUNTING				K	L	M	N
									HF7A		HQCWA					
									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 HOLE	LOW SPEED SHAFT			Y	APPROX. WEIGHT (LBS.)		
				42CZ	56C 140TC			MAX U +.0015 -.0000	V	W-KEY		HF7A	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	114 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 58.

See Page 114 for available bore sizes.

Input may be rotated clockwise or counterclockwise.



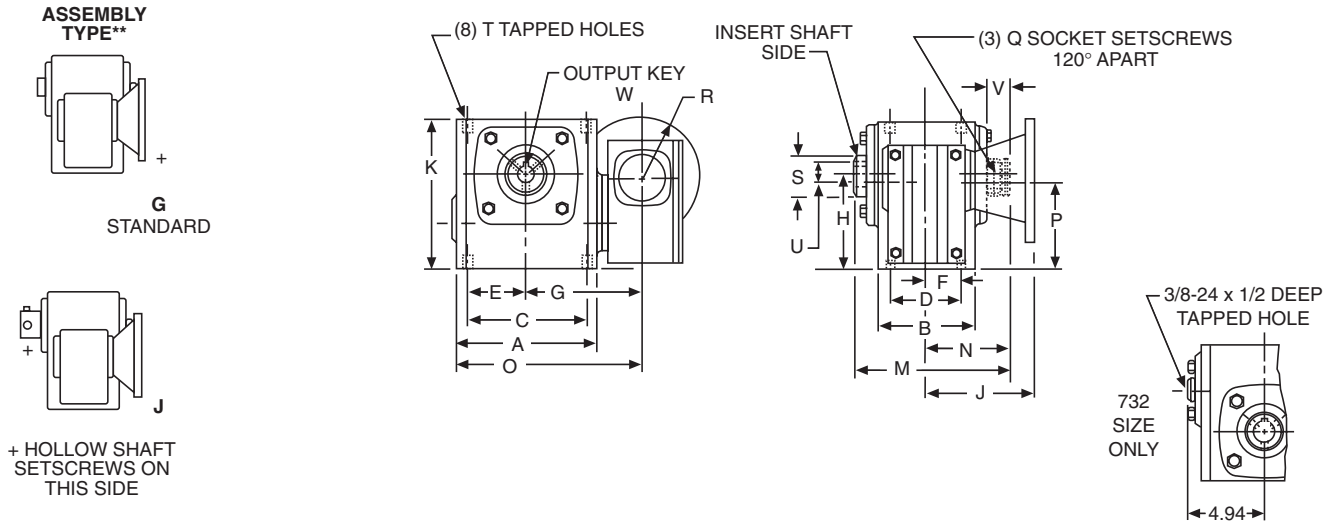
700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
PARALLEL SHAFTS
HOLLOW OUTPUT

SFWA700 SERIES - FLANGED QUILL TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 69.
 FOR RATING INFORMATION, See Pages 57, 63-67.



ALL DIMENSIONS IN INCHES

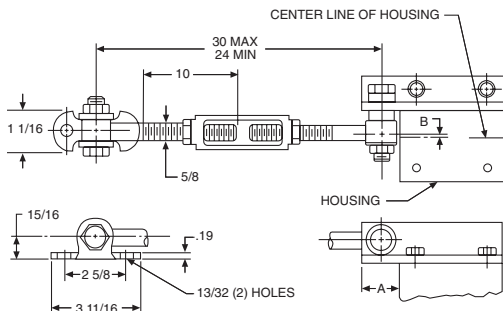
SIZE	A	B	C	D	E	F	G	H	J-NEMA MOUNTING		K	M	N
									SFWA				
									42CZ	56C 140TC			
718	5.50	3.69	4.19	2.75	2.09	1.38	4.44	3.69	3.16	3.94	5.75	5.47	3.09
721	6.00	3.81	5.00	2.88	2.50	1.44	4.94	4.09	—	3.94	6.38	5.69	3.22
726	7.38	4.44	6.38	3.38	3.19	1.69	5.66	5.06	—	3.94	8.00	6.28	3.50
732	9.00	5.88	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.) SFWA	
				42CZ	56C 140TC		TAP SIZE	DEPTH	U +.000 -.001	V	W-KEY		
				42CZ	56C 140TC						SQ.		LENGTH
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	114 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 58.

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.

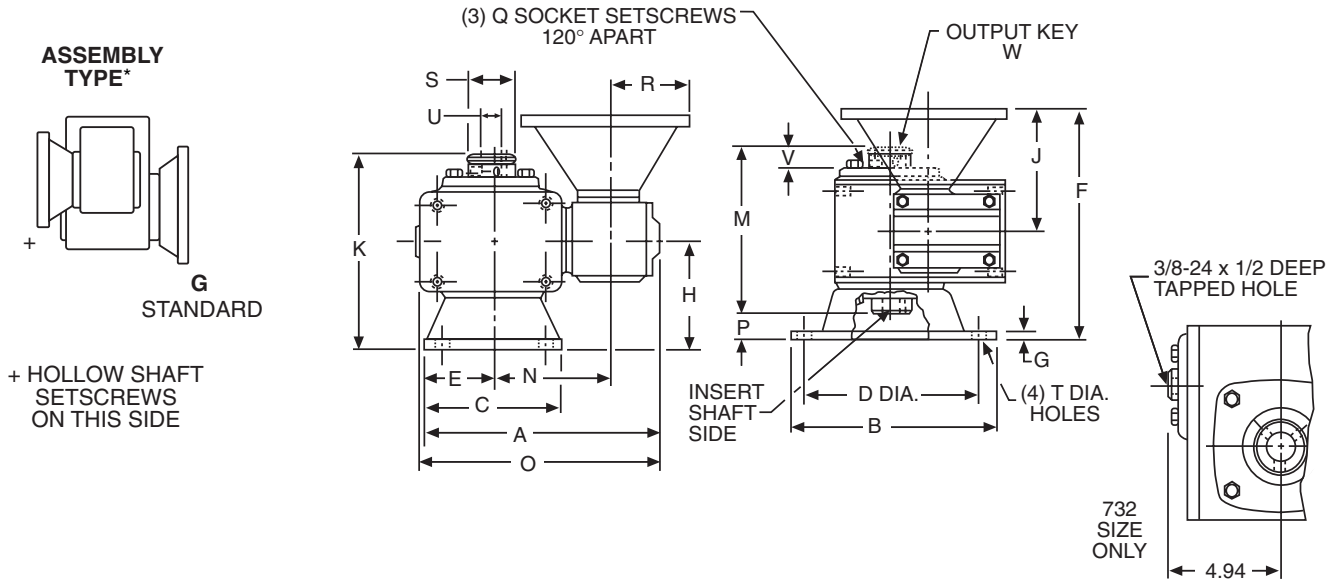
700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

V POSITION MOUNTING FLANGE
PARALLEL SHAFTS
HOLLOW OUTPUT

SFWA700 SERIES - FLANGED QUILL TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 70.
FOR RATING INFORMATION, See Pages 57, 63-67.



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 HOLE	LOW SPEED SHAFT			APPROX. WEIGHT (LBS.) SFWA	
				42CZ	56C 140TC			U +.000 -.001	V	W-KEY		
										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	114 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 58.

700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

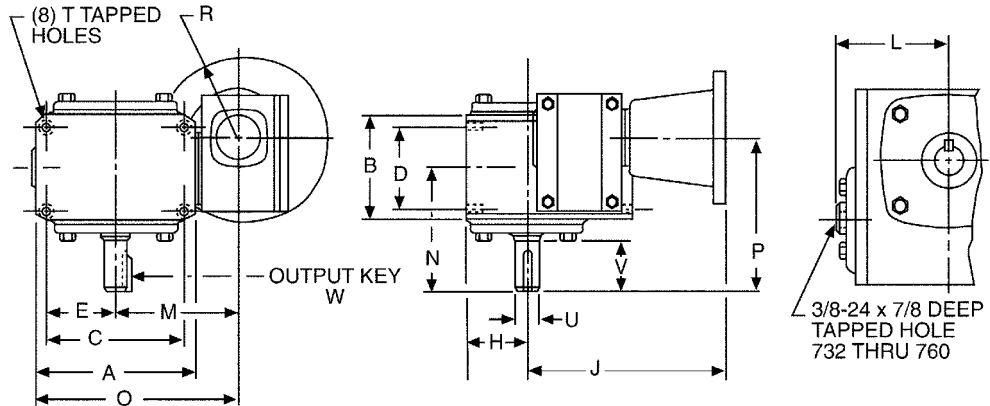
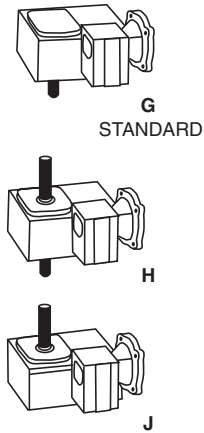
BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS

FOR ORDERING INFORMATION, see Page 56.

FWC700 SERIES - FLANGED QUILL TYPE
QCWC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 57, 63-67.

ASSEMBLY
 TYPES*



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		FWC	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 59.

† For Base Kits, see Page 115.

700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

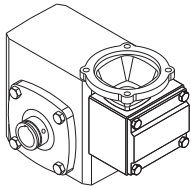
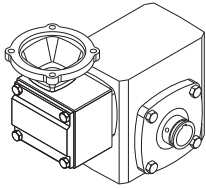
BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS
BORED TO SIZE HOLLOW OUTPUT

HFWC700 SERIES - FLANGED QUILL TYPE
HQCWC700 SERIES - FLANGED COUPLING TYPE

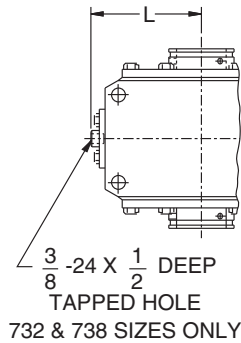
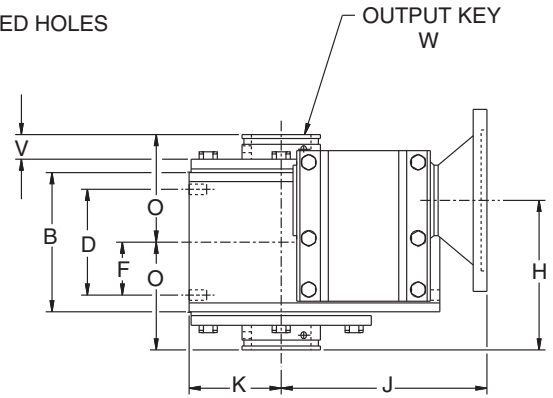
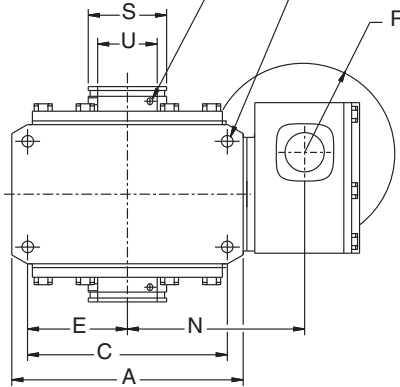
FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

ASSEMBLY TYPES*



(3) G SOCKET SETSCREWS
 120° APART (BOTH SIDES)



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	37	39	
726	5.66	3.44	—	3.31	2.50	3/8-16	.56	1.9375	.78	114 For	60	67	
730	6.12	4.19	—	3.31	2.88	7/16-14	.88	2.1875	1.10	Key Information	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 59.

Note: For base dimensions see Single Reduction Flanged Reducer Dimension pages.
 See Page 114 for available bore sizes.

700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

R/L POSITION MOUNTING BRACKET
RIGHT ANGLE SHAFTS
BORED TO SIZE HOLLOW OUTPUT

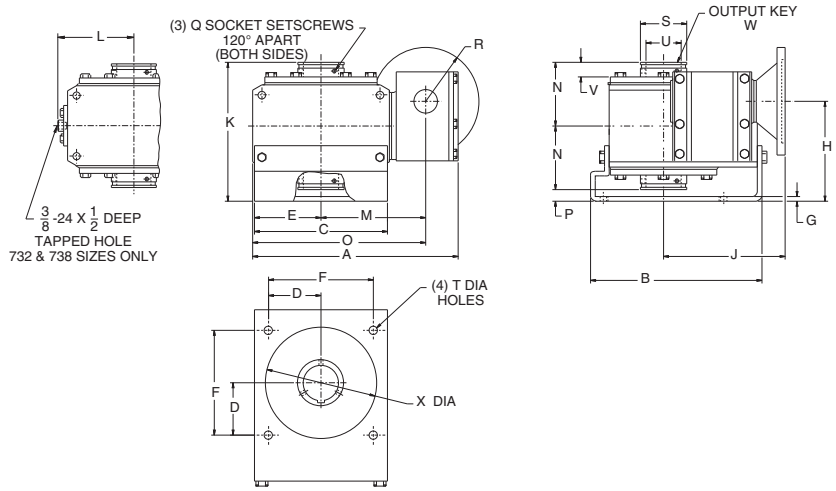
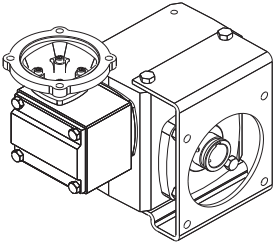
FOR ORDERING INFORMATION, see Page 56.

HF7C700 SERIES - FLANGED QUILL TYPE
HQC7C700 SERIES - FLANGED COUPLING TYPE

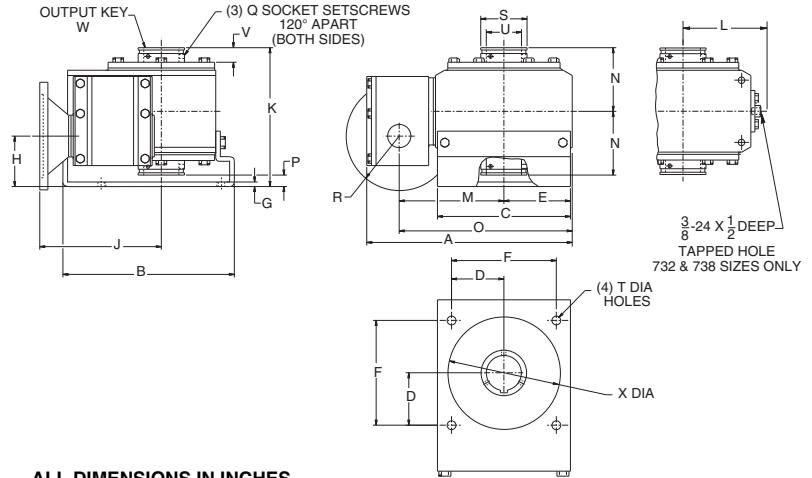
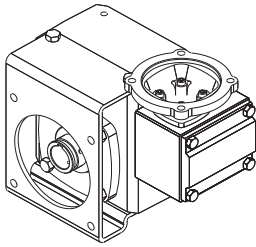
FOR RATING INFORMATION, See Pages 57, 63-67.

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	HF7C		HQC7C				
										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 HOLE	LOW SPEED SHAFT				X	APPROX. WEIGHT (LBS.)	
					42CZ	56C 140TC			MAX U +.0015 -0.0000	V	W-KEY			HF7C	HQC7C
											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	4.50	42	47	
726	3.44	9.35	.62	5/16-24	—	3.31	2.50	13/32	1.9375	.78	114 For	6.00	56	80	
730	4.19	10.18	.31	5/16-24	—	3.31	2.88	13/32	2.1875	1.10	Key Information	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 59

See Page 114 for availabl



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QRO (442) 1 95 72 60 ventas@industrialmagza.com



700 Series 75

B

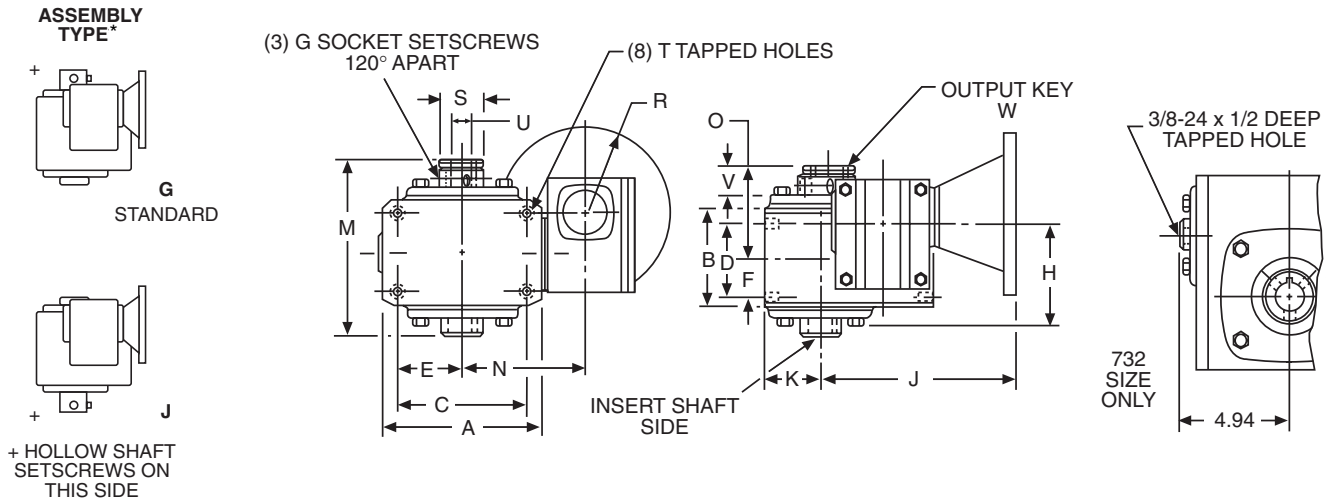
700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS
HOLLOW OUTPUT

SFWC700 SERIES - FLANGED QUILL TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 74.
 FOR RATING INFORMATION, See Pages 57, 63-67.



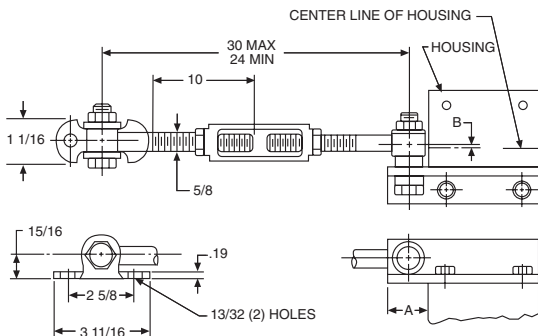
ALL DIMENSIONS IN INCHES

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		U +.000 -.001	LOW SPEED SHAFT		APPROX. WEIGHT (LBS.) SFWC
			42CZ	56C 140TC		TAP SIZE	DEPTH		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 114 For Key Information	24
721	4.94	3.22	—	3.31	1.50	3/8-16	.56	1.125	.88	See Page 114 For Key Information	32
726	5.66	3.50	—	3.31	2.16	3/8-16	.56	1.4375	.84	See Page 114 For Key Information	51
732	6.48	4.38	—	3.31	2.56	7/16-14	.66	1.9375	1.00	See Page 114 For Key Information	99

*See Assemblies and Mounting Positions, Page 59. 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.

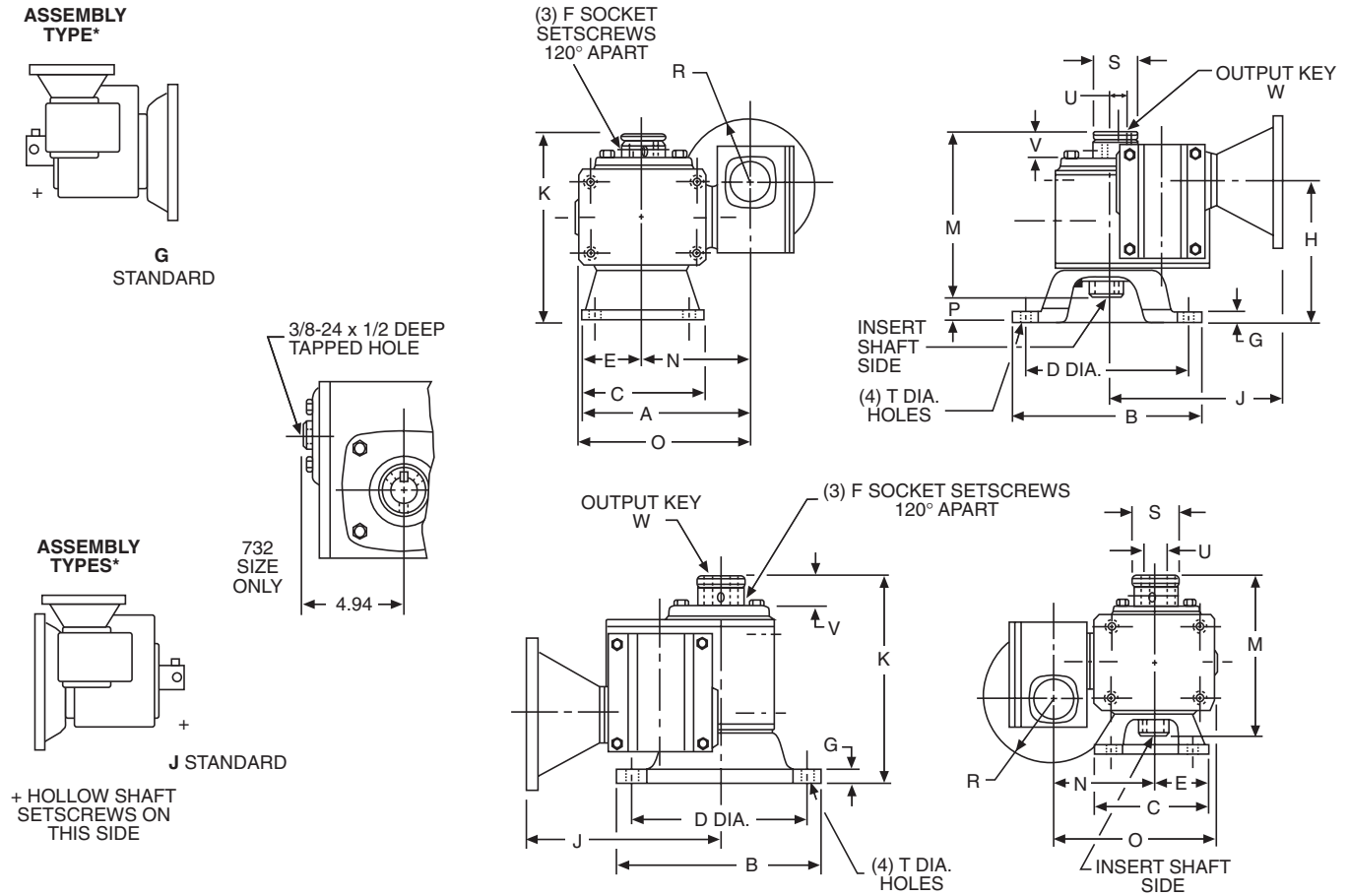
700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

V/W POSITION MOUNTING FLANGE
 RIGHT ANGLE SHAFTS
 HOLLOW OUTPUT

SFWC700 SERIES - FLANGED QUILL TYPE

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 75.
 FOR RATING INFORMATION, See Pages 57, 63-67.



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		S	T HOLE	LOW SPEED SHAFT		APPROX. WEIGHT (LBS.)		
				42CZ	56C 140TC			U +.000 -.001	V	W-KEY		SFWC
										SIZE	LENGTH	
718	4.44	7.19	.91	2.16	3.31	1.38	11/32	1.000	.78	See Page	29	
721	4.94	7.94	1.09	—	3.31	1.50	13/32	1.125	.88	114 For	40	
726	5.66	9.34	1.09	—	3.31	2.16	13/32	1.4375	.84	Key Information	53	
732	6.48	11.00	1.56	—	3.31	2.56	9/16	1.9375	1.00		128	

* See Assemblies and Mounting Positions, Page 59. Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft.

700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

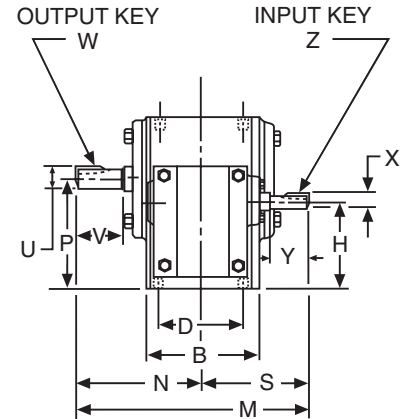
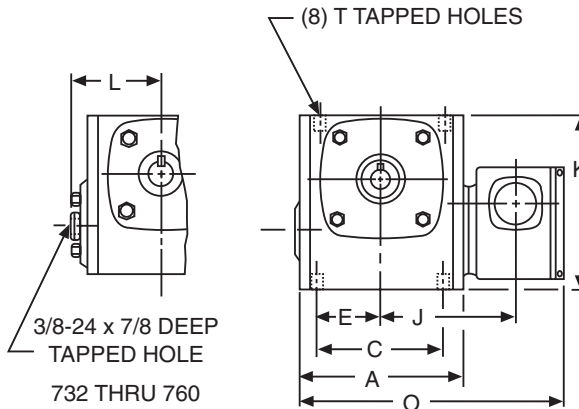
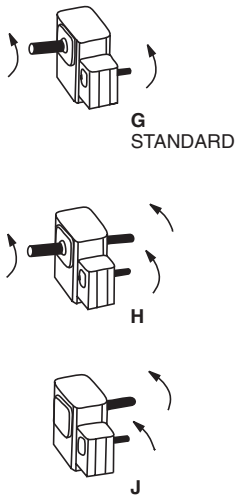
BASIC MODELS (NO BASE) PARALLEL SHAFTS

WA700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

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.)	HORI- ZONTAL BASE KIT NO. †
		TAP SIZE	DEPTH	U +.000 -.001	V	W-KEY		X +.000 -.001	Y	Z-KEY			
						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 60.

† For Base Kits, see Page 115.

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

700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

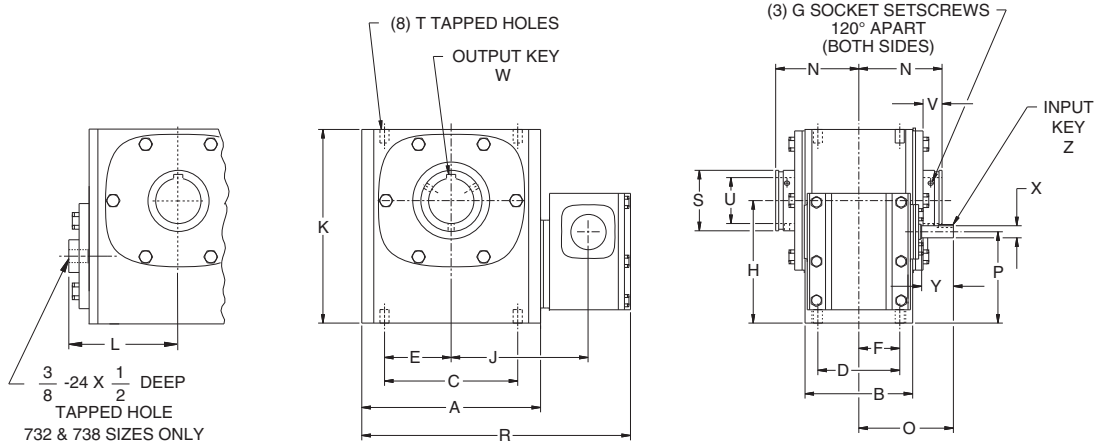
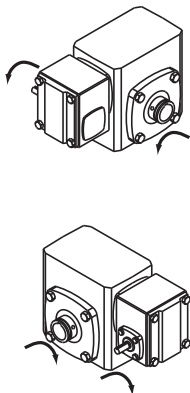
**BASIC MODELS (NO BASE)
PARALLEL SHAFTS
BORED TO SIZE HOLLOW OUTPUT**

HWA700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

**ASSEMBLY
TYPES***



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.)
			TAP SIZE	DEPTH	MAX U +.0015 -.0000	V	W-KEY		X +.000 -.001	Y	Z-KEY		
							SQUARE	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		.4995	1.31	1/8	5/8	37
726	11.09	2.50	3/8-16	.56	1.9375	.78	114 For		.4995	1.31	1/8	5/8	55
730	12.45	2.88	7/16-14	.88	2.1875	1.10	Key Information		.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 60.
Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.
See Page 114 for available bore sizes.

700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

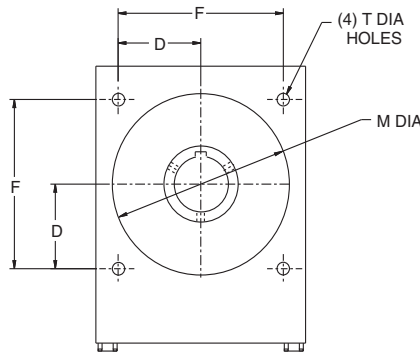
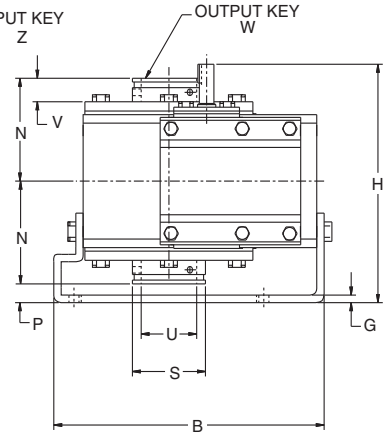
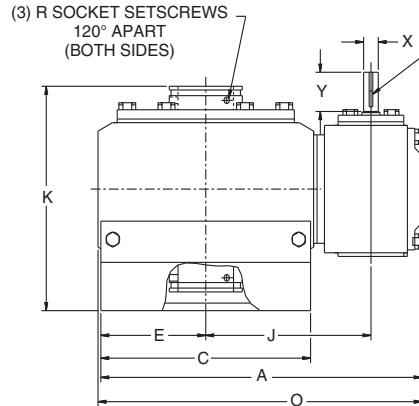
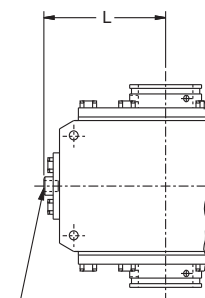
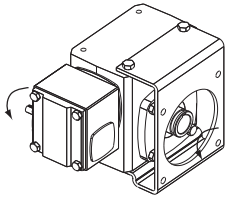
R POSITION MOUNTING BRACKET
PARALLEL SHAFTS
BORED TO SIZE HOLLOW OUTPUT

HWA700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

ASSEMBLY TYPES*



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		
						SQUARE	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 114 For Key Information		.4995	1.31	1/8	5/8	42
726	5/16-24	2.50	13/32	1.9375	.78			.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 60
Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.
See Page 114 for available bore sizes.

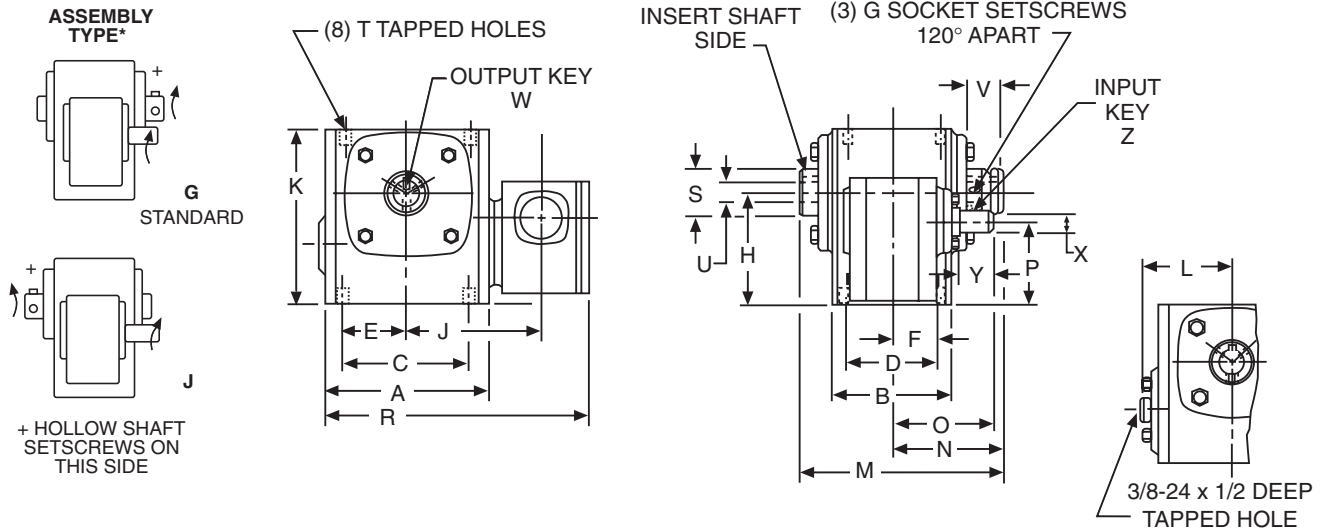
700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

**BASIC MODELS (NO BASE)
PARALLEL SHAFTS
HOLLOW OUTPUT**

SWA700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Pages 79.
FOR RATING INFORMATION, See Pages 57, 63-67.



ALL DIMENSIONS IN INCHES

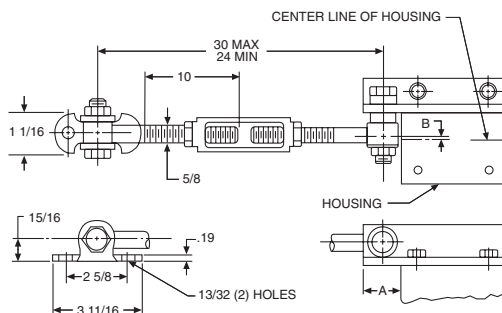
SIZE	A	B	C	D	E	F	G	H	J	K	M	N	O	P
718	5.50	3.69	4.19	2.75	2.09	1.38	#10-32	3.69	4.44	5.75	5.69	3.09	2.88	2.94
721	6.00	3.81	5.00	2.88	2.50	1.44	1/4-28	4.09	4.94	6.38	5.88	3.22	3.91	3.38
726	7.38	4.44	6.38	3.38	3.19	1.69	1/4-28	5.06	5.66	8.00	6.47	3.50	3.91	3.78
732	9.00	5.88	7.50	4.00	3.75	2.00	5/16-24	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 +.000 -.001	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	114 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 60. 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.

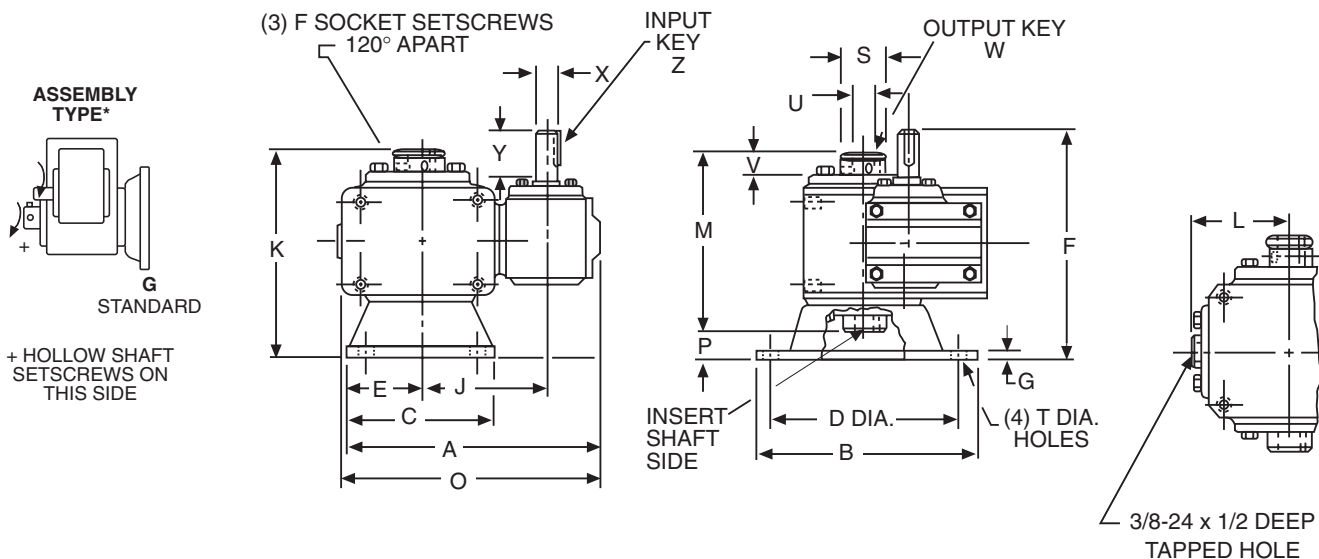
700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

V POSITION MOUNTING FLANGE
PARALLEL SHAFTS
HOLLOW OUTPUT

SWA700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 80.
FOR RATING INFORMATION, See Pages 57, 63-67.



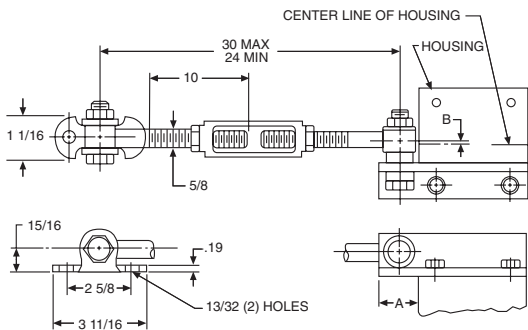
ALL DIMENSIONS IN INCHES

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 +.000 -.000	V	W-KEY		X +.000 -.001	Y	Z-KEY		
					SQUARE	LENGTH			SQ.	LENGTH	
718	1.38	11/32	1.000	.78	See Page 114 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 60. 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

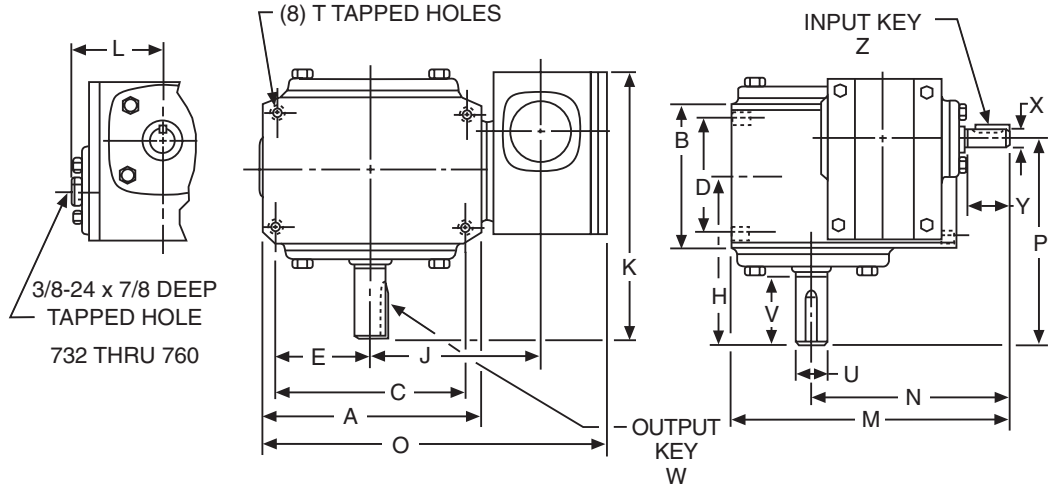
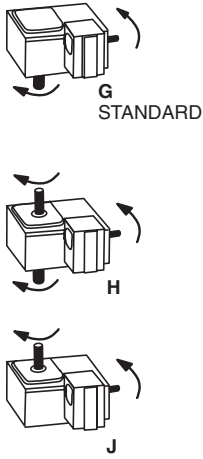
**BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS**

WC700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.

**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	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 61.

† For Base Kits, see Page 115.

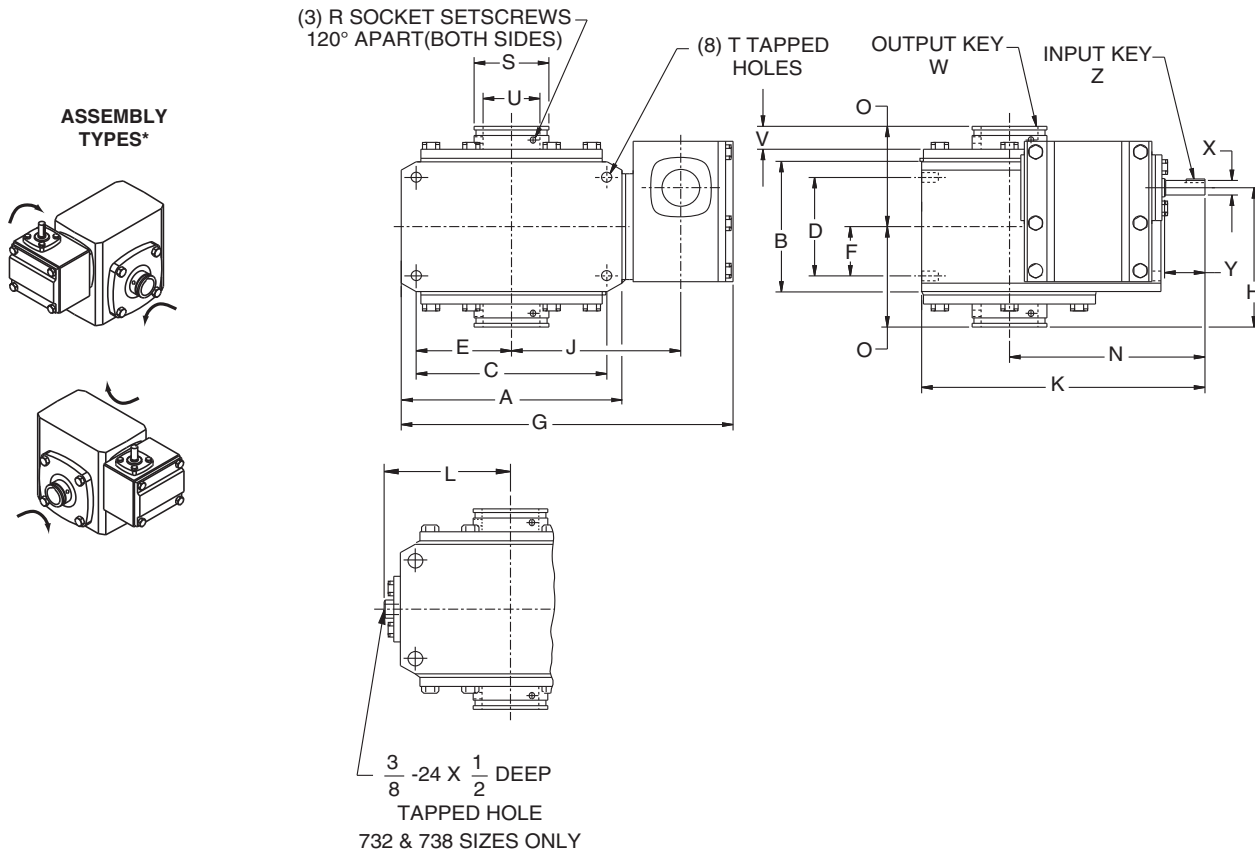
700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS
BORED TO SIZE HOLLOW OUTPUT

HWC700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR RATING INFORMATION, See Pages 57, 63-67.



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.)
		TAP SIZE	DEPTH	MAX U +.0015 -.0000	V	W-KEY		X +.000 -.001	Y	Z-KEY		
						SQUARE	LENGTH			SQ.	LENGTH	
713	.88	5/16-18	.50	.625	.68			.3745	.81	3/32	3/8	17
718	1.38	5/16-18	.50	1.000	.74			.3745	.81	3/32	3/8	28
721	1.94	3/8-16	.56	1.4375	.87	See Page		.4995	1.31	1/8	5/8	37
726	2.50	3/8-16	.56	1.9375	.78	114 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 61.

Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation.
 See Page 114 for available bore sizes.

700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

R/L POSITION MOUNTING BRACKET
RIGHT ANGLE SHAFTS
BORED TO SIZE HOLLOW OUTPUT

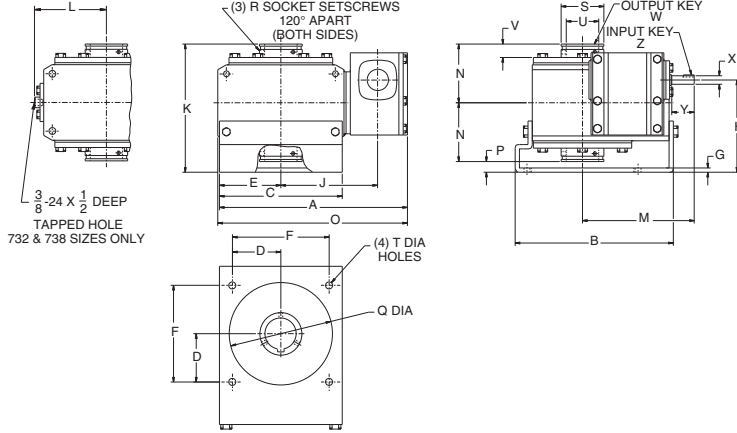
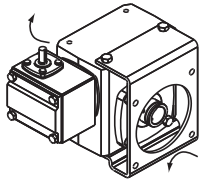
HWC700 SERIES

FOR ORDERING INFORMATION, see Page 56.

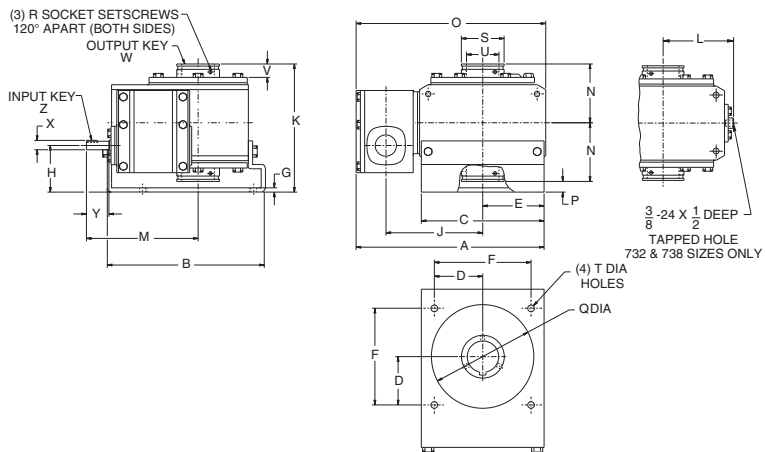
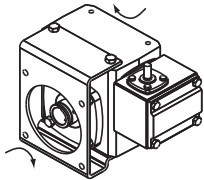
FOR RATING INFORMATION, See Pages 57, 63-67

ASSEMBLY TYPES*

R POSITION



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		
							SQUARE	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 114 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 61.

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

See Page 114 for available bore sizes.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com



700 Series 85

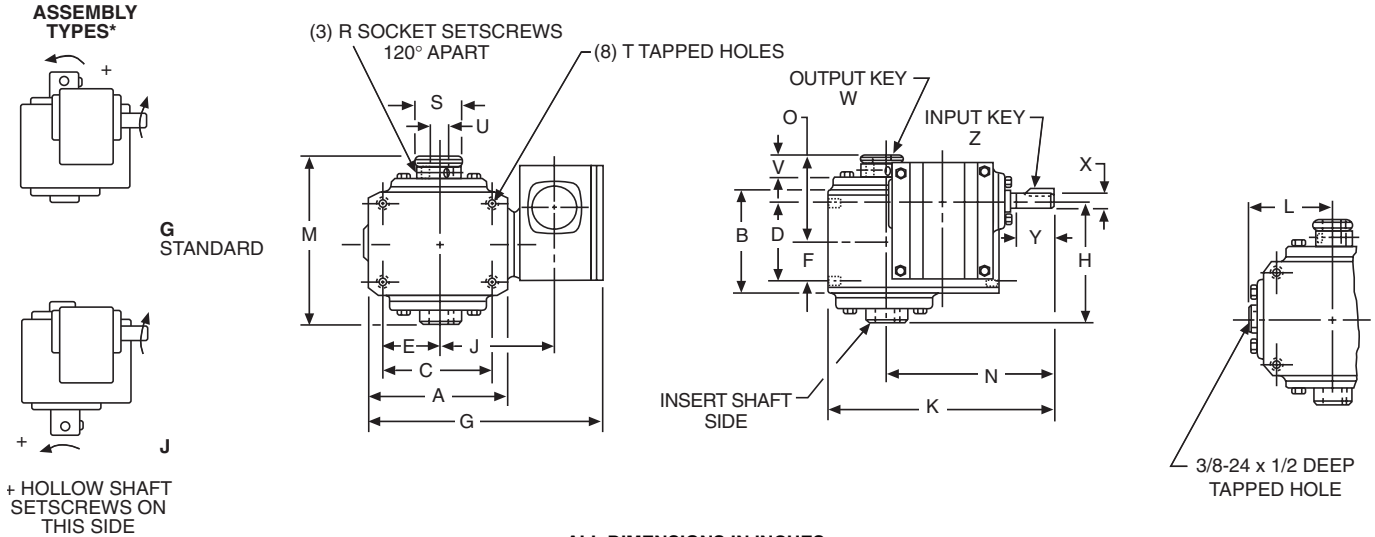
700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

**BASIC MODELS (NO BASE)
RIGHT ANGLE SHAFTS
HOLLOW OUTPUT**

SWC700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 84.
FOR RATING INFORMATION, See Pages 57, 63-67.



ALL DIMENSIONS IN INCHES

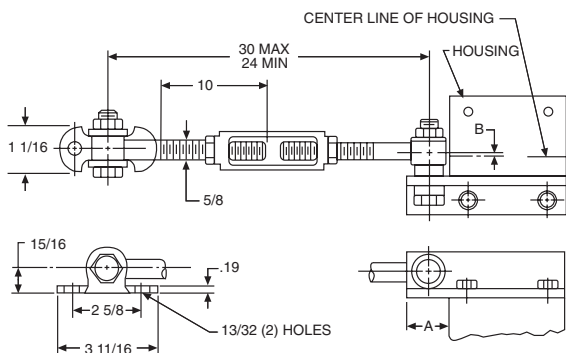
SIZE	A	B	C	D	E	F	G	H	J	K	M	N	O	R
718	5.50	3.69	4.19	2.75	2.09	1.38	8.72	3.59	4.44	6.69	5.69	4.63	3.09	#10-32
721	6.00	3.81	5.00	2.88	2.50	1.44	9.69	4.00	4.94	8.25	5.88	5.97	3.22	1/4-28
726	7.38	4.44	6.38	3.38	3.19	1.69	11.09	4.31	5.66	9.47	6.47	6.53	3.50	1/4-28
732	9.00	5.88	7.50	4.00	3.75	2.00	13.69	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 +.001 -.000	V	W-KEY		X +.000 -.001	Y	Z-KEY		
						SQUARE	LENGTH			SQ.	LENGTH	
718	1.38	5/16-18	.50	1.000	.78	See Page		.3745	.81	3/32	3/8	27
721	1.50	3/8-16	.56	1.125	.88	114 For		.4995	1.31	1/8	5/8	35
726	2.16	3/8-16	.56	1.4375	.84	Key Information		.4995	1.31	1/8	5/8	52
732	2.56	7/16-14	.66	1.9375	1.00			.6245	1.56	3/16	13/16	91

* See Assemblies and Mounting Positions, Page 61. 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.

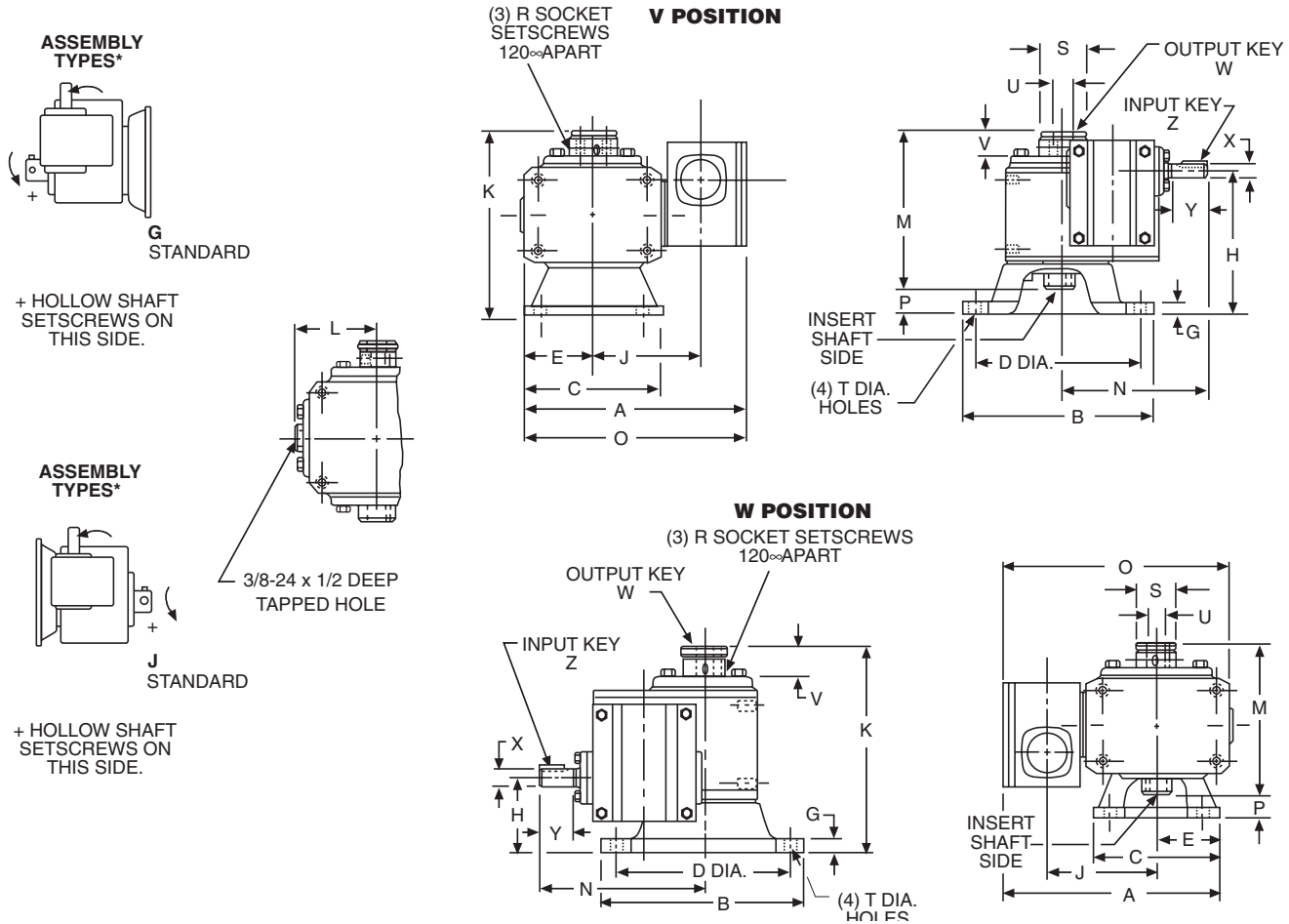
700 SERIES DOUBLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

V/W POSITION MOUNTING FLANGE
RIGHT ANGLE SHAFTS
HOLLOW OUTPUT

SWC700 SERIES

FOR ORDERING INFORMATION, see Page 56.

FOR ADDITIONAL SIZES, See the H Series Page 85.
FOR RATING INFORMATION, See Pages 57, 63-67.



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

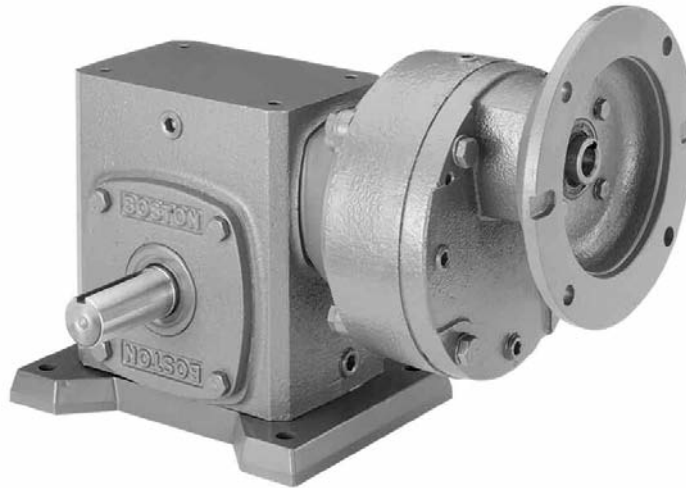
SIZE	R	S	T DIA.	LOW SPEED SHAFT			HIGH SPEED SHAFT				APPROX. WEIGHT (LBS.)	
				U +.001 -.000	V	W-KEY		X +.000 -.001	Y	Z-KEY		
						SQUARE	LENGTH			SQ.		LENGTH
718	#10-32	1.38	11/32	1.000	.78	See Page		.3745	.81	3/32	3/8	32
721	1/4-28	1.50	13/32	1.125	.88	114 For		.4995	1.31	1/8	5/8	40
726	1/4-28	2.16	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 61. 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.

NOTES

B


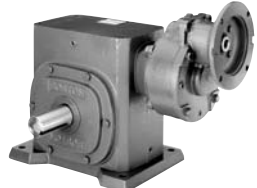





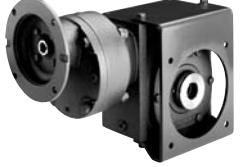




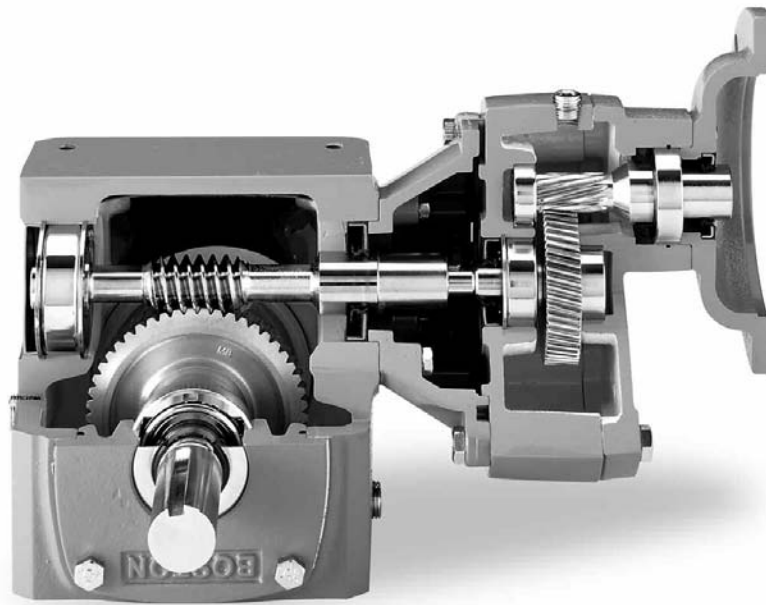
SECTION CONTENTS

PRODUCT REFERENCE GUIDE.....	90
FEATURES.....	91
NUMBERING SYSTEM / HOW TO ORDER.....	92
ASSEMBLIES AND MOUNTING POSITIONS.....	93-94
QUICK SELECTION CHART	95
OUTPUT RPM SELECTION TABLES.....	96-104
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PRODUCT SELECTION/REFERENCE GUIDE

<p>700 SERIES SINGLE REDUCTION FLANGED REDUCERS WITH HMF SERIES</p> <p>Ordering Information—Page 92 Selection/Rating Information—Pages 96-104 Mountings—Pages 93-94</p>		<p>F700 BASIC W/HMF</p>  <p>Dimension Page 105</p>	<p>F700B W/HMF</p>  <p>Dimension Page 106</p>
<p>F700A W/HMF</p>  <p>Dimension Page 107</p>	<p>F700 C/D W/HMF</p>  <p>Dimension Page 108</p>	<p>F700E/F W/HMF</p>  <p>Dimension Page 108</p>	<p>F700X W/HMF</p>  <p>Dimension Page 109</p>
<p>HF700 W/HMF</p>  <p>Dimension Page 110</p>	<p>HF700R/L W/HMF</p>  <p>Dimension Page 111</p>		

C



Combination 700 and HM Series Features

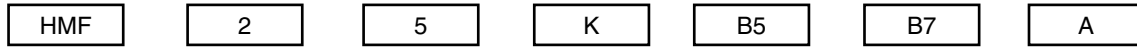
- Rugged housing of fine-grained, gear-quality cast iron provides maximum strength and durability. Greater rigidity and one-piece construction ensure precise alignment of the worm and gear. This housing construction also provides superior resistance to caustic washdown solutions, plus high heat dissipation 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.

NUMBERING SYSTEM / HOW TO ORDER

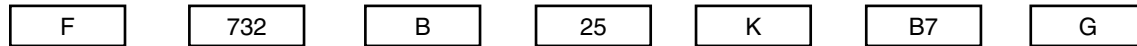
When ordering reducers please include code letters for Style, Size, Base (if required), Ratio, Lubrication (if required), NEMA Mounting (if flanged reducer), Shaft Assembly and Motor (if required).

Example:

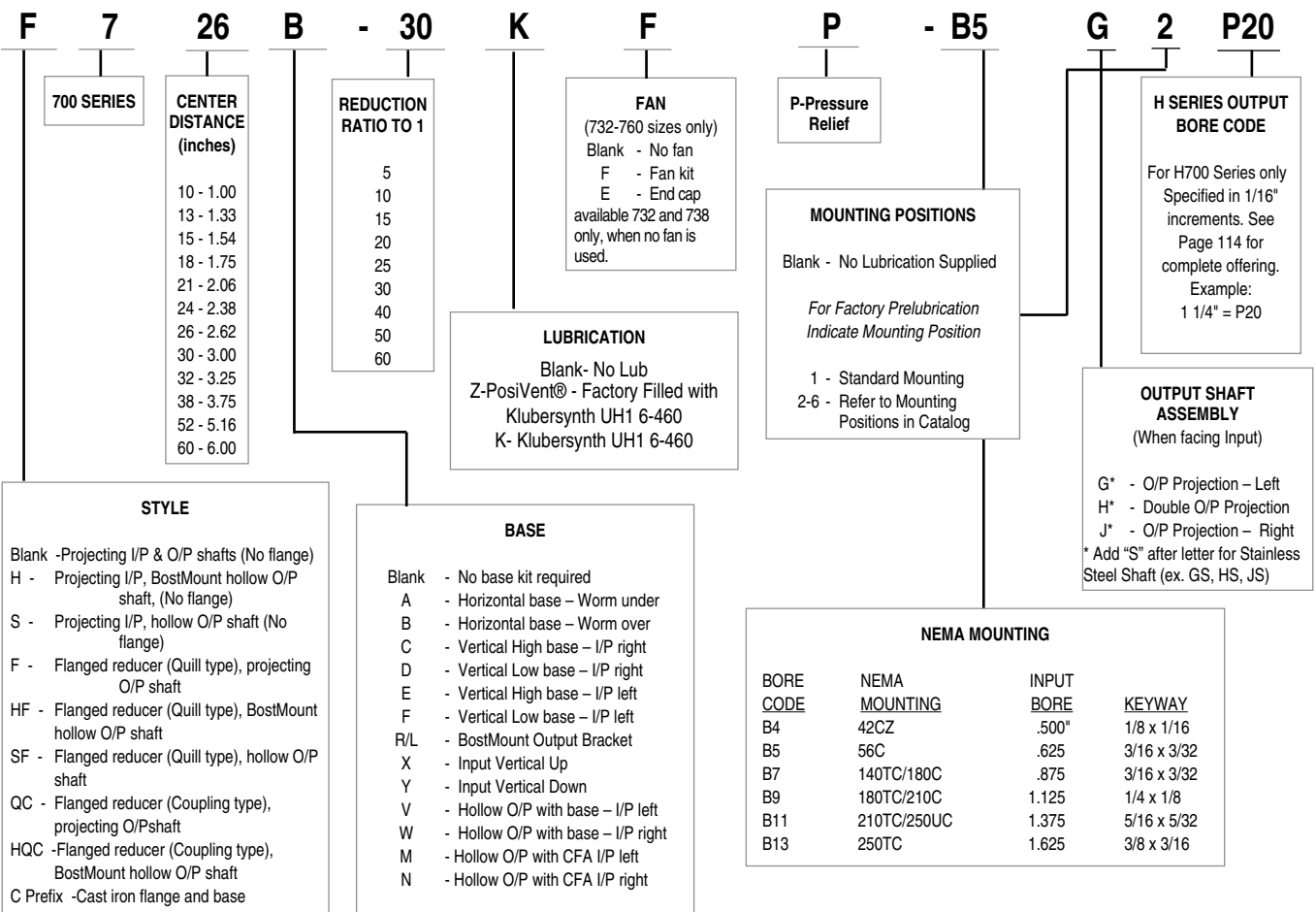
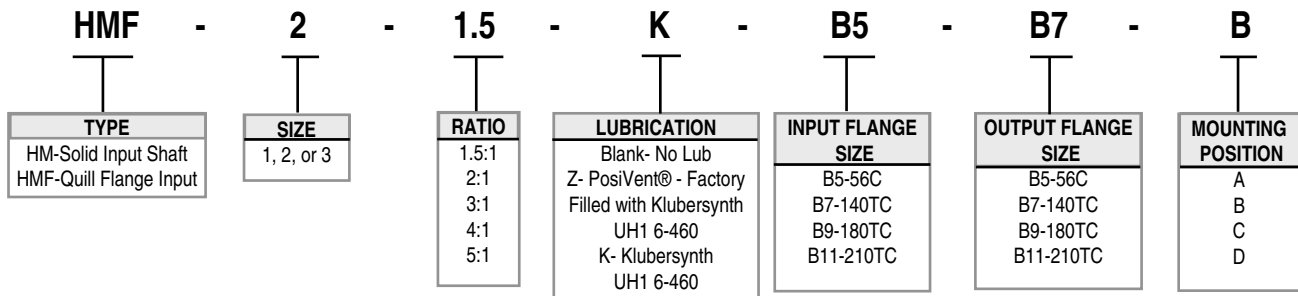
Application requirements: 125:1 reduction, 1 HP NEMA 56C 1750 RPM, Service Class I, horizontal base, Klubersynth UH1 6-460 lubrication, with standard assembly.



