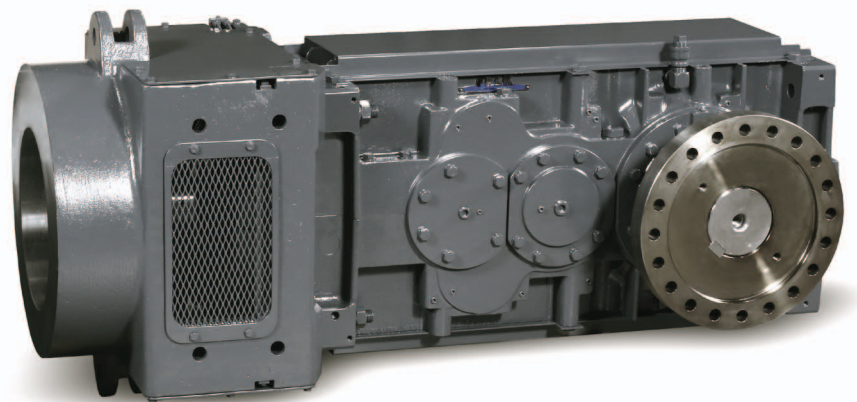
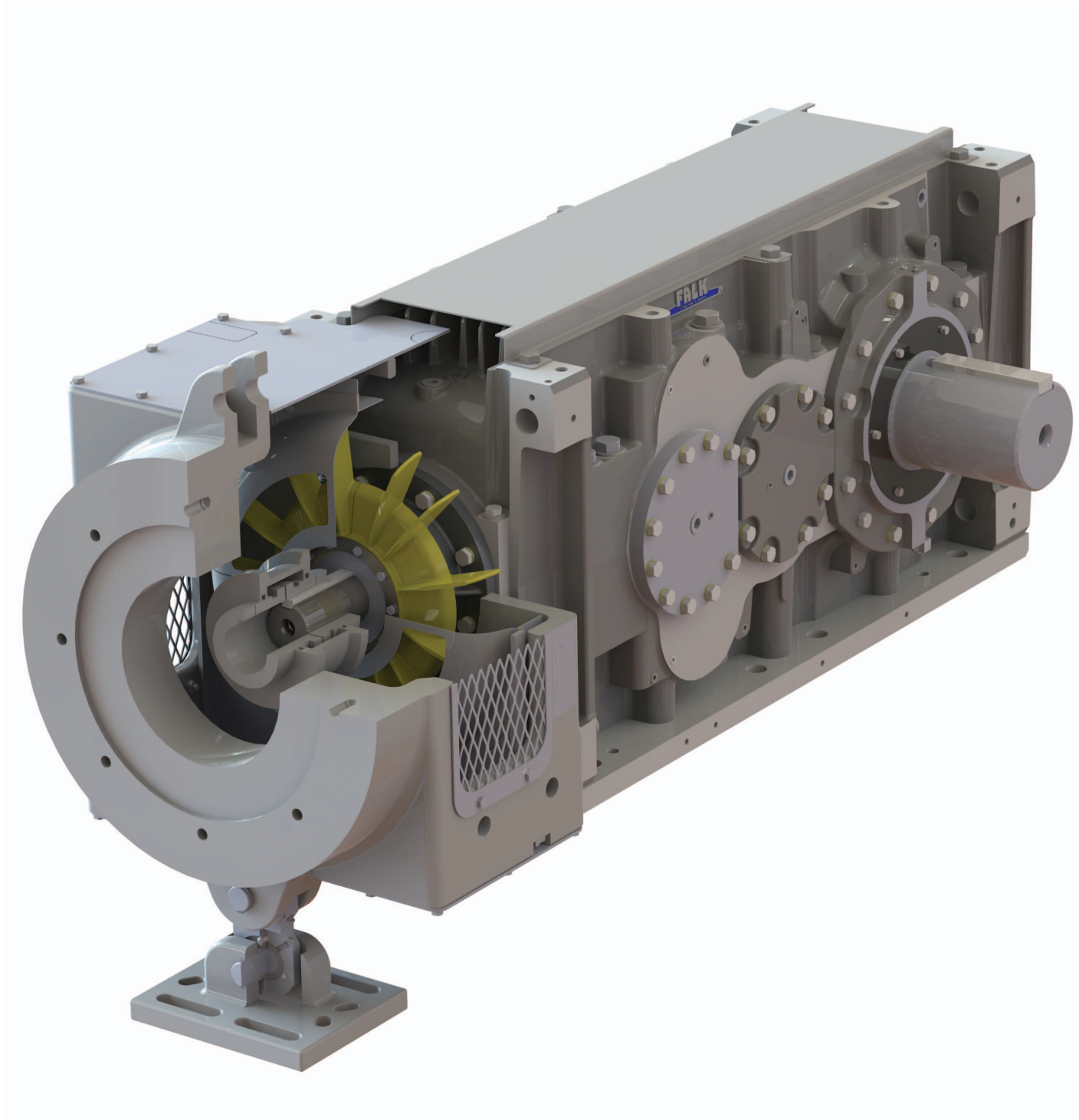




Falk V-Class Alignment-Free Drives (Inch)



Falk V-Class Alignment-Free Drive



To learn more about the new Falk V-Class™ Alignment Free Drive,
go to www.rexnord.com, where you'll find:

Product information • Brochures • Catalogs • Manuals

866-REXNORD/866-739-6673 (toll-free within the U.S.) or 414-643-2366 (Outside the U.S.)

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Basic Information

Safety Notes

Falk Gear Drives — The Falk® name on the gear drive is the purchaser's assurance that the drive was engineered, rated and manufactured to sound design practices.

The power supplied to the geared drive must be equal to or less than the power for which the drive was selected using the appropriate mechanical service factor for the application. The customer must assume the responsibility of isolating the gear drive from any vibratory or transient load induced by the driven equipment.

Install and operate Falk products in conformance with applicable local and national safety codes and per Falk installation manuals, which are shipped with gear drives and are also available upon request. Suitable guards for rotating members may be purchased from Falk as optional accessories. Contact your local Falk district office for complete details.





People Conveying Equipment — Selection of Falk gear drives for applications whose primary purpose is the transportation of people is not approved. This includes such applications as freight or passenger elevators, escalators, man lift platforms and ski tows and ski lifts.

If the primary purpose of the application is material conveyance and occasionally people are transported, the Rexnord warranty may remain in effect provided the design load conditions are not exceeded and certification to the appropriate safety codes and load conditions has been obtained by the system designer or end user from the appropriate enforcement authorities.

Gear Drive Ratings — All gear drive ratings in this catalog allow for starting loads and momentary overloads of 200% selection horsepower.

Operating Temperature — Gear drives can encounter sump oil temperatures up to 200°F (93°C). Higher temperatures are possible in localized areas. Since the drive will feel hot to the human hand at temperatures over 120°F (49°C), a portable pyrometer should be used to measure temperatures.

Drawing symbols — The following symbols are used throughout the dimensioned drawings.

-  = OIL DIPSTICK
-  = BREATHER
-  = OIL FILL
-  = OIL DRAIN



Factory Warranty We're so confident in the performance and reliability of our latest generation of Falk gear drives that we're backing this comprehensive offering with the best standard warranty in the business. Our full, three-year heavy-duty warranty provides shaft-to-shaft protection on all Falk components — including bearings and seals (warranty extends for three years from date of shipment). It's an industry first and one more powerful reason why Falk is your ultimate bottom-line value.

Conditions Affecting Selections

Non-Standard Selection Procedures

Some applications require special procedures, or refer to factory.

Excessive Overloads — The maximum momentary or starting load applied to the gear drive must not exceed 200% of the rated load capacity of the gear drive (100% overload). Rated load capacity of the gear drive is defined as the power rating published in this selection guide with a mechanical service factor of 1.00. If the actual maximum momentary or starting load exceeds the conditions stated above, calculate an equivalent input power associated with the excessive overload by dividing the maximum overload by two. The gear drive selected must have a rated load capacity equal to or greater than the equivalent input power.

Frequency of Starts — Starting frequency is an important consideration when selecting a gear drive. Applications involving two to three equally spaced starts per hour must utilize a minimum 1.5 service factor for unloaded starts, and a minimum 1.75 service factor for fully loaded starts. For applications involving more than three starts per hour, refer to factory application specifics such as starting frequency and maximum starting torque. The addition of a fluid coupling as a soft start device would increase the number of allowable starts.

Reversing Service — Applications involving either more than 20 reversals per 10-hour period, or less than 20 reversals per 10-hour period with peak torques greater than 175% of normal load must be referred to factory.

Brake-Equipped Applications — When a gear drive is equipped with a “working” brake that is used to decelerate the motion of the system, and the brake is located between the prime mover and the gear drive, select the gear drive based on the brake rating or the highest equivalent input power, whichever is greater. If the brake is used for holding only and is applied after the motion of the system has come to rest, the brake rating must be less than 175% of the rated load capacity of the gear drive selected for the application. If the brake rating is greater than 175% of the rated load capacity, refer the application to the factory. Also refer to the factory all applications in which the brake is located at the output shaft of the gear drive.

Oversize Prime Movers — Recommended Mechanical Service Factors do not cover applications that require oversize prime movers for high energy or peak loads. Refer such applications to the Factory for selection of suitable gear drives.

Speed Variation or Multi-Speed Applications — The gear drives offered in this selection guide are designed to operate with splash lubrication on any single-speed application and any ratio shown in the selection guide unless otherwise noted. It is essential that all orders indicate the operating speed requirements and ratio so that the proper internal oil distribution accessories can be supplied for the specific speed.

Falk gear drives use different oil levels for various gear drive sizes, speeds and ratios. Consequently, to operate an existing gear drive at different speeds from those shown on the nameplate, full application and nameplate information must be referred to the Factory for review of the lubrication system.

All variable or multi-speed applications will be referred to Factory to specify lubrication components for adequate lubrication at the slowest speed, without excessive temperature or churning at the highest speed. It is essential that all orders indicate minimum and maximum speeds, as well as the speed duration cycles. A separate motor-driven oil pump (at an extra charge) may be required.

When selecting gear drives for multi-speed or variable speed applications, determine the speed at which the greatest torque is developed, and select the gear drive on this basis. If the speed is not listed in the selection table, interpolate to determine the gear drive rating.

Ambient Temperatures — If a drive operates in the sun at ambient temperatures over 100°F (38°C), then special measures should be taken to protect the drive from solar energy. This protection can consist of a canopy over the drive or reflective paint on the drive. If neither is possible, a heat exchanger or other cooling device may be required to prevent the sump temperature from exceeding the allowable maximum of 200°F (93°C).

Selection tables were prepared for 60°F (16°C) and 100°F (38°C) ambient temperatures. If the ambient temperature is between 60°F (16°C) and 100°F (38°C), you may select the drive and cooling accessories from the 100°F (38°C) selection table. If the ambient temperature is less than 60°F (16°C), you may select the drive and cooling accessories from the 60°F (16°C) selection table. For exact cooling requirements at ambient conditions other than 60°F (16°C) and 100°F (38°C), consult Factory.

Non-Standard Motors or Prime Movers — Motor prints must be submitted to Rexnord for motors that are NOT standard NEMA motors through the 449TD frame size or standard IEC motors through the 400 frame size.

Non-Horizontal Mounting Positions — The V-Class drives were designed for horizontal input and horizontal output. Refer to Rexnord factory applications requiring other mounting positions.

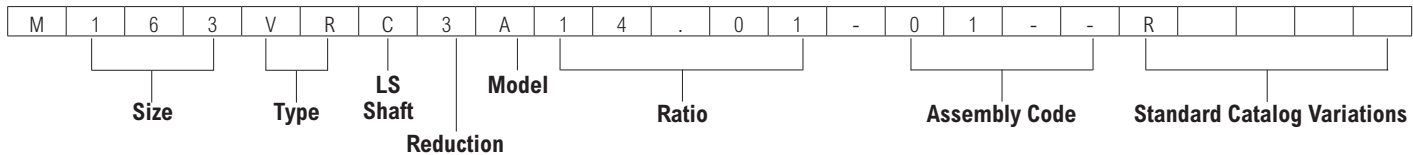
Service Factors

| Conveyor Application | 3 to 10 Hours per Day | Over 10 Hours per Day |
|-------------------------------|-----------------------|-----------------------|
| Uniformly Loaded or Fed | 1.25 | 1.25 |
| Heavy Duty, Not Uniformly Fed | 1.25 | 1.50 |

How To Select

- Determine Service Factor from Service Factor Table, Page 5, for electric motor driven applications operating 3 to 10 hours or over 10 hours per day. For applications requiring service factors other than 1.25 or 1.50, refer to Factory.
- Determine Ambient Temperature — either 60°F for applications under ground or 100°F for applications above ground.
- Determine Motor Power — hp.
- Determine Gear Drive Ratio — For ratio, divide high speed shaft rpm by low speed shaft rpm.
- Select Drive Size — Locate the selection tables on Pages 10 or 11 for the appropriate service factor and ambient temperature. Select the drive size opposite the motor power and ratio determined in steps 3 and 4. Note the cooling requirements, if needed.
- Select Coupling Type — Standard design accommodates Falk Steelflex® (T10), Wrapflex® (R10) and Rexnord Omega® (E) couplings. Refer to Factory for any non-standard coupling requirements.
- Compare Motor Weights to the maximum weights provided on Pages 15 and 17. For motor weights outside these limits, or for Steelflex coupling connections, refer to Rexnord factory.
- Select the Standard Assembly Desired — Identify the gear drive nomenclature below and the standard assembly number.
- Select Low Speed Connection Option — For MCF flange connections, refer to Pages 27 and 28. Ensure driven shaft diameter is within the bore range of the driven hub option. The Falk MCF coupling is the recommended interface between the solid low speed shaft drive and the driven shaft. Provide Rexnord the diameter and the usable shaft length dimensions of the driven shaft for a MCF guard. For a hollow shaft/shrink disc connection, refer to Pages 20 and 21 for details.
- Loads Generated — Verify that the driven shaft can withstand the maximum bending moment and radial force being transmitted at the face of the MCF coupling (Flange Connection). Verify the driven shaft can withstand the maximum forces being transmitted (Hollow Shaft Connection). Verify the foundation supplied for the torque arm can withstand the maximum force being transmitted by the drive. The maximum moments and forces are provided in the Forces Generated Table on Pages 15 and 17.
- Engineered Options — Refer to Rexnord requirements for brakes, flywheels, cast iron/steel fluid couplings, sump heaters, inching drives, special paint, monitoring devices, special ratios, special torque arms, or other special needs.

