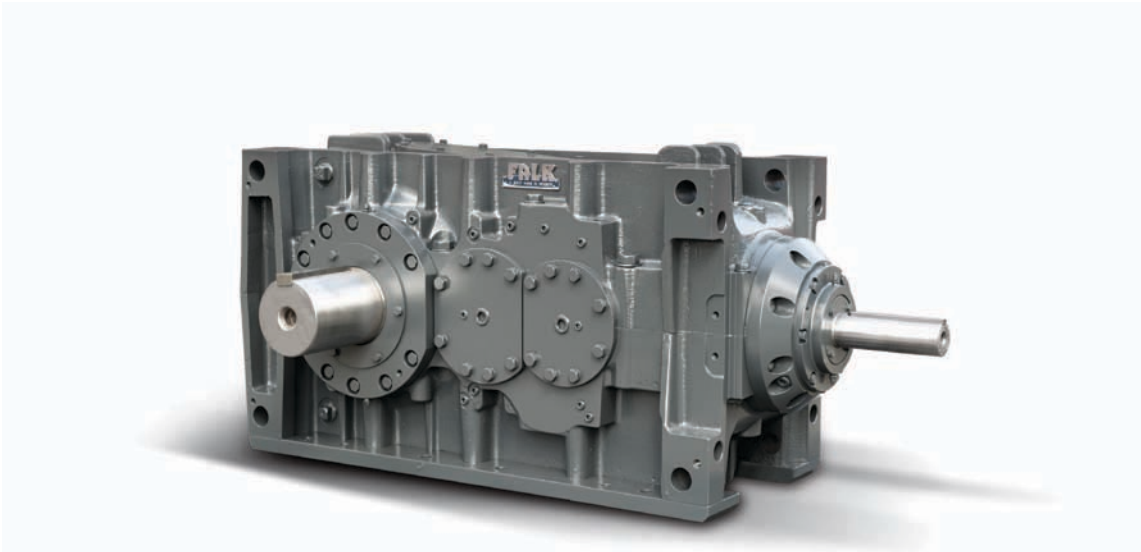




Falk V-Class Catalog



Selection Guide 171-110

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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.

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 Mechanical Power Ratings Gear drive mechanical power ratings stated in this selection guide allow 100% overload for starting loads and momentary overloads associated with normal electric motor driven standard applications operating 10 hours per day under uniform conditions, applications where the recommended mechanical service factor per Page 3 or 4 of this selection guide is 1.00, and where the actual mechanical service factor of the gear drive versus full motor-rated power is equal to or greater than 1.00.

For other standard applications not meeting conditions stated in the previous paragraph, determine the appropriate mechanical service factor from Page 3 or 4, then calculate an equivalent power by multiplying the actual power transmitted by the previously determined mechanical service factor. For these applications, the mechanical power rating of the gear drive selected must equal or exceed the equivalent power that has been calculated.

These service factors are based on the assumption that the system is free from serious critical and torsional vibrations and that maximum momentary or starting loads do not exceed 200% of the normal load.

For non-standard applications, those where excessive overloads, reversing service, mechanical brakes, or oversize prime movers are present, refer to Page 2, Conditions Affecting Selection, for special instructions.

Gear Drive Basic Thermal Ratings Gear drive basic thermal ratings stated in this selection guide are based on the following assumed conditions:

Ambient temperature is 68°F (20°C).

Altitude is between sea level and 2460 feet.

Ambient air velocity is between 1.6 feet per second and 4.6 feet per second typical of a large indoor room.

Duty cycle is continuous.

Orientation is floor-mounted with shafts in same horizontal plane.

Thermal Factors & Procedures, Page 6, permit the calculation of an application-adjusted thermal rating for the gear drive when local thermal conditions are different than those stated above. It is not necessary to apply the mechanical service factor to the basic thermal rating when determining the thermal adequacy of a gear drive.

Interpolation of Gear Drive Mechanical Power Ratings and Torque Ratings When the high-speed shaft rpm for an actual application falls between two tabulated high-speed shaft rpms found in the selection tables, interpolate to determine gear drive rating.

Stored and Inactive Drives Each gear drive is spin-tested with a rust-preventive oil that will protect parts against rust for a period of four months in an outdoor shelter, or 12 months in a dry building after shipment from the Factory.

Periodically inspect stored or inactive drives and spray internal parts with rust inhibitor every six months or more often, if necessary. Drain oil before adding rust inhibitor. Indoor dry storage is recommended.

Drives ordered for extended storage can be treated at the factory with a special preservative and sealed to rust-proof parts for periods longer than those cited above, if specified on the order.

Refer to Service Manual 128-014 for preparation of stored and inactive gear drives.

Conditions Affecting Selection

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.

Application-Adjusted Thermal Rating, Page 6, The application-adjusted thermal rating is the actual power that a gear drive will transmit continually for three hours or more without overheating. Although it is not necessary to apply the mechanical service factor when determining thermal adequacy of a gear drive, the application-adjusted thermal rating considers thermal factors associated with the application that will affect the ability of the gear drive to dissipate thermal energy. These thermal factors include ambient temperature, altitude above sea level, ambient air velocity and duty cycle. Thermal factors on Page 6 are used to adjust the Basic Thermal Rating when determining the application-adjusted thermal rating.

A check of the application-adjusted thermal rating versus the actual motor horsepower is necessary for the following applications:

- Continuous duty application where the gear drive runs continuously without shutdown for three hours or more per day.
- Intermittent duty applications where the gear drive operates for three hours or more per day, and run time intervals exceed the duration of the immediately following shutdown intervals. If any run time interval equals or exceeds three hours, the application is considered continuous duty.

The duty cycle factor permits an upward adjustment of the basic thermal rating associated with intermittent duty applications above, and takes into account the operating time per hour of the gear drive, regardless of duration relationship between run time intervals and down time intervals, and provided no specific run time interval exceeds one hour in duration.

Other short-interval, intermittent duty applications not meeting criteria stated above may generate only modest thermal energy to be dissipated by the gear drive. Refer full application details to the Factory for selection of the minimum cooling method that is adequate.

Effects of Solar Energy If a drive operates in the sun at ambient temperatures over 100°F (38°C), then special measures must be taken to protect the drive from solar energy. This protection can consist of a canopy over the gear drive or reflective paint on the gear drive. If neither is possible, a heat exchanger or other cooling device may be required.

Overhung Loads and Thrust Loads Overhung loads and thrust loads must be taken into account when selecting a gear drive. If either an overhung load or thrust load is imposed on the gear drive, or if both an overhung load and thrust load are applied simultaneously, refer application details to the Factory for correct gear drive selection.

Product Modifications The Factory can supply special product modifications to suit your application needs. Contact your local Representative for housing modifications, special ratios, special shafts, special mounting orientations, accessory modifications and other special application requirements.

Seal Housing Grease All gear drives will be shipped with NLGI grade #2 grease in the seal housing cavities. Where this grease could contaminate products produced by customer processes, such as in the food and drug industries, refer to factory for special food grade grease options.

Oil Pump-Equipped Application When a gear drive is equipped with an integral or external motor-driven oil pump, and the ambient temperature falls below 50°F (10°C), or the oil viscosity is in excess of 3250 cSt, an oil heater may be required to maintain a satisfactory flow rate at startup to prevent bearing failure. Consult the Factory.

Table 1 Mechanical Service Factor Conversions

Table 2 or 3 3 to 10 hour Service Factor	3 to 10 Hours per Day	Over 10 Hours per Day	Intermittent—Up to 3 Hours per Day †	
	Multi-Cyl. Engine †	Multi-Cyl. Engine †	Motor	Multi-Cyl. Engine †
1.25	1.50	1.75	1.25	1.25
1.50	1.75	2.00	1.25	1.50
1.75	2.00	2.25	1.50	1.75
2.00	2.25	2.50	1.75	2.00

† For applications operating one half hour or less per day or applications driven by single cylinder engines, refer to the Factory.

Occasional and Intermittent Service or Engine-Driven Applications

For multi-cylinder engine-driven applications and all applications operating intermittently up to three hours per day, refer to Table 2 or 3 for the Service Factor of the same application operating three to 10 hours per day. Next, in the first column of Table 1, find this same Service Factor. Then, to the right, under the desired hours service and prime mover, locate the converted Service Factor. For example, from Table 3, the Service Factor is 1.25 for a uniformly loaded belt conveyor. From Table 1, for the same application, the following are the Service Factors for various conditions.

1. Engine driven three to 10 hours per day; use 1.50 Service Factor.
1. Engine driven up to three hours intermittently; use 1.25 Service Factor.
1. Motor driven up to three hours intermittently; use 1.25 Service Factor.

Mounting Position — Standard mounting positions for types VP & VR are with the input and output shafts horizontal.

Allowable mounting angles for standard oil levels are:

	Bridge Slope	Kiln Slope
VP & VR	± 2°	± 4°
	Consult the Factory for other angles.	

Table 2 Mechanical Service Factors listed by Industry

For electric motor, steam turbine or hydraulic motor drives, recommendations are MINIMUM and normal conditions are assumed.

Industry	Service		Industry	Service	
	3 to 10 Hour	Over 10 Hour		3 to 10 Hour	Over 10 Hour
BOTTLING AND BREWING			Fourdrinier Rolls—		
Bottling Machinery	1.25	1.25	Lumpbreaker, Wire Turning		
Brew Kettles, Continuous Duty	1.25	1.25	Dandy & Return Rolls	1.50	1.50
Can Filling machines	1.25	1.25	Jordan	1.50	1.50
Cookers—Continuous Duty	1.25	1.25	Kiln Drive	1.50	1.50
Mash Tubs—Continuous Duty	1.25	1.25	ML Hope & Paper Rolls	1.25	1.25
Scale Hoppers—Frequent Starts	1.25	1.50	Platter	1.50	1.50
CLAY WORKING INDUSTRY			Presses (Felt & Suction)	1.25	1.25
Brick Press	1.75	2.00	Pulper (Continuous)	2.00	2.00
Briquette Machines	1.75	2.00	Repulper (Heavy Shock)	2.00	2.00
Clay Working Machinery	1.25	1.50	Reel (Surface Type)	1.25	1.25
Pug Mills	1.25	1.50	Screens		
DISTILLING	See Brewing		Chip & Rotary	1.50	1.50
DREDGES			Vibrating	2.00	2.00
Cable Reels, Conveyors	1.25	1.50	Size Press	1.25	1.25
Cutter Head, Jig Drives & Pumps	2.00	2.00	Super Calenders	1.25	1.25
Maneuvering Winches	1.75	2.00	Thickener & Washer		
Screen Drives	1.75	2.00	AC Motor	1.50	1.50
Stackers, Utility Winches	1.25	1.50	DC Motor	1.25	1.25
FOOD INDUSTRY			Vacuum Pumps	1.50	1.50
Beet Slicers	1.25	1.50	Wind & Unwind Stand	1.25	1.25
Bottling, Can Filling Machine	1.25	1.25	Winders (Surface Type)	1.25	1.25
Cereal Cookers	1.25	1.25	◆ Yankee Dryers	1.25	1.25
Dough Mixers, Meat Grinders	1.25	1.50	PLASTIC INDUSTRY		
LUMBER INDUSTRY			Batch Drop Mill, 2 smooth rolls	1.25	1.25
Barkers—Spindle Feed	1.25	1.50	Calenders	1.50	1.50
Barkers—Main Drive	1.75	1.75	Compounding Mills	1.25	1.25
Carriage Drive	Refer to Factory		Continuous Feed, Holding &		
Conveyors			Blend Mill	1.25	1.25
Burner	1.25	1.50	Extruders	1.50	1.50
Main or Heavy Duty	1.50	1.50	Variable Speed Drive	1.50	1.50
Main Log	1.75	2.00	Fixed Speed Drive	1.75	1.75
Re-Saw Merry-Go-Round	1.25	1.50	Intensive Internal Mixers		
Slab	1.75	2.00	Batch Mixers	1.75	1.75
Transfer	1.25	1.50	Continuous Mixers	1.50	1.50
Chains—Floor	1.50	1.50	RUBBER INDUSTRY		
Chains—Green	1.50	1.75	Batch Drop Mill, 2 smooth rolls	1.50	1.50
Cut-Off Saws—Chain & Drag	1.50	1.75	Calenders	1.50	1.50
Debarking Drums	1.75	2.00	Cracker, 2 corrugated rolls	2.00	2.00
Feeds—Edger	1.25	1.50	Cracker Warmer—2 roll,		
Feeds—Gang	1.75	1.75	1 corrugated roll	1.75	1.75
Feeds—Trimmer	1.25	1.50	Extruders		
Log Deck	1.75	1.75	Continuous Screw Operation	1.75	1.75
Log Hauls—Incline, Well Type	1.75	1.75	Intermittent Screw Operation	1.75	1.75
Log Turning Devices	1.75	1.75	Holding, Feed & Blend Mill—		
Planer Feed	1.25	1.50	2 Roll	1.25	1.25
Planer Tilting Hoists	1.50	1.50	Intensive Internal Mixers		
Rolls—Live—Off Bearing—			Batch Mixers	1.75	1.75
Roll Cases	1.75	1.75	Continuous Mixers	1.50	1.50
Sorting Table, Tipple Hoist	1.25	1.50	Mixing Mill—2 smooth rolls		
Transfers—Chain & Craneway	1.50	1.75	(if corrugated rolls are used, use		
Tray Drives	1.25	1.50	Cracker Warmer service factors)	1.50	1.50
Veneer Lathe Drives	Refer to Factory		Refiner—2 roll	1.50	1.50
OIL INDUSTRY			SEWAGE DISPOSAL		
Chillers	1.25	1.50	Bar Screens	1.25	1.25
Oil Well Pumping	Refer to Factory		Chemical Feeders	1.25	1.25
Paraffin Filter Press	1.25	1.50	Collectors	1.25	1.25
Rotary Kilns	1.25	1.50	Dewatering Screens	1.50	1.50
PAPER MILLS ■			Scum Breakers	1.50	1.50
Agitator (Mixer)	1.50	1.50	Slow or Rapid Mixers	1.50	1.50
Agitator for Pure Liquids	1.25	1.25	Thickeners	1.50	1.50
Barking Drums, Barkers—Mech.	2.00	2.00	Vacuum Filters	1.50	1.50
Beater	1.50	1.50	SUGAR INDUSTRY		
Breaker Stack	1.25	1.25	Cane Knives, Crushers	1.75	1.75
Calender	1.25	1.25	Mills (low-speed end)	1.75	1.75
Chipper	2.00	2.00	TEXTILE INDUSTRY		
Chip Feeder	2.00	2.00	Batchers, Calenders	1.25	1.50
Coating Rolls	1.25	1.25	Card Machines	1.25	1.50
Conveyors—			Dry Cans, Dryers	1.25	1.50
Chip, Bark, Chemical	1.25	1.25	Dyeing Machinery	1.25	1.50
Log (incl. Slab)	2.00	2.00	Knitting Machinery	Refer to Factory	
Couch Rolls	1.25	1.25	Looms, Mangles,		
Cutter	2.00	2.00	Nappers, Pads	1.25	1.50
Cylinder molds	1.25	1.25	Range Drives	Refer to Factory	
Dryers —			Slashers, Soapers, Spinners,		
Paper Mach. & Conveyor Type	1.25	1.25	Tenter Frames, Washers, Winders	1.25	1.50
Embosses	1.25	1.25	WINDLASS	Refer to Factory	
Extruder	1.50	1.50			

- ★ Service Factors for paper mill applications are applied to the nameplate rating of the electric drive motor at the motor-rated base speed and are consistent with those shown in TAPPI standards.
- ◆ Anti-friction bearings only.
- A service factor of 1.25 may be applied at base speed of a super calender operating over a speed range of part constant power and part constant torque where the constant power speed range is greater than 1.5 to 1. A service factor of 1.25 is applicable to super calenders operating at constant torque over the entire speed range or where the constant power speed range is less than 1.5 to 1.

Table 3 | Mechanical Service Factors Listed by Application

Application	Service		Application	Service		Application	Service		Application	Service	
	3 to 10 Hour	Over 10 Hour		3 to 10 Hour	Over 10 Hour		3 to 10 Hour	Over 10 Hour		3 to 10 Hour	Over 10 Hour
AGITATORS			▲ CONVEYORS—Uniformly loaded or Fed:			▲ HOISTS			PULLERS (Barge Haul)	1.75	2.00
Pure Liquids	Refer to Factory		Apron or Bucket	1.25	1.50	Heavy Duty	1.75	2.00	PUMPS		
Liquids & Solids	Refer to Factory		Assembly, Belt, Chain, Flight, Oven, Screw	1.25	1.25	Medium Duty	1.25	1.50	Centrifugal	1.25	1.25
Liquids—Variable Density	Refer to Factory		▲ CONVEYORS—Heavy Duty. Not Uniformly Fed			Skip Hoist	1.25	1.50	Proportioning	1.25	1.50
APRON CONVEYORS			Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	1.25	1.50	INDUCED DRAFT FANS	1.50	1.50	Reciprocating		
Uniformly Loaded or Fed	1.25	1.50	CONVEYORS—Severe Duty			See Mills. Rotary	See Mills. Rotary		Single Act., 3 or more Cyl.	1.25	1.50
Heavy Duty	1.25	1.50	Live Roll	Refer to Factory		LAUNDRY WASHERS	1.50	2.00	Double Act., 2 or more Cyl.	1.25	1.50
APRON FEEDERS	1.25	1.50	Reciprocating Shaker	1.75	2.00	LAUNDRY TUMBLERS	1.25	1.50	Single Act., 1 or 2 Cyl.	Refer to Factory	
ASSEMBLY CONVEYORS			COOKERS (Brewing & Distilling), (Food)	1.25	1.25	LINE SHAFTS			Double Acting, 1 Cyl.	Refer to Factory	
Uniformly Loaded or Fed	1.25	1.25	COOLING TOWER FANS	Refer to Factory		Driving Processing Equipment	1.25	1.50	Rotary: Gear, Lobe, Vane.	1.25	1.25
Heavy Duty	1.25	1.50	▲ CRANES			Other Line Shafts, Light.	1.25	1.25	PUNCH PRESSES (Gear Driven)	1.75	2.00
BALL MILLS	See Mills. Rotary		Dry Dock Cranes, Main Hoist, Bridge and Trolley Travel	Refer to Factory		LIVE ROLL CONVEYORS	Refer to Factory		RECIPROCATING CONVEYORS & FEEDERS	1.75	2.00
BARGE HAUL PULLERS	1.75	2.00	CRUSHERS			LOBE BLOWERS OR COMPRESSORS	1.25	1.50	RECIPROCATING COMPRESSORS		
BARKING			Ore or Stone	1.75	2.00	LOG HAULS (Lumber)			Multi-Cylinder	1.50	1.75
Drums (Coupling Connected)	1.75	2.00	Sugar	1.75	1.75	Incline-well Type.	1.75	1.75	Single Cylinder	1.25	2.00
Mechanical	1.25	2.00	DEWATERING SCREENS (Sewage)	1.50	1.50	LOOMS (Textile)	1.25	1.50	ROD MILLS	See Mills. Rotary	
BAR SCREENS (Sewage)	1.25	1.50	DISC FEEDERS	1.25	1.25	LUMBER INDUSTRY	See Table 2		ROTARY		
BATCHERS (Textile)	1.25	1.50	DISTILLING	See Table 2		MACHINE TOOLS			Pumps	1.25	1.25
BELT CONVEYORS			DOUBLE ACTING PUMPS			Auxiliary Drives	1.25	1.25	Screens (Sand or Gravel)	1.25	1.50
Uniformly Loaded or Fed	1.25	1.25	2 or more Cylinders	1.25	1.50	Bending Rolls	1.25	1.50	RUBBER & PLASTICS INDUSTRIES	See Table 2	
Heavy Duty	1.25	1.50	Single Cylinder	Refer to Factory		Main Drives	1.25	1.50	SAND MULLERS	1.25	1.50
BELT FEEDERS	1.25	1.50	DOUGH MIXER (Food)	1.25	1.50	Notching Press (Belted)	Refer to Factory		SCREENS		
BENDING ROLLS (Machine)	1.25	1.50	DRAW BENCH (Metal Mills)			Plate Planers	1.75	2.00	Air Washing	1.25	1.25
BLOWERS			Carriage & Main Drive	1.25	1.50	Punch Press (Geared)	1.75	2.00	Rotary—Sand or Gravel	1.25	1.50
Centrifugal	1.25	1.25	DREDGES	See Table 2		Tapping machines	1.75	2.00	Traveling Water Intake	1.25	1.25
Lobe	1.25	1.50	DRY DOCK CRANES	Refer to Factory		MANGLE (Textile)	1.25	1.50	SCREW CONVEYORS		
Vane	1.25	1.50	DRYERS & COOLERS (Mills. Rotary)	1.50		MASH TUBS (Brewing & Distilling)	1.25	1.25	Uniform	1.25	1.25
BOTTLING MACHINERY			DYEING MACHINERY (Textile)	1.25	1.50	MEAT GRINDERS (Food)	1.25	1.50	Heavy Duty or Feeder	1.25	1.50
Brewing	See Table 2		ELEVATORS			METAL MILLS			SCUM BREAKERS (Sewage)	1.50	1.50
BRICK PRESS (Clay Working)	1.75	2.00	Bucket-Uniform Load	1.25	1.50	Draw Bench Carriages & Main Drives	1.25	1.50	SEWAGE DISPOSAL	See Table 2	
BRIQUETTE MACHINES (Clay Working)	1.75	2.00	Bucket-Heavy Duty	1.25	1.50	Pinch, Dryer & Scrubber			SHAKER CONVEYORS	1.75	2.00
BUCKET			Bucket-Continuous	1.25	1.50	Rolls, Reversing	Refer to Factory		SHEETERS (Rubber)	1.75	2.00
Conveyors Uniform	1.25	1.50	Centrifugal Discharge	1.25	1.25	Sitters	1.25	1.50	SINGLE ACTING PUMP		
Conveyors Heavy Duty	1.25	1.50	▲ Escalators	Not Approved		Table Conveyors			1 or 2 Cylinders	Refer to Factory	
Elevators Continuous	1.25	1.50	▲ Freight	Not Approved		Non-Reversing Group Drives	1.50	1.50	3 or more Cylinders	1.25	1.50
Elevators Uniform	1.25	1.50	Gravity Discharge	1.25	1.25	Non-Reversing Individual Drives	2.00	2.00	▲ SKI TOWS & LIFTS	Not Approved	
Elevators Heavy Duty	1.25	1.50	▲ Man Lifts, Passenger	Not Approved		Reversing	Refer to Factory		▲ SKIP HOIST	1.25	1.50
CALENDERS			EXTRUDERS (Plastic & Rubber)	See Table 2		Wire Drawing & Flattening Machines	1.25	1.50	SLAB PUSHERS	1.50	1.50
Rubber and Plastic	See Table 2		FANS			Wire Winding Machines	1.50	1.50	SLITTERS (Metal)	1.25	1.50
Textile	1.25	1.50	Centrifugal	1.25	1.25	MILLS. ROTARY			SLUDGE COLLECTORS (Sewage)	1.25	1.25
CANE KNIVES	1.75	1.75	Cooling Towers	Refer to Factory		Ball and Rod Mills			SOAPERS (Textile)	1.25	1.50
CAN FILLING MACHINES	1.25	1.25	Forced Draft	1.25	1.25	with Spur Ring Gear	Refer to Factory		SPINNERS (Textile)	1.25	1.50
CARD MACHINES (Textile)	1.25	1.50	Induced Draft	1.50	1.50	with Helical Ring Gear	Refer to Factory		STEERING GEARS	Refer to Factory	
CAR DUMPERS	1.75	2.00	Large (Mine. etc.)	1.50	1.50	Direct Connected	Refer to Factory		STOKERS	1.25	1.25
CAR PULLERS	1.25	1.50	Large Industrial	1.50	1.50	Cement Kilns, Dryers & Coolers	Refer to Factory		STONE CRUSHERS	1.75	2.00
CEMENT KILNS	See Mills. Rotary		Light (Small Diameter)	1.25	1.25	Pebble, Plain & Wedge Bar Mills	Refer to Factory		SUGAR INDUSTRY	See Table 2	
CENTRIFUGAL			FEEDERS			Tumbling Barrels	Refer to Factory		TABLE CONVEYORS (Non-Reversing)		
Blowers, Compressors, Discharge Elevators, Fans or Pumps	1.25	1.25	Apron, Belt	1.25	1.50	MIXER (Also see Agitators)			Group Drives	1.50	1.50
CHAIN CONVEYORS			Disc	1.25	1.25	Concrete, Cont. & Int.	Refer to Factory		Individual Drives	2.00	2.00
Uniformly Loaded or Fed	1.25	1.25	Reciprocating	1.75	2.00	Constant Density	Refer to Factory		Reversing	Refer to Factory	
Heavy Duty	1.25	1.50	Screw	1.25	1.50	Variable Density	Refer to Factory		TENTER FRAMES (Textile)	1.25	1.50
CHEMICAL FEEDERS (Sewage)	1.25	1.25	FLIGHT CONVEYORS			NAPPERS (Textile)	1.25	1.50	TEXTILE INDUSTRY	See Table 2	
CLARIFIERS	1.25	1.25	Uniform	1.25	1.25	OIL INDUSTRY	See Table 2		THICKENERS (Sewage)	1.50	1.50
CLASSIFIERS	1.25	1.50	Heavy	1.25	1.50	ORE CRUSHERS	1.75	2.00	TUMBLING BARRELS	1.75	2.00
CLAY WORKING	See Table 2		FOOD INDUSTRY	See Table 2		OVEN CONVEYORS			VACUUM FILTERS (Sewage)	1.50	1.50
COLLECTORS (Sewage)	1.25	1.25	GENERATORS (Not Welding)	1.25	1.25	Uniform	1.25	1.25	VANE BLOWERS	1.25	1.50
COMPRESSORS			GRAVITY DISCHARGE ELEVATORS	1.25	1.25	Heavy Duty	1.25	1.50	WINCHES (Dredges)	1.25	1.50
Centrifugal	1.25	1.25	HAMMER MILLS	1.75	2.00	Reciprocating	1.25	1.50	WINDERS (Textile)	1.25	1.50
Lobe	1.25	1.50				Multi-Cylinder	1.50	1.75	WINDLASS	Refer to Factory	
Reciprocating						Single-Cylinder	1.75	2.00	WIRE		
CONCRETE MIXERS						▲ PASSENGER ELEVATORS	Not Approved		Drawing Machines	1.25	1.50
Continuous	Refer to Factory					PEBBLE MILLS	1.75	2.00	Winding Machines	1.50	1.50
Intermittent	Refer to Factory					PLATE PLANERS	1.75	2.00			

For electric motor, steam turbine or hydraulic motor drives, recommendations are MINIMUM and normal conditions are assumed.