Assembled to an:



Each gearbox can be shipped separately or assembled.



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.

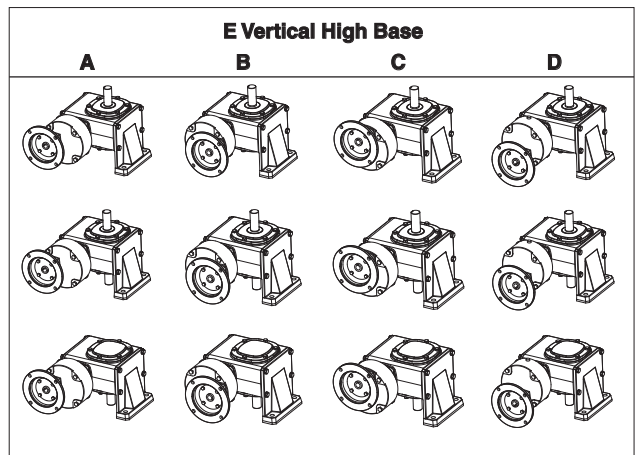
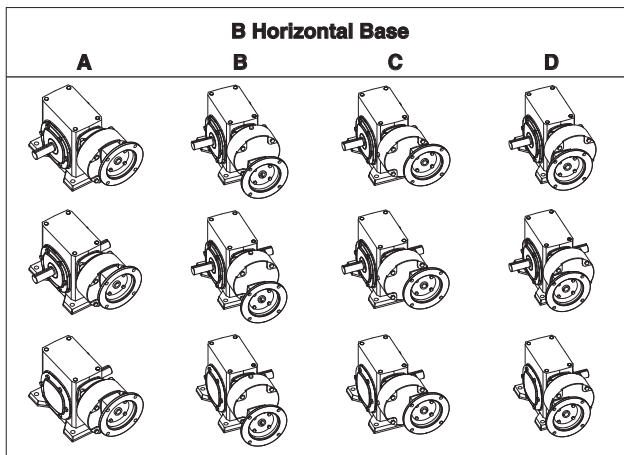
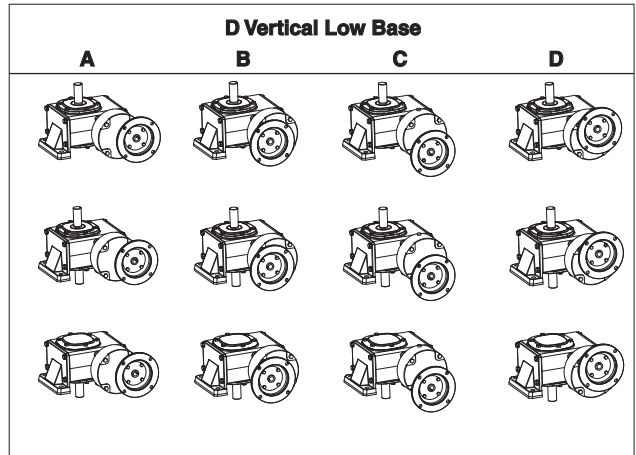
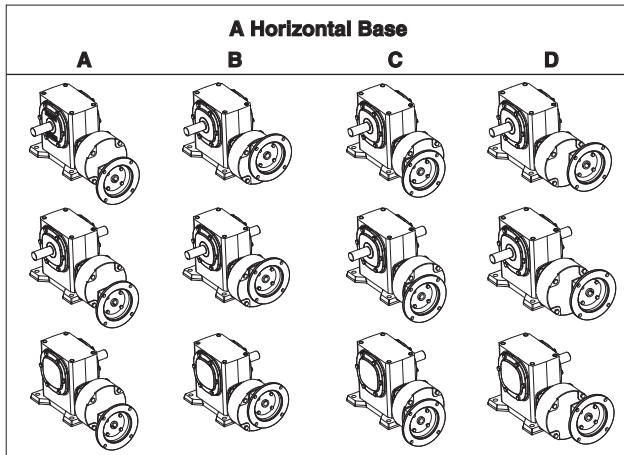
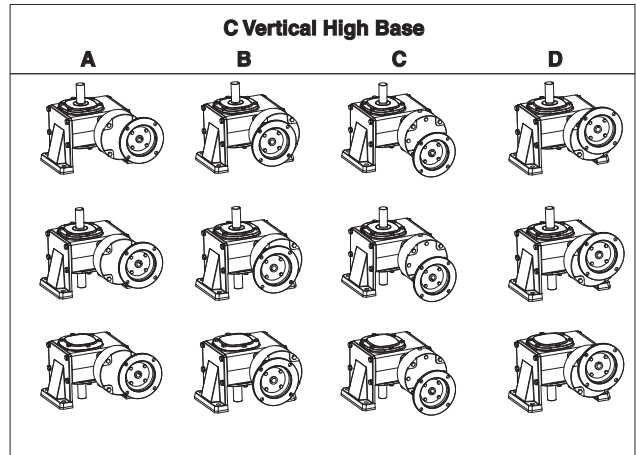
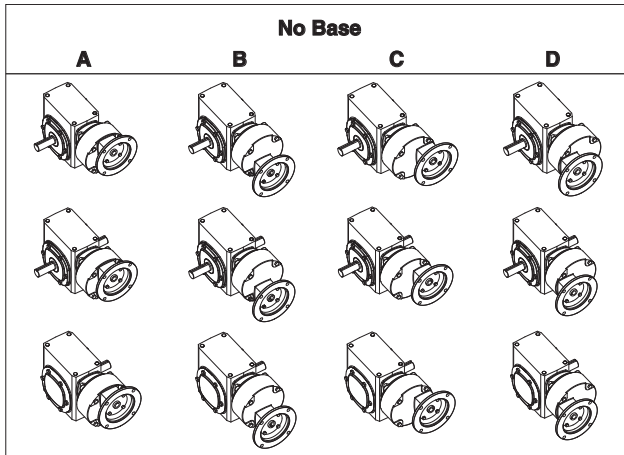
Types "C" and "E" are vertical high bases and types "D" and "F" are vertical low bases.

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.



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.

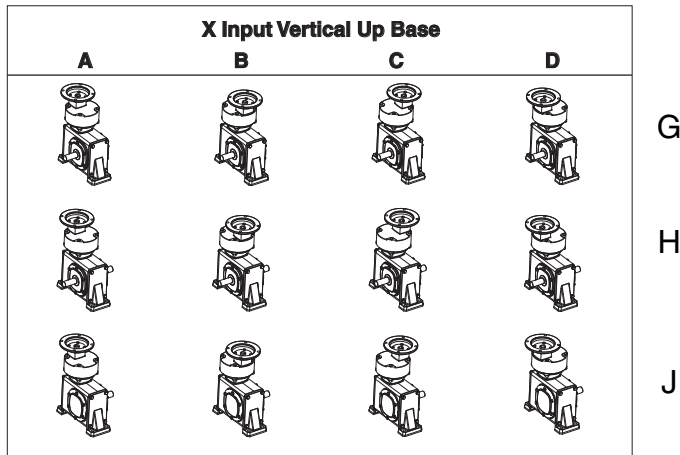
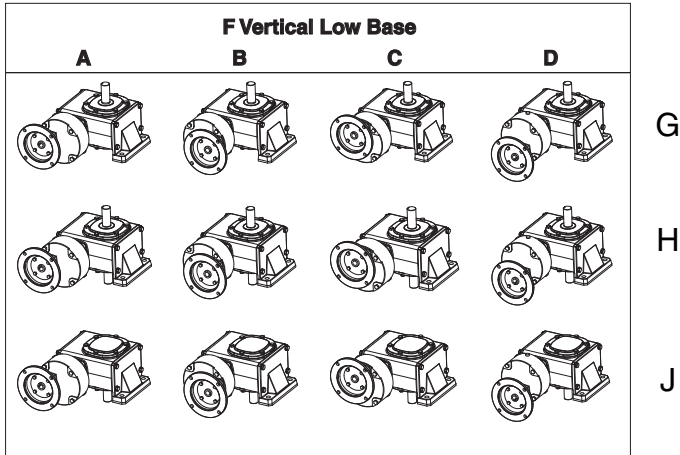
Types "C" and "E" are vertical high bases and types "D" and "F" are vertical low bases.

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

ENGINEERING DATA

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 96-104.



DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS.
		OUTPUT TORQUE (LB.IN.)	HP INPUT	OUT-PUT	F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz
175	10 2X5	203	0.67	0.56	HMF1-2-B5-B5 with F713-5-(B5)					
						1/3	101	III	B5	EUTF
						1/4	76	III	B5	DUTF
		315	1	0.87	HMF1-2-B5-B5 with F715-5-(B5)	1	315	I	B5	HUTF-5/8
						3/4	236	II	B5	GUTF
		380	1.21	1.06	HMF1-2-B5-B5 with F718-5-(B5)	1/2	158	III	B5	FUTF
						1	315	I	B5	HUTF-5/8
		622	1.94	1.73	HMF2-2-B7-B7 with F721-5-(B7)	3/4	236	II	B5	GUTF
						1/2	158	III	B5	FUTF
		850	2.72	2.36	HMF2-2-B7-B7 with F724-5-(B7)	1	315	I	B5	HUTF-5/8
1 1/2	466					II	B7	KUTF		
1140	3.91	3.17	HMF2-2-B5-B7 with F721-5-(B7)	1	311	III	B5	JUTF		
				2	621	I	B7	KUTF		
1944	5.98	5.4	HMF2-2-B5-B7 with F724-5-(B7)	1	312	III	B5	HUTF-5/8		
				1 1/2	468	II	B7	JUTF		
116.7	15 3X5	211	0.462	0.391	HMF3-2-B9-B9 with F726-5-(B9)	3	943	I	B9	LUTF
						2	629	II	B7	KUTF
						1 1/2	471	III	B7	JUTF
		337	0.752	0.624	HMF3-2-B9-B9 with F730-5-(B9)	5	1624	I	B9	MUTF
						3	974	II	B7	LUTF
		411	0.902	0.761	HMF2-2-B7-B7 with F726-5-(B7)	2	650	III	B7	KUTF
						1 1/2	471	III	B7	JUTF
		697	1.510	1.291	HMF1-3-B5-B5 with F713-5-(B5)	1/3	152	II	B5	EUTF
						1/4	114	III	B5	DUTF
		962	2.06	1.798	HMF1-3-B5-B5 with F715-5-(B5)	3/4	334	I	B5	GUTF
1/2	223					II	B5	FUTF		
1313	2.815	2.431	HMF1-3-B5-B5 with F718-5-(B5)	1/3	148	III	B5	EUTF		
				1/2	228	II	B5	FUTF		
2326	4.93	4.31	HMF1-3-B5-B5 with F713-5-(B5)	1/3	152	III	B5	EUTF		
				1/4	114	III	B5	DUTF		
87.5	20 2X10	257	0.426	0.357	HMF2-3-B7-B7 with F721-5-(B7)	1 1/2	691	I	B7	JUTF
						1	461	II	B5	HUTF-5/8
						3/4	346	III	B5	GUTF
		370	0.604	0.514	HMF2-3-B7-B7 with F724-5-(B7)	2	934	I	B7	KUTF
						1 1/2	700	II	B7	JUTF
		510	0.829	0.708	HMF2-3-B5-B7 with F724-5-(B7)	1	467	III	B5	HUTF-5/8
						2	932	II	B7	KUTF
		777	1.26	1.08	HMF2-3-B7-B7 with F726-5-(B7)	1 1/2	700	III	B7	JUTF
						3	1414	II	B9	LUTF
		777	1.26	1.08	HMF3-3-B9-B9 with F730-5-(B9)	2	943	III	B7	KUTF
2	943					III	B7	KUTF		

* 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

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS* CAT. NOS. 230/460 VAC 3 Phase 60 Hz			
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS							
		OUTPUT TORQUE (LB.IN.)	HP INPUT	OUT-PUT	F, QC, HF, SF, HQC, RF GEARBOX SIZE	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE				
87.5	20 2X10	1130	1.81	1.57	HMF2-2-B7-B7 with F724-10-(B7)	1 1/2	938	I	B7	JUTF			
					HMF2-2-B5-B7 with F724-10-(B7)	1 3/4	625 469	II III	B5 B5	HUTF-5/8 GUTF			
		1515	2.44	2.103	HMF2-2-B7-B7 with F726-10-(B7)	2 1 1/2	1242 931	I II	B7 B7	KUTF JUTF			
					HMF2-2-B5-B7 with F726-10-(B7)	1	621	III	B5	HUTF-5/8			
		2370	3.75	3.29	HMF3-2-B9-B9 with F730-10-(B9)	3	1881	II	B9	LUTF			
					HMF2-2-B7-B7 with F730-10-(B7)	2	1254	III	B7	KUTF			
		2660	4.23	3.69	HMF3-2-B9-B9 with F732-10-(B9)	3	1886	II	B9	LUTF			
					HMF3-2-B9-B9 with F738-10-(B9)	5 3	3125 1875	I II	B9 B9	MUTF LUTF			
		8037	12.78	11.16	HMF3-2-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	HMF1-1.5-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	HMF1-1.5-B5-B5 with F715-15-(B5)	1/2 1/3 1/4	337 225 169	I II III	B5 B5 B5	FUTF EUTF DUTF
								HMF1-1.5-B5-B5 with F718-15-(B5)	1/2 1/3	334 223	II III	B5 B5	FUTF EUTF
		HMF1-1.5-B5-B5 with F721-15-(B5)	1 3/4 1/2	674 506 337				I II III	B5 B5 B5	HUTF-5/8 GUTF FUTF			
		1060	1.56	1.29	HMF2-1.5-B7-B7 with F724-15-(B7)	1 1/2	1006	I	B7	JUTF			
					HMF2-1.5-B5-B7 with F724-15-(B7)	1 3/4	671 503	II III	B5 B5	HUTF-5/8 GUTF			
		1425	2.07	1.73	HMF2-1.5-B7-B7 with F726-15-(B7)	2 1 1/2	1353 1014	I II	B7 B7	KUTF JUTF			
					HMF2-1.5-B5-B7 with F726-15-(B7)	1	677	III	B5	HUTF-5/8			
		2425	3.51	2.95	HMF3-1.5-B9-B9 with F730-15-(B9)	3	2039	I	B9	LUTF			
					HMF2-1.5-B7-B7 with F730-15-(B7)	2 1 1/2	1359 1019	II III	B7 B7	KUTF JUTF			
		2600	3.74	3.16	HMF3-1.5-B9-B9 with F732-15-(B9)	3	2053	II	B9	LUTF			
					HMF3-1.5-B9-B9 with F738-15-(B9)	5 3	3449 2070	I II	B9 B9	MUTF LUTF			
		7700	10.82	9.37	HMF3-1.5-B11-B11 with RF752-15-(B11)	10 7 1/2	7008 5256	I II	B11 B11	PUTF NUTF			
					HMF3-1.5-B9-B11 with RF752-15-(B11)	5	3504	III	B9	MUTF			
		10800	15.18	13.14	HMF3-1.5-B11-B11 with RF760-15-(B11)	10 7 1/2	7008 5256	II III	B11 B11	PUTF NUTF			

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DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS. 230/460 VAC 3 Phase 60 Hz
		OUTPUT TORQUE (LB.IN.)	HP		F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	
	INPUT	OUT-PUT	GEARBOX SIZE							
70	25 5X5	225	0.307	0.25	HMF1-5-B5-B5 with F713-5-(B5)	1/4	183	I	B5	DUTF
		353	0.486	0.392	HMF1-5-B5-B5 with F715-5-(B5)	1/6	122	II	B5	CUTF
		435	0.6	0.483	HMF1-5-B5-B5 with F718-5-(B5)	1/2	353	I	B5	FUTF
						1/3	242	II	B5	EUTF
						1/4	181	III	B5	DUTF
		756	1.00	0.84	HMF1-5-B5-B5 with F721-5-(B5)	1/2	362	I	B5	FUTF
						1/3	242	II	B5	EUTF
						1/4	181	III	B5	DUTF
		1081	1.394	1.201	HMF1-5-B5-B5 with F724-5-(B5)	1	758	I	B5	HUTF-5/8
						3/4	568	II	B5	GUTF
						1/2	379	III	B5	FUTF
		1451	1.89	1.612	HMF2-5-B7-B7 with F726-5-(B7)	1	775	II	B5	HUTF-5/8
3/4	581					III	B5	GUTF		
1-1/2	1163					II	B7	JUTF		
2590	3.41	2.877	HMF2-5-B7-B7 with F730-5-(B7)	1	1519	II	B7	JUTF		
				2	1139	III	B7	KUTF		
58.3	30 2X15	277	0.31	0.256	HMF1-2-B5-B5 with F713-15-(B5)	1/4	223	I	B5	DUTF
		400	0.45	0.37	HMF1-2-B5-B5 with F715-15-(B5)	1/6	148	II	B5	CUTF
						1/3	297	II	B5	EUTF
						1/4	223	II	B5	DUTF
		510	0.572	0.472	HMF1-2-B5-B5 with F718-15-(B5)	1/6	148	III	B5	CUTF
						1/2	445	I	B5	FUTF
	1/3					297	II	B5	EUTF	
	30 3X10	842	0.96	0.78	HMF1-3-B5-B5 with F721-10-(B5)	1/4	223	III	B5	DUTF
						1	842	I	B5	HUTF-5/8
						3/4	660	II	B5	GUTF
						1/2	440	III	B5	FUTF
						1/3	293	III	B5	EUTF
		1241	1.345	1.148	HMF2-3-B5-B7 with F724-10-(B7)	1	930	II	B5	HUTF
						3/4	698	II	B5	GUTF
						1/2	465	III	B5	FUTF
		1665	1.82	1.54	HMF2-3-B7-B7 with F726-10-(B7)	1-1/2	1367	I	B7	JUTF
						1	911	II	B5	HUTF
						3/4	684	III	B5	GUTF
		2672	2.93	2.472	HMF2-3-B7-B7 with F730-10-(B7)	2	1823	II	B7	KUTF
						1-1/2	1367	III	B7	JUTF
						1	911	III	B5	HUTF-5/8
2890		3.132	2.673	HMF3-3-B9-B9 with F732-10-(B9)	3	2766	I	B9	LUTF	
	2				1844	II	B7	KUTF		
	1-1/2				1382	III	B7	JUTF		
4044	4.432	3.741	HMF3-3-B9-B9 with F738-10-(B9)	3	2734	II	B9	LUTF		
				2	1823	III	B9	KUTF		
30 2X15	8760	9.35	8.103	HMF3-2-B11-B11 with RF752-15-(B11)	7-1/2	7016	II	B11	NUTF	
					5	4677	II	B9	MUTF	
					3	1871	III	B9	LUTF	
12220	13.06	11.304	HMF3-2-B11-B11 with RF760-15-(B11)	10	9345	II	B11	PUTF		
				7-1/2	7008	II	B11	NUTF		
			HMF3-2-B9-B11 with RF760-15-(B11)	5	4672	III	B9	MUTF		

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DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*			
		GEAR CAPACITY			AVAILABLE MODELS		RATINGS			CAT. NOS.			
		OUTPUT TORQUE (LB.IN.)	HP		F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz			
46.7	37.5 1.5X25		491	0.49	0.36						HMF1-1.5-B5-B5 with F718-25-(B5)	1/2	491
		1/3				327	II	B5	EUTF				
		1/6				245	III	B5	CUTF				
		792	0.75	0.58	HMF1-1.5-B5-B5 with F721-25-(B5)	3/4	792	I	B5	GUTF			
						1/2		528	II	B5	FUTF		
						1/3		352	III	B5	EUTF		
		1150	1.06	0.84	HMF1-1.5-B5-B5 with F724-25-(B5)	1	1068	I	B5	HUTF-5/8			
						3/4		800	II	B5	GUTF		
						1/2		534	III	B5	FUTF		
		1525	1.35	1.11	HMF1-1.5-B5-B5 with F726-25-(B5)	1	1109	II	B5	HUTF-5/8			
						3/4		832	III	B5	GUTF		
						2560		2.37	1.86	HMF2-1.5-B7-B7 with F730-25-(B7)	2	2118	I
1-1/2	1589	II	B7	JUTF									
1	1059	III	B5	HUTF-5/8									
3000	2.73	2.19	HMF2-1.5-B7-B7 with F732-25-(B7)	2	2118	II	B7	KUTF					
				1-1/2		1589	III	B7	JUTF				
				43.8		40 4X10	279	0.25	0.194	HMF1-4-B5-B5 with F713-10-(B5)	1/4	279	I
1/6	186	II	B5		CUTF								
1/3	372	I	B5		EUTF								
404	0.36	0.28	HMF1-4-B5-B5 with F715-10-(B5)		1/4		279	II	B5	DUTF			
					1/6			186	III	B5	CUTF		
					1/3			391	II	B5	EUTF		
566	0.468	0.393	HMF1-4-B5-B5 with F718-10-(B5)		1/4		293	III	B5	DUTF			
					3/4			878	I	B5	GUTF		
					1/2			587	II	B5	FUTF		
880	0.79	0.61	HMF1-4-B5-B5 with F721-10-(B5)		1/3		391	III	B5	EUTF			
					1			1201	I	B5	HUTF-5/8		
					3/4			900	II	B5	GUTF		
1298	1.08	0.901	HMF1-4-B5-B5 with F724-10-(B5)	1/2	600	III	B5	FUTF					
				1		1201	II	B5	HUTF-5/8				
				3/4		900	III	B5	GUTF				
1754	1.46	1.218	HMF2-4-B5-B7 with F726-10-(B7)	1	1201	II	B5	HUTF-5/8					
				3/4		900	III	B5	GUTF				
				2842		2.36	1.973	HMF2-4-B7-B7 with F730-10-(B7)	2	2402	I	B7	KUTF
1-1/2	1802	II	B7		JUTF								
1	1201	III	B5		HUTF-5/8								
3014	2.51	2.092	HMF2-4-B7-B7 with F732-10-(B7)	2	2402	II	B7	KUTF					
				1-1/2		1802	II	B7	JUTF				
				4242		3.52	2.94	HMF3-4-B9-B11 with F738-10-(B11)	3	3604	I	B9	LUTF
9413	7.74	6.53	HMF3-4-B11-B11 with RF752-10-(B11)		7-1/2				9009		I	B11	NUTF
					5						6006	II	B9
				3	3604	III	B9	LUTF					
15112	12.28	10.49	HMF3-4-B11-B11 with RF760-10-(B11)	10	12012	II	B11	PUTF					
				7-1/2		9009	II	B11	NUTF				
				5		6006	III	B9	MUTF				
38.9	45 3X15	296	0.25	0.183	HMF1-3-B5-B5 with F713-15-(B5)	1/4	296	II	B5	DUTF			
						1/6		202	II	B5	CUTF		
		425	0.346	0.262	HMF1-3-B5-B5 with F715-15-(B5)	1/3	408	I	B5	EUTF			
						1/4		306	II	B5	DUTF		
						1/6		204	III	B5	CUTF		
		545	0.428	0.336	HMF1-3-B5-B5 with F718-15-(B5)	1/3	424	II	B5	EUTF			
						1/4		318	II	B5	DUTF		
						1/6		212	III	B5	CUTF		
856	0.66	0.53	HMF1-3-B5-B5 with F721-15-(B5)	1/2	652	II	B5	FUTF					
				1/3		435	III	B5	EUTF				

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DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS.
		OUTPUT TORQUE (LB.IN.)	HP INPUT	OUT-PUT	F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz
38.9	45 3X15	1279	0.951	0.789	HMF2-3-B5-B7 with F724-15-(B7)	3/4 1/2	978 652	II III	B5 B5	GUTF FUTF
		1744	1.337	1.076	HMF2-3-B5-B7 with F726-15-(B7)	1 3/4 1/2	1304 978 652	II III III	B5 B5 B5	HUTF-5/8 GUTF FUTF
		3051	2.319	1.883	HMF2-3-B7-B7 with F730-15-(B7)	2 1-1/2	2608 1956	I II	B7 B7	KUTF JUTF
					HMF2-3-B5-B7 with F730-15-(B7)	1	1304	III	B5	HUTF-5/8
		3126	2.34	1.929	HMF2-3-B7-B7 with F732-15-(B7)	2 1-1/2	2671 2003	I II	B7 B7	KUTF JUTF
					HMF2-3-B5-B7 with F732-15-(B7)	1	1304	III	B5	HUT-5/8
		4380	3.24	2.703	HMF3-3-B9-B9 with F738-15-(B9)	3	4054	I	B9	LUTF
		9913	7.25	6.118	HMF3-3-B9-B9 with RF752-15-(B9)	5 3	6757 4054	II III	B9 B9	MUTF LUTF
					HMF3-3-B11-B11 with RF752-15-(B11)	10 7-1/2	13514 10135	I II	B11 B11	PUTF NUTF
		13874	10.15	8.563						
35	50 5X10	283	0.205	0.157	HMF1-5-B5-B5 with F713-10-(B5)	1/6	232	I	B5	CUTF
		411	0.296	0.228	HMF1-5-B5-B5 with F715-10-(B5)	1/4 1/6 1/3	347 232 477	I II I	B5 B5 B5	DUTF CUTF EUTF
					HMF1-5-B5-B5 with F718-10-(B5)	1/4 1/6	356 239	II III	B5 B5	DUTF CUTF
					HMF1-5-B5-B5 with F721-10-(B5)	1/2 1/3	690 460	II III	B5 B5	FUTF EUTF
		1332	0.89	0.74	HMF2-5-B5-B7 with F724-10-(B7)	3/4 1/2 1/3	1123 749 499	I II III	B5 B5 B5	GUTF FUTF EUTF
					HMF2-5-B5-B7 with F726-10-(B7)	1 3/4 1/2	1484 1113 742	I II III	B5 B5 B5	HUTF-5/8 GUTF FUTF
					HMF2-5-B7-B7 with F730-10-(B7)	2 1-1/2	2898 2174	I II	B7 B7	KUTF JUTF
		2944	2.03	1.635	HMF2-5-B5-B7 with F730-10-(B7)	1	1449	III	B5	HUTF-5/8
					HMF2-5-B7-B7 with F732-10-(B7)	2 1-1/2	2968 2226	I II	B7 B7	KUTF JUTF
		3088	2.016	1.715	HMF2-5-B5-B7 with F732-10-(B7)	1	1484	III	B5	HUTF-5/8
					HMF3-5-B9-B9 with F738-10-(B9)	3	4361	I	B9	LUTF
		4361	2.91	2.422	HMF2-5-B7-B7 with F738-10-(B7)	2 1-1/2	2989 2242	II III	B7	KUTF JUTF
					HMF3-5-B9-B11 with RF752-10-(B11)	5 3	7578 4547	II III	B9	MUTF LUTF
					HMF3-5-B11-B11 with RF760-10-(B11)	10 7-1/2	15155 11366	I II	B11	PUTF NUTF
		15757	10.39	8.75	HMF3-5-B9-B11 with RF760-10-(B11)	5	7578	III	B9	MUTF
29.2	60 4X15	302	0.192	0.14	HMF1-4-B5-B5 with F713-15-(B5)	1/6	262	I	B5	CUTF
		438	0.278	0.203	HMF1-4-B5-B5 with F715-15-(B5)	1/4 1/6	393 262	I II	B5 B5	DUTF CUTF
					HMF1-4-B5-B5 with F718-15-(B5)	1/3 1/4 1/6	524 393 262	I II II	B5 B5 B5	EUTF DUTF CUTF

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DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS.
		OUTPUT TORQUE (LB.IN.)	HP		F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz
INPUT	OUT-PUT		GEARBOX SIZE							
29.2	60 4X15	890	0.525	0.412	HMF1-4-B5-B5 with F721-15-(B5)	1/2	848	I	B5	FUTF
						1/3	566	II	B5	EUTF
						1/4	424	III	B5	DUTF
		1334	0.796	0.617	HMF2-4-B5-B7 with F724-15-(B7)	3/4	1257	I	B5	GUTF
						1/2	838	II	B5	FUTF
						1/3	556	III	B5	EUTF
		1838	1.09	0.851	HMF2-4-B5-B7 with F726-15-(B7)	1	1676	I	B5	HUTF-5/8
						3/4	1257	II	B5	GUTF
						1/2	838	III	B5	FUTF
		3220	1.92	1.49	HMF2-4-B7-B7 with F730-15-(B7)	1-1/2	2514	I	B7	JUTF
						1	1676	II	B5	HUTF-5/8
						3/4	1257	III	B5	GUTF
		3299	1.87	1.53	HMF2-4-B7-B7 with F732-15-(B7)	1-1/2	2640	II	B7	JUTF
						1	1781	II	B5	HUTF-5/8
3/4	1336					III	B5	GUTF		
4628	2.56	2.14	HMF2-4-B7-B7 with F738-15-(B7)	2	3562	II	B7	KUTF		
				1-1/2	2671	II	B7	JUTF		
				1	1781	III	B5	HUTF-5/8		
10512	5.9	4.86	HMF3-4-B9-B9 with RF752-15-(B9)	5	8905	I	B9	MUTF		
				3	4343	III	B9	LUTF		
				7-1/2	13357	I	B11	NUTF		
14817	8.32	6.86	HMF3-4-B11-B11 with RF760-15-(B11)	5	8905	II	B11	MUTF		
				3	5343	III	B9	LUTF		
				3	5343	III	B9	LUTF		
23.3	75 5X15	446	0.24	0.165	HMF1-5-B5-B5 with F715-15-(B5)	1/6	314	II	B5	CUTF
						1/4	491	I	B5	DUTF
						1/6	327	II	B5	CUTF
		910	0.434	0.336	HMF1-5-B5-B5 with F721-15-(B5)	1/3	698	II	B5	EUTF
						1/4	524	II	B5	DUTF
						1/6	349	III	B5	CUTF
		1367	0.66	0.505	HMF2-5-B5-B7 with F724-15-(B7)	1/2	1034	II	B5	FUTF
						1/3	690	III	B5	EUTF
						3/4	1548	I	B5	GUTF
		1895	0.92	0.701	HMF2-5-B5-B7 with F726-15-(B7)	1/2	1031	II	B5	FUTF
						1/3	688	III	B5	EUTF
						1-1/2	3025	I	B7	JUTF
		3221	1.59	1.191	HMF2-5-B7-B7 with F730-15-(B7)	1	2017	II	B5	HUTF-5/8
						3/4	1512	III	B5	GUTF
1-1/2	3221					I	B7	JUTF		
3402	1.58	1.258	HMF2-5-B7-B7 with F732-15-(B7)	1	2148	II	B7	HUTF-5/8		
				3/4	1611	III	B5	GUTF		
				1-1/2	3221	I	B7	JUTF		
4776	2.22	1.766	HMF2-5-B7-B7 with F738-15-(B7)	2	4295	I	B7	KUTF		
				1-1/2	3221	II	B7	JUTF		
				1	2148	III	B5	HUTF-5/8		
10872	5.05	4.019	HMF3-5-B9-B9 with RF752-15-(B9)	5	10738	I	B9	MUTF		
				3	6443	II	B9	LUTF		
				5	11000	II	B9	MUTF		
15383	6.98	5.687	HMF3-5-B9-B11 with RF760-15-(B11)	3	6600	III	B9	LUTF		
				3	6600	III	B9	LUTF		
				3	6600	III	B9	LUTF		
21.9	80 4X20	448	0.228	0.156	HMF1-4-B5-B5 with F715-20-(B5)	1/6	326	II	B5	CUTF
						1/4	517	I	B5	DUTF
627	0.303	0.218	HMF1-4-B5-B5 with F718-20-(B5)	1/6	344	II	B5	CUTF		
				1/6	344	II	B5	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

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*		
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS. 230/460 VAC 3 Phase 60 Hz		
		OUTPUT TORQUE (LB.IN.)	HP INPUT	OUT-PUT	F, QC, HF, SF, HQC, RF GEARBOX SIZE	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE			
21.9	80 4X20	936	0.45	0.33	HMF1-4-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	HMF2-4-B5-B7 with F724-20-(B7)	1/2 1/3	1062 707	II III	B5 B5	FUTF EUTF		
		1864	0.8	0.648	HMF2-4-B5-B7 with F726-20-(B7)	3/4 1/2 1/3	1697 1131 754	I II III	B5 B5 B5	GUTF FUTF EUTF		
		3100	1.22	1.077	HMF2-4-B5-B7 with F730-20-(B7)	1 3/4 1/2	2514 1886 1256	II II III	B5 B5 B5	HUTF-5/8 GUTF FUTF		
		3677	1.646	1.278	HMF2-4-B7-B7 with F732-20-(B7)	1-1/2	3352	I	B7	JUTF		
					HMF2-4-B5-B7 with F732-20-(B7)	1 3/4	2234 1676	II III	B5	HUTF-5/8 GUTF		
		5285	2.337	1.836	HMF2-4-B7-B7 with F738-20-(B7)	2 1-1/2	4525 3394	I II	B7 B7	KUTF JUTF		
					HMF2-4-B5-B7 with F738-20-(B7)	1	2263	III	B5	HUTF-5/8		
		10450	4.68	3.63	HMF3-4-B9-B11 with RF752-20-(B11)	3	6705	II	B9	LUTF		
		15140	6.56	5.261	HMF3-4-B9-B11 with RF760-20-(B11)	5 3	11537 6922	II III	B9 B9	MUTF LUTF		
17.5	100 5X20	457	0.19	0.127	HMF1-5-B5-B5 with F715-20-(B5)	1/6	402	I	B5	CUTF		
		643	0.259	0.179	HMF1-5-B5-B5 with F718-20-(B5)	1/4 1/6	620 413	I II	B5 B5	DUTF CUTF		
		957	0.37	0.27	HMF1-5-B5-B5 with F721-20-(B5)	1/3	861	I	B5	EUTF		
						1/4	646	II	B5	DUTF		
						1/6	431	III	B5	CUTF		
		1435	0.562	0.398	HMF2-5-B5-B5 with F724-20-(B5)	1/2	1275	I	B5	FUTF		
						1/3	850	II	B5	EUTF		
						1/4	637	III	B5	DUTF		
		1912	0.68	0.531	HMF2-5-B5-B5 with F726-20-(B5)	1/2	1379	II	B5	FUTF		
						1/3	1000	III	B5	EUTF		
		3225	1.15	0.895	HMF2-5-B5-B7 with F730-20-(B7)	1 3/4	2759 2069	I II	B5 B5	HUTF-5/8 GUTF		
						1/2	1379	III	B5	FUTF		
3721	1.4	1.003	HMF2-5-B5-B7 with F732-20-(B7)	1 3/4 1/2	2654 1990 1327	II II III	B5 B5 B5	HUTF-5/8 GUTF FUTF				
				5418	2.01	1.504	HMF2-5-B7-B7 with F738-20-(B7)	2 1-1/2	5378 4033	I II	B7 B7	KUTF JUTF
							HMF2-5-B5-B7 with F738-20-(B7)	1	2689	III	B5	HUTF-5/8
10744	3.89	2.98	HMF3-5-B9-B11 with RF752-20-(B11)	3	8276	II	B9	LUTF				
15622	5.43	4.338	HMF3-5-B11-B11 with RF760-20-(B11)	5 3	13968 8381	I II	B11 B11	MUTF LUTF				
14	125 5X25	609	0.205	0.135	HMF1-5-B5-B5 with F718-25-(B5)	1/6	495	I	B5	CUTF		
		933	0.31	0.21	HMF1-5-B5-B5 with F721-25-(B5)	1/4 1/6	917 611	I II	B5 B5	DUTF CUTF		
						1407	0.46	0.313	HMF2-5-B5-B7 with F724-25-(B7)	1/3 1/4 1/6	1018 764 509	II II III
		1937	0.59	0.43	HMF2-5-B5-B7 with F726-25-(B7)					1/2 1/3 1/4	1637 1091 818	I II III

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



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com

DOUBLE REDUCTION OUTPUT RPM & CAPACITY SELECTION TABLES @ 1750 RPM INPUT

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*		
		GEAR CAPACITY			AVAILABLE MODELS		RATINGS				CAT. NOS.	
		OUTPUT TORQUE (LB.IN.)	HP		F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz		
			INPUT	OUT-PUT	GEARBOX SIZE							
14	125 5X25	3158	0.95	0.701	HMF2-5-B5-B7 with F730-25-(B7)	1 3/4 1/2	3158 2423 1615	I II III	B5 B5 B5	HUTF-5/8 GUTF FUTF		
		3373	1.1	0.75	HMF2-5-B5-B7 with F732-25-(B7)	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	HMF1-5-B5-B5 with F718-30-(B5)	1/6	594	I	B5	CUTF		
		977	0.28	0.18	HMF1-5-B5-B5 with F721-30-(B5)	1/4 1/6	877 585	I II	B5 B5	DUTF CUTF		
		1415	0.404	0.263	HMF2-5-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	HMF2-5-B5-B7 with F726-30-(B7)	1/2 1/3 1/4	1756 1170 877	I II III	B5 B5 B5	FUTF EUTF DUTF		
		3404	1.002	0.632	HMF2-5-B5-B7 with F730-30-(B7)	1 3/4 1/2	3404 2553 1702	I II III	B5 B5 B5	HUTF-5/8 GUTF FUTF		
		3788	1.1	0.73	HMF2-5-B5-B7 with F732-30-(B7)	1 3/4 1/2	3404 2553 1702	I II III	B5 B5 B5	HUTF-5/8 GUTF FUTF		
		5303	1.39	0.984	HMF2-5-B5-B7 with F738-30-(B7)	1 3/4	3824 2868	II II	B5 B5	HUTF-5/8 GUTF		
		11381	3.11	2.113	HMF3-5-B9-B9 with RF752-30-(B9)	3	11000	II	B9	LUTF		
		15932	4.08	2.958	HMF3-5-B9-B11 with RF760-30-(B11)	3	11000	II	B9	LUTF		
		8.8	200 5X40	643	0.162	0.089	HMF1-5-B5-B5 with F718-40-(B5)	1/6	640	I	B5	CUTF
957	0.25			0.13	HMF1-5-B5-B5 with F721-40-(B5)	1/4 1/6	950 640	I II	B5 B5	DUTF CUTF		
1435	0.35			0.199	HMF2-5-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	HMF2-5-B5-B5 with F726-40-(B5)	1/3 1/4	1374 1030	II III	B5 B5	EUTF DUTF		
3303	0.775			0.459	HMF2-5-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	HMF2-5-B5-B7 with F732-40-(B7)	3/4 1/2 1/3	3405 2270 1513	I II III	B5 B5 B5	GUTF FUTF EUTF		
5418	1.17			0.752	HMF2-5-B5-B7 with F738-40-(B7)	1 3/4 1/2	4609 3457 2305	I II III	B5 B5 B5	HUTF-5/8 CUTF FUTF		
15623	3.19			2.169	HMF3-5-B9-B9 with F760-40-(B9)	3	14457	I	B9	LUTF		
7	250 5X50			915	0.18	0.10	HMF1-5-B5-B5 with F721-50-(B5)	1/6	844	I	B5	CUTF
				1340	0.274	0.149	HMF2-5-B5-B5 with F724-50-(B5)	1/4 1/6	1222 814	I II	B5 B5	DUTF CUTF
		1848	0.359	0.205	HMF2-5-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	HMF2-5-B5-B7 with F730-50-(B7)	1/2 1/3 1/4	2488 1659 1244	I II III	B5 B5 B5	FUTF EUTF DUTF		
		3210	0.634	0.356	HMF2-5-B5-B7 with F732-50-(B7)	1/2 1/3	2488 1659	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

OUT-PUT RPM	RATIO	FLANGED REDUCERS (GEARMOTOR)								MOTORS*
		GEAR CAPACITY			AVAILABLE MODELS	RATINGS				CAT. NOS.
		OUTPUT TORQUE (LB.IN.)	HP		F, QC, HF, SF, HQC, RF	MTR HP	OUTPUT TORQUE (LB.IN.)	SERV-ICE CLASS	MTR. BORE CODE	230/460 VAC 3 Phase 60 Hz
INPUT	OUT-PUT		GEARBOX SIZE							
7	250 5X50	4373	0.862	0.486	HMF2-5-B5-B7 with F738-50-(B7)	3/4	3798	I	B5	GUTF
						1/2	2532	II	B5	FUTF
5.8	300 5X60	877	0.17	0.08	HMF1-5-B5-B5 with F721-60-(B5)	1/6	873	I	B5	CUTF
					HMF2-5-B5-B5 with F724-60-(B5)	1/6	873	II	B5	CUTF
					HMF2-5-B5-B5 with F726-60-(B5)	1/4	1388	II	B5	DUTF
						1/6	925	II	B5	
					HMF2-5-B5-B7 with F730-60-(B7)	1/3	2200	II	B5	EUTF
						1/4	1650	II	B5	DUTF
					HMF2-5-B7-B7 with F730-60-(B7)	1/6	1100	III	B7	CUTF
					HMF2-5-B5-B7 with F732-60-(B7)	1/2	2881	I	B5	FUTF
						1/3	1921	II	B5	EUTF
						1/6	1440	III	B5	CUTF
4272	0.73	0.395	HMF2-5-B5-B7 with F738-60-(B7)	3/4	4272	I	B5	GUTF		
				1/2	2933	II	B5	FUTF		
				1/3	1955	III	B5	EUTF		

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



HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

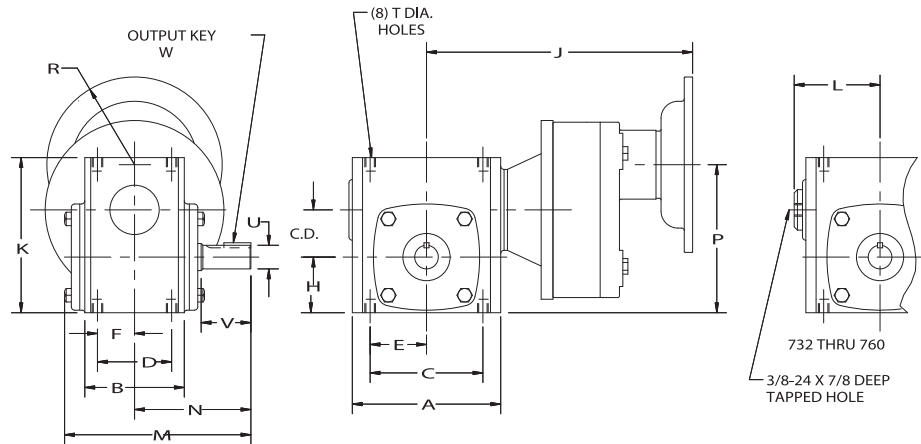
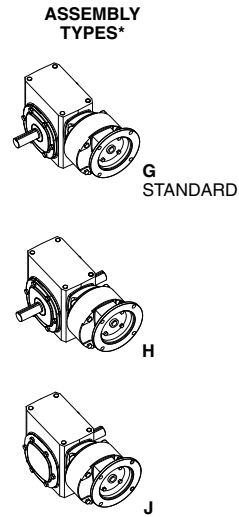
BASIC MODELS (NO BASE)

FOR ORDERING INFORMATION, see Page 92.

F700 SERIES - FLANGED QUILL TYPE

QC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 96-104.



Assembly "A" Shown

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 +0.000 -0.001	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 93 and 94.

** For Fan Kits, see Page 116.

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

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

Reference Page 229 for flange details.

HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

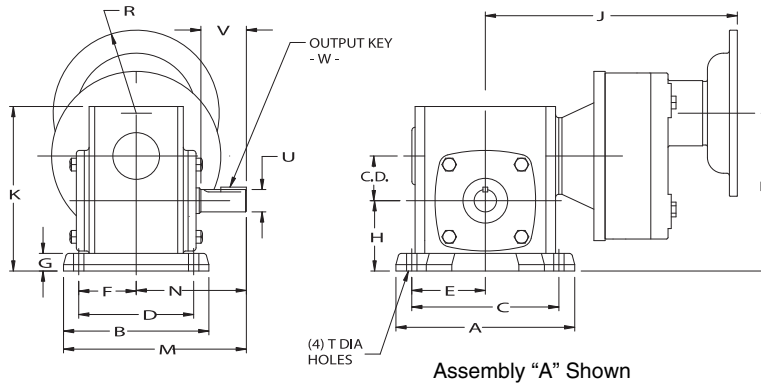
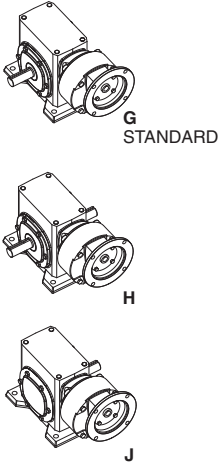
B POSITION HORIZONTAL BASE

F700 SERIES - FLANGED QUILL TYPE QC700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 92.

FOR RATING INFORMATION, See Pages 96-104.

ASSEMBLY
TYPES*



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			LOW SPEED SHAFT					APPROX.		BASE KIT NO.†	FAN KIT NO.**
			56C 140TC	180TC 210TC 250TC	T	U +.000 -.001	V	W-KEY		WEIGHT (LBS.)				
								SQ.	LENGTH	F700 (1)	QC700 (1)			
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 93 and 94.

Reference Page 229 for flange details.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.

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

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



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HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

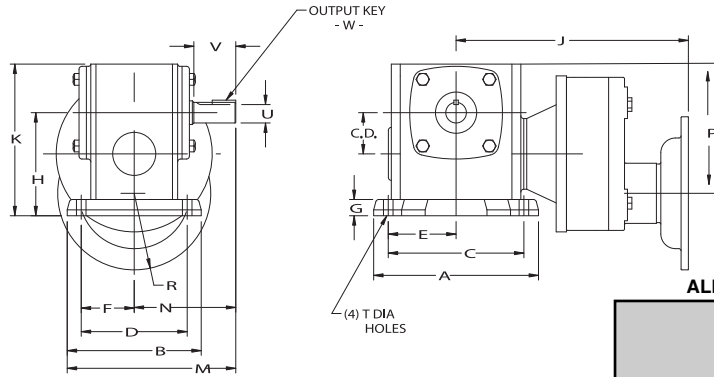
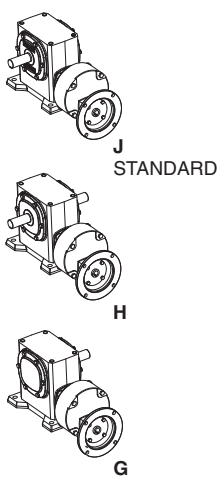
A POSITION HORIZONTAL BASE

F700 SERIES - FLANGED QUILL TYPE QC700 SERIES - FLANGED COUPLING TYPE

FOR ORDERING INFORMATION, see Page 92.

FOR RATING INFORMATION, See Pages 96-104.

ASSEMBLY TYPES*



Assembly "A" Shown

ALL DIMENSIONS IN INCHES

NEMA Mounting	Input	
	Bore +.0015 -.0000	Keyway
42CZ	.500	1/8 x 1/16
56C	.625	3/16 x 3/32
140TC	.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				
										56C	140TC	180TC	56C	140TC	180TC 210TC		
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				T HOLES	LOW SPEED SHAFT				APPROX. WT. (LBS.) (1)		BASE KIT NO.	FAN KIT NO.**	
			NEMA MOUNTING					U +.000/-0.001	V	W-KEY		F700	QC700			
			56C	140TC	180TC	210TC				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 93 and 94.

** For Fan Kits, see Page 116.

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

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

Reference Page 229 for flange details.

HMf AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

C/D POSITION VERTICAL BASE

C/E = HIGH BASE D/F = LOW BASE

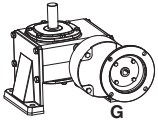
FOR ORDERING INFORMATION, see Page 92.

F700 SERIES - FLANGED QUILL TYPE

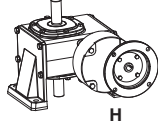
QC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 96-104.

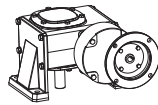
ASSEMBLY*
C/D



G



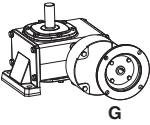
H



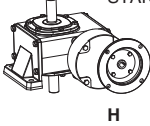
J

STANDARD

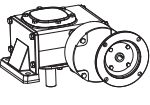
ASSEMBLY*
E/F



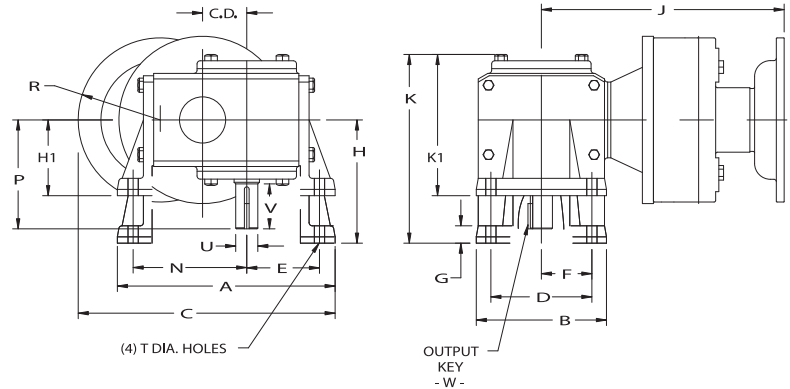
G
STANDARD



H



J



Assembly "A" Shown

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	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			T HOLES	LOW SPEED SHAFT				HIGH BASE		LOW BASE		FAN KIT NO.**		
			42CZ	56C 140TC	180TC 210TC 250TC		U +.000 -.001	V	W - KEY		APPROX. WEIGHT (LBS.)	BASE KIT NO.†	APPROX. WEIGHT (LBS.) (1)			BASE KIT NO.†	
									SQ.	LENGTH			F	QC			F
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 93 and 94.

** For Fan Kits, see Page 116.

† For Base Kits, see Page 115.

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

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

Reference Page 229 for flange details.

HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

X POSITION VERTICAL BASE

X = INPUT VERTICAL UP

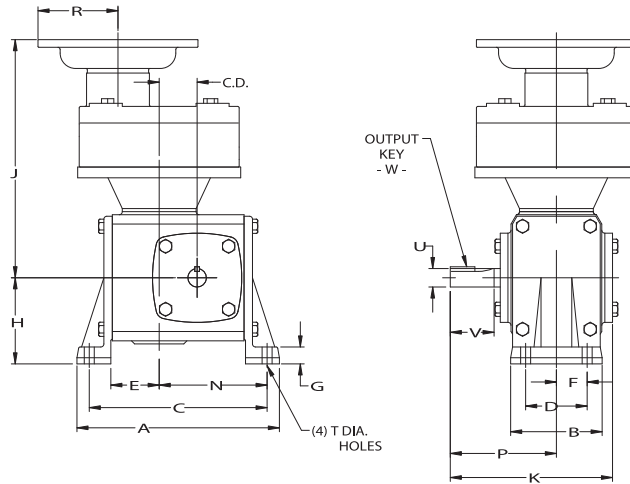
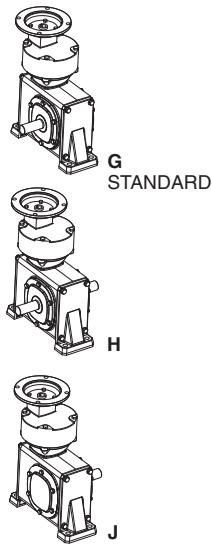
FOR ORDERING INFORMATION, see Page 92.

F700 SERIES - FLANGED QUILL TYPE

QC700 SERIES - FLANGED COUPLING TYPE

FOR RATING INFORMATION, See Pages 96-104.

ASSEMBLY TYPES*



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	.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	.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	.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	.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	.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	.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	
							SQUARE	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 93 and 94.

† For Base Kits, see Page 115.

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

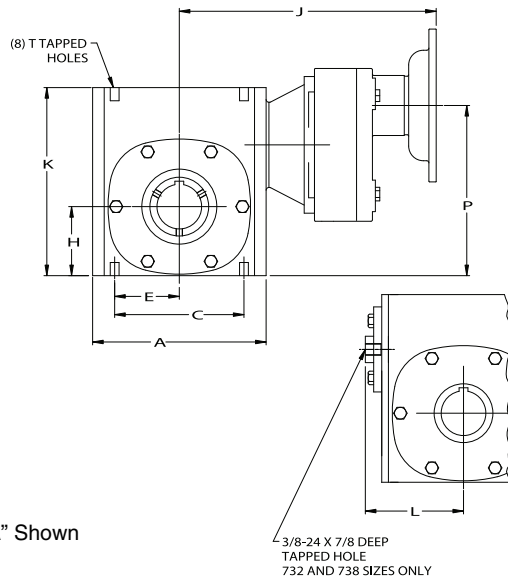
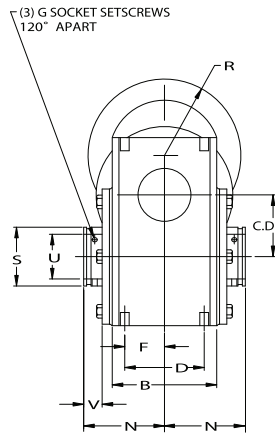
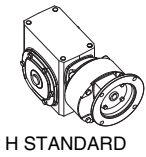
Reference Page 229 for flange details.

HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

BASIC MODELS (NO BASE)
BORED TO SIZE HOLLOW OUTPUT SHAFT
 FOR ORDERING INFORMATION, see Page 92.

HF700 SERIES - FLANGED QUILL TYPE
HQC700 SERIES - FLANGED COUPLING TYPE
 FOR RATING INFORMATION, See Pages 96-104.

ASSEMBLY
 TYPES*



Assembly "A" Shown

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	56C 140TC	180TC 210C			
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

SIZE	P	R - NEMA MOUNTING		S	T		LOW SPEED SHAFT				APPROX. WEIGHT (LBS.) (1)		FAN KIT NO.**	
		56C 140TC	180TC 210C		TAP SIZE	DEPTH	MAX U +.0015 -.0000	V	W-KEY		HF	HQC		
		SIZE	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

* See Assemblies and Mounting Positions, Pages 93 and 94.

** For Fan Kits, see Page 116.

(1) For sizes 724 and larger using HM3 add 25 lbs.
 Input may be rotated clockwise or counterclockwise.

See Page 114 for available bore sizes.

Reference Page 229 for flange details.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com

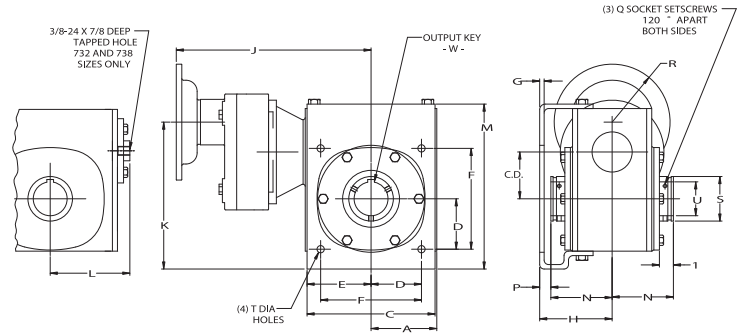
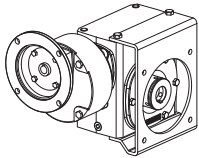
HMF AND 700 SERIES DOUBLE REDUCTION FLANGED REDUCER DIMENSIONS

R/L POSITION MOUNTING BRACKET
BORED TO SIZE HOLLOW OUTPUT SHAFT
FOR ORDERING INFORMATION, see Page 92.

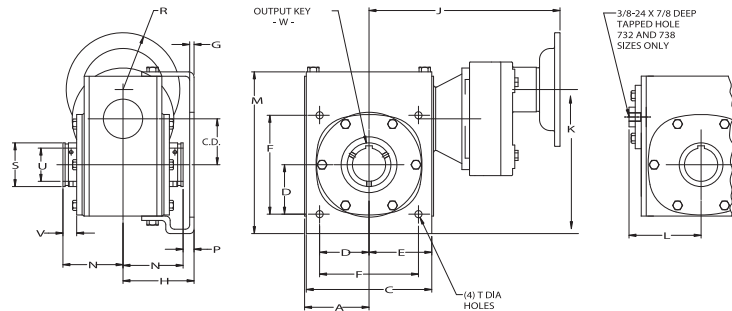
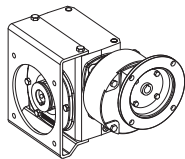
HF700 SERIES - FLANGED QUILL TYPE
HQC700 SERIES - FLANGED COUPLING TYPE
FOR RATING INFORMATION, See Pages 96-104.

ASSEMBLY
TYPES*

R POSITION



L POSITION



Assembly "A" Shown

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 210C			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 93 and 94.

** For Fan Kits, see Page 116.

(1) For sizes 724 and larger using HM3 add 25 lbs.
Input may be rotated cl

See Page 114 for available bore sizes.

Reference Page 229 for flange details.

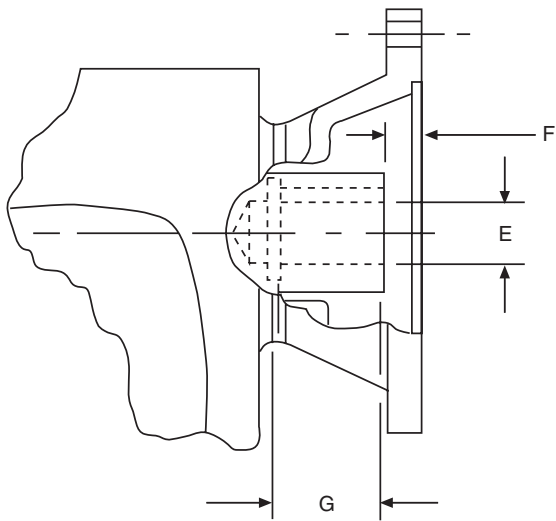


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700 SERIES MISCELLANEOUS COMPONENT DATA

F700 NEMA C QUILL TYPE MOTOR FLANGE DATA

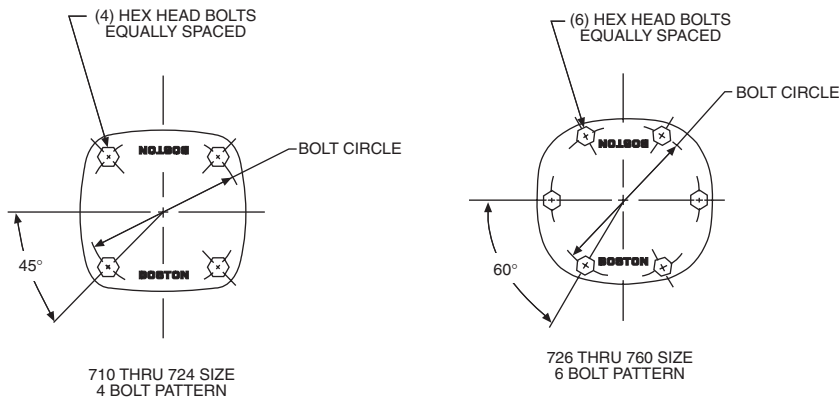


ALL DIMENSIONS IN INCHES

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

OUTPUT BEARING CARRIER DATA

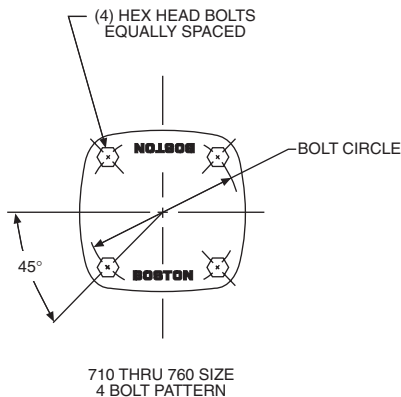
ALL DIMENSIONS IN INCHES



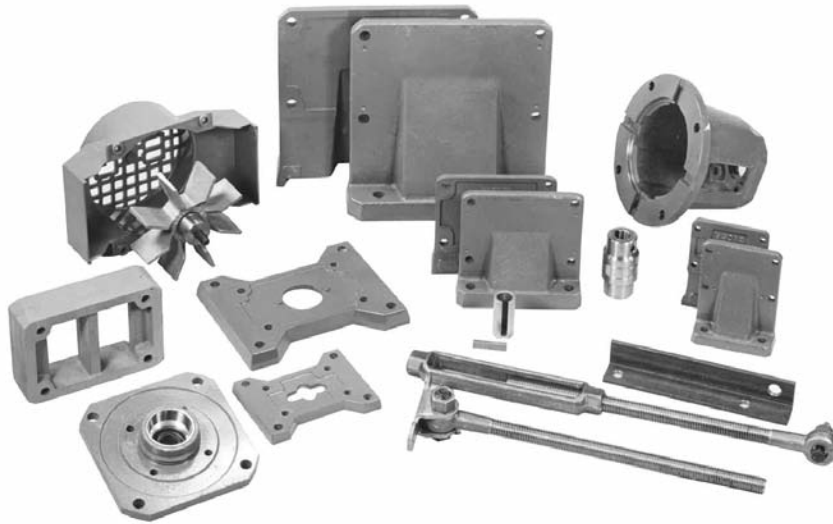
SIZE	BOLT		
	CIRCLE DIA.	SIZE	LENGTH
710	2-3/8	10-32	1/2
713	3	1/4-20	5/8
715	3-5/8	5/16-18	3/4
718	4	5/16-18	3/4
721	4-3/8	5/16-18	3/4
724	4-15/16	5/16-18	3/4
726	5-3/8	5/16-18	3/4
730	6	5/16-18	3/4
732	6-9/16	5/16-18	3/4
738	7-5/8	3/8-16	7/8
752	10-3/8	7/16-14	1-1/4
760	12-1/16	1/2-13	1-1/4

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

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D

700 SERIES ACCESSORIES

H SERIES HOLLOW OUTPUT BORE SIZES

Fraction Size	Output Bore Code	UNIT SIZE									Decimal Size*	KEY SIZE†
		713	715	718	721	724	726	730	732	738		
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"

* 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.

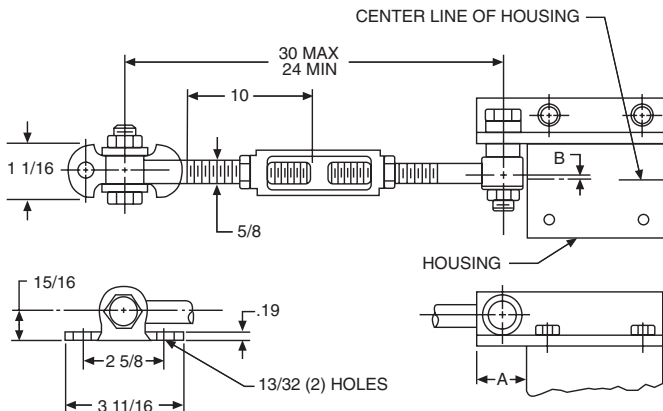
OUTPUT BRACKET (Including Fasteners)



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

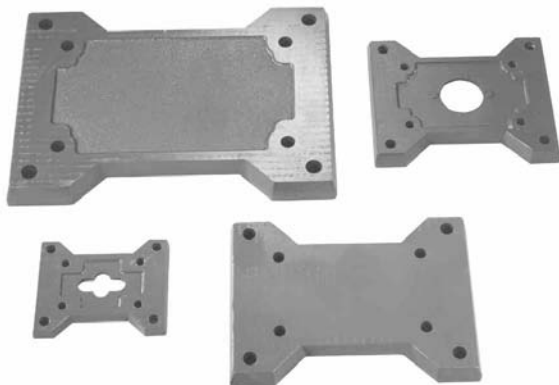
SIZE	DIMENSIONS		CATALOG NUMBER	KIT NUMBER
	A	B		
713	1.31	.26	XH713-76K	13973
715	1.18	.12	XH715-76K	13974
718	1.09	.09	X718-76K	69692
721	1.25	.03	X721-76K	69693
724	1.00	.03	X721-76K	69693
726	1.25	.22	X726-76K	69694
730	2.10	.52	X732-76K	69695
732	1.50	.53	X732-76K	69695
738	1.41	.91	XH738-76K	13976

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.

CAST IRON BASE KITS (Including Fasteners) FOR HORIZONTAL POSITIONS A & B



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

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.

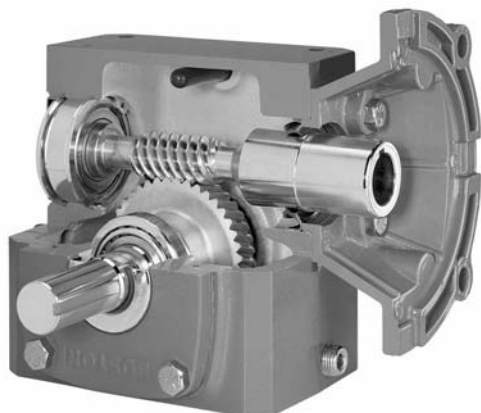
For E Base order C Base.
For F Base order D Base.

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		

710 available High Base only.

SPEED REDUCERS WITH POSIVENT® OPTION



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. The unique design comes complete with Klubersynth UH1 6-460 lubrication pre-filled for all mounting positions. 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™

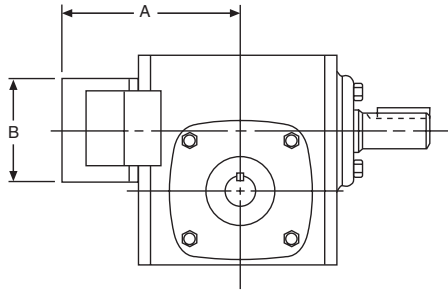
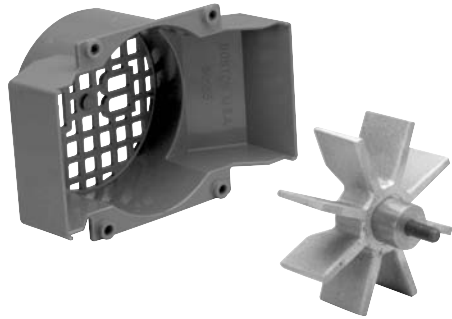
The PosiVent option is ideal for material handling, food processing, medical and pharmaceutical applications.