V-Class Nomenclature



Shaft Dimension Standard

M standard metric input and output shafts (diameter/bore length, key and keyway)

Size

107
117
127
133
137
143
145
147
153
155
157
163
165
167
173
175
177
187
193
195
197
203
207
213
215
217
223
225
227

Type

R Right Angle, Horizontal

LS Shaft

C Solid Shaft
T Hollow Shaft with TA Bushing
J Hollow Shaft with Shrink Disc

Reduction

Number of reductions/stages in gear drive

Model

Model A

Ratio

Exact ratio expressed as (5) characters including decimal point

Assembly Code

First two characters indicate shaft assembly, second two characters indicate accessory locations

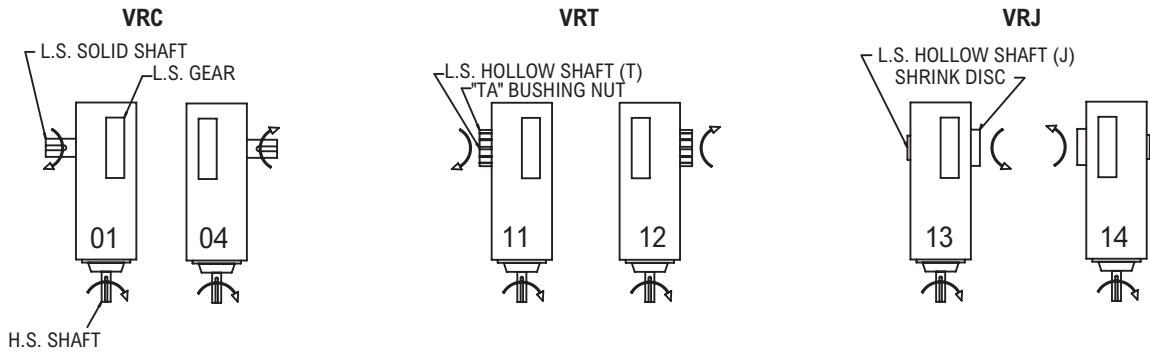
Standard Catalog Variations

A Backstop
B 1 Shaft Fan
H Immersion Heater Package
M Lubrication Package
N Condition Monitoring #1
P Condition Monitoring #2
Q Condition Monitoring #3
R Alignment-Free Package
S With Special Features

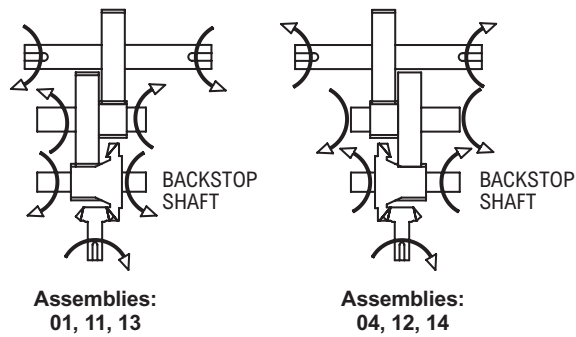
Assembly Options

Please specify the desired assembly number from the views below. Contact the Factory for inclined, wall-mounted, or other non-standard orientations.

Preferred Assemblies



Relative Rotations†

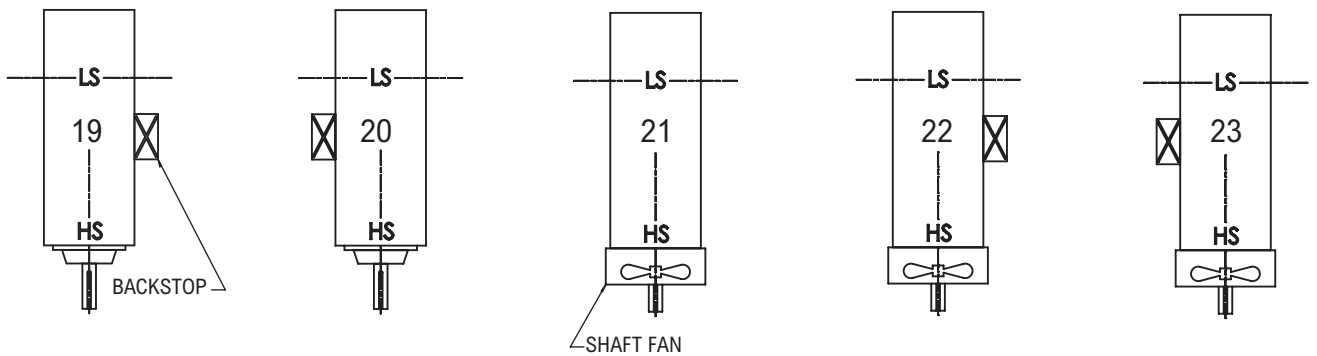


† If the input shaft rotation is opposite the rotation shown, the output shaft rotation will also be opposite the rotation shown.

Accessory Locations

Please specify the desired assembly number from the views below. Contact the Factory for inclined, wall-mounted, or other non-standard orientations.

Accessory Location Codes



Selection Example

A surface belt conveyor, heavy duty, runs 12 hours per day. The gear drive will be driven by a 300 HP electric motor at 1750 rpm. Approximate weight of the motor is 3000 lbs. A low-speed shaft speed of 88 rpm is requested.

Ambient temperature at the conveyor does not exceed 100°F. The conveyor is installed above ground in an open environment.

1. Required Service Factor from Page 5 is 1.50
2. The ambient temperature is 100°F.
3. The motor power is 300 HP.
4. The ideal ratio is $1750/88=19.88$
5. From Page 10, in the 1.50 Service Factor, 100°F Selection Table, the correct drive size is 153VR3, ratio 20:1
6. Select either Steelflex, Wrapflex or Omega coupling type.
7. The approximate motor weight is within the allowable range per the table on Page 15.
8. This application requires a solid low speed shaft. Nomenclature will be M153VRC3A20.00-01R
9. From Page 27 the correct MCF coupling selection is a 2180 MCF. The diameter of the driven shaft is within the bore range of 5.00 – 8.00 inches. Provide diameter and useable shaft length to Rexnord.
10. Check the driven shaft and the foundation for their ability to withstand the loading being transmitted by the alignment free drive package.
11. No engineered options are required.

How To Order

On the order please supply:

1. Drive size, type, ratio and assembly number.
2. MCF driven hub bore and useable shaft length.
3. Specify SteelFlex, WrapFlex or Omega coupling type.
4. Provide electric motor certified print.
5. List any other accessories or engineered options required.

Surface Belt Conveyors / 1750rpm / 100°F Ambient

Table 1 — Quick drive size selections for 1.25 Service Factor

| Total Ratio | LSS RPM | Selection Hp | | | | | | | | | | | |
|-------------|---------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 |
| 12.5 | 140 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 173VR3 | 173VR3 | 173VR3 |
| 14.0 | 125 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 153VR3 | 163VR3 | 173VR3 | 173VR3 | 173VR3 |
| 16.0 | 109 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 153VR3 | 163VR3 | 173VR3 | 173VR3 | 173VR3 |
| 18.0 | 97 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 137VR3 | 153VR3 | 163VR3 | 173VR3 | 173VR3 | 173VR3 |
| 20.0 | 88 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 143VR3 | 153VR3 | 165VR3 | 173VR3 | 173VR3 | 173VR3 |
| 22.4 | 78 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 153VR3 | 167VR3 | 173VR3 | 173VR3 | 173VR3 |
| 25.0 | 70 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 133VR3 | 153VR3 | 163VR3 | 173VR3 | 173VR3 | 173VR3 |
| 28.0 | 63 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 157VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 31.5 | 56 | 117VR3 | 117VR3 | 127VR3 | 133VR3 | 133VR3 | 143VR3 | 153VR3 | 155VR3 | 173VR3 | 173VR3 | 173VR3 | 175VR3 |
| 35.5 | 49 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 133VR3 | 145VR3 | 153VR3 | 157VR3 | 173VR3 | 173VR3 | 173VR3 | 177VR3 |
| 40.0 | 44 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 147VR3 | 155VR3 | 163VR3 | 173VR3 | 175VR3 | 177VR3 | 193VR3 |
| 45.0 | 39 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 175VR3 | 187VR3 | 193VR3 |
| 50.0 | 35 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 155VR3 | 163VR3 | 167VR3 | 175VR3 | 187VR3 | 187VR3 | 195VR3 |
| 56.0 | 31 | 127VR3 | 133VR3 | 143VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 187VR3 | 195VR3 | 203VR3 |
| 63.0 | 28 | 133VR3 | 133VR3 | 143VR3 | 147VR3 | 153VR3 | 163VR3 | 167VR3 | 173VR3 | 187VR3 | 195VR3 | 197VR3 | 207VR3 |
| 71.0 | 35 | 133VR3 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 175VR3 | 187VR3 | 197VR3 | 203VR3 | 203VR3 | 207VR3 |
| 80.0 | 22 | 133VR3 | 143VR3 | 147VR3 | 157VR3 | 163VR3 | 167VR3 | 187VR3 | 193VR3 | 197VR3 | 203VR3 | 213VR3 | 215VR3 |
| 90.0 | 19 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 193VR3 | 203VR3 | 207VR3 | 215VR3 | 223VR3 |
| 100 | 18 | 143VR3 | 147VR3 | 155VR3 | 163VR3 | 165VR3 | 177VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | 217VR3 | 225VR3 |
| 112 | 16 | 143VR3 | 147VR3 | 157VR3 | 165VR3 | 167VR3 | 187VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | 217VR3 | ... |
| 125 | 14 | 143VR3 | 153VR3 | 163VR3 | 167VR3 | 187VR3 | 187VR3 | 203VR3 | 203VR3 | 223VR3 | 223VR3 | 227VR3 | ... |

Table 2 — Quick drive size selections for 1.50 Service Factor

| Total Ratio | LSS RPM | Selection Hp | | | | | | | | | | | |
|-------------|---------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 |
| 12.5 | 140 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 173VR3 | 173VR3 | 173VR3 |
| 14.0 | 125 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 127VR3 | 143VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 16.0 | 109 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 127VR3 | 143VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 18.0 | 97 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 20.0 | 88 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 137VR3 | 143VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 22.4 | 78 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 173VR3 | 173VR3 | 173VR3 | 173VR3 |
| 25.0 | 70 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 153VR3 | 153VR3 | 163VR3 | 173VR3 | 173VR3 | 173VR3 |
| 28.0 | 63 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 133VR3 | 145VR3 | 153VR3 | 155VR3 | 173VR3 | 173VR3 | 173VR3 | 177VR3 |
| 31.5 | 56 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 147VR3 | 155VR3 | 157VR3 | 173VR3 | 173VR3 | 175VR3 | 187VR3 |
| 35.5 | 49 | 117VR3 | 127VR3 | 133VR3 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 163VR3 | 173VR3 | 175VR3 | 177VR3 | 187VR3 |
| 40.0 | 44 | 117VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 155VR3 | 163VR3 | 165VR3 | 175VR3 | 187VR3 | 187VR3 | 197VR3 |
| 45.0 | 39 | 127VR3 | 133VR3 | 137VR3 | 143VR3 | 147VR3 | 157VR3 | 165VR3 | 167VR3 | 177VR3 | 187VR3 | 193VR3 | 197VR3 |
| 50.0 | 35 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 163VR3 | 167VR3 | 173VR3 | 187VR3 | 193VR3 | 195VR3 | 203VR3 |
| 56.0 | 31 | 127VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 177VR3 | 195VR3 | 197VR3 | 203VR3 | 213VR3 |
| 63.0 | 28 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 195VR3 | 203VR3 | 207VR3 | 213VR3 |
| 71.0 | 35 | 133VR3 | 143VR3 | 147VR3 | 157VR3 | 163VR3 | 167VR3 | 187VR3 | 195VR3 | 203VR3 | 203VR3 | 207VR3 | 217VR3 |
| 80.0 | 22 | 133VR3 | 145VR3 | 157VR3 | 163VR3 | 165VR3 | 175VR3 | 193VR3 | 195VR3 | 207VR3 | 213VR3 | 215VR3 | 225VR3 |
| 90.0 | 19 | 137VR3 | 147VR3 | 163VR3 | 165VR3 | 167VR3 | 177VR3 | 193VR3 | 197VR3 | 207VR3 | 215VR3 | 223VR3 | 225VR3 |
| 100 | 18 | 143VR3 | 153VR3 | 163VR3 | 165VR3 | 175VR3 | 187VR3 | 197VR3 | 207VR3 | 215VR3 | 223VR3 | 225VR3 | ... |
| 112 | 16 | 143VR3 | 155VR3 | 165VR3 | 167VR3 | 177VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | ... | ... | ... |
| 125 | 14 | 145VR3 | 157VR3 | 165VR3 | 187VR3 | 187VR3 | 203VR3 | 203VR3 | 223VR3 | 225VR3 | ... | ... | ... |