▲ Selection of Rexnord products for applications whose primary purpose is the transportation of people is not approved. This includes such applications as freight or passenger elevators, escalators, man lifts, work lift platforms and ski tows and ski lifts. If the primary purpose of the application is material conveyance and occasionally people are transported, the Factory 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.

How to Select/Formula Method

Before making a selection, refer to Basic Information and Conditions Affecting Selection on Pages 1 and 2.

Information Required

The following basic information is required to select a Falk™ V-Class™ gear drive for your application.

Prime Mover Data

- Type – electric or hydraulic motor or engine
- Power rating in HP
- Speed – constant or variable
- Dimensions – if the Factory will furnish motor mounting accessory or coupling

Driven Machine Data

- Type – conveyor, kiln, etc.
- Power demand in HP, or equivalent torque
- Speed and direction of rotation
- Service – hours per day; reversals per minute if reversing; minutes per hour (duty cycle) if not continuous

Gear Drive Data

- Type – parallel shaft or right angle
- Ambient temperature range at drive location
- Altitude above sea level
- Ambient air velocity at drive location
- Mounting position – if inclined or non-standard orientation

Shaft Connections

- Shaft diameters and key sizes
- Overhung loads – provide full description of sheave, sprocket, or pinion
- Thrust load and direction

Power Selection Method

The power selection method is based on the power rating of the prime mover.

1. Determine the mechanical service factor.
Electric motor-driven applications, see Tables 2 & 3, Pages 3 & 4.
Engine-driven or intermittent applications, see Table 1, Page 3.
2. Calculate equivalent power by multiplying the rated power of the prime mover by the mechanical service factor determined in Step 1.
3. Determine gear drive nominal ratio.
Divide the high-speed shaft rpm by the low-speed shaft rpm to determine your ideal ratio. Choose a nominal ratio that most closely approximates your ideal ratio. Nominal ratios are found in the power ratings tables. See Step 4.
4. Using the equivalent power determined in Step 2, and the gear drive nominal ratio that most closely approximates the ideal ratio determined in Step 3, select the gear drive size using the Power Ratings Tables.

Power Ratings Tables:

- Parallel shaft gear drives, see Pages 18 thru 41.
- Right angle shaft drives, see Pages 144 thru 157.

Locate the proper page within the power ratings tables based on nominal ratio and high-speed shaft rpm. Once on the proper page, go to the portion of the table associated with your high-speed shaft rpm, and using the appropriate nominal ratio, trace to the right through the columns. Determine the column of the first power rating that equals or exceeds the equivalent power determined in Step 2. The size of the gear drive selected is at the top of the column. Once a gear drive size has been selected, an exact ratio can be determined from the exact ratio tables.

5. Check thermal rating using procedures outlined on Page 6. The application-adjusted thermal rating of the cooling method selected must equal or exceed the motor power.
6. When overhung loads or thrust loads are present, check to assure they are within the capacity of the gear drive selected.

Overhung load (radial load) is imposed by sheaves, sprockets, and open pinions that are mounted directly on the shaft extensions of the gear drive. Gear drive shaft extensions that are flexible coupling-connected need not be checked for overhung load. Flexible couplings do not impose significant overhung load.

Refer HS shaft overhung load applications to the Factory.

Gear drives that have thrust load (axial loads) applied need to be referred to Factory for correct selection. Please advise magnitude and direction to select the correct drive size for the application.

Combined shaft loadings involving simultaneous application of overhung load, thrust load, or bending moment (as in mixers and agitators) should be referred directly to the Factory.

Torque Selection Method

For convenience, low-speed shaft torque ratings of gear drives are provided, and a purely mechanical selection of a gear drive can be made using torque values. Simply follow the steps outlined in the power selection method, substituting torque values for power values. In order to check thermal adequacy, and check shaft ratings, it will be necessary to convert the torque to power using the formula below:

$$\text{Input Power (Hp)} = \frac{\text{Torque (lb-in)} \times \text{Output Speed (rpm)}}{63025}$$

Example Selections

An example using the Power Selection Method and an example using the Torque Selection Method is found on Page 7.

Thermal Factors & Procedures

Checking Thermal Rating

Checking the thermal rating is extremely important. If the gear drive's capacity to dissipate thermal energy is insufficient, it will overheat, and severe damage may occur.

Gear drive basic thermal ratings are defined on Page 1. A discussion of the application-adjusted thermal rating, and when it is applicable, is found on Page 2.

Thermal Rating Factors

Thermal horsepower ratings published herein are based on a 68°F (20°C) ambient temperature at an altitude up to 2460 feet above sea level. For other conditions, the thermal horsepower rating must be multiplied by the factors shown in Tables 1 & 2 (see right).

Application-Adjusted Thermal Rating

Once a mechanically adequate gear drive selection has been made per Steps 1-4 on Page 5, determine the application-adjusted thermal rating of the gear drive. The application-adjusted thermal rating of the gear drive selected must equal or exceed the actual motor horsepower.

In most cases, the nameplate power rating of the motor is assumed to equal the actual power transmitted. It is not necessary to apply the mechanical service factor when determining thermal adequacy of a gear drive.

Use the following formula to determine application-adjusted thermal rating:

$PT_A = P_T \times B_1 \times B_2 \times B_3 \times B_4 \times B_5$ where:

PT_A = Application-Adjusted Thermal Rating

P_T = Basic Thermal Rating

B_1 = Ambient Temperature Factor (Table 1)

B_2 = Altitude Factor (Table 2)

B_3 = Ambient Air Velocity Factor for no auxiliary cooling (Table 3)

B_4 = Duty Cycle Factor (Table 4)

B_5 = Alignment-Free Package Factor (Table 5)

Basic Thermal Ratings for parallel shaft gear drives are found on Pages 42-93.

Basic Thermal Ratings for right angle shaft gear drives are found on Pages 158-203.

Once a gear drive satisfies mechanical requirements, select an auxiliary cooling method with an application-adjusted thermal rating that equals or exceeds the actual power transmitted. If no listed cooling method is adequate, contact the Factory for selection of an optional heat exchanger, or consider a larger gear drive with greater thermal capacity.

Table 1 — Ambient Temperature Factor – B_1

(For all cooling methods)

Ambient Temperature ★	Ambient Adjustment Factor at 180°F Sump	Ambient Adjustment Factor at 200°F Sump
59F (15C)	1.09	1.08
68F (20C)	1.00	1.00
77F (25C)	0.91	0.92
86F (30C)	0.82	0.85
95F (35C)	0.74	0.78
104F (40C)	0.65	0.70
113F (45C)	0.56	0.63
122F (50C)	0.48	0.56

★ Factors for other ambient temperatures can be interpolated.

Table 2 — Altitude Factor – B_2

Altitude Above Sea Level – Feet	Factor
0	1.00
2461	0.95
4922	0.90
7382	0.85
9843	0.81
12304	0.76
14765	0.72
17225	0.68

Table 3 — Ambient Air Velocity Factor † – B_3

(For no auxiliary cooling)

Sustained Ambient Air Velocity †	Installed Environment	Factor for No Auxiliary Cooling
ft/sec		
< 1.6	Confined Space	0.75
1.6 to 4.6	Large Indoor Room	1.00
4.6 to 12.1	Large Indoor Room	1.40
> 12.1	Outdoors	1.90

† The sustained ambient air velocity must be a continuous flow of air directly onto the gear drive. If the air flow cannot be relied upon to be continuous, an ambient air velocity factor of 0.75 must be used.

Table 4 — Duty Cycle Factor ‡ – B_4

% Operating Time Per Hour	Factor With or Without Auxiliary Cooling
100%	1.00
80%	1.05
60%	1.15
40%	1.35
20%	1.80

‡ The duty cycle factor must be based on the percentage of each hour that the drive is operating. For example: a gear drive operating for 48 minutes of every hour of the day has an 80% duty cycle, but a drive operating for four hours and resting for four hours has a 100% duty cycle. Where the % Operating Time Per Hour falls between values tabulated above, use the next higher % Operating Time.

Table 5 — Alignment-Free Package Factor* – B_5

Size	Fluid Coupling				VFD / Floating Shaft Coupling		
	1420HFDD	1480HFDD	1584HFDD	1660HFDD	All Sizes (NEMA & IEC)	NEMA 447T/IEC 280M and Smaller Motors	NEMA 449T/IEC 315S and Larger Motors
117	1.14	...	...	...	1.14	...	...
127	1.00	1.13	...	...	1.00	...	...
133, 137	1.14	1.27	...	...	1.14	...	...
143, 145, 147	1.00	1.13	1.41	...	...	1.00	1.41
153, 155, 157	0.89	1.00	1.26	1.55	...	0.89	1.26
163, 165, 167	0.88	1.00	1.27	1.56	...	0.88	1.27
173, 175, 177	...	0.74	0.95	1.18	0.95	...	...
187	...	0.74	0.95	1.18	0.95	...	...
193, 195, 197	...	...	0.76	0.76	0.76	...	...
203, 207	...	...	0.76	0.76	0.76	...	...
213, 215, 217	...	...	...	...	...	...	...
223, 225, 227	...	...	...	...	...	...	...

* Factor to be applied to shaft fan cooling only. Not applicable for other cooling types.

Power Selection Example

An heavily loaded coal conveyor operates continuous duty 24 hours per day. The application requires a right angle reducer due to space constraints. The gear drive will be driven by a 600 HP electric motor at 1750 rpm. A low-speed shaft speed of 70 rpm and a maximum sump temperature of 200°F has been requested.

Ambient temperature at the conveyor does not exceed 68°F. The conveyor is installed underground in an open air environment with unrestricted air flow. The high-speed and low-speed shafts of the selected gear drive will be connected to the driving and driven equipment by flexible couplings. Select a base-mounted right angle gear drive for this application as follows:

1. The mechanical service factor is 1.50 for a heavily loaded conveyor operating over 10 hours per day, from page 3, Table 2 (Conveyors, Heavy Duty).
2. The equivalent power in HP = $1.50 \times 600 = 900$ HP.
3. The ideal ratio is $1750 \div 70 = 25.00$. The closest nominal ratio is 25.0:1 from the Right Angle Triple Reduction Power Ratings Table on page 146.
4. Using the Right Angle Triple Reduction Power Ratings Table on page 146 and in the section associated 25.0:1, trace right through the columns to the first power rating that equals or exceeds the equivalent of 900 HP calculated in Step 2. The selection is a size 173VR3 (shown at the top of the column) that has a power rating of 908 HP. Actual mechanical service factor is $908 \div 600 = 1.51$. Exact ratio is 25.65:1, found on page 204 (exact ratio table).
5. Check thermal rating. The application-adjusted thermal rating must equal or exceed the actual power transmitted (600 HP). Basic thermal rating for the 173VR3, nominal ratio 25:1, high-speed shaft of 1750 rpm, no auxiliary cooling, equals 244 HP, per page 164.

Thermal factors from page 6 for no auxiliary cooling are as follows.

- B_1 = Ambient Temperature Factor from Thermal Table 1 = 1.00
- B_2 = Altitude Factor from Thermal Table 2 = 1.00
- B_3 = Ambient Air Velocity Factor from Thermal Table 3 = 1.00
- B_4 = Duty Cycle Factor from Thermal Table 4 = 1.00

Application-adjusted thermal rating with no auxiliary cooling =
 $244 \times 1.00 \times 1.00 \times 1.00 \times 1.00 = 244$ HP

Application-adjusted thermal rating does not equal or exceed the 600 HP transmitted, so auxiliary cooling is required.

Basic thermal rating for the 173VR3, nominal ratio 25:1, high-speed shaft 1750 rpm, shaft fan cooling, equals 909 HP, per page 164.

Thermal factors for shaft fan cooling are as follows:

- B_1 = Ambient Temperature Factor from Thermal Table 1 = 1.00
- B_2 = Altitude Factor from Thermal Table 2 = 1.00
- B_4 = Duty Cycle Factor from Thermal Table 4 = 1.00

Application-adjusted thermal rating with no auxiliary cooling =
 $909 \times 1.00 \times 1.00 \times 1.00 = 909$ HP

Application-adjusted thermal rating does equal or exceed the 600 HP transmitted so shaft fan cooling is required. Right angle VRC3 unit utilize a split axial fan so the direction of rotation of the high-speed shaft must be provided at the time of order.

6. It is not necessary to check overhung load or thrust capacity of the gear drive for this example. Gear drive shaft extensions are connected by flexible couplings, which do not impose significant overhung load. No thrust load is present.
7. Determine the complete Falk V-Class unit nomenclature per page 12. You must specify the shaft orientation and accessory mounting position for your installation. For example, the final nomenclature for this unit could be M173VRC3A25.65-0421B.

Torque Selection Example

A dredge utility winch requires 500,000 lb.-in. of torque at its output shaft, which operates at 16 rpm. The winch is in service eight hours per day and is driven by a coupling-connected 150 HP, 1750 rpm electric motor. The ambient temperature never exceeds 68°F. The approximate air velocity is 10 feet per second, and the dredge operates in Lake Superior (sea level). The winch never operates more than 30 minutes in a given hour. The space available is best suited to a base-mounted right angle gear drive, and a maximum sump temperature of 200°F has been requested. Select a gear drive for this application.

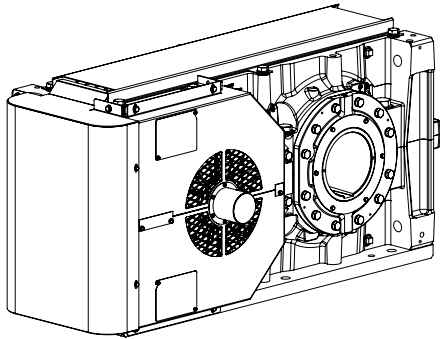
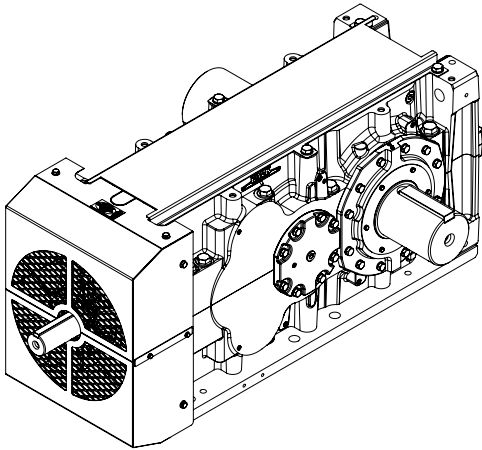
1. The Service Factor is 1.25 for a dredge utility winch operating 10 hours per day, from Page 3, Table 2 under Dredges.
2. The equivalent torque is $1.25 \times 500,000 = 625,000$ lb.-in.
3. The ideal ratio is $1750 \div 16 = 109.4:1$. The nearest standard nominal ratio is 112:1 from the Right Angle Triple Reduction Table on Page 147.
4. Using the Triple Reduction Table on Page 147, in the 1750 rpm high-speed shaft section and at the 112:1 ratio and 16 rpm, trace right to 692 (x 1000, the first torque exceeding the equivalent torque of 625,000 lb.-in.) and read the drive size 165 at the top of the column.
5. The basic thermal capacity with no auxiliary cooling for an 165VR3, 112:1, at 1750 rpm from the table on Page 165 is 135 HP. The ambient temperature factor (B_1) from Table 1, Page 6, is 1.00. The altitude factor (B_2) from Table 2, Page 6 is 1.00. The ambient air velocity factor (B_3) is 1.4 from Table 3, Page 6. The Duty Cycle is 50% (30 min/hour), so the duty cycle factor (B_4) is 1.15 from Table 4, Page 6.
6. The application-adjusted thermal capacity is $135 \times 1.00 \times 1.00 \times 1.40 \times 1.15 = 217$ HP, which exceeds the power rating of the motor (150 HP). Therefore, no additional cooling is required.
7. It is not necessary to check overhung load or thrust capacity of the gear drive for this example. Gear drive shaft extensions are connected by flexible couplings, which do not impose significant overhung load. No thrust load is present.

Accessory & Option Information

Shaft-Driven Cooling Fans

Shaft-driven cooling fans provide a simple and inexpensive way to utilize the full mechanical rating of the gear drives by lowering the operating temperature, thus increasing thermal power capacity. Cooling fans have been successfully used on electric motors and other related machinery for many years. They eliminate the need for water or electrically powered cooling, pumps and external piping. The sound level at standard motor rpm is about the same as that from fans on totally enclosed, fan-cooled driving motors. Less than 0.25% of cataloged power rating is required to drive the fans. Radial fans are available for use with VP parallel shaft drives. The radial fan utilized on the VP drives is a split fan design.

Axial split fans are also available for use on the VR right angle drives. The direction of rotation of the high-speed shaft is required at the time of order to ensure that the correct axial fan is selected. Dimensions, arrangements and clearances for shaft-driven fans are shown in the selection guide.



Electric Cooling Fan

The use of an electric fan permits the full use of available shaft extensions. Electric fans are unaffected by shaft rotation and speed of the gearbox. They include a thermostatic control to turn off the fan when it is not required. The electric fan can be mounted on either end of a parallel shaft drive and on the low-speed end of a right angle drive. Electric fans are available with the following standard motor packages:

60Hz, 3 phase, 220/380VAC

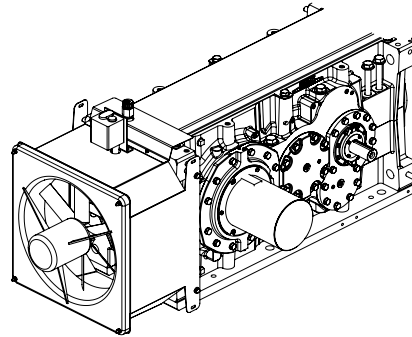
60Hz, 3 phase, 265/460VAC

60Hz, 1 phase, 110VAC

50Hz, 3 phase, 220/380VAC

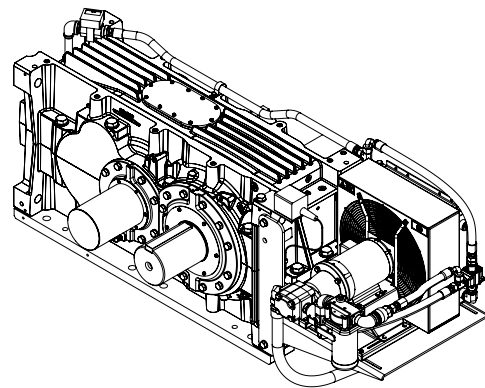
Other motor packages may be available at an extra charge. Consult the Factory for price and availability.

Dimensions, arrangements and clearances for electric fans are shown in the selection guide. Additional information including motor ratings and thermostatic control wiring diagrams are also available from the Factory.



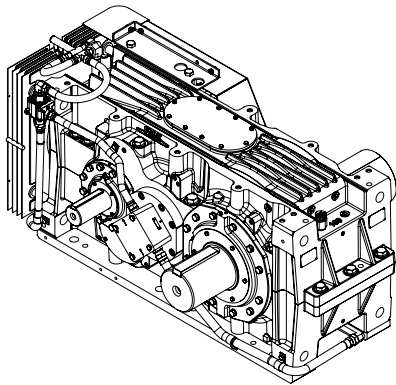
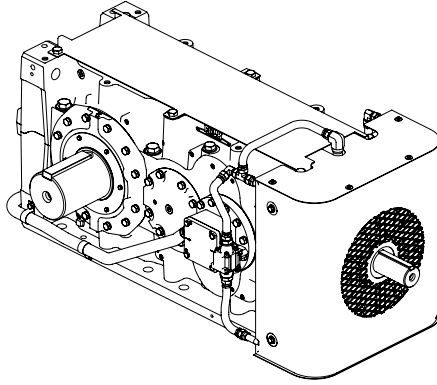
Pumps & Coolers

The 600 Series integrated oil-to-air cooler is drive mounted at the factory and shipped with both the lube suction and return lines connected to the drive with flexible hose. Only one motor is required – this dual output motor drives both the lube pump and cooling fan. The motor is 230-460V AC, 3 phase, 50 or 60Hz. A thermostatic bypass valve at the cooler regulates the flow of oil through the cooler. Available options include flow switch, single and dual filters.



DuraPlate™ Patent-Pending Cooling Package

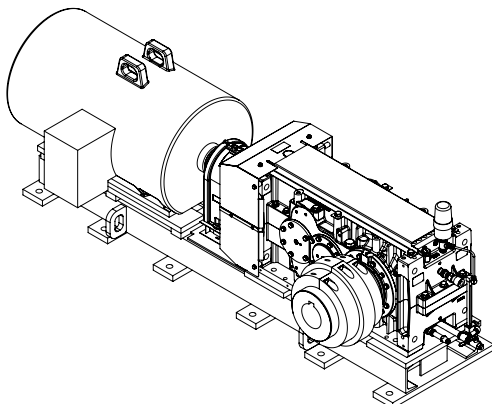
The Falk V-Class DuraPlate provides enhanced cooling capacity. This self-contained system is integral to the drive train and can control oil temperatures in the most extreme conditions. No air, water or electricity is required. A shaft-driven pump circulates oil through the patent-pending DuraPlate while a shaft-driven fan provides air flow to cool the oil.



Bedplates

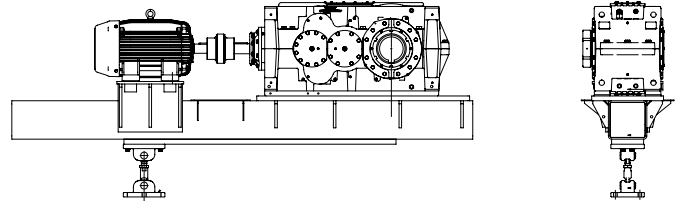
A bedplate is recommended to ensure proper alignment of a base-mounted drive with the motor. The Factory can provide a fabricated steel bedplate for all popular sizes of standard VP and VR drives. These bedplates accommodate standard NEMA and IEC motors within the power range of the drive and many of the larger non-NEMA motors. Special bedplates can be designed and manufactured for unique motor and special accessory combinations.

Supports for tachometers, brakes, timing devices, foot-mounted fluid couplings or other accessories can be added. Contact the Factory for further details on this accessory.



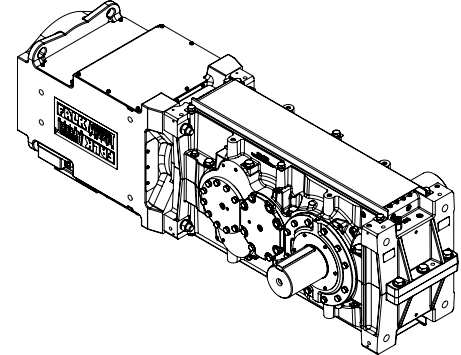
Swing Base

Designed specifically for use with the VR right angle shaft-mounted drive, the swing base provides an economical and readily available alternative to bedplates. Swing bases have been pre-engineered for several combinations of Falk V-Class units, NEMA & IEC motors and Falk couplings.