To order specify the letter "Z" after the ratio in the 700 series catalog number.

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 35.



ORDER BY KIT NUMBER

SIZE	C.D.	KIT. NO.	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
		51514	180TC
726	2.62	51440	56C
			140TC
		51515	180TC
730	3.00	65542	56C/140TC
		65548	180TC
732	3.25	51441	56C
			140TC
		51516	180TC

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

Not Recommended for Shock Loads or Reversing Applications

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

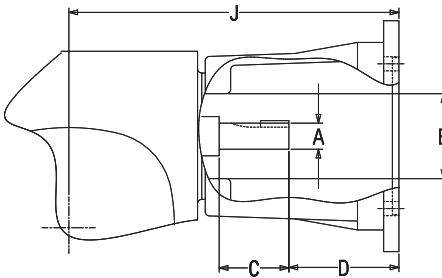


700 SERIES ACCESSORIES

Accessory kits are shipped separately, unless otherwise specified.

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 14-31 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.



ORDER BY KIT NUMBER

REDUCTION	NEMA	FLANGE	FRAME	KIT NO.*	A	B	C	D	J
710	W713	42CZ	52966	52967	3/8	1-3/16	13/16	1-7/8	4.76
	W718	56C	52967			2-27/32		5.72	
713	W721	56C	52968	52970	1/2	1-7/8	1-5/16	2-11/16	6.59
	W726								
715		56C	52969	52970	5/8	1-7/8	1-9/16	2-21/32	7.34
		140TC	52970					7.34	
718	W730	56C	52969	52970	5/8	1-7/8	1-9/16	2-21/32	7.53
	W732	140TC	52970					7.53	
721	W738	56C	52971	52972	5/8	2	1-9/16	3-3/16	8.31
		140TC	52972					8.31	
724		56C	52973	52974	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	52977	3/4	2-7/16	2	3-5/32	9.47
		140TC	52977					3-5/32	9.47
		180TC	52975					4-1/8	10.44
730		56C	52976	52977	3/4	2-7/16	2	3-5/32	9.92
		140TC	52977					3-5/32	9.92
		180TC	52975					4-1/8	10.88
732	W760	56C	52978	52979	7/8	2-7/16	2-11/32	2-27/32	10.28
		140TC	52979					2-27/32	10.28
		180TC	52980					3-13/16	11.25
738		140TC	52981	52982	1	2-11/16	2-3/4	2-15/16	11.81
		180TC	52982					4-1/2	11.81
		210TC	52983					4-1/2	12.88
752		180TC	52984	52985	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	52988	1-1/2	3-3/8	3-7/8	4-15/16	16.69
		250TC	52988					16.69	

* Includes FC coupling kit.

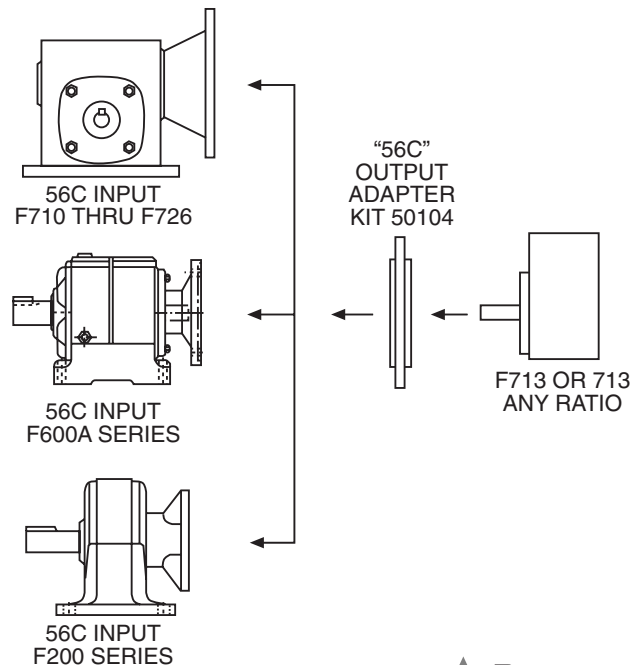
713 "56C" FACE OUTPUT ADAPTER KIT

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.



D



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, Motor Flange, and Optional Base
- 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 14 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
- Cast iron horizontal base standard.
- 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 TYPE					
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 14 (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.....	119
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OIL CAPACITIES.....	121
RECOMMENDED LUBRICANTS.....	121
LUBRICANT INTERCHANGE.....	121
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DOUBLE REDUCTION PARTS LIST.....	124-125
LIFETIME WARRANTY.....	126

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 I Service (Service Factor 1.0), using Klubersynth 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.

700 SERIES WORM GEAR SPEED REDUCERS

NOTE

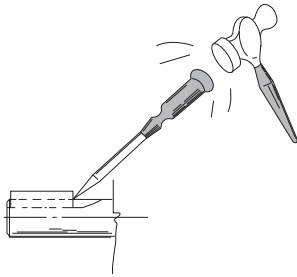
- Vented oil filler plug must be located in the uppermost position.
- For all mounting positions where the vented filler plug is located in a horizontal plane, the vent hole must point upward.
- For all mounting positions where the vented filler plug is located in a vertical plane, the vent hole must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

RF700 (Coupling Input – 3-Jaw Type FC)

1. Coat reducer input and motor shaft 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 motor shaft 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.

Lubrication Instructions

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.

The table on Page 121 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.

700 SERIES WORM GEAR SPEED REDUCERS

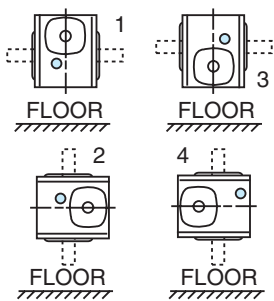
OIL CAPACITIES

SINGLE REDUCTION MODELS ONLY

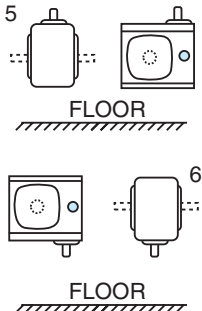
OIL CAPACITY IN FLUID OUNCES

OIL LEVELS FOR TYPICAL MOUNTING POSITIONS

HORIZONTAL INPUT SHAFT



VERTICAL INPUT SHAFT



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

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	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	LUBRICANT AGMA NO.	ISO VISCOSITY GRADE NO. †
-30° to 225°F** (-34° to 107°C)	Klubersynth* UH1 6-460 Synthetic	1950/2500	—	460
-30° to 225°F** (-34° to 107°C)	Mobil SHC634 Synthetic	1950/2500	—	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 exclusively for Klubersynth UH1 6-460, the use of other lubrications will void warranty.

** 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

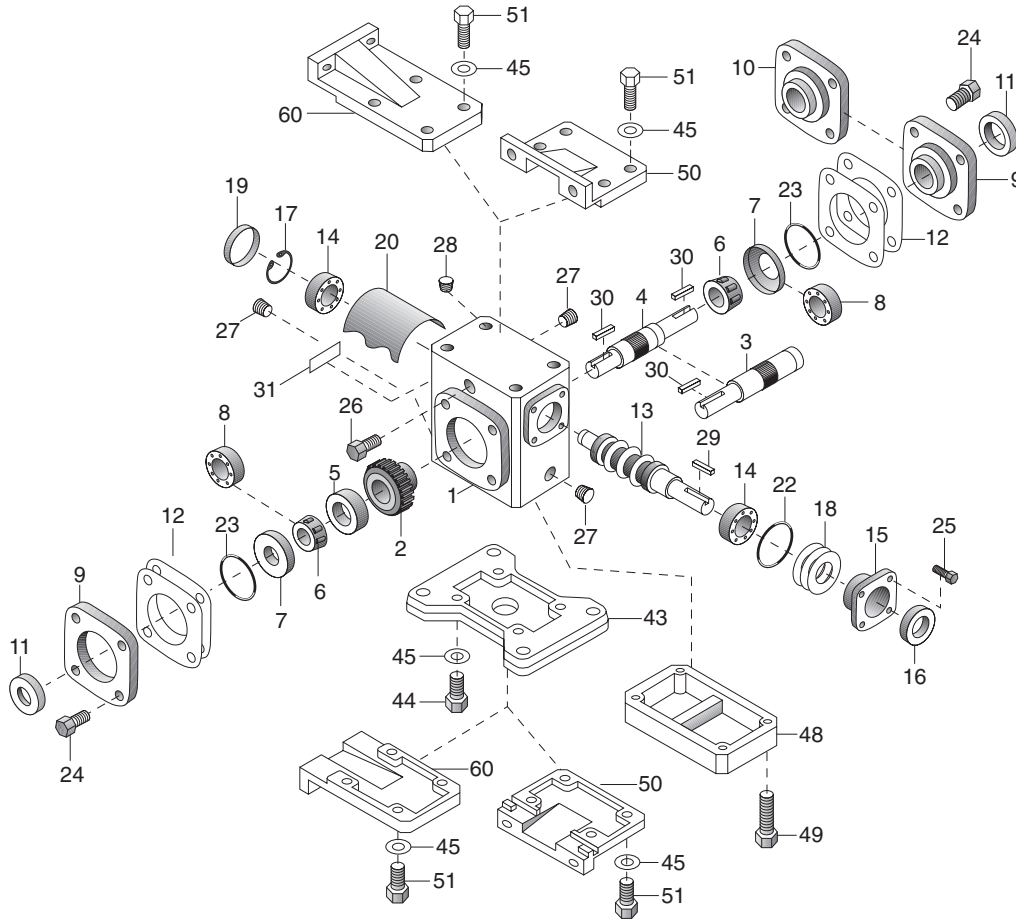
1. Ambient temperature is based upon 1.0 service factor.
2. Lubricants are compounded for use in worm gears. Some contain non-corrosive, extreme pressure additives. DO NOT USE lubes that contain sulphur and/or chlorine which are corrosive to bronze gears. Extreme pressure lubes, in some cases contain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

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
26**	VENT PLUG – 2 PIECE
27	PIPE PLUG

PART NO.	DESCRIPTION
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)
51	HEX HEAD CAP SCREW
60	VERTICAL BASE (X & Y ASSEMBLY 713-726)
101	FAN
102	SPACER

PART NO.	DESCRIPTION
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 123.

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



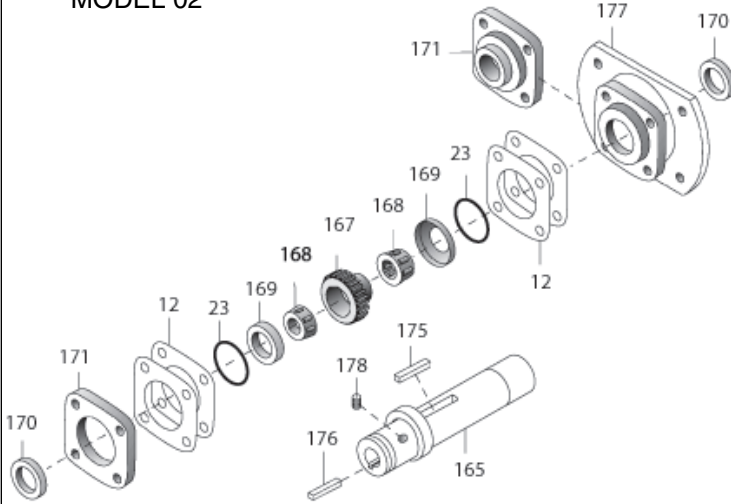
MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com

700 SERIES WORM GEAR SPEED REDUCERS

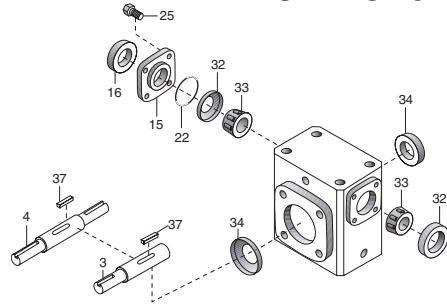
OPTIONS & ACCESSORIES – SINGLE REDUCTION MODELS

HOLLOW OUTPUT SHAFT MODELS S AND SF718-732*

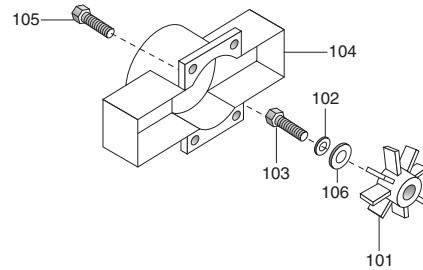
MODEL 02



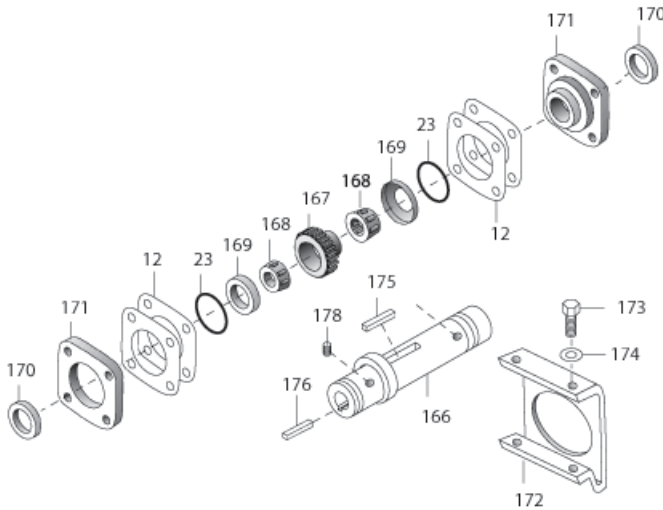
MODELS 732-760



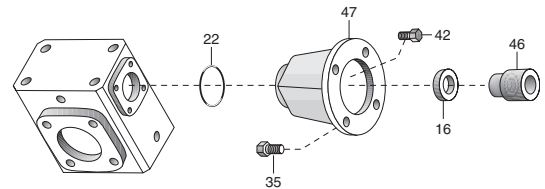
FAN KIT FOR MODELS 732-760



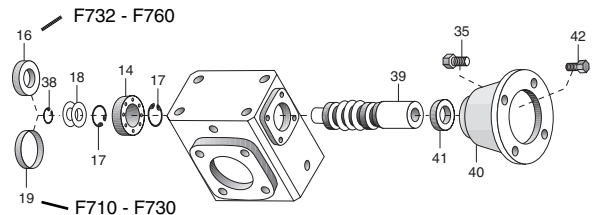
HOLLOW OUTPUT SHAFT MODELS H, HF, AND HQC713-738



MODELS QC710-QC738, RF752-RF760,



MODELS F710-F738



PART ORDERING INFORMATION

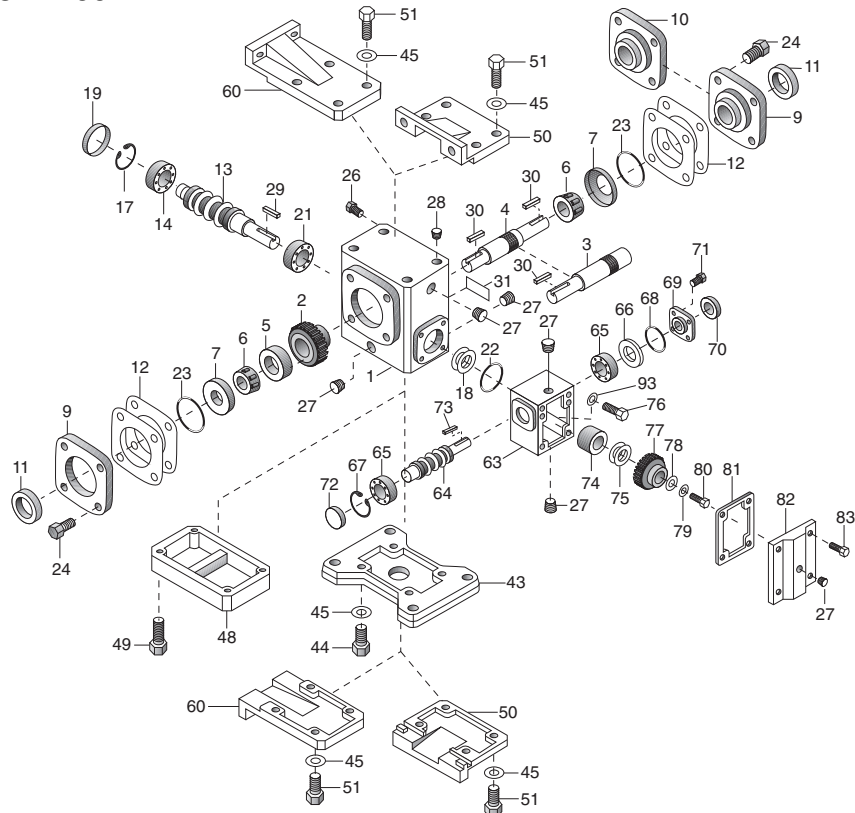
1. Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number. For example, "One output oil seal, Part No. 11, for QC718-30-B5-G".
2. Output shaft components for Boston Gear models 710 through 726 are available only as complete assemblies 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.

700 SERIES WORM GEAR SPEED REDUCERS

PARTS LIST – DOUBLE REDUCTION MODELS

MODELS W713-W760



PART NO.	DESCRIPTION	PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
1	HOUSING	33	INTER. BEARING (CONE) – MODELS W732-W760	82	ATTACHMENT COVER
2*	WORM GEAR	34	GREASE CUPS – MODELS W732-W760	83	HEX HEAD CAP SCREW
3*	SINGLE PROJECTING OUTPUT SHAFT	35	HEX HEAD CAP SCREW	84	INPUT BEARING (CONE) – MODEL W760 ONLY
4*	DOUBLE PROJECTING OUTPUT SHAFT	37	OUTPUT GEAR KEY – MODELS W730-W760	85	INPUT BEARING (CUP) – MODEL W760 ONLY
5*	GEAR SPACER	43	HORIZONTAL BASE	86	TWO PIECE COUPLING WITH INSERT
6*	OUTPUT BEARING (CONE)	44	HEX HEAD CAP SCREW	87	MOTOR FLANGE
7	OUTPUT BEARING (CUP)	45	LOCKWASHER	88	HEX HEAD CAP SCREW
9	BEARING CARRIER (OPEN)	48	RISER BLOCK	89	MOTOR FLANGE
10	BEARING CARRIER (CLOSED)	49	HEX HEAD CAP SCREW	90	INPUT WORM SHAFT
11*	OUTPUT OIL SEAL	50	VERTICAL BASE (HIGH OR LOW)	91	EXTERNAL RETAINING RING
12*	ADJUSTMENT SHIMS	51	HEX HEAD CAP SCREW	92	OIL SEAL – MODELS FW713-FW752
13	INTERMEDIATE WORM SHAFT	60	VERTICAL BASE (ASSEMBLY X & Y 713 - 726)	93	WASHER
14	INTERMEDIATE BEARING–MODELS W713-W730	63	ATTACHMENT HOUSING	165	HOLLOW OUTPUT SHAFT (S VERSION ONLY)
15	INTER. BEARING RETAINER–MODELS W732-760	64	INPUT WORM SHAFT	166	HOLLOW OUTPUT SHAFT (H VERSION ONLY)
16	INTER. OIL SEAL – MODELS W732-W760	65	INPUT BEARING	167	WORM GEAR
17	RETAINING RING – MODELS W713-W730	66	ADJUSTMENT SHIMS	168	OUTPUT BEARING (CONE)
18	ADJUSTMENTS SHIMS	67	RETAINING RING	169	OUTPUT BEARING (CUP)
19	BORE PLUG – MODELS W713-W730	68	“O” RING	170	OIL SEAL
21	INTERMEDIATE BEARING	69	BEARING RETAINER	171	BEARING CARRIER
22	INTERMEDIATE “O” RING	70	OIL SEAL	172	HOLLOW SHAFT MTG. BRACKET
23*	OUTPUT “O” RING	71	HEX HEAD CAP SCREW	173	HEX HEAD CAP SCREW
24	HEX HEAD CAP SCREW	72	BORE PLUG – MODELS W713-W752	174	LOCKWASHER
25	HEX HEAD CAP SCREW	73	INPUT WORM SHAFT KEY	175	KEY (INTERNAL)
26	VENT PLUG – 2 PIECE	74	GEAR SPACER - INTERMEDIATE	176	KEY (EXTERNAL)
27	PIPE PLUG	75	ADJUSTMENT SHIMS	177	“V” TYPE BASE MODEL (718, 721, 726, 732)
28	PROTECTIVE CAP PLUG	76	HEX HEAD CAP SCREW		
29	INTERMEDIATE KEY	77	INTERMEDIATE WORM GEAR		
30	OUTPUT KEY	78	WASHER		
31	NAMEPLATE	79	LOCKWASHER		
32	INTER. BEARING (CUP) – MODELS W732-W760	80	HEX HEAD CAP SCREW		
		81	ATTACHMENT COVER GASKET		

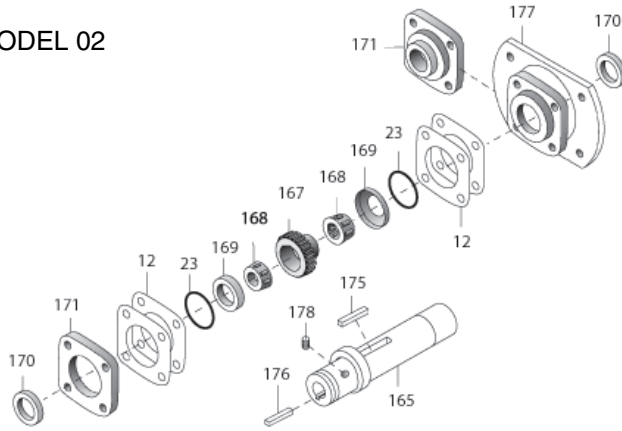
* For Models 710 to 726, these parts are available as complete assemblies. See Part Ordering Information, Page 125.

700 SERIES WORM GEAR SPEED REDUCERS

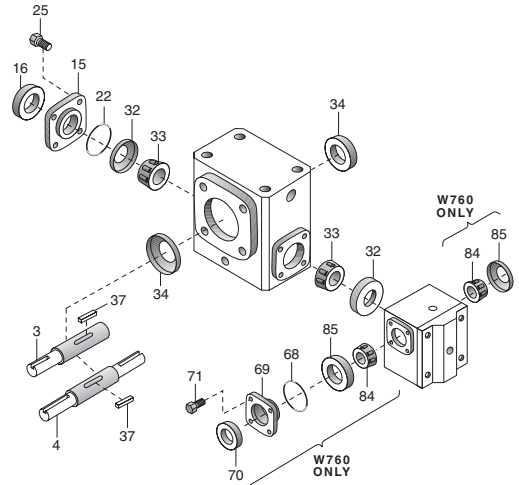
OPTIONS & ACCESSORIES – DOUBLE REDUCTION MODELS

HOLLOW OUTPUT SHAFT MODELS SW, SFW, and SRFW718-732*

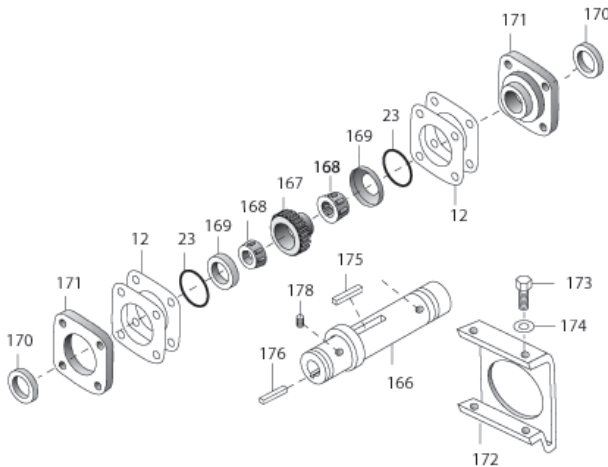
MODEL 02



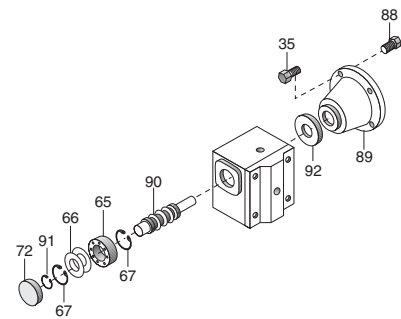
MODELS W732-W760 PARTS ADDED TO W732-W760



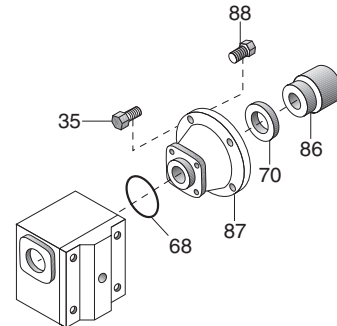
HOLLOW OUTPUT SHAFT MODELS HW, HFW, and HQCW713-738



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.

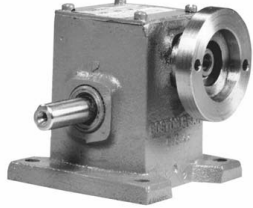



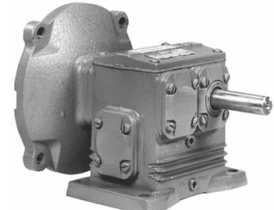
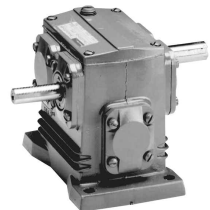
WARNING

- 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

SUB-FRACTIONAL HORSEPOWER SPEED REDUCERS

<p>SINGLE REDUCTION FLANGED REDUCERS & NON-FLANGED REDUCERS</p> <p>Ordering Information – Pages 128 & 131 Selection/Rating Information – Pages 128 & 131 Lubrication – Pages 128 & 131</p>	<p>F309B</p>  <p>Dimensions - Page 128</p>	<p>309 A & B</p>  <p>Dimensions - Page 131</p>
<p>DOUBLE REDUCTION FLANGED REDUCERS & NON-FLANGED REDUCERS</p> <p>Ordering Information - Pages 129, 130, 132, & 133 Selection/Rating Information - Pages 129, 130, 132, & 133 Lubrication - Pages 129, 130, 132, & 133</p>	<p>FWA309A</p>  <p>Dimensions - Page 129</p>	<p>WA309A</p>  <p>Dimensions - Page 132</p>
	<p>TWF113A</p>  <p>Dimensions - Page 130</p>	<p>TW113A</p>  <p>Dimensions - Page 133</p>

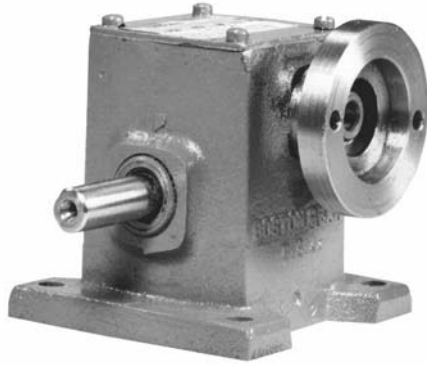
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SUB-FRACTIONAL HP SINGLE REDUCTION FLANGED REDUCERS

INTEGRAL HORIZONTAL BASE

F309B SERIES - FLANGED QUILL TYPE



LUBRICATION – Prelubricated for Ambient Temperature Range of +50° to +125° F. For all mounting positions.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: F309B-10-G

1750 INPUT RPM

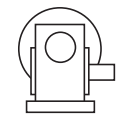
MOTOR HP	OUTPUT			GEAR CAPACITY		RATIO	CATALOG NUMBER	MOTOR CAT. NO.
	RPM	TORQUE (LB. IN.)	HP	TORQUE (LB. IN.)	HP			115-1-60 OPEN**
1/20	350	6	.03	14	.078	5	F309B-5	AST-B
	175	12	.03	25	.069	10	F309B-10	
	116.7	15	.03	30	.056	15	F309B-15	
	87.5	23	.03	43	.060	20	F309B-20	
	58.3	30	.03	30	.031	30	F309B-30	
	43.8	31	.02	31	.022	40	F309B-40	
1/12	350	9	.05	14	.078	5	F309B-5	AAST-B
	175	16	.04	25	.069	10	F309B-10	
	116.7	22	.04	30	.056	15	F309B-15	
	87.5	30	.04	43	.060	20	F309B-20	

** Open Dripproof. For motor dimensions, see Page 328.

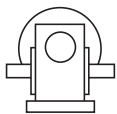
DIMENSIONS

Assembly Types

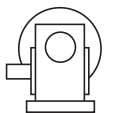
ASSEMBLY TYPES*



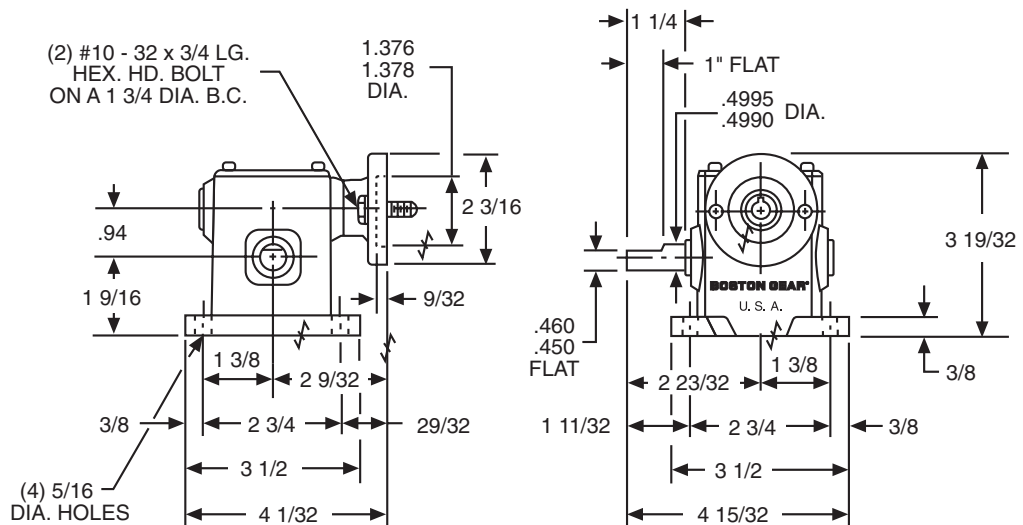
G
STANDARD



H



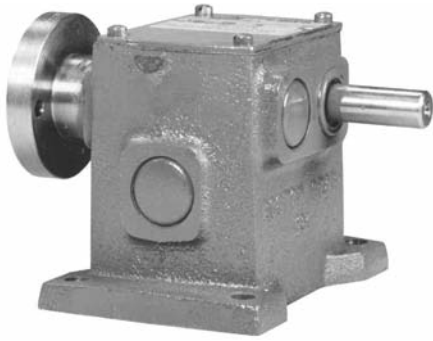
J



* 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

INTEGRAL HORIZONTAL BASE FWA309A SERIES - FLANGED QUILL TYPE PARALLEL SHAFTS



LUBRICATION – Prelubricated for Ambient Temperature Range of +50° to +125° F. For all mounting positions.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: FWA309A-50-K

1750 INPUT RPM

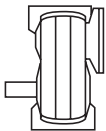
MOTOR HP	OUTPUT			GEAR CAPACITY		RATIO	CATALOG NUMBER	MOTOR CAT. NO.
	RPM	TORQUE (LB. IN.)	HP	TORQUE (LB. IN.)	HP			115-1-60 OPEN**
1/20	70.0	25	.028	50	.056	25	FWA309A-25	AST-B
	58.3	29	.027	50	.046	30	FWA309A-30	
	48.6	25	.019	40	.031	36	FWA309A-36	
	35.0	35	.019	55	.031	50	FWA309A-50	
	29.2	43	.020	43	.020	60	FWA309A-60	
	17.5	45	.012	60	.017	100	FWA309A-100	
	14.6	55	.012	55	.012	120	FWA309A-120	
	11.7	45	.008	45	.008	150	FWA309A-150	
	9.7	45	.007	45	.007	180	FWA309A-180	
8.8	65	.009	65	.009	200	FWA309A-200		

** Open Dripproof. For motor dimensions, see Page 328.

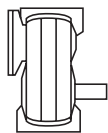
DIMENSIONS

Assembly Types

ASSEMBLY TYPES*

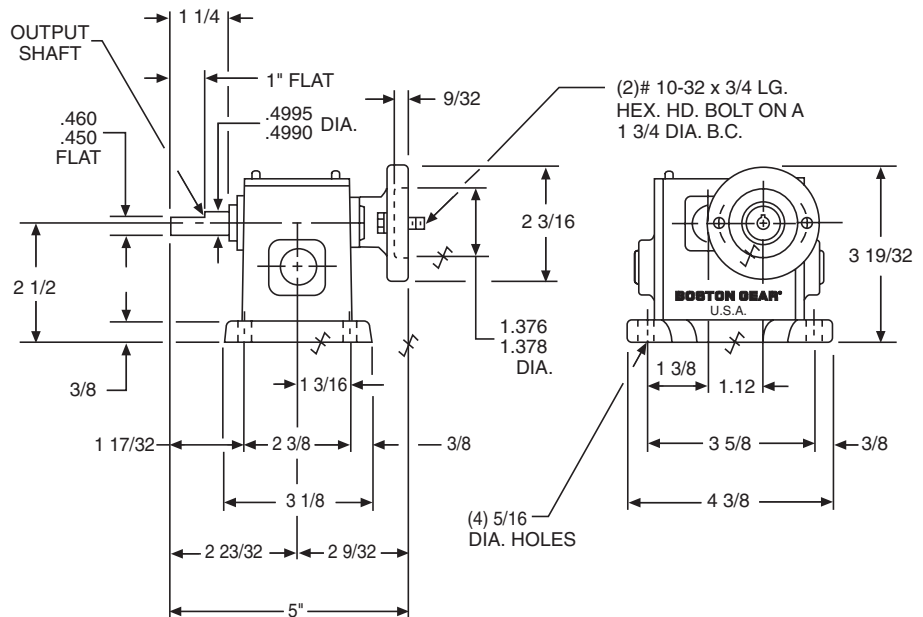


K STANDARD



G

TOP VIEW

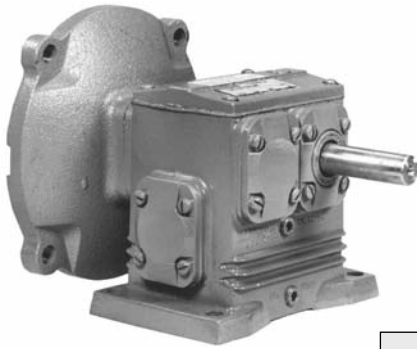


* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.

SUB-FRACTIONAL HP DOUBLE REDUCTION FLANGED REDUCERS

INTEGRAL HORIZONTAL BASE* TWF113A SERIES - FLANGED QUILL TYPE PARALLEL SHAFTS

F



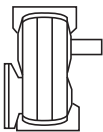
LUBRICATION – Quantity - 1/2 Pint. MUST BE ORDERED SEPARATELY. See Lubrication Instructions, Page 120

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	

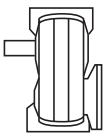
* Base is not detachable.

** Open Dripproof. For motor dimensions, see Page 328.

ASSEMBLY TYPES †

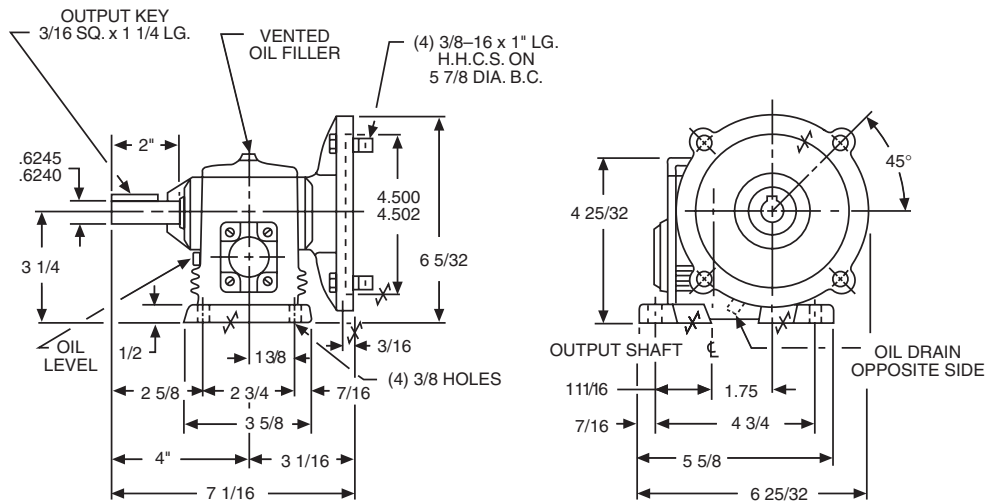


DM5 STANDARD



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 SINGLE REDUCTION NON-FLANGED REDUCERS

A POSITION HORIZONTAL BASE**
B POSITION HORIZONTAL BASE**

309A SERIES
309B SERIES



LUBRICATION – Prelubricated for Ambient Temperature Range of +50° to +125° F. For all angle operation.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: 309B-20-G

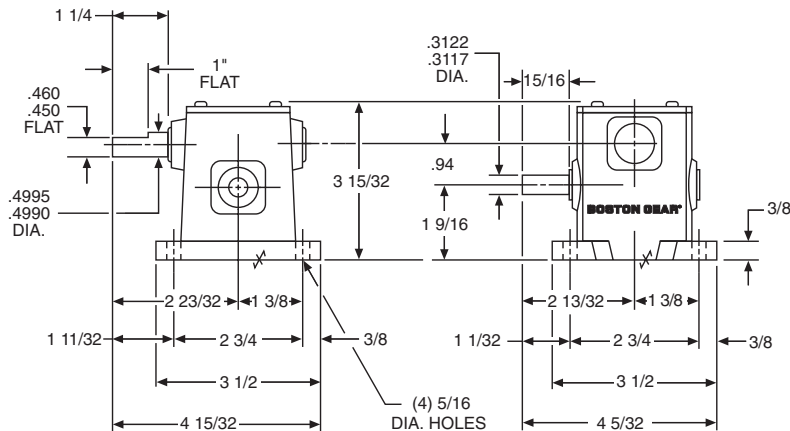
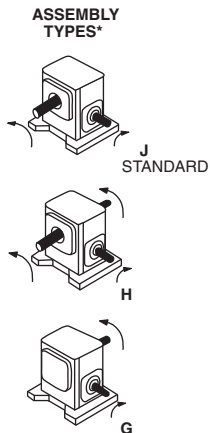
1750 INPUT RPM

OUTPUT			APPROX INPUT HP	RATIO	CATALOG NUMBERS	
RPM	TORQUE †	HP			A BASE POSITION	B BASE POSITION
350	14	.078	.12	5	309A-5	309B-5
175	25	.069	.13	10	309A-10	309B-10
116.7	30	.056	.17	15	309A-15	309B-15
87.5	43	.060	.17	20	309A-20	309B-20
58.3	33	.031	.10	30	309A-30	309B-30
43.2	31	.022	.07	40	309A-40	309B-40

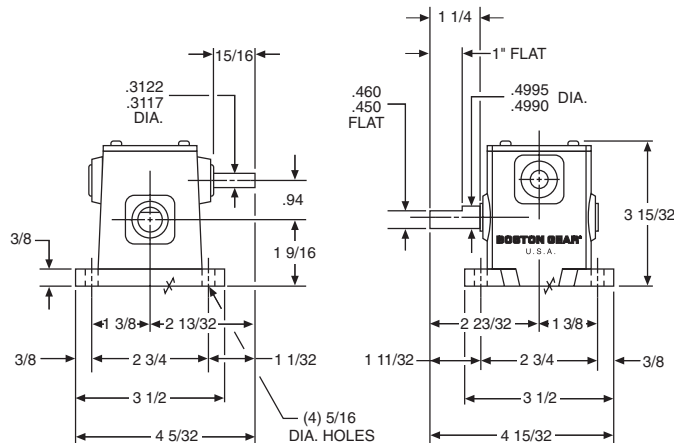
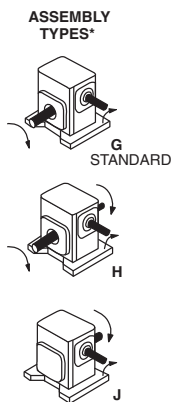
** Base is not detachable.

† Maximum torque in Pound Inches.

309A DIMENSIONS



309B DIMENSIONS



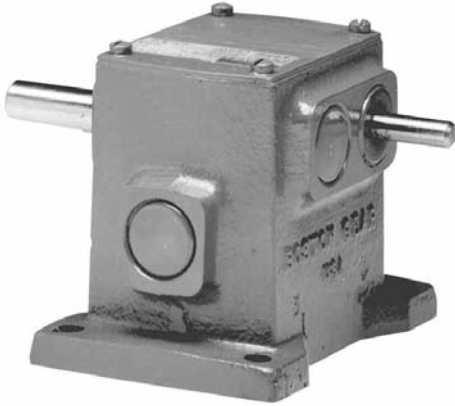
* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces, viewed from end of input shaft. Input may be rotated clockwise or counterclockwise. Arrows indicate relative rotation. Assembly H available at slight additional charge.

SUB-FRACTIONAL HP DOUBLE REDUCTION NON-FLANGED REDUCERS

HORIZONTAL BASE** PARALLEL SHAFTS

WA309A SERIES

F



LUBRICATION – Prelubricated for Ambient Temperature Range of +50° to +125° F.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: WA309A-25-K

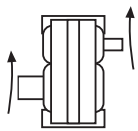
1750 INPUT RPM

RPM	OUTPUT		APPROX INPUT HP	RATIO	CATALOG NUMBER
	TORQUE †	HP			
70.0	50	.056	.12	25	WA309A-25
58.3	50	.046	.10	30	WA309A-30
48.6	40	.031	.08	36	WA309A-36
35.0	55	.031	.08	50	WA309A-50
29.2	43	.020	.07	60	WA309A-60
17.5	60	.017	.06	100	WA309A-100
14.6	55	.012	.07	120	WA309A-120
11.7	45	.008	.05	150	WA309A-150
9.7	45	.007	.046	180	WA309A-180
8.8	65	.009	.06	200	WA309A-200
5.8	45	.004	.033	300	WA309A-300
4.4	65	.005	.06	400	WA309A-400
2.9	45	.002	.032	600	WA309A-600
1.9	45	.001	.026	900	WA309A-900

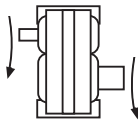
** Base is not detachable.
† Maximum Torque in Pound Inches.

DIMENSIONS

ASSEMBLY TYPES**

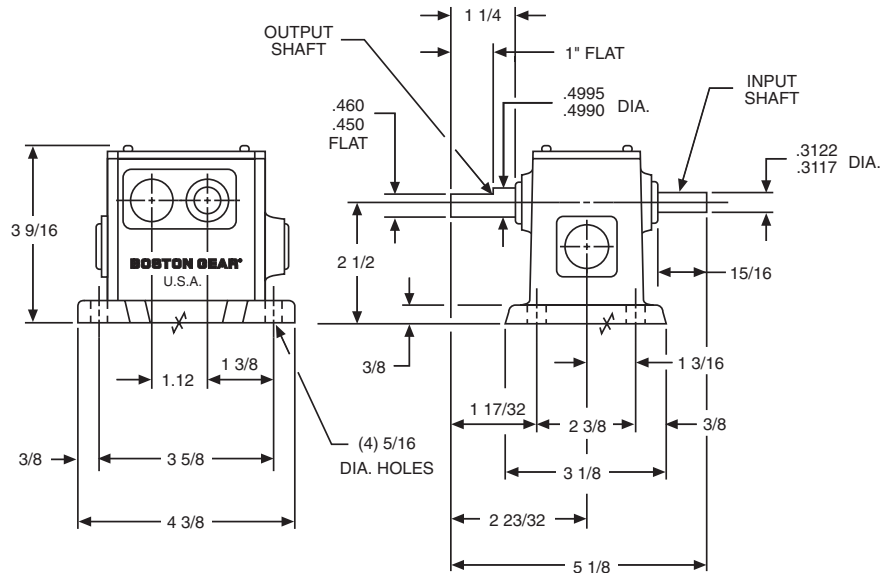


K STANDARD



G

TOP VIEW



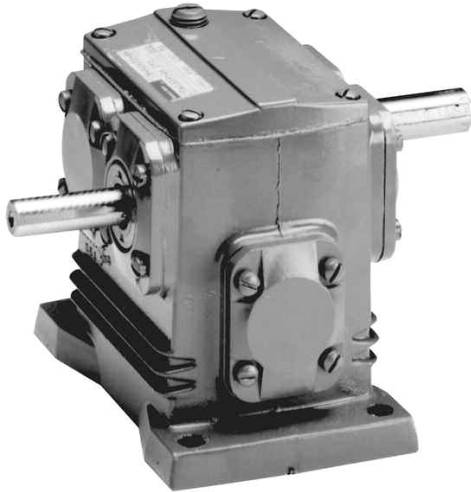
Approx. Weight 5 lbs.

* 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

HORIZONTAL BASE** PARALLEL SHAFTS

TW113A SERIES



LUBRICATION – Quantity - 1/2 Pint. **MUST BE ORDERED SEPARATELY.** See Lubrication Instructions, Page 120.

TO ORDER: Specify Catalog Number and Assembly Type.

EXAMPLE: TW113A-16-DM5.

1750 INPUT RPM

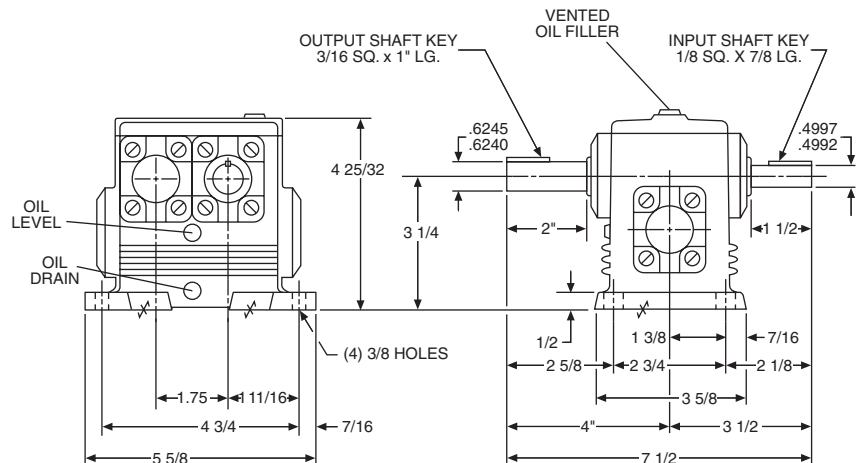
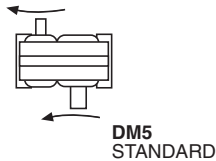
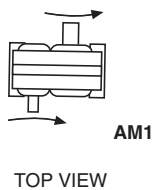
RPM	OUTPUT		APPROX INPUT HP	RATIO	CATALOG NUMBER
	TORQUE †	HP			
109.4	150	.26	.55	16	TW113A-16
87.5	180	.25	.57	20	TW113A-20
70.0	185	.21	.50	25	TW113A-25
43.8	185	.13	.33	40	TW113A-40
35.0	210	.12	.31	50	TW113A-50
29.2	200	.093	.24	60	TW113A-60
23.3	220	.081	.23	75	TW113A-75
21.9	225	.078	.22	80	TW113A-80
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

** Base is not detachable.

† Maximum Torque in Pound Inches.

DIMENSIONS

ASSEMBLY TYPES*



Approx. Weight 6 lbs.

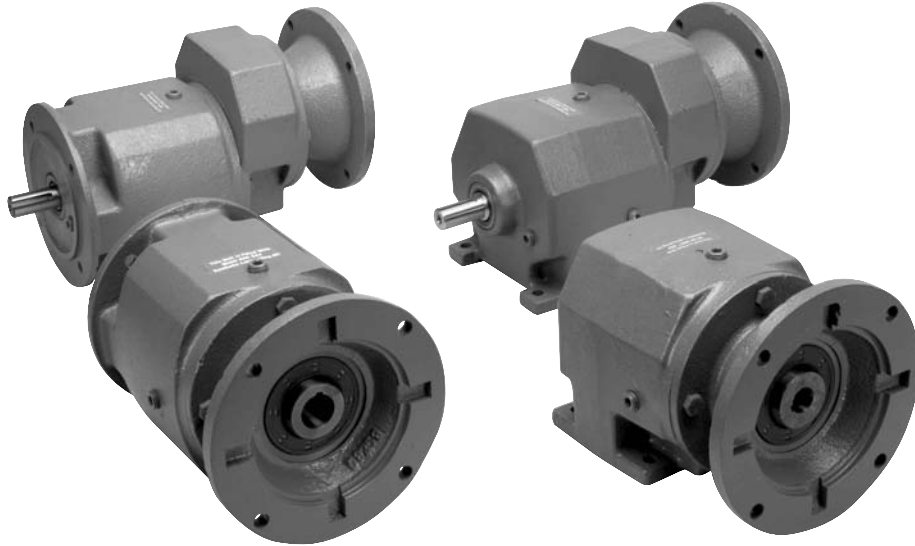
* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surfaces. Input may be rotated clockwise or counterclockwise.



NOTES

F





G

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800 SERIES INLINE HELICAL GEAR DRIVES

<p>F800B Series In-Line Helical Gear Flanged Input</p>	<p>Double Reduction Foot Mounted, Flange Input</p>  <p>Selection Pages 144-160 Dimensions-Page 171</p>	<p>Triple Reduction Foot Mounted, Flange Input</p>  <p>Selection Pages 144-160 Dimensions-Page 172</p>
	<p>Double Reduction Output Flange Mount, Flange Input</p>  <p>Selection Pages 144-160 Dimensions-Page 173</p>	<p>Triple Reduction Output Flange Mount, Flange Input</p>  <p>Selection Pages 144-160 Dimensions-Page 174</p>
	<p>Double Reduction Foot Mounted</p>  <p>Selection Pages 161-170 Dimensions-Page 175</p>	<p>Triple Reduction Foot Mounted</p>  <p>Selection Pages 161-170 Dimensions-Page 176</p>
	<p>Double Reduction Output Flange Mount</p>  <p>Selection Pages 161-170 Dimensions-Page 177</p>	<p>Triple Reduction Output Flange Mount</p>  <p>Selection Pages 161-170 Dimensions-Page 178</p>

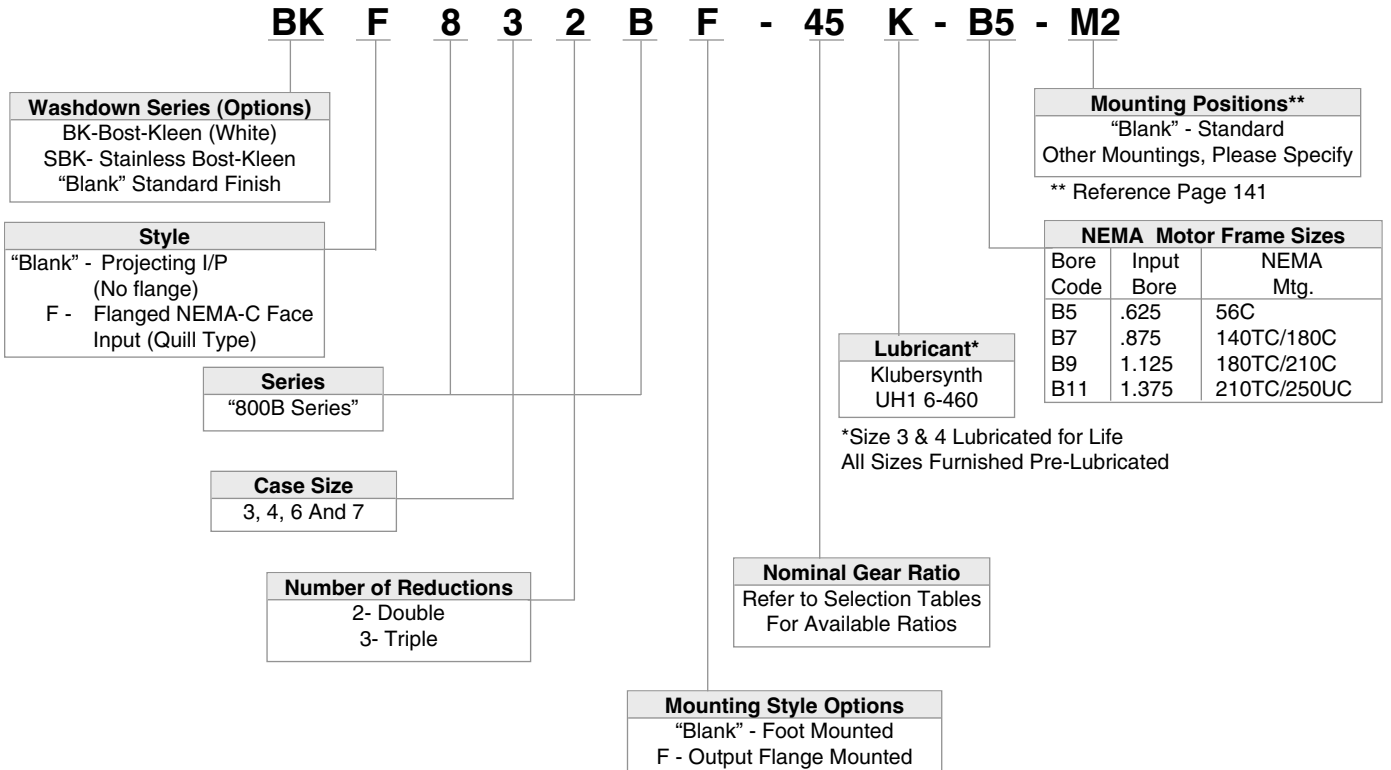
G

800 SERIES IN-LINE HELICAL GEAR DRIVES

NUMBERING SYSTEM / HOW TO ORDER

NUMBERING SYSTEM

EXAMPLE:



HOW TO ORDER

EXAMPLE:

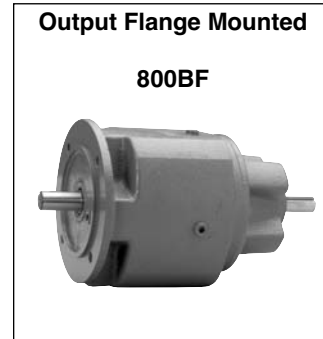
Required flange input NEMA 56C, and flanged output, 1/3 HP, Class I, 45:1 ratio, lubricated, and standard mounting position.

Order:
1 pc F832BF-45K-B5



800 SERIES IN-LINE HELICAL GEAR DRIVES

INTERCHANGE GUIDE



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)		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 140, or from Application Classifications on pages 340 and 341.
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 140.
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 143
6. Order: 1 - F872B-50K-B7 (F01078)
1 - KUTF Motor Ref - page 329 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 143.

IN-LINE HELICAL SELECTION TABLES

1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
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)	1.5	2552	III		
						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 161-170.
** 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 143.
■ 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.

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.

NON-MOTORIZED GEAR DRIVES

1. Determine application service factor from the service factor chart on this page, or from Application Classifications on pages 340 and 341.
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 161-170.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 139 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.

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 340 and 341.

800 SERIES IN-LINE HELICAL RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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

FOOT MOUNTED HORIZONTAL

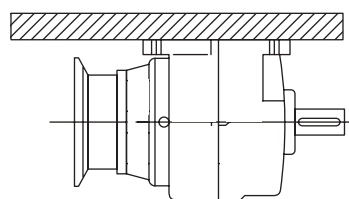
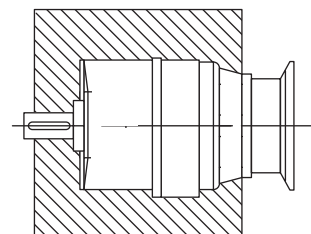
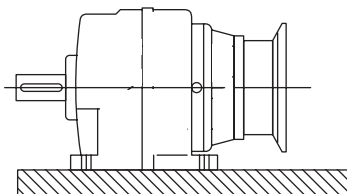
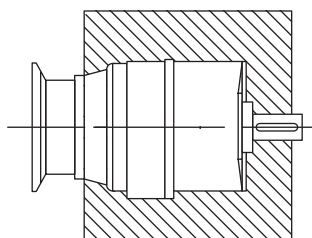
STANDARD

M1

M2

M3

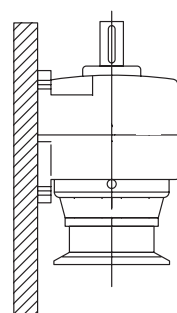
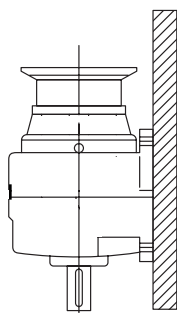
M4



FOOT MOUNTED VERTICAL

M5

M6



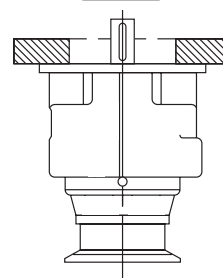
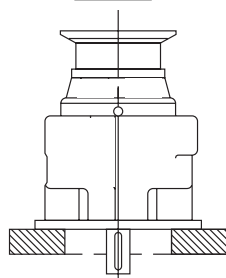
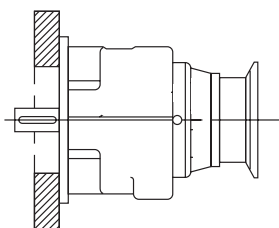
OUTPUT FLANGE MOUNTED

STANDARD

M7

M8

M9



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

800 SERIES IN-LINE HELICAL GEAR DRIVES

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	-30° to 225°F (-34° 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 SIZE	MOUNTING POSITIONS								
	M1	M2	M3	M4	M5	M6	M7	M8	M9
	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 141

800 SERIES IN-LINE HELICAL GEAR DRIVES

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.