Underground Belt Conveyors / 1750rpm / 60°F ambient

Table 3 — Quick drive size selections for 1.25 Service Factor

| Total Ratio | LSS RPM | Selection Hp | | | | | | | | | | | |
|-------------|---------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 |
| 12.5 | 140 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 173VR3 | 173VR3 | 173VR3 |
| 14.0 | 125 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 147VR3 | 153VR3 | 155VR3 | 163VR3 |
| 16.0 | 109 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 147VR3 | 153VR3 | 155VR3 | 163VR3 |
| 18.0 | 97 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 153VR3 | 153VR3 | 155VR3 | 163VR3 |
| 20.0 | 88 | 107VR3 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 137VR3 | 143VR3 | 153VR3 | 153VR3 | 155VR3 | 173VR3 |
| 22.4 | 78 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 155VR3 | 157VR3 | 173VR3 |
| 25.0 | 70 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 147VR3 | 155VR3 | 157VR3 | 163VR3 | 167VR3 |
| 28.0 | 63 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 163VR3 | 165VR3 | 173VR3 |
| 31.5 | 56 | 117VR3 | 117VR3 | 127VR3 | 133VR3 | 133VR3 | 143VR3 | 147VR3 | 155VR3 | 163VR3 | 165VR3 | 167VR3 | 175VR3 |
| 35.5 | 49 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 133VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 167VR3 | 173VR3 | 177VR3 |
| 40.0 | 44 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 147VR3 | 155VR3 | 163VR3 | 167VR3 | 175VR3 | 177VR3 | 187VR3 |
| 45.0 | 39 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 175VR3 | 187VR3 | 193VR3 |
| 50.0 | 35 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 155VR3 | 163VR3 | 167VR3 | 175VR3 | 187VR3 | 187VR3 | 195VR3 |
| 56.0 | 31 | 127VR3 | 133VR3 | 143VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 187VR3 | 195VR3 | 203VR3 |
| 63.0 | 28 | 133VR3 | 133VR3 | 143VR3 | 147VR3 | 153VR3 | 163VR3 | 167VR3 | 173VR3 | 187VR3 | 195VR3 | 197VR3 | 207VR3 |
| 71.0 | 35 | 133VR3 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 175VR3 | 187VR3 | 197VR3 | 203VR3 | 203VR3 | 207VR3 |
| 80.0 | 22 | 133VR3 | 143VR3 | 147VR3 | 157VR3 | 163VR3 | 167VR3 | 187VR3 | 193VR3 | 197VR3 | 203VR3 | 213VR3 | 215VR3 |
| 90.0 | 19 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 193VR3 | 203VR3 | 207VR3 | 215VR3 | 223VR3 |
| 100 | 18 | 143VR3 | 147VR3 | 155VR3 | 163VR3 | 165VR3 | 177VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | 217VR3 | 225VR3 |
| 112 | 16 | 143VR3 | 147VR3 | 157VR3 | 165VR3 | 167VR3 | 187VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | 217VR3 | ... |
| 125 | 14 | 143VR3 | 153VR3 | 163VR3 | 167VR3 | 187VR3 | 187VR3 | 203VR3 | 203VR3 | 223VR3 | 223VR3 | 227VR3 | ... |

Table 4 — Quick drive size selections for 1.50 Service Factor

| Total Ratio | LSS RPM | Selection Hp | | | | | | | | | | | |
|-------------|---------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 |
| 12.5 | 140 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 173VR3 | 173VR3 | 173VR3 |
| 14.0 | 125 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 127VR3 | 143VR3 | 145VR3 | 153VR3 | 155VR3 | 157VR3 | 165VR3 |
| 16.0 | 109 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 127VR3 | 143VR3 | 145VR3 | 153VR3 | 155VR3 | 157VR3 | 165VR3 |
| 18.0 | 97 | 107VR3 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 143VR3 | 145VR3 | 153VR3 | 155VR3 | 157VR3 | 165VR3 |
| 20.0 | 88 | 107VR3 | 117VR3 | 117VR3 | 127VR3 | 127VR3 | 137VR3 | 143VR3 | 147VR3 | 155VR3 | 157VR3 | 163VR3 | 173VR3 |
| 22.4 | 78 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 163VR3 | 165VR3 | 173VR3 |
| 25.0 | 70 | 107VR3 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 147VR3 | 153VR3 | 163VR3 | 165VR3 | 167VR3 | 173VR3 |
| 28.0 | 63 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 133VR3 | 145VR3 | 153VR3 | 155VR3 | 165VR3 | 167VR3 | 173VR3 | 177VR3 |
| 31.5 | 56 | 117VR3 | 127VR3 | 127VR3 | 133VR3 | 137VR3 | 147VR3 | 155VR3 | 157VR3 | 167VR3 | 173VR3 | 175VR3 | 187VR3 |
| 35.5 | 49 | 117VR3 | 127VR3 | 133VR3 | 133VR3 | 143VR3 | 153VR3 | 157VR3 | 163VR3 | 173VR3 | 175VR3 | 177VR3 | 187VR3 |
| 40.0 | 44 | 117VR3 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 155VR3 | 163VR3 | 165VR3 | 175VR3 | 187VR3 | 187VR3 | 197VR3 |
| 45.0 | 39 | 127VR3 | 133VR3 | 137VR3 | 143VR3 | 147VR3 | 157VR3 | 165VR3 | 167VR3 | 177VR3 | 187VR3 | 193VR3 | 197VR3 |
| 50.0 | 35 | 127VR3 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 163VR3 | 167VR3 | 173VR3 | 187VR3 | 193VR3 | 195VR3 | 203VR3 |
| 56.0 | 31 | 127VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 177VR3 | 195VR3 | 197VR3 | 203VR3 | 213VR3 |
| 63.0 | 28 | 133VR3 | 137VR3 | 145VR3 | 153VR3 | 157VR3 | 165VR3 | 173VR3 | 187VR3 | 195VR3 | 203VR3 | 207VR3 | 213VR3 |
| 71.0 | 35 | 133VR3 | 143VR3 | 147VR3 | 157VR3 | 163VR3 | 167VR3 | 187VR3 | 195VR3 | 203VR3 | 203VR3 | 207VR3 | 217VR3 |
| 80.0 | 22 | 133VR3 | 145VR3 | 157VR3 | 163VR3 | 165VR3 | 175VR3 | 193VR3 | 195VR3 | 207VR3 | 213VR3 | 215VR3 | 225VR3 |
| 90.0 | 19 | 137VR3 | 147VR3 | 163VR3 | 165VR3 | 167VR3 | 177VR3 | 193VR3 | 197VR3 | 207VR3 | 215VR3 | 223VR3 | 225VR3 |
| 100 | 18 | 143VR3 | 153VR3 | 163VR3 | 165VR3 | 175VR3 | 187VR3 | 197VR3 | 207VR3 | 215VR3 | 223VR3 | 225VR3 | ... |
| 112 | 16 | 143VR3 | 155VR3 | 165VR3 | 167VR3 | 177VR3 | 193VR3 | 197VR3 | 213VR3 | 215VR3 | ... | ... | ... |
| 125 | 14 | 145VR3 | 157VR3 | 165VR3 | 187VR3 | 187VR3 | 203VR3 | 203VR3 | 223VR3 | 225VR3 | ... | ... | ... |

Exact Ratios

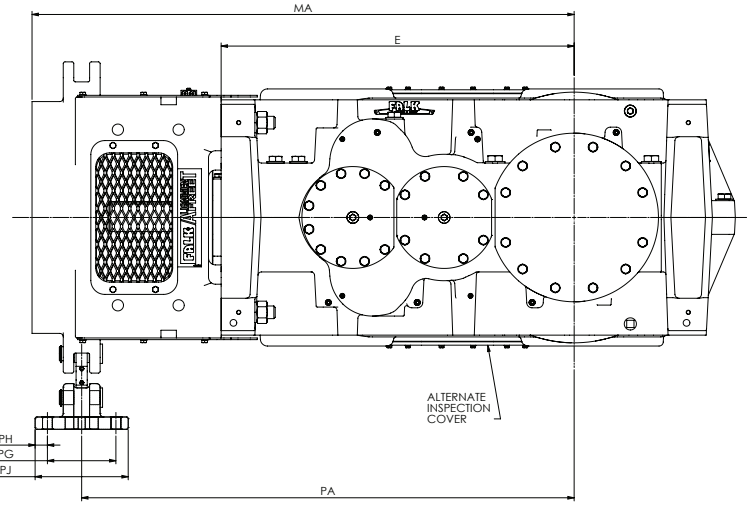
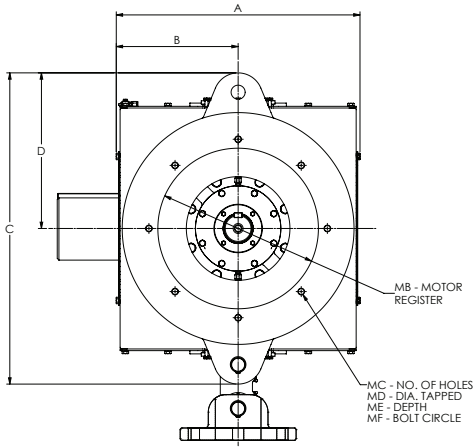
Table 5 — Exact Ratios

| Nominal Ratio | Unit Size | | | | | | | | | | | | | | |
|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 107 | 117 | 127 | 133 | 137 | 143 | 145 | 147 | 153 | 155 | 157 | 163 | 165 | 167 | 173 |
| 12.5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 13.74 |
| 14.0 | 14.64 | 14.39 | 14.26 | 14.44 | 14.44 | 14.09 | 14.09 | 14.09 | 14.39 | 14.39 | 14.39 | 14.40 | 14.40 | 14.40 | 15.20 |
| 16.0 | 16.00 | 16.42 | 16.02 | 16.22 | 16.22 | 15.77 | 15.77 | 15.77 | 16.66 | 16.66 | 16.66 | 15.86 | 15.86 | 15.86 | 17.37 |
| 18.0 | 17.82 | 18.47 | 17.32 | 17.54 | 17.54 | 18.11 | 18.11 | 18.11 | 18.01 | 18.01 | 18.01 | 17.54 | 17.54 | 17.54 | 18.79 |
| 20.0 | 20.03 | 20.00 | 19.82 | 20.15 | 20.15 | 20.43 | 20.43 | 20.43 | 19.91 | 19.91 | 19.91 | 20.81 | 20.81 | 20.81 | 20.78 |
| 22.4 | 21.90 | 22.82 | 22.26 | 22.63 | 22.63 | 22.86 | 22.86 | 22.86 | 23.05 | 23.05 | 23.05 | 22.92 | 22.92 | 22.92 | 23.75 |
| 25.0 | 24.39 | 25.67 | 24.07 | 24.47 | 24.47 | 26.26 | 26.26 | 26.26 | 24.93 | 24.93 | 24.93 | 25.35 | 25.35 | 25.35 | 25.65 |
| 28.0 | ... | 27.65 | 29.11 | 28.00 | 28.00 | 27.67 | 27.67 | 27.67 | 28.15 | 28.15 | 28.15 | 29.05 | 29.05 | 29.05 | 28.38 |
| 31.5 | ... | 31.54 | 32.70 | 31.44 | 31.44 | 30.98 | 30.98 | 30.98 | 32.58 | 32.58 | 32.58 | 32.00 | 32.00 | 32.00 | 32.43 |
| 35.5 | ... | 35.48 | 35.35 | 34.00 | 34.00 | 35.58 | 35.58 | 35.58 | 35.23 | 35.23 | 35.23 | 35.39 | 35.39 | 35.39 | 36.24 |
| 40.0 | ... | 39.64 | 40.46 | 39.52 | 39.52 | 38.30 | 38.30 | 38.30 | 40.46 | 40.46 | 40.46 | 41.66 | 41.66 | 41.66 | 40.09 |
| 45.0 | ... | ... | 45.44 | 44.38 | 44.38 | 42.87 | 42.87 | 42.87 | 46.84 | 46.84 | 46.84 | 45.88 | 45.88 | 45.88 | 45.82 |
| 50.0 | ... | ... | 49.13 | 47.99 | 47.99 | 49.24 | 49.24 | 49.24 | 50.65 | 50.65 | 50.65 | 50.74 | 50.74 | 50.74 | 50.85 |
| 56.0 | ... | ... | 58.38 | 57.11 | 57.11 | 54.77 | 54.77 | 54.77 | 55.45 | 55.45 | 55.45 | 58.10 | 58.10 | 58.10 | 56.25 |
| 63.0 | ... | ... | ... | 62.70 | 62.70 | 61.31 | 61.31 | 61.31 | 64.19 | 64.19 | 64.19 | 64.00 | 64.00 | 64.00 | 64.29 |
| 71.0 | ... | ... | ... | 67.80 | 67.80 | 70.41 | 70.41 | 70.41 | 69.41 | 69.41 | 69.41 | 70.78 | 70.78 | 70.78 | 73.65 |
| 80.0 | ... | ... | ... | 80.02 | 80.02 | 77.30 | 77.30 | 77.30 | 83.33 | 83.33 | 83.33 | 81.73 | 81.73 | 81.73 | 84.18 |
| 90.0 | ... | ... | ... | 86.53 | 86.53 | 88.77 | 88.77 | 88.77 | 90.11 | 90.11 | 90.11 | 90.39 | 90.39 | 90.39 | 93.41 |
| 100 | ... | ... | ... | ... | ... | 98.8 | 98.8 | 98.8 | 98.65 | 98.65 | 98.65 | 103.5 | 103.5 | 103.5 | 103.3 |
| 112 | ... | ... | ... | ... | ... | 110.5 | 110.5 | 110.5 | 114.2 | 114.2 | 114.2 | 114.0 | 114.0 | 114.0 | 118.1 |
| 125 | ... | ... | ... | ... | ... | 127.0 | 127.0 | 127.0 | 123.5 | 123.5 | 123.5 | 126.1 | 126.1 | 126.1 | ... |