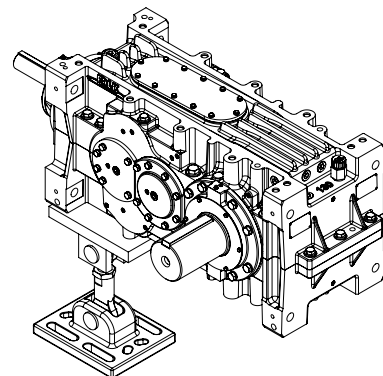
Alignment-Free Drive

The Alignment-Free Drive is a standard packaged drive developed to meet the demands of surface and underground belt conveyor applications. The drive comprises a unitized motor, coupling (fluid or flexible) and right angle gear drive that mounts directly to the conveyor drive shaft and is supported by a single torque arm. The unit can mount to the conveyor shaft via rigid flanged coupling, TA Taper® bushing or shrink disc. It is simple to install, eliminates the cost of expensive mounting pads, and offers the mobility required for today's conveyor systems.



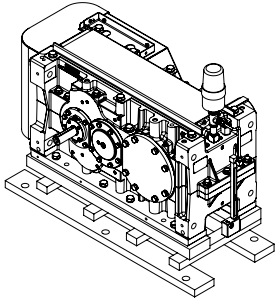
Torque Arm

Torque arms are available for VR right angle shaft-mounted drives. They are used to support the drive in a standard horizontal position, and are suitable for use with a swingbase, bedplate or Alignment-Free drive. The customer is responsible for determining the structural integrity of their support structure.



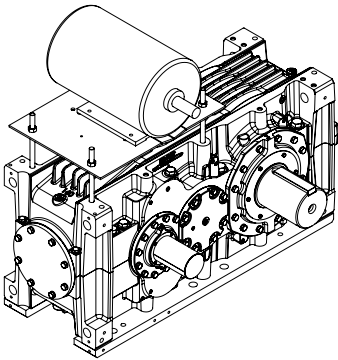
Transition Base

A custom transition bedplate can be provided to adapt a current Falk V-Class unit to the footprint of an existing gear drive. Transition bases are designed to align the center of the gear drive low-speed shaft with the center of the driven shaft. Additional adaption in the form of spacer couplings and/or an extended shaft may be required to complete the low-speed connection.



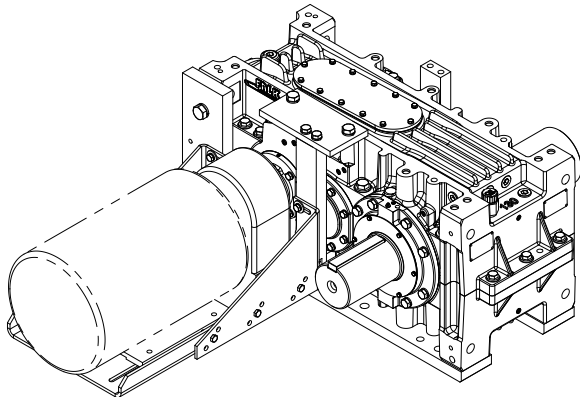
Motor Mounts

Motor mounts are selectively predesigned for type VP drives. Motor mounts provide a convenient support for the motor when the drive is belt-driven.



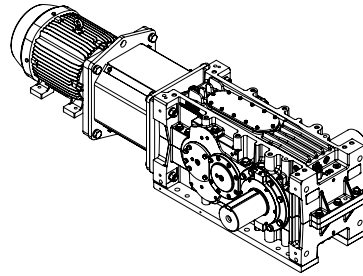
Motor Brackets

Motor brackets may be used for type VP and VR drives. These motor brackets provide an economical "soft" mounting for standard NEMA T-frame and IEC B3 induction motors. It is expected that the weight, location and starting torque of the motor will cause cantilevered motor brackets to deflect or twist to varying degrees. They are engineered to be within acceptable deflection limits as determined by the Factory. However, because the motor bracket is a "soft" motor support, deflection and vibration magnitudes of the bracket may exceed levels normally considered acceptable for rigidly, "hard" mounted machinery.



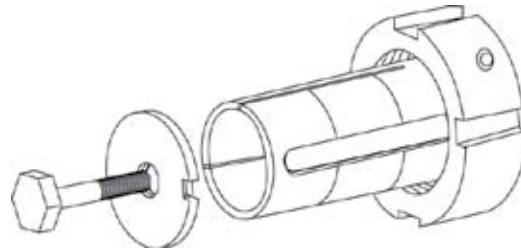
Flange Motor Adapters

Flanged motor adapters are available for type VP and VR drives. The adapter allows a flange-mounted motor to be directly mounted to the high speed shaft of the drive.



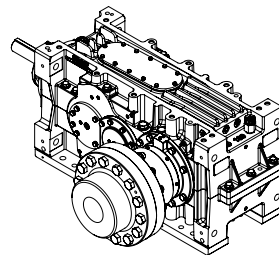
TA Taper Bushings

Available with both inch and metric bores, the TA Taper ductile iron bushings provide for easy-on easy-off shaft mounting convenience for hollow shaft drives.



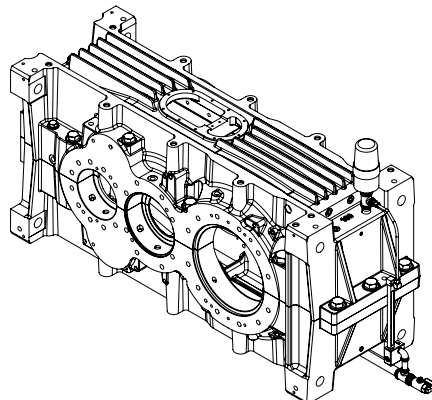
Shaft Mounting Options

In addition to the TA Taper bushing previously described, shaft mounting options include hollow shaft with shrink disc and solid shaft with a Falk MCF rigid flange coupling.



Lubrication Package

The Falk V-Class Lube Package includes a Falk desiccant breather, an oil sampling port, an oil sight gauge and oil drain ball valve assembly.

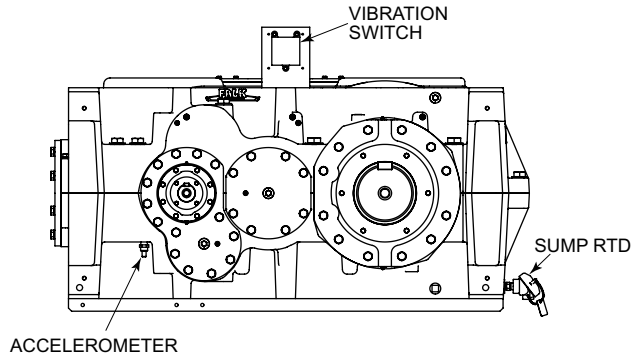


Condition Monitoring Packages

The Falk V-Class condition monitoring packages allow you to easily monitor the health of your drive.

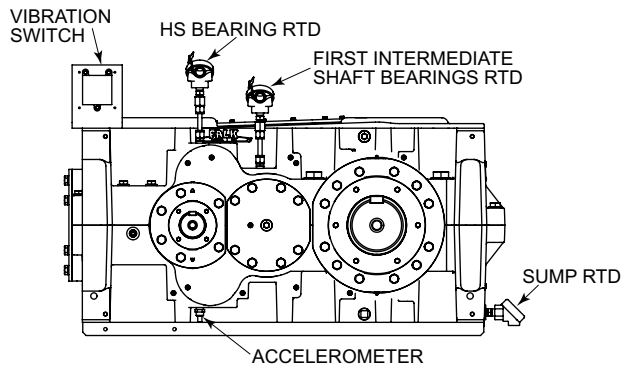
Condition Monitoring #1

This package includes a sump RTD and an accelerometer with vibration switch. The package includes one 100Ω three-wire platinum sump RTD with thermowell.



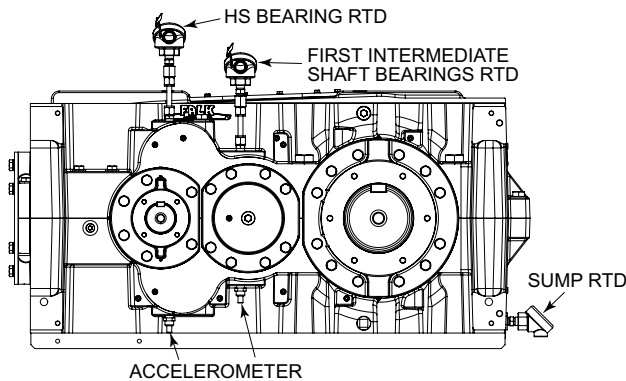
Condition Monitoring #2

This package includes a sump RTD and an accelerometer with vibration switch and bearing RTDs located at the high-speed and first intermediate shaft bearings.



Condition Monitoring #3

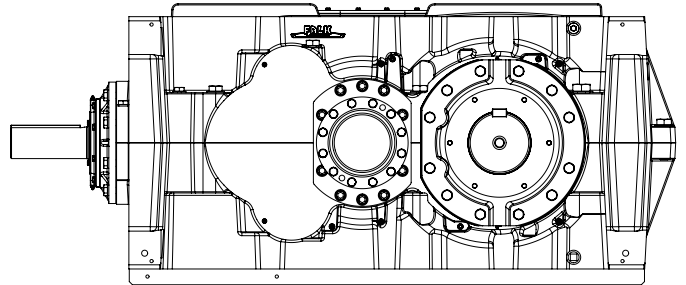
This package includes a sump RTD, bearing RTDs located at the high-speed and first intermediate shaft bearings, and accelerometers at the high-speed and first intermediate shaft bearings.



Backstops

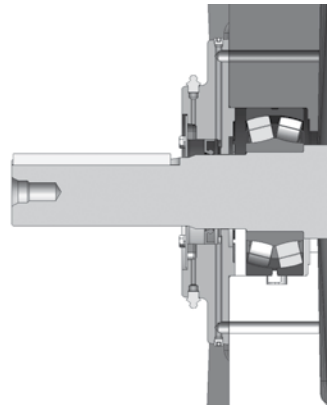
Backstops prevent reverse rotation or backrun without backlash for conveyors, elevator head shafts, and similar applications. A standard line of accessory backstops for use on types VP and VR drives is available. These accessory backstops are mounted integrally on an extension of either the high-speed or an intermediate shaft and share the drive sump oil. The Falk V-Class backstop is a sprag type design.

When specifying accessory backstops, the overrunning direction of rotation is defined as clockwise or counterclockwise when facing the rotating end of the low-speed shaft extension.



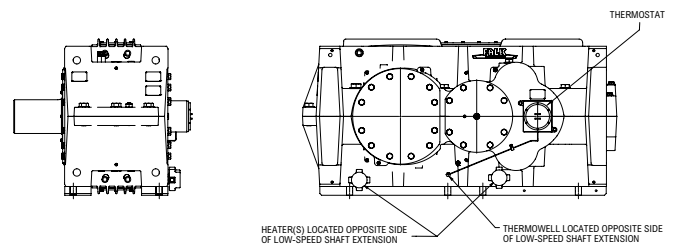
Magnum Seals

Falk V-Class units include the standard Falk Magnum seal arrangement. Falk's exclusive labyrinth-design, non-wearing Magnum seal keeps oil in and dirt out. A purgeable grease chamber with contact seal prevents the infiltration of dirt and grime. A unique drainback passage combines with a radial and axial bush seal to retain oil and eliminate leaks.

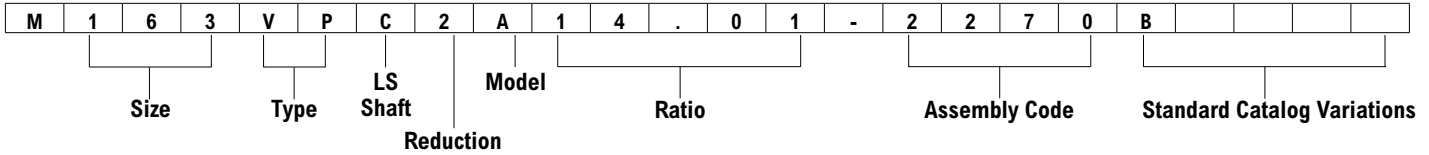


Immersion Heater

Pre-designed immersion heaters are available for all configurations. Heater options include, 1 phase, 120V and 3 phase in 240V and 460V options. Heater selections are designed to raise the sump temperature 10 to 15 deg F per hour dependent on ambient conditions. Consult Factory with ambient conditions for actual heating time and start up viscosity requirements. Single reduction drives (VP1) have single and dual heater options base on customer ambient conditions and requirements, Consult Factory for selection.



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

P Parallel Shaft, Horizontal
R Right Angle, Horizontal

LS Shaft

C Solid Shaft
T Hollow Shaft with TA Bushing
J Hollow Shaft with Shrink Disc
Q Hollow Shaft, Straight Bored & Keyed

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
D Electric Fan 60Hz 3Ph 220/380
E Electric Fan 60Hz 3Ph 265/460
F Electric Fan 60HZ 1Ph 110
G Electric Fan 50HZ 3Ph 220/380
H Immersion Heater Package
J Integrated PA - 600 Series
K DuraPlate Cooling Package
M Lubrication Package
N Condition Monitoring #1
P Condition Monitoring #2
Q Condition Monitoring #3
R Alignment-Free Package
S With Special Features
T Top Motor Mount
U Swingbase
V Bedplate
Y C-Face Motor Adapter
Z Motor Bracket

How to Order

The following information is required to order a Falk V-Class gear drive to meet your application requirements. Much of the information listed below is also used to make a selection and is repeated here in the event a selection will be made by the district office.

Gear Drive

- Size, type and ratio
- High-speed shaft rpm and low-speed shaft rpm
- Service factor
- External shaft loads – thrust and overhung load
- Factors affecting thermal performance – ambient temperature, altitude, ambient air velocity and duty cycle
- Auxiliary equipment required – couplings, backstops, etc.
- High-speed shaft rotation when looking at shaft end for right angle (VR) units with shaft driven fan.
- Shaft assembly accessory location number (see Pages 14-17 for parallel shaft drives and Pages 142 & 143 for right angle drives)

Motor – Prime Mover

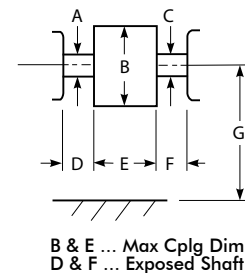
- Type – motor or engine
- Power rating – HP
- Speed – rpm
- Frame size – dimension prints if the Factory is to furnish mounting surface and/or mount the equipment
- Motor – type, class, weight, or any special characteristics (such as brake motor, explosion-proof, etc.)
- Identify if motor is to be furnished or installed by the Factory

Driven Machine

- Required power or torque
- Speed – rpm
- Application description – belt conveyor, agitator, etc.
- Service – duty cycle, hours per day, reversals per minute if reversing
- Ambient temperature range and operating conditions – outdoor, taconite dust, etc.

Auxiliary Equipment Furnished by the Factory

- Motors – if the Factory is to furnish, provide complete specifications
- Bedplates – supply drawing of motor and any auxiliary equipment not supplied by the Factory
- Flange motor adapters or motor brackets – supply drawing of motor
- Motor mount – supply drawing of motor and the required belt centers and mounting arrangement
- Backstops – specify direction of rotation of the low-speed shaft (CW or CCW) when facing the drive from the end of the exposed low-speed shaft extension. Also specify backstop location (right or left side facing HS end).
- Electric fan position, Hz and volts
- Couplings – specify size, type, drive and driven hub bores and keyways
- Coupling guards – furnish description of couplings and/or other equipment to be guarded, and all dimensions A through G below



- Swing base – supply frame size or drawing of the motor and HS coupling size or shaft gap

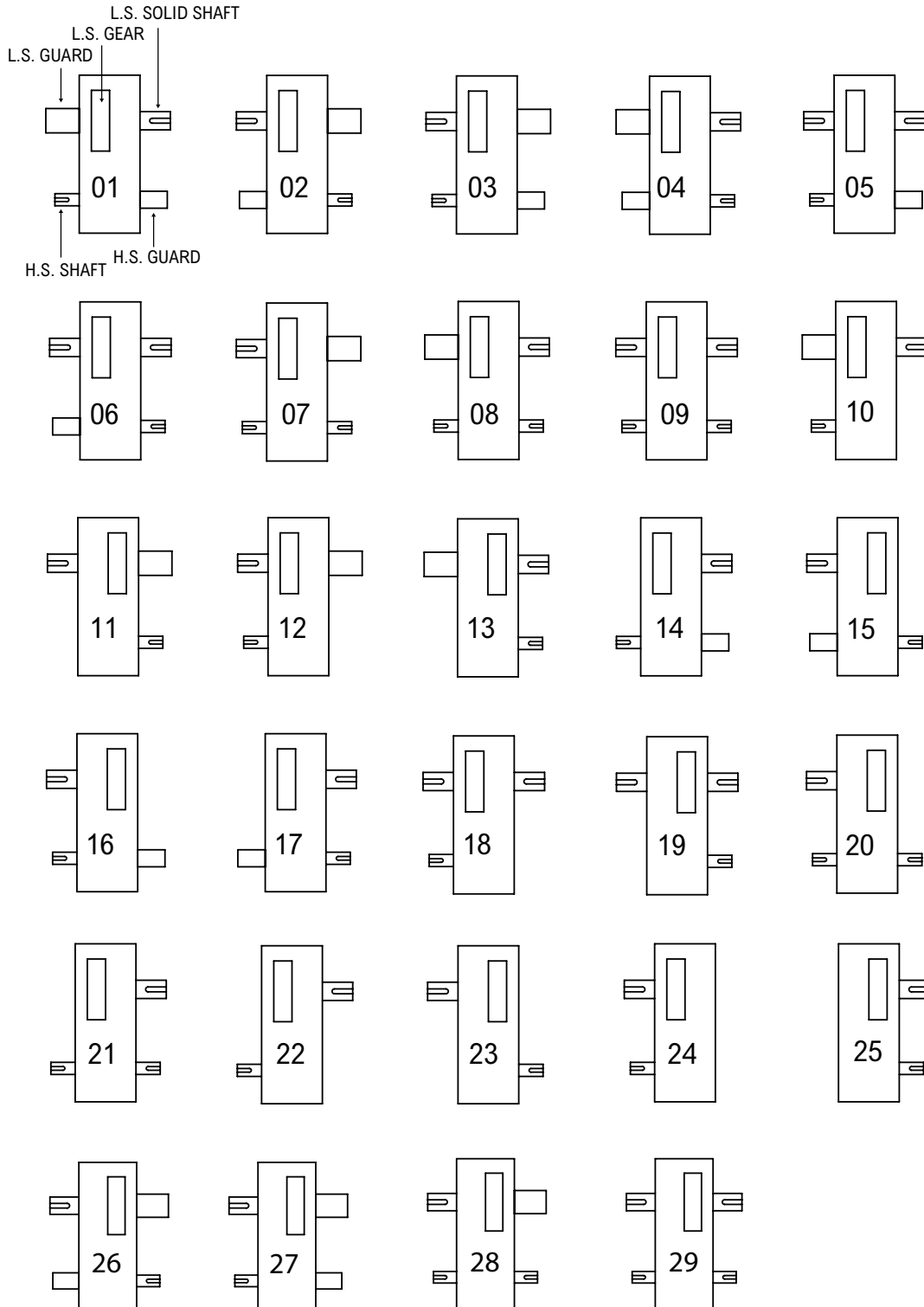
Special or Specification Requirements

Advise the Factory of any special project-related specifications such as: noise level specifications, bearing L10 requirements, etc.

Type VP Parallel Shaft Shaft Assemblies

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

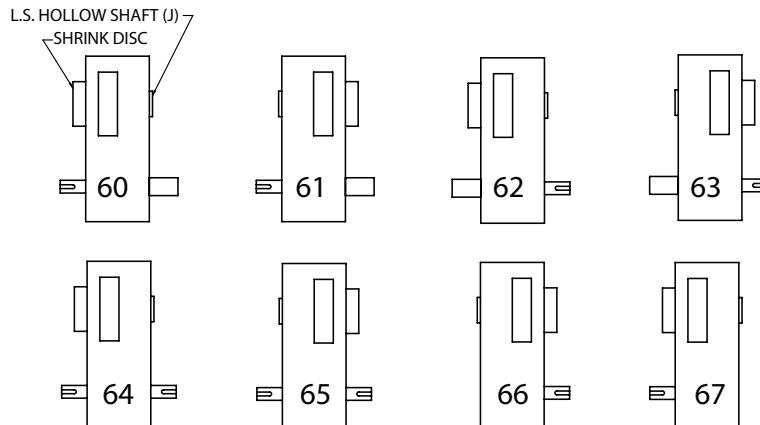
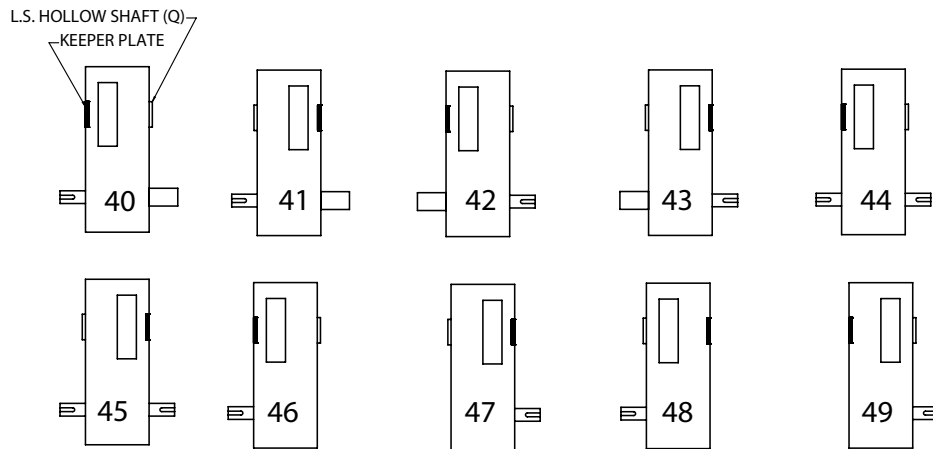
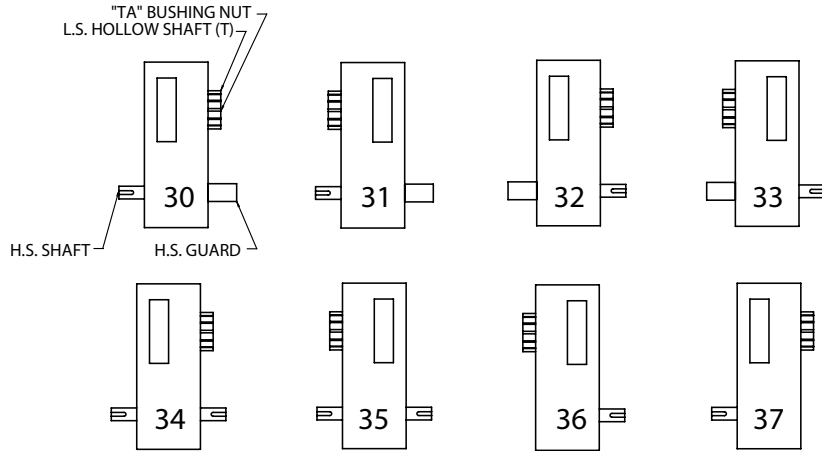
Shaft Assembly Codes



Type VP Parallel Shaft Shaft Assemblies

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

Shaft Assembly Codes

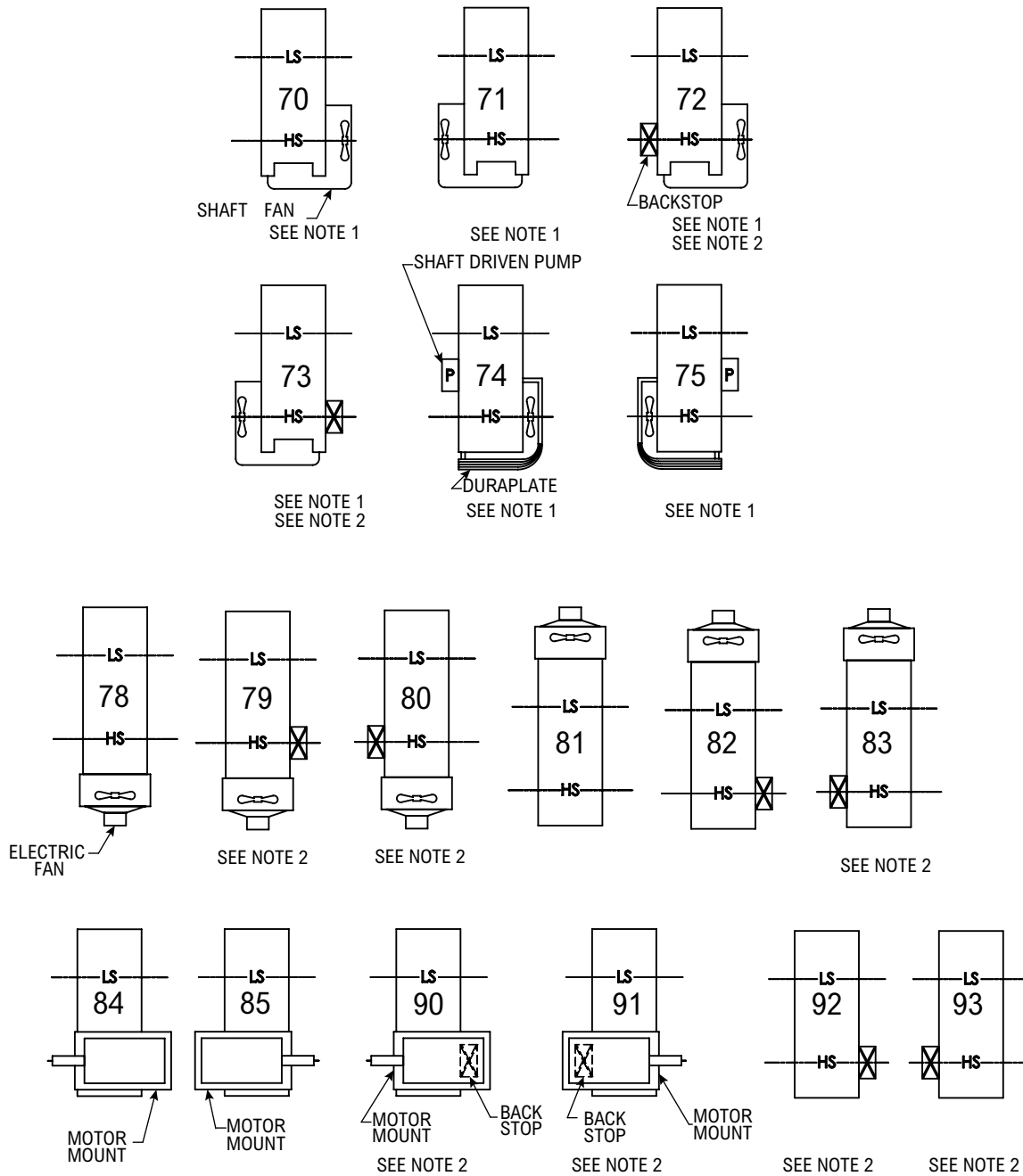


Type VP Parallel Shaft

Accessory Locations

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

Accessory Location Codes



Notes:

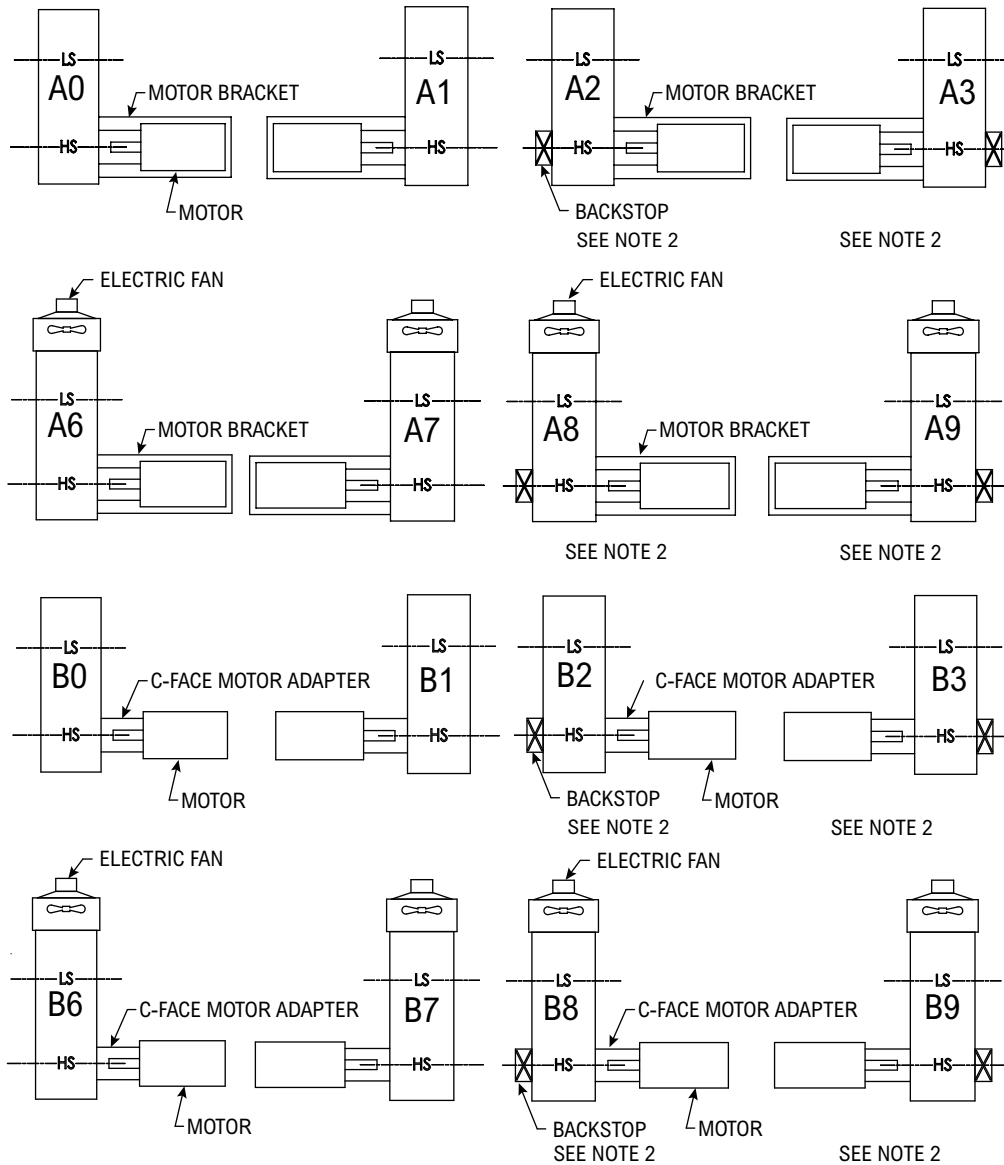
1. Shaft fans are located on H.S. extensions (figures 1 thru 49 and 60 thru 67).
2. Backstops are located on side opposite H.S. shaft extension (Figures 10-13, 18-19, 22-25, 36-37, 46-49, 66-67).

Type VP Parallel Shaft

Accessory Locations

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

Accessory Location Codes



Note:

2. Backstops are located on side opposite H.S. shaft extension (Figures 10-13, 18-19, 22-25, 36-37, 46-49, 66-67).

Type VP1 Parallel Shaft

Power Ratings – Hp/Single Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	1.25	1400	1039	1457	2684	2660	3106	3914	4417	4946	5322	5955	6640	7955	9064	10245	11652	12529	13393	15179
	1.40	1250	999	1359	2575	2557	2986	3712	4190	4691	5021	5619	6265	7566	8621	9745	10763	11573	12371	14488
	1.60	1094	916	1260	2343	2399	2801	3407	3846	4306	4719	5281	5888	6978	7952	8988	9868	10611	11343	13370
	1.80	972	854	1161	2188	2248	2625	3203	3615	4047	4314	4828	5383	6596	7516	8495	9270	9968	10655	12662
	2.00	875	791	1095	2032	2089	2439	2928	3305	3700	3968	4440	4951	5989	6824	7713	8371	9001	9622	11534
	2.24	781	743	1028	1793	2010	2347	2708	3057	3423	3746	4192	4673	5589	6369	7199	7771	8356	8932	10783
	2.50	700	672	929	1643	1854	2164	2586	2918	3268	3411	3817	4256	5188	5911	6682	7172	7711	8243	9951
	2.80	625	623	863	1494	1677	1958	2266	2557	2863	3188	3567	3977	4784	5451	6162	6299	6773	7240	9274
	3.15	556	574	797	1345	1512	1765	2157	2434	2725	2966	3319	3700	4378	4989	5639	5488	5901	6308	8147
	3.55	493	503	719	1197	1460	1704	1932	2180	2441	2767	3096	3452	3776	4302	4863	5483	5896	6302	7251
	4.00	438	422	660	1108	1229	1435	1822	2056	2302	2531	2832	3158	3215	3664	4141	4646	4995	5340	6509
	4.50	389	398	588	924	1154	1348	1515	1710	1915	2260	2529	2820	2772	3159	3571	3914	4208	4498	5136
5.00	350	393	491	807	995	1162	1257	1419	1589	1965	2199	2451	2396	2731	3087	3422	3680	3934	4581	
1430	1.25	1144	855	1265	2193	2309	2696	3398	3835	4294	4620	5170	5765	6906	7869	8895	9521	10238	10944	13178
	1.40	1021	855	1180	2104	2220	2592	3223	3637	4073	4359	4878	5439	6568	7485	8460	8795	9457	10109	12562
	1.60	894	789	1094	1914	2083	2432	2958	3339	3738	4083	4569	5095	6058	6904	7803	8064	8671	9269	11608
	1.80	794	729	1008	1788	1952	2279	2780	3138	3514	3679	4117	4590	5717	6514	7363	7575	8145	8707	10721
	2.00	715	669	946	1661	1813	2117	2542	2869	3212	3445	3855	4298	5199	5924	6697	6840	7355	7862	10013
	2.24	638	607	847	1465	1745	2037	2351	2654	2971	3252	3639	4057	4852	5529	6250	6350	6828	7299	9278
	2.50	572	549	783	1343	1609	1879	2221	2507	2807	2962	3314	3695	4485	5110	5776	5860	6301	6736	8132
	2.80	511	512	717	1221	1456	1700	1967	2220	2486	2767	3097	3453	4058	4624	5227	5147	5535	5916	7741
	3.15	454	475	652	1099	1313	1533	1872	2113	2366	2523	2824	3148	3633	4140	4679	4485	4822	5155	6657
	3.55	403	419	593	978	1267	1480	1677	1893	2119	2261	2530	2821	3278	3735	4222	4480	4817	5150	5925
	4.00	358	367	570	915	1067	1245	1489	1680	1881	2115	2366	2638	2791	3181	3595	3796	4082	4363	5318
	4.50	318	345	511	770	952	1111	1238	1398	1565	1847	2067	2304	2407	2743	3100	3198	3439	3676	4459
5.00	286	326	413	673	826	964	1034	1167	1307	1605	1797	2003	1958	2231	2522	2797	3007	3214	3847	
1170	1.25	936	699	1066	1795	2007	2343	2953	3333	3731	3834	4291	4784	6001	6838	7729	7790	8377	8954	11353
	1.40	836	699	987	1721	1929	2252	2800	3161	3539	3588	4015	4477	5708	6504	7351	7196	7737	8271	10278
	1.60	731	646	907	1566	1810	2113	2570	2901	3248	3341	3739	4168	5244	5976	6754	6598	7094	7583	9793
	1.80	650	597	828	1463	1696	1980	2416	2727	3053	3010	3368	3756	4677	5330	6025	6198	6664	7124	8772
	2.00	585	549	774	1359	1576	1840	2209	2493	2791	2993	3350	3735	4370	4979	5628	5597	6018	6433	8221
	2.24	522	501	693	1198	1516	1770	2043	2306	2582	2826	3162	3526	4019	4580	5177	5196	5587	5972	7591
	2.50	468	457	644	1099	1398	1633	1817	2051	2297	2541	2843	3170	3669	4181	4726	4795	5156	5511	6653
	2.80	418	427	594	999	1265	1477	1709	1929	2160	2343	2622	2923	3320	3783	4276	4211	4528	4840	6333
	3.15	371	396	545	907	1141	1332	1627	1836	2056	2065	2310	2576	2972	3387	3828	3669	3945	4217	5447
	3.55	330	349	494	815	1101	1286	1448	1635	1830	1850	2070	2308	2699	3076	3477	3666	3942	4213	4848
	4.00	293	318	474	751	927	1082	1226	1383	1549	1730	1936	2159	2333	2658	3005	3106	3340	3570	4351
	4.50	260	300	427	640	793	926	1029	1161	1300	1516	1697	1892	2068	2357	2664	2616	2813	3007	3852
5.00	234	267	342	559	687	802	862	973	1089	1327	1485	1656	1602	1826	2064	2288	2460	2630	3147	

Forced lubrication may be required. Consult factory

Type VP1 Parallel Shaft

Torque Ratings – lb-in/Single Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	1.25	1400	47	66	121	122	142	179	202	226	244	273	305	360	410	463	527	567	606	697
	1.40	1250	50	69	130	131	153	187	211	237	256	287	320	375	428	484	552	594	635	741
	1.60	1094	53	73	137	137	160	199	225	252	268	300	335	399	455	514	576	620	663	770
	1.80	972	55	76	140	144	168	208	234	262	284	318	355	423	482	545	591	636	680	815
	2.00	875	58	79	144	153	179	207	234	261	290	324	362	439	500	565	612	658	704	844
	2.24	781	59	82	143	162	189	215	243	272	298	334	372	455	518	586	625	672	718	874
	2.50	700	61	85	146	168	197	237	267	299	311	348	388	471	536	606	636	684	731	910
	2.80	625	64	87	148	166	194	233	262	294	320	358	399	487	555	627	628	675	722	933
	3.15	556	64	90	150	172	201	241	272	305	333	372	415	503	573	648	618	664	710	934
	3.55	493	65	91	151	184	215	245	277	310	360	402	449	487	555	627	735	790	845	940
	4.00	438	62	94	162	180	210	259	292	327	359	402	448	470	536	605	689	741	792	951
4.50	389	64	95	152	190	222	241	272	304	371	416	463	446	509	575	663	713	762	816	
5.00	350	70	90	143	177	206	229	259	290	349	391	435	427	486	550	624	670	717	835	
1430	1.25	1144	47	70	121	130	151	190	215	240	260	291	324	382	436	492	527	567	606	741
	1.40	1021	53	74	130	139	162	199	224	251	272	305	340	399	455	514	552	594	635	787
	1.60	894	56	77	137	146	170	212	239	268	284	318	354	424	483	546	576	620	663	819
	1.80	794	58	81	140	153	179	221	249	279	297	332	370	449	511	578	591	636	680	845
	2.00	715	60	83	144	163	190	220	248	278	308	345	384	466	531	600	612	658	704	897
	2.24	638	59	83	143	172	201	229	258	289	317	355	396	483	551	622	625	672	718	920
	2.50	572	61	87	146	179	209	249	281	314	331	370	413	498	568	642	636	684	731	910
	2.80	511	64	89	148	176	206	247	279	312	340	380	424	505	576	651	628	675	722	953
	3.15	454	65	90	150	183	214	256	289	324	346	388	432	511	582	658	618	664	710	934
	3.55	403	67	91	151	195	228	261	294	330	360	402	449	517	589	666	735	790	845	940
	4.00	358	66	99	164	191	223	259	292	327	367	411	458	499	569	643	689	741	792	951
4.50	318	68	101	155	191	224	241	272	304	371	416	463	474	540	611	663	713	762	867	
5.00	286	71	92	146	180	210	231	261	292	349	391	435	427	486	550	624	670	717	858	
1170	1.25	936	47	72	121	138	161	202	228	255	263	295	329	406	463	523	527	567	606	780
	1.40	836	53	75	130	147	172	211	238	267	274	306	342	424	483	546	552	594	635	787
	1.60	731	56	78	137	155	181	225	254	284	284	318	354	449	511	578	576	620	663	844
	1.80	650	58	82	140	162	190	234	264	296	297	332	370	449	511	578	591	636	680	845
	2.00	585	60	83	144	173	202	233	263	295	327	366	408	479	546	617	612	658	704	900
	2.24	522	60	83	143	183	214	243	274	307	337	377	420	489	557	630	625	672	718	920
	2.50	468	62	88	146	190	222	249	281	314	347	388	433	498	568	642	636	684	731	910
	2.80	418	65	90	148	187	219	262	296	332	352	393	439	505	576	651	628	675	722	953
	3.15	371	66	92	151	195	227	272	307	344	346	388	432	511	582	658	618	664	710	934
	3.55	330	68	93	154	208	242	275	311	348	360	402	449	520	593	670	735	790	845	940
	4.00	293	70	101	164	203	237	260	294	329	367	411	458	510	581	657	689	741	792	951
4.50	260	72	103	157	195	228	244	276	309	373	417	465	498	568	642	663	713	762	916	
5.00	234	71	93	148	183	213	235	266	297	353	395	440	427	486	550	624	670	717	858	

Forced lubrication may be required. Consult factory

Type VP1 Parallel Shaft

Power Ratings – Hp/Single Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	1.25	1400											
	1.40	1250	16763	18259	19815								
	1.60	1094	15254	16616	18031	19941	22738						
	1.80	972	13617	14832	16096	18772	21404	21303	22239	23358			
	2.00	875	12726	13861	15042	17435	19880	21076	22003	23110			
	2.24	781	11712	12758	13844	16439	18745	18625	19444	20422	21168	22239	23137
	2.50	700	10700	11655	12647	15251	17390	17278	18038	18945	19742	20741	21579
	2.80	625	9689	10554	11453	14058	16030	15926	16626	17463	18312	19238	20015
	3.15	556	8682	9457	10262	12607	14375	14568	15209	15974	16876	17730	18445
	3.55	493	8323	9066	9838	11150	12714	13158	13736	14427	15208	15977	16622
	4.00	438	6804	7411	8042	8971	10230	11482	11987	12590	13200	13868	14428
	4.50	389	6070	6612	7175	7920	9031	11108	11596	12179	11519	12101	12590
5.00	350	5033	5482	5949	7698	8777	9977	10416	10940	11143	11706	12179	
1430	1.25	1144	14515	15810	17157	18705	21328	20945	21866	22966	24582	25826	26868
	1.40	1021	13698	14920	16191	18335	20907	20130	21015	22072	23980	25193	26210
	1.60	894	12465	13578	14734	17312	19740	19108	19948	20952	23157	24329	25311
	1.80	794	11127	12120	13153	16297	18583	18495	19308	20279	21451	22537	23447
	2.00	715	10399	11327	12292	15105	17224	18298	19103	20064	20225	21249	22106
	2.24	638	9571	10425	11313	14272	16274	16170	16881	17730	18377	19307	20087
	2.50	572	8743	9523	10335	13241	15098	15001	15660	16448	17140	18007	18734
	2.80	511	7917	8624	9358	12205	13917	13827	14435	15161	15898	16702	17376
	3.15	454	7094	7728	8386	10302	11746	12648	13204	13868	14651	15393	16014
	3.55	403	6801	7408	8039	9111	10389	11423	11925	12525	13203	13871	14431
	4.00	358	5560	6056	6572	7667	8742	9968	10407	10930	11460	12040	12526
	4.50	318	4960	5403	5863	6472	7379	9316	9726	10215	10000	10506	10930
5.00	286	4112	4479	4861	6290	7172	8153	8511	8939	9674	10163	10574	
1170	1.25	936	11876	12936	14038	16254	18533	18200	19001	19957	21360	22441	23347
	1.40	836	11207	12208	13247	15791	18006	17492	18261	19180	20837	21892	22776
	1.60	731	10199	11109	12055	14325	16334	16604	17334	18206	20122	21140	21994
	1.80	650	9104	9917	10761	13343	15214	16071	16777	17621	18640	19584	20374
	2.00	585	8508	9267	10057	12359	14092	15900	16599	17434	17575	18464	19209
	2.24	522	7831	8529	9256	12402	14141	14051	14669	15407	15969	16777	17454
	2.50	468	7153	7792	8456	11505	13119	13035	13608	14293	14894	15647	16279
	2.80	418	6478	7056	7657	10606	12093	12015	12543	13174	13814	14513	15099
	3.15	371	5805	6323	6861	8429	9611	10769	11243	11808	12731	13375	13915
	3.55	330	5564	6061	6577	7455	8500	9926	10363	10884	11473	12053	12540
	4.00	293	4549	4955	5377	6273	7153	8584	8961	9412	9958	10462	10884
	4.50	260	4058	4421	4797	5295	6038	7622	7957	8358	8690	9129	9498
5.00	234	3365	3665	3977	5146	5868	6670	6964	7314	8352	8775	9129	

Forced lubrication may be required. Consult factory

Type VP1 Parallel Shaft

Torque Ratings – lb-in/Single Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE														
			193	195	197	203	207	213	215	217	223	225	227				
1750	1.25	1400															
	1.40	1250	832	906	983												
	1.60	1094	872	950	1031	1153	1315										
	1.80	972	873	951	1032	1199	1368	1386	1446	1519							
	2.00	875	932	1015	1102	1234	1408	1492	1558	1636							
	2.24	781	953	1038	1126	1316	1500	1490	1556	1634	1735	1823	1896				
	2.50	700	971	1058	1148	1362	1553	1543	1611	1692	1791	1882	1958				
	2.80	625	986	1074	1166	1409	1607	1596	1666	1750	1847	1940	2018				
	3.15	556	997	1086	1179	1405	1602	1649	1722	1808	1902	1999	2079				
	3.55	493	1093	1191	1292	1416	1615	1671	1744	1832	1930	2028	2110				
	4.00	438	1009	1099	1193	1311	1495	1678	1752	1840	1876	1971	2051				
	4.50	389	984	1072	1163	1292	1473	1775	1853	1947	1879	1974	2054				
5.00	350	918	1000	1085	1369	1561	1818	1898	1993	1982	2082	2166					
1430	1.25	1144	804	875	950	1020	1163	1136	1186	1246	1367	1436	1494				
	1.40	1021	832	906	983	1122	1280	1257	1312	1378	1453	1527	1588				
	1.60	894	872	950	1031	1225	1397	1353	1412	1483	1628	1710	1779				
	1.80	794	873	951	1032	1274	1453	1472	1537	1614	1696	1782	1854				
	2.00	715	932	1015	1102	1309	1492	1585	1655	1738	1755	1844	1918				
	2.24	638	953	1038	1126	1398	1594	1584	1653	1736	1843	1937	2015				
	2.50	572	971	1058	1148	1447	1650	1640	1712	1798	1903	1999	2080				
	2.80	511	986	1074	1166	1497	1707	1696	1770	1860	1962	2061	2144				
	3.15	454	997	1086	1179	1405	1602	1752	1829	1921	2021	2123	2209				
	3.55	403	1093	1191	1292	1416	1615	1775	1853	1946	2051	2154	2241				
	4.00	358	1009	1099	1193	1372	1564	1783	1862	1955	1994	2094	2179				
	4.50	318	984	1072	1163	1292	1473	1822	1902	1998	1996	2097	2182				
5.00	286	918	1000	1085	1369	1561	1818	1898	1993	2105	2212	2301					
1170	1.25	936	804	875	950	1083	1235	1207	1260	1323	1452	1526	1587				
	1.40	836	832	906	983	1182	1347	1335	1394	1464	1543	1621	1687				
	1.60	731	872	950	1031	1239	1413	1436	1500	1575	1729	1816	1890				
	1.80	650	873	951	1032	1275	1454	1563	1632	1714	1801	1893	1969				
	2.00	585	932	1015	1102	1309	1492	1684	1758	1846	1864	1958	2037				
	2.24	522	953	1038	1126	1484	1693	1682	1756	1844	1958	2057	2140				
	2.50	468	971	1058	1148	1537	1753	1741	1818	1909	2021	2123	2209				
	2.80	418	986	1074	1166	1590	1813	1801	1880	1975	2084	2189	2277				
	3.15	371	997	1086	1179	1405	1602	1823	1903	1999	2147	2255	2346				
	3.55	330	1093	1191	1292	1416	1615	1885	1968	2067	2178	2288	2380				
	4.00	293	1009	1099	1193	1372	1564	1877	1959	2058	2117	2224	2314				
	4.50	260	984	1072	1163	1292	1473	1822	1902	1998	2120	2227	2317				
5.00	234	918	1000	1085	1369	1561	1818	1898	1993	2222	2334	2428					