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	—

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
 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 (F00136)	5	251	I	F832B-1.5K-B9 (F00591)	F832BF-1.5K-B9 (F00653)
						3	149	II		
						2	98	III		
		479	9.08	842B-1.5K (F00205)	842BF-1.5K (F00238)	5	248	II	F842B-1.5K-B9 (F00728)	F842BF-1.5K-B9 (F00787)
						3	146	III		
830	16.20	862B-1.5K (F00307)	862BF-1.5K (F00341)	10	500	II	F862B-1.5K-B11 (F00871)	F862BF-1.5K-B11 (F00935)		
				7.5	380	III				
1094	21.20	872B-1.5K (F00411)	872BF-1.5K (F00444)	10	510	III	F872B-1.5K-B11 (F01044)	F872BF-1.5K-B11 (F01090)		
922	1.9	325	4.77	832B-1.9K (F00104)	832BF-1.9K (F00137)	3	200	II	F832B-1.9K-B9 (F00593)	F832BF-1.9K-B9 (F00655)
						2	133	III		
		643	8.69	842B-1.9K (F00206)	842BF-1.9K (F00239)	5	343	II	F842B-1.9K-B9 (F00729)	F842BF-1.9K-B9 (F00788)
						3	209	III		
		1100	15.40	862B-1.9K (F00308)	862BF-1.9K (F00342)	10	710	II	F862B-1.9K-B11 (F00872)	F862BF-1.9K-B11 (F00936)
7.5	535					III				
1492	21.20	872B-1.9K (F00412)	872BF-1.9K (F00445)	10	695	III	F872B-1.9K-B11 (F01045)	F872BF-1.9K-B11 (F01091)		
760	2.3	333	4.29	832B-2.3K (F00111)	832BF-2.3K (F00144)	3	234	I	F832B-2.3K-B9 (F00604)	F832BF-2.3K-B9 (F00664)
						2	156	III		
		695	8.52	842B-2.3K (F00213)	842BF-2.3K (F00246)	5	378	II	F842B-2.3K-B9 (F00742)	F842BF-2.3K-B9 (F00801)
						3	226	III		
		1217	15.00	862B-2.3K (F00315)	862BF-2.3K (F00349)	10	800	II	F862B-2.3K-B11 (F00884)	F862BF-2.3K-B11 (F00946)
7.5	600					III				
1680	21.20	872B-2.3K (F00419)	872BF-2.3K (F00452)	10	780	III	F872B-2.3K-B11 (F01055)	F872BF-2.3K-B11 (F01101)		
673 (CONT.)	2.6	350	3.98	832B-2.6K (F00112)	832BF-2.6K (F00145)	3	257	I	F832B-2.6K-B9 (F00606)	F832BF-2.6K-B9 (F00666)
						2	171	III		
		715	7.95	842B-2.6K (F00214)	842BF-2.6K (F00247)	5	416	II	F842B-2.6K-B9 (F00743)	F842BF-2.6K-B9 (F00802)
						3	250	III		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
 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 (F00316)	862BF-2.6K (F00350)	10	900	II	F862B-2.6K-B11 (F00885)	F862BF-2.6K-B11 (F00947)
		1800	21.20	872B-2.6K (F00420)	872BF-2.6K (F00453)	7.5	676	III	F872B-2.6K-B11 (F01056)	F872BF-2.6K-B11 (F01102)
605	2.9	533	5.18	832B-2.9K (F00113)	832BF-2.9K (F00146)	5	508	I	F832B-2.9K-B9 (F00607)	F832BF-2.9K-B9 (F00667)
		840	8.34	842B-2.9K (F00215)	842BF-2.9K (F00248)	3	305	III	F842B-2.9K-B9 (F00744)	F842BF-2.9K-B9 (F00803)
		1560	15.90	862B-2.9K (F00317)	862BF-2.9K (F00351)	5	500	II	F862B-2.9K-B11 (F00886)	F862BF-2.9K-B11 (F00948)
		2135	21.20	872B-2.9K (F00421)	872BF-2.9K (F00454)	10	972	III	F872B-2.9K-B11 (F01057)	F872BF-2.9K-B11 (F01103)
530	3.3	370	3.24	832B-3.3K (F00118)	832BF-3.3K (F00151)	3	338	I	F832B-3.3K-B9 (F00615)	F832BF-3.3K-B9 (F00673)
						2	226	II	F832B-3.3K-B7 (F00613)	F832BF-3.3K-B7 (F00672)
						1.5	169	III		
		775	7.03	842B-3.3K (F00220)	842BF-3.3K (F00253)	5	510	I	F842B-3.3K-B9 (F00757)	F842BF-3.3K-B9 (F00812)
						3	306	III		
		1550	13.40	862B-3.3K (F00323)	862BF-3.3K (F00356)	10	1145	I	F862B-3.3K-B11 (F00898)	F862BF-3.3K-B11 (F00957)
7.5	858					II				
2398	21.20	872B-3.3K (F00426)	872BF-3.3K (F00459)	5	572	III	F862B-3.3K-B9 (F00899)	F862BF-3.3K-B9 (F00958)		
500	3.5	376	3.11	832B-3.5K (F00119)	832BF-3.5K (F00152)	10	1120	III	F872B-3.3K-B11 (F01064)	F872BF-3.3K-B11 (F01110)
						3	358	I	F832B-3.5K-B9 (F00617)	F832BF-3.5K-B9 (F00675)
						2	241	II	F832B-3.5K-B7 (F00616)	F832BF-3.5K-B7 (F00674)
		858	6.46	842B-3.5K (F00221)	842BF-3.5K (F00254)	5	600	I	F842B-3.5K-B9 (F00758)	F842BF-3.5K-B9 (F00813)
						3	358	III		
		1665	12.70	862B-3.5K (F00324)	862BF-3.5K (F00357)	10	1298	I	F862B-3.5K-B11 (F00900)	F862BF-3.5K-B11 (F00959)
7.5	974					II				
2704	21.00	872B-3.5K (F00427)	872BF-3.5K (F00460)	5	680	III	F862B-3.5K-B9 (F00901)	F862BF-3.5K-B9 (F00960)		
				10	1275	III	F872B-3.5K-B11 (F01065)	F872BF-3.5K-B11 (F01111)		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
 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 (F00120)	832BF-3.9K (F00153)	3	412	I	F832B-3.9K-B9 (F00619)	F832BF-3.9K-B9 (F00677)
						2	275	III	F832B-3.9K-B7 (F00618)	F832BF-3.9K-B7 (F00676)
		959	6.96	842B-3.9K (F00222)	842BF-3.9K (F00255)	5	700	I	F842B-3.9K-B9 (F00759)	F842BF-3.9K-B9 (F00814)
						3	420	III		
		1835	13.30	862B-3.9K (F00325)	862BF-3.9K (F00358)	10	1366	I	F862B-3.9K-B11 (F00902)	F862BF-3.9K-B11 (F00961)
						7.5	1024	II		
				5	683	III	F862B-3.9K-B9 (F00903)	F862BF-3.9K-B9 (F00962)		
				10	1355	III	F872B-3.9K-B11 (F01066)	F872BF-3.9K-B11 (F01112)		
400	4.4	572	3.54	832B-4.4K (F00123)	832BF-4.4K (F00156)	3	480	I	F832B-4.4K-B9 (F00625)	F832BF-4.4K-B9 (F00681)
						2	320	II	F832B-4.4K-B7 (F00624)	F832BF-4.4K-B7 (F00680)
						1.5	240	III		
		1000	6.59	842B-4.4K (F00225)	842BF-4.4K (F00258)	5	773	I	F842B-4.4K-B9 (F00764)	F842BF-4.4K-B9 (F00817)
						3	464	III		
		1933	12.50	862B-4.4K (F00328)	862BF-4.4K (F00361)	10	1531	I	F862B-4.4K-B11 (F00909)	F862BF-4.4K-B11 (F00967)
7.5	1148					II				
				5	766	III	F862B-4.4K-B9 (F00910)	F862BF-4.4K-B9 (F00968)		
				10	1524	III	F872B-4.4K-B11 (F01071)	F872BF-4.4K-B11 (F01117)		
340	5.1	592	3.31	832B-5.1K (F00126)	832BF-5.1K (F00159)	3	531	I	F832B-5.1K-B9 (F00634)	F832BF-5.1K-B9 (F00686)
						2	354	II	F832B-5.1K-B7 (F00631)	F832BF-5.1K-B7 (F00684)
						1.5	266	III		
		1065	5.96	842B-5.1K (F00228)	842BF-5.1K (F00261)	5	840	I	F842B-5.1K-B9 (F00769)	F842BF-5.1K-B9 (F00820)
						3	504	III		
		2042	11.60	862B-5.1K (F00331)	862BF-5.1K (F00365)	10	1742	I	F862B-5.1K-B11 (F00915)	F862BF-5.1K-B11 (F00973)
7.5	1306					II				
				5	870	III	F862B-5.1K-B9 (F00916)	F862BF-5.1K-B9 (F00974)		
				10	1726	III	F872B-5.1K-B11 (F01076)	F872BF-5.1K-B11 (F01122)		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** Service Class I (S.F. = 1.00) Service Class II (S.F. = 1.50) Service III (S.F. = 2.00)
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 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 (F00127)	832BF-5.7K (F00160)	2	383	I	F832B-5.7K-B7 (F00636)	F832BF-5.7K-B7 (F00688)
						1.5	287	II		
						1	191	III	F832B-5.7K-B5 (F00635)	F832BF-5.7K-B5 (F00687)
		1110	5.64	842B-5.7K (F00229)	842BF-5.7K (F00262)	5	925	I	F842B-5.7K-B9 (F00771)	F842BF-5.7K-B9 (F00822)
						3	555	II		
						2	370	III	F842B-5.7K-B7 (F00770)	F842BF-5.7K-B7 (F00821)
		2140	10.80	862B-5.7K (F00332)	862BF-5.7K (F00366)	10	1891	I	F862B-5.7K-B11 (F00918)	F862BF-5.7K-B11 (F00975)
						7.5	1464	II		
						5	976	III	F862B-5.7K-B9 (F00919)	F862BF-5.7K-B9 (F00976)
		4160	21.20	872B-5.7K (F00435)	872BF-5.7K (F00468)	10	1942	III	F872B-5.7K-B11 (F01077)	F872BF-5.7K-B11 (F01123)
		273	6.4	588	2.52	832B-6.4K (F00130)	832BF-6.4K (F00163)	2	462	I
1.5	346							II		
1	230							III	F832B-6.4K-B5 (F00641)	F832BF-6.4K-B5 (F00691)
1095	5.34			842B-6.4K (F00232)	842BF-6.4K (F00265)	5	1014	I	F842B-6.4K-B9 (F00777)	F842BF-6.4K-B9 (F00826)
						3	608	II		
						2	406	III	F842B-6.4K-B7 (F00776)	F842BF-6.4K-B7 (F00825)
2248	10.20			862B-6.4K (F00335)	862BF-6.4K (F00369)	10	2182	I	F862B-6.4K-B11 (F00924)	F862BF-6.4K-B11 (F00980)
						7.5	1636	II		
						5	1091	III	F862B-6.4K-B9 (F00925)	F862BF-6.4K-B9 (F00981)
4623	20.90			872B-6.4K (F00438)	872BF-6.4K (F00471)	10	2189	III	F872B-6.4K-B11 (F01082)	F872BF-6.4K-B11 (F01128)
246	7.2			576	2.34	832B-7.2K (F00132)	832BF-7.2K (F00165)	2	488	I
		1.5	366					II		
		1	244					III	F832B-7.2K-B5 (F00644)	F832BF-7.2K-B5 (F00694)
		1171	4.88	842B-7.2K (F00234)	842BF-7.2K (F00267)	5	1171	I	F842B-7.2K-B9 (F00781)	F842BF-7.2K-B9 (F00829)
						3	713	II		
						2	475	III	F842B-7.2K-B7 (F00780)	F842BF-7.2K-B7 (F00828)
		2380	9.49	862B-7.2K (F00337)	862BF-7.2K (F00371)	7.5	1855	I	F862B-7.2K-B11 (F00928)	F862BF-7.2K-B11 (F00984)
						5	1237	III	F862B-7.2K-B9 (F00929)	F862BF-7.2K-B9 (F00985)
		4859	19.30	872B-7.2K (F00440)	872BF-7.2K (F00473)	10	2492	III	F872B-7.2K-B11 (F01085)	F872BF-7.2K-B11 (F01131)

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
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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 (F00134)	832BF-8K (F00167)	2	560	I	F832B-8K-B7 (F00649)	F832BF-8K-B7 (F00698)
						1.5	415	II		
						1	276	III	F832B-8K-B5 (F00648)	F832BF-8K-B5 (F00697)
		1206	4.54	842B-8K (F00236)	842BF-8K (F00269)	3	797	I	F842B-8K-B9 (F00784)	F842BF-8K-B9 (F00832)
						2	526	III	F842B-8K-B7 (F00783)	F842BF-8K-B7 (F00831)
		2480	8.82	862B-8K (F00339)	862BF-8K (F00373)	7.5	2087	I	F862B-8K-B11 (F00931)	F862BF-8K-B11 (F00987)
						5	1391	II	F862B-8K-B9 (F00932)	F862BF-8K-B9 (F00988)
						3	835	III		
		5074	18.00	872B-8K (F00442)	872BF-8K (F00475)	10	2790	II	F872B-8K-B11 (F01088)	F872BF-8K-B11 (F01134)
						7.5	2092	III		
194	9	636	1.86	832B-9K (F00135)	832BF-9K (F00168)	1.5	508	I	F832B-9K-B7 (F00651)	F832BF-9K-B7 (F00700)
						1	338	II	F832B-9K-B5 (F00650)	F832BF-9K-B5 (F00699)
						.75	253	III		
		1275	4.14	842B-9K (F00237)	842BF-9K (F00270)	3	924	I	F842B-9K-B9 (F00786)	F842BF-9K-B9 (F00834)
						2	616	III	F842B-9K-B7 (F00785)	F842BF-9K-B7 (F00833)
		2608	8.18	862B-9K (F00340)	862BF-9K (F00374)	7.5	2366	I	F862B-9K-B11 (F00933)	F862BF-9K-B11 (F00989)
						5	1577	II	F862B-9K-B9 (F00934)	F862BF-9K-B9 (F00990)
						3	946	III		
		5358	16.70	872B-9K (F00443)	872BF-9K (F00476)	10	3175	II	F872B-9K-B11 (F01089)	F872BF-9K-B11 (F01135)
						7.5	2381	III		
175	10	576	1.63	832B-10K (F00105)	832BF-10K (F00138)	1.5	524	I	F832B-10K-B7 (F00595)	F832BF-10K-B7 (F00657)
						1	349	II	F832B-10K-B5 (F00594)	F832BF-10K-B5 (F00656)
						.75	262	III		
		1295	3.82	842B-10K (F00207)	842BF-10K (F00240)	3	1006	I	F842B-10K-B9 (F00732)	F842BF-10K-B9 (F00791)
						2	670	II	F842B-10K-B7 (F00730)	F842BF-10K-B7 (F00790)
		2600	7.56	862B-10K (F00309)	862BF-10K (F00343)	1.5	503	III		
						7.5	2548	I	F862B-10K-B11 (F00873)	F862BF-10K-B11 (F00937)
						5	1700	II	F862B-10K-B9 (F00874)	F862BF-10K-B9 (F00938)
		5360	15.70	872B-10K (F00413)	872BF-10K (F00446)	3	1019	III		
						10	3278	II	F872B-10K-B11 (F01046)	F872BF-10K-B11 (F01092)
						7.5	2458	III		

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 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 (F00106)	832BF-11K (F00139)	1	400	I	F832B-11K-B5 (F00596)	F832BF-11K-B5 (F00658)
						.75	300	II		
						.50	200	III		
		1330	3.45	842B-11K (F00208)	842BF-11K (F00241)	3	1144	I	F842B-11K-B9 (F00734)	F842BF-11K-B9 (F00793)
						2	827	II		
						1.5	572	III		
		2680	6.70	862B-11K (F00310)	862BF-11K (F00344)	5	1975	I	F862B-11K-B9 (F00875)	F862BF-11K-B9 (F00939)
						3	1186	III		
		5291	13.70	872B-11K (F00414)	872BF-11K (F00447)	10	3822	I	F872B-11K-B11 (F01047)	F872BF-11K-B11 (F01093)
						7.5	2866	II		
145	12	550	1.30	832B-12K (F00107)	832BF-12K (F00140)	1	418	I	F832B-12K-B5 (F00597)	F832BF-12K-B5 (F00659)
						.75	314	II		
						.50	210	III		
		1419	3.23	842B-12K (F00209)	842BF-12K (F00242)	3	1304	I	F842B-12K-B9 (F00736)	F842BF-12K-B9 (F00795)
						2	870	II		
						1.5	652	III		
		2840	6.49	862B-12K (F00311)	862BF-12K (F00345)	5	2167	I	F862B-12K-B9 (F00876)	F862BF-12K-B9 (F00940)
						3	1300	III		
		5439	12.50	872B-12K (F00415)	872BF-12K (F00448)	10	4177	I	F872B-12K-B11 (F01048)	F872BF-12K-B11 (F01094)
						7.5	3132	II		
125	14	550	1.14	832B-14K (F00108)	832BF-14K (F00141)	1	478	I	F832B-14K-B5 (F00598)	F832BF-14K-B5 (F00660)
						.75	358	II		
						.50	239	III		
		1443	2.89	842B-14K (F00210)	842BF-14K (F00243)	2	988	II	F842B-14K-B7 (F00737)	F842BF-14K-B7 (F00796)
						1.5	741	III		
		2910	5.72	862B-14K (F00312)	862BF-14K (F00346)	5	2519	I	F862B-14K-B9 (F00877)	F862BF-14K-B9 (F00941)
						3	1512	III		
		5364	10.90	872B-14K (F00416)	872BF-14K (F00449)	10	4870	I	F872B-14K-B11 (F01049)	F872BF-14K-B11 (F01095)
						7.5	3653	II		
						5	2435	III		

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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 (F00109)	832BF-16K (F00142)	1	539	I	F832B-16K-B5 (F00599)	F832BF-16K-B5 (F00661)		
						.75	404	II				
						.50	270	III				
		1380	2.49	842B-16K (F00211)	842BF-16K (F00244)	2	1097	II	F842B-16K-B7 (F00739)	F842BF-16K-B7 (F00798)		
						1.5	823	II				
						1	548	III			F842B-16K-B5 (F00739)	F842BF-16K-B5 (F00797)
		2900	5.12	862B-16K (F00313)	862BF-16K (F00347)	5	2792	I	F862B-16K-B9 (F00881)	F862BF-16K-B9 (F00943)		
						3	1675	II				
						2	1117	III			F862B-16K-B7 (F00880)	F862BF-16K-B7 (F00942)
		5245	9.60	872B-16K (F00417)	872BF-16K (F00450)	7.5	4055	I	F872B-16K-B11 (F01051)	F872BF-16K-B11 (F01097)		
						5	2703	II				
						3	1639	III			F872B-16K-B9 (F01052)	F872BF-16K-B9 (F01098)
97	18	590	0.91	832B-18K (F00110)	832BF-18K (F00143)	.75	483	I	F832B-18K-B5 (F00600)	F832BF-18K-B5 (F00662)		
						.50	322	II				
						.33	210	III				
		1420	2.35	842B-18K (F00212)	842BF-18K (F00245)	2	1192	I	F842B-18K-B7 (F00741)	F842BF-18K-B7 (F00800)		
						1.5	894	II				
						1	596	III			F842B-18K-B5 (F00740)	F842BF-18K-B5 (F00799)
		2940	4.88	862B-18K (F00314)	862BF-18K (F00348)	3	1788	II	F862B-18K-B9 (F00883)	F862BF-18K-B9 (F00945)		
						2	1192	III				
		5320	8.50	872B-18K (F00418)	872BF-18K (F00451)	7.5	4645	I	F872B-18K-B11 (F01053)	F872BF-18K-B11 (F01099)		
						5	3096	II				
						3	1858	III			F872B-18K-B9 (F01054)	F872BF-18K-B9 (F01100)
		87 (CONT.)	20	590	0.85	832B-20K (F00114)	832BF-20K (F00147)	.75	526	I		
.50	350							II				
.33	232							III				
1442	2.01			842B-20K (F00216)	842BF-20K (F00249)	2	1420	I	F842B-20K-B7 (F00748)	F842BF-20K-B7 (F00805)		
						1.5	1065	II				
						.75	533	III			F842B-20K-B5 (F00745)	F842BF-20K-B5 (F00804)

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 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 (F00318)	862BF-20K (F00352)	3	2137	I	F862B-20K-B9 (F00888)	F862BF-20K-B9 (F00950)
						2	1425	III	F862B-20K-B7 (F00887)	F862BF-20K-B7 (F00949)
		5319	7.64	872B-20K (F00422)	872BF-20K (F00455)	7.5	5319	I	F872B-20K-B11 (F01058)	F872BF-20K-B11 (F01104)
						5	3444	II	F872B-20K-B9 (F01059)	F872BF-20K-B9 (F01105)
79	22	574	0.72	832B-22K (F00115)	832BF-22K (F00148)	.75	574	I	F832B-22K-B5 (F00610)	F832BF-22K-B5 (F00669)
						.50	395	II		
		1443	1.85	842B-22K (F00217)	842BF-22K (F00250)	1.5	1158	I	F842B-22K-B7 (F00751)	F842BF-22K-B7 (F00807)
						1	772	II	F842B-22K-B5 (F00750)	F842BF-22K-B5 (F00806)
		3030	3.95	862B-22K (F00319)	862BF-22K (F00353)	3	2281	I	F862B-22K-B9 (F00891)	F862BF-22K-B9 (F00952)
						2	1520	III	F862B-22K-B7 (F00889)	F862BF-22K-B7 (F00951)
		5398	6.77	872B-22K (F00423)	872BF-22K (F00456)	5	3946	I	F872B-22K-B9 (F01060)	F872BF-22K-B9 (F01106)
						3	2367	III		
70	25	580	0.65	832B-25K (F00116)	832BF-25K (F00149)	.50	442	I	F832B-25K-B5 (F00611)	F832BF-25K-B5 (F00670)
						.33	294	III		
		1312	1.64	842B-25K (F00218)	842BF-25K (F00251)	1.5	1187	I	F842B-25K-B7 (F00753)	F842BF-25K-B7 (F00809)
						1	791	II	F842B-25K-B5 (F00752)	F842BF-25K-B5 (F00808)
		3070	3.49	862B-25K (F00320)	862BF-25K (F00354)	3	2618	I	F862B-25K-B9 (F00893)	F862BF-25K-B9 (F00954)
						2	1745	II	F862B-25K-B7 (F00892)	F862BF-25K-B7 (F00953)
		5279	6.17	872B-25K (F00424)	872BF-25K (F00457)	1.5	1309	III		
						5	4236	I	F872B-25K-B9 (F01061)	F872BF-25K-B9 (F01107)
						3	2540	III		
62 (CONT.)	28	580	0.59	832B-28K (F00117)	832BF-28K (F00150)	.50	491	I	F832B-28K-B5 (F00612)	F832BF-28K-B5 (F00671)
						.33	327	II		
						.25	245	III		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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.
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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.

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 (F00219)	842BF-28K (F00252)	1.5	1467	I	F842B-28K-B7 (F00755)	F842BF-28K-B7 (F00811)
						1	994	II	F842B-28K-B5 (F00754)	F842BF-28K-B5 (F00810)
						.75	746	III		
		3070	3.19	862B-28K (F00321)	862BF-28K (F00355)	3	2867	I	F862B-28K-B9 (F00896)	F862BF-28K-B9 (F00956)
						2	1910	II	F862B-28K-B7 (F00895)	F862BF-28K-B7 (F00955)
						1.5	1433	III		
		5287	5.64	872B-28K (F00425)	872BF-28K (F00458)	5	4639	I	F872B-28K-B9 (F01063)	F872BF-28K-B9 (F01109)
						3	2783	II	F872B-28K-B7 (F01062)	F872BF-28K-B7 (F01108)
						2	1855	III		
54	32	555	0.52	832B-32K (F00121)	832BF-32K (F00154)	.50	528	I	F832B-32K-B5 (F00620)	F832BF-32K-B5 (F00678)
						.33	370	II		
						.25	264	III		
		1338	1.29	842B-32K (F00223)	842BF-32K (F00256)	1	1026	I	F842B-32K-B5 (F00760)	F842BF-32K-B5 (F00815)
						.75	770	II		
						.50	513	III		
		3120	2.79	862B-32K (F00326)	862BF-32K (F00359)	2	2225	II	F862B-32K-B7 (F00905)	F862BF-32K-B7 (F00964)
						1.5	1669	II		
						1	1159	III	F862B-32K-B5 (F00904)	F862BF-32K-B5 (F00963)
		5342	4.90	872B-32K (F00429)	872BF-32K (F00462)	5	5342	I	F872B-32K-B9 (F01068)	F872BF-32K-B9 (F01114)
3	3236					II	F872B-32K-B7 (F01067)	F872BF-32K-B7 (F01113)		
2	2158					III				
48 (CONT.)	36	557	0.47	832B-36K (F00122)	832BF-36K (F00155)	.50	557	I	F832B-36K-B5 (F00622)	F832BF-36K-B5 (F00679)
						.33	391	I		
						.25	294	II		
		562	0.47	833B-36K (F00178)	833BF-36K (F00196)	.50	562	I	F833B-36K-B5 (F00705)	F833BF-36K-B5 (F00718)
						.33	400	I		
						.25	299	II		
		1457	1.15	842B-36K (F00224)	842BF-36K (F00257)	1	1254	I	F842B-36K-B5 (F00763)	F842BF-36K-B5 (F00816)
						.75	940	II		
						.50	627	III		

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 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 (F00280)	843BF-36K (F00298)	1	1190	I	F843B-36K-B5 (F00844)	F843BF-36K-B5 (F00862)
						.75	893	II		
						.50	595	III		
		3120	2.55	862B-36K (F00327)	862BF-36K (F00360)	2	2436	I	F862B-36K-B7 (F00908)	F862BF-36K-B7 (F00966)
						1.5	1827	II		
						1	1218	III		
		2978	2.51	863B-36K (F00384)	863BF-36K (F00402)	2	2372	I	F863B-36K-B7 (F01001)	F863BF-36K-B7 (F01025)
						1.5	1779	II		
						1	1186	III		
		5296	4.48	872B-36K (F00430)	872BF-36K (F00463)	5	5296	I	F872B-36K-B9 (F01070)	F872BF-36K-B9 (F01116)
						3	3546	II		
						2	2364	III		
5225	4.42	873B-36K (F00486)	873BF-36K (F00504)	5	5225	I	F873B-36K-B9 (F01148)	F873BF-36K-B9 (F01176)		
				3	3546	II				
				2	2364	III				
43 (CONT.)	40	466	0.36	832B-40K (F00124)	832BF-40K (F00157)	.33	431	I	F832B-40K-B5 (F00626)	F832BF-40K-B5 (F00682)
						.25	323	I		
						.16	216	III		
		560	0.41	833B-40K (F00179)	833BF-40K (F00197)	.33	456	I	F833B-40K-B5 (F00706)	F833BF-40K-B5 (F00719)
						.25	342	II		
						.16	228	III		
		1375	1.00	842B-40K (F00226)	842BF-40K (F00259)	1	1254	I	F842B-40K-B5 (F00765)	F842BF-40K-B5 (F00818)
						.75	940	II		
						.50	627	III		
		1390	1.02	843B-40K (F00281)	843BF-40K (F00299)	1	1360	I	F843B-40K-B5 (F00845)	F843BF-40K-B5 (F00863)
						.75	1020	I		
						.50	680	III		
2992	2.18	862B-40K (F00329)	862BF-40K (F00362)	2	2678	I	F862B-40K-B7 (F00912)	F862BF-40K-B7 (F00970)		
				1.5	2008	II				
				1	1339	III				
2978	2.21	863B-40K (F00385)	863BF-40K (F00403)	2	2695	I	F863B-40K-B7 (F01003)	F863BF-40K-B7 (F01027)		
				1.5	2022	II				
				1	1348	III				

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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	40	5050	3.83	872B-40K (F00432)	872BF-40K (F00465)	3	3955	I	F872B-40K-B9 (F01073) F872B-40K-B7 (F01072)	F872BF-40K-B9 (F01119) F872BF-40K-B7 (F01118)																																																																																																																																																											
						2	2636	III			(CONT.)		5225	3.80	873B-40K (F00487)	873BF-40K (F00505)	3	4125	I	F873B-40K-B9 (F01150) F873B-40K-B7 (F01149)	F873BF-40K-B9 (F01178) F873BF-40K-B7 (F01177)	2	2750	II	38	45	480	0.33	832B-45K (F00125)	832BF-45K (F00158)	.33	480	I	F832B-45K-B5 (F00628)	F832BF-45K-B5 (F00683)	.25	359	I	.16	239	III	544	0.38	833B-45K (F00180)	833BF-45K (F00198)	.33	478	I	F833B-45K-B5 (F00707)	F833BF-45K-B5 (F00720)	.25	358	I	.16	239	III	1410	0.90	842B-45K (F00227)	842BF-45K (F00260)	.75	1180	I	F842B-45K-B5 (F00767)	F842BF-45K-B5 (F00819)	.50	788	II	.33	525	III	1420	0.92	843B-45K (F00282)	843BF-45K (F00300)	.75	1158	I	F843B-45K-B5 (F00846)	F843BF-45K-B5 (F00864)	.50	772	II	.33	515	III	2950	2.01	862B-45K (F00330)	862BF-45K (F00364)	2	2932	I	F862B-45K-B7 (F00914)	F862BF-45K-B7 (F00972)	1.5	2199	I	1	1466	III	3040	2.01	863B-45K (F00386)	863BF-45K (F00404)	2	3025	I	F863B-45K-B7 (F01005)	F863BF-45K-B7 (F01029)	1.5	2269	I	1	1512	III	5167	3.54	872B-45K (F00433)	872BF-45K (F00466)	3	4334	I	F872B-45K-B9 (F01075) F872B-45K-B7 (F01074)	F872BF-45K-B9 (F01121) F872BF-45K-B7 (F01120)	2	3010	II	1.5	2167	III	5300	3.52	873B-45K (F00488)	873BF-45K (F00506)	3	4526	I	F873B-45K-B9 (F01152) F873B-45K-B7 (F01151)	F873BF-45K-B9 (F01180) F873BF-45K-B7 (F01179)	2	3013	II	1.5	2404	III	35	50	555	0.34	832B-50K (F00128)	832BF-50K (F00161)	.33	540	I	F832B-50K-B5 (F00637)	F832BF-50K-B5 (F00689)	.25	405	I	.16	270	III	(CONT.)	
(CONT.)		5225	3.80	873B-40K (F00487)	873BF-40K (F00505)	3	4125	I	F873B-40K-B9 (F01150) F873B-40K-B7 (F01149)	F873BF-40K-B9 (F01178) F873BF-40K-B7 (F01177)																																																																																																																																																											
						2	2750	II			38	45	480	0.33	832B-45K (F00125)	832BF-45K (F00158)	.33	480	I	F832B-45K-B5 (F00628)	F832BF-45K-B5 (F00683)	.25	359	I							.16	239	III			544	0.38	833B-45K (F00180)	833BF-45K (F00198)	.33	478					I	F833B-45K-B5 (F00707)	F833BF-45K-B5 (F00720)			.25	358	I	.16	239	III					1410	0.90	842B-45K (F00227)			842BF-45K (F00260)	.75	1180	I	F842B-45K-B5 (F00767)	F842BF-45K-B5 (F00819)					.50	788	II			.33	525	III	1420	0.92	843B-45K (F00282)					843BF-45K (F00300)	.75	1158			I	F843B-45K-B5 (F00846)	F843BF-45K-B5 (F00864)	.50	772	II					.33	515	III			2950	2.01	862B-45K (F00330)	862BF-45K (F00364)	2	2932					I	F862B-45K-B7 (F00914)	F862BF-45K-B7 (F00972)			1.5	2199	I	1	1466	III					3040	2.01	863B-45K (F00386)			863BF-45K (F00404)	2	3025	I	F863B-45K-B7 (F01005)	F863BF-45K-B7 (F01029)							1.5	2269	I			1	1512	III	5167	3.54	872B-45K (F00433)	872BF-45K (F00466)	3
38	45	480	0.33	832B-45K (F00125)	832BF-45K (F00158)	.33	480	I	F832B-45K-B5 (F00628)	F832BF-45K-B5 (F00683)																																																																																																																																																											
						.25	359	I																																																																																																																																																													
						.16	239	III																																																																																																																																																													
		544	0.38	833B-45K (F00180)	833BF-45K (F00198)	.33	478	I	F833B-45K-B5 (F00707)	F833BF-45K-B5 (F00720)																																																																																																																																																											
						.25	358	I																																																																																																																																																													
						.16	239	III																																																																																																																																																													
		1410	0.90	842B-45K (F00227)	842BF-45K (F00260)	.75	1180	I	F842B-45K-B5 (F00767)	F842BF-45K-B5 (F00819)																																																																																																																																																											
						.50	788	II																																																																																																																																																													
						.33	525	III																																																																																																																																																													
		1420	0.92	843B-45K (F00282)	843BF-45K (F00300)	.75	1158	I	F843B-45K-B5 (F00846)	F843BF-45K-B5 (F00864)																																																																																																																																																											
						.50	772	II																																																																																																																																																													
						.33	515	III																																																																																																																																																													
		2950	2.01	862B-45K (F00330)	862BF-45K (F00364)	2	2932	I	F862B-45K-B7 (F00914)	F862BF-45K-B7 (F00972)																																																																																																																																																											
						1.5	2199	I																																																																																																																																																													
						1	1466	III																																																																																																																																																													
		3040	2.01	863B-45K (F00386)	863BF-45K (F00404)	2	3025	I	F863B-45K-B7 (F01005)	F863BF-45K-B7 (F01029)																																																																																																																																																											
1.5	2269					I																																																																																																																																																															
1	1512					III																																																																																																																																																															
5167	3.54	872B-45K (F00433)	872BF-45K (F00466)	3	4334	I	F872B-45K-B9 (F01075) F872B-45K-B7 (F01074)	F872BF-45K-B9 (F01121) F872BF-45K-B7 (F01120)																																																																																																																																																													
				2	3010	II																																																																																																																																																															
				1.5	2167	III																																																																																																																																																															
5300	3.52	873B-45K (F00488)	873BF-45K (F00506)	3	4526	I	F873B-45K-B9 (F01152) F873B-45K-B7 (F01151)	F873BF-45K-B9 (F01180) F873BF-45K-B7 (F01179)																																																																																																																																																													
				2	3013	II																																																																																																																																																															
				1.5	2404	III																																																																																																																																																															
35	50	555	0.34	832B-50K (F00128)	832BF-50K (F00161)	.33	540	I	F832B-50K-B5 (F00637)	F832BF-50K-B5 (F00689)																																																																																																																																																											
						.25	405	I																																																																																																																																																													
						.16	270	III																																																																																																																																																													
(CONT.)																																																																																																																																																																					

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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 (F00181)	833BF-50K (F00199)	.33	540	I	F833B-50K-B5 (F00708)	F833BF-50K-B5 (F00721)
						.25	409	I		
						.16	273	III		
		1500	0.87	842B-50K (F00230)	842BF-50K (F00263)	.75	1280	I	F842B-50K-B5 (F00772)	F842BF-50K-B5 (F00823)
						.50	854	II		
		1429	0.81	843B-50K (F00283)	843BF-50K (F00301)	.75	1323	I	F843B-50K-B5 (F00847)	F843BF-50K-B5 (F00865)
						.50	882	II		
		3150	1.86	862B-50K (F00333)	862BF-50K (F00367)	1.5	2514	I	F862B-50K-B7 (F00921)	F862BF-50K-B7 (F00978)
						1	1676	II		
						.75	1257	III		
		3040	1.77	863B-50K (F00387)	863BF-50K (F00405)	1.5	2578	I	F863B-50K-B7 (F01007)	F863BF-50K-B7 (F01031)
						1	1718	II		
		5216	3.16	872B-50K (F00436)	872BF-50K (F00469)	3	4900	I	F872B-50K-B9 (F01079)	F872BF-50K-B9 (F01125)
						2	3268	II		
1.5	2552					III				
5290	3.02	873B-50K (F00489)	873BF-50K (F00507)	3	5256	I	F873B-50K-B9 (F01154)	F873BF-50K-B9 (F01182)		
				2	3504	II				
				1.5	2628	II				
31 (CONT.)	56	540	0.29	832B-56K (F00129)	832BF-56K (F00162)	.25	460	I	F832B-56K-B5 (F00639)	F832BF-56K-B5 (F00690)
						.16	308	II		
		554	0.30	833B-56K (F00182)	833BF-56K (F00200)	.25	462	I	F833B-56K-B5 (F00709)	F833BF-56K-B5 (F00722)
						.16	308	II		
		1392	0.71	842B-56K (F00231)	842BF-56K (F00264)	.5	970	I	F842B-56K-B5 (F00775)	F842BF-56K-B5 (F00824)
						.33	647	III		
		1396	0.76	843B-56K (F00284)	843BF-56K (F00302)	.75	1378	I	F843B-56K-B5 (F00848)	F843BF-56K-B5 (F00866)
						.50	918	II		
						.33	612	III		
		2460	1.28	862B-56K (F00334)	862BF-56K (F00368)	1	2018	I	F862B-56K-B5 (F00923)	F862BF-56K-B5 (F00979)
.75	1513					II				
.50	1000					III				

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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 (F00388)	863BF-56K (F00406)	1.5	2887	I	F863B-56K-B7 (F01009)	F863BF-56K-B7 (F01033)	
						1	1939	II	F863B-56K-B5 (F01008)	F863BF-56K-B5 (F01032)	
						.75	1459	III			
		4629	2.50	872B-56K (F00437)	872BF-56K (F00470)	2	3665	I	F872B-56K-B7 (F01081)	F872BF-56K-B7 (F01127)	
						1.5	2749	II			
						1	1832	III	F872B-56K-B5 (F01080)	F872BF-56K-B5 (F01126)	
	5227	2.69	873B-56K (F00490)	873BF-56K (F00508)	2	3886	I	F873B-56K-B7 (F01156)	F873BF-56K-B7 (F01184)		
					1.5	2915	II				
					1	1941	III	F873B-56K-B5 (F01155)	F873BF-56K-B5 (F01183)		
	27	63	500	0.25	832B-63K (F00131)	832BF-63K (F00164)	.25	500	I	F832B-63K-B5 (F00643)	F832BF-63K-B5 (F00693)
							.16	330	II		
			522	0.25	833B-63K (F00183)	833BF-63K (F00201)	.25	502	I	F833B-63K-B5 (F00710)	F833BF-63K-B5 (F00723)
.16							335	II			
1475			0.70	842B-63K (F00233)	842BF-63K (F00266)	.50	1000	I	F842B-63K-B5 (F00778)	F842BF-63K-B5 (F00827)	
						.33	666	III			
1300			0.65	843B-63K (F00285)	843BF-63K (F00303)	.50	1044	I	F843B-63K-B5 (F00849)	F843BF-63K-B5 (F00867)	
						.33	696	III			
3098			1.52	862B-63K (F00336)	862BF-63K (F00370)	1.5	3027	I	F862B-63K-B7 (F00927)	F862BF-63K-B7 (F00983)	
						1	2018	II	F862B-63K-B5 (F00926)	F862BF-63K-B5 (F00982)	
						.75	1576	III			
2973			1.41	863B-63K (F00389)	863BF-63K (F00407)	1.5	2973	I	F863B-63K-B7 (F01011)	F863BF-63K-B7 (F01035)	
						1	2109	I	F863B-63K-B5 (F01010)	F863BF-63K-B5 (F01034)	
						.75 .50	1582 1054	II III			
5300			2.64	872B-63K (F00439)	872BF-63K (F00472)	2	3993	I	F872B-63K-B7 (F01084)	F872BF-63K-B7 (F01130)	
						1.5	2995	II			
						1	2080	III	F872B-63K-B5 (F01083)	F872BF-63K-B5 (F01129)	
5226			2.52	873B-63K (F00491)	873BF-63K (F00509)	2	4149	I	F873B-63K-B7 (F01158)	F873BF-63K-B7 (F01186)	
	1.5	3112				II					
	1	2075				III	F873B-63K-B5 (F01157)	F873BF-63K-B5 (F01185)			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.

** 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 143.

■ Indicates Triple Reduction



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
 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 (F00133)	832BF-71K (F00166)	.25	500	I	F832B-71K-B5 (F00647)	F832BF-71K-B5 (F00696)
						.16	375	I		
		577	0.24	833B-71K (F00184)	833BF-71K (F00202)	.25	577	I	F833B-71K-B5 (F00711)	F833BF-71K-B5 (F00724)
						.16	400	I		
		1485	0.62	842B-71K (F00235)	842BF-71K (F00268)	.50	1186	I	F842B-71K-B5 (F00782)	F842BF-71K-B5 (F00830)
						.33	709	II		
						.25	592	III		
		1427	0.60	843B-71K (F00286)	843BF-71K (F00304)	.50	1189	I	F843B-71K-B5 (F00850)	F843BF-71K-B5 (F00868)
						.33	793	II		
						.25	594	III		
		2966	1.28	862B-71K (F00338)	862BF-71K (F00372)	1	2303	I	F862B-71K-B5 (F00930)	F862BF-71K-B5 (F00986)
						.75	1720	II		
						.50	1457	III		
		3040	1.23	863B-71K (F00390)	863BF-71K (F00408)	1	2473	I	F863B-71K-B5 (F01012)	F863BF-71K-B5 (F01036)
.75	1855					II				
.50	1236					III				
5385	2.38	872B-71K (F00441)	872BF-71K (F00474)	2	4479	I	F872B-71K-B7 (F01087)	F872BF-71K-B7 (F01133)		
				1.5	3359	II				
				1	2239	III				
5298	2.14	873B-71K (F00492)	873BF-71K (F00510)	2	4952	I	F873B-71K-B7 (F01160)	F873BF-71K-B7 (F01188)		
				1.5	3714	II				
				1	2476	III				
21	80	565	0.21	833B-80K (F00185)	833BF-80K (F00203)	.25	565	I	F833B-80K-B5 (F00712)	F833BF-80K-B5 (F00725)
						.16	448	I		
		1320	0.51	843B-80K (F00287)	843BF-80K (F00305)	.50	1294	I	F843B-80K-B5 (F00851)	F843BF-80K-B5 (F00869)
						.33	862	II		
						.25	647	III		
		3038	1.13	863B-80K (F00391)	863BF-80K (F00409)	1	2689	I	F863B-80K-B5 (F01013)	F863BF-80K-B5 (F01037)
						.75	2016	II		
						.50	1344	III		
		5315	2.01	873B-80K (F00493)	873BF-80K (F00511)	2	5288	I	F873B-80K-B7 (F01162)	F873BF-80K-B7 (F01190)
						1.5	3966	I		
1	2644					III				

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.
 ■ Indicates Triple Reduction



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.

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 (F00186)	833BF-90K (F00204)	.16	504	I	F833B-90K-B5 (F00713)	F833BF-90K-B5 (F00726)
		1395	0.47	843B-90K (F00288)	843BF-90S (F00306)	.50	1398	I	F843B-90K-B5 (F00852)	F843BF-90K-B5 (F00870)
						.33	989	I		
						.25	741	II		
		2745	0.98	863B-90K (F00392)	863BF-90K (F00410)	.75	2100	I	F863B-90K-B5 (F01014)	F863BF-90K-B5 (F01038)
						.50	1400	III		
						5252	1.73	873B-90K (F00494)		
		1	3035	II	F873B-90K-B5 (F01163)				F873BF-90K-B5 (F01191)	
.75	2277	III								
17	100	570	0.17	833B-100K (F00169)	833BF-100K (F00187)	.16	560	I	F833B-100K-B5 (F00701)	F833BF-100K-B5 (F00714)
		1400	0.42	843B-100K (F00271)	843BF-100K (F00289)	.33	1115	I	F843B-100K-B5 (F00835)	F843BF-100K-B5 (F00853)
						.25	836	II		
						.16	557	III		
		3095	0.88	863B-100K (F00375)	863BF-100K (F00393)	.75	2638	I	F863B-100K-B5 (F00991)	F863BF-100K-B5 (F01015)
						.50	1759	II		
						.33	1172	III		
		5252	1.58	873B-100K (F00477)	873BF-100K (F00495)	1.5	4986	I	F873B-100K-B7 (F01137)	F873BF-100K-B7 (F01166)
1	3324					II	F873B-100K-B5 (F01136)	F873BF-100K-B5 (F01165)		
.75	2498					III				
15	112	543	0.15	833B-112K (F00170)	833BF-112K (F00188)	.16	543	I	F833B-112K-B5 (F00702)	F833BF-112K-B5 (F00715)
		1340	0.37	843B-112K (F00272)	843BF-112K (F00290)	.33	1282	I	F843B-112K-B5 (F00836)	F843BF-112K-B5 (F00854)
						.25	962	II		
						.16	641	III		
		2820	0.79	863B-112K (F00376)	863BF-112K (F00394)	.75	2678	I	F863B-112K-B5 (F00992)	F863BF-112K-B5 (F01016)
						.50	1786	II		
						.33	1190	III		
		5300	1.37	873B-112K (F00478)	873BF-112K (F00496)	1	3868	I	F873B-112K-B5 (F01139)	F873BF-112K-B5 (F01167)
.75	2900					II				
.50	1934					III				

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.
 ■ Indicates Triple Reduction

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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.

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 (F00171)	833BF-125K (F00189)	.16	523	I	F833B-125K-B5 (F00703)	F833BF-125K-B5 (F00716)
		1430	0.33	843B-125K (F00273)	843BF-125K (F00291)	.33	1430	I	F843B-125K-B5 (F00837)	F843BF-125K-B5 (F00855)
		3000	0.70	863B-125K (F00377)	863BF-125K (F00395)	.25 .16	1083 722	I III		
		5337	1.26	873B-125K (F00479)	873BF-125K (F00497)	.50 .33	2150 1433	I III	F863B-125K-B5 (F00993)	F863BF-125K-B5 (F01017)
12	140	487	0.11	833B-140K (F00172)	833BF-140K (F00190)	.16	487	I	F833B-140K-B5 (F00704)	F833BF-140K-B5 (F00717)
		1360	0.29	843B-140K (F00274)	843BF-140K (F00292)	.25	1175	I	F843B-140K-B5 (F00838)	F843BF-140K-B5 (F00856)
		2916	0.65	863B-140K (F00378)	863BF-140K (F00396)	.16 .50	783 2443	II I		
		5247	1.11	873B-140K (F00480)	873BF-140K (F00498)	1 .75 .50	4727 3545 2363	I II III	F863B-140K-B5 (F00994)	F863BF-140K-B5 (F01018)
10	160	490	0.10	833B-160K (F00173)	833BF-160K (F00191)	—	—	—	—	—
		1410	0.27	843B-160K (F00275)	843BF-160K (F00293)	.25	1325	I	F843B-160K-B5 (F00839)	F843BF-160K-B5 (F00857)
		3130	0.58	863B-160K (F00379)	863BF-160K (F00397)	.16 .50 .33 .25	883 2700 1800 1350	II I II III	F863B-160K-B5 (F00995)	F863BF-160K-B5 (F01019)
		5280	1.02	873B-160K (F00481)	873BF-160K (F00499)	1 .75 .50	5176 3882 2588	I I III	F873B-160K-B5 (F01142)	F873BF-160K-B5 (F01170)
9.7 (CONT.)	180	555	0.10	833B-180K (F00174)	833BF-180K (F00192)	—	—	—	—	—
		1436	0.24	843B-180K (F00276)	843BF-180K (F00294)	.25	1436	I	F843B-180K-B5 (F00840)	F843BF-180K-B5 (F00858)
		3146	0.53	863B-180K (F00380)	863BF-180K (F00398)	.16 .50 .33	997 2975 1980	I I II	F863B-180K-B5 (F00996)	F863BF-180K-B5 (F01020)

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.
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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 161-170.
 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 (F00482)	873BF-180K (F00500)	.75	4371	I	F873B-180K-B5 (F01143)	F873BF-180K-B5 (F01171)
						.50	2914	II		
						.33	1942	III		
8.8	200	568	0.09	833B-200K (F00175)	833BF-200K (F00193)	—	—	—	—	—
		1428	0.21	843B-200K (F00277)	843BF-200K (F00295)	.25	1428	I	F843B-200K-B5 (F00841)	F843BF-200K-B5 (F00859)
		3173	0.47	863B-200K (F00381)	863BF-200K (F00399)	.33	2250	I	F863B-200K-B5 (F00997)	F863BF-200K-B5 (F01021)
						.25	1688	II		
						.16	1125	III		
		5432	0.82	873B-200K (F00483)	873BF-200K (F00501)	.75	4968	I	F873B-200K-B5 (F01144)	F873BF-200K-B5 (F01172)
						.50	3216	II		
						.33	2208	III		
7.8	225	544	0.08	833B-225K (F00176)	833BF-225K (F00194)	—	—	—	—	—
		1410	0.19	843B-225K (F00278)	843BF-225K (F00296)	.16	1219	I	F843B-225K-B5 (F00842)	F843BF-225K-B5 (F00860)
		3146	0.44	863B-225K (F00382)	863BF-225K (F00400)	.33	2383	I	F863B-225K-B5 (F00998)	F863BF-225K-B5 (F01022)
						.25	1788	II		
						.16	1192	III		
		5341	0.75	873B-225K (F00484)	873BF-225K (F00502)	.75	5341	I	F873B-225K-B5 (F01145)	F873BF-225K-B5 (F01173)
						.50	3561	II		
						.33	2375	III		
7.0	250	540	0.07	833B-250K (F00177)	833BF-250K (F00195)	—	—	—	—	—
		1410	0.17	843B-250K (F00279)	843BF-250K (F00297)	.16	1385	I	F843B-250K-B5 (F00843)	F843BF-250K-B5 (F00861)
		3110	0.39	863B-250K (F00383)	863BF-250K (F00401)	.33	2709	I	F863B-250K-B5 (F00999)	F863BF-250K-B5 (F01023)
						.25	2032	II		
						.16	1355	III		
5423	0.67	873B-250K (F00485)	873BF-250K (F00503)	.50	4047	I	F873B-250K-B5 (F01146)	F873BF-250K-B5 (F01174)		
				.33	2698	III				

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 161-170.
 ** 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 143.
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800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340-341.
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 143.



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 690 RPM, & 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 340-341.
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 143.



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340-341.
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Overhung Load Ratings refer to Page 143



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 690 RPM, & 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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

■ Indicates Triple Reduction



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 690 RPM, & 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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

■ Indicates Triple Reduction



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

■ Indicates Triple Reduction



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 690 RPM, & 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	.009	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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

■ Indicates Triple Reduction



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340-341

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

■ Indicates Triple Reduction



800 SERIES RATIO AND CAPACITY SELECTION TABLES

Non-Flanged
Input Speeds 690 RPM, & 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 340-341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Overhung Load Ratings refer to Page 143.

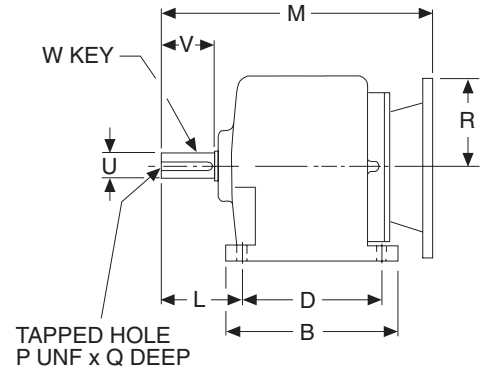
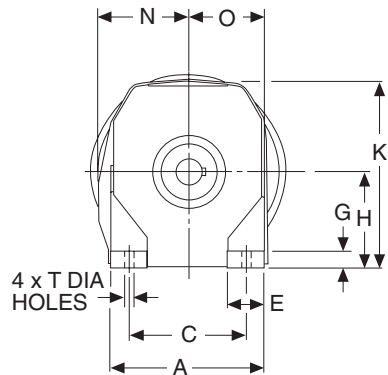
Indicates Triple Reduction



800 SERIES IN-LINE HELICAL GEAR DRIVES DIMENSIONS

FOOT MOUNTED

F800B SERIES
DOUBLE REDUCTION
NEMA C-FACE INPUT



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

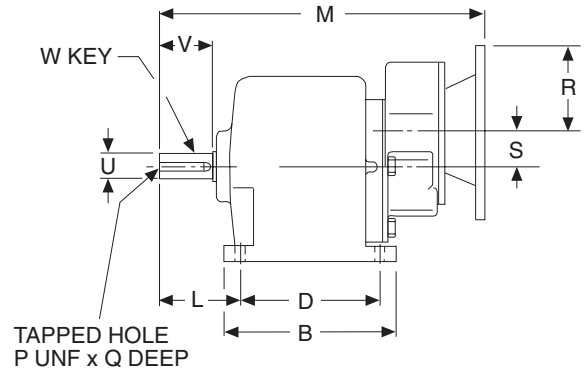
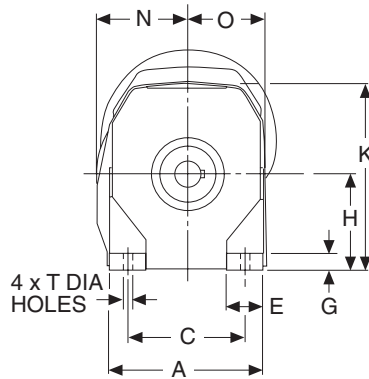
SIZE	LOW SPEED SHAFT				M				R			
	U +.000 -.001	V	W-Key		NEMA MOUNTING				NEMA MOUNTING			
			Sq.	Lgth.	56C	140TC	180TC	210TC	56C	140TC	180TC	210TC
					B5	B7	B9	B11	B5	B7	B9	B11
F832B	.750	1.57	.19	1.28	9.82	9.82	10.65	—	3.31	3.31	4.63	—
F842B	1.000	1.97	.25	1.75	10.73	10.73	11.55	—	3.31	3.31	4.63	—
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

FOOT MOUNTED

F800B SERIES
TRIPLE REDUCTION
NEMA C-FACE INPUT



G

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

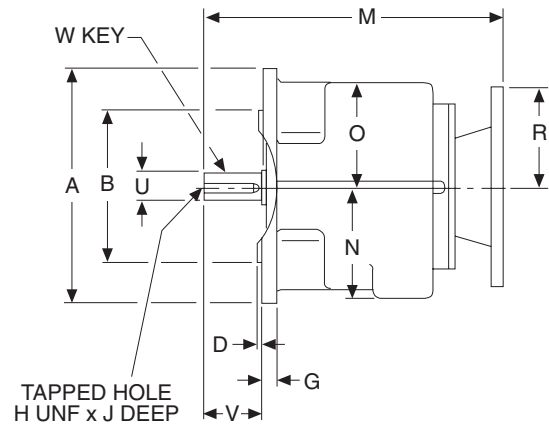
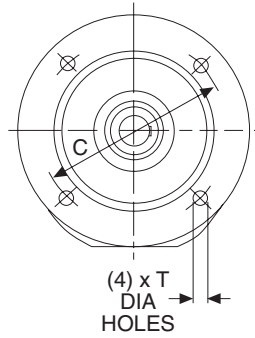
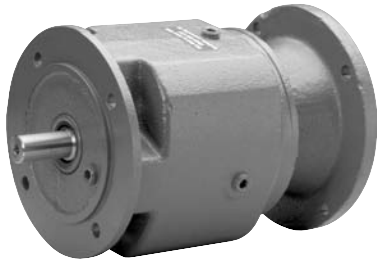
SIZE	T	LOW SPEED SHAFT				M			R		
		U +.000 -.001	V	W-Key		NEMA MOUNTING			NEMA MOUNTING		
				Sq.	Lgth.	56C	140TC	180TC	56C	140TC	180TC
						B5	B7	B9	B5	B7	B9
F833B	.39	.750	1.57	.19	1.28	12.03	—	—	3.31	—	—
F843B	.39	1.000	1.97	.25	1.75	12.94	—	—	3.31	—	—
F863B	.59	1.250	2.36	.25	2.00	15.38	15.38	—	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 DRIVES DIMENSIONS

OUTPUT FLANGE MOUNTED

F800BF SERIES DOUBLE REDUCTION NEMA C-FACE INPUT



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

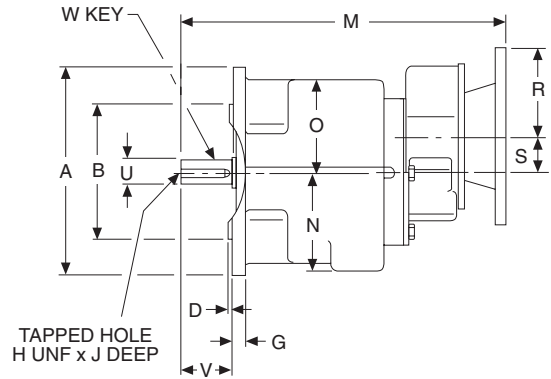
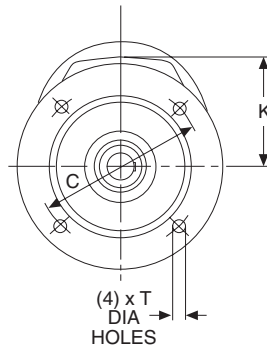
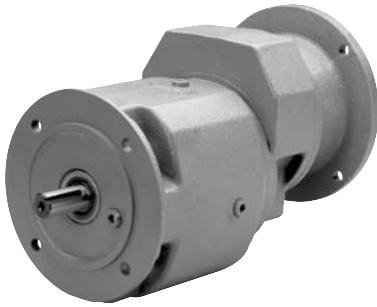
SIZE	LOW SPEED SHAFT				M				R			
	U +.000 -.001	V	W-Key		NEMA MOUNTING				NEMA MOUNTING			
			Sq.	Lgth.	56C	140TC	180TC	210TC	56C	140TC	180TC	210TC
					B5	B7	B9	B11	B5	B7	B9	B11
F832BF	.750	1.57	.19	1.28	9.82	9.82	10.65	—	3.31	3.31	4.63	—
F842BF	1.000	1.97	.25	1.75	10.73	10.73	11.55	—	3.31	3.31	4.63	—
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

OUTPUT FLANGE MOUNTED

F800BF SERIES TRIPLE REDUCTION NEMA C-FACE INPUT



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

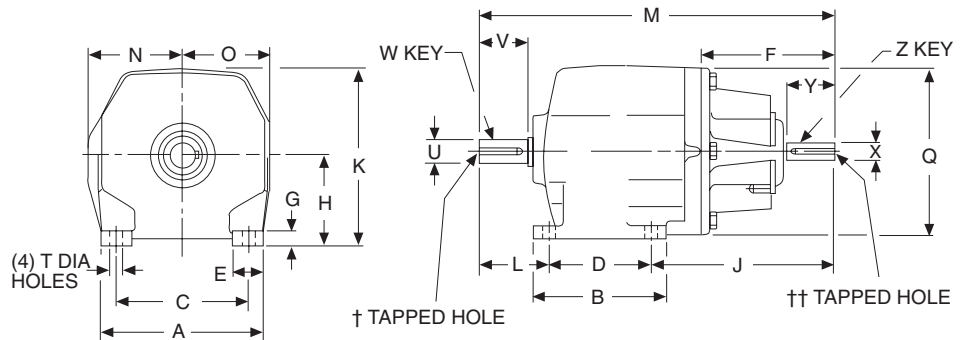
SIZE	T	LOW SPEED SHAFT				M			R		
		U +.000 -.001	V	W-Key		NEMA MOUNTING			NEMA MOUNTING		
				Sq.	Lgth.	56C	140TC	180TC	56C	140TC	180TC
						B5	B7	B9	B5	B7	B9
F833BF	.39	.750	1.57	.19	1.28	12.03	—	—	3.31	—	—
F843BF	.47	1.000	1.97	.25	1.75	12.94	—	—	3.31	—	—
F863BF	.59	1.250	2.36	.25	2.00	15.38	15.38	—	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 DRIVES DIMENSIONS

FOOT MOUNTED

800B SERIES
DOUBLE REDUCTION
NON-FLANGED



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.

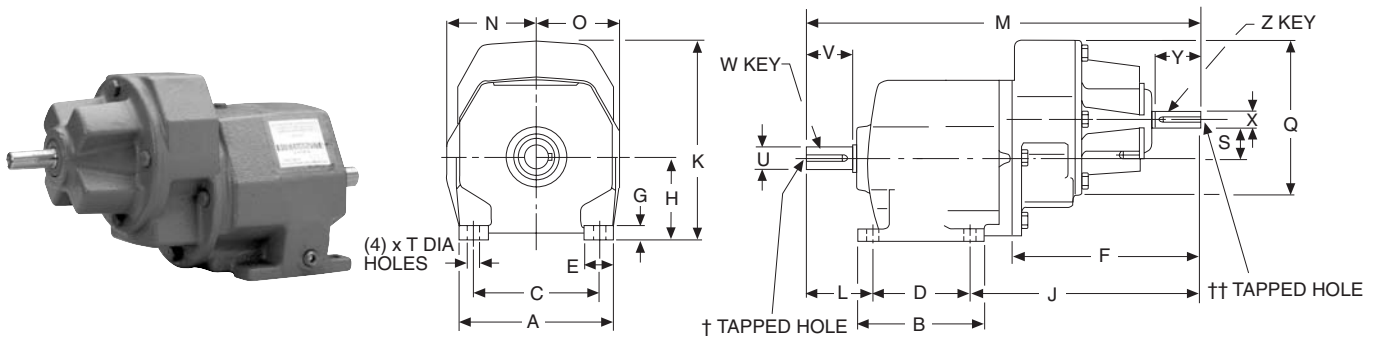
†† 832B 1/4 UNF x 0.49 DP, 842B 1/4 UNF x 0.49 DP. Size 862B 1/4 UNF x 0.63 DP. Size 872B 5/16 UNF x 0.63 DP.

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800 SERIES IN-LINE HELICAL GEAR DRIVES DIMENSIONS

FOOT MOUNTED

800B SERIES
TRIPLE REDUCTION
NON-FLANGED



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.

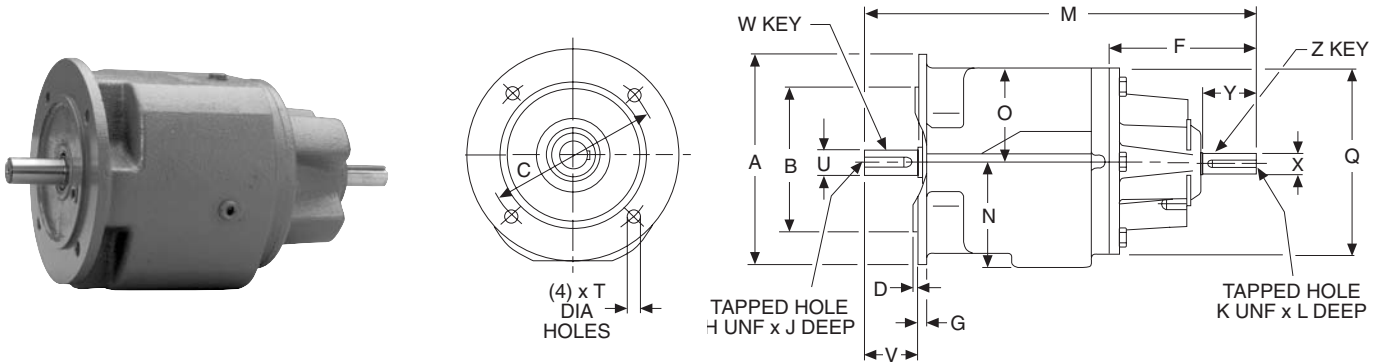
† Size 833B 1/4 UNF x 0.63 DP, 843 1/4 UNF x 0.63 DP, 863B 3/8 UNF x 0.87 DP. Size 873B 5/8 UNF x 1.38 DP.

†† 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 DRIVES DIMENSIONS

OUTPUT FLANGE MOUNTED

800BF SERIES DOUBLE REDUCTION NON-FLANGED



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

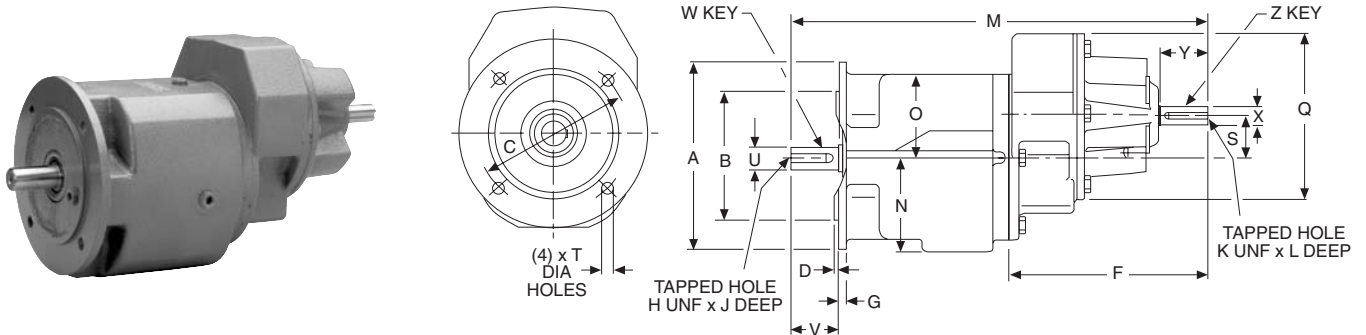
SIZE	O	Q	T	LOW SPEED SHAFT				HIGH SPEED SHAFT			
				U +.000 -.001	V	W-Key		X +.000 -.001	Y	Z-Key	
						Sq.	Lgth.			Sq.	Lgth.
832BF	2.76	5.51	.39	.750	1.57	.19	1.28	.6250	1.57	.19	1.28
842BF	3.46	5.51	.47	1.000	1.97	.25	1.75	.6250	1.57	.19	1.28
862BF	4.53	7.09	.59	1.250	2.36	.25	2.00	.7500	1.57	.19	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

OUTPUT FLANGE MOUNTED

800BF SERIES
TRIPLE REDUCTION
NON-FLANGED



SIZE	A	B +0.000 -0.003	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 +0.000 -0.001	V	W-Key		X +0.000 -0.001	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.

BISSC Certified Units



- Includes all the standard Bost-Kleen features
- Single reduction quill style units
- Available in BK or SBK
- Cast iron horizontal base standard.
- Pre-lubricated standard with 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)

White Bost-Kleen™



- Washable and Scrubbable
- Corrosion Resistant
- Durable White Epoxy Finish
- Includes all the standard 800 features
- Limited Lifetime Warranty
- Cast Iron Housing, Motor Flange, and Optional Base
- 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 14 for a complete list of lubrication options
- Exposed hardware made of stainless steel.

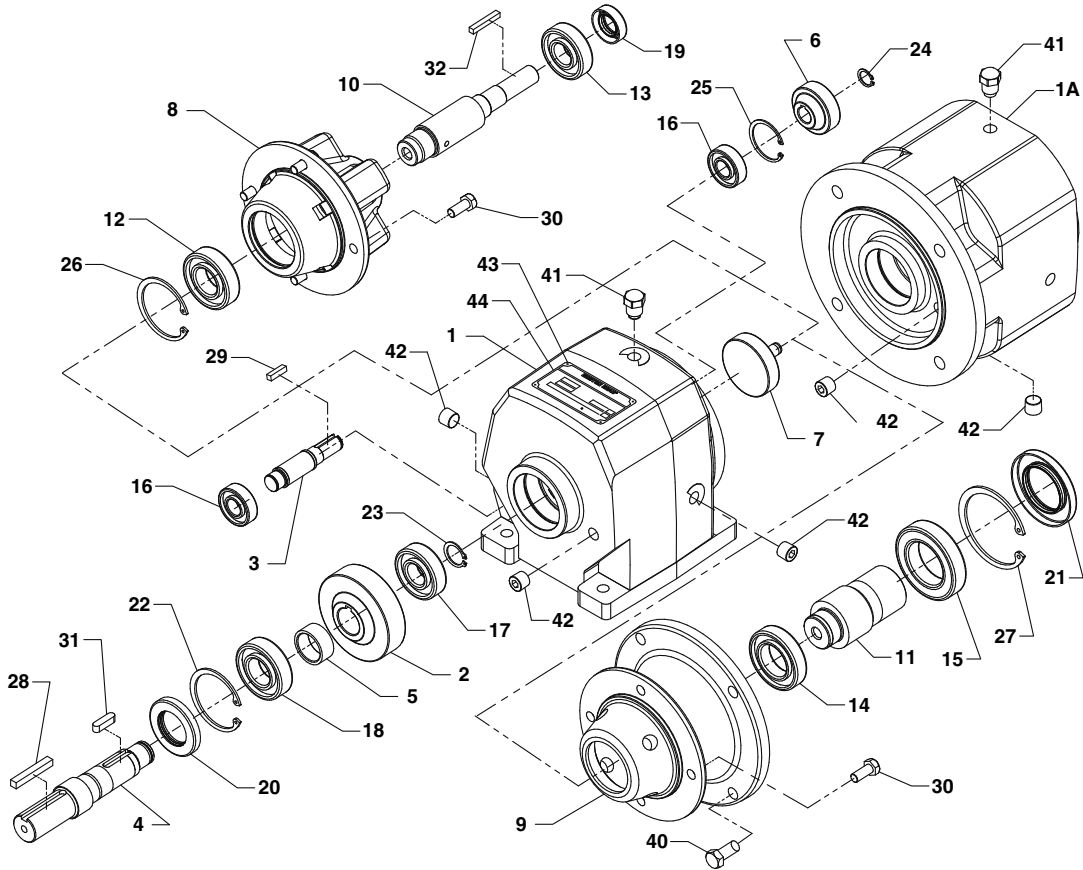
Stainless Bost-Kleen™



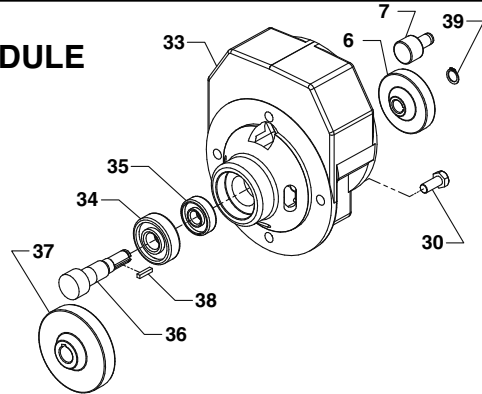
- Includes all the features of the standard white Bost-Kleen reducers
- U.S.D.A. approved for use in food processing and handling industry where incidental food contact may occur
- Excluder seal on solid output shaft units
- Durable stainless steel epoxy coating system utilizes a unique #316L stainless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

BISSC 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				
BK832	BKF832	SBK832	SBKF832	56C, 140TC, 180TC	.625	.750	ALL
BK833	BKF833	SBK833	SBKF833	56C	.625		
BK842	BKF842	SBK842	SBKF842	56C, 140TC, 180TC	.625	1.000	ALL
BK843	BKF843	SBK843	SBKF843	56C	.625		
BK862	BKF862	SBK862	SBKF862	56C, 140TC, 180TC, 210TC	.750	1.250	ALL
BK863	BKF863	SBK863	SBKF863	56C, 140TC	.625		
BK872	BKF872	SBK872	SBKF872	56C, 140TC, 180TC, 210TC	.875	1.625	ALL
BK873	BKF873	SBK873	SBKF873	56C, 140TC, 180TC	.750		

800 SERIES PARTS LIST – IN-LINE HELICAL GEAR DRIVES



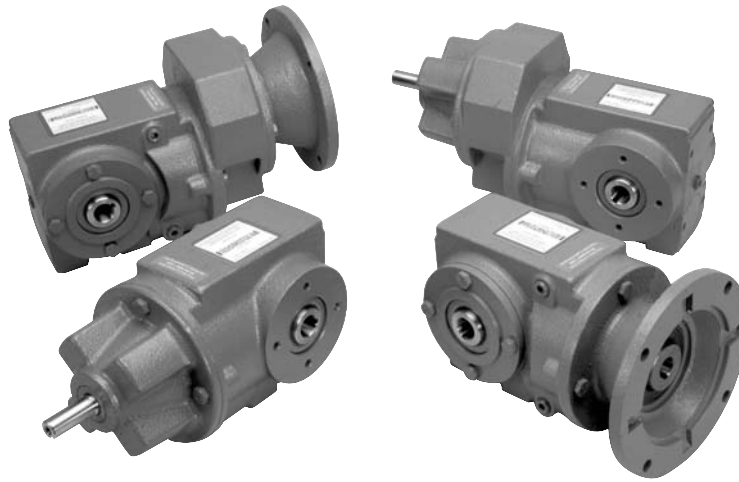
TRIPLE MODULE



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 SAFT
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

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



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SECTION CONTENTS

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800 SERIES HELICAL GEAR DRIVES

**SF800BR Series
Right Angle
Helical-Worm
Flanged**

Double Reduction
Flange Input



Selection Pages 191-205
Dimensions-Page 216

Triple Reduction
Flange Input



Selection Pages 191-205
Dimensions-Page 217

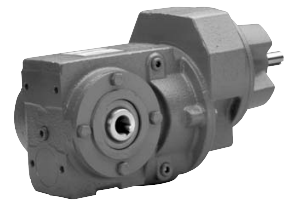
**S800BR Series
Right Angle
Helical Worm
Non-Flanged**

Double Reduction



Selection Pages 206-215
Dimensions-Page 218

Triple Reduction



Selection Pages 206-215
Dimensions-Page 219

**SF/S800BR Series
Accessories
and
Options**

Output Flange Kits



Dimensions-Page 220

Torque Arm Kits



Dimensions-Page 220

Base Kits



Dimensions-Page 221

Output Shaft Kits



Dimensions-Page 221

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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.