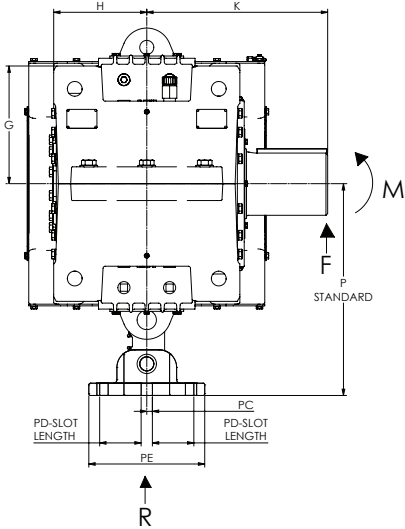
| Nominal Ratio | Unit Size | | | | | | | | | | | | | | |
|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 175 | 177 | 187 | 193 | 195 | 197 | 203 | 207 | 213 | 215 | 217 | 223 | 225 | 227 | |
| 12.5 | 13.74 | 13.74 | ... | 13.45 | 13.45 | 13.45 | 13.08 | 13.08 | 12.32 | 12.32 | 12.32 | 12.29 | 12.29 | 12.29 | |
| 14.0 | 15.20 | 15.20 | 14.97 | 15.19 | 15.19 | 15.19 | 14.97 | 14.97 | 14.18 | 14.18 | 14.18 | 13.79 | 13.79 | 13.79 | |
| 16.0 | 17.37 | 17.37 | 16.29 | 16.60 | 16.60 | 16.60 | 16.71 | 16.71 | 15.50 | 15.50 | 15.50 | 15.83 | 15.83 | 15.83 | |
| 18.0 | 18.79 | 18.79 | 18.67 | 18.23 | 18.23 | 18.23 | 18.21 | 18.21 | 17.29 | 17.29 | 17.29 | 17.25 | 17.25 | 17.25 | |
| 20.0 | 20.78 | 20.78 | 20.47 | 20.58 | 20.58 | 20.58 | 20.28 | 20.28 | 19.90 | 19.90 | 19.90 | 19.35 | 19.35 | 19.35 | |
| 22.4 | 23.75 | 23.75 | 22.27 | 22.49 | 22.49 | 22.49 | 22.64 | 22.64 | 21.75 | 21.75 | 21.75 | 22.20 | 22.20 | 22.20 | |
| 25.0 | 25.65 | 25.65 | 25.53 | 24.92 | 24.92 | 24.92 | 24.68 | 24.68 | 25.32 | 25.32 | 25.32 | 24.20 | 24.20 | 24.20 | |
| 28.0 | 28.38 | 28.38 | 27.95 | 28.13 | 28.13 | 28.13 | 27.73 | 27.73 | 27.64 | 27.64 | 27.64 | 28.26 | 28.26 | 28.26 | |
| 31.5 | 32.43 | 32.43 | 30.40 | 30.74 | 30.74 | 30.74 | 30.95 | 30.95 | 30.22 | 30.22 | 30.22 | 30.84 | 30.84 | 30.84 | |
| 35.5 | 36.24 | 36.24 | 34.86 | 35.56 | 35.56 | 35.56 | 33.73 | 33.73 | 35.47 | 35.47 | 35.47 | 33.62 | 33.62 | 33.62 | |
| 40.0 | 40.09 | 40.09 | 39.49 | 40.14 | 40.14 | 40.14 | 39.57 | 39.57 | 40.83 | 40.83 | 40.83 | 39.71 | 39.71 | 39.71 | |
| 45.0 | 45.82 | 45.82 | 42.96 | 43.87 | 43.87 | 43.87 | 44.16 | 44.16 | 44.64 | 44.64 | 44.64 | 45.56 | 45.56 | 45.56 | |
| 50.0 | 50.85 | 50.85 | 49.26 | 50.18 | 50.18 | 50.18 | 48.14 | 48.14 | 50.88 | 50.88 | 50.88 | 49.67 | 49.67 | 49.67 | |
| 56.0 | 56.25 | 56.25 | 55.40 | 56.66 | 56.66 | 56.66 | 55.85 | 55.85 | 55.28 | 55.28 | 55.28 | 56.78 | 56.78 | 56.78 | |
| 63.0 | 64.29 | 64.29 | 60.27 | 61.92 | 61.92 | 61.92 | 62.32 | 62.32 | 60.43 | 60.43 | 60.43 | 61.69 | 61.69 | 61.69 | |
| 71.0 | 73.65 | 73.65 | 69.11 | 71.68 | 71.68 | 71.68 | 67.94 | 67.94 | 73.45 | 73.45 | 73.45 | 67.24 | 67.24 | 67.24 | |
| 80.0 | 84.18 | 84.18 | 78.91 | 78.33 | 78.33 | 78.33 | 78.84 | 78.84 | 80.30 | 80.30 | 80.30 | 81.97 | 81.97 | 81.97 | |
| 90.0 | 93.41 | 93.41 | 90.49 | 89.60 | 89.60 | 89.60 | 85.95 | 85.95 | 91.53 | 91.53 | 91.53 | 89.35 | 89.35 | 89.35 | |
| 100 | 103.3 | 103.3 | 101.8 | 101.2 | 101.2 | 101.2 | 99.72 | 99.72 | 99.44 | 99.44 | 99.44 | 102.1 | 102.1 | 102.1 | |
| 112 | 118.1 | 118.1 | 110.7 | 110.6 | 110.6 | 110.6 | 111.3 | 111.3 | 108.7 | 108.7 | 108.7 | 111.0 | 111.0 | 111.0 | |
| 125 | ... | ... | 127.0 | ... | ... | ... | 121.3 | 121.3 | ... | ... | ... | 121.0 | 121.0 | 121.0 | |

Type VRC/VRT Triple Reduction / Alignment Free Drive Short Adapter

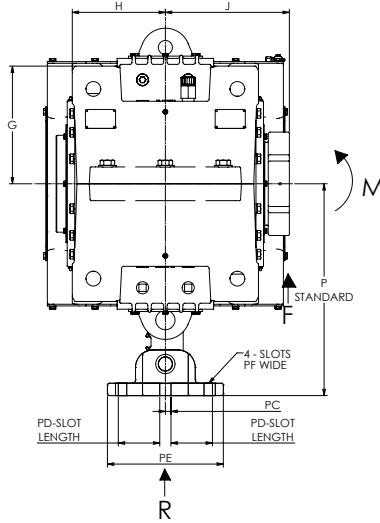
Sizes 107-187 / Dimensions-Inch



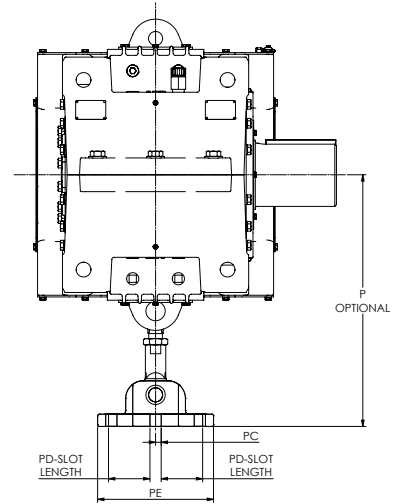
SOLID LOW SPEED SHAFT, VRC



HOLLOW LOW SPEED SHAFT, VRT



OPTIONAL TORQUE ARM



Type VRC/VRT Triple Reduction / Alignment Free Drive Short Adapter

Sizes 107–187 / Dimensions–Inch

Dimensions (Inch)

| DRIVE SIZE ① | A | B | C | D | E | P - Optional | | P - Std | PA | PC | PD | PE | PF | PG | PH | PJ |
|-----------------|-------|-------|-------|-------|-------|--------------|-------|---------|-------|------|------|-------|------|------|------|-------|
| | | | | | | Min | Max | | | | | | | | | |
| 107 | 21.22 | 10.61 | 27.40 | 13.70 | 20.16 | 24.41 | 25.31 | 20.39 | 34.02 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 117 | 21.22 | 10.61 | 27.40 | 13.70 | 22.68 | 24.41 | 25.31 | 20.39 | 36.81 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 127 | 25.12 | 12.56 | 33.23 | 16.61 | 25.59 | 27.32 | 28.23 | 23.31 | 40.24 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 133, 137 | 25.12 | 12.56 | 29.29 | 14.65 | 27.95 | 25.35 | 26.26 | 21.34 | 44.69 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 143, 145, 147 | 25.12 | 12.56 | 33.23 | 16.61 | 31.50 | 27.32 | 28.23 | 23.31 | 46.69 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 153, 155, 157 | 27.31 | 13.66 | 34.88 | 17.44 | 35.24 | 27.76 | 28.66 | 23.74 | 50.87 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 163, 165, 167 | 27.31 | 13.66 | 34.88 | 17.44 | 39.57 | 27.76 | 28.66 | 23.74 | 55.20 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 173, 175, 177 | 32.13 | 16.06 | 38.98 | 19.49 | 45.28 | 30.20 | 31.10 | 26.18 | 63.54 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |
| 187 | 32.13 | 16.06 | 38.98 | 19.49 | 46.26 | 30.20 | 31.10 | 26.18 | 63.54 | 0.63 | 4.65 | 12.99 | 1.10 | 7.68 | 1.38 | 10.43 |

| DRIVE SIZE ① | G | H | J | K | Motor Adapter | | | | | |
|-----------------|-------|-------|-------|-------|---------------|----|----|----|----|----|
| | | | | | MA | MB | MC | MD | ME | MF |
| 107 | 7.36 | 6.46 | 8.27 | 11.61 | ② | ③ | 8 | ③ | ③ | ③ |
| 117 | 8.31 | 7.20 | 10.51 | 13.98 | ② | ③ | 8 | ③ | ③ | ③ |
| 127 | 9.45 | 8.11 | 10.94 | 14.69 | ② | ③ | 8 | ③ | ③ | ③ |
| 133, 137 | 9.65 | 8.37 | 11.93 | 16.61 | ② | ③ | 8 | ③ | ③ | ③ |
| 143, 145, 147 | 10.63 | 8.46 | 11.81 | 16.93 | ② | ③ | 8 | ③ | ③ | ③ |
| 153, 155, 157 | 11.61 | 9.65 | 12.91 | 17.91 | ② | ③ | 8 | ③ | ③ | ③ |
| 163, 165, 167 | 13.19 | 10.43 | 13.98 | 20.28 | ② | ③ | 8 | ③ | ③ | ③ |
| 173, 175, 177 | 15.75 | 11.61 | 13.03 | 23.03 | ② | ③ | 8 | ③ | ③ | ③ |
| 187 | 15.75 | 11.61 | 13.03 | 23.03 | ② | ③ | 8 | ③ | ③ | ③ |

- ① Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, shaft-mounted operation unless specifically stated otherwise. Consult the Rexnord factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.
- ② "MA" dimension typically varies from 140% to 200% of "E" dimension.
- ③ Dimensions vary with motor selections. Certified prints will be provided after receipt of order.

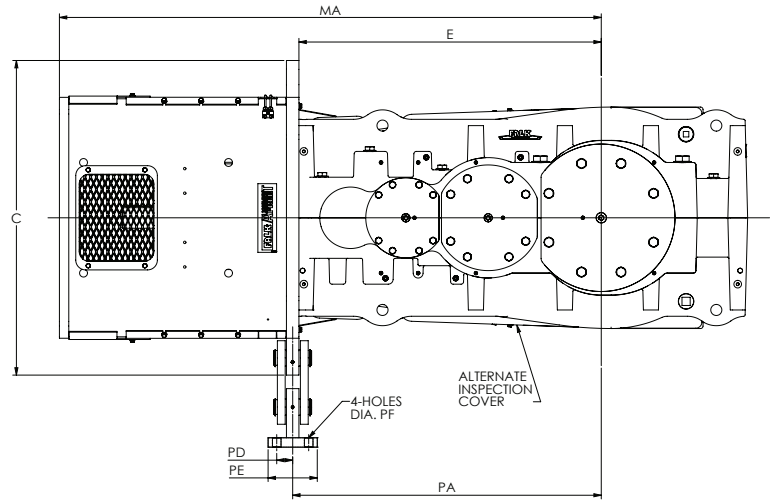
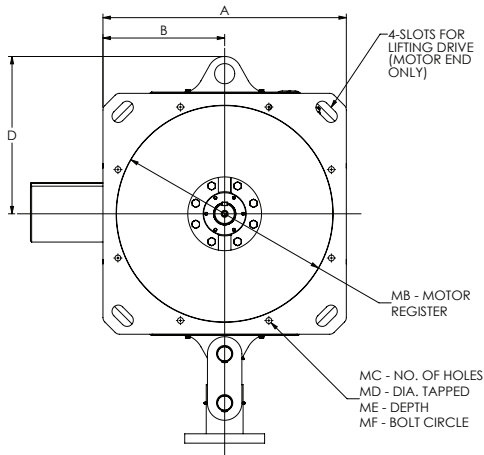
Loads Generated ④ / Torque Arm Forces, Low Speed Shaft Forces (Inch)

| DRIVE SIZE | Max Torque Arm Force R (lb) | Max Loads at End of Shaft, VRT ⑤ | | Max Loads at End of Shaft, VRC ⑤ | | Maximum Motor Weight (lb) | Available Motors to Suit Adapter | | | |
|---------------|-----------------------------|----------------------------------|--------------------------|----------------------------------|--------------------------|---------------------------|----------------------------------|-----------|-----------------|------------------|
| | | Radial Force F (lb) | Bending Moment M (in-lb) | Radial Force F (lb) | Bending Moment M (in-lb) | | NEMA | IEC | Siemens | Brook & Crompton |
| 107 | 6,100 | 4,200 | 34,400 | 4,200 | 48,300 | 1,650 | 364T-449T | 225S-280M | ... | ... |
| 117 | 9,000 | 5,600 | 52,200 | 5,600 | 78,900 | 2,000 | 364T-449T | 225S-280M | ... | ... |
| 127 | 11,700 | 7,800 | 75,800 | 7,800 | 114,900 | 2,650 | 364T-449T | 225S-315L | ... | ... |
| 133, 137 | 14,900 | 11,100 | 121,000 | 10,700 | 177,000 | 3,300 | 364T-449T | 225S-315L | ... | ... |
| 143, 145, 147 | 20,000 | 14,100 | 166,000 | 14,800 | 250,600 | 5,100 | 364T-449T | 225S-355M | ... | 585, 586, 587SDZ |
| 153, 155, 157 | 31,600 | 21,400 | 282,300 | 18,400 | 316,200 | 6,800 | 364T-449T | 225M-355L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 163, 165, 167 | 35,500 | 25,300 | 354,100 | 25,300 | 513,700 | 6,800 | 364T-449T | 225M-355L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 173, 175, 177 | 38,400 | 28,600 | 372,200 | 28,600 | 657,900 | 6,800 | 444T-449T | 250M-355L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 187 | 42,000 | 33,500 | 437,100 | 33,500 | 771,500 | 6,800 | 444T-449T | 250M-355L | 5011, 588, 5810 | 585, 586, 587SDZ |

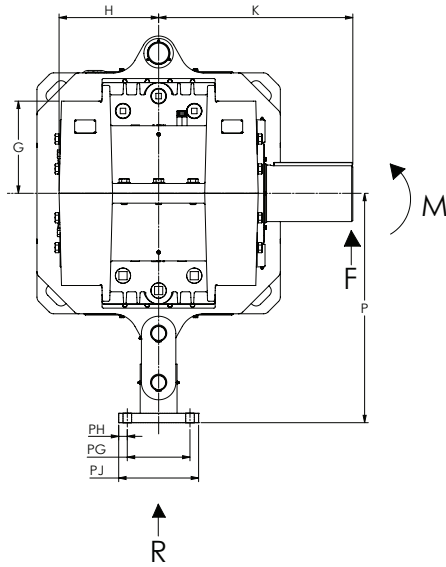
- ④ The loads generated are based on a combination of the most unfavorable conditions of rotation, speed, selection horsepower, motor weight and a 200% start factor.
- ⑤ Values for R, F and M are the maximum loads at the position shown during start-up. The loads may NOT be acting in the direction of the arrows. Use the worst case loading condition when designing the driven equipment. Bending Moment is for torque arm located farthest from driven equipment.