Forced lubrication may be required. Consult factory

Type VP1 Parallel Shaft

Power Ratings – Hp/Single Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	1.25	776	580	884	1488	1760	2055	2550	2878	3222	3179	3557	3966	5067	5774	6526	6459	6945	7424	9413
	1.40	693	580	818	1427	1692	1975	2446	2760	3091	2975	3329	3711	4780	5447	6157	5966	6415	6857	8521
	1.60	606	539	752	1299	1588	1853	2212	2496	2795	2770	3099	3456	4348	4954	5600	5470	5882	6287	8119
	1.80	539	501	687	1213	1488	1737	2055	2319	2597	2496	2793	3114	3878	4419	4995	5138	5525	5906	7272
	2.00	485	463	647	1127	1382	1614	1937	2186	2448	2518	2818	3142	3623	4128	4666	4640	4989	5333	6816
	2.24	433	423	583	996	1330	1553	1792	2022	2264	2354	2634	2936	3332	3797	4292	4307	4632	4951	6294
	2.50	388	385	543	920	1227	1432	1507	1701	1904	2107	2357	2628	3042	3466	3918	3975	4274	4569	5516
	2.80	346	359	501	843	1110	1295	1499	1692	1895	1942	2173	2423	2753	3137	3545	3491	3754	4013	5251
	3.15	308	333	458	765	1000	1168	1358	1532	1716	1712	1915	2136	2464	2808	3174	3042	3271	3496	4516
	3.55	273	292	415	686	966	1128	1220	1377	1542	1539	1722	1920	2238	2550	2882	3039	3268	3493	4019
	4.00	243	279	398	622	788	920	1034	1167	1307	1450	1622	1809	1940	2210	2498	2575	2769	2960	3608
	4.50	216	255	358	537	667	778	867	978	1095	1280	1433	1597	1733	1975	2232	2179	2343	2505	3194
5.00	194	221	286	469	577	674	725	818	916	1119	1252	1396	1353	1542	1743	1918	2062	2204	2622	
870	1.25	696	520	793	1334	1631	1904	2287	2581	2890	2851	3190	3557	4545	5179	5854	5793	6229	6658	8442
	1.40	621	520	734	1280	1568	1831	2194	2476	2772	2668	2986	3329	4287	4886	5522	5351	5753	6150	7643
	1.60	544	488	678	1165	1471	1718	1984	2239	2507	2484	2780	3099	3899	4443	5022	4906	5275	5639	7282
	1.80	483	454	623	1088	1379	1610	1843	2080	2329	2238	2505	2793	3478	3963	4480	4608	4955	5297	6523
	2.00	435	419	586	1016	1281	1495	1795	2026	2269	2259	2527	2818	3249	3702	4185	4162	4475	4783	6113
	2.24	388	382	528	904	1232	1439	1660	1874	2098	2111	2362	2634	2989	3406	3849	3863	4154	4441	5645
	2.50	348	348	492	834	1137	1327	1355	1529	1712	1889	2114	2357	2728	3109	3514	3565	3834	4098	4947
	2.80	311	324	453	763	1028	1200	1378	1555	1741	1742	1949	2173	2469	2813	3180	3131	3367	3599	4709
	3.15	276	300	414	692	927	1082	1231	1389	1555	1540	1723	1921	2210	2518	2847	2728	2934	3136	4050
	3.55	245	264	375	620	887	1035	1105	1247	1397	1395	1562	1741	2015	2296	2595	2726	2931	3133	3605
	4.00	218	259	359	558	712	831	936	1056	1183	1314	1470	1639	1759	2004	2266	2320	2495	2667	3236
	4.50	193	230	322	485	602	703	783	884	990	1159	1297	1446	1570	1790	2023	1976	2125	2271	2877
5.00	174	199	258	423	521	608	655	739	827	1012	1132	1263	1225	1396	1578	1737	1868	1997	2377	

Type VP1 Parallel Shaft

Torque Ratings – lb-in/Single Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	1.25	776	47	72	121	146	170	210	237	266	263	295	329	414	471	533	527	567	606	780
	1.40	693	53	75	130	156	182	222	251	281	274	306	342	428	488	551	552	594	635	787
	1.60	606	57	78	137	164	191	234	264	295	284	318	354	449	511	578	576	620	663	844
	1.80	539	59	82	140	172	201	240	271	304	297	332	370	449	511	578	591	636	680	845
	2.00	485	61	84	144	183	214	247	279	312	332	371	414	479	546	617	612	658	704	900
	2.24	433	61	84	143	194	226	257	290	325	338	379	422	489	557	630	625	672	718	920
	2.50	388	63	90	147	201	235	249	281	314	347	388	433	498	568	642	636	684	731	910
	2.80	346	66	91	151	198	231	278	313	351	352	393	439	505	576	651	628	675	722	953
	3.15	308	67	93	154	206	240	274	309	346	346	388	432	511	582	658	618	664	710	934
	3.55	273	68	94	156	220	256	280	316	354	361	404	450	520	593	670	735	790	845	940
	4.00	243	74	102	164	208	243	265	299	335	371	415	463	512	583	659	689	741	792	951
	4.50	216	74	105	159	198	231	248	280	314	380	425	474	504	574	649	666	717	766	916
5.00	194	71	94	150	185	216	239	269	302	359	401	447	435	495	560	630	678	724	862	
870	1.25	696	47	72	121	150	176	210	237	266	263	295	329	414	471	533	527	567	606	780
	1.40	621	53	75	130	161	188	222	251	281	274	306	342	428	488	551	552	594	635	787
	1.60	544	57	79	137	169	197	234	264	295	284	318	354	449	511	578	576	620	663	844
	1.80	483	59	83	140	178	207	240	271	304	297	332	370	449	511	578	591	636	680	845
	2.00	435	62	85	145	189	221	255	288	322	332	371	414	479	546	617	612	658	704	900
	2.24	388	62	85	145	200	233	266	300	336	338	379	422	489	557	630	625	672	718	920
	2.50	348	63	90	149	208	242	249	282	315	347	388	433	498	568	642	636	684	731	910
	2.80	311	67	92	152	205	239	284	321	359	352	393	439	505	576	651	628	675	722	953
	3.15	276	68	94	155	213	248	277	312	350	347	389	434	511	582	658	618	664	710	934
	3.55	245	69	95	157	225	263	283	319	357	365	408	455	522	595	673	735	790	845	940
	4.00	218	76	103	164	210	245	267	302	338	375	420	468	517	589	666	692	744	796	951
	4.50	193	74	105	160	199	232	250	283	316	383	429	478	509	580	655	674	724	774	920
5.00	174	71	95	151	186	217	240	271	304	362	405	451	439	500	565	637	685	732	871	

Type VP1 Parallel Shaft

Power Ratings – Hp/Single Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	1.25	776	9846	10725	11638	13858	15802	15962	16664	17502	18733	19681	20476
	1.40	693	9292	10121	10983	13092	14928	15341	16015	16821	18275	19200	19975
	1.60	606	8455	9210	9994	11876	13541	14562	15202	15967	17648	18541	19289
	1.80	539	7548	8221	8922	11062	12613	14094	14714	15454	16348	17175	17868
	2.00	485	7054	7683	8338	10246	11683	13753	14358	15080	15413	16193	16847
	2.24	433	6492	7071	7674	10795	12309	12060	12591	13224	14005	14714	15308
	2.50	388	5931	6460	7010	9855	11237	11014	11498	12076	13062	13723	14277
	2.80	346	5370	5850	6348	8916	10167	9969	10407	10931	12115	12729	13242
	3.15	308	4812	5242	5688	6988	7968	8928	9321	9790	11165	11730	12204
	3.55	273	4613	5025	5453	6180	7047	8289	8654	9089	10062	10571	10998
	4.00	243	3771	4108	4458	5201	5930	7117	7430	7803	8733	9175	9546
4.50	216	3365	3665	3977	4390	5006	6319	6597	6929	7621	8007	8330	
5.00	194	2790	3038	3297	4267	4865	5530	5773	6064	6924	7275	7568	
870	1.25	696	8831	9619	10438	12429	14173	14792	15442	16219	17360	18238	18974
	1.40	621	8334	9077	9851	11742	13389	14216	14841	15587	16935	17792	18510
	1.60	544	7584	8260	8964	10652	12145	13494	14087	14796	16353	17181	17875
	1.80	483	6770	7374	8002	9921	11313	12695	13254	13920	15149	15916	16558
	2.00	435	6326	6891	7478	9190	10479	12335	12878	13525	14283	15006	15611
	2.24	388	5823	6342	6883	9682	11040	10817	11293	11861	12978	13635	14185
	2.50	348	5319	5794	6288	8839	10078	9878	10313	10831	12104	12717	13230
	2.80	311	4817	5247	5694	7997	9119	8941	9334	9804	11197	11764	12239
	3.15	276	4316	4701	5102	6267	7146	8008	8360	8780	10123	10635	11065
	3.55	245	4138	4507	4891	5543	6321	7435	7761	8152	9054	9512	9896
	4.00	218	3382	3684	3998	4664	5319	6383	6664	6999	8093	8502	8846
4.50	193	3018	3287	3567	3937	4490	5668	5917	6215	6987	7341	7637	
5.00	174	2528	2753	2988	3827	4364	4960	5178	5439	6210	6525	6788	

Type VP1 Parallel Shaft

Torque Ratings – 1b-in/Single Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	1.25	776	804	875	950	1114	1270	1277	1333	1400	1536	1614	1679
	1.40	693	832	906	983	1182	1347	1412	1475	1549	1633	1715	1785
	1.60	606	872	950	1031	1239	1413	1520	1586	1666	1829	1921	1999
	1.80	539	873	951	1032	1275	1454	1654	1727	1813	1906	2002	2083
	2.00	485	932	1015	1102	1309	1492	1757	1834	1926	1972	2072	2155
	2.24	433	953	1038	1126	1558	1777	1741	1818	1909	2071	2176	2264
	2.50	388	971	1058	1148	1588	1811	1775	1853	1946	2138	2246	2337
	2.80	346	986	1074	1166	1612	1838	1803	1882	1977	2204	2316	2409
	3.15	308	997	1086	1179	1405	1602	1823	1903	1999	2271	2386	2482
	3.55	273	1093	1191	1292	1416	1615	1899	1983	2082	2304	2420	2518
	4.00	243	1009	1099	1193	1372	1564	1877	1959	2058	2240	2353	2448
4.50	216	984	1072	1163	1292	1473	1822	1902	1998	2243	2356	2451	
5.00	194	918	1000	1085	1369	1561	1818	1898	1993	2222	2334	2428	
870	1.25	696	804	875	950	1114	1270	1319	1377	1446	1587	1667	1735
	1.40	621	832	906	983	1182	1347	1459	1523	1600	1687	1772	1844
	1.60	544	872	950	1031	1239	1413	1570	1639	1721	1890	1985	2065
	1.80	483	873	951	1032	1275	1454	1661	1734	1821	1969	2068	2152
	2.00	435	932	1015	1102	1309	1492	1757	1834	1926	2037	2140	2227
	2.24	388	953	1038	1126	1558	1777	1741	1818	1909	2140	2248	2339
	2.50	348	971	1058	1148	1588	1811	1775	1853	1946	2209	2321	2414
	2.80	311	986	1074	1166	1612	1838	1803	1882	1977	2271	2386	2483
	3.15	276	997	1086	1179	1405	1602	1823	1903	1999	2295	2412	2509
	3.55	245	1093	1191	1292	1416	1615	1899	1983	2082	2311	2428	2526
	4.00	218	1009	1099	1193	1372	1564	1877	1959	2058	2314	2431	2529
4.50	193	984	1072	1163	1292	1473	1822	1902	1998	2292	2408	2506	
5.00	174	927	1010	1096	1369	1561	1818	1898	1993	2222	2334	2428	

Type VP2 Parallel Shaft Power Ratings – Hp/Double Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	5.00	350														3336	3657	4095		
	5.60	313	253	374	644	716	858	1024	1159	1252	1558	1685	1876	1976	2228	2594	3231	3541	3966	4095
	6.30	278	239	374	606	716	858	1024	1159	1252	1553	1681	1871	1981	2233	2600	3094	3390	3797	3970
	7.10	246	236	338	541	716	858	957	1083	1170	1378	1491	1660	1866	2103	2449	2547	2791	3125	3796
	8.00	219	193	335	494	620	744	855	967	1045	1225	1326	1475	1544	1740	2026	2308	2529	2833	3125
	9.00	194	182	303	463	620	744	863	977	1055	1211	1310	1458	1605	1810	2107	2206	2418	2708	3075
	10.0	175	181	261	413	567	680	764	864	933	1073	1161	1292	1457	1642	1912	2027	2222	2488	2886
	11.2	156	156	268	406	493	591	653	738	797	990	1071	1192	1212	1367	1591	1735	1902	2130	2529
	12.5	140	148	242	377	466	558	634	717	775	942	1019	1134	1216	1370	1596	1654	1812	2029	2312
	14.0	125	148	208	337	439	526	577	653	705	824	892	992	1105	1246	1451	1469	1610	1803	2163
	16.0	109	125	195	314	377	452	523	592	639	755	817	910	928	1046	1218	1255	1375	1540	1875
	18.0	97	118	175	274	334	401	464	525	567	666	721	802	864	973	1133	1193	1307	1464	1672
	20.0	88	114	153	260	314	377	422	477	515	582	630	701	784	884	1029	1064	1166	1306	1560
	22.4	78	73	138	196	227	272	346	391	422	485	525	584	699	788	917	908	995	1114	1325
	25.0	70	73	125	196	227	272	328	371	401	485	525	584	626	706	822	862	944	1057	1210
28.0	63	73	113	187	224	269	298	337	364	429	464	516	568	640	746				1127	
1430	5.00	286														2881	3157	3535		
	5.60	255	220	305	559	604	724	889	1006	1087	1352	1463	1628	1716	1934	2252	2719	2980	3337	3535
	6.30	227	208	305	526	604	724	889	1006	1087	1349	1459	1624	1720	1939	2258	2572	2818	3156	3446
	7.10	201	205	294	470	604	724	831	940	1015	1197	1295	1441	1620	1826	2126	2211	2423	2713	3295
	8.00	179	168	285	429	539	646	742	840	907	1064	1151	1281	1340	1511	1759	1922	2106	2359	2713
	9.00	159	158	263	402	528	633	745	842	910	1051	1137	1266	1394	1571	1829	1833	2009	2250	2561
	10.0	143	158	226	359	492	590	663	750	810	926	1002	1115	1265	1426	1660	1681	1842	2063	2398
	11.2	128	136	221	353	428	513	567	641	692	860	930	1035	1053	1187	1381	1437	1575	1764	2146
	12.5	114	128	205	310	383	460	523	591	638	777	841	936	1004	1132	1318	1368	1499	1678	1915
	14.0	102	129	179	293	361	433	475	538	581	680	735	819	912	1029	1197	1212	1329	1488	1789
	16.0	89	109	160	260	320	383	439	497	537	622	673	749	797	898	1046	1035	1134	1270	1548
	18.0	79	103	144	225	274	329	382	432	466	548	593	660	711	802	933	983	1077	1206	1379
	20.0	72	93	125	214	258	310	347	392	423	479	518	576	645	727	847	875	959	1074	1286
	22.4	64	64	116	162	188	225	286	324	350	396	429	477	577	651	758	746	818	916	1098
	25.0	57	64	103	161	188	225	269	304	329	396	429	477	515	580	675	708	776	869	995
28.0	51	64	93	153	184	221	244	276	298	352	381	424	466	526	612				926	
1170	5.00	234														2357	2583	2892		
	5.60	209	191	250	474	494	592	747	845	912	1164	1259	1401	1491	1681	1957	2245	2461	2756	2892
	6.30	186	181	250	457	494	592	747	845	912	1164	1259	1401	1495	1685	1962	2146	2352	2634	2892
	7.10	165	178	250	408	494	592	722	817	882	1040	1125	1252	1407	1587	1847	1866	2045	2290	2807
	8.00	146	146	233	373	463	555	645	730	788	924	1000	1113	1165	1313	1528	1596	1750	1959	2358
	9.00	130	138	229	349	436	522	616	696	752	875	947	1054	1177	1327	1545	1520	1666	1866	2127
	10.0	117	137	197	312	410	492	560	634	684	766	828	922	1070	1206	1405	1392	1525	1708	1989
	11.2	104	118	181	291	356	427	485	549	593	727	787	876	915	1031	1200	1189	1303	1459	1777
	12.5	94	111	168	255	316	379	431	487	526	641	694	772	829	935	1088	1130	1238	1387	1584
	14.0	84	108	147	242	297	356	391	443	478	560	606	675	753	848	988	1000	1096	1228	1478
	16.0	73	95	132	215	265	318	359	407	439	512	554	617	656	740	861	853	935	1047	1277
	18.0	65	87	118	185	225	270	314	355	383	451	488	543	585	660	768	810	887	994	1137
	20.0	59	77	103	175	212	254	285	322	348	394	426	474	531	598	697	720	790	884	1059
	22.4	52	55	95	134	155	186	235	266	287	324	351	390	474	535	623	614	673	754	914
	25.0	47	55	85	132	155	186	221	250	270	324	351	390	423	477	555	582	638	714	818
28.0	42	54	76	125	151	181	200	227	245	289	313	348	383	432	503				761	

Type VP2 Parallel Shaft

Torque Ratings – lb-in/Double Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	5.00	350															629	689	772	
	5.60	313	52	73	130	149	179	203	229	247	311	337	375	398	449	523	674	738	827	841
	6.30	278	54	84	137	167	201	227	256	277	359	389	433	440	496	577	737	808	905	887
	7.10	246	59	85	133	181	217	243	275	297	345	373	415	458	517	601	696	763	855	973
	8.00	219	58	97	147	182	218	238	269	291	355	384	427	442	499	580	698	765	857	931
	9.00	194	59	100	155	204	244	269	304	328	406	439	489	507	571	665	763	836	936	997
	10.0	175	66	97	150	201	242	273	309	334	389	421	468	509	573	667	758	831	930	1073
	11.2	156	64	108	168	201	241	263	298	322	397	429	478	502	566	659	718	787	881	1030
	12.5	140	66	111	176	213	256	286	324	350	437	473	526	555	625	728	782	857	959	1025
	14.0	125	74	107	170	217	261	299	339	366	413	447	498	558	629	732	776	850	952	1099
	16.0	109	72	113	181	217	261	292	330	357	435	471	524	551	621	723	733	804	900	1079
	18.0	97	74	116	177	216	259	290	328	354	444	481	535	565	637	741	797	873	978	1047
	20.0	88	80	113	182	220	264	303	342	370	420	454	506	567	639	744	788	864	968	1120
	22.4	78	60	113	159	184	221	276	312	337	383	414	461	579	652	760	744	816	913	1070
25.0	70	65	112	178	207	248	293	331	358	443	480	534	571	644	750	807	885	991	1063	
28.0	63	73	114	183	222	266	306	346	373	424	458	510	573	646	752				1135	
1430	5.00	286															664	728	816	
	5.60	255	56	73	138	154	184	215	243	263	331	358	398	423	477	556	694	760	852	889
	6.30	227	57	84	146	173	207	241	272	294	382	413	460	467	527	613	750	822	921	942
	7.10	201	63	90	141	187	224	259	292	316	366	396	441	487	549	639	740	811	908	1033
	8.00	179	61	101	157	193	231	253	286	309	377	408	454	470	530	617	712	780	873	989
	9.00	159	63	106	165	212	254	284	321	347	431	467	519	538	607	706	776	850	952	1016
	10.0	143	70	103	159	214	257	290	328	355	411	444	495	540	609	709	769	843	944	1091
	11.2	128	68	109	179	214	256	280	316	342	422	456	508	533	601	700	728	797	893	1070
	12.5	114	70	115	177	215	258	289	327	353	441	477	531	561	632	736	791	867	971	1039
	14.0	102	78	113	180	219	263	302	341	368	417	451	502	563	635	739	784	859	962	1112
	16.0	89	77	113	183	225	270	300	340	367	439	474	528	579	653	760	740	811	908	1090
	18.0	79	79	116	178	217	261	292	330	357	447	484	539	569	642	747	804	881	986	1057
	20.0	72	80	114	183	221	265	304	344	372	422	457	509	571	644	749	794	870	975	1130
	22.4	64	63	116	160	187	224	280	316	342	383	414	461	585	660	768	749	821	919	1086
25.0	57	69	113	179	210	251	294	333	360	443	480	534	575	648	754	812	890	997	1070	
28.0	51	77	114	184	223	267	307	347	375	426	461	513	576	649	756				1142	
1170	5.00	234															664	728	816	
	5.60	209	59	73	143	154	184	221	250	270	348	376	419	450	507	590	700	768	860	889
	6.30	186	61	84	155	173	207	247	280	302	402	435	485	496	560	652	765	838	939	967
	7.10	165	67	94	150	187	224	275	311	335	389	421	468	517	583	679	763	837	937	1076
	8.00	146	65	101	166	203	243	268	304	328	400	433	482	499	563	655	722	792	887	1051
	9.00	130	67	113	175	214	257	287	324	350	439	475	528	556	626	729	786	862	965	1031
	10.0	117	74	109	169	218	262	300	339	366	415	449	500	559	630	733	778	853	955	1105
	11.2	104	72	109	180	217	261	293	331	358	436	472	525	567	639	744	735	806	903	1083
	12.5	94	74	116	178	216	260	291	329	355	445	481	536	566	638	743	799	876	980	1050
	14.0	84	80	113	182	220	264	303	343	371	420	455	506	568	640	745	790	866	970	1123
	16.0	73	81	114	185	228	274	300	340	367	441	477	531	583	657	765	746	817	915	1099
	18.0	65	81	116	179	218	262	293	332	358	450	487	541	573	646	752	809	887	993	1065
	20.0	59	80	114	183	222	266	306	346	374	425	459	511	574	647	754	799	875	980	1137
	22.4	52	67	117	162	189	226	280	317	342	383	414	461	588	663	772	753	825	924	1104
25.0	47	74	114	180	212	254	295	334	361	443	480	534	577	651	757	816	894	1001	1075	
28.0	42	81	115	184	223	268	308	348	376	427	462	515	578	652	759				1147	

Type VP2 Parallel Shaft Power Ratings – Hp/Double Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	5.00	350	5592	6198	6809			9160	10234	11544				
	5.60	313	5099	5652	6209	6209	6806	8357	9336	10532	10231	10919	11542	
	6.30	278	5003	5545	6092	5674	6219	7841	8760	9882	9334	9962	10531	
	7.10	246	4251	4712	5176	5569	6104	7119	7953	8971	8761	9350	9884	
	8.00	219	3488	3867	4248	4816	5279	6146	6867	7746	8139	8686	9182	
	9.00	194	3470	3846	4225	4373	4794	5979	6679	7534	7210	7695	8134	
	10.0	175	3186	3531	3879	4267	4678	5074	5668	6394	6953	7420	7844	
	11.2	156	2637	2923	3211	3868	4240	4413	4930	5562	6045	6452	6820	
	12.5	140	2635	2920	3208	3304	3621	4323	4830	5448	5402	5765	6094	
	14.0	125	2296	2544	2795	3241	3552	3547	3962	4470	5338	5697	6023	
	16.0	109	1895	2100	2307	2787	3055	3087	3448	3890	4239	4525	4783	
	18.0	97	1890	2095	2301	2375	2603	3017	3370	3802	3778	4032	4262	
	20.0	88	1592	1765	1939	2325	2548	2510	2804	3163	3725	3975	4202	
	22.4	78	1365	1513	1662	1769	1939	2320	2592	2924	2969	3169	3350	
25.0	70	1360	1507	1656	1711	1876	2264	2530	2854	2756	2941	3109		
28.0	63				1673	1834				2756	2941	3109		
1430	5.00	286	4855	5381	5911			7953	8885	10022				
	5.60	255	4169	4620	5076	5390	5908	7097	7929	8944	8882	9480	10021	
	6.30	227	4141	4590	5042	4926	5399	6808	7606	8579	8104	8649	9142	
	7.10	201	3491	3870	4251	4835	5299	5817	6499	7331	7606	8118	8581	
	8.00	179	2893	3206	3522	4181	4583	5023	5611	6330	6684	7134	7541	
	9.00	159	2893	3206	3522	3624	3973	4888	5461	6160	6148	6561	6935	
	10.0	143	2648	2935	3224	3557	3899	4214	4708	5311	6035	6441	6809	
	11.2	128	2188	2425	2664	3215	3524	3674	4105	4630	4940	5272	5573	
	12.5	114	2184	2421	2659	2742	3006	3594	4016	4530	4497	4800	5073	
	14.0	102	1898	2103	2311	2686	2945	2938	3283	3703	4438	4737	5007	
	16.0	89	1565	1734	1905	2304	2526	2553	2853	3218	3464	3697	3908	
	18.0	79	1559	1728	1899	1942	2129	2493	2785	3142	3125	3336	3526	
	20.0	72	1301	1442	1584	1918	2103	2071	2314	2610	3079	3286	3473	
	22.4	64	1124	1246	1368	1445	1584	1913	2137	2411	2535	2705	2860	
25.0	57	1119	1240	1362	1409	1544	1866	2084	2351	2252	2403	2541		
28.0	51				1377	1509				2252	2403	2541		
1170	5.00	234	4156	4607	5061			6560	7329	8267				
	5.60	209	3411	3780	4153	4684	5134	5807	6487	7318	7327	7819	8266	
	6.30	186	3401	3770	4141	4276	4687	5648	6310	7118	7042	7515	7944	
	7.10	165	2911	3227	3545	4183	4585	4771	5330	6012	6609	7054	7456	
	8.00	146	2408	2669	2932	3535	3875	4166	4654	5250	5469	5837	6170	
	9.00	130	2404	2665	2927	3017	3307	4079	4558	5141	5099	5442	5753	
	10.0	117	2196	2434	2674	2957	3242	3506	3917	4419	4964	5298	5601	
	11.2	104	1813	2009	2207	2667	2923	3051	3409	3845	4042	4314	4560	
	12.5	94	1807	2003	2201	2271	2490	2982	3331	3758	3735	3986	4213	
	14.0	84	1567	1737	1908	2223	2437	2431	2716	3064	3660	3906	4129	
	16.0	73	1291	1431	1572	1903	2086	2110	2357	2659	2834	3025	3198	
	18.0	65	1286	1425	1566	1589	1742	2059	2300	2594	2582	2756	2913	
	20.0	59	1086	1203	1322	1582	1734	1708	1908	2152	2542	2713	2868	
	22.4	52	925	1025	1126	1206	1322	1576	1761	1987	2090	2231	2358	
25.0	47	921	1020	1121	1159	1271	1537	1717	1937	1850	1974	2087		
28.0	42				1133	1242				1850	1974	2087		