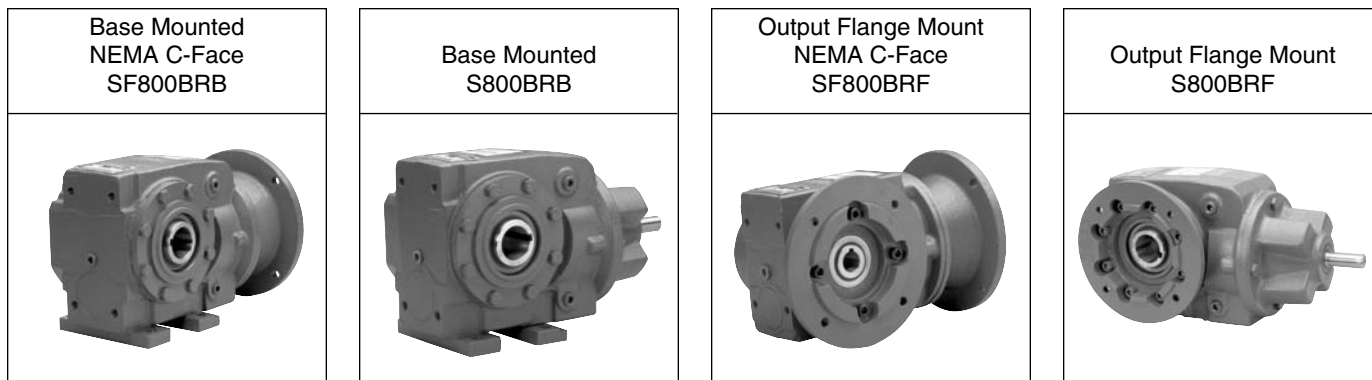
REDUCER EXPRESS



See page 348 for conditions.

800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

INTERCHANGE GUIDE



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 221.

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 GEAR DRIVES

NUMBERING SYSTEM / HOW TO ORDER

NUMBERING SYSTEM

EXAMPLE:

BK SF 8 3 2 B R F - 45 K - B5 - G - M2

Washdown Series (Options)

BK-Bost-Kleen (White)
SBK-Stainless Bost-Kleen

Styles

S - Projecting I/P, hollow
O/P shaft (No flange)
SF - Flanged NEMA C-FACE
input (Quill type), hollow
O/P shaft

Series

"800B Series"

Case Size

3, 4, 5 And 6

Type

Right Angle
Helical/Worm

Number of Reductions

2- Double
3- Triple

Lubricant*

Klubersynth
UH1 6-460

*Sizes 3 & 4
Lubricated for
life.

Nominal Gear Ratio

Refer to Selection Tables
For Available Ratios

Mounting Style Options

"Blank" - Foot Mounted
F - Output Flange Mounted
T-Torque Arm
† B-Detachable Base

† Conforms to Industry
Mounting Standards.

Shaft Projection

"Blank"-Hollow Shaft
G - Left Projection
H - Double Projection
J - Right Projection
(When Viewing From
Input)

Mounting Positions**

"Blank" - Standard
Other Mountings, Please Specify

** Reference Page 190

NEMA Motor Frame Sizes

Bore Code	Input Bore	NEMA Mtg
B5	.625	56C
B7	.875	140TC/180C
B9	1.125	180TC/210C
B11	1.375	210TC/250UC

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.

800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

MOTORIZED GEAR DRIVES

1. Determine application service factor from page 187 or from Application Classifications on page 340 and 341.
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 187.
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 196
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:

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

- 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 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 188.

H

800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

ORDER BY CATALOG NUMBER OR ITEM CODE
FOR STANDARD MOUNTING POSITIONS

APPROX. OUTPUT RPM	NOMINAL RATIO*	NON-FLANGED			FLANGED (GEARMOTORS)			CATALOG NO. (ITEM CODE) SHAFT MOUNTED
		GEAR CAPACITY OUTPUT TORQUE	HP INPUT	CATALOG NUMBER (ITEM CODE)	MOTOR HP	RATINGS OUTPUT TORQUE	SERVICE CLASS**	
35	50	3248	2.24	S852BR-50K (F01304)	2	2899	I	SF852BR-50K-B7 (F01547)
					1.5	2174	II	
					1	1499	III	
		5930	3.79	S862BR-50K (F01349)	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 206-215.

** 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 188



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 DRIVE

1. Determine application service factor from the service factor chart on this page, or from Application Classifications on pages 340 and 341.
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 186 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 220 and 221.

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 340 and 341.

800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged

Input Speeds 1750 RPM, 1450 RPM & 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	Lbs	SIZE	NEMA MOUNTING			
			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	-30° to 225°F (-34° 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)

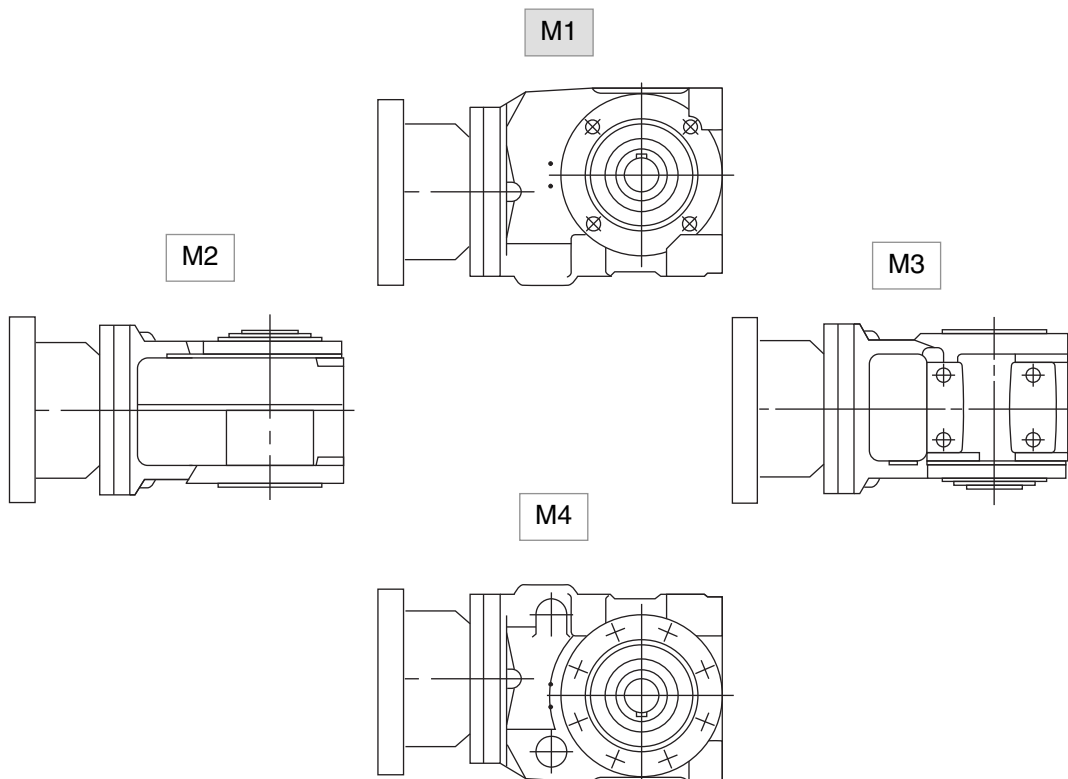
UNIT SIZE	MOUNTING POSITIONS					
	M1	M2	M3	M4	M5	M6
832BR	.80	1.0	1.0	1.7	1.7	1.7
833BR	2.3	1.3	1.3	2.8	2.8	2.8
842BR	1.2	1.6	1.6	2.0	2.0	2.0
843BR	2.6	1.8	1.8	3.2	3.4	3.4
852BR	1.8	2.3	2.3	2.7	3.8	3.8
853BR	3.2	2.8	2.8	4.4	4.8	4.8
862BR	4.0	4.6	4.6	7.0	7.0	7.0
863BR	7.0	5.8	5.8	8.8	9.6	10.0

H

800 SERIES RIGHT ANGLE HELICAL-WORM MOUNTING POSITIONS

HORIZONTAL MOUNTINGS

STANDARD



VERTICAL



- 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 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
218	8	689	2.65	S832BR-8K (F01218)	2	519	I	SF832BR-8K-B7 (F01432)
					1.5	389	II	
					1	260	III	SF832BR-8K-B5 (F01431)
		1160	4.39	S842BR-8K (F01263)	3	751	II	SF842BR-8K-B9 (F01491)
					2	500	III	SF842BR-8K-B7 (F01490)
		1678	6.66	S852BR-8K (F01309)	5	1260	I	SF852BR-8K-B9 (F01558)
					3	755	III	
					10	2578	I	SF862BR-8K-B11 (F01622)
		2940	11.40	S862BR-8K (F01354)	7.5	1933	II	
					5	1289	III	SF862BR-8K-B9 (F01623)
159	11	742	2.14	S832BR-11K (F01195)	2	694	I	SF832BR-11K-B7 (F01404)
					1.5	520	II	
					1	347	II	SF832BR-11K-B5 (F01403)
		1194	3.57	S842BR-11K (F01240)	3	1003	I	SF842BR-11K-B9 (F01453)
					2	668	II	SF842BR-11K-B7 (F01452)
		1930	5.52	S852BR-11K (F01285)	1.5	501	III	
					5	1746	I	SF852BR-11K-B9 (F01517)
					3	1048	II	
		3480	9.38	S862BR-11K (F01331)	2	666	III	SF852BR-11K-B7 (F01516)
					7.5	2780	I	SF862BR-11K-B11 (F01584)
145 (CONT.)	12	787	1.95	S832BR-12K (F01197)	5	1853	II	SF862BR-11K-B9 (F01585)
					3	1112	III	
					1.5	583	III	
		1264	3.25	S842BR-12K (F01242)	1.5	605	I	SF832BR-12K-B7 (F01407)
					1	403	II	SF832BR-12K-B5 (F01406)
					.75	302	III	

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
145 (CONT)	12	2010	5.22	S852BR-12K (F01287)	5	1924	I	SF852BR-12K-B9 (F01520)
					3	1155	II	
					2	770	III	SF852BR-12K-B7 (F01519)
		3646	8.77	S862BR-12K (F01333)	7.5	3117	I	SF862BR-12K-B11 (F01587)
					5	2078	II	SF862BR-12K-B9 (F01588)
3	1246	III						
125	14	790	1.79	S832BR-14K (F01199)	1.5	662	I	SF832BR-14K-B7 (F01410)
					1	441	II	SF832BR-14K-B5 (F01409)
					.75	330	III	
		1288	2.99	S842BR-14K (F01244)	3	1288	I	SF842BR-14K-B9 (F01459)
					2	861	II	SF842BR-14K-B7 (F01458)
					1.5	646	III	
		2060	4.85	S852BR-14K (F01289)	3	1274	II	SF852BR-14K-B9 (F01523)
					2	849	III	SF852BR-14K-B7 (F01522)
		3827	8.20	S862BR-14K (F01335)	7.5	3498	I	SF862BR-14K-B11 (F01591)
					5	2332	II	SF862BR-14K-B9 (F01592)
3	1399				III			
109	16	730	1.70	S832BR-16K (F01201)	1.5	644	I	SF832BR-16K-B7 (F01413)
					1	430	II	SF832BR-16K-B5 (F01412)
					.75	322	III	
		1218	2.72	S842BR-16K (F01246)	2	895	I	SF842BR-16K-B7 (F01462)
					1.5	671	II	
		2710	5.92	S852BR-16K (F01291)	1	448	III	SF842BR-16K-B5 (F01461)
					5	2287	I	SF852BR-16K-B9 (F01525)
		4199	9.03	S862BR-16K (F01337)	3	1372	III	
					7.5	3054	I	SF862BR-16K-B11 (F01595)
5	2323				II	SF862BR-16K-B9 (F01596)		
3	1393	III						

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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 (F01202)	1.5	864	I	SF832BR-18K-B7 (F01415)		
					1	576	II	SF832BR-18K-B5 (F01414)		
					.75	432	III			
		1388	2.50	S842BR-18K (F01247)	2	1110	I	SF842BR-18K-B7 (F01464)		
					1.5	832	II			
					1	555	III	SF842BR-18K-B5 (F01463)		
		2162	4.21	S852BR-18K (F01292)	3	1540	I	SF852BR-18K-B9 (F01527)		
					2	1026	III	SF852BR-18K-B7 (F01526)		
		4208	7.10	S862BR-18K (F01338)	5	2962	I	SF862BR-18K-B9 (F01597)		
					3	1777	III			
		87	20	860	1.43	S832BR-20K (F01203)	1	600	I	SF832BR-20K-B5 (F01416)
							.75	451	III	
1391	2.37			S842BR-20K (F01248)	2	1173	I	SF842BR-20K-B7 (F01466)		
					1.5	880	II			
1	586			III	SF842BR-20K-B5 (F01465)					
					3	1803	I	SF852BR-20K-B9 (F01529)		
2345	3.90			S852BR-20K (F01294)	2	1202	II	SF852BR-20K-B7 (F01528)		
					1.5	902	III			
4400	6.58			S862BR-20K (F01339)	5	3343	I	SF862BR-20K-B9 (F01598)		
					3	2006	III			
79	22			804	1.39	S832BR-22K (F01205)	1	578	I	SF832BR-22K-B5 (F01418)
							.75	434	II	
		.50	289				III			
		1321	2.23	S842BR-22K (F01250)	2	1184	I	SF842BR-22K-B7 (F01470)		
					1.5	888	II			
					1	592	III	SF842BR-22K-B5 (F01468)		
		3086	4.90	S852BR-22K (F01296)	5	3086	I	SF852BR-22K-B9 (F01532)		
					3	1889	II			
					2	1259	III	SF852BR-22K-B7 (F01531)		
		4784	7.41	S862BR-22K (F01341)	5	3226	II	SF862BR-22K-B9 (F01601)		
					3	1935	III			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
70	25	843	1.28	S832BR-25K (F01207)	1	658	I	SF832BR-25K-B5 (F01420)
					.75	494	II	
					.50	329	III	
		1389	2.04	S842BR-25K (F01252)	2	1360	I	SF842BR-25K-B7 (F01473)
					1.5	1020	I	
		3177	4.62	S852BR-25K (F01298)	1	680	III	SF842BR-25K-B5 (F01472)
					3	2062	II	
		5026	6.94	S862BR-25K (F01343)	2	1374	III	SF852BR-25K-B9 (F01535)
					5	3620	I	
					3	2172	III	SF852BR-25K-B7 (F01534)
			3	2172	III	SF862BR-25K-B9 (F01603)		
62	28	862	1.17	S832BR-28K (F01208)	1	736	I	SF832BR-28K-B5 (F01421)
					.75	552	II	
					.50	368	III	
		1363	1.88	S842BR-28K (F01253)	1.5	1087	I	SF842BR-28K-B7 (F01475)
					1	725	II	
		3200	4.24	S852BR-28K (F01299)	.75	543	III	SF842BR-28K-B5 (F01474)
					3	2263	I	
		5290	6.49	S862BR-28K (F01344)	2	1508	III	SF852BR-28K-B9 (F01537)
					5	4073	I	
					3	2444	III	SF852BR-28K-B7 (F01536)
			3	2444	III	SF862BR-28K-B9 (F01604)		
54	32	971	1.00	S832BR-32K (F01209)	1	971	I	SF832BR-32K-B5 (F01422)
					.75	728	II	
					.50	485	III	
		1560	1.66	S842BR-32K (F01254)	1.5	1409	I	SF842BR-32K-B7 (F01477)
					1	940	II	
		2813	2.98	S852BR-32K (F01300)	.75	705	III	SF842BR-32K-B5 (F01476)
					3	2813	I	
		5184	4.93	S862BR-32K (F01345)	2	1887	II	SF852BR-32K-B9 (F01539)
					1.5	1415	III	
					3	3153	II	SF852BR-32K-B7 (F01538)
			2	2102	III	SF862BR-32K-B9 (F01606)		
			2	2102	III	SF862BR-32K-B7 (F01605)		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)	
		Output Torque (LB-IN.)	Input HP						
48	36	936	0.99	S832BR-36K (F01210)	1	936	I	SF832BR-36K-B5 (F01423)	
					.75	709	I		
					.50	472	III		
		1525	1.59	S842BR-36K (F01255)	1.5	1438	I	SF842BR-36K-B7 (F01479)	
					1	959	II	SF842BR-36K-B5 (F01478)	
		3262	3.59	S852BR-36K (F01301)	3	2722	I	SF852BR-36K-B9 (F01541)	
					2	1816	II	SF852BR-36K-B7 (F01540)	
		5768	5.65	S862BR-36K (F01346)	5	5102	I	SF862BR-36K-B9 (F01608)	
					3	3061	II	SF862BR-36K-B7 (F01607)	
					2	2040	III		
43	40	933	0.94	S832BR-40K (F01211)	.75	744	I	SF832BR-40K-B5 (F01424)	
					.50	746	II		
					.33	330	III		
		1527	1.51	S842BR-40K (F01256)	1.5	1516	I	SF842BR-40K-B7 (F01481)	
					1	1010	II	SF842BR-40K-B5 (F01480)	
		3453	3.28	S852BR-40K (F01302)	3	3156	I	SF852BR-40K-B9 (F01543)	
					2	2104	II	SF852BR-40K-B7 (F01542)	
		6045	5.25	S862BR-40K (F01347)	1.5	1578	III	SF862BR-40K-B9 (F01610)	
					5	5754	I		
					3	3453	II		
2			2	2302	III	SF862BR-40K-B7 (F01609)			
			1032	0.80	S832BR-45K (F01212)	.75	967	I	SF832BR-45K-B5 (F01425)
						.50	644	II	
.33	430	III							
1669	1.34	S842BR-45K (F01257)	1	1244	I	SF842BR-45K-B5 (F01482)			
			.75	933	II				
			.50	622	III				

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
38 (CONT.)	45	3165	2.37	S852BR-45K (F01303)	2	2669	I	SF852BR-45K-B7 (F01545)
					1.5	1978	II	
		5810	3.95	S862BR-45K (F01348)	1	1335	III	SF852BR-45K-B5 (F01544)
					3	4410	I	SF862BR-45K-B9 (F01612)
			2	3407	II	SF862BR-45K-B7 (F01611)		
35	50	1000	0.71	S832BR-50K (F01213)	.50	703	I	SF832BR-50K-B5 (F01426)
					.33	469	III	
		1616	1.19	S842BR-50K (F01258)	1	1354	I	SF842BR-50K-B5 (F01483)
					.75	1015	II	
					.50	677	III	
		3248	2.24	S852BR-50K (F01304)	2	2899	I	SF852BR-50K-B7 (F01547)
					1.5	2174	II	
					1	1449	III	
		5930	3.79	S862BR-50K (F01349)	3	4692	I	SF862BR-50K-B9 (F01614)
					2	3128	II	SF862BR-50K-B7 (F01613)
1.5	2346				III			
31	56	1033	0.74	S832BR-56K (F01214)	.75	1033	I	SF832BR-56K-B5 (F01427)
					.50	698	II	
					.33	465	III	
		1670	1.18	S842BR-56K (F01259)	1	1416	I	SF842BR-56K-B5 (F01484)
					.75	1062	II	
					.50	708	III	
		3813	2.63	S852BR-56K (F01305)	2	2900	I	SF852BR-56K-B7 (F01549)
					1.5	2174	II	
					1	1449	III	
		6500	4.20	S862BR-56K (F01350)	3	4633	I	SF862BR-56K-B9 (F01616)
2	3088				III	SF862BR-56K-B7 (F01615)		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
27	63	1040	0.67	S832BR-63K (F01215)	.50	775	I	SF832BR-63K-B5 (F01428)
					.33	517	III	
		1710	1.07	S842BR-63K (F01260)	1	1597	I	SF842BR-63K-B5 (F01485)
					.75	1197	II	
					.50	800	III	
					2	3261	I	
		3899	2.39	S852BR-63K (F01306)	1.5	2446	II	SF852BR-63K-B7 (F01552)
					1	1630	III	
					3	5360	I	
					2	3574	II	
6720	3.76	S862BR-63K (F01351)	1.5	2680	III	SF862BR-63K-B7 (F01617)		
			2	3574	II	SF862BR-63K-B9 (F01618)		
			3	5360	I	SF862BR-63K-B5 (F01550)		
24	71	1192	0.59	S832BR-71K (F01216)	.50	1009	I	SF832BR-71K-B5 (F01429)
					.33	673	II	
					.25	505	III	
		1739	0.88	S842BR-71K (F01261)	.75	1482	I	SF842BR-71K-B5 (F01487)
					.50	950	II	
					.33	658	III	
					1.5	2828	I	
		3225	1.71	S852BR-71K (F01307)	1	1885	II	SF852BR-71K-B7 (F01555)
					.75	1414	III	
					2	4520	II	
6645	2.94	S862BR-71K (F01352)	1.5	3389	III	SF862BR-71K-B5 (F01554)		
			2	4520	II	SF862BR-71K-B7 (F01619)		
21	80	1250	0.54	S832BR-80K (F01217)	.50	1158	I	SF832BR-80K-B5 (F01430)
					.33	772	II	
					.25	579	III	
		1619	0.74	S842BR-80K (F01262)	.75	1640	I	SF842BR-80K-B5 (F01488)
					.50	1093	II	
					.33	729	III	
					1.5	3453	I	
		3453	1.50	S852BR-80K (F01308)	1	2368	II	SF852BR-80K-B7 (F01557)
					.75	1776	III	
					2	4895	I	
6783	2.77	S862BR-80K (F01353)	1.5	3671	II	SF862BR-80K-B7 (F01621)		
			1	2444	III			
			2	4895	I			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.



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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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 (F01219)	.50	1040	I	SF832BR-90K-B5 (F01433)
					.33	693	II	
					.25	520	III	
		1934	0.91	S842BR-90K (F01264)	.75	1593	I	SF842BR-90K-B5 (F01492)
					.50	1062	II	
					.33	708	III	
		4178	1.82	S852BR-90K (F01310)	1.5	3442	I	SF852BR-90K-B7 (F01560)
					1	2295	II	
					.75	1720	III	
		7514	3.05	S862BR-90K (F01355)	3	7388	I	SF862BR-90K-B9 (F01625)
					2	4925	II	
					1.5	3694	III	
17	100	1120	0.51	S832BR-100K (F01193)	.50	1098	I	SF832BR-100K-B5 (F01401)
					.33	732	II	
					.25	549	III	
		1302	0.47	S833BR-100K (F01220)	.33	923	I	SF833BR-100K-B5 (F01434)
					.25	692	II	
					.16	461	III	
		1835	0.81	S842BR-100K (F01238)	.75	1697	I	SF842BR-100K-B5 (F01450)
					.50	1132	II	
					.33	755	III	
		1700	0.63	S843BR-100K (F01265)	.50	1349	I	SF843BR-100K-B5 (F01495)
					.33	900	II	
					.25	674	III	
		4225	1.71	S852BR-100K (F01283)	1.5	3704	I	SF852BR-100K-B7 (F01514)
					1	2469	II	
					.75	1852	III	
		3477	1.22	S853BR-100K (F01311)	1	2849	I	SF853BR-100K-B5 (F01563)
					.75	2136	II	
					.50	1424	III	
7539	2.87	S862BR-100K (F01329)	2	5252	I	SF862BR-100K-B7 (F01581)		
			1.5	3939	III			
			2	6128	I			
7173	2.34	S863BR-100K (F01356)	2	6128	I	SF863BR-100K-B7 (F01627)		
			1.5	4596	II			
			1	3064	III			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
15	112	1360	0.44	S832BR-112K (F01194)	.33	1029	I	SF832BR-112K-B5 (F01402)
					.25	772	II	
					.16	514	III	
		1412	0.48	S842BR-112K (F01239)	.33	980	I	SF842BR-112K-B5 (F01451)
					.25	735	II	
					.16	490	III	
		3088	1.00	S852BR-112K (F01284)	1	3088	I	SF852BR-112K-B5 (F01515)
					.75	2317	I	
.50	1544				III			
6574	1.97	S862BR-112K (F01330)	1.5	5003	I	SF862BR-112K-B7 (F01583)		
			1	3366	II			
			.75	2502	III			
14	118	1321	0.42	S833BR-118K (F01221)	.33	1048	I	SF833BR-118K-B5 (F01435)
					.25	786	II	
					.16	524	III	
		1698	0.55	S843BR-118K (F01266)	.50	1543	I	SF843BR-118K-B5 (F01496)
					.33	1029	II	
					.25	772	III	
		3436	1.07	S853BR-118K (F01312)	1	3210	I	SF853BR-118K-B5 (F01564)
					.75	2407	II	
.50	1605				III			
7434	2.14	S863BR-118K (F01357)	2	6945	I	SF863BR-118K-B7 (F01629)		
			1.5	5209	II			
			1	3472	III			
14	125	1311	0.36	S832BR-125K (F01196)	.33	1213	I	SF832BR-125K-B5 (F01405)
					.25	910	II	
					.16	606	III	
		1248	0.36	S842BR-125K (F01241)	.33	1155	I	SF842BR-125K-B5 (F01454)
					.25	866	II	
					.16	578	III	
		2630	0.75	S852BR-125K (F01286)	.75	2630	I	SF852BR-125K-B5 (F01518)
					.50	1753	II	
.33	1167				III			
4832	1.28	S862BR-125K (F01332)	1	3773	I	SF862BR-125K-B5 (F01586)		
			.75	2830	II			
			.50	1886	III			



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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 (F01222)	.33	966	I	SF833BR-132K-B5 (F01436)
					.25	724	II	
					.16	483	III	
		1953	0.66	S843BR-132K (F01267)	.50	1478	I	SF843BR-132K-B5 (F01497)
					.33	986	III	
					1	3235	I	
		4596	1.42	S853BR-132K (F01313)	.75	2426	II	SF853BR-132K-B5 (F01565)
					.50	1617	III	
2	6739				I			
7410	2.21	S863BR-132K (F01358)	1.5	5054	II	SF863BR-132K-B7 (F01631)		
			1	3370	III			
								SF863BR-132K-B5 (F01630)
12	140	1310	0.40	S832BR-140K (F01198)	.33	1090	I	SF832BR-140K-B5 (F01408)
					.25	818	II	
					.16	545	III	
		2117	0.64	S842BR-140K (F01243)	.50	1653	I	SF842BR-140K-B5 (F01457)
					.33	1102	II	
					.25	826	III	
		4143	1.30	S852BR-140K (F01288)	1	3186	I	SF852BR-140K-B5 (F01521)
					.75	2389	II	
					.50	1592	III	
		7520	2.02	S862BR-140K (F01334)	2	7448	I	SF862BR-140K-B7 (F01590)
					1.5	5586	I	
					1	3724	III	
11	150	1237	0.40	S833BR-150K (F01223)	.33	1030	I	SF833BR-150K-B5 (F01437)
					.25	773	II	
					.16	515	III	
		1980	0.63	S843BR-150K (F01268)	.50	1570	I	SF843BR-150K-B5 (F01498)
					.33	1047	II	
					.25	785	III	
		4604	1.35	S853BR-150K (F01314)	1	3409	I	SF853BR-150K-B5 (F01566)
					.75	2557	II	
					.50	1705	III	
		7143	2.00	S863BR-150K (F01359)	2	7143	I	SF863BR-150K-B7 (F01633)
					1.5	5382	I	
					1	3571	III	

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.
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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)		
		Output Torque (LB-IN.)	Input HP							
10	160	1364	0.37	S832BR-160K (F01200)	.33	1228	I	SF832BR-160K-B5 (F01411)		
					.25	921	II			
					.16	614	III			
		2216	0.59	S842BR-160K (F01245)	.50	1877	I	SF842BR-160K-B5 (F01460)		
					.33	1251	II			
					.25	939	III			
		4738	1.19	S852BR-160K (F01290)	1	3978	I	SF852BR-160K-B5 (F01524)		
					.75	2984	II			
					.50	1989	III			
		7504	1.86	S862BR-160K (F01336)	1.5	6049	I	SF862BR-160K-B7 (F01594)		
					1	4033	II			
					.75	3024	III			
		10	160	1320	0.33	S833BR-160K (F01224)	.33	1320	I	SF833BR-160K-B5 (F01438)
							.25	1030	I	
							.16	687	II	
				1693	0.41	S843BR-160K (F01269)	.33	1376	I	SF843BR-160K-B5 (F01499)
.25	1032						II			
.16	688						III			
3406	0.79			S853BR-160K (F01315)	.75	3233	I	SF853BR-160K-B5 (F01567)		
					.50	2792	II			
					.33	1437	III			
7431	1.51			S863BR-160K (F01360)	1.5	7378	I	SF863BR-160K-B7 (F01635)		
					1	4919	II			
					.75	3689	III			
9.1	180			1247	0.27	S833BR-180K (F01225)	.25	1153	I	SF833BR-180K-B5 (F01439)
							.16	769	II	
				1545	0.35	S843BR-180K (F01270)	.33	1471	I	SF843BR-180K-B5 (F01500)
							.25	1103	I	
		.16	735				III			
		3161	0.68	S853BR-180K (F01316)	.50	2323	I	SF853BR-180K-B5 (F01568)		
					.33	1549	III			
		7427	1.39	S863BR-180K (F01361)	1	5341	I	SF863BR-180K-B5 (F01636)		
					.75	4006	II			
					.50	2670	III			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)
		Output Torque (LB-IN.)	Input HP					
8.8	200	1346	0.33	S833BR-200K (F01226)	.33	1346	I	SF833BR-200K-B5 (F01440)
					.25	1085	I	
		2267	0.50	S843BR-200K (F01271)	.16	723	II	SF843BR-200K-B5 (F01501)
					.50	2264	I	
		5139	1.08	S853BR-200K (F01317)	.33	1510	I	SF853BR-200K-B5 (F01569)
					.25	1133	III	
		7443	1.49	S863BR-200K (F01362)	1	4756	I	SF863BR-200K-B5 (F01637)
					.75	3567	II	
			.50	2378	III			
			1	4789	II			
			.75	3745	III			
8.2	212	1333	0.28	S832BR-212K (F01204)	.25	1190	I	SF832BR-212K-B5 (F01417)
					.16	793	II	
		2352	0.47	S842BR-212K (F01249)	.33	1667	I	SF842BR-212K-B5 (F01467)
					.25	1250	II	
		5021	0.97	S852BR-212K (F01295)	.16	833	III	SF852BR-212K-B5 (F01530)
					.75	3880	I	
		7607	1.39	S862BR-212K (F01340)	.50	2587	II	SF862BR-212K-B5 (F01599)
					1	5470	I	
			.75	4103	II			
			.50	2735	III			
7.8	225	1311	0.27	S833BR-225K (F01227)	.25	1213	I	SF833BR-225K-B5 (F01441)
					.16	809	II	
		2346	0.46	S843BR-225K (F01272)	.33	1700	I	SF843BR-225K-B5 (F01502)
					.25	1274	II	
		5260	0.97	S853BR-225K (F01318)	.16	850	III	SF853BR-225K-B5 (F01570)
					.75	4095	I	
		7405	1.32	S863BR-225K (F01363)	.50	2803	II	SF863BR-225K-B5 (F01638)
					.33	1869	III	
			1	5608	I			
			.75	4206	II			
			.50	2804	III			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)		
		Output Torque (LB-IN.)	Input HP							
7.0	250	1382	0.25	S832BR-250K (F01206)	.25	1382	I	SF832BR-250K-B5 (F01419)		
		2050	0.36	S842BR-250K (F01251)	.16	920	II			
		4566	0.75	S852BR-250K (F01297)	.33	1898	I	SF852BR-250K-B5 (F01533)		
					.25	1423	II			
					.16	949	III			
					.75	4566	I			
		7676	1.25	S862BR-250K (F01342)	.50	3043	II	SF862BR-250K-B5 (F01602)		
					.33	2197	III			
1	6139				I					
.75	4604				II					
6.6	265	1297	0.20	S833BR-265K (F01228)	.16	1150	I	SF833BR-265K-B5 (F01442)		
		1588	0.25	S843BR-265K (F01273)	.25	1588	I	SF843BR-265K-B5 (F01503)		
		3351	0.49	S853BR-265K (F01319)	.16	1058	II	SF853BR-265K-B5 (F01571)		
					.33	2279	I			
		6895	0.98	S863BR-265K (F01364)	.25	1709	II	SF863BR-265K-B5 (F01639)		
					.16	1139	III			
					.75	5274	I			
					.50	3516	II			
6.2	280	S863BR-265K (F01364)	.33	2344	III	SF863BR-265K-B5 (F01639)				
			1357	0.18	S833BR-280K (F01229)		.16	1256	I	SF833BR-280K-B5 (F01443)
			1590	0.23	S843BR-280K (F01274)		.16	1151	I	SF843BR-280K-B5 (F01504)
			3356	0.44	S853BR-280K (F01320)		.33	2541	I	SF853BR-280K-B5 (F01572)
							.25	1906	II	
			7671	0.88	S863BR-280K (F01365)		.16	1270	III	SF863BR-280K-B5 (F01640)
							.75	6535	I	
							.50	4357	II	
.33	2904	III								
5.6 (CONT.)	315	1311	0.20	S833BR-315K (F01230)	.16	1092	I	SF833BR-315K-B5 (F01444)		

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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 (F01275)	.33	2238	I	SF843BR-315K-B5 (F01505)
					.25	1679	II	
					.16	1119	III	
		5252	0.75	S853BR-315K (F01321)	.75	5252	I	SF853BR-315K-B5 (F01573)
					.50	3595	II	
					.33	2397	III	
		7490	0.94	S863BR-315K (F01366)	.75	5973	I	SF863BR-315K-B5 (F01641)
					.50	3982	I	
					.33	2655	II	
4.9	360	1177	0.18	S833BR-360K (F01231)	.16	1089	I	SF833BR-360K-B5 (F01445)
					.33	2376	I	
		2496	0.35	S843BR-360K (F01276)	.25	1782	I	SF843BR-360K-B5 (F01506)
					.16	1188	III	
		4862	0.63	S853BR-360K (F01322)	.50	3857	I	SF853BR-360K-B5 (F01574)
					.33	2571	II	
		7382	0.87	S863BR-360K (F01367)	.25	1928	III	SF863BR-360K-B5 (F01642)
					.75	6361	I	
4.4	400	1296	0.13	S833BR-400K (F01232)	.16	1296	I	SF833BR-400K-B5 (F01446)
					.16	1647	I	
		1647	0.16	S843BR-400K (F01277)	.25	2630	I	SF843BR-400K-B5 (F01507)
					.16	1753	II	
		3368	0.32	S853BR-400K (F01323)	.50	5733	I	SF853BR-400K-B5 (F01575)
.33	3822				III			
3.9	450	1279	0.11	S833BR-450K (F01233)	.16	1279	I	SF833BR-450K-B5 (F01447)
					.16	1572	I	
		1572	0.14	S843BR-450K (F01278)	.25	2950	I	SF843BR-450K-B5 (F01508)
					.16	1966	II	
		3305	0.28	S853BR-450K (F01324)	.50	6516	I	SF853BR-450K-B5 (F01576)
					.33	4344	II	
		7692	0.59	S863BR-450K (F01369)	.25	3258	III	SF863BR-450K-B5 (F01644)

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



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800 SERIES RIGHT ANGLE HELICAL-WORM SELECTION TABLES 1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 206-215.

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)	Motor HP	Ratings Output Torque (LB-IN.)	Service Class**	Catalog No. (Item Code)					
		Output Torque (LB-IN.)	Input HP										
3.5	500	1354	0.13	S833BR-500K (F01234)	.16	1354	I	SF833BR-500K-B5 (F01448)					
		2647	0.25	S843BR-500K (F01279)	.25	2641	I	SF843BR-500K-B5 (F01509)					
		5146	0.46	S853BR-500K (F01325)	.33	3728	I	SF853BR-500K-B5 (F01577)					
					.25 .16	2796 1864	I II						
		6913	0.62	S863BR-500K (F01370)	.50	5573	I	SF863BR-500K-B5 (F01645)					
					.33 .25	3715 2786	II III						
					3.1	560	1384	0.12	S833BR-560K (F01235)	.16	1384	I	SF833BR-560K-B5 (F01449)
							2745	0.23	S843BR-560K (F01280)	.16	1988	I	SF843BR-560K-B5 (F01510)
5296	0.42	S853BR-560K (F01326)	.33	4201			I	SF853BR-560K-B5 (F01578)					
			.25 .16	3151 2100			II III						
7200	0.55	S863BR-560K (F01371)	.50	6543			I	SF863BR-560K-B5 (F01646)					
			.33 .25	4362 3272			II III						
2.2	800	1274	0.08	S833BR-800K (F01236)			--	--	--	--			
		2591	0.16	S843BR-800K (F01281)			.16	2591	I	SF843BR-800K-B5 (F01511)			
		5308	0.31	S853BR-800K (F01327)	.25	4279	I	SF853BR-800K-B5 (F01579)					
					.16	2852	II						
		7734	0.43	S863BR-800K (F01372)	.33	5993	I	SF863BR-800K-B5 (F01647)					
					.25 .16	4495 2997	II III						
1.9	900	1247	0.07	S833BR-900K (F01237)	--	--	--	--					
		2494	0.14	S843BR-900K (F01282)	.16	2494	I	SF843BR-900K-B5 (F01512)					
		5099	0.27	S853BR-900K (F01328)	.25	4719	I	SF853BR-900K-B5 (F01580)					
					.16	3146	II						
		7659	0.38	S863BR-900K (F01373)	.33	6715	I	SF863BR-900K-B5 (F01648)					
					.25 .16	5036 3358	II III						

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 206-215.

** 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 Pages 188.

† For Base / Projecting Shaft / Output Flange see How to Order Page 185.

■ Indicates Triple Reduction



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185

For Overhung Load Ratings refer to Page 188



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 690 RPM, & 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 340 & 341.
Actual Output RPM = Input Speed ÷ Actual Ratio.
For Base / Projecting Shaft / Output Flange see How to Order Page 185.
For Overhung Load Ratings refer to Page 188.



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 690 RPM, & 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 340 & 341.
 Actual Output RPM = Input Speed ÷ Actual Ratio.
 For Base / Projecting Shaft / Output Flange see How to Order Page 185.
 For Overhung Load Ratings refer to Page 188.



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

■ Indicates Triple Reduction



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 690 RPM, & 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		.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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

■ Indicates Triple Reduction

800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

■ Indicates Triple Reduction



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 690 RPM, & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

■ Indicates Triple Reduction



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com



800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 1750 RPM, 1450 RPM & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

■ Indicates Triple Reduction

H

800 SERIES RIGHT ANGLE HELICAL-WORM RATINGS

Non-Flanged
Input Speeds 690 RPM, & 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 340 & 341.

Actual Output RPM = Input Speed ÷ Actual Ratio.

For Base / Projecting Shaft / Output Flange see How to Order Page 185.

For Overhung Load Ratings refer to Page 188.

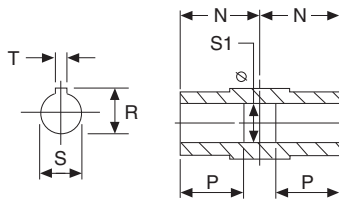
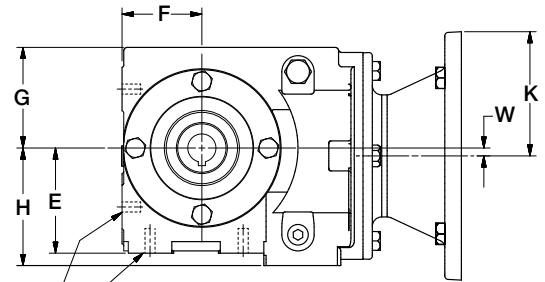
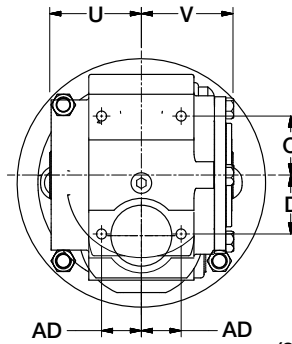
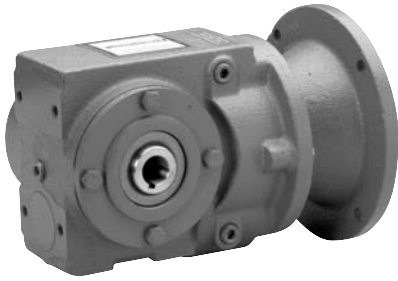
■ Indicates Triple Reduction



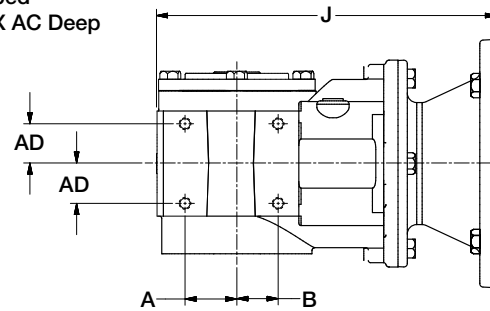
800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

BASIC MODEL

SF800BR SERIES NEMA C-FACE INPUT DOUBLE REDUCTION



(8) Holes Tapped
AB X AC Deep



SIZE	A	B	C	D	E	F	G	H	J				K			
									NEMA MOUNTING				NEMA MOUNTING			
									56C B5	140TC B7	180TC B9	210TC B11	56C B5	140TC B7	180TC B9	210TC 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 220 & 221.

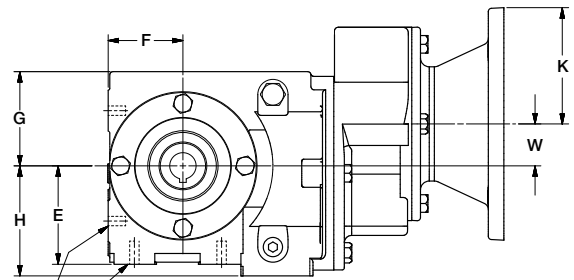
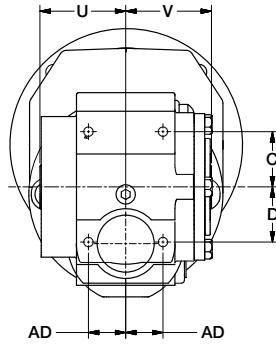
* Maximum bore size is 1.625, contact factory for availability.

H

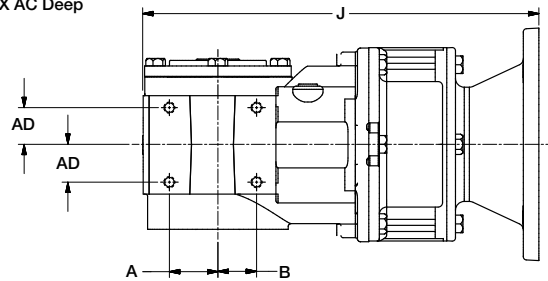
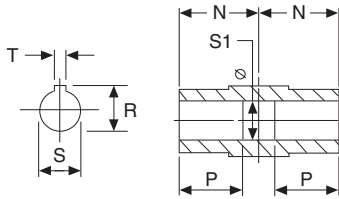
800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

BASIC MODEL

SF800BR SERIES NEMA C-FACE INPUT TRIPLE REDUCTION



(8) Holes
Tapped
AB X AC Deep



SIZE	A	B	C	D	E	F	G	H	J		K	
									NEMA MOUNTING		NEMA MOUNTING	
									56C B5	140TC B7	56C B5	140TC B7
SF833BR	1.38	1.10	1.57	1.57	2.80	2.13	2.68	3.13	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	—	3.31	3.31
SF853BR	1.77	2.17	2.56	3.03	3.78	2.68	3.46	4.41	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.

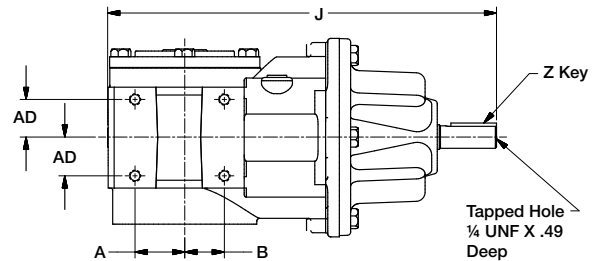
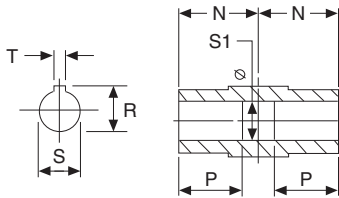
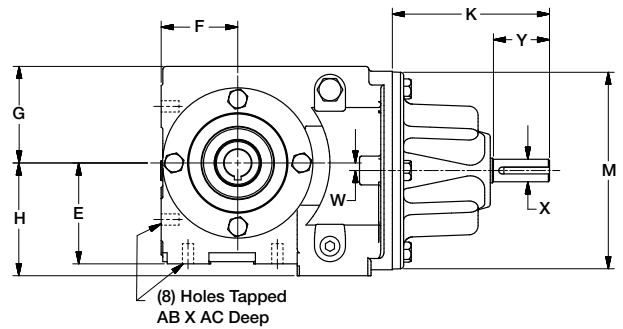
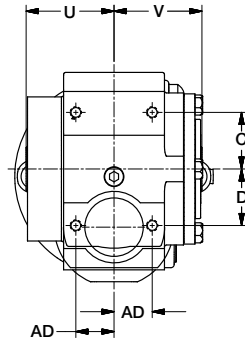
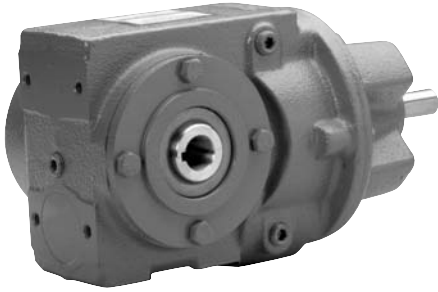
Option kit dimensions on pages 220 & 221.

* Maximum bore size is 1.625, contact factory for availability.

800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

BASIC MODEL

S800BR SERIES NON-FLANGED DOUBLE REDUCTION



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 220 & 221.

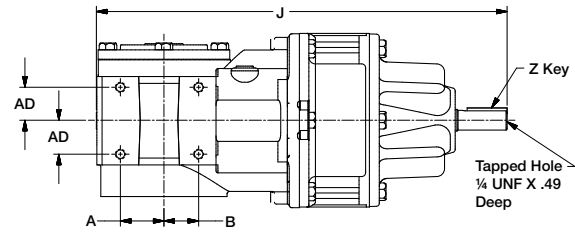
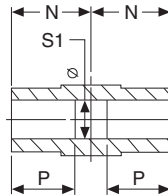
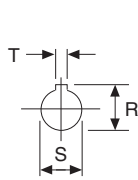
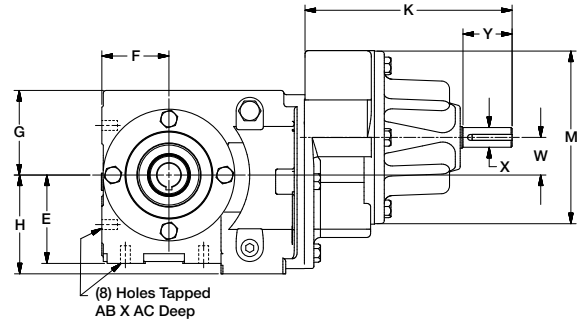
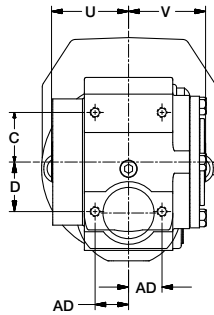
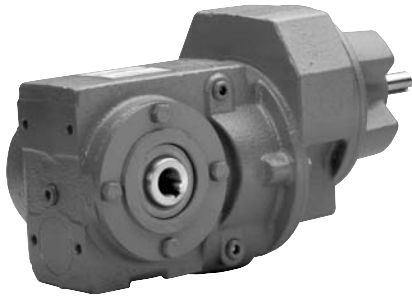
* Maximum bore size is 1.625, contact factory for availability.

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800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

BASIC MODEL

S800BR SERIES NON-FLANGED TRIPLE REDUCTION



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 220 & 221.

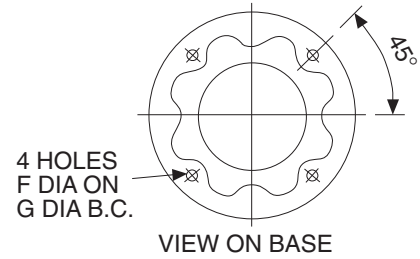
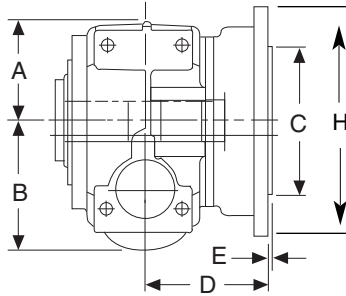
* Maximum bore size is 1.625, contact factory for availability.



800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

OUTPUT FLANGE KITS

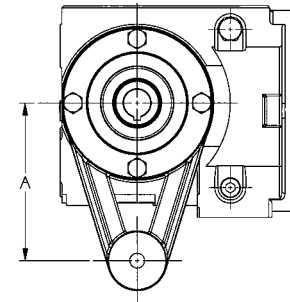
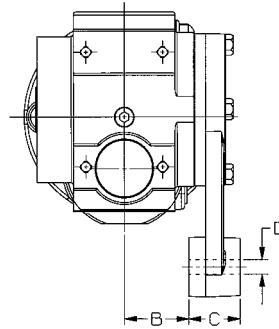
ACCESSORIES



SIZE	A	B	C	D	E	F	G	H	CATALOG NO. (ITEM CODE)
832BR 833BR	2.66	3.13	4.3312 4.3304	2.95	.16	.35	5.12	6.30	XS830BR-11VK (59611)
842BR 843BR	2.95	3.36	4.3312 4.3304	3.39	.16	.35	5.12	6.30	XS840BR-11VK (59523)
852BR 853BR	3.43	4.41	5.1187 5.1177	4.21	.14	.43	6.50	7.88	XS850BR-11VK (59528)
862BR 863BR	4.04	5.49	5.1187 5.1177	4.72	.14	.43	6.50	7.88	XS860BR-11VK (59533)

H

TORQUE ARM KITS



SIZE	A	B	C	D	CATALOG NO. (ITEM CODE)
832BR 833BR	4.33	1.85	1.42	.41	XS830BR-76K (59612)
842BR 843BR	5.12	2.05	1.42	.41	XS840BR-76K (59524)
852BR 853BR	6.30	2.05	1.42	.41	XS850BR-76K (59529)
862BR 863BR	7.87	2.81	1.73	.65	XS860BR-76K (59534)

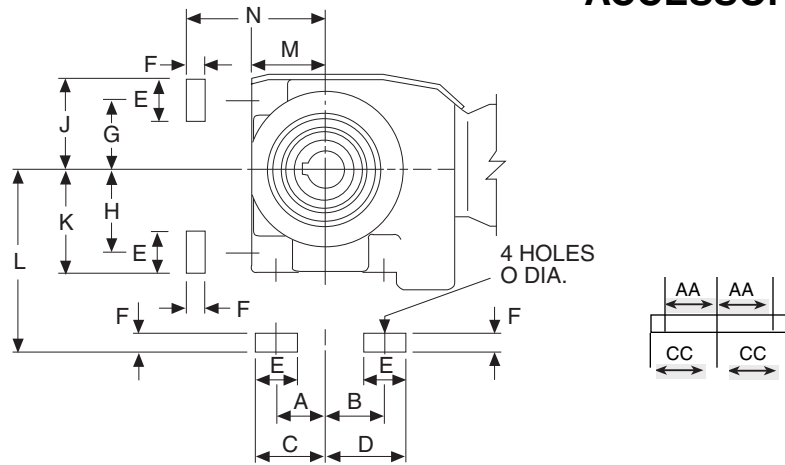
- All torque arm kits are supplied at 6 o'clock position when assembled.

800 SERIES RIGHT ANGLE HELICAL-WORM GEAR DRIVES

BASE KITS

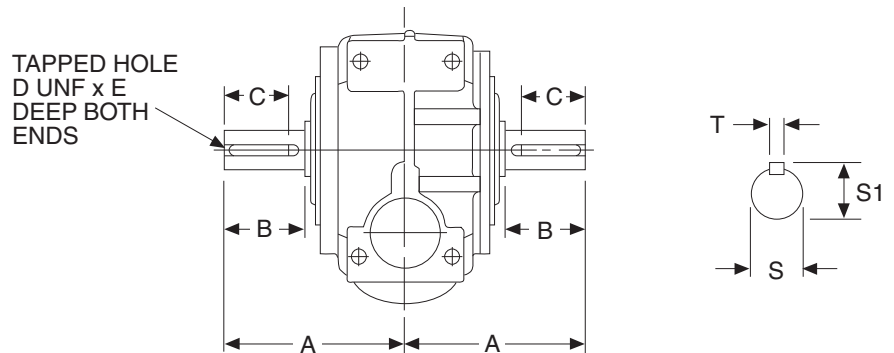


ACCESSORIES



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)

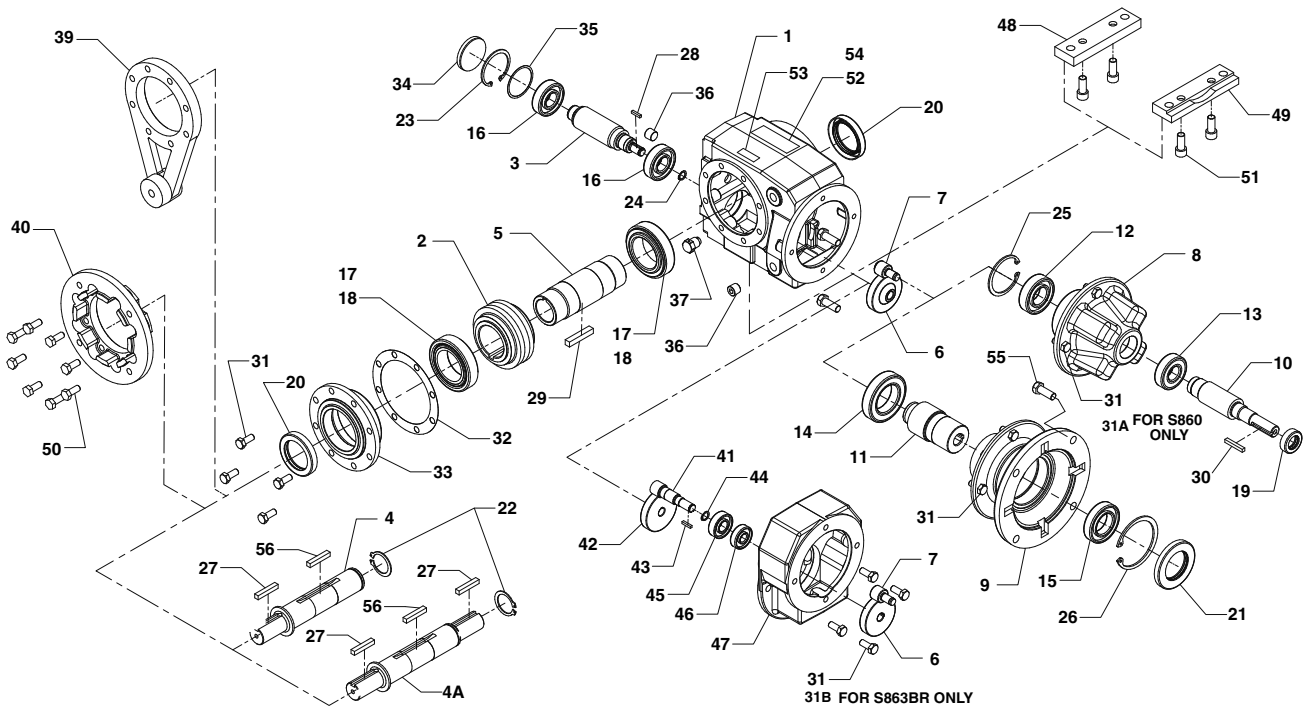
OUTPUT SHAFT KITS



SIZE	A	B	C	D	E	S +0.000 -0.001	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



ITEM 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

ITEM 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.....	224
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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.

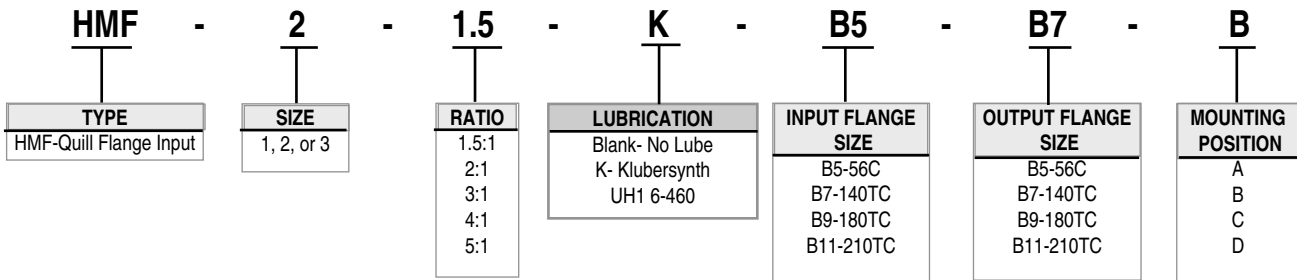
- Close grained cast iron housing and flanges
- Hardened steel helical gearing for long life
- Anti-friction bearings
- Double lip seals guard against oil leakage
- Brass spring loaded breather plug keeps out dirt and water
- Optional steel bolt on base
- Double bearing design on input and output shaft



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
	B11	B9
	B11	B11

HELICAL-MULTIPLIER SERIES REDUCER

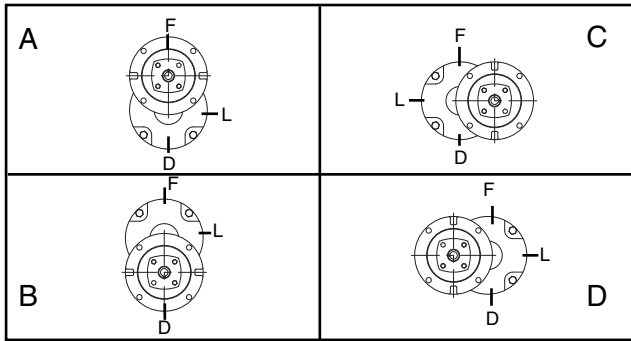
NEMA C-Face Models

Catalog Number	Item Code
HMF1-1.5-B5-B5	76600
HMF1-2-B5-B5	83230
HMF1-3-B5-B5	76602
HMF1-4-B5-B5	83231
HMF1-5-B5-B5	83232
HMF2-1.5-B7-B7	76620
HMF2-1.5-B7-B5	76615
HMF2-1.5-B5-B7	76610
HMF2-1.5-B5-B5	76605
HMF2-2-B7-B7	83233
HMF2-2-B7-B5	76616
HMF2-2-B5-B7	76611
HMF2-2-B5-B5	83234
HMF2-3-B7-B7	83235
HMF2-3-B7-B5	76617
HMF2-3-B5-B7	76612
HMF2-3-B5-B5	76607
HMF2-4-B7-B7	83236
HMF2-4-B7-B5	76618
HMF2-4-B5-B7	83237
HMF2-4-B5-B5	83238
HMF2-5-B7-B7	83239
HMF2-5-B7-B5	76619
HMF2-5-B5-B7	83240
HMF2-5-B5-B5	83241

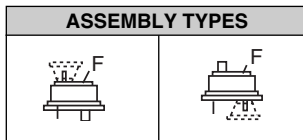
Catalog Number	Item Code
HMF3-1.5-B9-B9	76625
HMF3-1.5-B9-B11	76630
HMF3-1.5-B11-B9	76635
HMF3-1.5-B11-B11	76640
HMF3-2-B9-B9	76626
HMF3-2-B9-B11	76631
HMF3-2-B11-B9	83242
HMF3-2-B11-B11	76641
HMF3-3-B9-B9	76627
HMF3-3-B9-B11	76632
HMF3-3-B11-B9	76637
HMF3-3-B11-B11	76642
HMF3-4-B9-B9	83243
HMF3-4-B9-B11	76633
HMF3-4-B11-B9	76638
HMF3-5-B9-B9	83244
HMF3-5-B9-B11	76634
HMF3-5-B11-B9	76639
HMF3-5-B11-B11	83245

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	Lubricant AGMA No.	ISO Viscosity Grade No.
-30° to 225°F ± (-34°C to 107°C)	Klubersynth* UH1 6-460	1950/2500	—	460
-30° to 225°F ± (-34°C to 107°C)	Mobile SHC634	1950/2500	—	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 226. 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 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

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.)

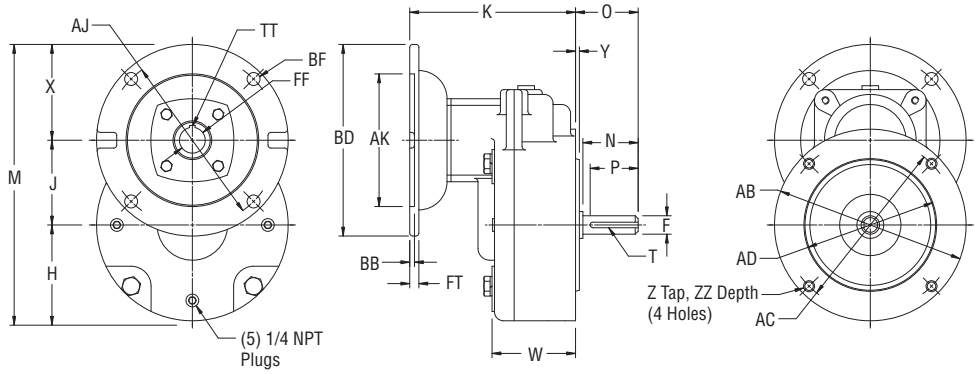
	HMF Size 1	HMF Size 2		HMF Size 3	
Input	200	200		350	
Output	315	B5 375	B7 750	B9 1100	B11 1135

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

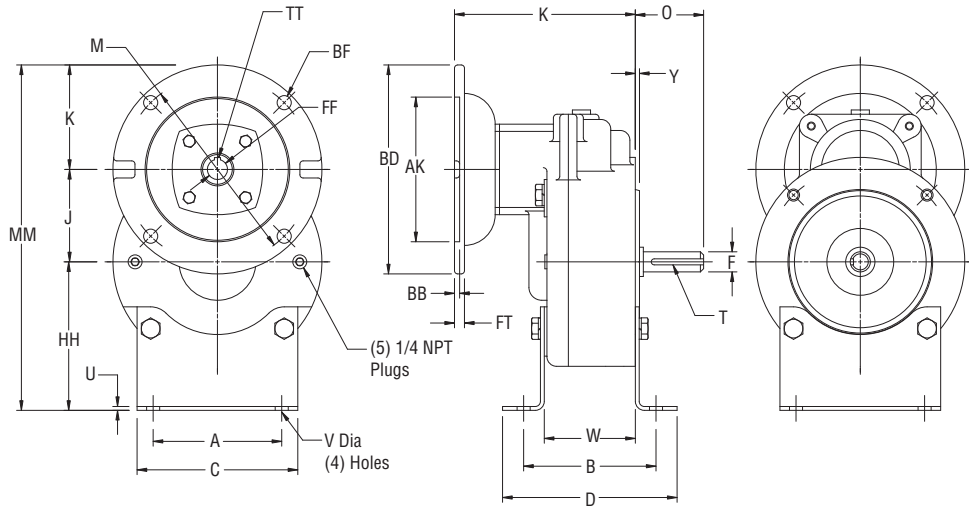
Overhung Load is at centerline of output shaft projection and with NO THRUST Load.