Type VRC/VRJ Triple Reduction / Alignment Free Drive Short Adapter

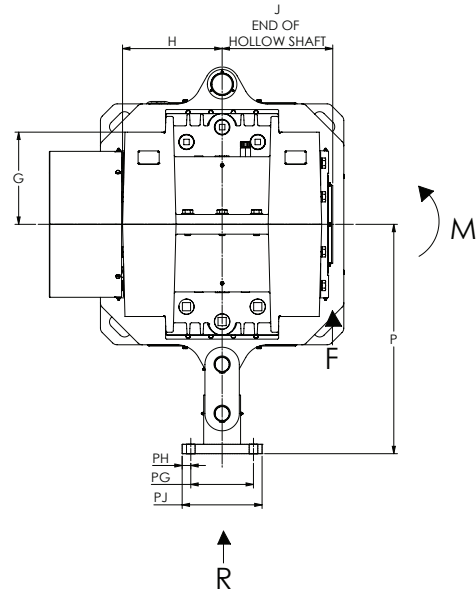
Sizes 193-227 / Dimensions-Inch



SOLID LOW SPEED SHAFT, VRC



HOLLOW LOW SPEED SHAFT, VRJ



Type VRC/VRJ Triple Reduction / Alignment Free Drive Short Adapter

Sizes 193–227 / Dimensions–Inch

Dimensions (Inch)

| DRIVE SIZE ① | A | B | C | D | E | P | PA | PD | PE | PF | PG | PH | PJ |
|-----------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|------|-------|
| 197 | 38.98 | 19.49 | 50.39 | 25.20 | 48.43 | 36.74 | 49.43 | 2.56 | 7.87 | 1.38 | 10.04 | 1.38 | 12.80 |
| 203, 207 | 38.98 | 19.49 | 50.39 | 25.20 | 50.00 | 36.74 | 51.00 | 2.56 | 7.87 | 1.38 | 10.04 | 1.38 | 12.80 |
| 213, 215, 217 | 38.98 | 19.49 | 50.39 | 25.20 | 56.69 | 36.74 | 57.69 | 2.56 | 7.87 | 1.38 | 10.04 | 1.38 | 12.80 |
| 223, 225, 227 | 38.98 | 19.49 | 50.39 | 25.20 | 58.66 | 36.74 | 59.66 | 2.56 | 7.87 | 1.38 | 10.04 | 1.38 | 12.80 |

| DRIVE SIZE ① | G | H | J | K | Motor Adapter | | | | | |
|-----------------|-------|-------|-------|-------|---------------|----|----|----|----|----|
| | | | | | MA | MB | MC | MD | ME | MF |
| 197 | 14.76 | 15.95 | ... | 31.50 | ② | ③ | 8 | ③ | ③ | ③ |
| 203, 207 | 14.76 | 15.95 | 17.72 | 31.50 | ② | ③ | 8 | ③ | ③ | ③ |
| 213, 215, 217 | 17.13 | 17.74 | ... | 35.69 | ② | ③ | 8 | ③ | ③ | ③ |
| 223, 225, 227 | 17.13 | 17.74 | 19.69 | 35.69 | ② | ③ | 8 | ③ | ③ | ③ |

① Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, shaft-mounted operation unless specifically stated otherwise. Consult the Rexnord factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

② "MA" dimension typically varies from 140% to 200% of "E" dimension.

③ Dimensions vary with motor selections. Certified prints will be provided after receipt of order.

Loads Generated ④ / Torque Arm Forces, Low Speed Shaft Forces (Inch)

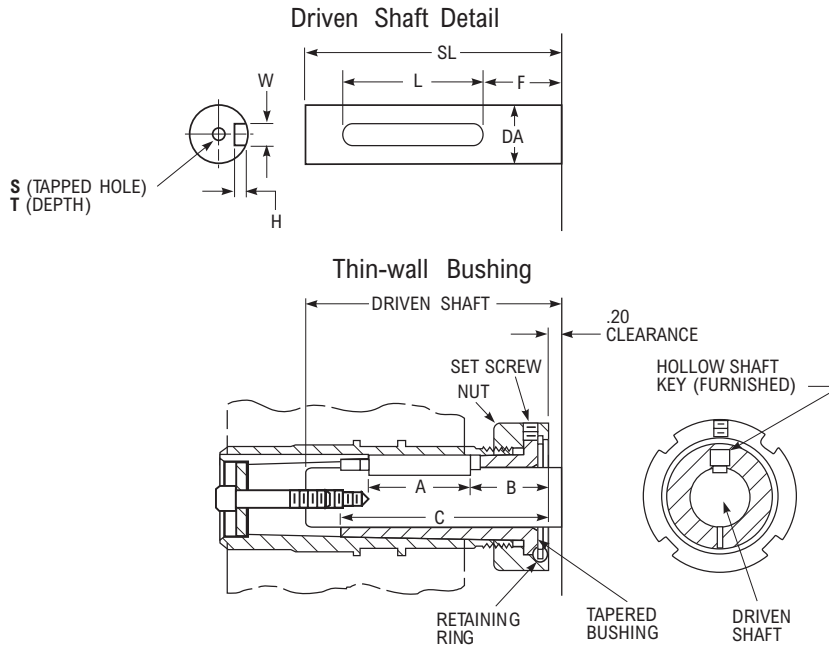
| DRIVE SIZE | Max Torque Arm Force R (lb) | Max Loads at End of Shaft, VRJ ⑤ | | Max Loads at End of Shaft, VRC ⑤ | | Maximum Motor Weight (lb) | Available Motors to Suit Adapter | | | |
|---------------|-----------------------------|----------------------------------|--------------------------|----------------------------------|--------------------------|---------------------------|----------------------------------|-----------|-----------------|------------------|
| | | Radial Force F (lb) | Bending Moment M (in-lb) | Radial Force F (lb) | Bending Moment M (in-lb) | | NEMA | IEC | Siemens | Brook & Crompton |
| 197 | 65,400 | ... | ... | 53,400 | 1,660,000 | 6,800 | 447-449T | 315S-400L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 203, 207 | 82,200 | 60,600 | 1,074,500 | 70,600 | 2,196,200 | 6,800 | 447-449T | 315S-400L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 213, 215, 217 | 96,200 | ... | ... | 86,800 | 3,058,000 | 6,800 | 447-449T | 315S-400L | 5011, 588, 5810 | 585, 586, 587SDZ |
| 223, 225, 227 | 97,100 | 87,800 | 1,728,900 | 87,800 | 3,094,200 | 6,800 | 447-449T | 315S-400L | 5011, 588, 5810 | 585, 586, 587SDZ |

④ The loads generated are based on a combination of the most unfavorable conditions of rotation, speed, selection horsepower, motor weight and a 200% start factor.

⑤ Values for R, F and M are the maximum loads at the position shown during start-up. The loads may NOT be acting in the direction of the arrows. Use the worst case loading condition when designing the driven equipment. Bending Moment is for torque arm located farthest from driven equipment.

Type VPT/VRT TA Taper Bushing & Driven Shaft

Sizes 107–167 / Dimensions–Inch



Dimensions (Inch)

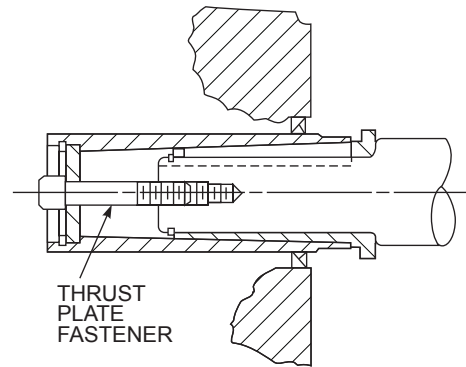
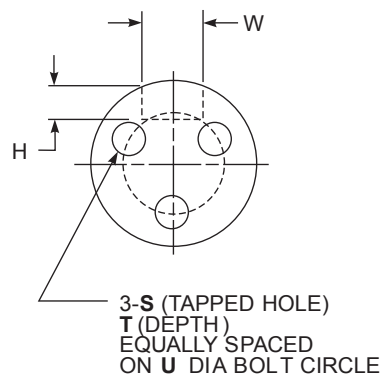
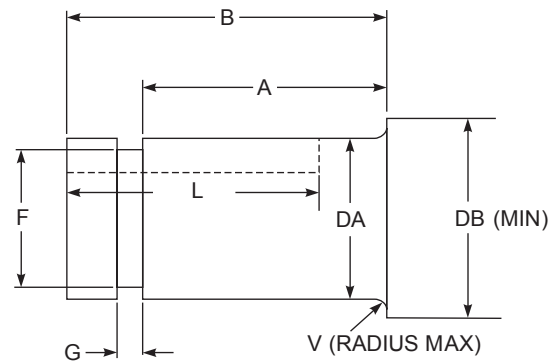
| DRIVE SIZE | Bushing | | | | Driven Shaft | | | | | | | |
|---------------|--------------|--------|------|------------------------|--------------|--------------------|--------------|--------------|-------|-------|-------------|-------|
| | Bushing Size | A | B | C Min Shaft Engagement | DA | Tolerance | SL | W x H ① | F | L Min | S | T Min |
| 107 | 2.938 | 7.087 | 2.55 | 10.91 | 2.9375 | + 0.000 - 0.006 | 13.58 ± 0.39 | .750 x .375 | 2.38 | 7.84 | .750-10 UNC | 1.50 |
| | 3.188 | | | | .875 x .4375 | | | 2.31 | 7.96 | | | |
| | 3.438 | | | | .875 x .4375 | | | 2.76 | 7.96 | | | |
| 117 | 3.438 | 7.087 | 3.00 | 11.89 | 3.4375 | + 0.000 - 0.006 | 15.35 ± 0.47 | .875 x .500 | 2.70 | 8.09 | 1.000-8 UNC | 2.00 |
| | 3.938 | | | | 1.000 x .500 | | | 2.70 | 8.09 | | | |
| | 4.188 | | | | 1.000 x .500 | | | 2.70 | 8.09 | | | |
| 127 | 3.938 | 7.087 | 3.19 | 12.09 | 3.9375 | + 0.000 - 0.006 | 16.30 ± 0.47 | 1.000 x .500 | 2.89 | 8.09 | 1.000-8 UNC | 2.00 |
| | 4.188 | | | | 1.000 x .500 | | | 2.89 | 8.09 | | | |
| | 4.438 | | | | 1.000 x .500 | | | 2.89 | 8.09 | | | |
| 133, 137 | 4.438 | 7.874 | 2.33 | 12.83 | 4.4375 | + 0.000 - 0.007 | 18.03 ± 0.47 | 1.000 x .500 | 2.03 | 8.87 | 1.000-8 UNC | 2.00 |
| | 4.938 | | | | 1.250 x .625 | | | 1.91 | 9.12 | | | |
| | 4.938 | | | | 1.250 x .625 | | | 1.91 | 9.12 | | | |
| 143, 145, 147 | 4.938 | 9.843 | 2.33 | 13.23 | 4.9375 | + 0.000 - 0.007 | 17.44 ± 0.55 | 1.250 x .625 | 1.91 | 11.09 | 1.125-7 UNC | 2.25 |
| | 5.438 | | | | 1.500 x .750 | | | 1.78 | 11.34 | | | |
| | 5.938 | | | | 1.500 x .750 | | | 1.78 | 11.34 | | | |
| 153, 155, 157 | 5.938 | 9.843 | 2.69 | 14.69 | 5.9375 | + 0.000 - 0.007 | 19.80 ± 0.55 | 1.500 x .750 | 2.14 | 11.34 | 1.125-7 UNC | 2.25 |
| | 6.000 | | | | 1.500 x .750 | | | 2.14 | 11.34 | | | |
| | 6.500 | | | | 1.500 x .750 | | | 2.14 | 11.34 | | | |
| 163, 165, 167 | 5.938 | 11.024 | 2.59 | 15.28 | 5.9375 | + 0.000 - 0.007 | 21.73 ± 0.55 | 1.500 x .750 | 2.04 | 12.52 | 1.125-7UNC | 2.25 |
| | 6.000 | | | | 1.500 x .750 | | | 2.04 | 12.52 | | | |
| | 6.500 | | | | 1.500 x .750 | | | 2.04 | 12.52 | | | |
| | 6.938 | | | | 1.750 x .750 | 1.92 | | 12.77 | | | | |
| | 7.000 | | | | 1.750 x .750 | 1.92 | | 12.77 | | | | |

① Check strength of driven shaft.

② A trapped keyway is not allowed on the keyway shown. An open keyway must extend to the end of the driven shaft.