Type VP2 Parallel Shaft

Torque Ratings – lb-in/Double Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	5.00	350	1024	1135	1247			1614	1803	2033				
	5.60	313	1054	1168	1283	1265	1387	1694	1893	2135	2017	2153	2276	
	6.30	278	1130	1253	1376	1290	1414	1738	1942	2191	2112	2254	2383	
	7.10	246	1138	1261	1386	1380	1513	1772	1980	2233	2161	2306	2438	
	8.00	219	1055	1169	1284	1435	1573	1761	1967	2219	2268	2420	2558	
	9.00	194	1146	1271	1396	1454	1594	1873	2092	2360	2305	2460	2601	
	10.0	175	1156	1281	1407	1547	1696	1772	1980	2233	2423	2586	2734	
	11.2	156	1080	1197	1315	1562	1712	1774	1982	2236	2363	2522	2666	
	12.5	140	1179	1307	1436	1489	1632	1900	2123	2395	2423	2586	2734	
	14.0	125	1188	1317	1447	1592	1745	1830	2044	2306	2611	2786	2945	
	16.0	109	1107	1227	1348	1606	1760	1833	2048	2310	2448	2613	2762	
	18.0	97	1207	1338	1470	1527	1673	1958	2188	2468	2504	2672	2825	
	20.0	88	1163	1290	1417	1629	1786	1857	2075	2341	2691	2872	3036	
	22.4	78	1126	1248	1371	1438	1576	1865	2084	2351	2452	2617	2766	
	25.0	70	1226	1359	1493	1553	1702	1990	2224	2508	2473	2639	2790	
28.0	63				1655	1814				2695	2877	3041		
1430	5.00	286	1088	1206	1324			1714	1915	2160				
	5.60	255	1055	1169	1284	1344	1473	1761	1967	2219	2143	2287	2418	
	6.30	227	1145	1269	1394	1371	1503	1847	2063	2327	2244	2395	2532	
	7.10	201	1144	1268	1393	1467	1608	1772	1980	2233	2296	2450	2590	
	8.00	179	1070	1186	1303	1525	1671	1761	1967	2219	2279	2433	2571	
	9.00	159	1169	1296	1424	1475	1617	1874	2093	2361	2405	2567	2714	
	10.0	143	1176	1303	1431	1578	1730	1801	2012	2270	2574	2747	2904	
	11.2	128	1097	1216	1335	1588	1741	1807	2019	2278	2363	2522	2666	
	12.5	114	1196	1326	1457	1512	1657	1933	2160	2436	2469	2635	2785	
	14.0	102	1202	1333	1464	1615	1770	1855	2073	2338	2656	2835	2996	
	16.0	89	1119	1240	1363	1624	1781	1856	2073	2339	2448	2613	2762	
	18.0	79	1219	1351	1484	1528	1675	1981	2213	2496	2535	2705	2860	
	20.0	72	1163	1290	1417	1645	1804	1876	2095	2364	2722	2905	3070	
	22.4	64	1134	1257	1381	1438	1576	1882	2103	2372	2562	2734	2890	
	25.0	57	1234	1368	1503	1564	1714	2007	2242	2529	2473	2639	2790	
28.0	51				1666	1827				2695	2877	3041		
1170	5.00	234	1138	1262	1386			1728	1931	2178				
	5.60	209	1055	1169	1284	1428	1565	1761	1967	2219	2161	2306	2438	
	6.30	186	1149	1274	1399	1454	1594	1873	2092	2360	2383	2544	2689	
	7.10	165	1166	1292	1420	1551	1700	1776	1984	2239	2438	2602	2751	
	8.00	146	1089	1207	1326	1575	1727	1785	1994	2250	2279	2433	2571	
	9.00	130	1188	1317	1447	1500	1645	1911	2135	2409	2439	2603	2751	
	10.0	117	1192	1321	1451	1603	1758	1831	2046	2308	2588	2762	2920	
	11.2	104	1110	1231	1352	1610	1765	1835	2050	2312	2363	2522	2666	
	12.5	94	1210	1341	1473	1531	1678	1960	2190	2470	2506	2674	2827	
	14.0	84	1214	1345	1478	1633	1790	1876	2096	2364	2677	2857	3020	
	16.0	73	1129	1251	1374	1640	1797	1874	2094	2362	2448	2613	2762	
	18.0	65	1229	1362	1496	1528	1675	1999	2233	2519	2560	2732	2888	
	20.0	59	1187	1315	1445	1659	1818	1890	2112	2382	2747	2931	3099	
	22.4	52	1141	1265	1390	1467	1608	1896	2118	2389	2582	2756	2913	
	25.0	47	1241	1376	1511	1574	1725	2020	2257	2546	2482	2649	2800	
28.0	42				1676	1837				2706	2888	3053		

Type VP2 Parallel Shaft

Power Ratings – Hp/Double Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	5.00	194														1954	2141	2398		
	5.60	173	168	207	393	410	491	619	700	756	965	1044	1162	1288	1452	1691	1894	2075	2324	2398
	6.30	154	158	207	393	410	491	619	700	756	965	1044	1162	1288	1452	1691	1806	1980	2217	2398
	7.10	137	156	207	358	410	491	619	700	756	911	986	1097	1234	1391	1620	1567	1717	1923	2363
	8.00	121	128	193	323	384	460	558	632	682	811	877	976	1021	1151	1340	1339	1467	1643	2000
	9.00	108	121	193	293	363	436	514	582	628	732	792	881	986	1111	1294	1273	1396	1563	1784
	10.0	97	120	169	273	342	410	468	529	571	640	692	770	895	1009	1175	1164	1276	1429	1666
	11.2	87	103	150	241	295	354	402	455	492	607	657	731	776	874	1018	994	1089	1219	1486
	12.5	78	98	140	213	263	315	359	406	438	535	579	644	692	780	908	944	1034	1158	1324
	14.0	69	90	122	202	247	297	326	369	398	467	505	563	628	708	824	834	915	1024	1234
	16.0	61	81	110	178	222	266	298	337	364	427	462	514	547	616	718	711	780	873	1065
	18.0	54	72	98	154	188	225	261	295	319	375	406	452	488	550	640	675	740	828	948
	20.0	49	64	86	146	176	212	237	268	290	328	355	395	442	498	580	600	658	736	883
	22.4	43	48	79	112	129	155	195	220	238	269	291	324	395	445	518	511	560	627	766
25.0	39	48	71	110	129	155	184	208	224	269	291	324	352	397	462	484	531	594	681	
28.0	35	45	63	104	125	150	167	188	203	240	260	289	319	359	418				634	
870	5.00	174														1752	1921	2151		
	5.60	155	155	186	353	367	441	555	628	678	865	936	1042	1156	1303	1517	1713	1877	2102	2151
	6.30	138	147	186	353	367	441	555	628	678	865	936	1042	1156	1303	1517	1632	1789	2003	2151
	7.10	123	145	186	332	367	441	555	628	678	822	890	990	1127	1271	1480	1414	1550	1735	2135
	8.00	109	118	173	290	344	413	501	567	612	748	809	900	946	1067	1242	1208	1323	1482	1805
	9.00	97	112	173	264	327	392	463	524	566	659	713	794	889	1002	1166	1148	1258	1409	1609
	10.0	87	109	152	250	308	369	421	476	514	576	623	694	807	909	1059	1049	1150	1287	1501
	11.2	78	96	134	216	265	317	361	408	441	546	591	658	698	787	917	895	981	1098	1339
	12.5	70	90	126	191	236	284	323	365	394	481	520	579	623	702	818	849	931	1042	1193
	14.0	62	80	110	181	222	267	293	331	358	420	455	506	565	637	741	751	823	921	1111
	16.0	54	73	98	160	199	239	267	302	327	383	415	462	492	554	645	640	701	785	958
	18.0	48	65	88	138	168	202	235	265	287	337	365	406	438	494	575	607	665	745	853
	20.0	44	57	77	131	158	190	213	241	260	294	319	355	397	448	521	539	591	662	794
	22.4	39	44	71	100	116	140	175	197	213	241	261	290	355	400	466	459	503	564	688
25.0	35	44	64	99	116	140	165	187	201	241	261	290	316	356	415	435	477	534	612	
28.0	31	41	57	94	113	135	150	169	183	216	234	260	286	323	376				569	

Type VP2 Parallel Shaft

Torque Ratings – lb-in/Double Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	5.00	194															664	728	816	
	5.60	173	62	73	143	154	184	221	250	270	348	376	419	469	528	615	712	781	874	889
	6.30	154	65	84	161	173	207	247	280	302	402	435	485	516	582	678	777	851	953	967
	7.10	137	71	94	158	187	224	284	321	347	411	445	495	547	617	718	773	847	949	1092
	8.00	121	69	101	174	203	243	280	317	342	423	458	510	528	595	693	731	801	897	1075
	9.00	108	71	115	177	216	258	289	327	353	443	479	533	561	633	737	794	870	975	1043
	10.0	97	79	113	179	219	263	302	341	369	418	453	504	564	636	740	785	861	964	1117
	11.2	87	76	109	180	217	261	293	331	358	439	475	529	580	653	761	742	813	910	1092
	12.5	78	79	116	178	217	261	292	331	357	448	484	539	570	642	748	805	882	988	1059
	14.0	69	80	114	183	221	265	305	345	372	423	457	509	571	644	750	795	872	976	1132
	16.0	61	84	114	185	231	276	300	340	367	443	480	534	586	660	769	750	822	921	1106
	18.0	54	82	117	180	219	263	294	333	360	452	489	544	575	649	755	813	891	998	1071
	20.0	49	81	114	184	223	267	307	347	375	426	461	513	577	650	757	802	879	985	1143
	22.4	43	71	117	163	190	228	280	317	342	383	414	461	590	665	774	756	829	928	1116
25.0	39	78	115	180	213	256	296	335	362	443	480	534	579	653	760	819	898	1005	1080	
28.0	35	81	115	185	224	268	308	349	377	428	464	516	580	654	761				1152	
870	5.00	174															664	728	816	
	5.60	155	65	73	143	154	184	221	250	270	348	376	419	469	528	615	718	787	882	889
	6.30	138	67	84	161	173	207	247	280	302	402	435	485	516	582	678	783	858	960	967
	7.10	123	73	94	164	187	224	284	321	347	413	447	498	557	628	731	778	852	954	1100
	8.00	109	71	101	174	203	243	280	317	342	435	471	524	545	615	716	735	805	902	1082
	9.00	97	73	115	178	216	259	290	328	354	444	481	535	564	636	740	798	875	980	1049
	10.0	87	80	113	182	220	264	303	343	370	420	454	506	566	638	743	789	865	968	1122
	11.2	78	79	109	180	217	261	293	331	358	440	477	530	582	656	764	745	816	914	1097
	12.5	70	81	116	179	218	261	293	332	358	449	486	541	572	644	750	808	885	991	1063
	14.0	62	80	114	183	222	266	306	346	373	424	459	511	573	646	752	798	874	979	1136
	16.0	54	84	114	185	231	277	300	340	367	444	481	535	587	662	771	752	824	923	1110
	18.0	48	82	117	180	219	263	295	334	360	452	490	545	577	650	757	815	893	1001	1074
	20.0	44	81	114	184	223	267	307	348	376	427	462	514	578	652	759	804	881	987	1146
	22.4	39	72	117	163	191	229	280	317	342	383	414	461	591	666	776	758	830	930	1118
25.0	35	78	115	180	214	257	296	335	362	443	480	534	580	654	761	820	899	1007	1082	
28.0	31	81	115	185	224	268	309	349	377	429	464	517	581	655	763				1154	

Type VP2 Parallel Shaft

Power Ratings – Hp/Double Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	5.00	194	3466	3842	4220			5439	6076	6854			
	5.60	173	2872	3183	3497	4016	4402	4814	5378	6067	6074	6483	6853
	6.30	154	2871	3182	3496	3598	3944	4706	5258	5931	5892	6288	6647
	7.10	137	2449	2714	2981	3531	3871	4029	4501	5077	5534	5906	6244
	8.00	121	2022	2241	2462	2957	3241	3511	3922	4424	4534	4839	5115
	9.00	108	2017	2236	2456	2534	2778	3433	3836	4327	4297	4586	4848
	10.0	97	1840	2039	2240	2482	2720	2944	3289	3710	4116	4392	4643
	11.2	87	1517	1681	1847	2234	2449	2558	2858	3224	3351	3576	3780
	12.5	78	1512	1675	1840	1901	2084	2498	2791	3148	3132	3342	3533
	14.0	69	1309	1451	1594	1860	2038	2032	2271	2561	3034	3238	3423
	16.0	61	1077	1194	1312	1589	1742	1762	1969	2221	2350	2508	2651
	18.0	54	1073	1189	1306	1317	1444	1719	1920	2166	2157	2302	2434
	20.0	49	914	1013	1113	1320	1447	1424	1591	1795	2122	2264	2393
	22.4	43	770	854	938	1015	1113	1314	1468	1656	1743	1861	1967
25.0	39	766	849	933	966	1058	1281	1431	1614	1562	1667	1762	
28.0	35				943	1034				1562	1667	1762	
870	5.00	174	3142	3483	3826			4878	5450	6147			
	5.60	155	2601	2883	3167	3602	3948	4356	4867	5490	5448	5814	6146
	6.30	138	2598	2880	3164	3259	3572	4267	4767	5377	5303	5660	5983
	7.10	123	2212	2452	2693	3196	3503	3641	4068	4589	4964	5298	5600
	8.00	109	1825	2023	2223	2652	2907	3174	3546	4000	4067	4340	4588
	9.00	97	1820	2017	2216	2288	2507	3102	3466	3910	3885	4146	4383
	10.0	87	1659	1839	2020	2239	2454	2657	2969	3349	3691	3940	4165
	11.2	78	1367	1515	1664	2014	2208	2308	2578	2908	3005	3208	3391
	12.5	70	1362	1509	1658	1713	1878	2252	2516	2838	2824	3014	3186
	14.0	62	1178	1306	1434	1675	1836	1831	2045	2307	2721	2904	3070
	16.0	54	969	1075	1180	1430	1568	1587	1773	1999	2108	2249	2378
	18.0	48	965	1069	1175	1182	1295	1547	1728	1949	1942	2073	2191
	20.0	44	826	915	1006	1187	1301	1281	1432	1615	1903	2031	2147
	22.4	39	693	768	843	917	1006	1182	1320	1489	1568	1674	1769
25.0	35	689	764	839	868	951	1151	1286	1451	1404	1498	1584	
28.0	31				848	929				1404	1498	1584	

Type VP2 Parallel Shaft

Torque Ratings – lb-in/Double Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	5.00	194	1145	1269	1394			1728	1931	2178			
	5.60	173	1071	1187	1304	1476	1618	1761	1967	2219	2161	2306	2438
	6.30	154	1170	1297	1425	1476	1618	1882	2103	2372	2405	2567	2714
	7.10	137	1183	1311	1440	1579	1731	1809	2021	2280	2463	2628	2778
	8.00	121	1103	1222	1343	1589	1742	1815	2027	2287	2279	2433	2571
	9.00	108	1202	1333	1464	1520	1666	1940	2168	2445	2479	2645	2796
	10.0	97	1204	1335	1466	1623	1779	1855	2072	2338	2588	2762	2920
	11.2	87	1121	1242	1365	1627	1783	1855	2073	2338	2363	2522	2666
	12.5	78	1221	1353	1486	1545	1694	1981	2213	2496	2534	2705	2859
	14.0	69	1222	1355	1488	1648	1806	1892	2114	2384	2677	2857	3020
	16.0	61	1136	1259	1383	1652	1810	1888	2109	2379	2448	2613	2762
	18.0	54	1236	1370	1505	1528	1675	2013	2249	2537	2579	2752	2910
	20.0	49	1205	1335	1467	1669	1829	1902	2125	2397	2765	2951	3119
	22.4	43	1146	1271	1396	1489	1632	1906	2129	2402	2597	2772	2930
25.0	39	1246	1382	1518	1581	1733	2031	2269	2559	2528	2698	2852	
28.0	35				1683	1845				2755	2941	3108	
870	5.00	174	1157	1283	1409			1728	1931	2178			
	5.60	155	1081	1199	1317	1476	1618	1777	1985	2239	2161	2306	2438
	6.30	138	1181	1309	1438	1490	1634	1903	2126	2398	2414	2576	2723
	7.10	123	1191	1320	1450	1594	1747	1823	2037	2298	2463	2628	2778
	8.00	109	1110	1230	1351	1589	1742	1829	2044	2305	2279	2433	2571
	9.00	97	1210	1341	1473	1530	1677	1955	2184	2464	2499	2667	2819
	10.0	87	1211	1342	1474	1633	1790	1867	2085	2352	2588	2762	2920
	11.2	78	1126	1248	1371	1635	1793	1866	2085	2351	2363	2522	2666
	12.5	70	1226	1359	1493	1553	1702	1991	2224	2509	2549	2720	2875
	14.0	62	1227	1360	1494	1655	1814	1900	2122	2394	2677	2857	3020
	16.0	54	1140	1263	1388	1657	1817	1895	2117	2388	2448	2613	2762
	18.0	48	1240	1374	1509	1528	1675	2020	2257	2546	2589	2763	2920
	20.0	44	1214	1345	1478	1674	1835	1907	2131	2404	2765	2951	3119
	22.4	39	1149	1274	1399	1500	1645	1911	2135	2409	2605	2780	2939
25.0	35	1249	1384	1521	1584	1737	2036	2274	2566	2533	2704	2858	
28.0	31				1686	1849				2762	2947	3115	

Type VP3 Parallel Shaft

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	28.0	63															654	720	774	
	31.5	56	59	83	132	144	180	202	228	252	302	338	385	422	483	550	654	720	774	774
	35.5	49	59	83	132	144	180	202	228	252	302	338	385	421	481	548	630	692	745	774
	40.0	44	57	80	125	144	180	199	225	248	283	317	362	413	473	538	521	573	616	774
	45.0	39	45	66	99	124	155	163	184	203	236	263	301	328	376	428	473	520	559	616
	50.0	35	45	64	98	117	147	163	184	203	227	254	290	320	367	417	448	493	530	608
	56.0	31	40	56	92	110	138	148	167	185	198	222	253	290	332	378	404	444	477	565
	63.0	28	33	47	71	85	106	113	128	141	187	209	238	237	271	309	343	378	406	496
	71.0	25	32	44	71	80	101	115	129	143	164	183	209	227	260	296	325	358	385	441
	80.0	22	28	38	67	76	95	103	117	129	143	160	183	206	236	269	289	318	342	410
	90.0	19	22	35	55	61	76	81	92	102	128	143	163	173	198	225	246	270	291	355
	100	18	22	32	51	56	70	80	91	100	120	134	153	164	187	213	233	256	275	316
	112	16	20	28	48	54	67	73	82	91	105	117	134	148	170	193	203	223	240	293
	125	14	16	26	37	45	56	60	68	75	92	102	117	122	140	159	172	189	204	249
	140	13	16	23	36	41	51	59	67	74	86	96	109	116	133	151	163	179	193	221
160	11	15	20	34	39	49	54	61	67	75	84	95	105	120	137				206	
1430	28.0	51															568	625	672	
	31.5	45	51	72	109	123	154	175	198	218	262	293	335	366	419	477	545	599	644	672
	35.5	40	51	72	109	123	154	175	198	218	262	293	335	366	418	476	517	568	611	672
	40.0	36	47	66	102	123	154	163	184	203	232	260	297	338	386	440	452	497	535	651
	45.0	32	39	56	81	101	127	133	150	166	205	229	261	273	313	356	388	426	459	535
	50.0	29	37	52	80	96	120	134	152	167	186	208	237	262	300	342	368	404	435	498
	56.0	26	33	46	75	90	113	121	137	151	162	182	207	238	272	310	331	363	391	463
	63.0	23	27	38	58	69	87	93	105	116	153	171	195	194	222	252	281	309	333	406
	71.0	20	26	36	58	66	82	94	106	117	134	150	171	186	212	242	266	293	315	361
	80.0	18	23	31	54	62	78	84	95	105	117	131	149	169	193	220	236	260	280	336
	90.0	16	18	29	45	50	62	67	75	83	105	117	134	141	161	184	201	221	238	291
	100	14	18	26	41	46	58	66	74	82	98	110	125	134	153	174	190	209	225	258
	112	13	16	23	39	44	55	60	67	74	86	96	109	121	139	158	166	182	196	240
	125	11	13	21	31	36	46	49	55	61	75	84	96	100	114	130	141	155	167	204
	140	10	13	19	29	34	42	49	55	61	70	78	89	95	109	124	133	147	158	181
160	9	12	17	28	32	40	44	50	55	61	68	78	86	98	112				168	
1170	28.0	42															494	543	584	
	31.5	37	43	63	89	102	128	146	165	182	228	255	291	311	356	406	447	492	529	584
	35.5	33	43	59	89	102	128	148	167	184	218	244	279	299	342	390	424	466	502	574
	40.0	29	38	54	83	102	128	133	150	166	191	213	243	276	316	360	374	411	442	535
	45.0	26	31	46	66	83	104	109	123	136	174	194	222	224	256	292	318	350	376	459
	50.0	23	31	43	66	79	99	110	124	137	153	171	195	215	245	280	301	331	357	409
	56.0	21	27	38	62	74	93	99	112	123	133	149	170	195	223	254	271	298	321	380
	63.0	19	22	31	48	57	71	76	86	95	125	140	160	158	181	206	231	253	273	332
	71.0	16	22	29	48	54	68	77	87	96	110	123	140	152	174	198	218	240	258	296
	80.0	15	19	26	45	51	63	69	78	86	96	107	122	138	158	180	194	213	229	275
	90.0	13	15	24	37	41	51	54	61	68	86	96	110	115	132	150	165	181	195	238
	100	12	15	21	34	38	47	54	61	67	80	90	103	110	125	143	156	172	185	212
	112	10	13	19	32	36	45	49	55	61	70	78	89	99	114	129	136	149	161	197
	125	9	11	17	25	30	37	40	45	50	62	69	79	82	93	106	115	127	136	167
	140	8	11	16	24	28	35	40	45	50	57	64	73	78	89	101	109	120	129	148
160	7	10	14	23	26	33	36	41	45	50	56	64	70	81	92				138	

Type VP3 Parallel Shaft

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	28.0	63	1143	1261	1381			1765	1966	2188				
	31.5	56	992	1095	1199	1264	1381	1688	1880	2093	1949	2051	2188	
	35.5	49	988	1090	1194	1238	1353	1646	1833	2041	1949	2051	2188	
	40.0	44	853	941	1031	1210	1322	1272	1417	1577	1938	2040	2176	
	45.0	39	701	774	848	1031	1127	1155	1287	1432	1405	1479	1577	
	50.0	35	698	770	843	875	957	1126	1254	1395	1400	1474	1572	
	56.0	31	597	659	722	855	934	926	1032	1148	1355	1426	1521	
	63.0	28	491	542	593	722	789	811	904	1006	1023	1077	1148	
	71.0	25	488	539	590	613	669	790	880	979	983	1035	1104	
	80.0	22	425	469	514	598	653	653	727	810	945	995	1061	
	90.0	19	349	385	422	471	515	602	670	746	769	809	863	
	100	18	347	383	420	436	476	586	653	726	729	768	819	
	112	16	311	343	376	425	465	470	523	583	709	746	796	
	125	14	255	282	309	347	379	433	482	537	557	587	626	
	140	13	254	280	307	319	348	421	469	522	524	552	589	
160	11				311	340				508	535	570		
1430	28.0	51	934	1031	1129			1515	1688	1879				
	31.5	45	815	900	985	1033	1129	1388	1546	1721	1673	1761	1879	
	35.5	40	811	895	980	1017	1112	1353	1507	1677	1673	1761	1879	
	40.0	36	699	772	845	993	1086	1040	1158	1289	1583	1667	1778	
	45.0	32	575	635	695	846	924	948	1056	1175	1148	1208	1289	
	50.0	29	572	631	691	718	785	923	1028	1145	1148	1208	1289	
	56.0	26	489	540	591	701	766	757	843	938	1107	1166	1243	
	63.0	23	402	444	486	592	647	665	741	824	836	880	938	
	71.0	20	400	441	483	502	548	647	721	802	806	848	904	
	80.0	18	348	384	420	490	535	535	596	663	772	813	867	
	90.0	16	286	315	345	387	423	493	549	611	633	666	711	
	100	14	284	313	343	357	390	480	534	595	597	629	670	
	112	13	254	281	308	348	380	385	428	477	579	610	650	
	125	11	209	231	253	284	311	354	395	439	458	482	514	
	140	10	208	229	251	261	285	345	384	427	429	452	482	
160	9				254	278				415	437	466		
1170	28.0	42	769	848	929			1240	1381	1537				
	31.5	37	670	739	810	850	929	1141	1271	1415	1369	1441	1537	
	35.5	33	666	735	805	836	913	1112	1239	1379	1369	1441	1537	
	40.0	29	574	634	694	816	892	851	947	1054	1295	1364	1455	
	45.0	26	472	521	570	694	759	778	867	965	939	989	1054	
	50.0	23	469	518	567	589	644	758	844	939	939	989	1054	
	56.0	21	401	443	485	575	628	619	690	768	906	954	1017	
	63.0	19	330	364	398	485	530	545	607	676	684	720	768	
	71.0	16	328	362	396	411	450	531	591	658	661	695	742	
	80.0	15	285	315	345	401	439	438	488	544	632	665	709	
	90.0	13	234	258	283	318	348	404	450	501	521	548	585	
	100	12	233	257	281	292	319	393	438	487	489	515	549	
	112	10	208	230	252	285	312	315	351	391	474	499	532	
	125	9	171	189	207	233	255	290	323	360	376	396	422	
	140	8	170	188	206	214	233	282	315	350	352	370	395	
160	7				208	228				340	358	381		