HELICAL MULTIPLIER DIMENSIONS

HMF Basic



HMF with Base



ALL DIMENSIONS IN INCHES

Size	Output Flange	A	B	C	D	F	H	HH	J	K	M	MM	N	O	P	T
1	B5	4.00	3.875	5.00	5.187	0.625	3.45	4.62	1.675	5.177	8.38	9.55	1.875	2.06	1.625	3/16X3/32
2	B5	4.00	4.120	5.00	5.430	0.625	3.40	4.62	2.875	5.00	9.49	10.75	1.84	1.90	1.625	3/16X3/32
	0.875					3/16X3/32										
3	B9	5.13	4.750	6.37	6.150	1.125	4.25	4.81	2.875	6.75	11.63	12.19	2.50	2.50	1.97	1/4X1/8
	1.375					3.00							3.00			2.36

Size	U	V	W	X	Y	Z	ZZ	AB	AC	AD
1	0.12	0.406	2.59	3.25	0.13	3/8-16	0.75	6.50	5.875	4.50
2	0.12	0.406	2.83	3.25	0.13	3/8-16	0.75	6.74	5.875	4.50
3	0.16	0.500	3.24	4.50	0.25	1/2-13	0.94	9.13	7.250	8.50

Size	Input Flange	AJ	AK	BD	BF	BB	FF	FT	TT
1	B5	5.875	4.50	6.50	0.44	0.16	0.625	0.31	3/16x3/32
2	B5	5.875	4.50	6.50	0.44	0.16	0.625	0.43	3/16x3/32
	B7	5.875	4.50	6.50	0.44	0.16	0.875	0.43	3/16x3/32
3	B9	7.250	8.50	9.00	0.53	0.19	1.125	0.38	1/4x1/8
	B11	7.250	8.50	9.00	0.53	0.19	1.375	0.38	5/16x5/32

NOTES



HOLLOW SHAFT



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200 SERIES OPTIMOUNT® PRODUCT REFERENCE GUIDE

F200 Series Optimount® Helical Gear Flanged Reducers

Ordering Information – Pages 233-235
 Selection/Rating Information – Pages 237-240
 Lubrication – Pages 251-252
 Motor Selection – Pages 324, 327-331

Basic Model



Dimensions – Page 243

F200H Series
Horizontal Base Model



Dimensions – Page 244

F200V Series
Vertical Base Model



Dimensions – Page 244

200 Series Optimount® Helical Gear Non-Flanged Reducers

Ordering Information – Pages 233-235
 Selection/Rating Information – Pages 241-242
 Lubrication – Pages 251-252
 Motor Selection – Pages 322, 325-329

Basic Model



Dimensions – Pages 245 & 247

200H Series
Horizontal Base Model



Dimensions – Page 246

200V Series
Vertical Base Model



Dimensions – Page 246

200 Series Optimount® Helical Gear Accessories and Options

Ordering Information – Pages 233

Shaft Kits / Reaction Rods



Dimensions – Page 248

Base Kits
Vertical/Horizontal



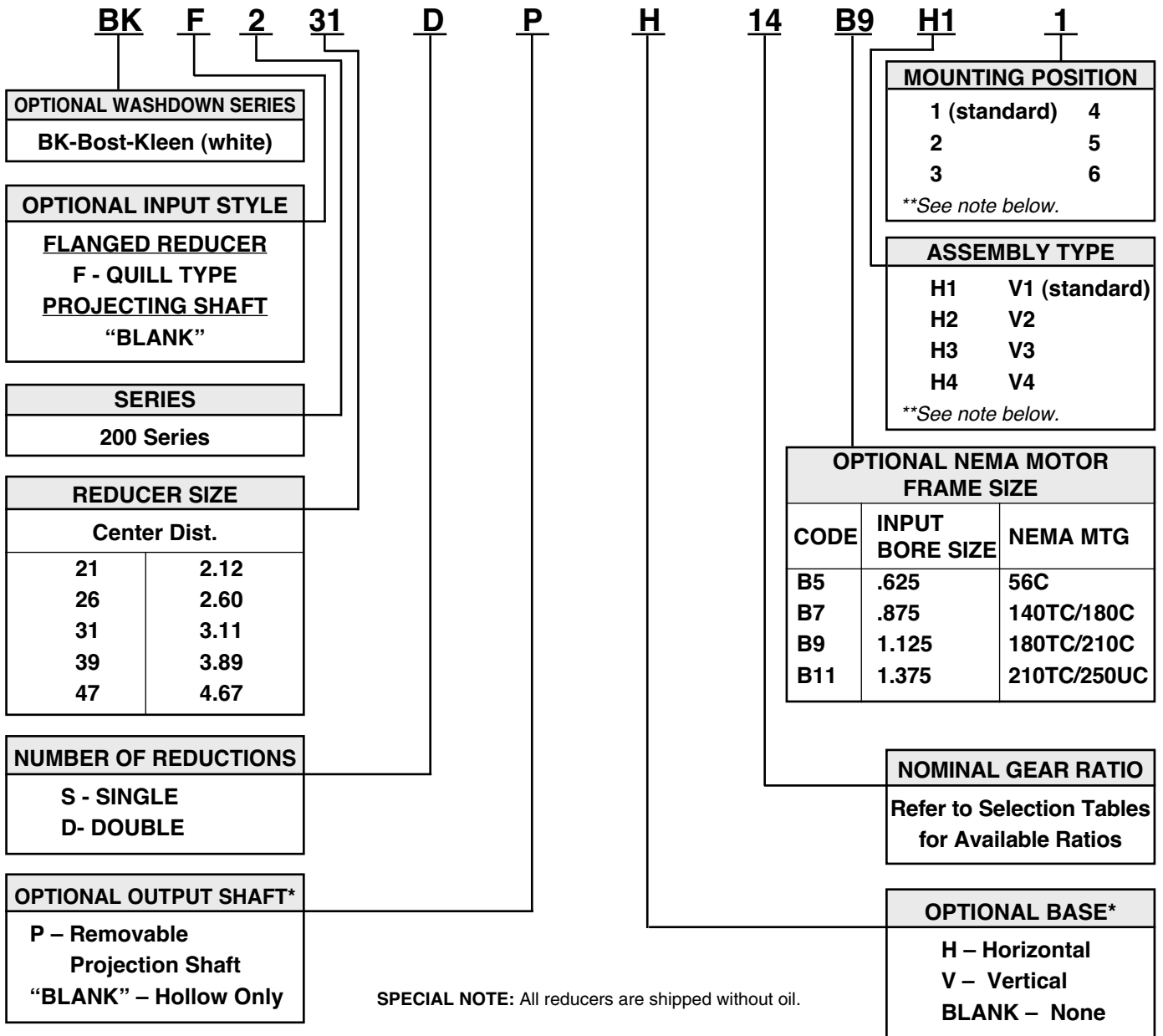
Dimensions – Page 249

J

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.



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 236

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 340 & 341.
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 241-242.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 235 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 340 and 341.

200 SERIES RATIO AND CAPACITY SELECTION TABLES

(SERVICE FACTOR 1.0)

Catalog Number	Item Code	1750				1150				Gear Ratio	O.H.L. (LB.)*	Wt Lb.
		RPM	Output Torque (LB.-IN.)	HP		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		1488	2.98	2.86		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	4.96	4.75		3219	3.54	3.40		900	96
247D-17	39070		5071	8.49	8.15		5775	6.34	6.10		1100	135

Ref. Page 241

200 SERIES OPTIMOUNT® HELICAL GEAR SPEED REDUCERS

MOTORIZED SPEED REDUCER

1. Determine application service factor from the table on page 234 or from pages 340 and 341.
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 340 and 341 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. 241
6. Order: 1 – F231D-17-B7 (39250)
1 – JUTF Motor Ref. page 327 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:

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

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 241-242.

200 SERIES OUTPUT RPM AND CAPACITY SELECTION TABLES

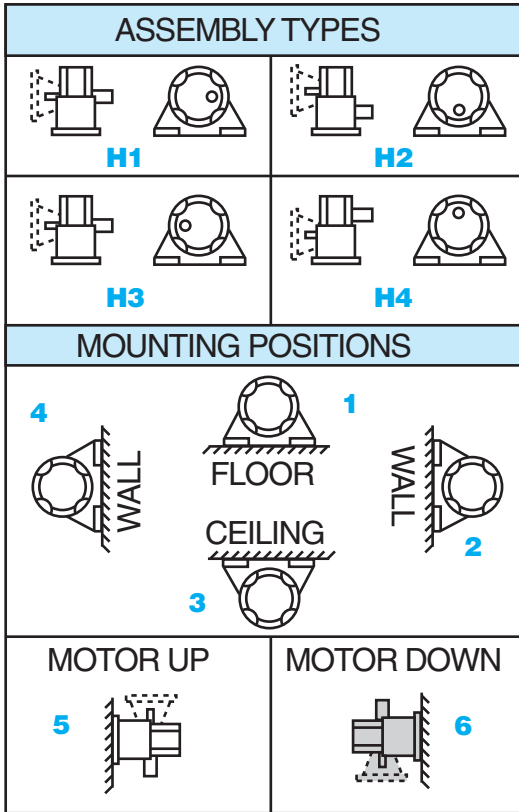
@ 1750 RPM INPUT

OUT-PUT RPM	RATIO (LB.IN.)	NON-FLANGED REDUCERS				FLANGED REDUCERS (GEARMOTORS)					AC MOTORS†	DC MOTORS††		
		GEAR CAPACITY			CATALOG NUMBER	ITEM CODE	RATING			CATALOG NUMBER			ITEM CODE	
		OUTPUT TORQUE	HP				MOTOR HP	OUTPUT TORQUE	SERV-ICE CLASS					
			INPUT	OUT-PUT										
101 Cont.	17.28	1644	2.75	2.64	231D-17	39038	2	1194	I	F231D-17-B7	39250	KUTF	PM18200	
							1 1/2	896	II			JUTF	PM18150	
								1	597	III	F231D-17-B5	39246	HUTF-5/8	PM9100 5/8 PM18100 5/8
		2959	4.96	4.76	239D-17	39054	5	2986	I	F239D-17-B9	39276	MUTF	PM18500	

Reference Page 239

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. H11).

Mounting H11 is standard and will be furnished unless otherwise specified.

SIZES 221 TO 247

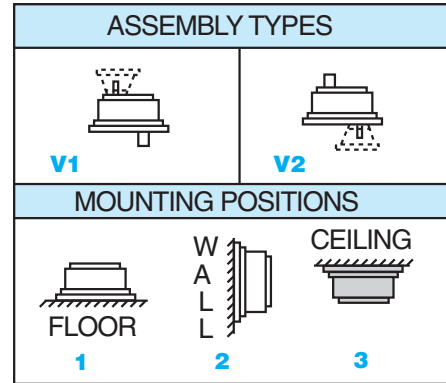
All other assemblies are available at no additional charge. The assembly types shown indicate the four possible arrangements of the Reducor in the base.

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 251-252.*

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. V11).

Mounting V11 is standard and will be furnished unless otherwise specified. All other mountings are available at no additional charge.

SIZES 221 TO 247

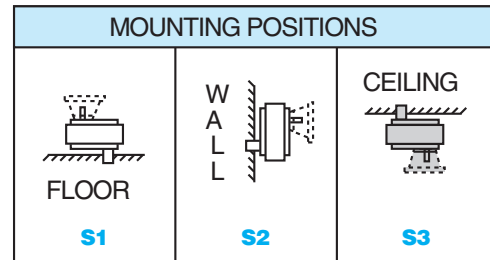
Assemblies V1 & V2 may be installed in the various floor, side-wall or ceiling mounting positions shown.

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 Reducor 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 Reducors may be installed in floor, sidewall or ceiling mounting positions by proper relocation of oil plugs. Reference to pages 251-252.

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 241-242
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	—
							5	716	III	F239S-4-B9	39288	MUTF	PM18500
		2851	19.90	19.50	247S-4	39076	10	1432	II	F247S-4-B11	39308	PUTF	—
7 1/2	1074						III	NUTF	—				
178	9.84	390	1.15	1.10	221D-10	39002	1	340	I	F221D-10-B5	39202	HUTF-5/8	PM9100 5/8 PM18100 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
							1	340	II	F226D-10-B5	39218	HUTF-5/8	PM9100 5/8 PM18100 5/8
		1322	3.89	3.73	231D-10	39034	3/4	255	III	F231D-10-B9	39242	GUTF	PM975 PM1875
							3	1020	I			LUTF	PM18300
							2	680	II			F231D-10-B7	39240
		2426	7.12	6.84	239D-10	39050	1 1/2	510	III	F239D-10-B9	39268	JUTF	PM18150
5	1700						I	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 327-329.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 330 and 331.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 241-242
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	—		
							7 1/2	2550	II			NUTF	—		
							5	1700	III	F247D-10-B9	39294	MUTF	PM18500		
121	14.45	403	.80	.77	221D-14	39004	3/4	374	I	F221D-14-B5	39204	GUTF	PM975		
							1/2	250	II			FUTF	PM950		
							1/3	166	III			EUTF	PM933		
		711	1.43	1.37	226D-14	39020	1 1/2	*711	*	F226D-14-B7	39224	JUTF	PM18150		
							1	500	I	F226D-14-B5	39222	HUTF-5/8	PM9100 5/8 PM18100 5/8		
							3/4	374	II	GUTF	PM975				
		1500	3.00	2.88	231D-14	39036	3	1500	I	F231D-14-B9	47226	LUTF	PM18300		
							2	998	II	F231D-14-B7	39248	KUTF	PM18200		
							1 1/2	750	III	JUTF	PM18150				
		2842	5.69	5.46	239D-14	39052	5	2497	I	F239D-14-B9	39272	MUTF	PM18500		
							3	1498	II	LUTF	PM18300				
							2	998	III	F239D-14-B7	39270	KUTF	PM18200		
		4736	9.48	9.10	247D-14	39068	10	*4736	*	F247D-14-B11	47232	PUTF	—		
							7 1/2	3745	I	NUTF	—				
							5	2497	II	MUTF	PM18500				
							3	1498	III	F247D-14-B9	39298	LUTF	PM18300		
		101	17.28	410	.69	.66	221D-17	39006	3/4	*410	*	F221D-17-B5	39206	GUTF	PM975
									1/2	298	I			FUTF	PM950
1/3	199								III	EUTF	PM933				
754	1.26			1.21	226D-17	39022	1 1/2	*754	*	F226D-17-B7	47220	JUTF	PM18150		
							1	597	I	F226D-17-B5	39226	HUTF-5/8	PM9100 5/8 PM18100 5/8		
							3/4	448	II	GUTF	PM975				
						1/2	298	III	FUTF	PM950					

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 327-329.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 330-331.

*Rating Limited to Gear Capacity.

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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 241-242
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	PM18200
							1 1/2	896	II			JUTF	PM18150
							1	597	III	F231D-17-B5	39246	HUTF-5/8	PM9100 5/8 PM18100 5/8
		2959	4.96	4.76	239D-17	39054	5	*2956	*	F239D-17-B9	39276	MUTF	PM18500
							3	1498	II			LUTF	PM18300
							2	1194	III	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	PM18500
							3	1791	III			LUTF	PM18300
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 PM18100 5/8
							3/4	519	II			GUTF	PM975
							1/2	346	III			FUTF	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	PM18200
							1 1/2	1038	II			JUTF	PM18150
							1	692	III	F231D-20-B5	39252	HUTF-5/8	PM9100 5/8 PM18100 5/8
		3022	4.36	4.19	239D-20	39056	5	*3022	*	F239D-20-B9	39280	MUTF	PM18500
							3	2076	I			LUTF	PM18300
							2	1384	III	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	PM18500
							3	2076	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 327-329.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 330-331.

*Rating Limited to Gear Capacity.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 241-242
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	HUTF-5/8	PM9100 5/8 PM18100 5/8
		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	III			JUTF	PM18150
		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 327-329.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 330-331.

* Rating Limited to Gear Capacity.

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200 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 1750 RPM & 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.)*	Wt 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 RPM & 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.)*	Wt 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.

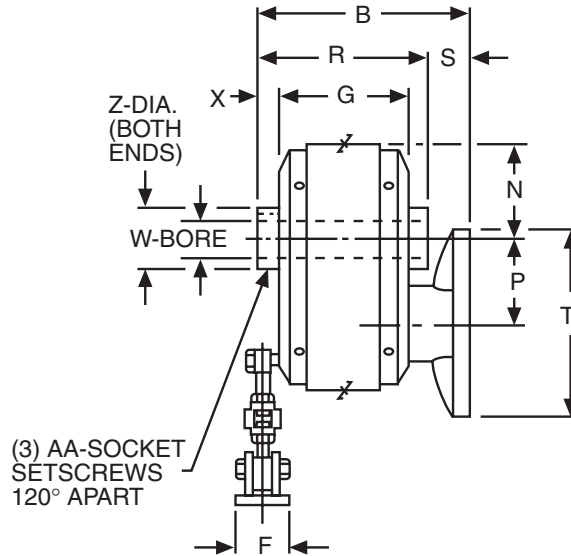
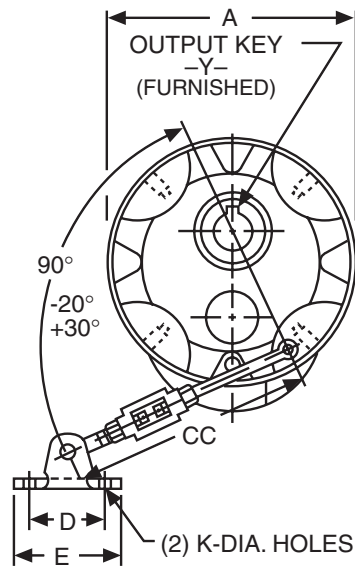
Size	Shaft Dia. (Ins.)	Input Shaft		Output Shaft	
		Allowable Overhung Load in Lbs. (No Thrust) at 1 and 2 Shaft diameters from Oil Seal			Allowable Thrust Load In Lbs. (No Overhung Load)
		1	2		
221	1/2	80	60	700	
226	5/8	100	80	1000	
231	15/16	160	120	1100	
239	1-3/8	325	225	1200	
247	1-9/16	400	300	1300	

200 SERIES FLANGED REDUCER DIMENSIONS

For ordering information
See Page 233.

HOLLOW SHAFT

F200 SERIES F221-247 SIZES



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 248 for Shaft Kit and for Reaction Rod Kit.
Note: For external reference surfaces, refer to page 247.

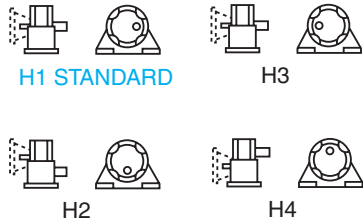
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200 SERIES FLANGED REDUCER DIMENSIONS

For ordering information

See Page 233.

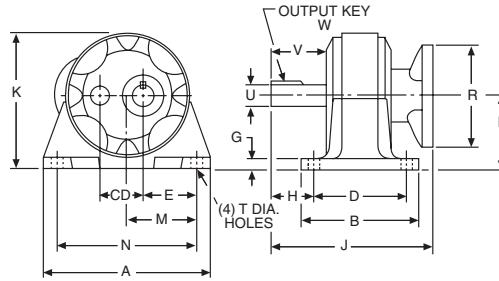
ASSEMBLY TYPES*



PARALLEL SHAFTS

F200 SERIES

HORIZONTAL BASE PROJECTING SHAFT



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

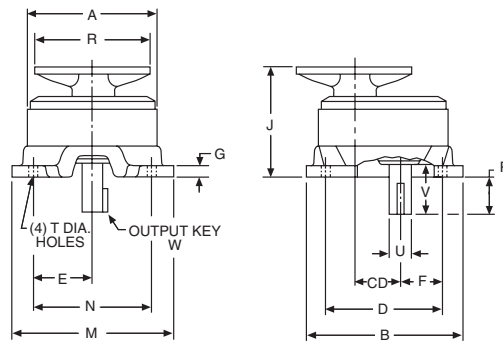
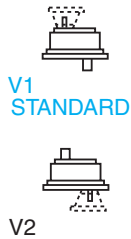
Size	P	R				T Holes	Low Speed Shaft				Approx. Weight (Lbs.)	Optional	
		NEMA Mounting					U +.000 -.001	V	W-Key			Base Kit No. (Ref. Pg 247)	Output Shaft Kit (Ref. Pg 246)
		56C	140TC	180TC	210TC				Sq.	LENGTH			
221	3.75	6.56	—	—	—	13/32	1.0000	2.25	1/4	1-1/4	28	X221-11HK	X221-3PK
226	4.62	6.56	6.56	—	—	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

PARALLEL SHAFTS

F200 SERIES

VERTICAL BASE PROJECTING SHAFT

ASSEMBLY TYPES*



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

ALL DIMENSIONS IN INCHES

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 247)	Output Shaft Kit (Ref. Pg 246)
		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

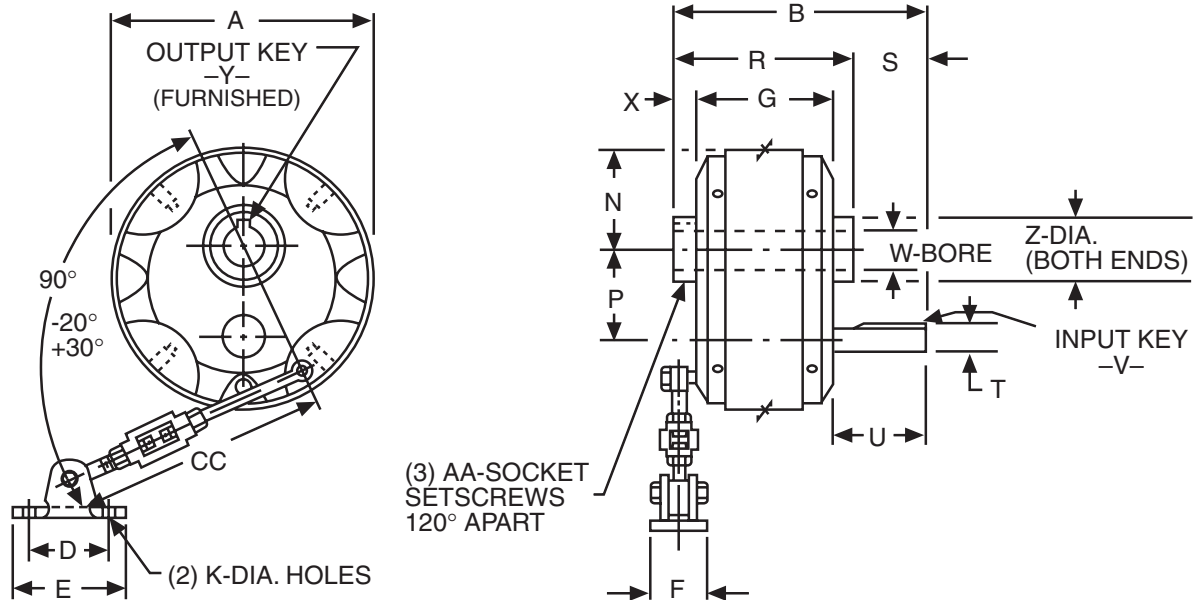
* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surface, viewed from end of output shaft. Input may be rotated clockwise or counterclockwise. Input and Output shafts rotate in opposite directions.

200 SERIES NON-FLANGED REDUCER DIMENSIONS

For ordering information
See Page 233.

HOLLOW SHAFT

200 SERIES
221-247 SIZES



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.			Size	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 248 for dimensions

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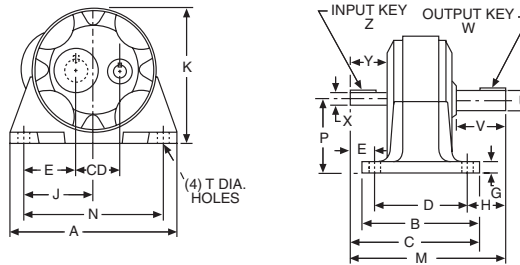
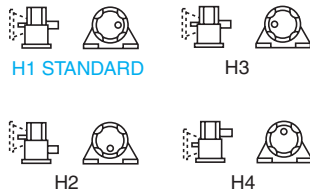
200 SERIES NON-FLANGED REDUCER DIMENSIONS

For ordering information
See Page 233.

PARALLEL SHAFTS

200 SERIES HORIZONTAL BASE PROJECTING SHAFT

ASSEMBLY TYPES*



ALL DIMENSIONS IN INCHES

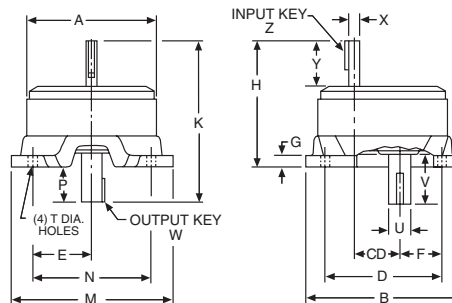
Size	C.D.	A	B	C	D	E	G	H	J	K	M	N	P
221	2.12	8.75	6.00	6.72	4.75	2.72	.50	2.16	3.63	6.84	8.25	7.25	3.75
226	2.60	11.00	7.38	8.59	5.75	3.56	.63	2.59	4.50	8.38	10.38	9.00	4.62
231	3.11	12.50	8.50	9.69	6.75	4.13	.75	2.72	5.13	9.88	11.53	10.25	5.44
239	3.89	15.50	9.75	11.78	7.75	4.94	.88	3.38	6.50	12.34	14.16	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 249)	Output Shaft Kit No. (Ref. page 248)
					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

PARALLEL SHAFTS

200 SERIES VERTICAL BASE PROJECTING SHAFT

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 249)	Output Shaft Kit No. (Ref. page 248)
					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

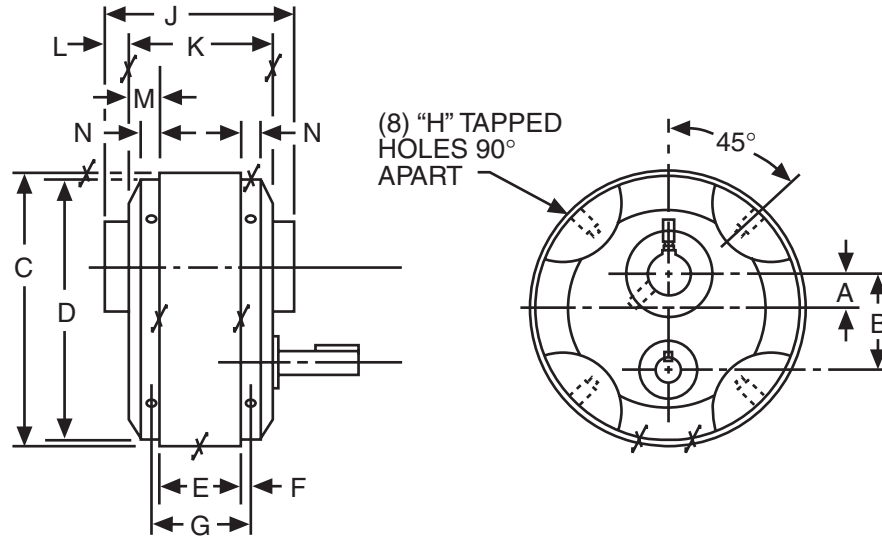
* Assemblies define output (slow speed) shaft projection with respect to input (high speed) shaft and mounting surface, viewed from end of output shaft. Input may be rotated clockwise or counterclockwise.

• 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

EXTERNAL REFERENCE SURFACES

200 SERIES
221-247 SIZES



ALL DIMENSIONS IN INCHES

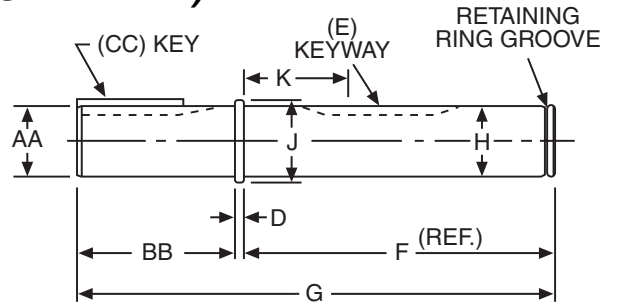
Size	A ±.005	B +.002 -.000	C* +.000 -.010	D* +.000 -.003	E* +.000 -.004	F	G	H		J	K	L	M	N
								Size	Depth					
221	.904	2.123	6.193	5.998	2.000	.19	2.38	1/4-20	9/16	4.31	3.31	.50	.66	.44
226	.936	2.595	7.495	7.248	2.062	.38	2.81	5/16-18	5/8	5.19	4.06	.56	1.00	.69
231	1.000	3.114	8.870	8.624	2.625	.34	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)

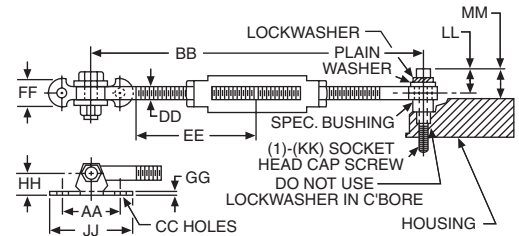


ALL DIMENSIONS IN INCHES

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.

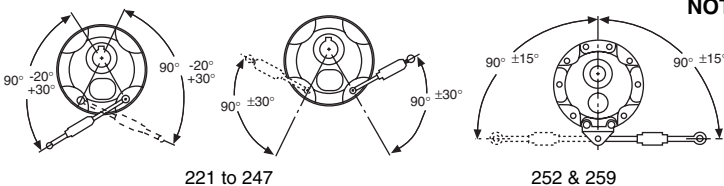
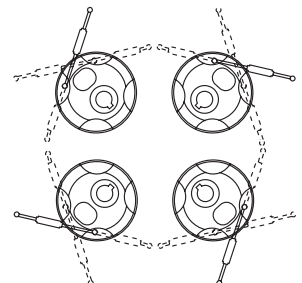


Figure 2 illustrates in a typical manner the possible reaction rod positions for shaft mounted reducers in horizontal or vertical positions.

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 REDUCTION RATIOS – 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 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
- 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

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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.

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 252. 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.

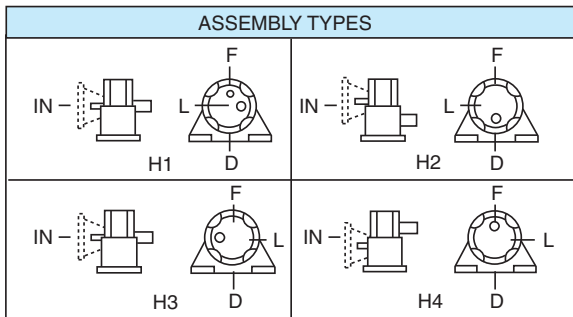
Location of Filler, Level and Drain Plugs

Optimount reducers may be mounted in any position shown with the following exceptions:

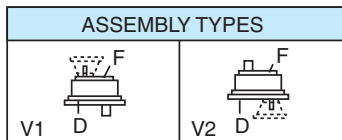
Filler, level and drain plugs are completely interchangeable and should be arranged to suit the required mounting positions. Four (4) pipe tapped holes for these plugs are located on the input shaft side of the housing and one (1) on the opposite side.

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	Lubricant AGMA No.	ISO Viscosity Grade No.
-30° to 225°F ‡ (-34°C to 107°C)	Klubersynth* UH1 6-460	1950/2500	—	460
-30° to 225°F ‡ (-34°C to 107°C)	Mobile SHC634	1950/2500	—	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.

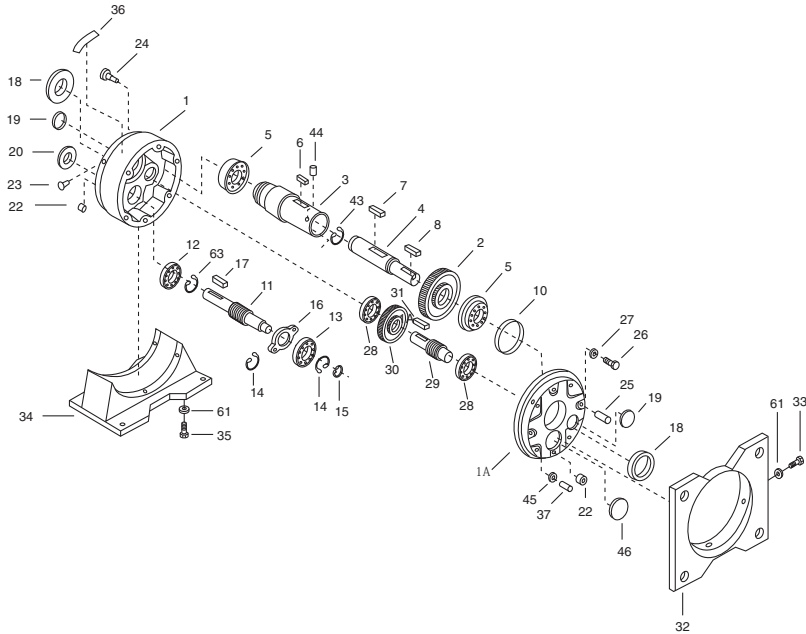
For vertical mounting (V1 and V2), this plug must be tightened with arrow pointing toward the center.

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.

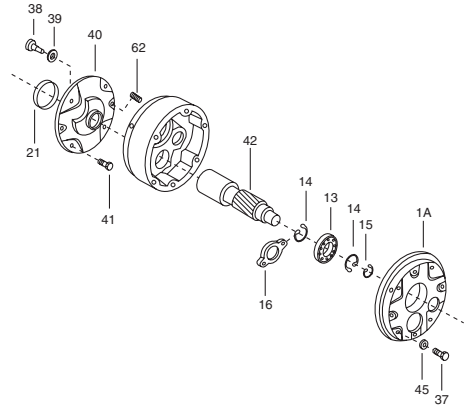
Size	Single Reduction		Double Reduction	
	Oil Dist. (Inches)	Capacity (Qts)	Oil Dist. (Inches)	Capacity (Qts)
221	1.25	.38	1.00	.50
226	1.62	.75	1.38	1.00
231	2.00	1.25	1.62	1.50
239	2.12	2.75	1.88	3.00
247	2.25	4.00	1.88	4.25

200 SERIES PARTS LIST — SINGLE AND DOUBLE REDUCTION

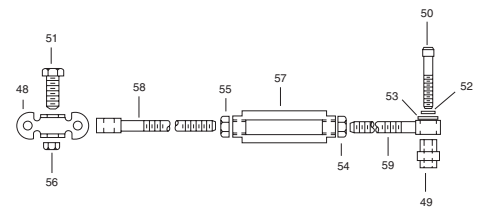
MODELS 221-247



MODELS F221-F247



REACTION ARM KIT



ITEM NO.	DESCRIPTION OF PART	ITEM NO.	DESCRIPTION OF PART	ITEM NO.	DESCRIPTION OF PART
1	Housing, Body	22	Pipe Plug	44	Hex. Soc. Setscrew
1A	Housing, Cover	23	Plastic Plug	45	Rolled Washer (For 226-247)
2	Helical Gear (Output)	24	Vented Oil Filler	46	Bore Plug
3	Hollow Output Shaft	25	Dowel Pin	47	N/A
4	Solid Output Shaft, Insert	26	Soc. Head Capscrew	48	Clevis
4A	N/A	27	Lockwasher	49	Bushing
5	Ball Bearing	28	Ball Bearing	50	Soc. Head Capscrew
6	Key, Output Gear	29	Interm. Helical Pinion	51	Hex Head Capscrew
7	Key	30	Interm. Helical Gear	52	Lockwasher
8	Key	31	Key, Interm. Gear	53	Flatwasher
9	N/A	32	Vertical Base	54	Nut
10	Shim	33	Soc. Head Capscrew	55	Nut, Left Hand
11	Input Helical Pinion	34	Horizontal Base	56	Nut, Lock
12	Ball Bearing	35	Soc. Head Capscrew	57	Turnbuckle
13	Ball Bearing	36	Nameplate	58	Eyebolt, Rod End (Left Hand)
14	Retaining Ring (For 221 Only)	37	Button Hd. Capscrew (For 226-247)	59	Eyebolt, Rod End
15	Retaining Ring	38	Soc. Head Capscrew	61	Lockwasher
16	Bearing Retainer (For 226-247)	39	Lockwasher	62	Hex. Soc. Setscrew
17	Key	40	Motor Flange	63	Retaining Ring
18	Oil Seal	41	Hex Head Capscrew		
19	Bore Plug	42	Motor Shaft (Input)		
20	Oil Seal	43	Retaining Ring		
21	Oil Seal				

PART ORDERING INFORMATION: Please contact your local Boston Gear distributor for part ordering information from speed reducer nameplate.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com



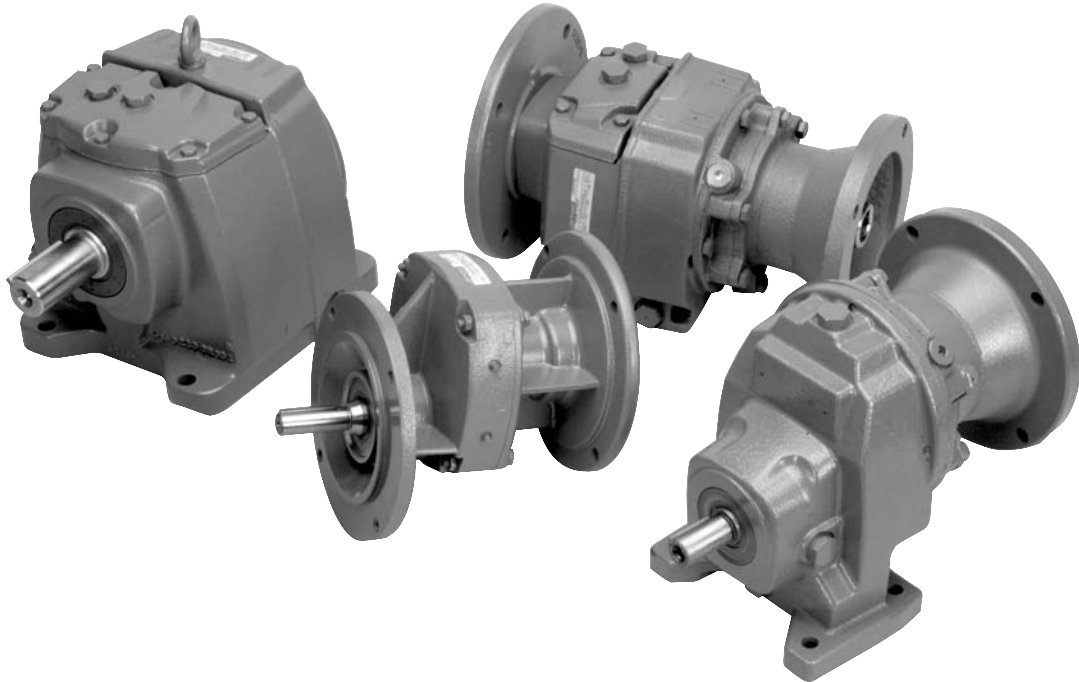
200 Series **253**

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NOTES



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SECTION CONTENTS

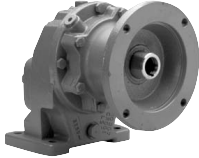
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MOUNTING POSITIONS & LUBRICANTS	260
OVERHUNG LOAD	261
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600 SERIES PRODUCT REFERENCE GUIDE

F600B Series Helical Gear Flanged Reducers

Ordering Information - Page 257
 Lubrication - Page 260
 Selection/Rating Information - Pages 262 - 274
 Motor Selection - Pages 328 and 330

Single Reduction
Foot Mounted, Flange Input



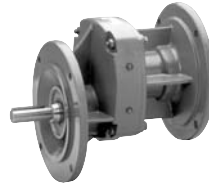
Dimensions - Page 281

Double & Triple Reduction
Foot Mounted, Flange Input



Dimensions - Page 282

Single Reduction
Output Flange Mounted



Dimensions - Page 283

Double & Triple Reduction
Output Flange Mounted



Dimensions - Page 284

600B Series Helical Gear Non-Flanged Reducers

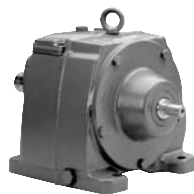
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 Motor Selection - Pages 328 and 330

Single Reduction
Foot Mounted



Dimensions - Page 285

Double & Triple Reduction
Foot Mounted



Dimensions - Page 286

600 SERIES HOW TO ORDER/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:

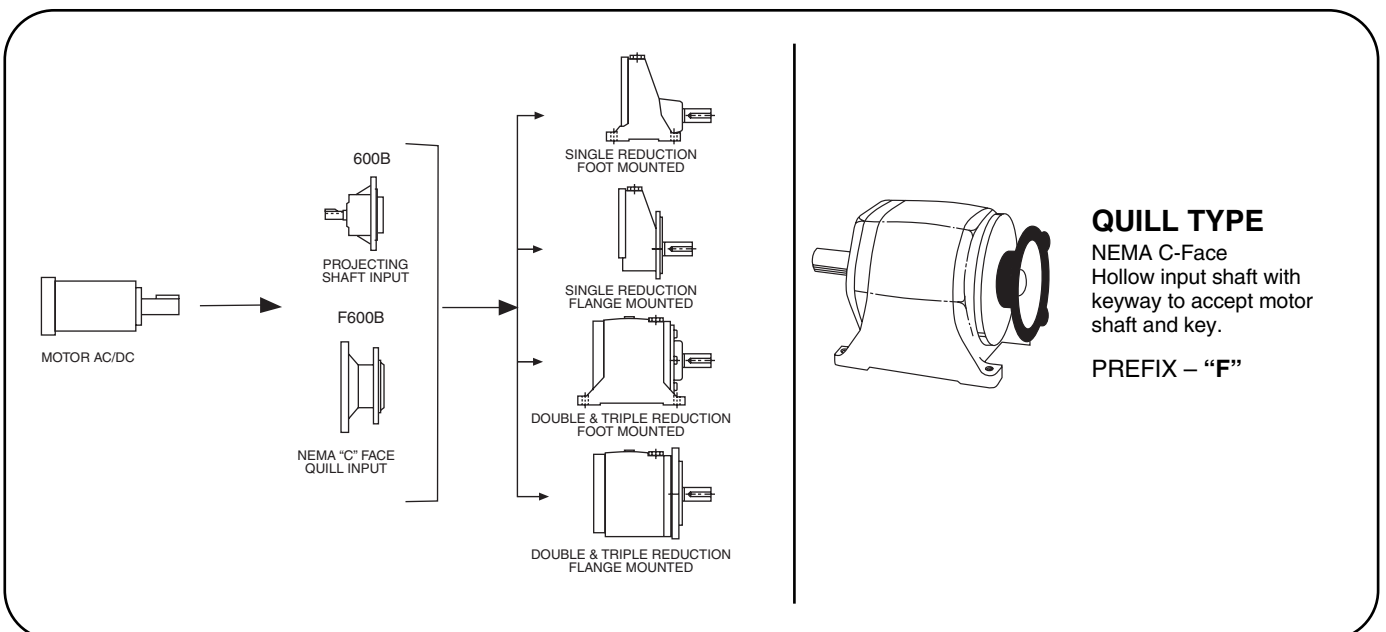
BK F 6 3 2 B F - 16 - K - B9 - Motor Catalog Number
(If Required)

Washdown Series (Option) BK-Bost-Kleen (white) SBK-Stainless Bost-Kleen			LUBRICATION (Option) "BLANK" - No lubrication Supplied K - Klubersynth UH1 6-460																					
INPUT STYLE (Option) FLANGED REDUCER F - QUILL TYPE "BLANK" - PROJECTING INPUT																								
SERIES "600B"																								
REDUCER SIZE 1, 2, 3, 4, 5 AND 6																								
NUMBER OF REDUCTIONS 1 - SINGLE 2 - DOUBLE 3 - TRIPLE	MOUNTING STYLE (Option) "BLANK" - FOOT MOUNTED F - OUTPUT FLANGE MOUNTED	NEMA MOTOR (Option) FRAME SIZE <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>CODE</th> <th>INPUT BORE SIZE</th> <th>NEMA MTG</th> </tr> </thead> <tbody> <tr> <td>B5</td> <td>.625</td> <td>56C</td> </tr> <tr> <td>B7</td> <td>.875</td> <td>140TC/180C</td> </tr> <tr> <td>B9</td> <td>1.125</td> <td>180TC/210C</td> </tr> <tr> <td>B11</td> <td>1.375</td> <td>210TC/250UC</td> </tr> <tr> <td>B13</td> <td>1.625</td> <td>250 TC</td> </tr> <tr> <td>BLANK</td> <td>NO MOTOR</td> <td></td> </tr> </tbody> </table>		CODE	INPUT BORE SIZE	NEMA MTG	B5	.625	56C	B7	.875	140TC/180C	B9	1.125	180TC/210C	B11	1.375	210TC/250UC	B13	1.625	250 TC	BLANK	NO MOTOR	
CODE	INPUT BORE SIZE	NEMA MTG																						
B5	.625	56C																						
B7	.875	140TC/180C																						
B9	1.125	180TC/210C																						
B11	1.375	210TC/250UC																						
B13	1.625	250 TC																						
BLANK	NO MOTOR																							
		NOMINAL GEAR RATIO REFER TO SELECTION TABLES FOR AVAILABLE RATIOS																						

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 327.

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 340 & 341.
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 275-280.
4. Overhung shaft load should be checked when belt or chain drives are used, to prevent premature shaft or bearing failure. Reference page 259 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 340 and 341.

600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS

INPUT SPEEDS 1750 RPM & 1150 RPM

SERVICE FACTOR 1.0*

Catalog Number†	Item Code	Input Speed						OHL (LB)††
		1750 RPM		1160 RPM		Input HP (Max.)		
		Approx. Output RPM	Output Torque (LB-IN)(Max.)	Input HP (Max.)	Approx. Output RPM		Output Torque (LB-IN)(Max.)	
612C-32	28682	55	791	0.7	36	821	33.48	
622B-32	28685	55	1780	1.68	36	1799	30.55	
632B-32	28690	55	3977	3.79	36	4023	30.29	
642B-32	28695	55	5910	5.40	36	6416	32.32	
652B-32	28698	55	13826	12.52	36	14014	31.90	
662B-32	28703	55	26088	25	36	26487	30.14	

Reference Page 279

600 SERIES HELICAL GEAR SPEED REDUCERS

MOTORIZED SPEED REDUCER

1. Determine application service factor from table 1 page 258 or from pages 340 and 341.
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 338 and 339 or from Table 1 page 258. 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 261
6. Order: 1 – F652B-50-B11 (28748) Ref. Pg. 271
 1 – NUTF Motor Ref. page 329 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 261.

600 SERIES OUTPUT RPM AND CAPACITY SELECTION TABLES

@1750 RPM INPUT

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280

ORDER BY CATALOG NUMBER OR ITEM CODE

*						**				†	††	
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 (28751)	NUTF	-----	
				5	8699	II			MUTF			

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Page 275-280

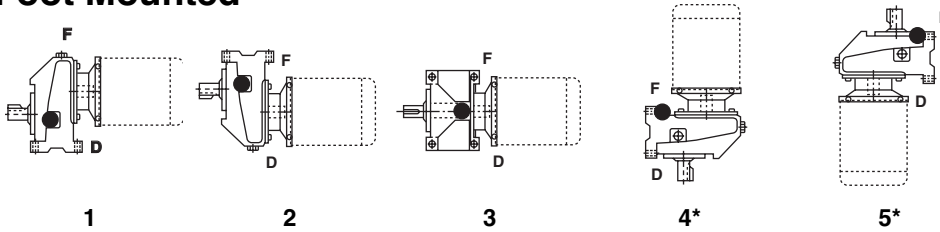
** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

† AC Motors – 230/460-3-60 TEFC, for specific motor manufacturers and 5 digit item code refer to pages 327-329.

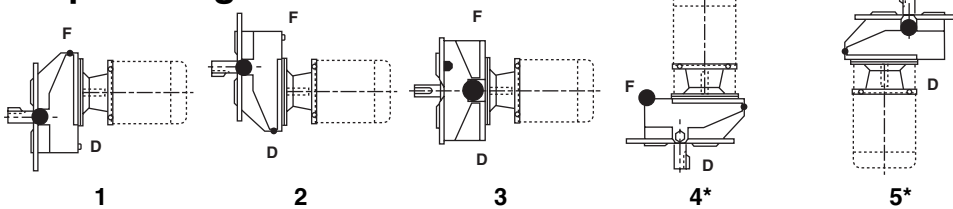
†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code ref. pages 324, 330 and 331. Overhung Load Ratings refer to Pages 261.

600 SERIES MOUNTING POSITIONS & LUBRICATION

Foot Mounted



Output Flange Mounted



CAUTION

Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

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	-30° to 225°F (-34° 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

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

K

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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	—		
						5	273	III			MUTF	PM18500		
		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			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	PM18200
								1.5	104	III			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			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			NUTF	—		
						5	342	III	F631B-2-B9 (28030)	F631BF-2-B9 (28031)	MUTF	PM18500		
1030	14.33			14.04	641B-2 (28032)	10	720	I	F641B-2-B11 (28033)	F641BF-2-B11 (28034)	PUTF	—		
						7.5	540	II			NUTF	—		
						5	360	III	F641B-2-B9 (28035)	F641BF-2-B9 (28036)	MUTF	PM18500		
2521	36.29			35.56	651B-2 (28037)	20	1390	II	F651B-2-B13 (28038)	—	SUTF	—		
		15	1043			III			RUTF	—				

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 275-280

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Overhung Load Ratings refer to Page 261.



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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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)
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
						1.5	172	III			JUTF	PM18150
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

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Overhung Load Ratings refer to Page 261.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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	—
						5	557	III	F641B-3.2-B9 (28079)	F641BF-3.2-B9 (28080)	MUTF	PM18500
		2894	25.76	25.24	651B-3.2 (28081)	20	2244	I	F651B-3.2-B13 (28082)	—	SUTF	—
						15	1683	II			RUTF	—
						10	1122	III	F651B-3.2-B11 (28084)	F651BF-3.2-B11 (28085)	PUTF	—
		4655	42.96	42.10	661B-3.2 (28086)	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)
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	—

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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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	2738	II	F661B-4-B13 (28120)	—	SUTF	—	
						15	2053	III			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	PM9100-5/8	
						.75	137	II			GUTF	PM18100-5/8	
						.5	91	III			FUTF	PM975	
		442	2.55	2.50	621B-5 (28124)	2	347	I	F621B-5-B7 (28125)	F621BF-5-B7 (28126)	KUTF	PM18200	
						1.5	260	II			JUTF	PM18150	
						1	174	III			HUTF-5/8	PM9100-5/8	
		708	4.11	4.03	631B-5 (28129)	3	516	II	F631B-5-B9 (28130)	F631BF-5-B9 (28131)	LUTF	PM18300	
						2	344	III			KUTF	PM18200	
		1327	7.73	7.575	641B-5 (28134)	7.5	1289	I	F641B-5-B11 (28135)	F641BF-5-B11 (28137)	NUTF	—	
						5	859	II			MUTF	PM18500	
						3	515	III			LUTF	PM18300	
		2903	16.01	15.69	651B-5 (28140)	15	2715	I	F651B-5-B13 (28141)	—	RUTF	—	
						10	1810	II			PUTF	—	
						7.5	1357	III			NUTF	—	
		5221	30.49	29.88	661B-5 (28145)	20	3422	II	F661B-5-B13 (28146)	—	SUTF	—	
						15	2567	III			RUTF	—	
278	6.3	1251	5.63	5.52	622B-6.3 (28147)	5	1109	I	F622B-6.3-B9 (28148)	F622BF-6.3-B9 (28149)	MUTF	PM18500	
						3	666	II			LUTF	PM18300	
						2	444	III			KUTF	PM18200	
		2208	10.45	10.03	632B-6.3 (28152)	10	2108	I	F632B-6.3-B11 (28153)	F632BF-6.3-B11 (28154)	PUTF	—	
						7.5	1581	II			NUTF	—	
						5	1054	III			MUTF	PM18500	

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Overhung Load Ratings refer to Page 261.



FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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	—
						7.5	1661	III			NUTF	—
		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 1/2	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	—
18252	66.63	63.96	662B-8 (28188)	20	5474	III	F662B-8-B13 (28199)	—	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

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K

FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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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	PM18200
						1.5	541	III			JUTF	PM18150
		2208	6.56	6.30	632B-10 (28201)	5	1680	II	F632B-10-B9 (28202)	F632BF-10-B9 (28203)	MUTF	PM18500
						3	1008	III			LUTF	PM18300
		3615	10.49	10.07	642B-10 (28204)	10	3449	I	F642B-10-B11 (28207)	F642BF-10-B11 (28208)	PUTF	—
						7.5	2587	II			NUTF	—
						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	—
						15	5013	III			RUTF	—
		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)
1	423							II	F612C-12.5-B5 (28216)	F612CF-12.5-B5 (28217)	HUTF-5/8	PM9100-5/8 PM18100-5/8 PM975 PM1875
.75	317							III			GUTF	
1252	2.87			2.76	622B-12.5 (28218)	2	872	I	F622B-12.5-B7 (28219)	F622BF-12.5-B7 (28220)	KUTF	PM18200
						1.5	654	II			JUTF	PM18150
						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	PM18500
						3	1272	II			LUTF	PM18300
						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	PM18500
						3	1291	III			LUTF	PM18300

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ORDER BY CATALOG NUMBER OR ITEM CODE.

K

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									
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	PM9100-5/8
						.75	398	II			GUTF	PM18100-5/8
						.5	265	III			FUTF	PM975
		1252	2.29	2.20	622B-16 (28256)	2	1091	I	F622B-16-B7 (28265)	F622BF-16-B7 (28276)	KUTF	PM18200
						1.5	819	II			JUTF	PM18150
						1	546	III	F622B-16-B5 (28277)	F622BF-16-B5 (28284)	HUTF-5/8	PM9100 5/8
		2208	4.15	3.98	632B-16 (28291)	3	1593	II	F632B-16-B9 (28300)	F632BF-16-B9 (28302)	LUTF	PM18300
						2	1062	III	F632B-16-B7 (28306)	F632BF-16-B7 (28328)	KUTF	PM18200
						5	2649	I	F642B-16-B9 (28355)	F642BF-16-B9 (28360)	MUTF	PM18500
		3615	6.81	6.54	642B-16 (28330)	3	1589	III			LUTF	PM18300
						20	10900	I	F652B-16-B13 (28384)	—	SUTF	—
						15	8175	II			RUTF	—
13452	24.63	23.64	652B-16 (28366)	10	5450	III	F652B-16-B11 (28385)	F652BF-16-B11 (28388)	PUTF	—		
				20	10486	III	F662B-16-B13 (28395)	—	SUTF	—		
				23788	45.28	43.47	662B-16 (28390)					
88	20	783	1.12	1.08	612C-20 (28396)	1	699	I	F612C-20-B5 (28538)	F612CF-20-B5 (28564)	HUTF-5/8	PM9100-5/8
						.75	525	II			GUTF	PM18100-5/8
						.5	350	III			FUTF	PM975
		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	F622B-20-B5 (28587)	F622BF-20-B5 (28588)	HUTF-5/8	PM9100 5/8
						.75	520	III			GUTF	PM18100 5/8

* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 275-280.

** Class I (S.F. = 1.00) Class II (S.F. = 1.50) Class III (S.F. = 2.00)

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FOR RATINGS AT OTHER INPUT SPEEDS, SEE TABLES ON PAGES 275-280.
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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 Input	HP Output		Motor HP	Output Torque (LB-IN.)	S.C. **	Foot Mounted	Output Flange Mounted			
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			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			LUTF	PM18300	
		13601	19.86	19.07	652B-20 (28650)	15	10249	I	F652B-20-B13 (28651)	—	RUTF	—	
						10	6833	II	F652B-20-B11 (28652)	F652BF-20-B11 (28653)	PUTF	—	
						7.5	5124	III			NUTF	—	
		24111	36.51	35.05	662B-20 (28654)	20	13181	II	F662B-20-B13 (28655)	—	SUTF	—	
						15	9886	III			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	PM9100-5/8	
		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	
		13727	15.52	14.90	652B-25 (28674)	15	13245	I	F652B-25-B13 (28675)	—	RUTF	—	
						10	8830	II	F652B-25-B11 (28676)	F652BF-25-B11 (28677)	PUTF	—	
						7.5	6623	III			NUTF	—	

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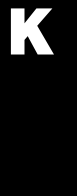
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Output RPM	Ratio *	Non-Flanged Reducers				Flanged Reducers (Gearmotors)						AC Motors†	DC Motors††	
		Gear Capacity		Catalog No. (Item Code)	Ratings			Catalog Numbers (Item Code)						
		Output Torque (LB-IN.)	HP Input Output		Motor HP	Output Torque (LB-IN.)	S.C. **	Foot Mounted	Output Flange Mounted					
70 (Cont)	25	25876	31.03	29.79	662B-25 (28679)	20	16644	II	F662B-25-B13 (28681)	—	SUTF	—		
						15	12483	III			RUTF	—		
55	32	791	.7	0.67	612C-32 (28682)	.5	579	II	F612C-32-B5 (28683)	F612CF-35-B5 (28684)	FUTF	PM950		
						.33	382	III			DUTF	PM925		
		1780	1.68	1.61	622B-32 (28685)	1.5	1584	I	F622B-32-B7 (28686)	F622BF-32-B7 (28687)	JUTF	PM18150		
						1	1056	II			F622B-32-B5 (28688)	F622BF-32-B5 (28689)	HUTF-5/8	PM9100-5/8
		3977	3.79	3.64	632B-32 (28690)	.75	792	III	F632B-32-B9 (28691)	F632BF-32-B9 (28692)			GUTF	PM1800-5/8
						3	3140	I			F632B-32-B7 (28693)	F632BF-32-B7 (28694)	LUTF	PM18300
		5910	5.40	5.18	642B-32 (28695)	2	2094	II	F642B-32-B9 (28696)	F642BF-32-B9 (28697)			KUTF	PM18200
						1.5	1570	III			DUTF	PM18150		
						5	5585	I			F642B-32-B7 (28879)	F642BF-32-B7 (28880)	MUTF	PM18500
		3	3351	II	LUTF	PM18300								
		13826	12.52	12.02	652B-32 (28698)	2	2234	III	F652B-32-B11 (28699)	F652BF-32-B11 (28700)	KUTF	PM18200		
						10	11025	I			F652B-32-B9 (28701)	F652BF-32-B9 (28702)	PUTF	—
						7.5	8268	II					NUTF	—
		26088	25	24.00	662B-32 (28703)	5	5512	III	F662B-32-B13 (28704)	—	MUTF	PM18500		
20	20833					I	F662B-32-B11 (28705)	F662BF-32-B11 (28706)			SUTF	—		
15	15625					II					RUTF	—		
794	.57	0.55	612C-40 (28707)	10	10416	III	F612C-40-B5 (28708)	F612CF-40-B5 (28709)	PUTF	—				
				.5	697	I			F622B-40-B5 (28711)	F622BF-40-B5 (28712)	FUTF	PM950		
				.33	460	II					EUTF	PM933		
44	40	1790	1.33	1.28	622B-40 (28710)	.25	348	III	F622B-40-B5 (28711)	F622BF-40-B5 (28712)	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	F662B-32-B11 (28705)	F662BF-32-B11 (28706)	FUTF	PM1875								
					PM950									

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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	PM18200		
						1.5	2032	III			JUTF	PM18150		
		6010	4.3	4.04	643B-40 (28716)	3	4172	II	F643B-40-B9 (28717)	F643BF-40-B9 (28718)	LUTF	PM18300		
						2	2782	III	F643B-40-B7 (28719)	F643BF-40-B7 (28720)	KUTF	PM18200		
		13901	10.5	10.08	652B-40 (28721)	10	13216	I	F652B-40-B11 (28722)	F652BF-40-B11 (28723)	PUTF	—		
						7.5	9912	II			NUTF	—		
						5	6608		F652B-40-B9 (28724)	F652BF-40-B9 (28725)	MUTF	PM18500		
		26314	19.37	18.60	662B-40 (28726)	15	20337	II	F662B-40-B13 (28727)	—	RUTF	—		
						10	13558	III	F662B-40-B11 (28728)	F662BF-40-B11 (28729)	PUTF	—		
						7.5	10168				NUTF	—		
		35	50	796	.45	0.42	613C-50 (28730)	.33	549	II	F613C-50-B5 (28731)	F613CF-50-B5 (28732)	EUTF	PM933
								.25	416	III			DUTF	PM925
1699	1			0.96	622B-50 (28733)	1	1699	I	F622B-50-B5 (28734)	F622BF-50-B5 (28735)	HUTF-5/8	PM9100-5/8 PM18100-5/8		
						.75 .5	1274 849	II III			GUTF FUTF	PM975/PM1875 PM950		
4024	2.32			2.23	632B-50 (28736)	2	3469	I	F632B-50-B7 (28737)	F632BF-50-B7 (28738)	KUTF	PM18200		
						1.5	2602	II			JUTF	PM18150		
						1	1735	III	F632B-50-B5 (28740)	F632BF-50-B5 (28741)	HUTF-5/8	PM9100-5/8 PM18100-5/8		
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 3	8699 5219	II III	F652B-50-B9 (28750)	F652BF-50-B9 (28751)	MUTF LUTF	— PM18300		

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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	
						.25	552	III			DUTF	PM925	
		4038	1.85	1.74	633B-63 (28762)	1.5	3259	I	F633B-63-B7 (28763)	F633BF-63-B7 (28764)	JUTF	PM18150	
						1	2173	II	F633B-63-B5 (28765)	F633BF-63-B5 (28766)	HUTF-5/8	PM9100-5/8	
						.75	1629	III			GUTF	PM18175	
		6100	2.73	2.57	643B-63 (28767)	2	4474	I	F643B-63-B7 (28768)	F643BF-63-B7 (28769)	KUTF	PM18200	
						1.5	3356	II			JUTF	PM18150	
						1	2237	III	F643B-63-B5 (28770)	F643BF-63-B5 (28771)	HUTF-5/8	PM9100 5/8	
		14084	6.48	6.09	653B-63 (28772)	5	10817	II	F653B-63-B9 (28773)	F653BF-63-B9 (28774)	MUTF	PM18500	
3	6490					III			LUTF	PM18300			
23239	11.13	10.46	663B-63 (28775)	10	20791	I	F663B-63-B11 (28776)	F663BF-63-B11 (28777)	PUTF	—			
				7.5	15593	II			NUTF	—			
				5	10396	II	F663B-63-B9 (28778)	F663BF-63-B9 (28779)	MUTF	PM18500			
22	80	1519	.54	0.51	623B-80 (28780)	.5	1375	I	F623B-80-B5 (28781)	F623BF-80-B5 (28782)	FUTF	PM950	
						.33	908	II			EUTF	PM933	
						.25	688	III			DUTF	PM925	
		4038	1.53	1.44	633B-80 (28783)	1.5	3952	I	F633B-80-B7 (28784)	F633BF-80-B7 (28785)	JUTF	PM18150	
						1	2635	II	F633B-80-B5 (28786)	F633BF-80-B5 (28787)	HUTF-5/8	PM9100-5/8	
						.75	1976	III			GUTF	PM18100-5/8	

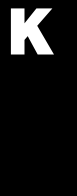
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Output RPM	Ratio *	Non-Flanged Reducers				Flanged Reducers (Gearmotors)						AC Motors†	DC Motors††
		Gear Capacity			Catalog No. (Item Code)	Ratings			Catalog Numbers (Item Code)				
		Output Torque (LB-IN.)	HP			Motor HP	Output Torque (LB-IN.)	S.C. **	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	
						1	2736	III	F643B-80-B5 (28791)	F643BF-80-B5 (28792)	HUTF-5/8	PM9100-5/8 PM18100-5/8	
		14152	5.2	4.89	653B-80 (28793)	5	13558	I	F653B-80-B9 (28794)	F653BF-80-B9 (28796)	MUTF	PM18500	
						3	8135	II			LUTF	PM18300	
						2	5423	III	F653B-80-B7 (28797)	F653BF-80-B7 (28798)	KUTF	PM18200	
		25562	9.74	9.16	663B-80 (28799)	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
.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 PM18100-5/8 PM975/PM1875 PM950	
						.75	2493	II			GUTF		
						.5	1662	III			FUTF		
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 PM18100-5/8 PM975 PM1875	
						.75	2567	III			GUTF		
14222	4.04			3.80	653B-100 (28816)	2	7008	I	F653B-100-B7 (28817)	F653BF-100-B7 (28818)	KUTF	PM18200	
						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
		.25	1052					II			DUTF	PM925	

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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	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	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	PM18300	
						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
.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	PM18200	
						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	PM18500	
						3	16128	II					
						2	10752	III					

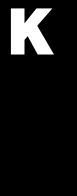
* Gear Ratio is Approximate. For Actual Gear Ratio Reference Pages 275-280.

** 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 327-329.

†† DC Motors – 90 VDC or 180 VDC where applicable, for specific motor manufacturers and 5 digit item code refer to pages 324, 330-331.

Overhung Load Ratings refer to Page 261.



600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 1750 RPM & 1160 RPM

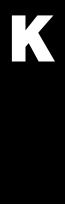
Service Factor 1.0*

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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.



600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 690 RPM & 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.)	
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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 1750 RPM & 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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

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600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 690 RPM & 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-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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 1750 RPM & 1160 RPM

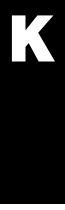
Service Factor 1.0*

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	1302	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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.



600 SERIES RATIO AND CAPACITY SELECTION TABLES

NON-FLANGED REDUCERS INPUT SPEEDS 690 RPM & 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 340-341, before selection.

† Reducer dimensions can be found on pages 281-286.

†† Gear Ratio is the actual ratio rounded to the nearest hundredth.

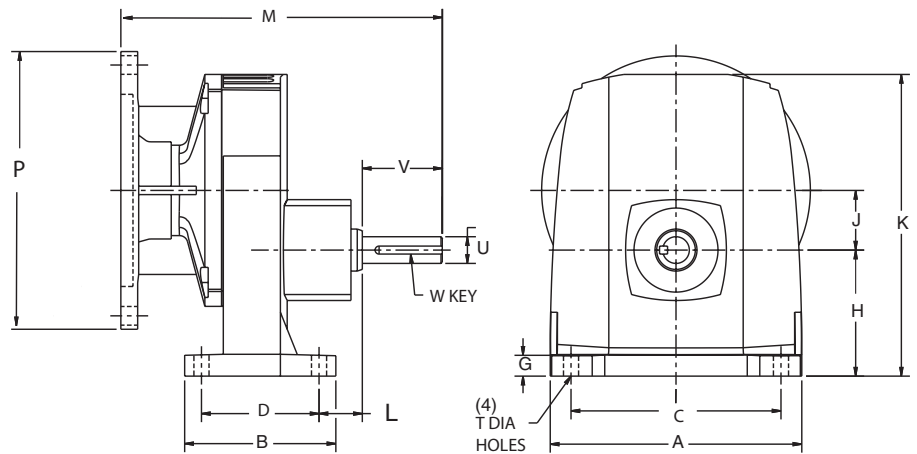
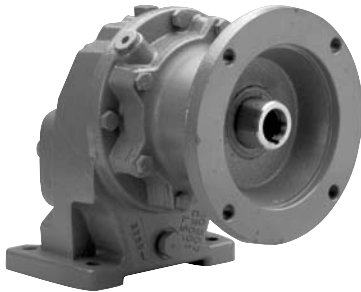


MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

600 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

FOOT MOUNTED

F600B SERIES—Flanged Quill Type



K

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	B7	B9	B11	B13				Sq.	Length	
	56C	140TC	180TC	210TC	250TC						
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.