Type VPT/VRT Driven Shaft Recommendations Using TA Taper Bushing With Keeper Plate

Sizes 173–187 / Dimensions–Inch



Dimensions (Inch)

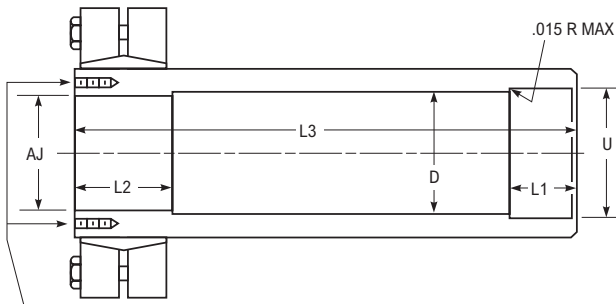
| DRIVE SIZE | A | B | DA ^① | DB | Retaining Ring | | | | Keyway | | | Shaft End | | | V |
|--------------------|--------|--------|-----------------|------|----------------|-------|--------------------|--------|--------|-------|---------|----------------|---------|-------|------|
| | | | | | Groove | | Mfg No. | Max OD | W | H | L (Min) | S | T (Min) | U | |
| | | | | | F | G | | | | | | | | | |
| 173, 175, 177, 187 | 15.630 | 16.805 | 7.500h10 | 8.25 | 7.180 | 0.209 | Smalley WST-750 | 7.930 | 1.750 | 0.750 | 14.81 | 1.250-7 UNC | 2.500 | 4.750 | 0.15 |
| 173, 175, 177, 187 | 15.630 | 16.805 | 8.000h10 | 8.75 | 7.660 | 0.209 | Smalley WST-800 | 8.410 | 2.000 | 0.750 | 14.81 | 1.250-7 UNC | 2.500 | 4.750 | 0.15 |

① See table 1 on page 98 of V-Class Catalog (171-110) for tolerance.

Type VPJ & VRJ Hollow Low-Speed Shaft — Shrink Disc Mounted

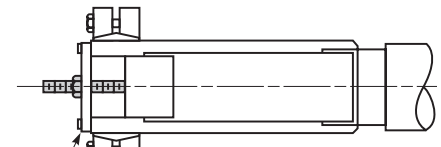
Sizes 107–187 / Dimensions–Inch

The drive package includes the keeper plate and keeper plate retention hardware

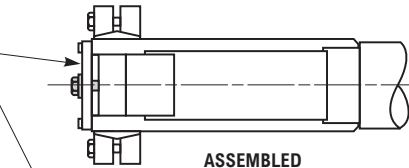


Z - QUANTITY
 ZA - DIA. TAPPED HOLES IN HOLLOW SHAFT
 ZB - DEEP
 Y - DIA. BOLT CIRCLE - EQUALLY SPACED HOLES FOR KEEPER PLATE RETENTION

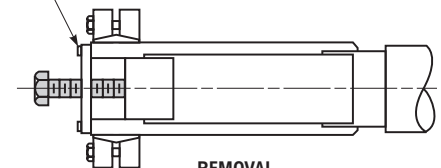
Installation and removal can be assisted through the use of additional hardware items shown shaded (customer-supplied)



INSTALLATION
 A threaded rod is inserted through the keeper plate center hole and into the tapped hole in the end of the driven shaft. The threaded rod, with nut as shown, are used to aid assembly.



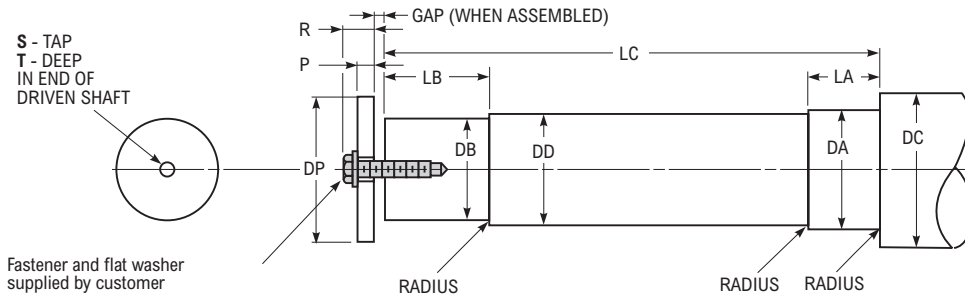
ASSEMBLED



REMOVAL
 A fastener (larger dia than the threaded rod) is threaded into the tapped center hole of the keeper plate and is used to separate the driven shaft from the hollow low-speed shaft of the gear drive.

Hollow Low-Speed Shaft Dimensions (Inch)

| DRIVE SIZE | AJ ^① | D | L1 | L2 | L3 | U* | Z | ZA | ZB | Y |
|---------------|-----------------|-------|------|------|-------|-----------|---|------------|-------|-------|
| 107 | 3.3465 J7 | 3.465 | 2.36 | 2.36 | 15.67 | 3.5433 H7 | 8 | M6 x 1.00 | 0.47 | 3.780 |
| 117 | 4.1339 J7 | 4.252 | 2.95 | 2.36 | 18.19 | 4.3307 H7 | 8 | M8 x 1.25 | 0.63 | 4.803 |
| 127 | 4.9213 J7 | 5.039 | 2.76 | 2.76 | 19.53 | 5.1181 H7 | 8 | M8 x 1.25 | 0.63 | 5.512 |
| 133, 137 | 5.3150 J7 | 5.433 | 3.54 | 3.54 | 20.63 | 5.5118 H7 | 8 | M8 x 1.25 | 0.63 | 5.827 |
| 143, 145, 147 | 5.9055 J7 | 6.024 | 3.74 | 3.74 | 22.17 | 6.1024 H7 | 8 | M8 x 1.25 | 0.63 | 6.575 |
| 153, 155, 157 | 6.4961 J7 | 6.614 | 4.33 | 4.13 | 24.96 | 6.6929 H7 | 6 | M12 x 1.75 | 1.10 | 7.520 |
| 163, 165, 167 | 7.0866 J7 | 7.205 | 4.72 | 4.13 | 27.01 | 7.2835 H7 | 6 | M12 x 1.75 | 1.10 | 8.268 |
| 173, 175, 177 | 7.8740 J7 | 8.071 | 5.12 | 4.72 | 29.92 | 8.2677 H7 | 6 | M12 x 1.75 | 0.945 | 9.055 |
| 187 | 8.0709 J7 | 8.189 | 5.12 | 4.72 | 29.92 | 8.2677 H7 | 6 | M12 x 1.75 | 0.945 | 9.055 |



Driven Shaft Recommended Dimensions (Inch)

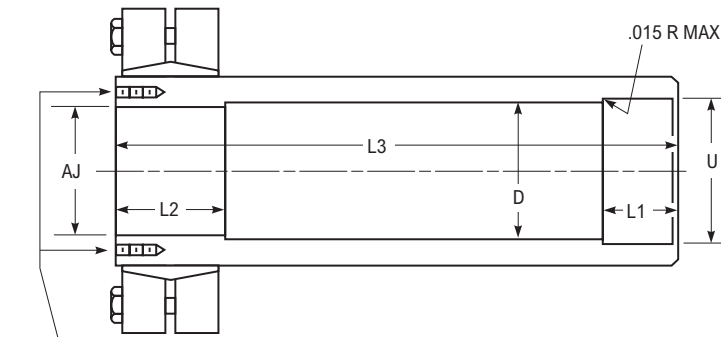
| DRIVE SIZE | DA ^① | DB ^① | DC Min | DD | Radius Max | LA | LB | LC | DP | P | R | S | T | Fastener Length | Tapped Hole in Center of Keeper Plate | Gap |
|---------------|-----------------|-----------------|--------|------------|------------|-------|-------|--------|-------|------|------|-----------|-------|-----------------|---------------------------------------|------|
| 107 | 3.5433 h6 | 3.3465 g6 | 4.13 | 3.4646 c11 | 0.118 | 2.13 | 2.598 | 15.512 | 4.33 | 0.59 | 1.22 | M20 x 2.5 | 1.57 | 2.17 | M24 x 3.0 | 0.16 |
| 117 | 4.3307 h6 | 4.1339 g6 | 4.92 | 4.2520 c11 | 0.118 | 2.72 | 2.598 | 18.031 | 5.47 | 0.63 | 1.38 | M24 x 3.0 | 1.89 | 2.56 | M30 x 3.5 | 0.16 |
| 127 | 5.1181 h6 | 4.9213 g6 | 5.71 | 5.0394 c11 | 0.118 | 2.520 | 2.992 | 19.370 | 6.06 | 0.75 | 1.54 | M24 x 3.0 | 1.89 | 2.76 | M30 x 3.5 | 0.16 |
| 133, 137 | 5.5118 h6 | 5.3150 g6 | 6.10 | 5.4331 c11 | 0.118 | 3.307 | 3.780 | 20.472 | 6.46 | 0.75 | 1.54 | M24 x 3.0 | 1.89 | 2.76 | M36 x 4.0 | 0.16 |
| 143, 145, 147 | 6.1024 h6 | 5.9055 g6 | 6.69 | 6.0236 c11 | 0.118 | 3.504 | 3.976 | 22.008 | 6.85 | 0.75 | 1.69 | M30 x 3.5 | 2.36 | 3.15 | M42 x 4.5 | 0.16 |
| 153, 155, 157 | 6.6929 h6 | 6.4961 g6 | 7.28 | 6.6142 c11 | 0.118 | 4.094 | 4.370 | 24.803 | 8.62 | 0.75 | 1.89 | M36 x 4.0 | 2.91 | 3.54 | M48 x 5.0 | 0.16 |
| 163, 165, 167 | 7.2835 h6 | 7.0866 g6 | 7.87 | 7.2047 c11 | 0.118 | 4.488 | 4.370 | 26.850 | 9.25 | 0.75 | 1.85 | M36 x 4.0 | 2.913 | 3.54 | M48 x 5.0 | 0.16 |
| 173, 175, 177 | 8.2677 h6 | 7.8740 g6 | 9.06 | 8.0709 c11 | 0.118 | 4.882 | 4.961 | 29.764 | 10.16 | 1.00 | 2.09 | M36 x 4.0 | 2.913 | 3.94 | M48 x 5.0 | 0.16 |
| 187 | 8.2677 h6 | 8.0709 g6 | 9.06 | 8.1890 c11 | 0.118 | 4.882 | 4.961 | 29.764 | 10.16 | 1.00 | 2.09 | M36 x 4.0 | 2.913 | 3.94 | M48 x 5.0 | 0.16 |

① See table 1 on page 98 of V-Class Catalog (171-110) for tolerance.

Type VPJ & VRJ Hollow Low-Speed Shaft — Shrink Disc Mounted

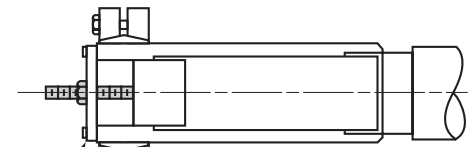
Sizes 203–227 / Dimensions—Inch

The drive package includes the keeper plate and keeper plate retention hardware



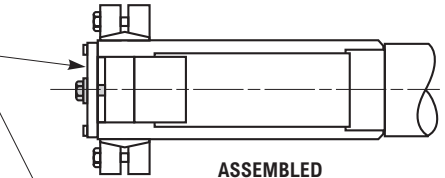
Z - QUANTITY
 ZA - DIA. TAPPED HOLES IN HOLLOW SHAFT
 ZB - DEEP
 Y - DIA. BOLT CIRCLE - EQUALLY SPACED HOLES FOR KEEPERPLATE RETENTION

Installation and removal can be assisted through the use of additional hardware items shown shaded (customer-supplied)

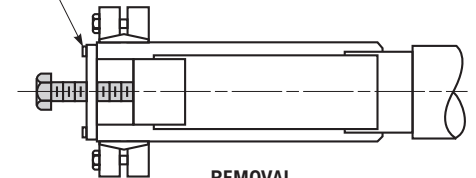


INSTALLATION

A threaded rod is inserted through the keeper plate center hole and into the tapped hole in the end of the driven shaft. The threaded rod, with nut as shown, are used to aid assembly.



ASSEMBLED

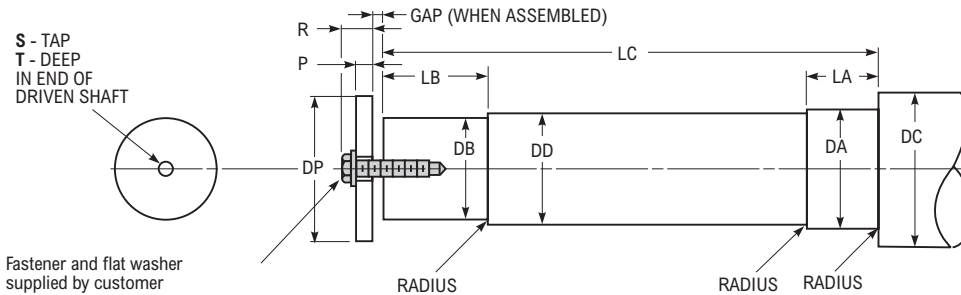


REMOVAL

A fastener (larger dia than the threaded rod) is threaded into the tapped center hole of the keeper plate and is used to separate the driven shaft from the hollow low-speed shaft of the gear drive.