Type VP3 Parallel Shaft

Torque Ratings – 1b-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	28.0	63	1171	1292	1415			1746	1945	2165				
	31.5	56	1148	1266	1387	1441	1575	1923	2142	2384	2158	2272	2424	
	35.5	49	1248	1378	1509	1575	1722	2049	2283	2541	2477	2607	2781	
	40.0	44	1246	1375	1506	1678	1834	1860	2072	2306	2685	2826	3014	
	45.0	39	1157	1277	1399	1677	1833	1944	2165	2410	2299	2420	2581	
	50.0	35	1258	1388	1521	1589	1736	2070	2306	2567	2628	2767	2951	
	56.0	31	1254	1384	1516	1691	1848	1941	2163	2407	2773	2919	3114	
	63.0	28	1164	1285	1407	1688	1845	1957	2180	2426	2400	2526	2694	
	71.0	25	1265	1396	1529	1598	1747	2084	2321	2583	2646	2786	2971	
	80.0	22	1260	1390	1523	1701	1859	1963	2187	2434	2773	2919	3114	
	90.0	19	1169	1290	1413	1554	1699	1965	2189	2437	2580	2716	2896	
	100	18	1270	1401	1535	1605	1754	2092	2330	2593	2657	2797	2984	
	112	16	1264	1395	1527	1707	1866	1970	2195	2443	2816	2964	3161	
	125	14	1172	1293	1417	1567	1713	1972	2196	2445	2609	2746	2929	
	140	13	1273	1405	1539	1609	1759	2098	2337	2601	2666	2807	2993	
160	11				1711	1870				2816	2964	3161		
1430	28.0	51	1171	1292	1415			1835	2044	2275				
	31.5	45	1154	1273	1394	1441	1575	1935	2155	2398	2268	2388	2547	
	35.5	40	1254	1384	1516	1583	1731	2061	2296	2556	2602	2740	2922	
	40.0	36	1251	1381	1512	1686	1843	1860	2072	2306	2685	2826	3014	
	45.0	32	1162	1282	1404	1684	1840	1952	2174	2420	2299	2420	2581	
	50.0	29	1262	1393	1526	1594	1743	2078	2315	2577	2637	2777	2961	
	56.0	26	1258	1388	1521	1697	1855	1941	2163	2407	2773	2919	3114	
	63.0	23	1167	1288	1411	1693	1850	1963	2187	2434	2400	2526	2694	
	71.0	20	1268	1399	1533	1602	1751	2089	2327	2590	2654	2794	2980	
	80.0	18	1262	1393	1526	1705	1863	1968	2192	2440	2773	2919	3114	
	90.0	16	1171	1292	1415	1563	1708	1969	2194	2442	2598	2735	2917	
	100	14	1272	1404	1537	1608	1757	2096	2335	2598	2663	2803	2990	
	112	13	1265	1396	1530	1710	1869	1974	2198	2447	2816	2964	3161	
	125	11	1174	1295	1419	1574	1720	1975	2200	2448	2622	2760	2944	
	140	10	1274	1406	1541	1611	1761	2101	2340	2605	2670	2811	2998	
160	9				1713	1873				2816	2964	3161		
1170	28.0	42	1178	1300	1423			1835	2044	2275				
	31.5	37	1158	1278	1400	1449	1584	1944	2166	2411	2268	2388	2547	
	35.5	33	1259	1390	1522	1590	1738	2071	2307	2568	2602	2740	2922	
	40.0	29	1255	1385	1517	1692	1850	1860	2072	2306	2685	2826	3014	
	45.0	26	1165	1286	1408	1689	1846	1959	2182	2428	2299	2420	2581	
	50.0	23	1266	1397	1530	1599	1748	2085	2322	2585	2637	2777	2961	
	56.0	21	1261	1391	1524	1701	1860	1941	2163	2407	2773	2919	3114	
	63.0	19	1170	1291	1414	1696	1854	1967	2192	2439	2400	2526	2694	
	71.0	16	1270	1402	1536	1606	1755	2094	2332	2596	2660	2801	2987	
	80.0	15	1264	1395	1528	1708	1867	1972	2196	2444	2773	2919	3114	
	90.0	13	1173	1294	1418	1570	1716	1973	2198	2446	2613	2751	2934	
	100	12	1274	1406	1540	1610	1760	2099	2338	2602	2667	2808	2995	
	112	10	1267	1398	1531	1712	1871	1976	2201	2450	2816	2964	3161	
	125	9	1175	1296	1420	1579	1726	1977	2202	2451	2633	2772	2956	
	140	8	1276	1408	1542	1613	1763	2103	2343	2608	2673	2814	3002	
160	7				1715	1874				2816	2964	3161		

Type VP3 Parallel Shaft

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	28.0	35															431	474	510	
	31.5	31	36	52	74	85	107	121	136	151	200	223	255	258	295	336	372	409	440	510
	35.5	27	36	49	74	85	107	122	138	152	181	203	232	248	284	323	352	387	417	478
	40.0	24	32	45	69	85	107	110	125	138	158	177	202	229	262	298	311	341	367	444
	45.0	22	26	38	55	69	86	90	102	112	144	161	184	186	212	242	264	290	313	382
	50.0	19	25	36	55	65	82	91	103	114	127	142	162	178	204	232	250	275	296	339
	56.0	17	23	31	51	61	77	82	93	102	110	124	141	162	185	211	225	247	266	316
	63.0	15	18	26	39	47	59	63	71	78	104	116	133	131	150	171	191	210	226	275
	71.0	14	18	24	39	45	56	64	72	79	91	102	117	126	144	164	181	199	214	246
	80.0	12	16	21	37	42	53	57	65	71	80	89	102	115	131	150	161	177	190	229
	90.0	11	12	20	31	34	43	45	51	56	72	80	91	96	109	125	137	150	162	198
	100	10	12	18	28	31	39	45	50	56	67	75	85	91	104	119	129	142	153	176
	112	9	11	16	27	30	37	41	46	51	58	65	74	82	94	107	113	124	133	163
	125	8	9	14	21	25	31	33	38	42	51	57	65	68	78	88	96	105	113	138
	140	7	9	13	20	23	29	33	37	41	48	53	61	64	74	84	91	100	107	123
	160	6	8	11	19	22	27	30	34	37	41	46	53	58	67	76				114
870	28.0	31															390	428	461	
	31.5	28	32	47	66	77	96	108	122	135	180	202	230	232	265	302	334	367	395	461
	35.5	25	32	44	66	77	96	110	124	137	163	182	208	222	254	290	316	348	374	429
	40.0	22	28	40	62	77	96	99	112	123	142	159	181	205	235	268	279	307	330	399
	45.0	19	23	34	49	62	77	81	91	101	129	145	165	166	190	217	237	261	281	342
	50.0	17	23	32	49	59	73	82	92	102	114	127	145	160	183	208	225	247	266	305
	56.0	16	20	28	46	55	69	74	83	92	99	111	127	145	166	189	202	222	239	283
	63.0	14	16	23	35	42	53	56	64	70	93	104	119	118	135	154	172	189	203	247
	71.0	12	16	22	35	40	50	57	64	71	82	92	105	113	129	147	163	179	192	221
	80.0	11	14	19	33	38	47	51	58	64	71	80	91	103	118	134	144	159	171	205
	90.0	10	11	18	28	30	38	40	46	50	64	72	82	86	98	112	123	135	145	177
	100	9	11	16	25	28	35	40	45	50	60	67	76	82	93	106	116	128	137	158
	112	8	10	14	24	27	33	36	41	45	52	58	67	74	85	96	101	111	120	146
	125	7	8	13	19	22	28	30	34	37	46	51	59	61	70	79	86	94	102	124
	140	6	8	12	18	21	26	30	33	37	43	48	54	58	66	75	81	89	96	110
	160	5	7	10	17	20	24	27	30	33	37	42	47	52	60	68				102

Type VP3 Parallel Shaft

Torque Ratings – 1b-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	28.0	35															827	909	978	
	31.5	31	75	105	157	174	218	249	281	311	409	458	522	538	615	701	789	867	933	1065
	35.5	27	82	112	176	196	245	282	319	352	430	481	549	569	651	742	854	939	1010	1085
	40.0	24	81	115	179	212	265	293	330	365	406	454	518	581	665	757	841	925	995	1158
	45.0	22	77	109	161	198	248	257	290	321	424	475	542	554	634	722	792	870	937	1128
	50.0	19	82	116	181	212	265	291	329	363	432	483	551	586	670	763	857	942	1014	1090
	56.0	17	81	115	184	215	270	301	340	375	407	455	520	589	673	767	844	928	998	1162
	63.0	15	77	109	161	198	248	257	290	321	425	476	543	554	634	722	794	873	939	1124
	71.0	14	82	116	181	212	266	291	329	363	432	484	552	585	670	763	859	945	1016	1093
	80.0	12	81	115	184	216	270	301	340	375	408	456	521	590	675	769	846	930	1000	1165
	90.0	11	73	118	182	207	260	264	298	329	401	449	512	563	644	734	795	874	941	1133
	100	10	79	117	182	210	263	293	330	365	433	484	553	590	675	769	861	946	1018	1095
	112	9	81	115	186	216	270	305	344	380	408	457	521	591	676	770	847	931	1002	1166
	125	8	73	118	173	208	260	264	298	329	403	450	514	563	644	734	797	876	942	1135
	140	7	80	117	181	210	263	293	331	365	434	485	553	590	675	769	862	948	1020	1096
	160	6	81	116	186	216	271	305	344	380	409	457	522	591	677	771				1166
870	28.0	31															833	916	985	
	31.5	28	75	105	157	175	219	249	281	311	412	461	526	538	615	701	790	868	934	1073
	35.5	25	82	112	176	197	246	282	319	352	431	482	550	569	651	742	855	940	1012	1087
	40.0	22	81	115	179	213	266	293	330	365	406	455	519	581	665	757	842	926	996	1159
	45.0	19	77	109	161	198	248	257	290	321	425	475	542	554	634	722	793	871	937	1124
	50.0	17	82	116	181	212	265	291	329	363	432	483	551	586	670	763	858	943	1015	1091
	56.0	16	81	115	184	215	270	301	340	375	407	456	520	589	674	768	844	928	999	1163
	63.0	14	77	109	161	198	248	257	290	321	426	476	543	554	634	722	794	873	940	1124
	71.0	12	82	116	181	212	266	291	329	363	433	484	552	585	670	763	860	945	1017	1093
	80.0	11	81	115	184	216	270	301	340	375	408	457	521	590	675	769	846	930	1001	1165
	90.0	10	73	118	182	207	260	264	298	329	402	449	513	563	644	734	796	875	941	1134
	100	9	79	117	182	210	263	293	331	365	433	485	553	590	675	769	861	947	1019	1095
	112	8	81	116	186	216	270	305	344	380	409	457	521	591	676	770	847	932	1002	1166
	125	7	73	118	173	208	260	264	298	329	403	451	514	563	644	734	797	876	943	1136
	140	6	80	117	181	210	264	293	331	365	434	485	553	591	676	770	862	948	1020	1097
	160	5	81	116	186	216	271	305	344	380	409	457	522	592	677	771				1166

Type VP3 Parallel Shaft

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
970	28.0	35	648	716	784			1039	1157	1288				
	31.5	31	557	615	673	717	784	950	1058	1178	1147	1207	1288	
	35.5	27	554	611	670	695	760	925	1031	1147	1147	1207	1288	
	40.0	24	477	527	577	679	742	705	786	874	1074	1131	1206	
	45.0	22	392	433	474	577	631	647	721	802	779	820	874	
	50.0	19	390	430	471	489	535	630	702	781	779	820	874	
	56.0	17	333	368	403	478	522	513	572	637	751	791	843	
	63.0	15	274	302	331	403	440	453	504	561	567	597	637	
	71.0	14	272	300	329	342	373	441	491	546	549	578	616	
	80.0	12	237	261	286	333	364	364	406	451	524	551	588	
	90.0	11	194	215	235	265	289	335	373	416	434	457	487	
	100	10	193	213	233	243	265	326	363	404	406	428	456	
	112	9	173	191	209	237	259	261	291	324	393	414	441	
	125	8	142	157	172	194	212	241	268	299	313	329	351	
	140	7	141	156	171	177	194	234	261	290	292	307	328	
160	6				173	189				282	296	316		
870	28.0	31	582	642	703			941	1048	1167				
	31.5	28	500	552	605	643	703	854	951	1058	1039	1094	1167	
	35.5	25	498	549	601	624	683	831	926	1031	1034	1089	1161	
	40.0	22	429	473	518	610	666	632	705	784	963	1014	1082	
	45.0	19	352	389	426	518	566	581	647	720	698	735	784	
	50.0	17	350	386	423	439	480	566	630	701	698	735	784	
	56.0	16	299	330	362	429	469	461	513	571	674	709	756	
	63.0	14	246	271	297	361	395	407	453	504	508	535	571	
	71.0	12	244	269	295	307	335	396	441	491	493	519	553	
	80.0	11	212	234	257	299	327	327	364	405	470	495	527	
	90.0	10	174	192	211	238	260	301	335	373	390	410	438	
	100	9	173	191	209	218	238	293	326	363	365	384	409	
	112	8	155	171	188	212	232	235	261	291	352	371	396	
	125	7	127	141	154	174	190	216	241	268	281	296	316	
	140	6	127	140	153	159	174	210	234	261	262	276	294	
160	5				155	170				253	266	284		

Type VP3 Parallel Shaft

Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	28.0	35	1198	1322	1448			1854	2066	2299			
	31.5	31	1162	1283	1405	1475	1612	1952	2174	2420	2292	2413	2574
	35.5	27	1263	1394	1527	1595	1744	2078	2315	2577	2630	2769	2953
	40.0	24	1258	1389	1521	1698	1856	1860	2072	2306	2685	2826	3014
	45.0	22	1168	1289	1411	1693	1851	1964	2187	2434	2299	2420	2581
	50.0	19	1268	1400	1533	1603	1752	2090	2328	2591	2637	2777	2961
	56.0	17	1263	1394	1527	1705	1864	1941	2163	2407	2773	2919	3114
	63.0	15	1171	1293	1416	1699	1857	1971	2196	2444	2400	2526	2694
	71.0	14	1272	1404	1538	1608	1758	2097	2336	2600	2665	2806	2992
	80.0	12	1266	1397	1530	1710	1869	1974	2199	2448	2773	2919	3114
	90.0	11	1174	1296	1419	1576	1722	1975	2201	2449	2625	2764	2948
	100	10	1275	1407	1541	1612	1762	2102	2341	2606	2671	2812	2999
	112	9	1268	1399	1533	1714	1873	1978	2204	2453	2816	2964	3161
	125	8	1176	1297	1421	1583	1730	1979	2205	2454	2641	2781	2966
	140	7	1277	1409	1543	1614	1764	2105	2345	2610	2676	2817	3005
	160	6				1716	1876				2816	2964	3161
870	28.0	31	1198	1322	1448			1873	2087	2323			
	31.5	28	1164	1285	1407	1475	1612	1956	2178	2424	2316	2438	2600
	35.5	25	1265	1396	1529	1598	1747	2082	2319	2581	2644	2784	2969
	40.0	22	1260	1390	1523	1700	1858	1860	2072	2306	2685	2826	3014
	45.0	19	1169	1290	1413	1695	1853	1966	2190	2438	2299	2420	2581
	50.0	17	1270	1401	1535	1605	1754	2092	2331	2594	2637	2777	2961
	56.0	16	1264	1395	1528	1707	1866	1941	2163	2407	2773	2919	3114
	63.0	14	1172	1294	1417	1700	1858	1973	2198	2446	2400	2526	2694
	71.0	12	1273	1405	1539	1609	1759	2099	2338	2602	2667	2808	2995
	80.0	11	1267	1398	1531	1712	1871	1976	2201	2450	2773	2919	3114
	90.0	10	1175	1296	1420	1578	1725	1977	2202	2451	2631	2770	2954
	100	9	1276	1408	1542	1613	1763	2103	2343	2607	2673	2814	3001
	112	8	1269	1400	1533	1715	1874	1979	2205	2454	2816	2964	3161
	125	7	1176	1298	1422	1585	1732	1980	2206	2455	2645	2785	2970
	140	6	1277	1409	1544	1615	1765	2106	2346	2611	2677	2818	3006
	160	5				1717	1876				2816	2964	3161

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	1.25	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.40	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.60	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.80	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.00	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.24	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.50	None Shaft Fan Electric Fan	* N/A 2084	* N/A 2104	* N/A 2125	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.80	None Shaft Fan Electric Fan	* N/A 2161	* N/A 2182	* N/A 2204	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	3.15	None Shaft Fan Electric Fan	* N/A 2186	* N/A 2208	* N/A 2230	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	3.55	None Shaft Fan Electric Fan	* N/A 1915	* N/A 1934	* N/A 1953	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	4.00	None Shaft Fan Electric Fan	* N/A 2129	* N/A 2150	* N/A 2171	* N/A 1697	* N/A 1731	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	4.50	None Shaft Fan Electric Fan	* N/A 2007	* N/A 2027	* N/A 2047	* N/A 1938	* N/A 1977	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
5.00	None Shaft Fan Electric Fan	* N/A 2160	* N/A 2182	* N/A 2203	* N/A 1853	* N/A 1890	* N/A 2599	* N/A 2625	* N/A 2651	* N/A *	* N/A *	* N/A *	
1430	1.25	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.40	None Shaft Fan Electric Fan	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.60	None Shaft Fan Electric Fan	* N/A 2750	* N/A 2778	* N/A 2805	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.80	None Shaft Fan Electric Fan	* N/A 2734	* N/A 2762	* N/A 2789	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.00	None Shaft Fan Electric Fan	* N/A 2809	* N/A 2837	* N/A 2865	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.24	None Shaft Fan Electric Fan	* N/A 2799	* N/A 2827	* N/A 2855	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.50	None Shaft Fan Electric Fan	* N/A 2759	* N/A 2787	* N/A 2815	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	2.80	None Shaft Fan Electric Fan	* N/A 2686	* N/A 2713	* N/A 2740	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	3.15	None Shaft Fan Electric Fan	* N/A 2576	* N/A 2602	* N/A 2627	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	3.55	None Shaft Fan Electric Fan	* N/A 2150	* N/A 2172	* N/A 2193	* N/A 1998	* N/A 2038	* N/A 2693	* N/A 2719	* N/A 2746	* N/A *	* N/A *	* N/A *
	4.00	None Shaft Fan Electric Fan	* N/A 2275	* 0 2298	* N/A 2321	* N/A 1987	* N/A 2027	* N/A 2630	* N/A 2656	* N/A 2682	* N/A *	* N/A *	* N/A *
	4.50	None Shaft Fan Electric Fan	* N/A 2118	* N/A 2139	* N/A 2161	* N/A 2160	* N/A 2203	* N/A 2504	* N/A 2530	* N/A 2555	* N/A 2255	* N/A 2277	* N/A 2300
5.00	None Shaft Fan Electric Fan	* N/A 2239	* N/A 2261	* N/A 2284	* N/A 2026	* N/A 2066	* N/A 2911	* N/A 2940	* N/A 2970	* N/A 2195	* N/A 2217	* N/A 2238	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings [★] – Hp/Single Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1170	1.25	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3490	N/A 3524	N/A 3559	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3581	N/A 3617	N/A 3652	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3580	N/A 3616	N/A 3652	N/A 2758	N/A 2813	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3431	N/A 3466	N/A 3500	N/A 2744	N/A 2799	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3361	N/A 3395	N/A 3428	N/A 2719	N/A 2774	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
	2.24	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3239	N/A 3271	N/A 3304	N/A 2624	N/A 2677	N/A 3380	N/A 3414	N/A 3447	N/A *	N/A *	N/A *	N/A *
	2.50	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 3094	N/A 3125	N/A 3156	N/A 2561	N/A 2612	N/A 3325	N/A 3358	N/A 3391	N/A *	N/A *	N/A *	N/A *
	2.80	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan Electric Fan	N/A 2925	N/A 2954	N/A 2983	N/A 2471	N/A 2520	N/A 3232	N/A 3264	N/A 3296	N/A *	N/A *	N/A *	N/A *
3.15	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan Electric Fan	N/A 2731	N/A 2758	N/A 2785	N/A 2394	N/A 2442	N/A 3096	N/A 3127	N/A 3158	N/A 2726	N/A 2754	N/A 2781	N/A *	
3.55	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan Electric Fan	N/A 2222	N/A 2244	N/A 2266	N/A 2239	N/A 2284	N/A 3084	N/A 3114	N/A 3145	N/A 2789	N/A 2817	N/A 2845	N/A *	
4.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan Electric Fan	N/A 2284	N/A 2307	N/A 2330	N/A 2094	N/A 2136	N/A 2847	N/A 2876	N/A 2904	N/A 2767	N/A 2794	N/A 2822	N/A *	
4.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan Electric Fan	N/A 2110	N/A 2131	N/A 2152	N/A 2218	N/A 2262	N/A 2653	N/A 2680	N/A 2706	N/A 2601	N/A 2627	N/A 2653	N/A *	
5.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan Electric Fan	N/A 2207	N/A 2229	N/A 2251	N/A 2057	N/A 2099	N/A 2994	N/A 3024	N/A 3054	N/A 2448	N/A 2472	N/A 2497	N/A *	
970	1.25	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3926	N/A 3965	N/A 4005	N/A 3092	N/A 3154	N/A 3979	N/A 4018	N/A 4058	N/A *	N/A *	N/A *	N/A *
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3922	N/A 3961	N/A 4000	N/A 3264	N/A 3330	N/A 4161	N/A 4203	N/A 4245	N/A *	N/A *	N/A *	N/A *
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3821	N/A 3859	N/A 3897	N/A 3244	N/A 3309	N/A 4223	N/A 4265	N/A 4307	N/A *	N/A *	N/A *	N/A *
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3618	N/A 3654	N/A 3690	N/A 3158	N/A 3221	N/A 4042	N/A 4082	N/A 4123	N/A 3448	N/A 3483	N/A 3517	N/A *
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3487	N/A 3522	N/A 3557	N/A 3058	N/A 3119	N/A 4001	N/A 4041	N/A 4081	N/A 3441	N/A 3476	N/A 3510	N/A *
	2.24	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3321	N/A 3354	N/A 3387	N/A 2875	N/A 2933	N/A 3787	N/A 3825	N/A 3863	N/A 3398	N/A 3432	N/A 3466	N/A *
	2.50	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 3136	N/A 3167	N/A 3199	N/A 2743	N/A 2798	N/A 3624	N/A 3660	N/A 3696	N/A 3336	N/A 3369	N/A 3403	N/A *
	2.80	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan Electric Fan	N/A 2932	N/A 2961	N/A 2991	N/A 2591	N/A 2643	N/A 3432	N/A 3466	N/A 3501	N/A 3242	N/A 3274	N/A 3306	N/A *
3.15	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan Electric Fan	N/A 2710	N/A 2737	N/A 2764	N/A 2467	N/A 2516	N/A 3211	N/A 3243	N/A 3275	N/A 3111	N/A 3142	N/A 3173	N/A *	
3.55	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan Electric Fan	N/A 2182	N/A 2204	N/A 2226	N/A 2266	N/A 2311	N/A 3139	N/A 3170	N/A 3202	N/A 3052	N/A 3083	N/A 3113	N/A *	
4.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan Electric Fan	N/A 2216	N/A 2238	N/A 2260	N/A 2069	N/A 2111	N/A 2840	N/A 2868	N/A 2897	N/A 2910	N/A 2939	N/A 2968	N/A *	
4.50	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan Electric Fan	N/A 2039	N/A 2060	N/A 2080	N/A 2170	N/A 2214	N/A 2624	N/A 2650	N/A 2676	N/A 2653	N/A 2680	N/A 2706	N/A *	
5.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan Electric Fan	N/A 2125	N/A 2146	N/A 2167	N/A 2004	N/A 2044	N/A 2929	N/A 2958	N/A 2988	N/A 2466	N/A 2491	N/A 2516	N/A *	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F (20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
870	1.25	None	256	284	348	*	*	*	*	*	806	814	822	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1.40	Electric Fan	406	514	618	557	568	741	748	755	1775	1793	1810	1608	1624	1640	2916	2945	2974	2657
		None	251	280	345	*	*	*	*	*	790	798	806	*	*	*	*	*	*	*
	1.60	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	397	503	610	542	553	728	735	742	1723	1740	1757	1577	1593	1608	2837	2865	2894	2568
	1.80	None	241	247	329	*	*	*	*	*	762	770	777	*	*	*	1080	1091	1101	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2.00	Electric Fan	381	458	580	523	533	700	704	711	1652	1668	1685	1502	1517	1532	2710	2737	2764	2508
		None	232	238	316	*	*	*	*	*	716	723	730	*	*	*	1046	1057	1067	*
	2.24	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	366	438	556	500	509	670	677	683	1542	1557	1573	1404	1418	1432	2609	2636	2662	2363
	2.50	None	221	230	261	*	*	*	*	*	597	603	608	*	*	*	988	998	1008	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2.80	Electric Fan	349	423	483	459	468	585	590	596	1299	1312	1325	1336	1350	1363	2442	2466	2491	2253
		None	209	217	244	*	*	*	*	*	569	575	580	*	*	*	943	952	962	*
	3.15	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	330	398	450	418	426	549	555	560	1236	1248	1261	1259	1272	1284	2319	2342	2365	2135
	3.55	None	196	206	232	*	*	*	*	*	524	529	535	*	*	*	894	903	912	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.00	Electric Fan	308	377	425	396	404	449	453	458	1134	1145	1156	1176	1188	1200	2187	2209	2231	1966	
	None	184	195	219	*	*	*	*	*	492	497	502	*	*	*	821	829	838	*	
4.50	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	289	355	399	350	356	395	399	403	1062	1072	1083	1088	1099	1110	2010	2030	2050	1869	
5.00	None	173	182	204	*	*	*	*	*	*	*	*	*	*	*	749	757	764	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5.50	Electric Fan	271	331	370	322	328	375	379	382	766	773	781	995	1005	1015	1834	1852	1871	1689	
	None	155	169	188	*	*	*	*	*	298	301	304	*	*	*	622	629	635	*	
6.00	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	244	306	339	327	334	354	358	361	746	754	761	685	692	699	1546	1561	1577	1611	
6.50	None	111	147	154	151	154	180	181	183	229	232	234	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.00	Electric Fan	174	261	277	313	319	375	378	382	559	565	571	674	680	687	1053	1063	1074	1466	
	None	103	133	158	155	158	179	181	183	232	234	237	*	*	*	393	397	401	*	
7.50	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	161	235	281	318	324	371	375	379	546	551	557	640	647	653	1182	1194	1206	1018	
8.00	None	108	138	149	148	151	166	168	170	226	228	231	300	303	306	431	435	439	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
8.50	Electric Fan	169	241	263	300	305	339	342	345	518	524	529	796	804	812	1233	1245	1258	1118	