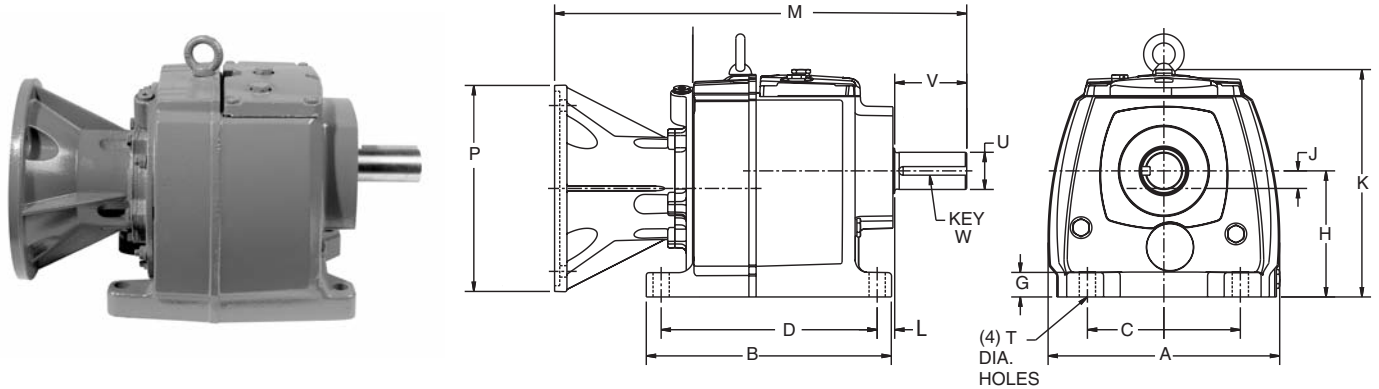
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 SERIES DOUBLE & TRIPLE REDUCTION FLANGED REDUCER DIMENSIONS

FOOT MOUNTED

F600B SERIES—Flanged Quill Type



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	*U	Low Speed Shaft			Approx. Weight (lb.)
	NEMA Mounting							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.

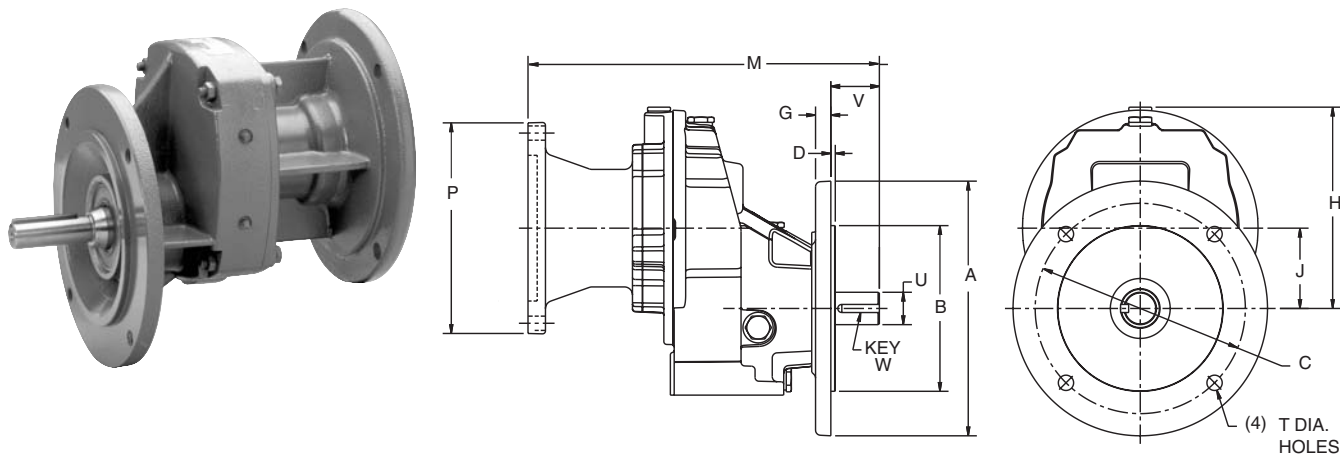
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 SERIES SINGLE REDUCTION FLANGED REDUCER DIMENSIONS

OUTPUT FLANGE MOUNTED

F600B SERIES—Flanged Quill Type



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 56C	B7 140TC	B9 180TC	B11 210TC				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						

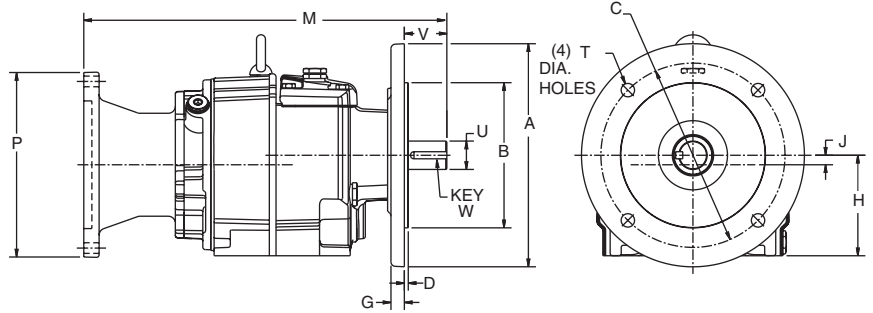
Output shaft rotation is opposite input shaft rotation.

* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

OUTPUT FLANGE MOUNTED

F600B SERIES—Flanged Quill Type



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.

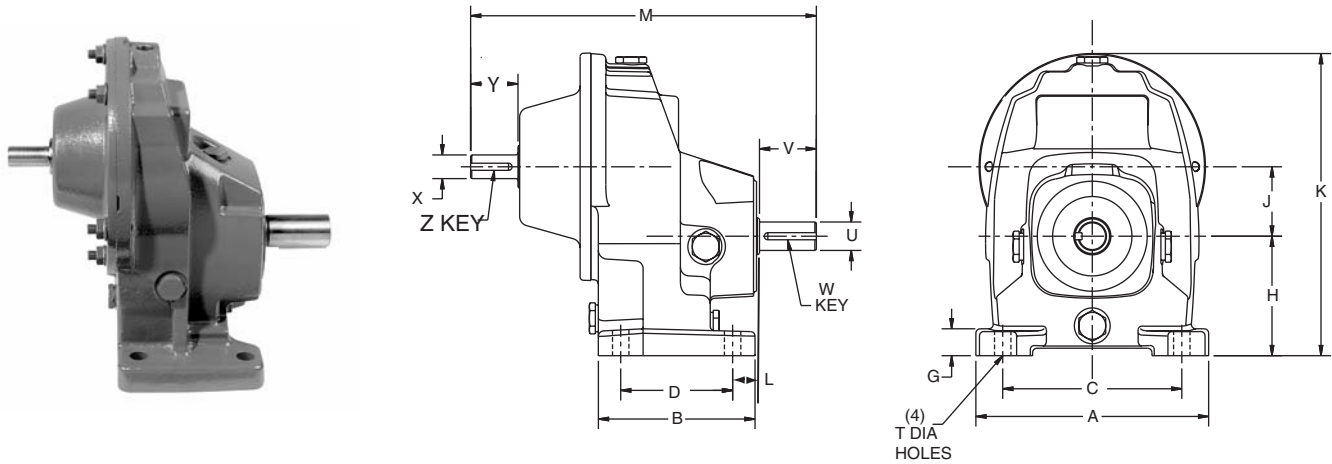
* Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000; -.001".

Dimensions to rough casting are approximate.

600 SERIES SINGLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

FOOT MOUNTED

600B SERIES



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".

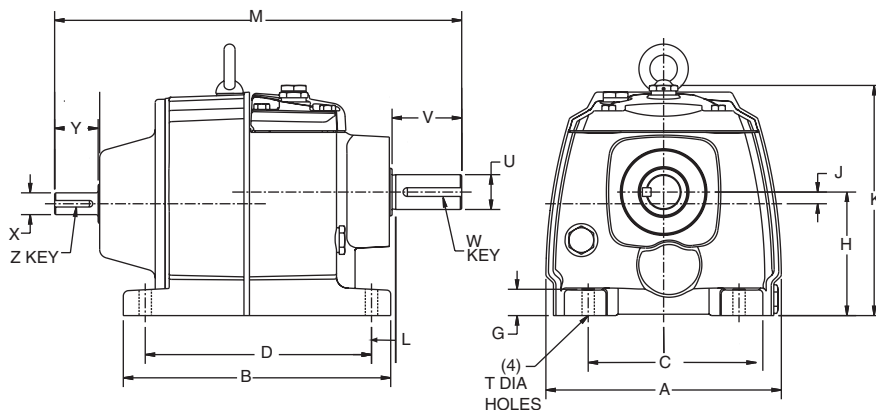
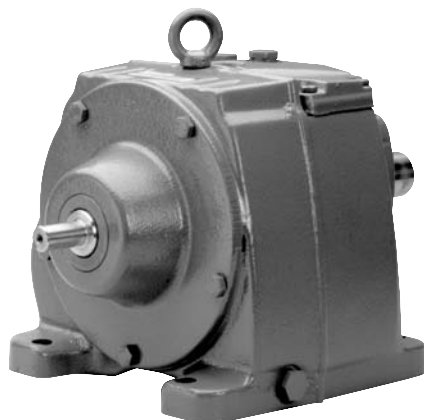
Dimensions to rough casting are approximate.

600 SERIES DOUBLE & TRIPLE REDUCTION NON-FLANGED REDUCER DIMENSIONS

FOOT MOUNTED

600B SERIES

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.

600 SERIES WASHDOWN DUTY



K

600B SERIES – BOST-KLEEN™

- WASHABLE AND SCRUBBABLE
- DURABLE, NON-ABSORBENT, NON-TOXIC WHITE EPOXY FINISH, USDA APPROVED
- STANDARD NEMA C-FACE OR PROJECTING INPUT SHAFT CONFIGURATIONS
- SINGLE, DOUBLE AND TRIPLE REDUCTION RATIOS – 1:6 TO 160:1
- HELICAL GEARING
- OUTPUT MOUNTING FLANGE MOUNT ATTACHMENT AVAILABLE

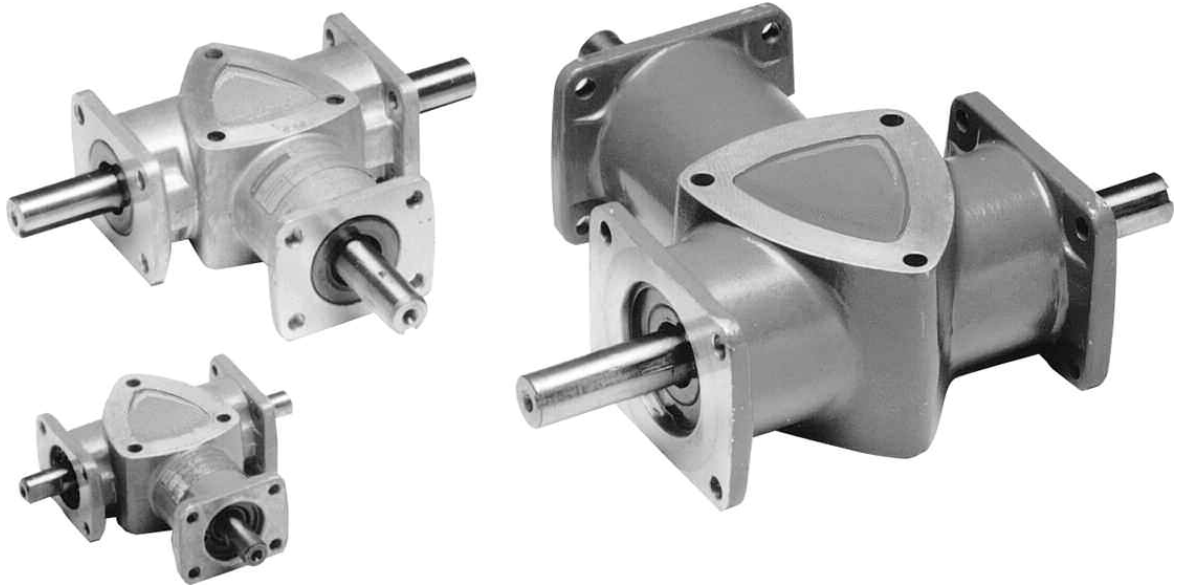
BISCC CERTIFIED BASIC MODEL NUMBERS, DIMENSIONS AND AVAILABLE RATIOS							
WHITE BOST-KLEEN		STAINLESS BOST-KLEEN		NEMA MOUNTING	INPUT SHAFT DIA. +.000 -.001*	OUTPUT SHAFT DIA. +.000 -.001*	AVAILABLE RATIOS
NON-FLANGED TYPE	QUILL TYPE	NON-FLANGED TYPE	QUILL TYPE				
BK611	BKF611	SBK611	SBKF611	56C	.500	.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".

NOTES

K





SECTION CONTENTS

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SELECTION PROCEDURE.....	290
DIMENSIONS.....	291
PARTS LIST.....	292

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 340 & 341. If the application is not listed, obtain service factor from Service Factor Chart, Page 341.
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)



NOTE: See page 290 for features and how to order information.

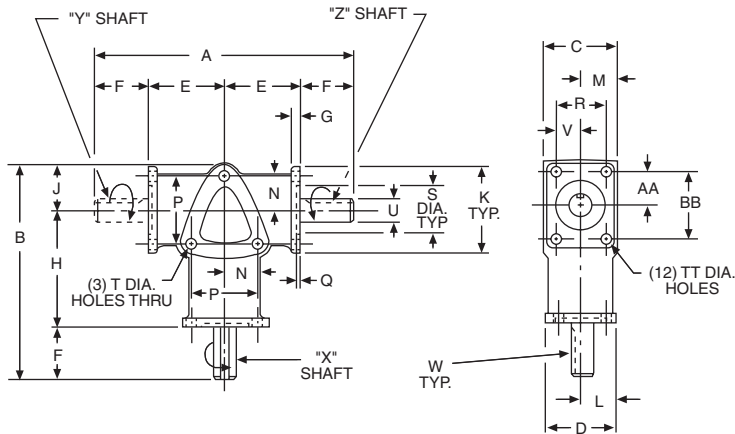
RATIO	X-SHAFT INPUT RPM	OUTPUT RPM	RA621/631		RA1021/1031		RA1521/1531	
			HP	TORQUE†	HP	TORQUE†	HP	TORQUE†
1:1	1750	1750	.91	31.1	2.19	74.9	3.5	125
	1150	1150	.61	31.8	1.47	76.5	2.5	135
	690	690	.37	32.1	0.9	78.1	1.6	142
	100	100	.06	35.9	0.14	83.8	.28	174
2:1	1750	875	.26	17.8	1.07	73.2	1.8	132
	1150	575	.176	18.3	.72	75.0	1.4	150
	690	345	.108	18.7	.44	76.4	.89	162
	100	50	.016	19.2	.07	73.8	.14	175
1:2	1750	3500	.13	2.4	.55	10	1.8	33.0
	1150	2300	.10	2.6	.40	11.2	1.4	37.5
	690	1380	.06	2.8	.25	11.7	.89	40.5
	100	200	.01	3.0	.04	12.5	.14	43.8

* 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

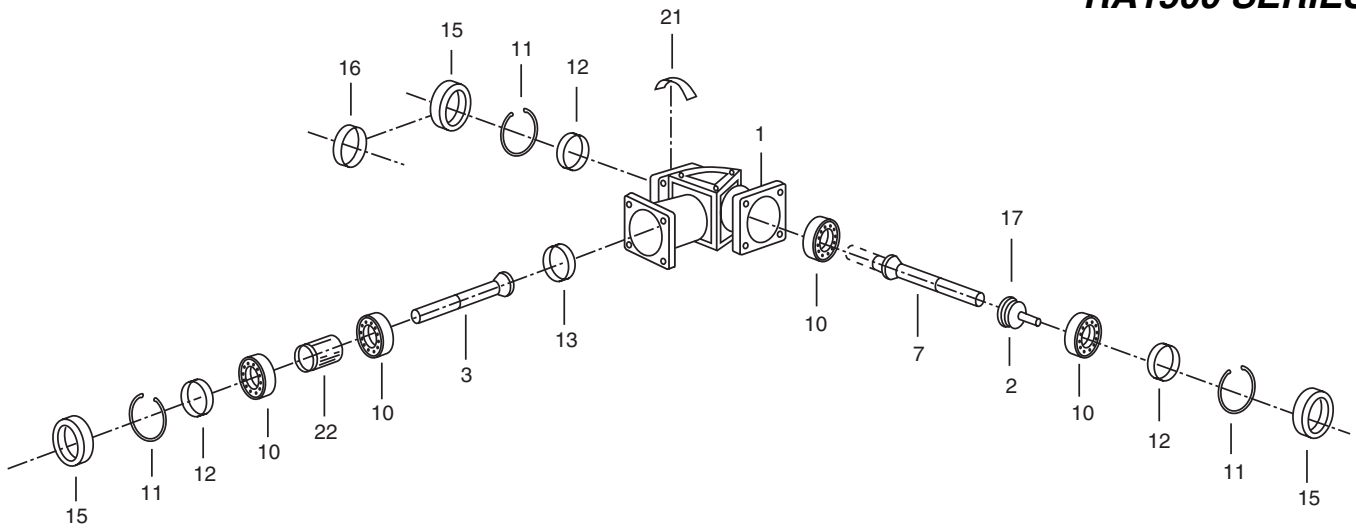
The letters X, Y and Z are used to designate specific shaft projections when ordering units with special shaft requirements.

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 SERIES
RA1000 SERIES
RA1500 SERIES**



Part No.	Description
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

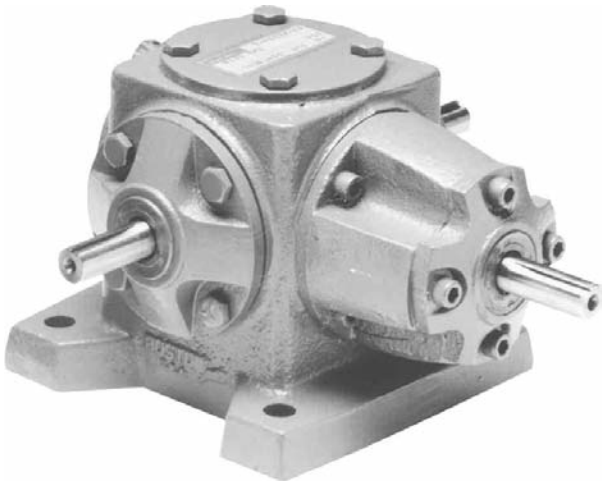
Part No.	Description
17	Pin
21	Nameplate
22	Spacer

PART ORDERING INFORMATION

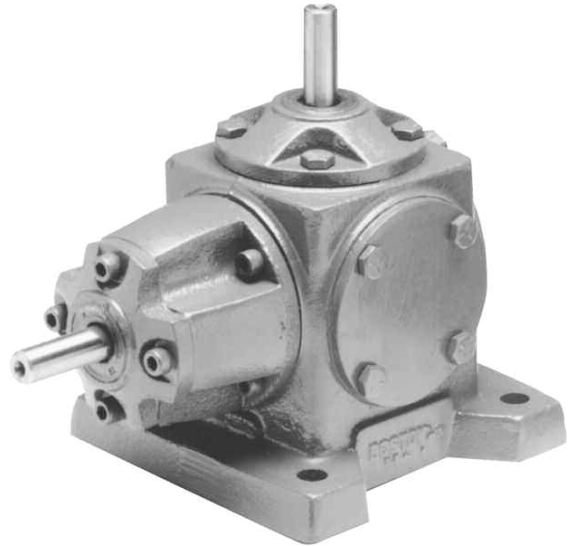
Be sure to provide complete Boston Gear catalog number from speed reducer nameplate, along with part description and number.

* No replacement parts available.

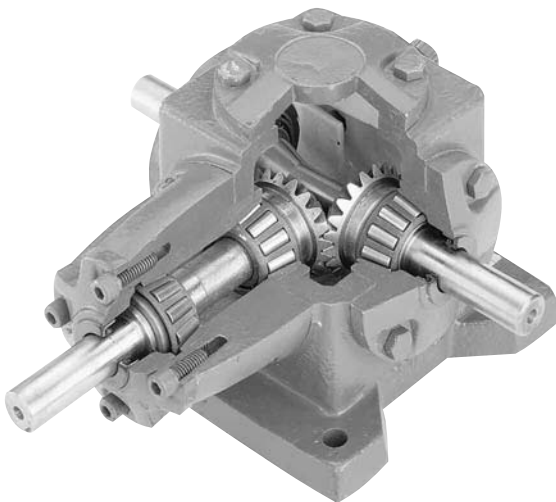




R100/R200



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

M

SECTION CONTENTS

NUMBERING SYSTEM / HOW TO ORDER.....	294
LUBRICATION / MOUNTING.....	294-295
SELECTION CHARTS.....	296
DIMENSIONS.....	297
PARTS LIST.....	298

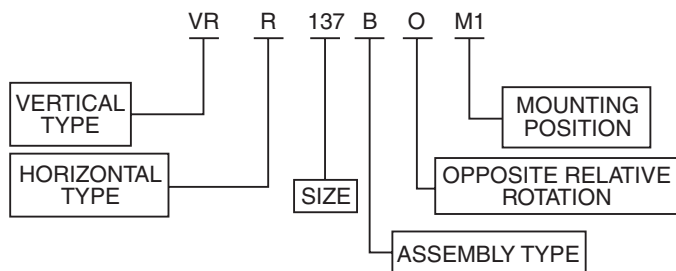
SELECTION PROCEDURE

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 340 & 341. If the application is not listed, obtain service factor from Service Factor Chart, Page 341.
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



TO ORDER: Specify Catalog Number and or Item Code, Assembly Type and Mounting Position.

EXAMPLE: R137-BM1 (40346)
(Ref. Page 296 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.
-30° to 225°F ‡ (-34°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

M

MOUNTINGS

R100/R200 SERIES

Mountings are designated by combining identification for Assembly Type and Mounting Position. Example: Mtg. AM1.

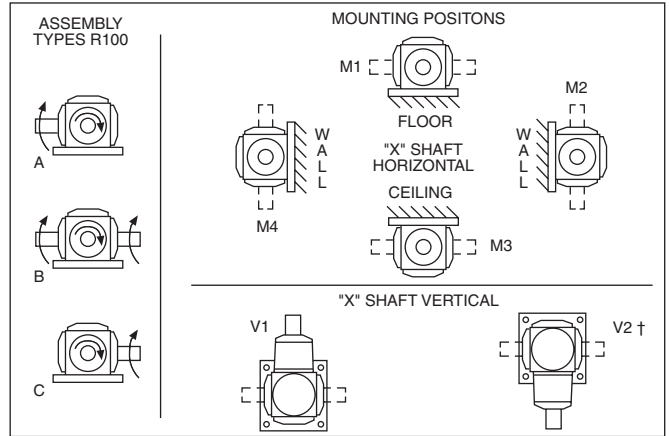
Assembly B is standard for Type R and Assembly N is standard for Type VR and will be furnished unless otherwise specified.

All assemblies can be mounted in any position shown with "X" Shaft horizontal by re-locating Oil Plugs in proper position.

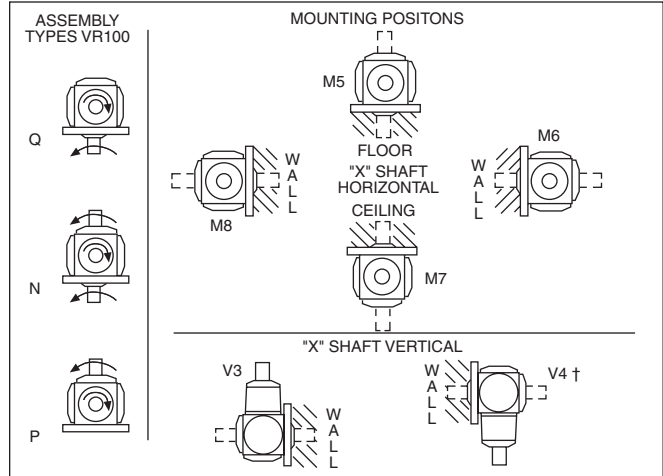
Mountings with "X" Shaft vertical available at a slight extra charge.

Shafts can rotate in either direction, arrows show standard relative rotation. Opposite relative rotation available at no additional charge.

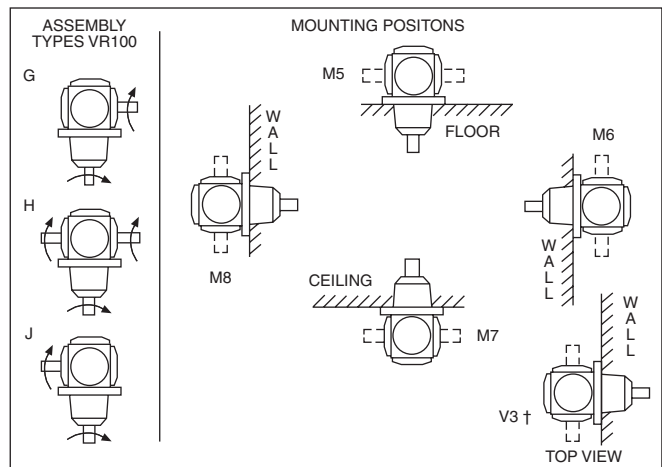
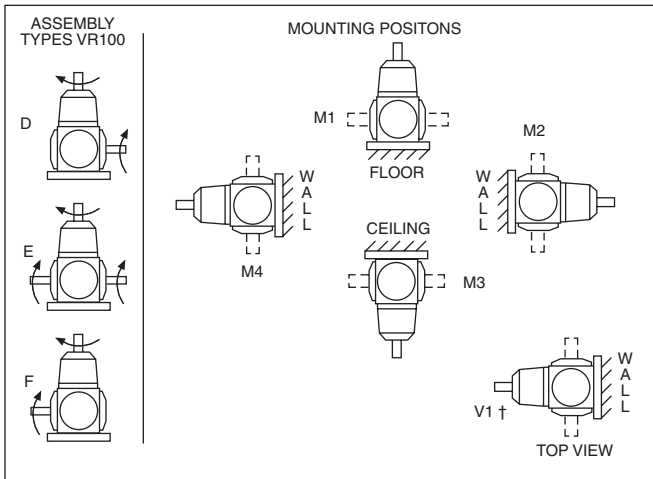
To order with opposite relative rotation, insert letter "O" between Assembly and Mounting code. Example: AOM1.



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.



SELECTION CHARTS

**R100/R200 SERIES
VR100/VR200 SERIES**

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	875	2.2	158	3.7	267	12.2	878	22.6	1620
		1150	575	1.5	161	2.5	272	8.2	900	15.2	1670
		690	345	.90	164	1.5	280	5.1	924	9.4	1717
		100	50	.15	189	.23	290	.77	970	1.5	1870
INCREASER*	1:2	1750	3500	2.2	39.5	3.7	67	12.2	220	—	—
		1150	2300	1.5	40.2	2.5	68	8.2	225	15.2	418
		690	1380	.90	41.0	1.5	70	5.1	231	9.4	429
		100	200	.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.

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

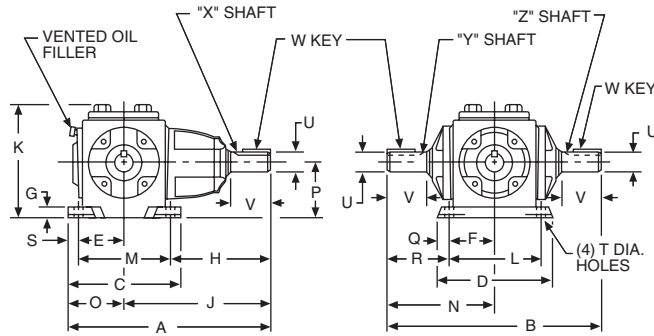
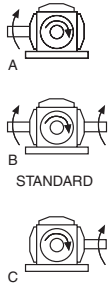


MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com

DIMENSIONS — HORIZONTAL BASE MODELS

**R100/R200 SERIES
VR100/VR200 SERIES**

ASSEMBLY TYPES



For mounting positions see page 293.

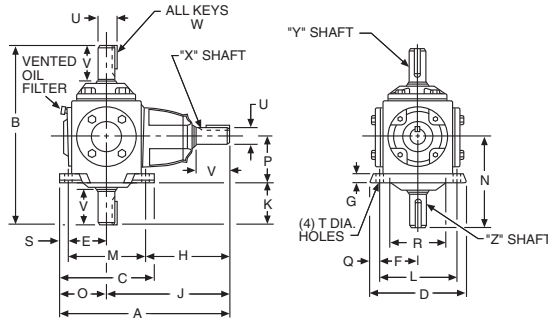
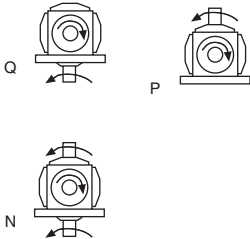
ALL DIMENSIONS IN INCHES

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 293.

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

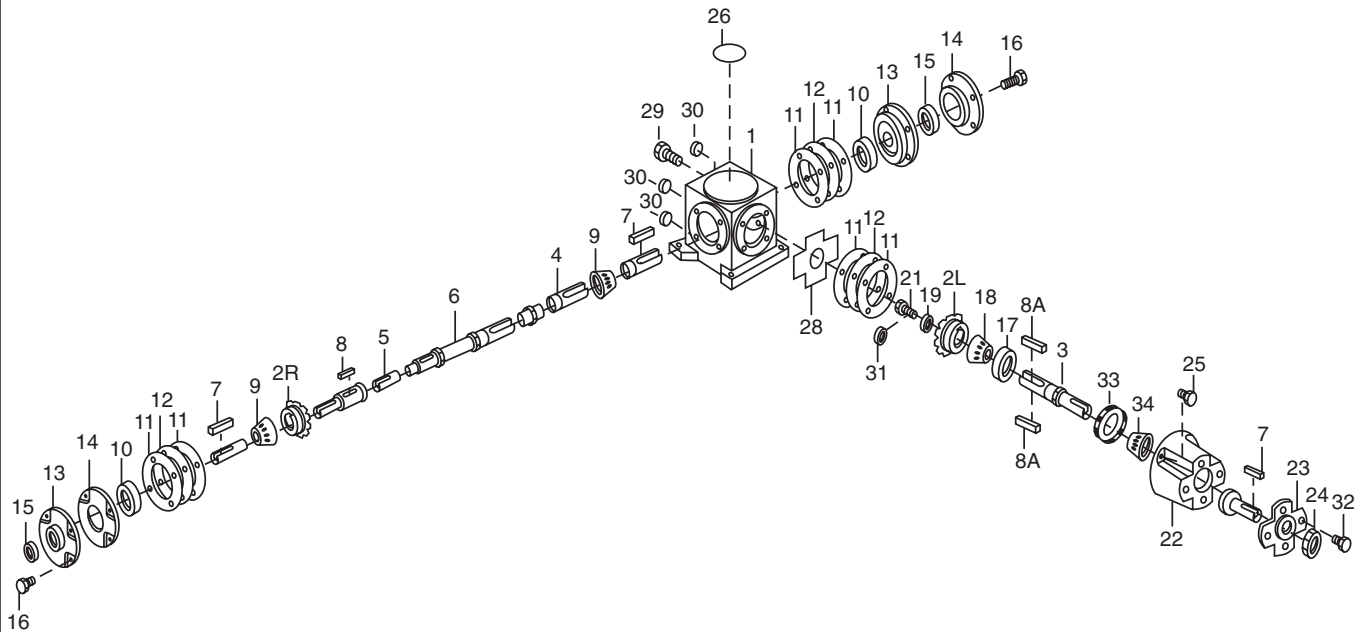
The letters X, Y and Z are used to designate specific shaft projections when ordering units with special shaft requirements



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R100/R200 SERIES & VR100/VR200 SERIES – PARTS LIST



MODEL R100/R200 SHOWN*

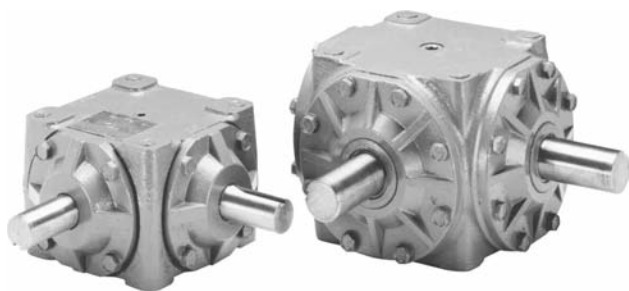
PART ORDERING INFORMATION

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	11	Shim	25	Soc. Head Capscrew
1A	Basic Housing - VR Series	12	Shim	26	Small Nameplate
2R	Spiral Miter or Bevel Gear (RH)	13	Output Bearing Carrier (O/E)	28	Baffle
2L	Spiral Miter Gear or Bevel Pinion (LH)	14	Output Bearing Carrier (C/E)	29	Vented Oil Filler
3	Input Shaft	15	Oil Seal, Output	30	Socket Pipe Plug
4	Output Shaft-Double Proj	16	Hex Head Capscrews	31	Locknut-R & VR 231
5	Output Shaft-Single Proj	17	Bearing Cup, Input	32	Socket Head Capscrew
6	Output Shaft-Single Proj	18	Bearing Cone, Input	33	Bearing Cup, Input
7	Key	19	Input Shaft Washer	34	Bearing Cone, Input
8	Key, Gear	21	Input Shaft Hex Hd Capscrew		
8A	Key, Gear or Pinion	22	Input Shaft Bearing Carrier		
9	Bearing Cone, Output	23	Input Bearing Retainer		
10	Bearing Cup, Output	24	Oil Seal, Input		

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 340 & 341. If the application is not listed, obtain service factor from Service Factor Chart on page 341.
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

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R1000 SERIES - ITEM CODES	300
MOUNTINGS / LUBRICATION	301
SELECTION CHARTS.....	302-304
DIMENSIONS	305-311

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					
	1.35		61172	61214	61226			61228		
	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 301.

R1000 SERIES BEVEL GEAR DRIVES — FEATURES / MOUNTINGS

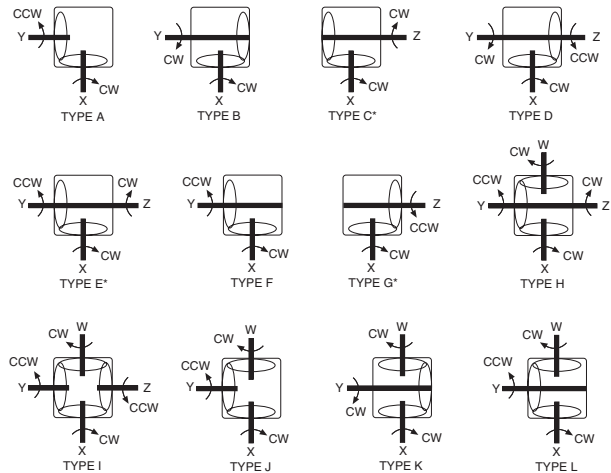
MOUNTINGS

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.

- 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.



* **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.

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	Lubricant AGMA No.	ISO Viscosity Grade No.
-30° to 225°F ‡ (-34°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

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

SELECTION CHART – RATINGS FOR SERVICE FACTOR (1.0) *R1200 SERIES*

			R1200**		R1211 R1215 R1216		R1214	
RATIO	INPUT RPM	OUTPUT RPM	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.

R1000 SERIES BEVEL GEAR DRIVES

SELECTION CHART – RATINGS FOR SERVICE FACTOR (1.0) *R1400 SERIES*

	RATIO	INPUT RPM	OUTPUT RPM	R1412 R1416		R1413 R1414	
				OUTPUT		OUTPUT	
				HP	TORQUE*	HP	TORQUE*
REDUCER	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
	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.

R1000 SERIES BEVEL GEAR DRIVES

SELECTION CHART — RATINGS FOR SERVICE FACTOR (1.0) *R1500 SERIES*

			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

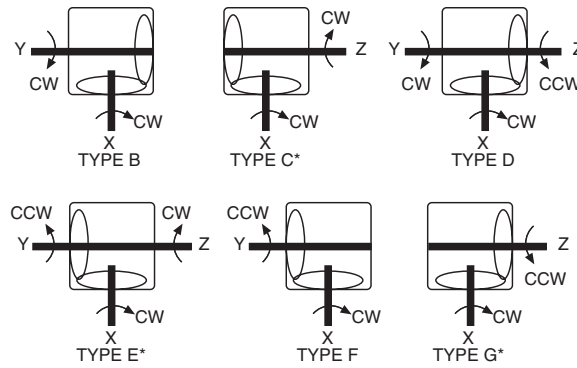
* Torque (lb-ins)
Input Horsepower approximately 5% higher than output horsepower shown above.

R1000 SERIES BEVEL GEAR DRIVES — DIMENSIONS

DIMENSIONS — R1200 SERIES

R1200 SERIES

ASSEMBLY TYPES

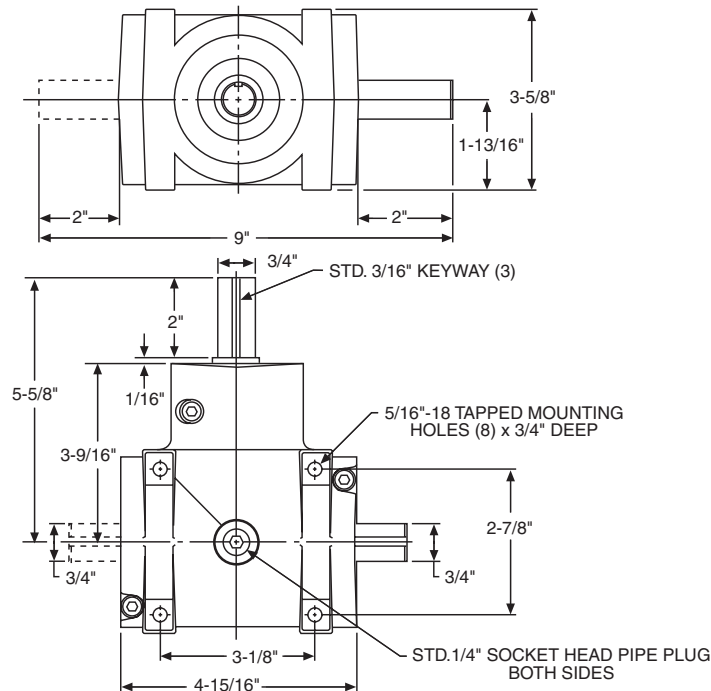


* Types "C," "E" and "G" can be accomplished by rotating types "B," "D" and "F" respectively 180°. No change in plugs are required.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

Approx. Wt. — 7 Lbs.

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.

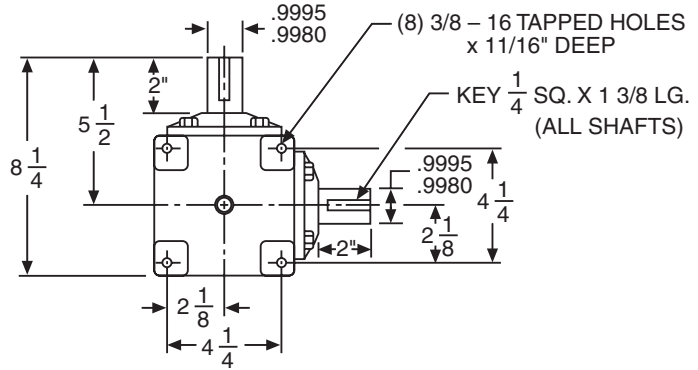
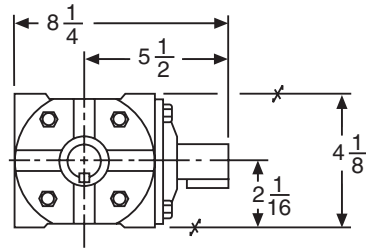
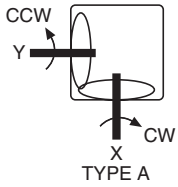


R1000 SERIES BEVEL GEAR DRIVES — DIMENSIONS

DIMENSIONS – R1211 SERIES

R1211 SERIES R1214 SERIES

ASSEMBLY TYPES

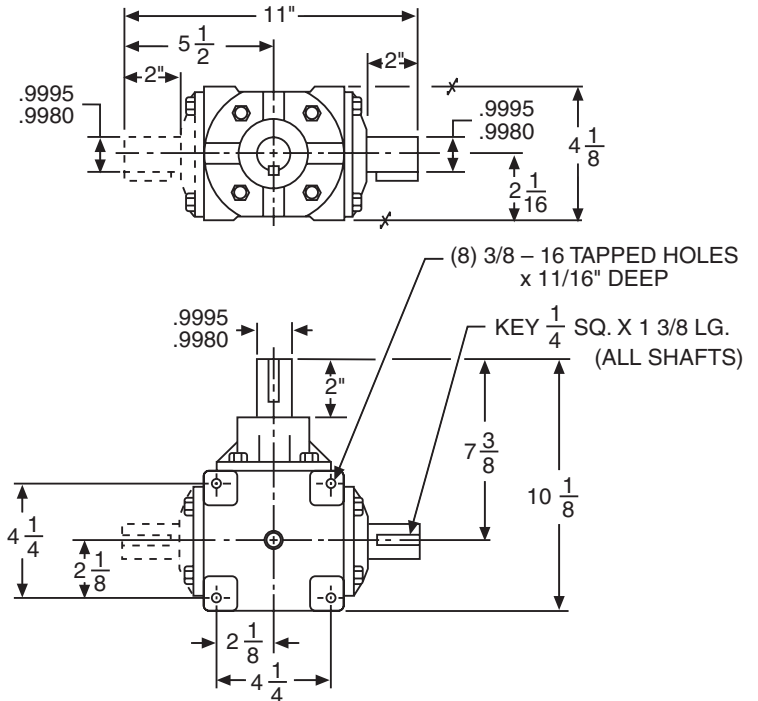
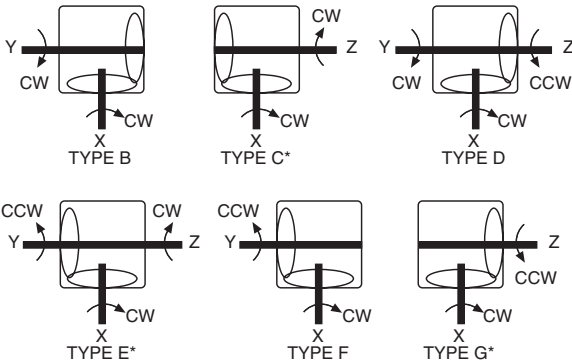


Oil Capacity – 16 ozs.
Approx. Wt. – 22 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

DIMENSIONS – R1214 SERIES

ASSEMBLY TYPES



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.



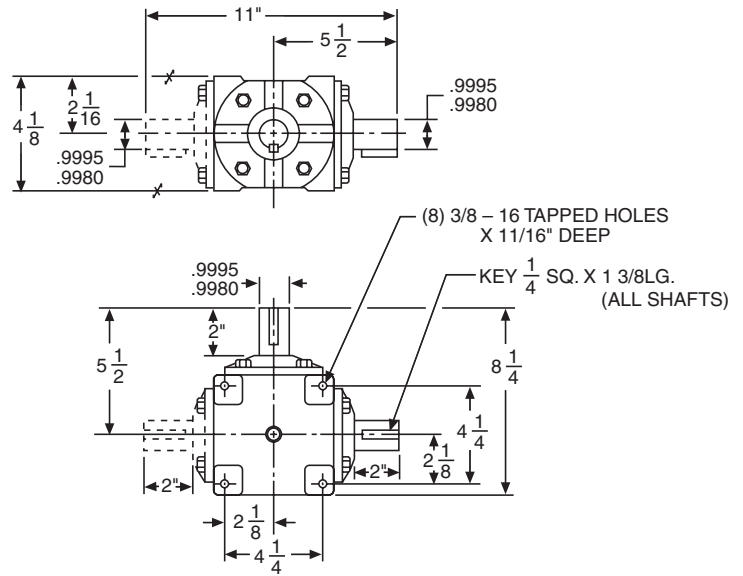
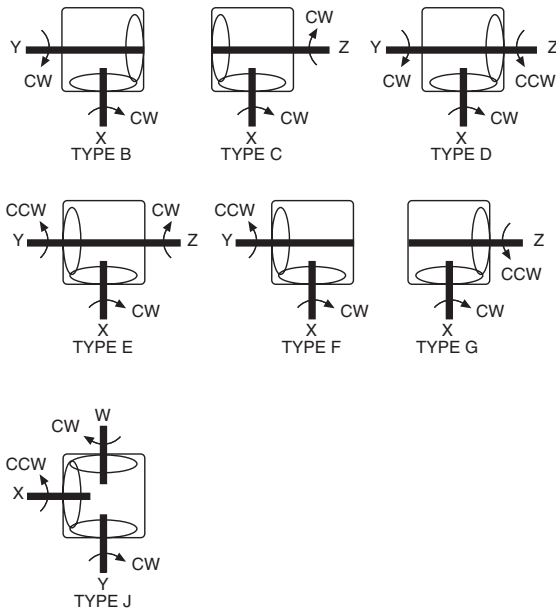
MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

R1000 SERIES BEVEL GEAR DRIVES – DIMENSIONS

DIMENSIONS – R1215 SERIES

R1215 SERIES R1216 SERIES

ASSEMBLY TYPES



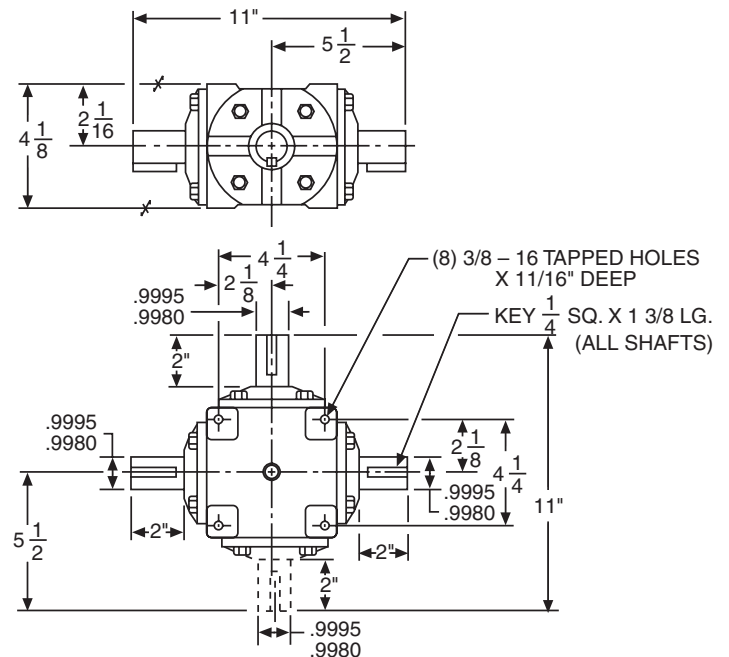
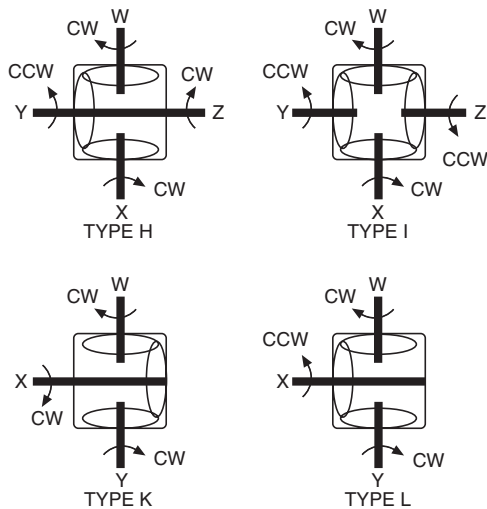
Oil Capacity – 16 ozs.

Approx. Wt. – 27 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

DIMENSIONS – R1216 SERIES

ASSEMBLY TYPES



Oil Capacity – 16 ozs.

Approx. Wt. – 28 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.

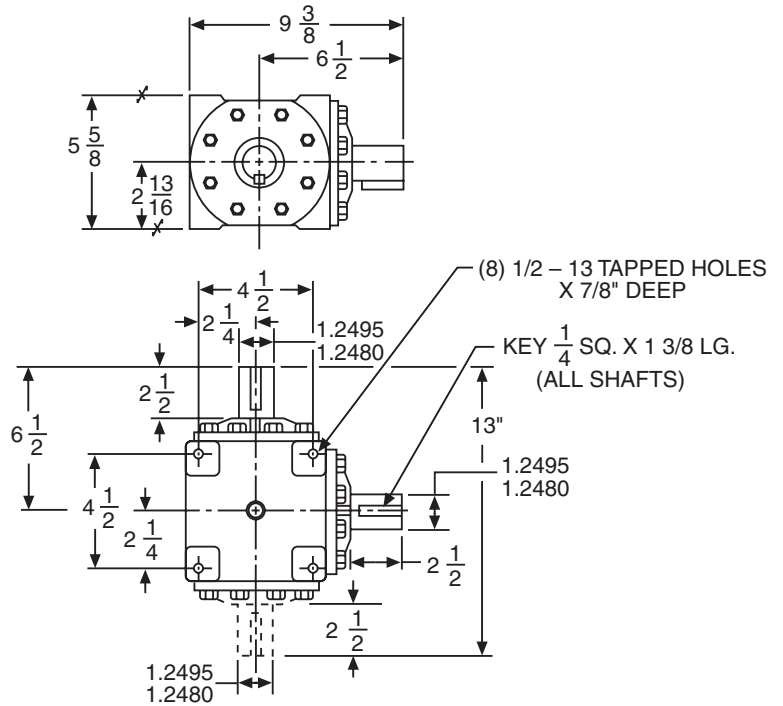
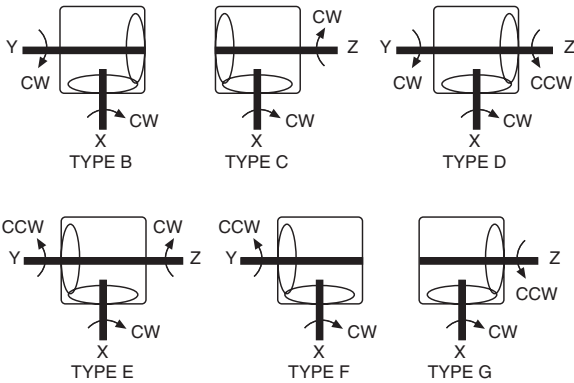
The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 SERIES BEVEL GEAR DRIVES — DIMENSIONS

DIMENSIONS – R1412 SERIES

R1412 SERIES R1413 SERIES

ASSEMBLY TYPES

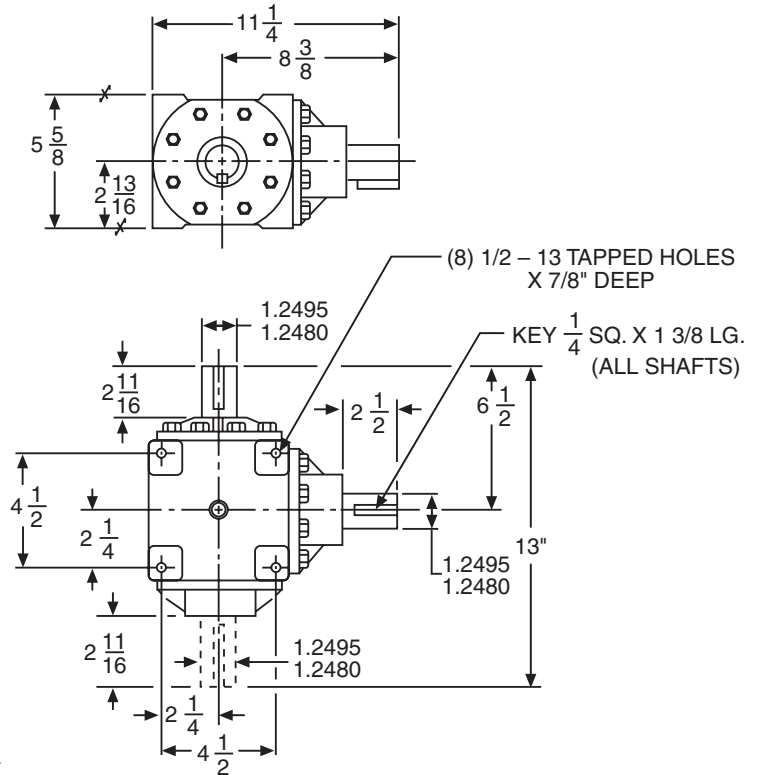
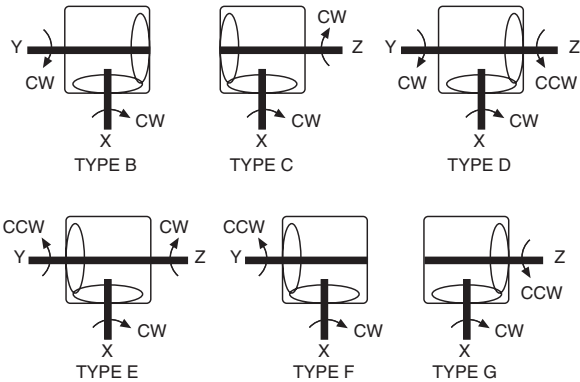


Oil Capacity – 24 ozs.
Approx. Wt. – 39 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

DIMENSIONS – R1413 SERIES

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.

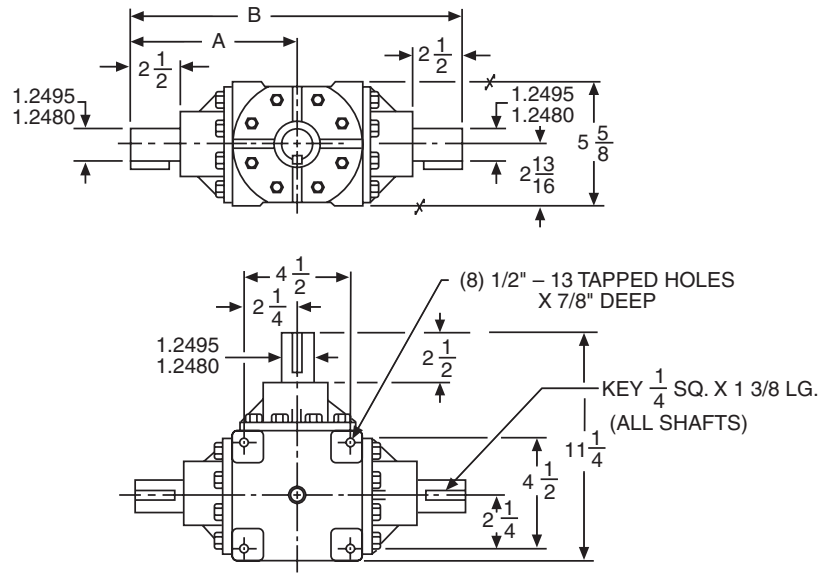
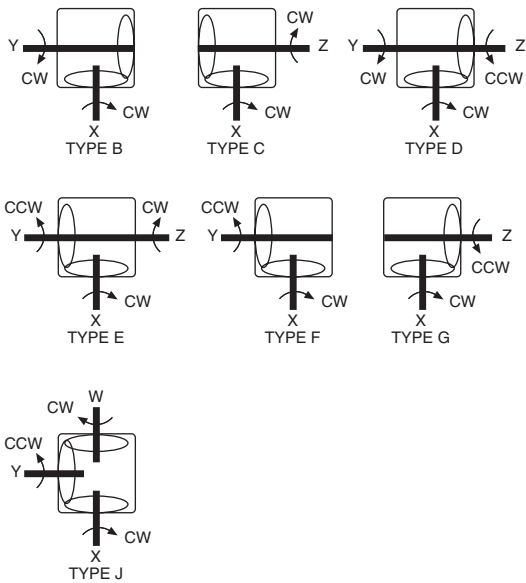
The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 SERIES BEVEL GEAR DRIVES – DIMENSIONS

DIMENSIONS – R1414 SERIES

R1414 SERIES R1416 SERIES

ASSEMBLY TYPES



Note: Type J illustrated.

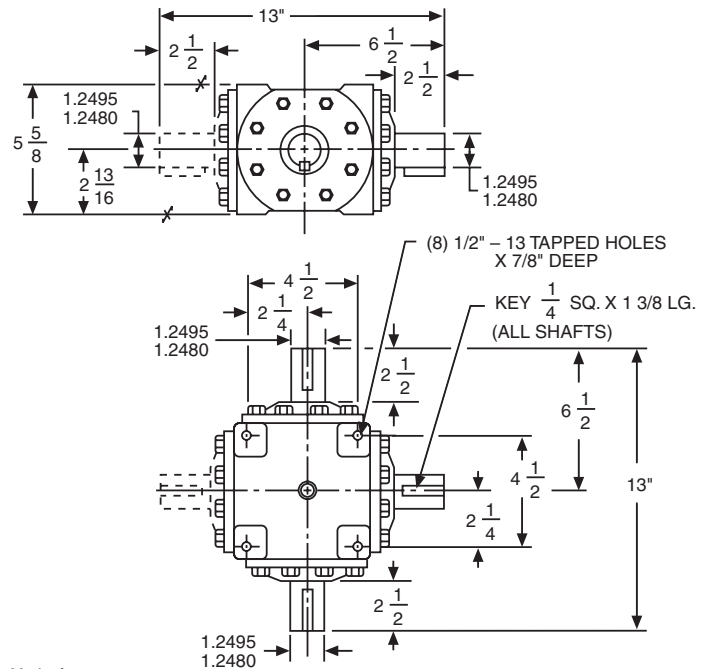
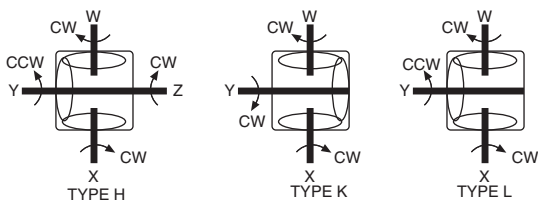
Oil Capacity – 32 ozs.
Approx. Wt. – 50 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

A	B	MTG. TYPE
8 3/8	16 3/4	J
6 1/2	13	All Others

DIMENSIONS – R1416 SERIES

ASSEMBLY TYPES



Oil Capacity – 24 ozs.
Approx. Wt. – 50 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

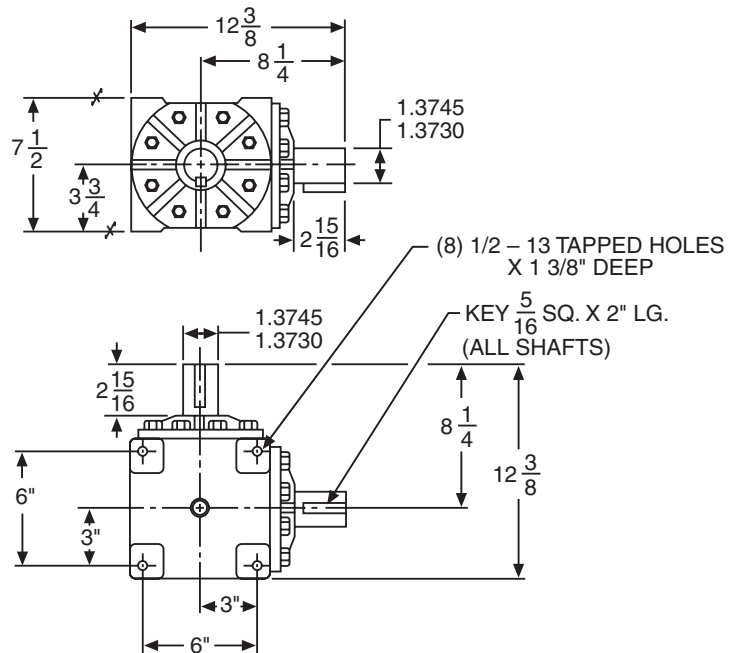
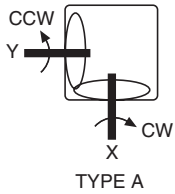
CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions.
The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 SERIES BEVEL GEAR DRIVES – DIMENSIONS

DIMENSIONS – R1511 SERIES

R1511 SERIES R1514 SERIES

ASSEMBLY TYPES

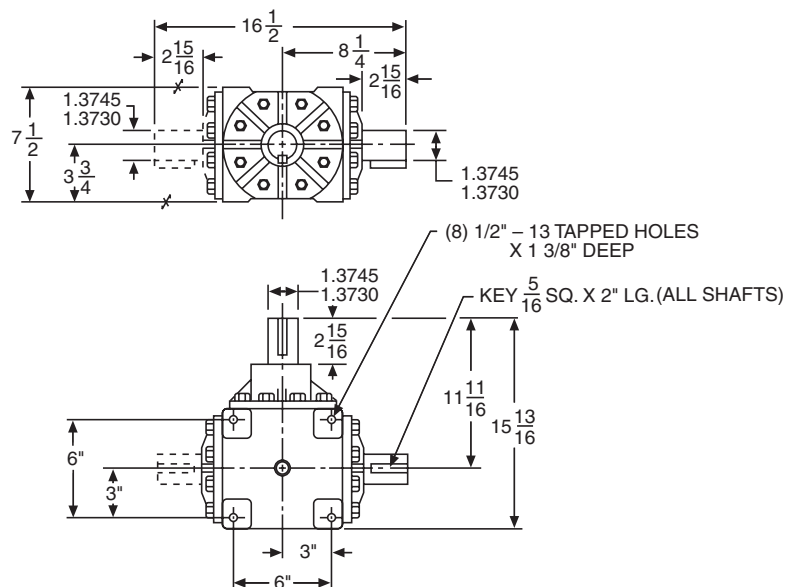
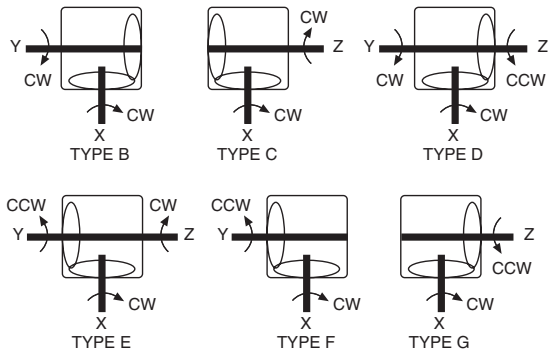


Oil Capacity – 64 ozs.
 Approx. Wt. – 73 Lbs.

Note: On other than 1:1 ratio, pinion (small gear) will always be on X shaft.

DIMENSIONS – R1514 SERIES

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.

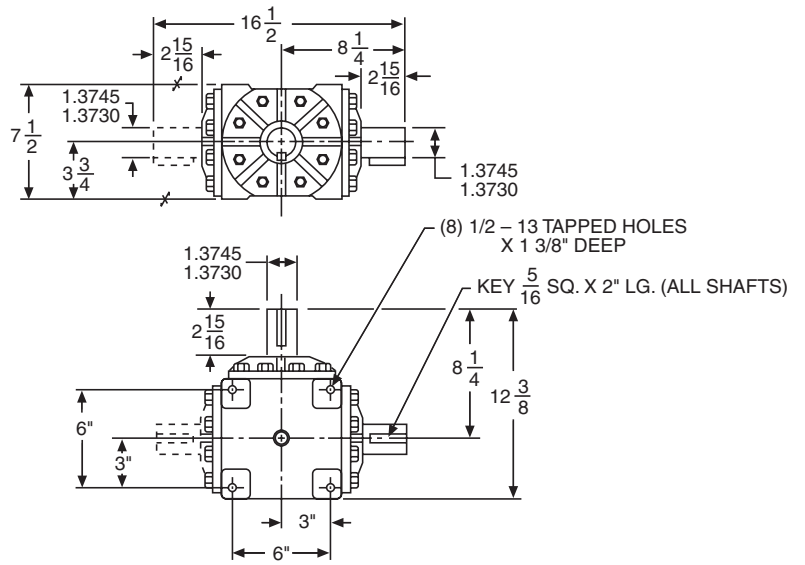
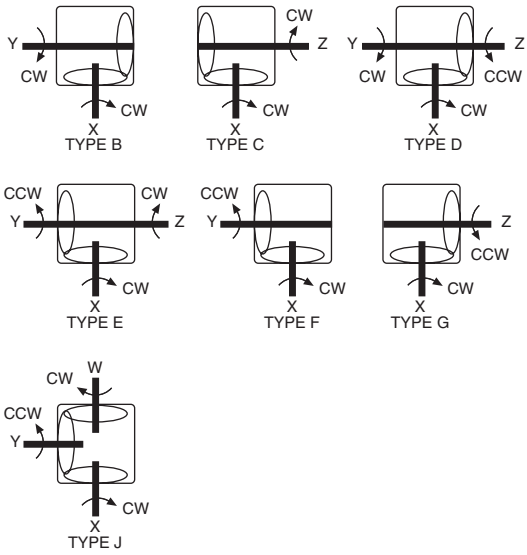
CW and CCW notations indicate direction of shaft rotation when facing outer end of shaft extensions.
 The letters W, X, Y, Z are used to designate specific shaft extensions when ordering boxes with special shafts.

R1000 SERIES BEVEL GEAR DRIVES – DIMENSIONS

DIMENSIONS – R1515 SERIES

R1515 SERIES R1516 SERIES

ASSEMBLY TYPES



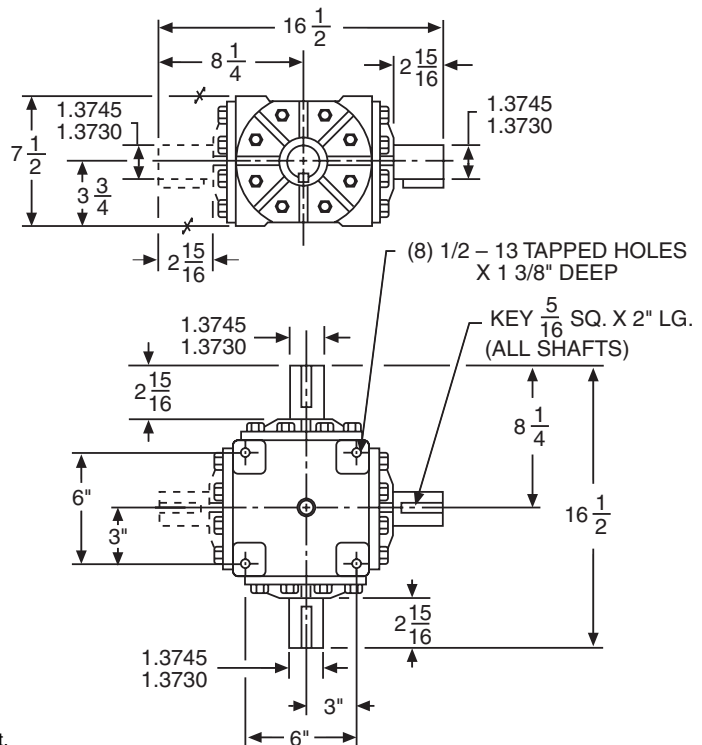
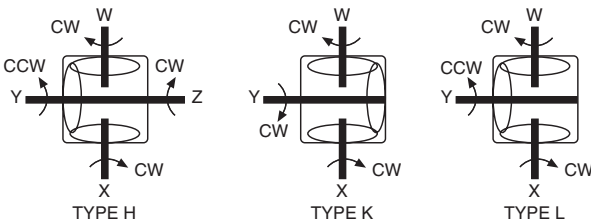
Oil Capacity – 72 ozs.