Hollow Low-Speed Shaft Dimensions (Inch)

| DRIVE SIZE | AJ ^① | D | L1 | L2 | L3 | U ^① | Z | ZA | ZB | Y |
|---------------|-----------------|--------|-------|-------|--------|----------------|----|---------------|------|--------|
| 203, 207 | 10.2362J7 | 10.433 | 7.874 | 7.480 | 42.520 | 10.6299H7 | 10 | M12 x 1.75-6H | 0.95 | 11.417 |
| 223, 225, 227 | 12.2047J7 | 12.402 | 8.071 | 8.071 | 47.441 | 12.5984H7 | 10 | M16 x 2.0-6H | 1.26 | 13.583 |



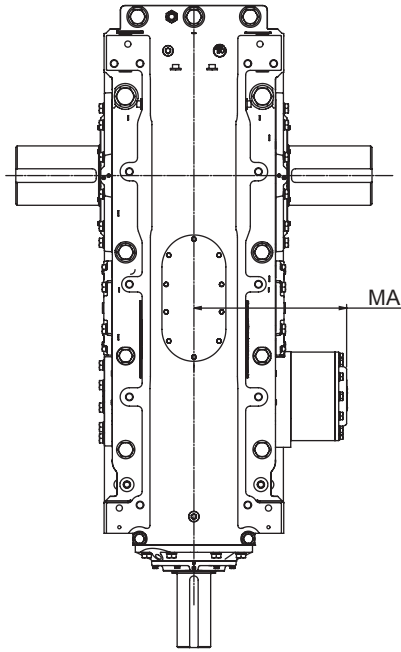
Driven Shaft Recommended Dimensions (Inch)

| DRIVE SIZE | DA ^① | DB ^① | DC Min | DD | Radius Max | LA | LB | LC | DP | P | R | S | T | Fastener Length | Tapped Hole in Center of Keeper Plate | Gap |
|---------------|-----------------|-----------------|--------|------------|------------|-------|-------|--------|-------|-------|------|------------|-------|-----------------|---------------------------------------|-------|
| 203, 207 | 10.6299h6 | 10.2362g6 | 11.614 | 10.4331c11 | 0.157 | 7.638 | 7.559 | 42.362 | 12.52 | 1.260 | 2.76 | M48 x 5-6H | 3.780 | 4.72 | M64 x 6-6H | 0.157 |
| 223, 225, 227 | 12.5984h6 | 12.2047g6 | 13.583 | 12.4016c11 | 0.157 | 7.835 | 8.150 | 47.283 | 14.88 | 1.260 | 2.76 | M48 x 5-6H | 3.780 | 4.72 | M64 x 6-6H | 0.157 |

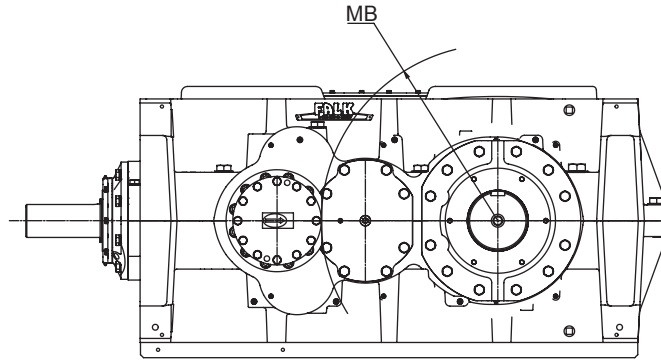
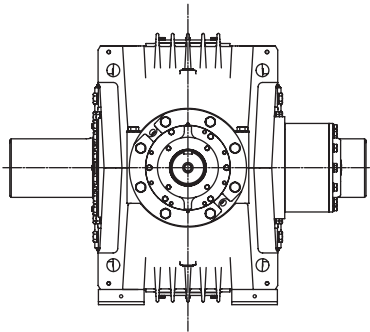
① See table 1 on page 98 of V-Class Catalog (171-110) for tolerance.

Type VR3 Backstop Clearance

Sizes 107-187 / Dimensions-Inch



NOTE: Check for backstop interference with couplings, sprockets, and sheaves.



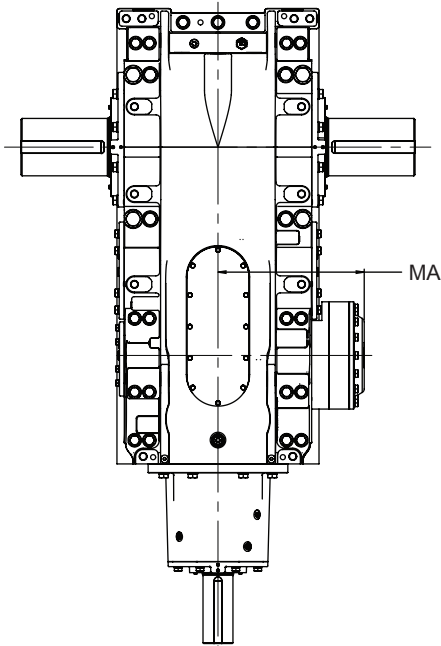
VR3 Backstop Clearance Dimensions (Inch)

| DRIVE SIZE ① | Ratios | MA | MB |
|---------------|---------------------------|-------|-------|
| 107 | 14.0 - 50.0 & 80.0 - 90.0 | 10.16 | 9.04 |
| | 56.0 - 71.0 & 100 - 125 | 8.31 | 9.73 |
| 117 | 14.0 - 50.0 & 80.0 - 90.0 | 10.52 | 10.78 |
| | 56.0 - 71.0 & 100 - 125 | 10.16 | 11.50 |
| 127 | 14.0 - 50.0 & 80.0 - 90.0 | 12.29 | 11.70 |
| | 56.0 - 71.0 & 100 - 125 | 10.31 | 12.39 |
| 133, 137 | 14.0 - 50.0 & 80.0 - 90.0 | 14.12 | 13.18 |
| | 56.0 - 71.0 & 100 - 125 | 12.04 | 13.48 |
| 143, 145, 147 | 14.0 - 50.0 & 80.0 - 90.0 | 13.07 | 14.95 |
| | 56.0 - 71.0 & 100 - 125 | 12.60 | 15.34 |
| 153, 155, 157 | 14.0 - 50.0 & 80.0 - 90.0 | 16.32 | 17.90 |
| | 56.0 - 71.0 & 100 - 125 | 13.38 | 18.30 |
| 163, 165, 167 | 14.0 - 50.0 & 80.0 - 90.0 | 16.85 | 19.97 |
| | 56.0 - 71.0 & 100 - 125 | 14.06 | 20.66 |
| 173, 175, 177 | 12.5 - 45.0 & 71.0 - 80.0 | 19.77 | 21.84 |
| | 50.0 - 63.0 & 90.0 - 112 | 16.54 | 22.72 |
| 187 | 14.0 - 50.0 & 80.0 - 90.0 | 19.77 | 22.82 |
| | 56.0 - 71.0 & 100 - 125 | 16.54 | 23.71 |

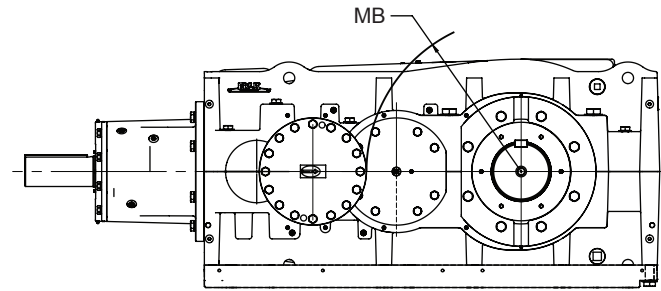
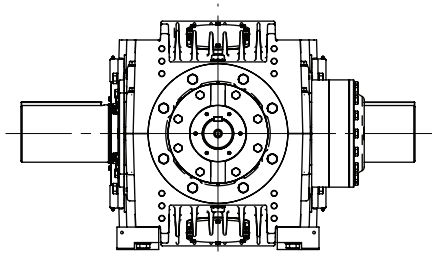
① Dimensions are for reference only and are subject to change without notice unless certified.

Type VR3 Backstop Clearance

Sizes 193–227 / Dimensions–Inch



NOTE: Check for backstop interference with couplings, sprockets, and sheaves.



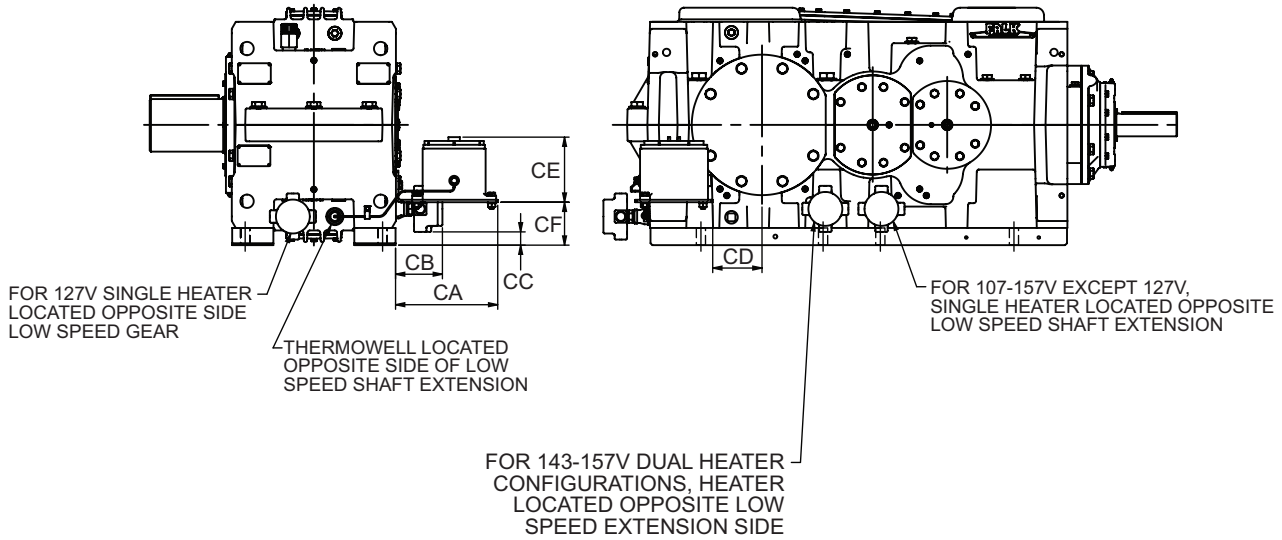
VR3 Backstop Clearance Dimensions (Inch)

| DRIVE SIZE | Ratios | MA | MB |
|---------------|----------------------------|-------|-------|
| 193, 195, 197 | 8.00 - 45.0 & 71.0 - 80.0 | 23.09 | 24.41 |
| | 50.0 - 63.0 & 90.0 - 112 | 21.64 | 27.15 |
| 203, 207 | 9.00 - 50.0 & 80.0 - 90.0 | 23.09 | 24.41 |
| | 56.0 - 71.0 & 100 - 125 | 21.64 | 27.15 |
| 213, 215, 217 | 8.00 - 45.0 & 71.0 - 80.0 | 27.64 | 30.48 |
| | 50.0 - 63.0 & 90.0 - 112 | 23.27 | 32.86 |
| 223, 225, 227 | 9.001 - 50.0 & 80.0 - 90.0 | 27.64 | 30.48 |
| | 56.0 - 71.0 & 100 - 125 | 23.27 | 32.86 |

① Dimensions are for reference only and are subject to change without notice unless certified.

Type VR3 Immersion Heater Package

Sizes 107–157 / Dimensions–Inch

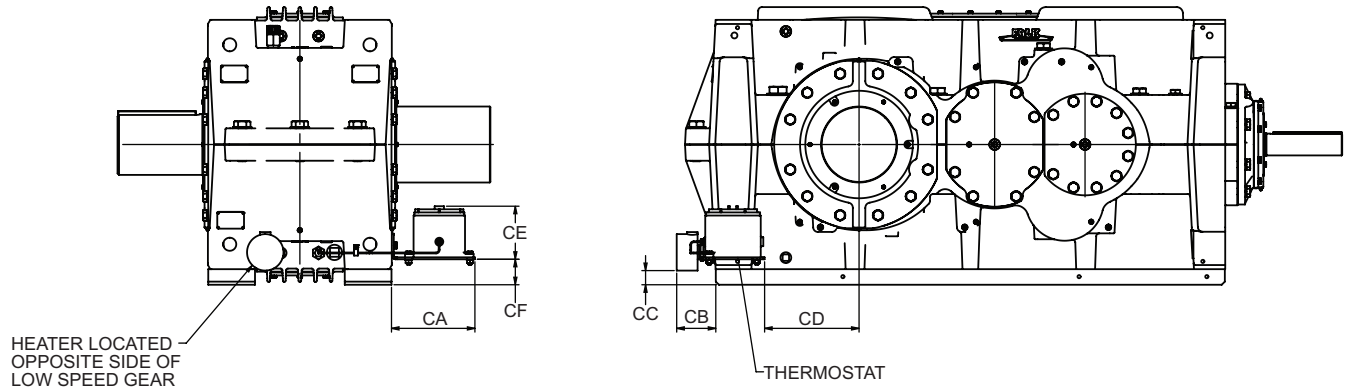


Single Reduction and Ratios (Inch)

| DRIVE SIZE | CA | CB | CC | CD | CE | | | CF |
|---------------|-------|------|------|------|---------------------|---------------------|---------------------|------|
| | | | | | 120V 60HZ 1PH | 240V 60HZ 3PH | 480V 60HZ 3PH | |
| 107 | 10.62 | 4.20 | 0.50 | 2.50 | 5.67 | 7.00 | | 1.20 |
| 117 | 10.54 | 4.27 | 0.38 | 3.80 | 5.67 | 7.00 | | 2.50 |
| 127 | 10.54 | 4.24 | 0.18 | 3.87 | 5.67 | 7.00 | | 1.20 |
| 133, 137 | 10.56 | 4.00 | 0.93 | 5.76 | 5.67 | 7.00 | | 2.82 |
| 143, 145, 147 | 10.54 | 4.83 | 1.37 | 5.08 | 5.67 | 7.00 | | 4.43 |
| 153, 155, 157 | 10.54 | 4.01 | 1.37 | 6.61 | 5.67 | 7.00 | | 2.19 |

Type VR3 Immersion Heater Package

Sizes 163–187 / Dimensions–Inch

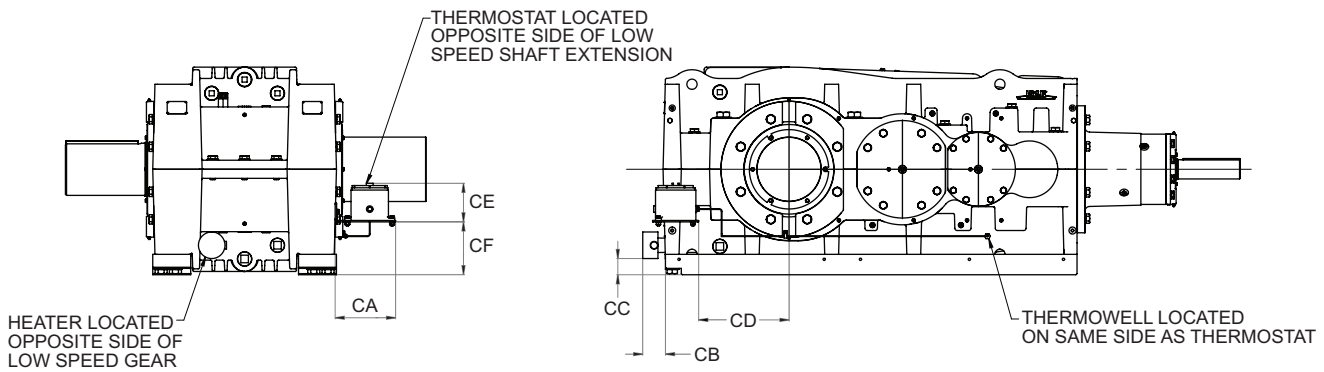


Single Reduction and Ratios (Inch)

| DRIVE SIZE | CA | CB | CC | CD | CE | | | CF |
|---------------|-------|------|------|-------|---------------------|---------------------|---------------------|----|
| | | | | | 120V 60HZ 1PH | 240V 60HZ 3PH | 480V 60HZ 3PH | |
| 163, 165, 167 | 10.54 | 5.33 | 1.60 | 9.06 | 5.67 | 7.00 | 2.35 | |
| 173, 175, 177 | 10.54 | 4.94 | 1.79 | 12.92 | 5.67 | 7.00 | 3.22 | |
| 187 | 10.54 | 4.94 | 1.79 | 11.94 | 5.67 | 7.00 | 3.22 | |