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.

DIMENSIONS – R1516 SERIES

ASSEMBLY TYPES



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.

NOTES



N



PLANETARY RATIO MULTIPLIER

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

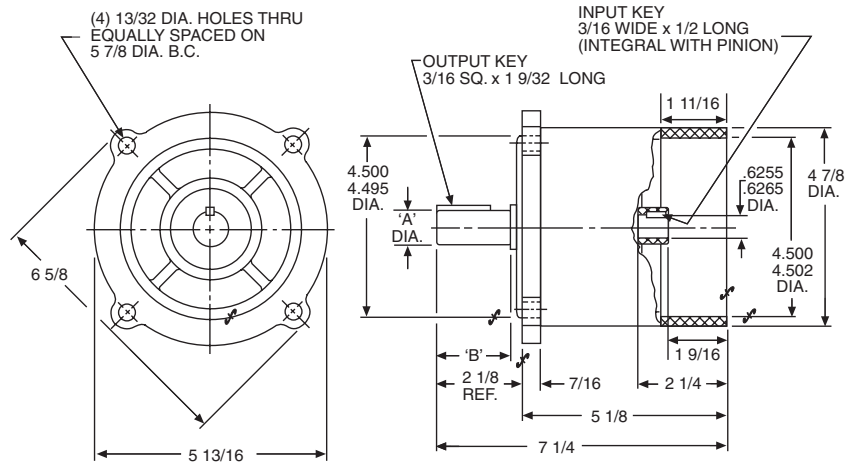
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PLANETARY RATIO MULTIPLIER

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

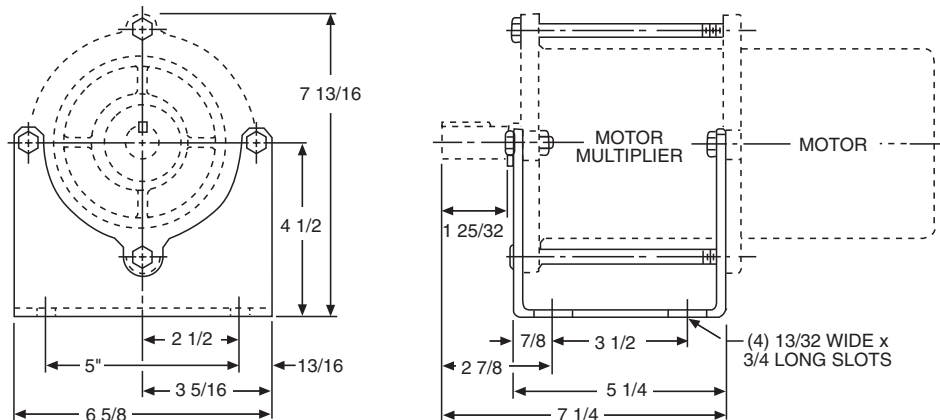


ALL DIMENSIONS IN INCHES

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		

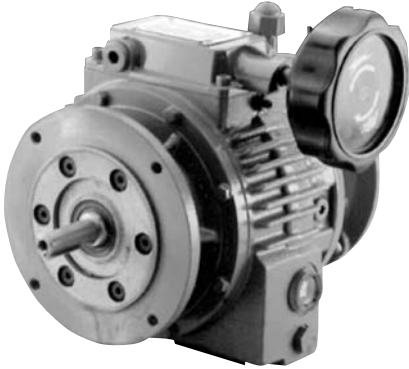
PLANETARY RATIO MULTIPLIER

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	FSP5	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

MECHANICAL VARIABLE SPEED DRIVES

MVS SERIES



Boston Gear's Mechanical Variable Speed (MVS) Drives provide an alternative means of varying the output speed of an electric motor and/or speed reducer. These units are designed with a NEMA C-Face input and output to allow the easy installation between a speed reducer and motor. The MVS Series offers a variable speed range of 200 to 1200 RPM (6:1) when used with a 1750 RPM motor.

FEATURES

- *Input HP Range – 1/4 to 10 (At 1750 RPM Input)*
- *Speed Range – 6:1*
- *Precise Operation*
- *Standard Double NEMA C-Face Mountings*
- *Quiet, Smooth Operation*
- *Extended Life Lubricant Included with Each Unit*
- *High Performance, Low Wear Design*
- *Handwheel Available with Optional Turns Indicator*



Bost-Kleen™ Wash Down

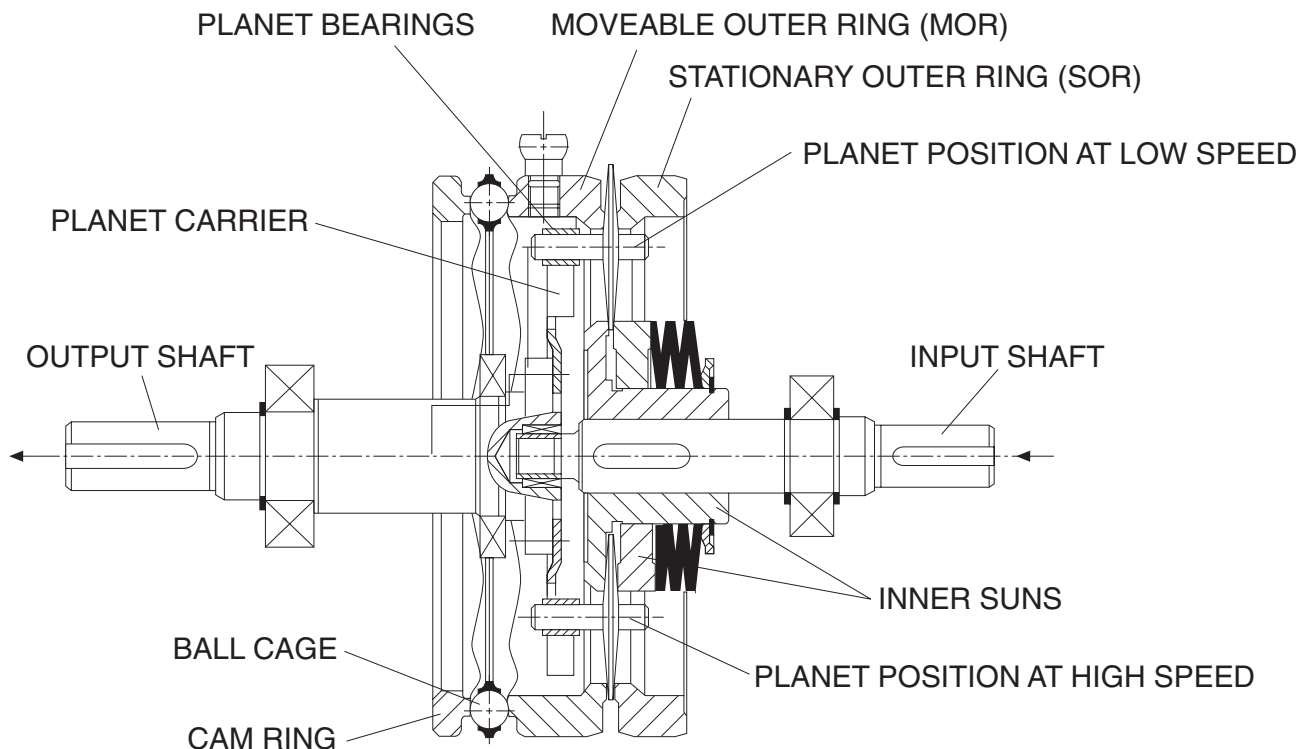
- **Includes all the standard MVS Series features**
- **Durable white epoxy finish**
- **Washable & Scrubbable**
- **Corrosion resistant**

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MECHANICAL VARIABLE SPEED DRIVES

PRINCIPLE OF OPERATION



Operation

The input shaft drives the inner sun. The two halves of the inner suns are compressed together with cup springs creating force against the planets. The planets also contact the outer rings which are fixed within the housing. The axles of the planets are connected to the planet carrier and output shaft by bearings fitted into slots in the planet carrier. When the input shaft turns the inner sun, the planets rotate against the outer rings, thereby causing the planet carrier and output shaft to rotate.

How Speed Changes

Turning the handwheel causes the moveable outer ring (MOR) to turn. The MOR and the fixed cam ring are separated by the ball cage. The double cam action between the MOR and the fixed cam ring causes the MOR to shift axially as it rotates. The tapered planets are forced into the inner sun as the MOR shifts toward the stationary outer ring (SOR), or allows the spring action of the inner suns to force the planets away from the center line as the MOR shifts away from the SOR. Slots in the planet carrier allow the planets to move radially closer to or further from the center line. This movement, relative to the center line, alters the effective pitch diameter of the planets and the output speed. The drive may be shifted to low speed without shaft rotation, but the drive must be rotating in order to shift to a higher speed.

MECHANICAL VARIABLE SPEED DRIVES

SELECTION PROCESS

REQUIRED INFORMATION

1. Power (HP) or Torque (LB. IN.) to be transmitted.
2. Range of speed required.
3. Average hours of operation per day.
4. Type of load.
5. Service Factor per Table below.

SELECTION PROCEDURE

1. Select Service Factor

SERVICE FACTORS			
Load Characteristics	Average Operating Hours/Day		
	Up to 8	8-16	16-24
Uniform load and continuous operation No reversal Light inertia load	1.0	1.1	1.2
Medium shock, intermittent operation Frequent start and frequent reversal Medium inertia load	1.3	1.4	1.5
Heavy shock, intermittent operation Frequent start and frequent reversal	1.7	1.8	1.9

2. Calculate Design Torque

The design torque can be obtained by multiplying the torque to be transmitted by the appropriate service factor given in the Table.

Design Torque = T x Service Factor

If the power (HP) to be transmitted is known in advance, the design torque can be calculated by the following formulas:

$$T = \frac{63025 \times \text{HP}}{N}$$

T = Torque to be transmitted (LB. IN.)

HP = Power to be transmitted (HP)

N = Output speed (RPM) at highest speed for constant torque load and lowest speed for constant horsepower

3. Select Unit Size.

Select the most suitable size to ensure that the allowable output torque will always be greater than the design torque. Size selection may be obtained from the Selection Chart or from the selection guide at right.

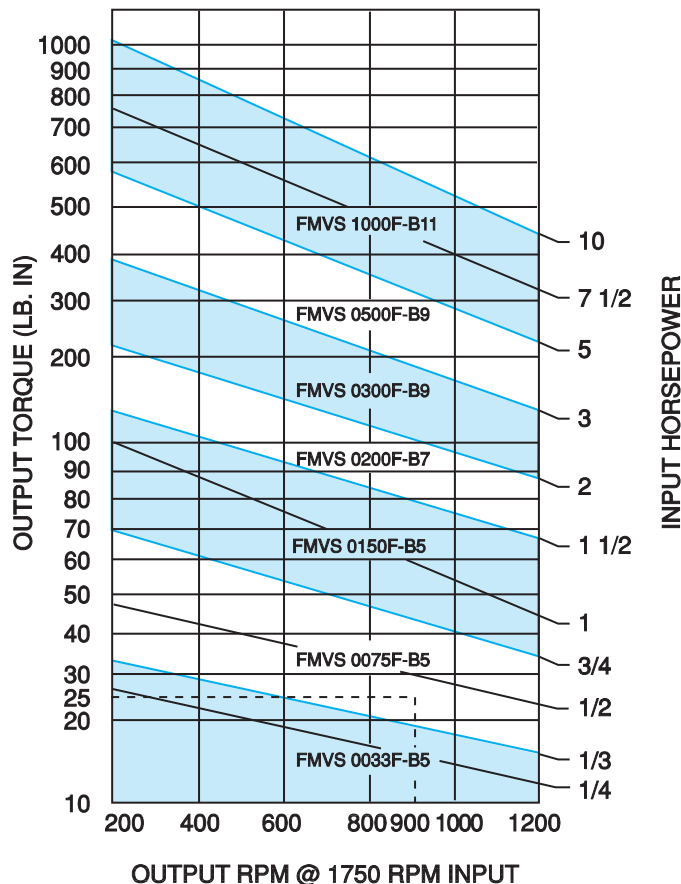
4. Check Overhung Load.

When coupling the shafts of the unit with a motor or the driven machine, check the allowable thrust and overhung load, not to exceed values listed in the Table.

Permissible Loads (Lbs.)		
Model	Overhung	Thrust
FMVS0033F-B5	55	85
FMVS0075F-B5	110	155
FMVS0150F-B5	165	265
FMVS0200F-B7	310	380
FMVS0300F-B9	400	515
FMVS0500F-B9	400	515
FMVS1000F-B11	785	785

Overhung load is at centerline of the output shaft projection and with no thrust. When there is combined radial and thrust loading developed, the maximum allowable thrust load must NOT EXCEED 20% of the thrust load rating shown above.

SELECTION GUIDE



Using determined output torque and RPM, select desired unit.

EXAMPLE:

25 LB. IN. output torque at 900 RPM, select FMVS0075F-B5 using 1/2 Horsepower motor.

MECHANICAL VARIABLE SPEED DRIVES

SELECTION CHART

ORDER BY CATALOG NUMBER OR ITEM CODE

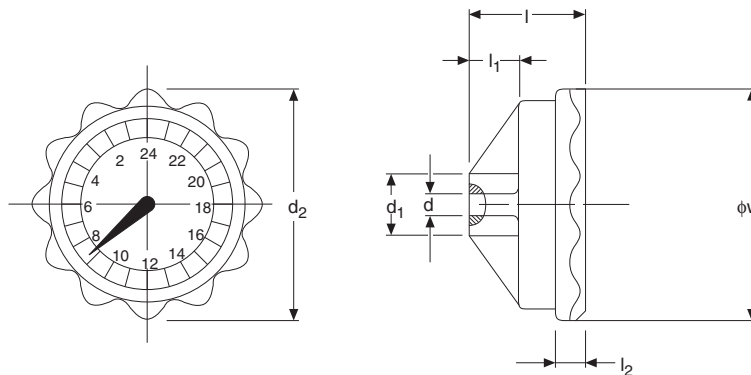
Catalog Number	Item Code	NEMA Mounting	Bore Code	Motor HP (1750 RPM)	Output @ 1750 RPM Input				
					Speed Range (RPM)		Torque (lb. in.)		Max. HP†
					Max.	Min.	Max. RPM	Min. RPM	
FMVS0033F-B5	48114	56C	B5	1/4	1155	190	12	27	.22
				1/3	1155	190	16	35	.29
FMVS0075F-B5	48115	56C	B5	1/2	1200	200	22	47	.42
				3/4	1200	200	33	70	.63
FMVS0150F-B5	48116	56C	B5	1	1175	200	44	105	.82
				1-1/2	1175	200	66	140	1.2
FMVS0200F-B7	48117	145TC	B7	2	1140	200	90	210	1.6
FMVS0300F-B9	48118	184TC	B9	3	1200	210	135	390	2.6
FMVS0500F-B9	48119	184TC	B9	5	1200	210	220	566	4.2
FMVS1000F-B11	48120	213TC	B11	7-1/2	1200	235	330	773	6.3
				10	1200	235	440	1030	8.4

MOTORS NOT INCLUDED, MUST BE ORDERED SEPARATELY.

† Speed reducer selection should be predicated on maximum output HP and minimum RPM ratings of MVS Series Drive.

Washdown Application - All units can be supplied painted with a durable white epoxy finish for washdown applications - Order with a BK Prefix i.e.: BKFMVS0075F-B5

Optional Handwheel with Turns Indicator — Note: Units are standard with a non-indicator handwheel.



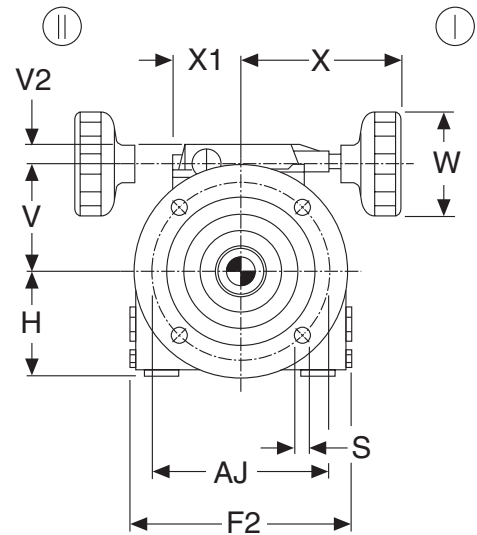
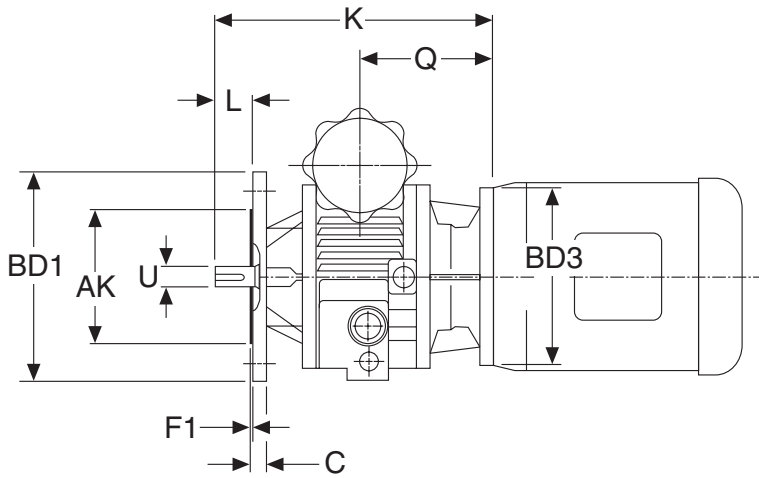
ALL DIMENSIONS IN INCHES

Catalog Number	Item Code	For Use With	d +0.001	d ₁	d ₂	l	l ₁	l ₂	w	Ratio
FMVSIND 33	48121	0033, 0075	0.315	0.79	2.05	1.69	0.55	0.75	2.76	12/18*
FMVSIND 500	48122	0150-0500	0.394	1.18	3.43	2.17	0.71	0.98	4.13	24
FMVSIND 1000	48123	1000	0.591	0.98	3.43	2.17	0.91	0.59	6.30	36

* 12=0033
18=0075

MECHANICAL VARIABLE SPEED DRIVES

DIMENSIONS



Mounting (I) Standard, Mounting (II) can be accomplished by easily rotating handwheel assembly

NOTE: Motor supplied separately

ALL DIMENSIONS IN INCHES

Type	Motor Frame Size	Output Flange	BD1	BD3	AK +.000 -.003	C	U +.0000 -.0005	AJ	F1	F2
FMVS0033F-B5	56C	56C	6.50	6.50	4.500	.39	.6250	5.875	.125	5.91
FMVS0075F-B5	56C	56C	6.50	6.50	4.500	.39	.6250	5.875	.125	6.89
FMVS0150F-B5	56C	56C	6.50	6.50	4.500	.39	.6250	5.875	.125	8.46
FMVS0200F-B7	145TC	145TC	6.50	6.50	4.500	.47	.8750	5.875	.125	9.96
FMVS0300F-B9	184TC	184TC	9.00	9.00	8.500	.39	1.1250	7.250	.276	12.01
FMVS0500F-B9	184TC	184TC	9.00	9.00	8.500	.39	1.1250	7.250	.276	12.01
FMVS1000F-B11	215TC	215TC	9.00	9.00	8.500	.71	1.3750	7.250	.276	14.92

ALL DIMENSIONS IN INCHES

Type	H	K	L	Q	S	V	V2	W	X	X1	Weight (lbs)*
FMVS0033F-B5	2.56	8.68	1.875	4.23	3/8-16	3.27	.55	2.76	4.13	1.69	19.8
FMVS0075F-B5	3.27	9.53	1.875	4.65	3/8-16	3.39	.55	2.76	4.13	1.69	39.6
FMVS0150F-B5	3.86	10.83	1.875	5.04	3/8-16	4.06	.67	4.13	5.98	2.48	57.2
FMVS0200F-B7	4.80	12.44	2.250	5.67	3/8-16	4.84	.67	4.13	5.98	2.48	88.0
FMVS0300F-B9	5.71	15.59	2.750	7.40	1/2-13	5.87	.67	4.13	5.98	2.48	160.6
FMVS0500F-B9	5.71	15.59	2.750	7.40	1/2-13	5.87	.67	4.13	5.98	2.48	160.6
FMVS1000F-B11	6.93	16.55	2.756	8.27	1/2-13	7.48	1.02	6.30	7.68	4.37	286.0

* without motor

NOTES

P



MOTORS AND ADJUSTABLE SPEED DRIVES



Boston Gear's Ratiotrol controllers, companion motors and other Boston power transmission products combine to provide one of the most extensive systems available today.

Utilizing the latest electronic developments, these components have been designed to provide maximum capacity and flexibility in horsepower ratings, performance and available options.

They are readily adapted to existing machinery as well as being ideally suited for incorporation in original equipment. Choose from a variety of AC or DC motors and controllers.

This catalog provides complete descriptions, charts and instructions for selecting a variety of systems

using stock components. However, if your application needs cannot be readily solved with this selection, contact a Boston Gear customer service representative or your local Boston Gear distributor for an even wider variety of components.

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.

For a complete listing of Boston Gear Electrical Products, refer to the Electrical Products Catalog.

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NEMA C-FACE MOTORS

CATALOG NUMBERING SYSTEM

AC MOTORS

HP	VOLTAGE	ENCL.	SUFFIX	MANUFACTURER	SERIES DESIGNATION	VOLTAGE	HP	ENCLOSURE	MANUFACTURER
A - 1/20	R - 115/230-1-60	T - TENV	B - BRAKE	B = BALDOR	PM - PERMANENT	9 - 90VDC	16 - 1/6	T, AT - TENV	B=BALDOR
AA - 1/12	S - 115-1-60	TF - TEFC	35 - 3450 RPM	W = WEG	MAGNET	18 - 180VDC	25 - 1/4	TF,ATF - TEFC	Blank = Boston Gear
C - 1/6	T - 230-1-60		11 - 1150 RPM				33 - 1/3		
D - 1/4	U - 230/460-3-60						50 - 1/2		
E - 1/3	Y - 575-3-60						75 - 3/4		
F - 1/2							100 - 1		
G - 3/4							150 - 1-1/2		
H - 1							200 - 2		
J - 1-1/2							300 - 3		
K - 2							500 - 5		
L - 3									
M - 5									
N - 7-1/2									
P - 10									
R - 15									
S - 20									

PM MOTORS

Letters after dash indicate manufacturer:

B = Baldor

W = WEG

Blank = Boston Gear

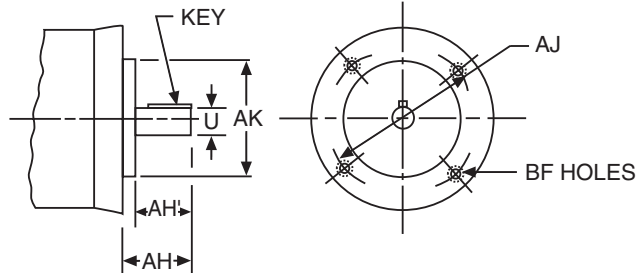
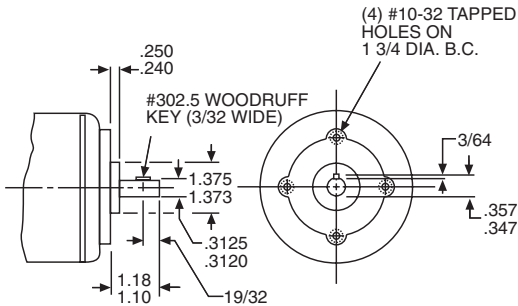
CATALOG NUMBER EXAMPLE: FUTF-W
1/2 HP, 230/460-3-60, TEFC, BOSTON GEAR

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 MTG.	U	AK	MAX. AH	MAX. AH'	KEY		AJ	BF
						SQ.	LG.		
B4	42CZ	.5000	3.000	1 5/16	—	1/8	3/4	3 3/4	1/4-20
		.4995	2.997						
B5	56C	.6250	4.500	2 5/32	—	3/16	1 3/8	5 7/8	3/8-16
		.6245	4.497						
B7	182C	.8750	4.500	2 5/32	—	3/16	1 3/8	5 7/8	3/8-16
	184C								
	143TC 145TC								
B9	213C	1.1250	8.500	—	2 25/32	1/4	1 3/4	7 1/4	1/2-13
	215C								
	182TC 184TC								
B11	254UC	1.3750	8.500	—	3 17/32	5/16	2 3/8	7 1/4	1/2-13
	256UC								
	213TC 215TC								
B13	254TC	1.6250	8.500	—	3 13/16	3/8	2 7/8	7 1/4	1/2-13
	256TC	1.6240	8.497						

Flanged reducers are designed for use with motors having NEMA "C" face and shaft dimensions as shown. AH and AH' must not be exceeded.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
QRO (442) 1 95 72 60 ventas@industrialmagza.com

ADJUSTABLE SPEED CONTROL SYSTEMS - QUICK SELECTION CHART

HP (MOTOR)	RATIOCONTROL CONTROLLERS		RPM † (RANGE)	TORQUE (MAXIMUM) (LB. IN.)	FLANGED REDUCERS**	MOTORS	
	DC †					AC †	DC †
1/6	RBA2S		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		
			58-2	132	F713-30		
				139	F710-30		
			44-1.5	128	F710-40		
				178	F713-40		
			35-1.2	120	F710-50		
210	F715-50						
29-1	223	F718-60					
1/4	RBA2S		350-12	41	F710-5	ADUTF* DUTF	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	RBA2S		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	RBA2S			
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	RBA2S					350-12	123
			175-6	240	F715-10		
			117-4	348	F715-15		
			88-3	443	F718-20		
			70-2.5	526	F721-25		

* NEMA 42CZ Frame Motors.

** 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 SYSTEMS - QUICK SELECTION CHART

HP (MOTOR)	RATIOTROL CONTROLLERS		RPM † (RANGE)	TORQUE (MAXIMUM) (LB. IN.)	FLANGED REDUCERS**	MOTORS	
	DC †					AC †	DC †
3/4 (CONT.)	RBA2S		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	RBA2S		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	RBA2S		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	RBA2S		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	VES3S		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	VES5S		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

ORDER BY CATALOG NUMBER OR ITEM CODE

HP	NEMA MTG.	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	—	—	CR-W	65221	CU-W	65237
	56C	B5	CRT-B	85775	CUT-B	85776	—	—	CR-B	85773	CU-B	85774
1/4	56C	B5	CRTF-B	85777	CUTF-B	85778	—	—	—	—	—	—
	42CZ	B4	ADRTF-W	65325	ADUT-W	65374	—	—	—	—	—	—
	42CZ	B4	ADRTF-B	69726	ADUTF-B	69729	—	—	—	—	—	—
	56C	B5	DRTF-W	65326	DUTF-W	65380	—	—	DR-W	65222	DU-W	65238
DRTF-B			66199	DUTF-B	66205	DYTF-B	66208	DR-B	66109	DU-B	66115	
DSTF-B**			66202	—	—	—	—	DS-B**	66112	—	—	
—	—	—	—	—	—	—	—	DS-W**	65220	—	—	
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	EYTF-W	65454	ER-W	65223	EU-W	65239
56C	B5	ERTF-B	66211	EUTF-B	66214	EYTF-B	66217	ER-B	66121	EU-B	66124	
		FRTF-W	65350	FUTF-W	65404	FYTF-W	65455	FR-W	65224	FU-W	65241	
1/2	56C	B5	FRTF-B	66219	FUTF-B	66223	FYTF-B	66226	FR-B	66130	FU-B	66133
			GRTF-W	65351	GUTF-W	65405	GYTF-W	65457	—	—	GU-W	65243
3/4	56C	B5	GRTF-B	66228	GUTF-B	66231	GYTF-B	66831	GR-B	66139	GU-B	66142
			HRTF-5/8-W	65354	HUTF-5/8-W	65406	—	—	—	—	HU-5/8-W	65246
			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	143TC	B7	—	—	HUTF-W	65412	HYTF-W	65460	—	—	HU-W	65249
			HRTF-B	66234	HUTF-B	66237	HYTF-B	66240	HR-B	66145	HU-B	66148
1-1/2	56C	B5	—	—	JUTF-5/8-W	65407	—	—	—	—	—	—
			—	—	JUTF-5/8-B	19784	—	—	—	—	—	—
2	145TC	B7	JRTF-B	66243	JUTF-W	65437	JYTF-W	65475	JR-B	66154	JU-W	65251
			—	—	JUTF-B	66246	JYTF-B	66249	—	—	JU-B	66157
3	56C	B5	—	—	KUTF-5/8-W	65440	—	—	—	—	—	—
			—	—	KUTF-5/8-B	19785	—	—	—	—	—	—
5	182TC	B9	—	—	KUTF-W	65445	—	—	—	—	KU-W	65256
			—	—	KUTF-B	66252	KYTF-B	66255	—	—	KU-B	66163
7-1/2	184TC	B9	—	—	LUTF-W	65446	—	—	—	—	LU-W	65257
			—	—	LUTF-B	66258	LYTF-B	66260	—	—	LU-B	66166
10	213TC	B11	—	—	MUTF-W	65448	—	—	—	—	MU-W	65258
			—	—	MUTF-B	66262	MYTF-B	66264	—	—	MU-B	66170
15	215TC	B11	—	—	NUTF-B	66266	—	—	—	—	—	—
			—	—	PUTF-B	66270	—	—	—	—	—	—
20	254TC	B13	—	—	RUTF-B	66274	—	—	—	—	—	—
			—	—	SUTF-B	66278	—	—	—	—	—	—

* T = TENV – Totally Enclosed, Non-ventilated.

** 115 Volt only.

TF = TEFC – Totally Enclosed, Fan Cooled.

† See Page 324 for Bore Code explanation.

Letters after dash indicate manufacturer — W = WEG.; B = Baldor

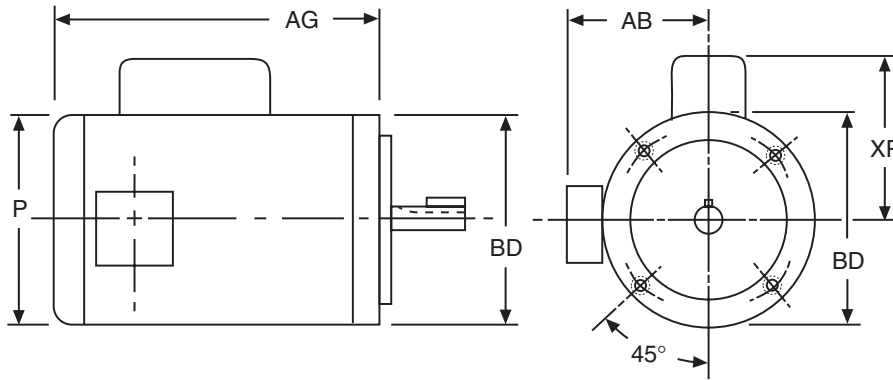
FOR DIMENSIONS OF THESE MOTORS, SEE PAGES 328 AND 329
 FOR OTHER AVAILABLE MOTORS, CONSULT FACTORY OR REFER TO
 BOSTON GEAR'S COMPLETE ELECTRICAL PRODUCTS CATALOG.



MEX (55) 53 63 23 31 MTY (81) 83 54 10 18
 QRO (442) 1 95 72 60 ventas@industrialmagza.com



AC OPEN DRIPPROOF MOTOR DIMENSIONS

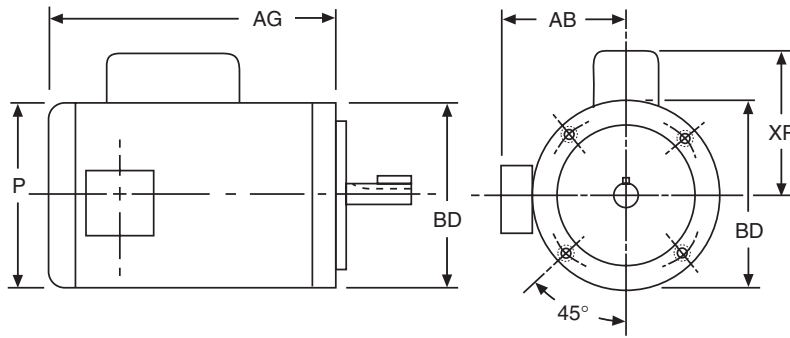


ALL DIMENSIONS IN INCHES

HP	NEMA MTG.	BORE CODE	-W (WEG) MOTORS							HP	NEMA MTG.	BORE CODE	-B (BALDOR) MOTORS						
			CATALOG NUMBER	ITEM CODE	AB	AG	BD	XP	P				CATALOG NUMBER	ITEM CODE	AB	AG	BD	XP	P
1/20	SPL	—	—	—	—	—	—	—	—	1/20	SPL	SPL	AST-B	65403	—	7.62	4.51	—	4.62
1/12	SPL	—	—	—	—	—	—	—	—	1/12	SPL	SPL	AAST-B	80994	—	7.62	4.51	—	4.62
1/6	56C	B5	CR-W	65221	—	7.58	5.75	3.80	5.71	1/6	56C	B5	CR-B	85773	4.41	8.04	5.87	4.34	5.69
	56C	B5	CU-W	65237	—	8.25	6.54	—	6.54		56C	B5	CU-B	85774	4.41	8.04	5.87	—	5.69
1/4	56C	B5	DR-W	65222	—	7.58	5.75	3.80	5.75	1/4	56C	B5	DR-B	66109	4.41	8.04	5.87	4.34	5.69
	56C	B5	DS-W	65220	—	7.58	5.75	3.80	5.75		56C	B5	DS-B	66112	4.41	8.04	5.87	4.34	5.69
	56C	B5	DU-W	65238	—	8.25	6.54	—	6.54		56C	B5	DU-B	66115	4.41	8.04	5.87	—	5.69
1/3	56C	B5	ER-W	65223	—	8.49	5.75	3.80	5.75	1/3	56C	B5	ER-B	66121	4.41	8.04	5.87	4.34	5.69
	56C	B5	EU-W	65239	—	8.25	6.54	—	6.54		56C	B5	EU-B	66124	4.41	8.04	5.87	—	5.69
1/2	56C	B5	FR-W	65224	—	8.49	5.75	3.80	5.75	1/2	56C	B5	FR-B	66130	4.41	8.29	5.87	4.34	5.69
	56C	B5	FU-W	65241	—	8.25	6.54	—	6.54		56C	B5	FU-B	66133	4.41	8.29	5.87	—	5.69
3/4	56C	B5	GR-W	65228	—	—	—	—	—	3/4	56C	B5	GR-B	66139	4.41	9.53	5.87	5.02	5.69
	56C	B5	GU-W	65243	—	9.04	6.54	—	6.54		56C	B5	GU-B	66142	4.41	8.67	5.87	—	5.69
1	56C	B5	—	—	—	—	—	—	—	1	56C	B5	HR-5/8-B	19183	5.09	10.00	6.50	5.49	5.69
	—	—	HU-5/8-W	65246	—	9.04	6.54	—	6.54		56C	B5	HU-5/8-B	50427	5.06	9.54	5.87	—	5.69
	143TC	B7	—	—	—	—	—	—	—		143TC	B7	HR-B	66145	5.09	10.00	6.50	5.49	6.62
	—	—	—	—	—	—	—	—	—		143TC	B7	HU-B	66148	5.12	9.00	6.50	—	6.62
1-1/2	145TC	B7	—	—	—	—	—	—	—	1-1/2	145TC	B7	JR-B	66154	5.09	10.00	6.50	5.49	6.62
	—	—	—	—	—	—	—	—	—		145TC	B7	JU-B	66157	5.09	9.00	6.50	—	6.62
2	145TC	B7	—	—	—	—	—	—	—	2	145TC	B7	KU-B	66163	5.09	10.00	6.50	—	6.62
3	182TC	B9	—	—	—	—	—	—	—	3	182TC	B9	LU-B	66166	5.88	10.75	6.50	—	7.88

Note: See Page 324 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	6.19
	56C	B5	CUTF-W	65371	5.43	9.04	6.54	—	7.32	CUTF-B	85778	4.90	9.29	5.81	—	6.19
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	6.19
	56C	B5	—	—	—	—	—	—	—	DSTF-B	66202	4.51	9.29	5.81	4.41	6.19
	56C	B5	DUTF-W	65380	5.43	9.04	6.54	—	7.32	DUTF-B	66205	4.51	9.32	5.81	4.41	6.19
	56C	B5	—	—	—	—	—	—	—	DYTF-B	66208	4.53	9.29	5.81	—	6.19
1/3	56C	B5	ERTF-W	65348	5.43	9.04	6.54	4.13	7.32	ERTF-B	66211	4.51	9.32	5.81	4.41	6.19
	56C	B5	EUTF-W	65383	5.43	9.04	6.54	—	7.32	EUTF-B	66214	4.51	9.32	5.81	—	6.19
	56C	B5	EYTF-W	65454	5.43	9.04	6.54	—	7.32	EYTF-B	66217	4.51	9.32	5.81	—	6.19
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	6.19
	56C	B5	FUTF-W	65404	5.43	9.04	6.54	—	7.32	FUTF-B	66223	4.51	9.32	5.81	—	6.19
	56C	B5	FYTF-W	65455	5.43	9.04	6.54	—	7.32	FYTF-B	66226	4.51	9.32	5.81	—	6.19
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	6.19
	56C	B5	GUTF-W	65405	5.43	9.04	6.54	—	7.32	GUTF-B	66231	4.51	9.32	5.81	—	6.19
	56C	B5	GYTF-W	65457	5.43	9.04	6.54	—	7.32	GYTF-B	66831	5.22	10.19	6.50	—	7.19
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	6.19
	56C	B5	HUTF-5/8-W	65406	5.43	10.22	6.54	—	7.32	HUTF-5/8-B	50428	5.22	10.19	6.50	—	7.19
	56C	B5	—	—	—	—	—	—	—	HYTF-5/8-B	19179	5.22	10.19	6.50	—	7.19
	143TC	B7	—	—	—	—	—	—	—	HRTF-B	66234	5.22	11.19	6.50	5.56	7.19
	143TC	B7	HUTF-W	65412	5.43	10.95	6.54	—	7.32	HUTF-B	66237	4.51	10.80	5.81	—	6.19
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	—	7.19
	145TC	B7	—	—	—	—	—	—	—	JRTF-B	66243	5.22	12.06	6.50	5.56	7.19
	145TC	B7	JUTF-W	65437	5.43	10.95	6.54	—	7.32	JUTF-B	66246	5.22	10.19	6.50	—	7.19
	145TC	B7	JYTF-W	65475	5.43	10.95	6.54	—	7.32	JYTF-B	66249	5.22	10.19	6.50	—	7.19
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	11.19	6.50	—	7.19
	145TC	B7	—	—	—	—	—	—	—	KYTF-B	66255	5.22	11.19	6.50	—	7.19
3	182TC	B9	LUTF-W	65446	6.61	13.24	8.88	—	8.75	LUTF-B	66258	6.00	12.31	8.86	—	8.49
	—	—	—	—	—	—	—	—	—	LYTF-B	66260	6.00	12.31	8.86	—	8.49
5	184TC	B9	MUTF-W	65448	6.61	13.24	8.88	—	8.75	MUTF-B	66262	6.00	13.68	8.86	—	8.49
7-1/2	213TC	B11	—	—	—	—	—	—	—	NUTF-B	66266	7.45	15.28	9.04	—	10.34
10	215TC	B11	—	—	—	—	—	—	—	PUTF-B	66270	7.45	16.41	9.04	—	10.34
15	254TC	B13	—	—	—	—	—	—	—	RUTF-B	66274	9.22	16.32	9.10	—	10.28

Note: See page 324 for mounting and shaft dimensions.

T = Totally-enclosed, non-ventilated.

TF = Totally-enclosed, fan cooled.

QUICK SELECTION GUIDE – DC NEMA C-FACE MOTORS

PERMANENT MAGNET TOTALLY ENCLOSED 1750 RPM MOTORS

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 324 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
1-1/2	56CZ	B7	PM18100TF-B	69869
			PM18100TF	59487
2	56CZ	B7	PM18150TF-B	69870
			PM18150TF	59489
3	184TC	B7	PM18200TF-B	68783
			PM18200TF	59490
5	184TC	B9	PM18300TF-B	69411
			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.

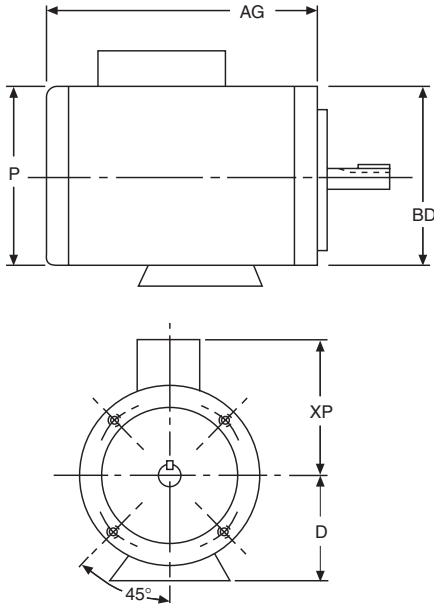
TOTALLY-ENCLOSED—A motor so constructed as to prevent free exchange of air between the inside and outside of the motor case, but not air-tight.

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 331.
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 324 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

White Bost-Kleen Motors

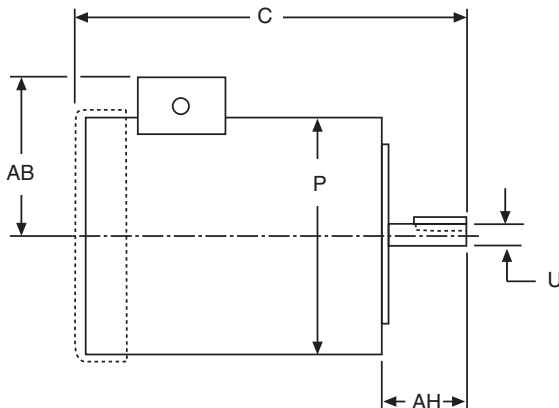
- AC Motors 1/2 - 5 HP
- DC Motors 1/4 - 3/4 HP
- Durable White Epoxy Finish
- Gasketed Thru Bolts
- Weep Holes
- NEMA C-Face Mounting
- BISSC certified



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	12.38	2.13	6.62	5.25
2	KUTF-WB-B	.8750	13.38	2.13	6.62	5.25
3	LUTF-WB-B	1.1250	15.18	2.63	7.88	5.88
5	MUTF-WB-B	1.1250	16.56	2.63	7.88	5.88

RATIOTROL® CONTROLLERS

DCX® SERIES – CHASSIS DC MOTOR SPEED CONTROLLER 1/12 to 3 HORSEPOWER

Boston Gear has developed the DCX Series DC motor speed controllers and options for use by both the OEM and user. They have been designed to provide the performance and reliability you expect from Boston Gear in a compact, low cost controller.

DCX Series drives consist of three chassis controllers with ratings up to 3 horsepower, single and dual voltages, tachometer feedback and inhibit circuits.

DESIGN CRITERIA

These controllers are designed for proper performance and high reliability when operated within the following parameters.

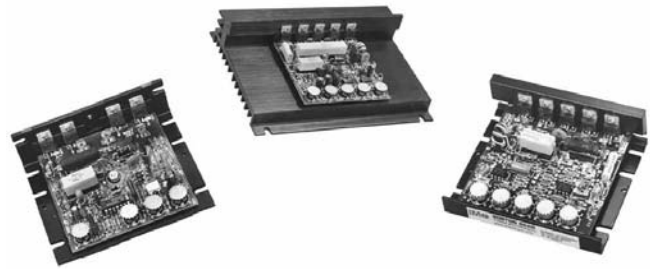
- Line Voltage 115 or 230 VAC ± 10%
- Line Frequency 50 or 60 Hz ± 2 Hz
- Output Power
 - 115 VAC input Armature 0-90VDC
 - Field 100 VDC
 - 230 VAC input Armature 0-180 VDC
 - Field 200 VDC
- Tachometer Feedback Signal 50 or 100 VDC/1000 RPM
- Service Factor 1.0
- Duty Continuous
- Overload Capacity 150% for 1 Minute
- Ambient Temperature 0-50°C (32°-122°F)
- Altitude 3300 Ft (1000 Meters) Maximum

ORDER BY CATALOG NUMBER OR ITEM CODE

HORSEPOWER RANGE (2)		CATALOG NUMBER (1)	ITEM CODE	FUNCTION (3)
115 VAC	230 VAC			
1/12-1/2	1/2 - 1	DCX202C	65985	Run-Stop
1/12-1 1/2	1/2-3	DCX302C	65986	Run-Stop

Notes: (1) DCX Units are furnished with a potentiometer rated 5K ohms, 1/2 watt for separate mounting.

(2) Units may be easily recalibrated for any standard rating within the range of the product using trimpots.



PERFORMANCE CHARACTERISTICS

Controlled Speed Range.....0 to Base Speed
Speed Regulation:

REGULATION METHOD	VARIABLE				SPEED RANGE
	LOAD CHANGE 95%	LINE VOLTAGE ±10%	FIELD HEATING COLD/NORMAL	TEMP. ±10°C	
Standard Voltage Feedback with IR Compensation	2%	±1%	5-12%	±2%	30:1
Optional Speed Tachometer Feedback (1)	1%	±1%	0.2%	±2%	100:1

(1) Unidirectional Models Only

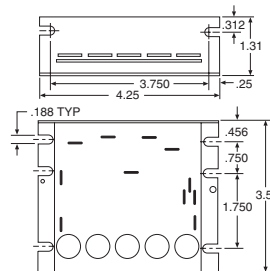
Efficiency (Rated Speed, Rated Load)

Controller 99%
Controller With Motor 85%

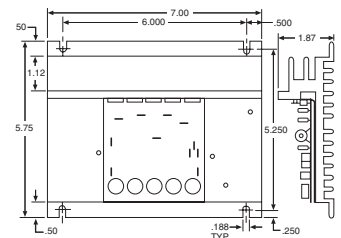
Power Factor (Rated Speed, Rated load) 87%

ADJUSTMENTS

Acceleration/Deceleration.....0.8-10 Seconds
Minimum Speed 0-40% of Base Speed
Maximum Speed 60-100% of Base Speed
IR (Load) Compensation 0-100% of Rated Load
Current Limit 0-150% of Full Load



DCX202C



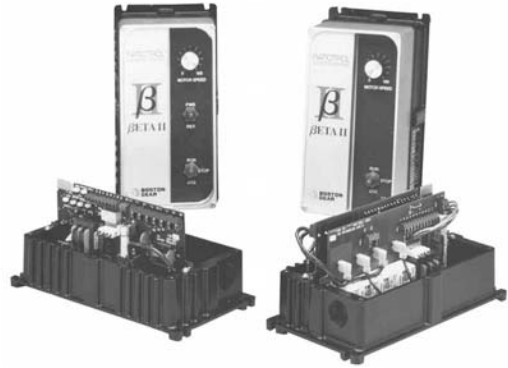
DCX302C

Refer to Electrical Products Catalog for additional models and configurations.

RATIOTROL® CONTROLLERS

BETA II SERIES

SINGLE PHASE ADJUSTABLE SPEED DC MOTOR CONTROLLERS 1/6 TO 3 HORSEPOWER



DESIGN CRITERIA

These controllers are designed for proper performance and high reliability when operated within the following parameters.

- Line Voltage (Single Phase)..... 115 or 230 VAC \pm 10%
- Line Frequency 50 or 60 Hz \pm 2 Hz
- Output Power
 - 115 VAC input Armature0-90VDC
Field50 or 100 VDC
 - 230 VAC input Armature0-180 VDC
Field100 or 200 VDC
- Tachometer Feedback Signal.....7-100 VDC/1000 RPM
- Service Factor1.0
- Duty.....Continuous
- Overload Capacity150% for 1 Minute
- Ambient Temperature (Chassis).....0-55°C (32-131°F)
(Enclosed)0-40°C (32-104°F)
- Altitude (Standard)3300 Ft (1000 Meters) Maximum

PERFORMANCE CHARACTERISTICS

Controlled Speed Range.....0 to Base Speed
Speed Regulation:

REGULATION METHOD	VARIABLES				SPEED RANGE
	LOAD CHANGE 95%	LINE VOLTAGE \pm 10%	FIELD HEATING COLD/NORMAL	TEMP. \pm 10°C	
Standard Voltage Feedback with IR Compensation	2%	\pm 1%	5-12%	\pm 2%	50:1
Tachometer Feedback with SPYDCTACH	0.5%	\pm 1%	0.2%	\pm 2%	200:1

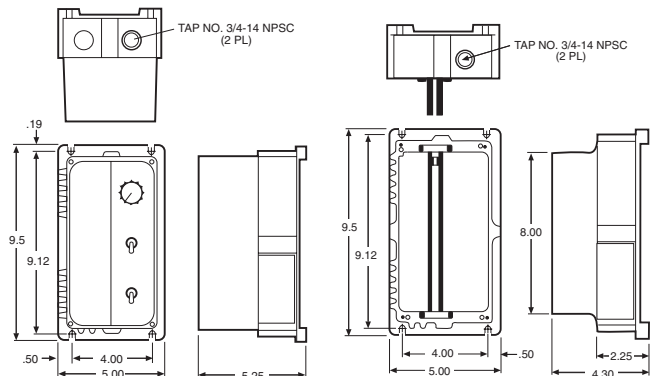
Efficiency (Rated Speed, Rated Load)

Controller 99%
Controller With Motor 85%
Power Factor (Rated Speed, Rated Load) 87%

ADJUSTMENTS

Acceleration Time..... 0.2-40 Seconds
Deceleration Time..... 0.2-40 Seconds
Minimum Speed 0-40% of Base Speed
Maximum Speed..... 50-100% of Base Speed
IR (Load) Compensation 0-100% of Rated Load
Current Limit 0-150% of Full Load

DIMENSIONS



ORDER BY CATALOG NUMBER OR ITEM CODE

Horsepower Range		Catalog Number	Item Code
115 VAC	230 VAC		
Open Chassis, Run/Stop (Remote)			
1/6 - 1	1/2 - 2	RBA2	64801
1/6 - 1 1/2	1/2 - 3	RBA3	64865
NEMA 3, 4, 12 Enclosed, Run/Stop/Jog (Integral)			
1/6 - 1	1/2 - 2	RBA2S	64814
NEMA 3, 4, 12 Enclosed, Run/Stop/Jog, Forward/Reverse (Integral)			
1/6 - 1	1/2 - 2	RBA2MR	64863

Refer to Electrical Products Catalog for additional models and configurations.

RATIOTROL® CONTROLLERS

VEplus SERIES SINGLE PHASE ADJUSTABLE SPEED DC MOTOR CONTROLLERS 1/6 TO 5 HORSEPOWER



DESIGN CRITERIA

These controllers are designed for proper performance and high reliability when operated within the following parameters.

- Line Voltage (Single Phase)..... 115 or 230 VAC \pm 10%
- Line Frequency50 or 60 Hz \pm 2 Hz
- Output Power
 - 115 VAC input Armature.....0-90VDC
Field.....50 or 100 VDC
 - 230 VAC input Armature.....0-180 VDC
Field.....100 or 200 VDC
- Tachometer Feedback Signal.....7-100 VDC/1000 RPM
- Service Factor1.0
- Duty.....Continuous
- Overload Capacity150% for 1 Minute
- Ambient Temperature (Chassis).....0-55°C (32-131°F)
(Enclosed)0-40°C (32-104°F)
- Altitude (Standard)3300 Ft (1000 Meters) Maximum

PERFORMANCE CHARACTERISTICS

Controlled Speed Range.....0 to Base Speed
Speed Regulation:

REGULATION METHOD	VARIABLES				SPEED RANGE
	LOAD CHANGE 95%	LINE VOLTAGE \pm 10%	FIELD HEATING COLD/ NORMAL	TEMP. \pm 10°C	
Voltage Feedback with IR Compensation	2%	\pm 1%	5-12%	\pm 2%	50:1
Tach Feedback (1)	0.5%	\pm 1%	0.2%	\pm 2%	200:1

(1) Unidirectional Models Only

ORDER BY CATALOG NUMBER OR ITEM CODE

HORSEPOWER RANGE		CATALOG NUMBER	ITEM CODE
115 VAC	230 VAC		
Open Chassis, Run/Stop (Remote)			
1/6 - 1 1/2	1/2 - 3	VES3	64883
1/6 - 2	1/2 - 5	VES5	64890
NEMA 3, 4, 12 Enclosed, Run/Stop/Jog (Integral)			
1/6 - 1 1/2	1/2 - 3	VES3S	64886
1/6 - 2	1/2 - 5	VES5S	64893
NEMA 3, 4, 12 Enclosed, Run/Stop/Jog Forward/Reverse (Integral)			
1/6 - 1 1/2	1/2 - 3	VES3MR	64889
1/6 - 2	1/2 - 5	VES5MR	64896

Refer to Electrical Products Catalog for additional models and configurations.

Efficiency (Rated Speed, Rated Load)

Controller 99%
Controller With Motor 85%

Power Factor (Rated Speed, Rated Load) 87%

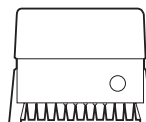
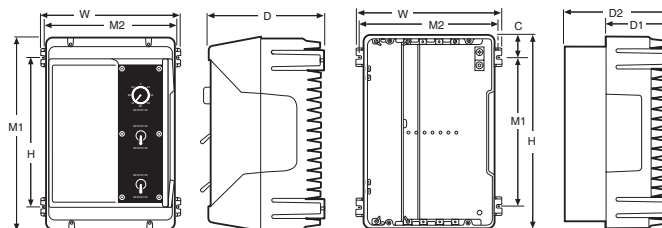
ADJUSTMENTS

Acceleration Time..... 0.2-30 Seconds
Deceleration Time..... 0.2-30 Seconds
Minimum Speed 0-40% of Base Speed
Maximum Speed..... 50-100% of Base Speed
IR (Load) Compensation 0-100% of Rated Load
Current Limit 0-150% of Full Load

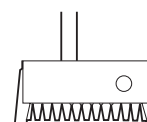
DIMENSIONS

	H	W	D	D1	D2	M1	M2	C	WEIGHT	
									Chassis	Enclosed
VES3	12.1	9.0	7.3	4.1	5.6	9.3	8.6	1.3	9.0	11.4
VES5	12.1	9.0	9.0	4.1	6.9	9.3	8.6	1.3	9.5	13.0

Note: VES5 enclosed models are supplied with a fan assembly.



ENCLOSED MODELS



OPEN CHASSIS MODELS

NOTES



R





R

SECTION CONTENTS

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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.

R

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.

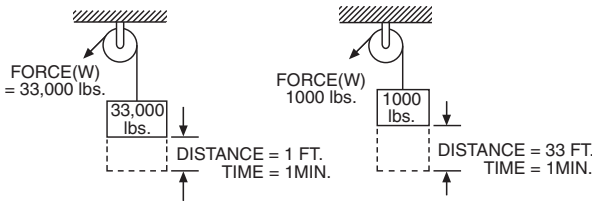
$$\text{POWER (Foot Pounds per Minute)} = \frac{\text{WORK (Ft. Lbs.)}}{\text{TIME (Minutes)}}$$

POWER is usually expressed in terms of **HORSEPOWER**.

HORSEPOWER is **POWER** (Foot Pounds per Minute) divided by 33,000.

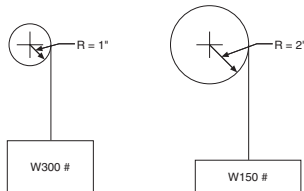
$$\begin{aligned} \text{HORSEPOWER (HP)} &= \frac{\text{POWER (Ft. Lbs. per Minute)}}{33,000} \\ &= \frac{\text{WORK (Ft. Pounds)}}{33,000 \times \text{TIME (Min.)}} \\ &= \frac{\text{FORCE (Lbs.)} \times \text{DISTANCE (Feet)}}{33,000 \times \text{TIME (Min.)}} \end{aligned}$$

ILLUSTRATION OF HORSEPOWER



$$\text{HP} = \frac{33,000 \times 1}{33,000 \times 1} = 1 \text{ HP} \quad \text{HP} = \frac{1000 \times 33}{33,000 \times 1} = 1 \text{ HP}$$

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.



$$\begin{aligned} T &= WR \\ &= 300 \times 1 = 300 \text{ In. Lbs.} \end{aligned}$$

$$\begin{aligned} T &= WR \\ &= 150 \times 2 = 300 \text{ In. Lbs.} \end{aligned}$$

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)**

$$\text{Therefore HORSEPOWER (HP)} = \frac{\text{TORQUE (T)} \times \text{RPM}}{63,025}$$

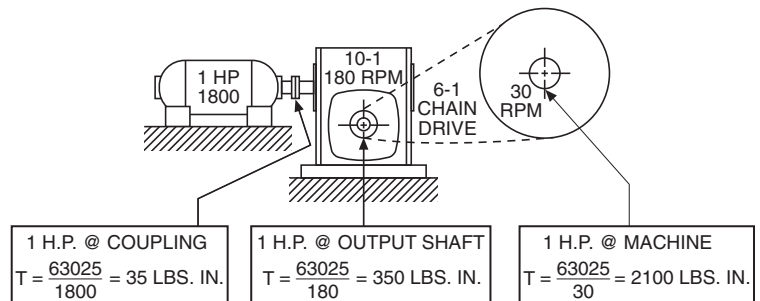
Where total reductions are small, 50 to 1 or less, **HP** figures are commonly used. Higher reductions require that **TORQUE** figures be used to select drive components, because with large reductions, a small motor can produce extremely high **TORQUE** at the final low speed. For example, 1/12 HP reduced to 1 RPM using the formula below and neglecting friction:

$$\text{HP} = \frac{\text{TORQUE} \times \text{RPM}}{63,025} \quad \text{or} \quad \text{TORQUE} = \frac{63,025 \times \text{HP}}{\text{RPM}}$$

$$\text{TORQUE} = \frac{63,025 \times 1/12}{1} = 5,252 \text{ In. Lbs.}$$

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.



R

AGMA SERVICE FACTORS AND LOAD CLASSIFICATIONS

TYPE OF MACHINE TO BE DRIVEN	NON-MOTOR REDUCER (SERVICE FACTORS)		MOTORIZED REDUCER (CLASS OF SERVICE)	
	HRS. PER DAY		HRS. 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	—	—

TYPE OF MACHINE TO BE DRIVEN	NON-MOTOR REDUCER (SERVICE FACTORS)		MOTORIZED REDUCER (CLASS OF SERVICE)	
	HRS. PER DAY		HRS. 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 Press	1.25	1.50	—	—
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	—	—

*Consult Manufacturer



AGMA SERVICE FACTORS AND LOAD CLASSIFICATIONS

TYPE OF MACHINE TO BE DRIVEN	NON-MOTOR REDUCER (SERVICE FACTORS)		MOTORIZED REDUCER (CLASS OF SERVICE)	
	HRS. PER DAY		HRS. PER DAY	
	3 TO 10	OVER 10	3 TO 10	OVER 10
PAPER MILLS (Continued)				
Claendar - 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	—	—

TYPE OF MACHINE TO BE DRIVEN	NON-MOTOR REDUCER (SERVICE FACTORS)		MOTORIZED REDUCER (CLASS OF SERVICE)	
	HRS. PER DAY		HRS. 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

*Consult Manufacturer.

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.

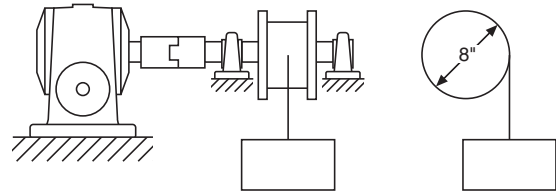
Consider “auxiliary drives” whenever possible for economy. A properly selected gear or chain drive reduction from the reducer output to the driven shaft can produce substantial savings in space and drive cost.

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:

$$\text{Belt Pull} = (\text{Total weight on conveyor}) \times (\text{Application Factor})$$

$$\text{Torque} = (\text{Belt Pull}) \times (\text{Radius of Head Pulley})$$

APPLICATION CONSIDERATIONS

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".

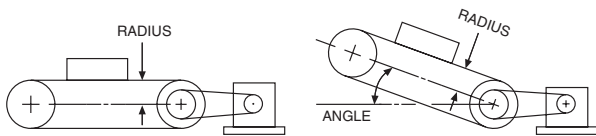
How much torque is required at the head pulley?

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.

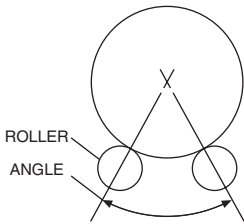


TABLE 2. ANGLE FACTORS FOR ROLLER SUPPORTED CYLINDERS

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:

$$\text{Torque} = (\text{Friction Force}) \times (\text{Radius of Roller})$$

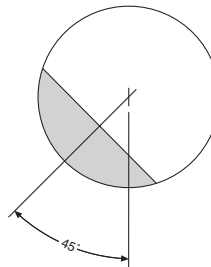
Example:

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.



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".

Effective Radius = Cylinder Diameter (D) x 0.23 (1/4 full)
0.15 (1/2 full)
0.08 (3/4 full)

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?

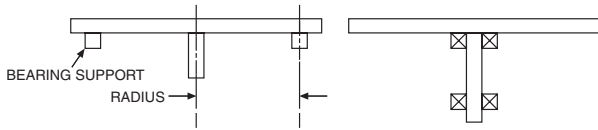
Determine the Effective Radius: .15 x (3 x 12) = 5.4 In.

Calculate Torque: 400 x 5.4 = 2160 Lb. Ins.

R

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.

R

APPLICATION FORMULAS

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.	$\text{RPM} = \frac{63025 \times \text{HP}}{T}$

R

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, Quincy, Massachusetts 02171, 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.

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.

TERMS AND CONDITIONS

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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

TERMS AND CONDITIONS

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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.

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

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.



Altra Industrial Motion

All Customer Service phone numbers shown in bold

Warner Electric

Electromagnetic Clutches and Brakes

South Beloit, IL - USA
1-800-825-6544

For application assistance:
1-800-825-9050

Electromagnetic Clutches and Brakes

St Barthelemy d'Anjou, France
+33 (0) 2 41 21 24 76

Precision Electric Coils and Electromagnetic Clutches and Brakes

Columbia City, IN - USA
1-260-244-6183

Inertia Dynamics

Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes

New Hartford, CT - USA
1-800-800-6445

Matrix International

Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes

Brechin, Scotland
+44 (0) 1356 602000

South Beloit, IL - USA
1-815-389-3771

Warner Linear

Linear Actuators and Guideways

Belvidere, IL - USA
1-800-825-6544

For application assistance:
1-800-825-9050

Twiflex Limited

Caliper Brakes and Thrusters

Twickenham, England
+44 (0) 20 8894 1161

Kilian Manufacturing

Engineered Bearing Assemblies

Syracuse, NY - USA
1-315-432-0700

TB Wood's

Belted Drives and Elastomeric Couplings

Chambersburg, PA - USA
1-888-829-6637 – Press #5

For application assistance:
1-888-829-6637 – Press #7

General Purpose Disc Couplings

San Marcos, TX - USA
1-512-353-4000

Wichita Clutch

Pneumatic Clutches and Brakes

Wichita Falls, TX - USA
1-800-964-3262

Pneumatic Clutches and Brakes

Bedford, England
+44 (0) 1234 350311

Industrial Clutch

Pneumatic and Oil Immersed Clutches and Brakes

Waukesha, WI - USA
1-262-547-3357

Formsprag Clutch

Overrunning Clutches and Holdbacks

Warren, MI - USA
1-800-348-0881 – Press #1

For application assistance:
1-800-348-0881 – Press #2

Marland Clutch

Roller Ramp and Sprag Type Overrunning Clutches and Backstops

Burr Ridge, IL - USA
1-800-216-3515

Stieber Clutch

Overrunning Clutches and Holdbacks

Heidelberg, Germany
+49 (0) 6221 30 47 0

Boston Gear

Enclosed and Open Gearing, Electrical and Mechanical P.T. Components

Charlotte, NC - USA
1-800-825-6544

For application assistance:
1-800-816-5608

Huco Dynatork

Precision Couplings and Air Motors

Hertford, England
+44 (0) 1992 501900

USA
1-800-825-6544

Ameridrives Couplings

Gear Couplings, Mill Spindles, Universal Joints

Erie, PA - USA
1-814-480-5000

Ameridrives Power Transmission

Universal Joints, Drive Shafts, Mill Gear Couplings

Green Bay, WI - USA
1-920-593-2444

Bibby Transmissions

Disc, Gear, Grid Couplings, Overload Clutches

Dewsbury, England
+44 (0) 1924 460801

Boksburg, South Africa
+27 11 918 4270

Nuttall Gear and Delroyd Worm Gear

Worm Gear and Helical Speed Reducers

Niagara Falls, NY - USA
1-716-298-4100

Saftek Friction

Non-asbestos Brake and Clutch Materials

Telford, England
+44 (0) 1952 581122

Asia Pacific Sales Offices

Australia

+61 2 9894 0133

China - Beijing

+86 (10) 6053 9884

China - Hong

+852 2615 9313

China - Shanghai

+86 21 5169 9255

China - Taiwan

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Singapore

+65 6487 4464

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+66 2 322 5527



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