Type VR3 Immersion Heater Package

Sizes 193-227 / Dimensions—Inch

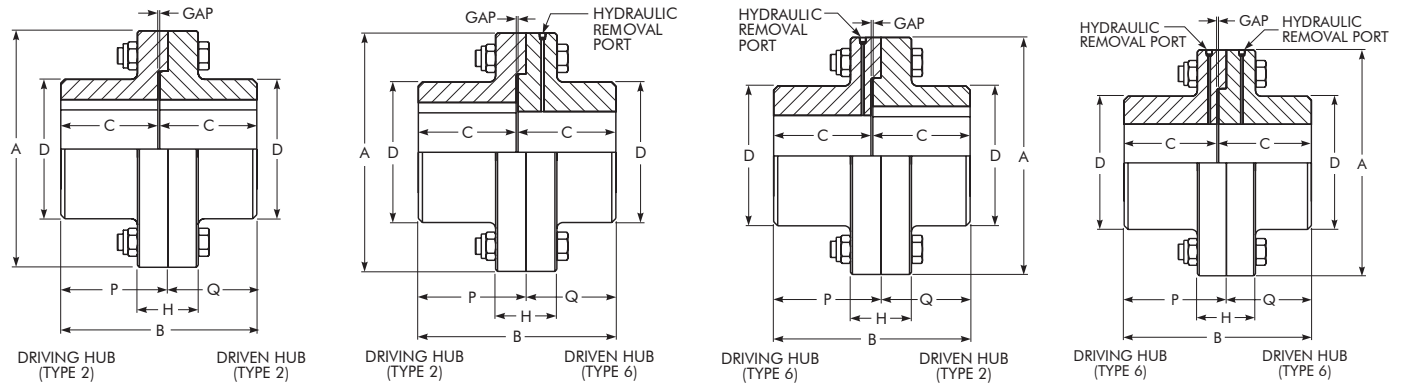


Single Reduction and Ratios (Inch)

| DRIVE SIZE | CA | CB | CC | CD | CE | | CF |
|---------------|-------|------|------|-------|------|--------------|-------|
| | | | | | 120V | 240V 480Z | |
| 193, 195, 197 | 10.50 | 3.93 | 2.81 | 17.26 | 5.67 | 7.00 | 9.17 |
| 203, 207 | 10.50 | 3.93 | 2.81 | 15.69 | 5.67 | 7.00 | 9.17 |
| 213, 215, 217 | 10.50 | 3.57 | 2.81 | 21.07 | 5.67 | 7.00 | 11.34 |
| 223, 225, 227 | 10.50 | 3.57 | 2.81 | 19.11 | 5.67 | 7.00 | 11.34 |

Type 2000 MCF Couplings

WARNING: Drive system analysis must be performed by Rexnord Application Engineering. Driven shaft loads will be furnished to check shaft stresses and bearing loads. Improper installation and maintenance of this coupling may result in injury.



Flange Connection/Dimensions (Inch)

| DRIVE SIZE | Coupling Size ① | Hub Type | | | | Minimum/Maximum Bore | | | | Cplg Wt lb ② | A | B | C | D | H | P | Q | Gap |
|---------------|-----------------|-------------|----------------------------------|------------|----------------------------------|----------------------|--------------------------------------|---------------|--------------------------------------|--------------|-------|-------|------|-------|------|------|------|------|
| | | Driving Hub | | Driven Hub | | Driving Hub | | Driven Hub | | | | | | | | | | |
| | | Type ③ | Hydraulic Removal Port Size BSPP | Type ③ | Hydraulic Removal Port Size BSPP | Bore | Fit | Bore Range | Fit | | | | | | | | | |
| 107 | 2130MCF | 2 | ... | 2 | ... | 3.9370 | Keyed Keyed Keyless Keyless | 3.00- 4.50 | Keyed Keyless Keyed Keyless | 131 | 12.50 | 9.12 | 4.50 | 7.00 | 2.50 | 4.81 | 4.31 | 0.12 |
| | | 2 | ... | 6 | 0.125-28 | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 6 | 0.125-28 | | | | | | | | | | | | | |
| 117 | 2140MCF | 2 | ... | 2 | ... | 4.3307 | Keyed Keyed Keyless Keyless | 4.00- 5.00 | Keyed Keyless Keyed Keyless | 169 | 13.25 | 11.12 | 5.50 | 7.75 | 2.76 | 5.81 | 5.31 | 0.12 |
| | | 2 | ... | 6 | 0.125-28 | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 6 | 0.125-28 | | | | | | | | | | | | | |
| 127 | 2150MCF | 2 | ... | 2 | ... | 4.7244 | Keyed Keyed Keyless Keyless | 4.00- 5.50 | Keyed Keyless Keyed Keyless | 246 | 14.62 | 12.12 | 6.00 | 8.62 | 3.76 | 6.62 | 5.50 | 0.12 |
| | | 2 | ... | 6 | 0.125-28 | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 6 | 0.125-28 | | | | | | | | | | | | | |
| 133, 137 | 2160MCF | 2 | ... | 2 | ... | 5.1181 | Keyed Keyed Keyless Keyless | 4.50- 6.50 | Keyed Keyless Keyed Keyless | 343 | 16.25 | 13.12 | 6.50 | 10.00 | 4.00 | 7.12 | 6.00 | 0.12 |
| | | 2 | ... | 6 | 0.125-28 | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.125-28 | 6 | 0.125-28 | | | | | | | | | | | | | |
| 143, 145, 147 | 2170MCF | 2 | ... | 2 | ... | 5.5118 | Keyed Keyed Keyless Keyless | 5.00- 7.50 | Keyed Keyless Keyed Keyless | 496 | 18.00 | 14.88 | 7.38 | 11.62 | 4.00 | 8.00 | 6.88 | 0.12 |
| | | 2 | ... | 6 | 0.250-19 | | | | | | | | | | | | | |
| | | 6 | 0.250-19 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.250-19 | 6 | 0.250-19 | | | | | | | | | | | | | |
| 153, 155, 157 | 2180MCF | 2 | ... | 2 | ... | 6.2992 | Keyed Keyed Keyless Keyless | 5.00- 8.00 | Keyed Keyless Keyed Keyless | 604 | 19.12 | 14.88 | 7.38 | 12.88 | 4.50 | 8.00 | 6.88 | 0.12 |
| | | 2 | ... | 6 | 0.250-19 | | | | | | | | | | | | | |
| | | 6 | 0.250-19 | 2 | ... | | | | | | | | | | | | | |
| | | 6 | 0.250-19 | 6 | 0.250-19 | | | | | | | | | | | | | |

① Refer to Factory for all applications above 100 rpm. Dimensions are for reference only and are subject to change without notice unless certified.

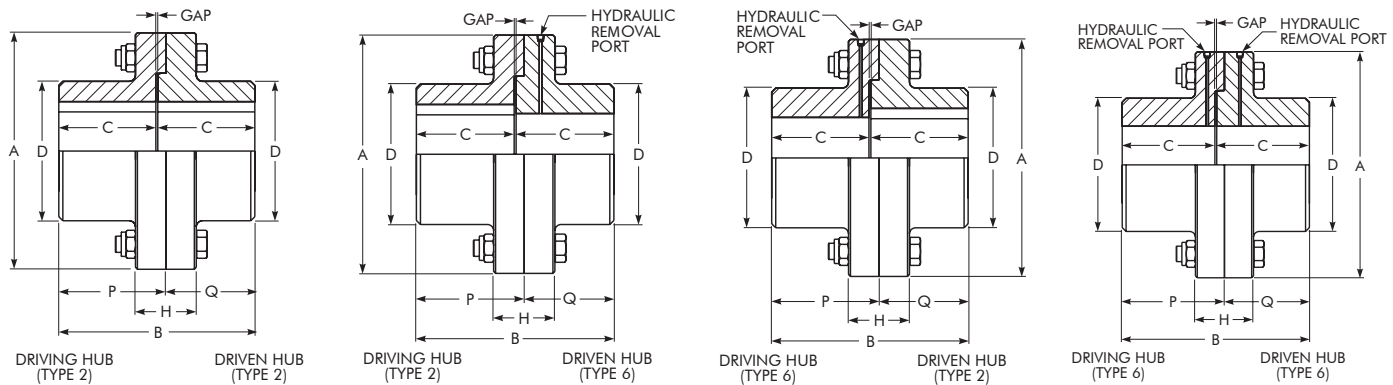
② Coupling weights are for hubs with rough bores.

③ Type 2 hub is straight bored with keyed hub; Type 6 hub is straight bored KEYLESS hub with hydraulic removal.
Type 2 and Type 6 hubs are interference fit. Driven shaft tolerance is expected to be: +0.000/-0.001 inches for inch shafts, or M6 for metric shafts.

Continued on next page.

Type 2000 MCF Couplings

WARNING: Drive system analysis must be performed by Rexnord Application Engineering. Driven shaft loads will be furnished to check shaft stresses and bearing loads. Improper installation and maintenance of this coupling may result in injury.



Flange Connection/Dimensions (Inch)

| DRIVE SIZE | Coupling Size ① | Hub Type | | | | Minimum/Maximum Bore | | | | Cplg Wt lb ② | A | B | C | D | H | P | Q | Gap |
|---------------|-----------------|-------------|----------------------------------|------------|----------------------------------|----------------------|---------|------------|---------|--------------|-------|-------|-------|-------|------|-------|-------|------|
| | | Driving Hub | | Driven Hub | | Driving Hub | | Driven Hub | | | | | | | | | | |
| | | Type ③ | Hydraulic Removal Port Size BSPP | Type ③ | Hydraulic Removal Port Size BSPP | Bore | Fit | Bore Range | Fit | | | | | | | | | |
| 163, 165, 167 | 2190MCF | 2 | ... | 2 | ... | 7.0866 | Keyed | 5.50-9.00 | Keyed | 803 | 21.12 | 17.62 | 8.75 | 13.88 | 4.76 | 9.37 | 8.25 | 0.12 |
| | | 2 | ... | 6 | 0.250-19 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.250-19 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.250-19 | 6 | 0.250-19 | | Keyless | | Keyless | | | | | | | | | |
| 173, 175, 177 | 2200MCF | 2 | ... | 2 | ... | 7.6772 | Keyed | 6.50-9.50 | Keyed | 946 | 22.00 | 19.12 | 9.50 | 14.75 | 5.00 | 10.12 | 9.00 | 0.12 |
| | | 2 | ... | 6 | 0.250-19 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.250-19 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.250-19 | 6 | 0.250-19 | | Keyless | | Keyless | | | | | | | | | |
| 187 | 2210MCF | 2 | ... | 2 | ... | 7.6772 | Keyed | 7.00-10.00 | Keyed | 1207 | 23.50 | 21.36 | 10.62 | 15.50 | 6.00 | 11.24 | 10.12 | 0.12 |
| | | 2 | ... | 6 | 0.250-19 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.250-19 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.250-19 | 6 | 0.250-19 | | Keyless | | Keyless | | | | | | | | | |
| 193, 195, 197 | 2220MCF | 2 | ... | 2 | ... | 9.0551 | Keyed | 7.50-12.00 | Keyed | 1638 | 25.88 | 24.12 | 12.00 | 17.38 | 6.54 | 12.62 | 11.50 | 0.12 |
| | | 2 | ... | 6 | 0.750-14 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.750-14 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.750-14 | 6 | 0.750-14 | | Keyless | | Keyless | | | | | | | | | |
| 203, 207 | 2230MCF | 2 | ... | 2 | ... | 9.0551 | Keyed | 8.50-13.00 | Keyed | 2232 | 28.75 | 27.12 | 13.50 | 18.75 | 6.76 | 14.12 | 13.00 | 0.12 |
| | | 2 | ... | 6 | 0.750-14 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.750-14 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.750-14 | 6 | 0.750-14 | | Keyless | | Keyless | | | | | | | | | |
| 213, 215, 217 | 2240MCF | 2 | ... | 2 | ... | 10.6299 | Keyed | 8.50-14.00 | Keyed | 2647 | 30.25 | 28.62 | 14.25 | 20.25 | 7.24 | 14.87 | 13.75 | 0.12 |
| | | 2 | ... | 6 | 0.750-14 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.750-14 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.750-14 | 6 | 0.750-14 | | Keyless | | Keyless | | | | | | | | | |
| 223, 225, 227 | 2250MCF | 2 | ... | 2 | ... | 10.6299 | Keyed | 9.50-15.00 | Keyed | 3337 | 32.00 | 30.12 | 15.00 | 22.25 | 7.50 | 15.62 | 14.50 | 0.12 |
| | | 2 | ... | 6 | 0.750-14 | | Keyed | | Keyless | | | | | | | | | |
| | | 6 | 0.750-14 | 2 | ... | | Keyless | | Keyed | | | | | | | | | |
| | | 6 | 0.750-14 | 6 | 0.750-14 | | Keyless | | Keyless | | | | | | | | | |

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② Coupling weights are for hubs with rough bores.

③ Type 2 hub is straight bored with keyed hub; Type 6 hub is straight bored KEYLESS hub with hydraulic removal.

Type 2 and Type 6 hubs are interference fit. Driven shaft tolerance is expected to be: +0.000/-0.001 inches for inch shafts, or M6 for metric shafts.



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