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† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
870	1.25	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	4027	4068	4108	3344	3411	4385	4429	4473	3631	3667	3703		
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	3989	4029	4068	3448	3517	4443	4487	4532	3817	3855	3893		
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	3852	3890	3929	3368	3436	4428	4473	4517	3897	3936	3975		
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	3632	3668	3704	3258	3323	4201	4243	4285	3882	3921	3960		
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	3481	3516	3551	3132	3195	4128	4169	4210	3806	3844	3882		
	2.24	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	3302	3335	3368	2920	2979	3869	3907	3946	3658	3695	3731		
2.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	3105	3137	3168	2766	2821	3670	3707	3743	3531	3566	3602			
2.80	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2892	2921	2950	2594	2645	3447	3482	3516	3377	3411	3445			
3.15	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2663	2689	2716	2454	2503	3200	3232	3264	3194	3226	3258			
3.55	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2136	2157	2179	2240	2285	3109	3140	3171	3095	3126	3157			
4.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2159	2181	2203	2029	2069	2793	2821	2849	2914	2943	2972			
4.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1984	2004	2024	2121	2163	2573	2598	2624	2629	2655	2681			
5.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1631	1647	1663	1955	1994	2862	2890	2919	2433	2458	2482			

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings [★] – Hp/Single Reduction Maximum 180°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1750	1.25	None Shaft Fan Electric Fan	N/A 298	N/A 323	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	1.40	None Shaft Fan Electric Fan	N/A 306	N/A 342	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	1.60	None Shaft Fan Electric Fan	N/A 309	N/A 352	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	1.80	None Shaft Fan Electric Fan	N/A 307	N/A 354	N/A 440	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	2.00	None Shaft Fan Electric Fan	167 N/A 300	N/A 351	N/A 429	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	2.24	None Shaft Fan Electric Fan	163 N/A 289	N/A 340	N/A 407	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	2.50	None Shaft Fan Electric Fan	157 N/A 276	N/A 330	N/A 391	N/A *	N/A *	N/A *	N/A *	N/A *	N/A 651	N/A 658	N/A 664	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	2.80	None Shaft Fan Electric Fan	151 N/A 263	N/A 316	N/A 371	N/A *	N/A *	N/A *	N/A *	N/A *	N/A 656	N/A 663	N/A 670	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	3.15	None Shaft Fan Electric Fan	144 N/A 250	N/A 300	N/A 348	N/A 301	N/A 307	N/A *	N/A *	N/A *	N/A 644	N/A 650	N/A 656	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	3.55	None Shaft Fan Electric Fan	N/A 176	N/A 281	N/A 322	N/A 310	N/A 316	N/A *	N/A *	N/A *	N/A 705	N/A 712	N/A 719	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	4.00	None Shaft Fan Electric Fan	N/A 149	N/A 265	N/A 277	N/A 309	N/A 315	N/A *	N/A *	N/A *	N/A 534	N/A 539	N/A 544	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	4.50	None Shaft Fan Electric Fan	N/A 143	N/A 190	N/A 283	N/A 316	N/A 323	N/A 346	N/A 350	N/A 353	N/A 527	N/A 532	N/A 537	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	5.00	None Shaft Fan Electric Fan	87 N/A 155	98 N/A 210	N/A 184	N/A 298	N/A 304	N/A 320	N/A 323	N/A 326	N/A 502	N/A 507	N/A 512	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	
	1430	1.25	None Shaft Fan Electric Fan	177 N/A 324	N/A 370	N/A 485	N/A *	N/A *	N/A *	N/A *	N/A 926	N/A 935	N/A 944	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
		1.40	None Shaft Fan Electric Fan	182 N/A 327	N/A 380	N/A 493	N/A *	N/A *	N/A *	N/A *	N/A 998	N/A 1008	N/A 1018	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
		1.60	None Shaft Fan Electric Fan	184 N/A 324	N/A 381	N/A 480	N/A *	N/A *	N/A *	N/A *	N/A 1005	N/A 1015	N/A 1025	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
		1.80	None Shaft Fan Electric Fan	182 N/A 317	N/A 376	N/A 468	N/A *	N/A *	N/A *	N/A *	N/A 1000	N/A 1010	N/A 1020	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *	N/A *
		2.00	None Shaft Fan Electric Fan	178 N/A 307	N/A 368	N/A 452	N/A 373	N/A 381	N/A *	N/A *	N/A 867	N/A 876	N/A 885	N/A *	N/A *	N/A *	N/A *	N/A 1316	N/A 1329	N/A 1342	N/A *
		2.24	None Shaft Fan Electric Fan	171 N/A 294	N/A 352	N/A 424	N/A 399	N/A 407	N/A *	N/A *	N/A 856	N/A 865	N/A 873	N/A *	N/A *	N/A *	N/A *	N/A 1345	N/A 1358	N/A 1372	N/A *
		2.50	None Shaft Fan Electric Fan	163 N/A 278	166 N/A 337	N/A 403	N/A 381	N/A 388	N/A *	N/A *	N/A 829	N/A 837	N/A 845	N/A *	N/A *	N/A *	N/A *	N/A 1360	N/A 1374	N/A 1387	N/A *
2.80		None Shaft Fan Electric Fan	113 N/A 214	159 N/A 321	N/A 379	N/A 337	N/A 344	N/A *	N/A *	N/A 802	N/A 811	N/A 819	N/A 760	N/A 768	N/A 775	N/A 1340	N/A 1354	N/A 1367	N/A *	N/A *	
3.15		None Shaft Fan Electric Fan	112 N/A 208	151 N/A 302	N/A 352	N/A 311	N/A 318	N/A *	N/A *	N/A 757	N/A 765	N/A 772	N/A 738	N/A 745	N/A 752	N/A 1302	N/A 1315	N/A 1328	N/A *	N/A *	
3.55		None Shaft Fan Electric Fan	108 N/A 196	94 N/A 222	N/A 323	N/A 317	N/A 324	N/A 336	N/A 339	N/A 343	N/A 764	N/A 771	N/A 779	N/A 718	N/A 725	N/A 733	N/A 1210	N/A 1222	N/A 1234	N/A 1128	
4.00		None Shaft Fan Electric Fan	88 N/A 155	99 N/A 216	N/A 198	N/A 308	N/A 314	N/A 360	N/A 364	N/A 367	N/A 565	N/A 571	N/A 576	N/A 690	N/A 697	N/A 703	N/A 1090	N/A 1101	N/A 1112	N/A 1109	
4.50		None Shaft Fan Electric Fan	84 N/A 146	97 N/A 204	N/A 216	N/A 197	N/A 201	N/A 358	N/A 361	N/A 365	N/A 545	N/A 551	N/A 556	N/A 687	N/A 694	N/A 701	N/A 1258	N/A 1271	N/A 1284	N/A 1141	
5.00		None Shaft Fan Electric Fan	91 N/A 157	109 N/A 218	N/A 213	N/A 208	N/A 212	N/A 166	N/A 167	N/A 169	N/A 513	N/A 518	N/A 524	N/A 837	N/A 845	N/A 853	N/A 1295	N/A 1308	N/A 1321	N/A 1216	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	1.25	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
2.24	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
2.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
2.80	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
3.15	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
3.55	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
4.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*		
4.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1263	1275	1288	*	*	*	*	*	*	*	*	*		
5.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1428	1442	1456	*	*	*	*	*	*	*	*	*		
1430	1.25	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*		
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*		
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*		
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*		
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	*	*	*	*	*	*	*	*	*	*	*			
2.24	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	*	*	*	*	*	*	*	*	*	*	*			
2.50	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	*	*	*	*	*	*	*	*	*	*	*			
2.80	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	*	*	*	*	*	*	*	*	*	*	*			
3.15	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1622	1639	1655	*	*	*	*	*	*	*	*			
3.55	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1431	1446	1460	*	*	*	*	*	*	*	*			
4.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1618	1634	1651	*	*	*	*	*	*	*	*			
4.50	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1526	1541	1556	1465	1494	1576	1591	1607	1145	1156	1168			
5.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1651	1668	1684	*	*	*	*	*	*	*	*			

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† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1170	1.25	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*	
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	2197	2219	2241	*	*	*	*	*	*	*	*	*	
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Electric Fan	2177	2199	2221	*	*	*	*	*	*	*	*	*	
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Electric Fan	2228	2251	2273	*	*	*	*	*	*	*	*	*		
2.24	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2212	2234	2257	*	*	*	*	*	*	*	*	*		
2.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2173	2195	2217	*	*	*	*	*	*	*	*	*		
2.80	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2108	2129	2150	1586	1618	2001	2021	2041	*	*	*	*		
3.15	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2014	2034	2054	1608	1640	2041	2061	2081	*	*	*	*		
3.55	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1672	1689	1705	1569	1601	2136	2157	2178	*	*	*	*		
4.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1772	1790	1808	1554	1585	2067	2088	2109	1765	1783	1801	*		
4.50	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1645	1661	1678	1688	1722	1959	1979	1998	1791	1809	1827	*		
5.00	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	1740	1757	1774	1577	1609	2275	2298	2321	1731	1748	1766	*		
970	1.25	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	2634	2660	2687	*	*	*	*	*	*	*	*		
	1.40	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	2722	2749	2776	*	*	*	*	*	*	*	*		
	1.60	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	2741	2768	2796	*	*	*	*	*	*	*	*		
	1.80	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	2634	2661	2687	*	*	*	*	*	*	*	*		
	2.00	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Electric Fan	2592	2618	2644	2064	2105	2627	2653	2679	*	*	*			
2.24	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	2504	2529	2554	2000	2040	2581	2607	2633	*	*	*			
2.50	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	2396	2420	2444	1959	1998	2551	2576	2602	*	*	*			
2.80	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	2269	2291	2314	1896	1933	2489	2514	2539	*	*	*			
3.15	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	2121	2142	2164	1842	1879	2392	2416	2440	*	*	*			
3.55	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1725	1742	1759	1727	1761	2386	2409	2433	2135	2156	2177			
4.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1784	1802	1820	1626	1658	2208	2231	2253	2131	2152	2173			
4.50	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1645	1661	1678	1730	1764	2057	2077	2098	2010	2031	2051			
5.00	None	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Electric Fan	1725	1742	1760	1602	1634	2333	2356	2379	1892	1911	1930			

★ Basic thermal ratings listed are based on an ambient temperature of 68°F (20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
870	1.25	None	182	206	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1.40	Electric Fan	315	408	499	443	452	572	578	584	1389	1403	1417	1221	1233	1245	2227	2250	2272	1954	
		None	180	206	259	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	1.60	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	309	402	495	435	444	568	574	580	1362	1375	1389	1214	1226	1238	2205	2227	2249	1927	
	1.80	None	174	167	248	*	*	*	*	*	526	531	536	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2.00	Electric Fan	299	350	472	422	431	552	557	563	1313	1326	1340	1171	1183	1195	2127	2148	2169	1910	
		None	169	164	239	*	*	*	*	*	502	507	512	*	*	*	*	*	*	*	
	2.24	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	289	338	454	405	413	533	538	544	1234	1247	1259	1102	1113	1124	2059	2080	2101	1814	
	2.50	None	163	161	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2.80	Electric Fan	276	328	364	374	382	467	472	476	1041	1052	1062	1059	1069	1080	1943	1963	1982	1752	
		None	155	154	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	3.15	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Electric Fan	263	311	343	300	306	441	446	450	994	1004	1014	1004	1014	1024	1856	1874	1893	1673	
	3.55	None	146	149	*	*	*	*	*	*	377	381	385	*	*	*	*	*	*	*	
		Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.00	Electric Fan	247	297	328	291	297	297	299	302	917	926	935	944	953	962	1760	1778	1795	1554		
	None	138	142	152	*	*	*	*	*	356	360	364	*	*	*	*	*	*	*		
4.50	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	233	282	311	262	267	273	276	278	861	870	879	878	887	896	1625	1641	1658	1489		
5.00	None	131	135	145	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5.50	Electric Fan	219	265	291	247	252	265	268	271	488	493	498	807	815	824	1490	1505	1520	1356		
	None	118	126	136	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
6.00	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	198	246	270	254	259	259	262	264	516	522	527	410	414	419	1263	1276	1288	1301		
6.50	None	87	112	114	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.00	Electric Fan	144	214	223	248	252	282	285	288	403	407	411	448	452	457	670	677	684	1193		
	None	80	102	119	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
7.50	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Electric Fan	133	195	229	255	260	283	286	289	409	413	417	440	445	449	817	825	833	608		
8.00	None	85	108	113	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
8.50	Electric Fan	140	200	215	242	247	265	267	270	398	402	406	578	584	590	884	893	902	733		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP1 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Single Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	1.25	None Shaft Fan Electric Fan	* N/A 2903	* N/A 2932	* N/A 2961	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *	* N/A *
	1.40	None Shaft Fan Electric Fan	* N/A 2939	* N/A 2969	* N/A 2998	* N/A 2312	* N/A 2358	* N/A 2912	* N/A 2941	* N/A 2970	* N/A *	* N/A *	* N/A *
	1.60	None Shaft Fan Electric Fan	* N/A 2902	* N/A 2931	* N/A 2960	* N/A 2357	* N/A 2404	* N/A 3040	* N/A 3070	* N/A 3101	* N/A *	* N/A *	* N/A *
	1.80	None Shaft Fan Electric Fan	* N/A 2764	* N/A 2791	* N/A 2819	* N/A 2318	* N/A 2364	* N/A 2947	* N/A 2977	* N/A 3006	* N/A *	* N/A *	* N/A *
	2.00	None Shaft Fan Electric Fan	* N/A 2687	* N/A 2714	* N/A 2741	* N/A 2268	* N/A 2314	* N/A 2952	* N/A 2981	* N/A 3011	* N/A *	* N/A *	* N/A *
	2.24	None Shaft Fan Electric Fan	* N/A 2574	* N/A 2599	* N/A 2625	* N/A 2156	* N/A 2199	* N/A 2831	* N/A 2859	* N/A 2887	* N/A 2357	* N/A 2381	* N/A 2404
	2.50	None Shaft Fan Electric Fan	* N/A 2443	* N/A 2467	* N/A 2492	* N/A 2077	* N/A 2118	* N/A 2740	* N/A 2768	* N/A 2795	* N/A 2372	* N/A 2395	* N/A 2419
	2.80	None Shaft Fan Electric Fan	* N/A 2295	* N/A 2318	* N/A 2341	* N/A 1980	* N/A 2019	* N/A 2624	* N/A 2650	* N/A 2676	* N/A 2356	* N/A 2379	* N/A 2403
	3.15	None Shaft Fan Electric Fan	* N/A 2130	* N/A 2151	* N/A 2173	* N/A 1900	* N/A 1938	* N/A 2479	* N/A 2504	* N/A 2529	* N/A 2305	* N/A 2328	* N/A 2351
	3.55	None Shaft Fan Electric Fan	* N/A 1720	* N/A 1737	* N/A 1754	* N/A 1758	* N/A 1793	* N/A 2438	* N/A 2462	* N/A 2487	* N/A 2296	* N/A 2319	* N/A 2342
	4.00	None Shaft Fan Electric Fan	* N/A 1763	* N/A 1781	* N/A 1799	* N/A 1627	* N/A 1660	* N/A 2225	* N/A 2247	* N/A 2270	* N/A 2228	* N/A 2250	* N/A 2272
	4.50	None Shaft Fan Electric Fan	* N/A 1622	* N/A 1638	* N/A 1654	* N/A 1720	* N/A 1754	* N/A 2060	* N/A 2081	* N/A 2101	* N/A 2057	* N/A 2078	* N/A 2098
	5.00	None Shaft Fan Electric Fan	* N/A 1056	* N/A 1066	* N/A 1077	* N/A 1588	* N/A 1619	* N/A 2319	* N/A 2342	* N/A 2365	* N/A 1920	* N/A 1939	* N/A 1958

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	5.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	*	*	*			*	*	*			
		DuraPlate	3583	3619	3655			*	*	*			
	5.60	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	3906	3945	3984	2736	2791	*	*	*	*	*	*
	6.30	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	3927	3966	4006	3285	3351	1826	1844	1862	*	*	*
	7.10	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	2188	2210	2232	*	*	*	*	*	*	*	*
		Electric Fan	2077	2098	2119	*	*	*	*	*	*	*	*
		DuraPlate	3438	3473	3507	3415	3483	3179	3211	3243	*	*	*
	8.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	2245	2268	2290	1942	1981	1335	1348	1361	*	*	*
		Electric Fan	2139	2160	2182	1831	1868	*	*	*	*	*	*
		DuraPlate	3443	3477	3512	3205	3269	3435	3469	3504	2251	2273	2296
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	2192	2214	2236	2078	2120	1447	1462	1476	*	*	*
		Electric Fan	2089	2110	2131	1970	2010	1192	1204	1216	*	*	*
		DuraPlate	3354	3388	3421	3294	3360	3479	3514	3549	2783	2810	2838
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	2390	2414	2438	2054	2095	2710	2737	2764	*	*	*
Electric Fan		2298	2321	2344	1950	1989	2471	2496	2520	*	*	*	
DuraPlate		2682	2709	2736	3231	3296	6168	6230	6291	2938	2967	2996	
11.2	None	676	682	689	*	*	*	*	*	*	*	*	
	Shaft Fan	2367	2390	2414	2291	2337	2675	2702	2729	2422	2446	2470	
	Electric Fan	2278	2300	2323	2199	2243	2447	2472	2496	2182	2204	2226	
	DuraPlate	2648	2674	2701	2584	2636	5978	6038	6098	5908	5967	6026	
12.5	None	651	658	664	617	630	*	*	*	*	*	*	
	Shaft Fan	2287	2309	2332	2316	2362	2616	2642	2668	2462	2487	2512	
	Electric Fan	2200	2222	2244	2226	2270	2395	2419	2443	2235	2257	2280	
	DuraPlate	2560	2586	2611	2599	2651	5838	5896	5954	5782	5840	5898	
14.0	None	776	784	792	604	616	939	948	957	*	*	*	
	Shaft Fan	2229	2251	2273	2245	2290	3118	3149	3181	2436	2460	2485	
	Electric Fan	2152	2173	2195	2158	2201	2917	2946	2976	2216	2238	2260	
	DuraPlate	3061	3091	3122	2521	2571	4574	4620	4666	5670	5726	5783	
16.0	None	777	785	792	738	753	903	912	921	*	*	*	
	Shaft Fan	2185	2207	2229	2182	2226	2977	3007	3037	3033	3063	3093	
	Electric Fan	2111	2133	2154	2106	2148	2785	2813	2841	2831	2860	2888	
	DuraPlate	2987	3017	3047	3015	3076	4372	4416	4460	4493	4538	4583	
18.0	None	741	748	755	759	775	866	875	884	847	855	864	
	Shaft Fan	2108	2129	2150	2173	2217	2876	2905	2933	2906	2935	2964	
	Electric Fan	2036	2056	2077	2099	2141	2689	2716	2742	2714	2741	2768	
	DuraPlate	2892	2921	2949	2980	3039	4239	4281	4324	4303	4346	4389	
20.0	None	838	846	855	727	741	1027	1037	1048	819	828	836	
	Shaft Fan	2181	2203	2225	2099	2141	3044	3074	3104	2814	2842	2870	
	Electric Fan	2109	2130	2151	2026	2067	2854	2883	2911	2627	2653	2679	
	DuraPlate	2383	2407	2431	2887	2944	3765	3803	3840	4177	4219	4261	
22.4	None	842	851	859	812	828	1025	1035	1045	1049	1060	1070	
	Shaft Fan	2454	2479	2504	2147	2190	3002	3032	3062	3055	3085	3116	
	Electric Fan	2121	2142	2164	2075	2117	2816	2844	2872	2866	2894	2923	
	DuraPlate	2400	2424	2448	2349	2396	3423	3457	3491	3775	3813	3851	
25.0	None	798	806	814	839	856	1045	1055	1066	1058	1069	1080	
	Shaft Fan	2365	2388	2412	2464	2513	2959	2989	3018	3025	3056	3086	
	Electric Fan	2038	2059	2079	2131	2173	2779	2807	2834	2840	2868	2897	
	DuraPlate	2311	2334	2357	2413	2461	3368	3402	3435	3446	3480	3514	
28.0	None				796	812				1011	1021	1031	
	Shaft Fan				2375	2423				2912	2941	2970	
	Electric Fan				2049	2090				2732	2759	2787	
	DuraPlate				2326	2372				3320	3353	3387	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1430	5.00	None	*	*	*			*	*	*			
		Shaft Fan	1376	1390	1404			*	*	*			
		Electric Fan	1649	1666	1682			*	*	*			
		DuraPlate	3839	3877	3916			2713	2740	2767			
	5.60	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1608	1624	1640	*	*	*	*	*	*	*	*
		Electric Fan	1870	1889	1908	1157	1180	*	*	*	*	*	*
		DuraPlate	3957	3997	4036	3379	3447	3465	3500	3535	*	*	*
	6.30	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1633	1649	1665	1231	1256	*	*	*	*	*	*
		Electric Fan	1885	1904	1923	1498	1528	*	*	*	*	*	*
		DuraPlate	3899	3938	3977	3635	3708	3699	3736	3773	2263	2286	2309
	7.10	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	2181	2203	2225	1322	1348	2005	2025	2045	*	*	*
		Electric Fan	2403	2427	2451	1577	1609	2236	2258	2280	*	*	*
		DuraPlate	3169	3200	3232	3632	3705	3747	3785	3822	2707	2734	2761
	8.00	None	666	673	680	*	*	*	*	*	*	*	*
		Shaft Fan	2190	2212	2234	2035	2076	2122	2144	2165	1494	1509	1524
		Electric Fan	2403	2427	2451	2257	2302	2341	2365	2388	1721	1739	1756
		DuraPlate	3139	3170	3202	3027	3088	3775	3813	3851	3235	3268	3300
	9.00	None	652	658	665	*	*	*	*	*	*	*	*
		Shaft Fan	2120	2141	2163	2102	2144	2126	2147	2169	1756	1774	1791
		Electric Fan	2327	2350	2373	2317	2363	2338	2361	2385	1973	1993	2012
		DuraPlate	3041	3071	3102	3060	3122	3727	3764	3802	3407	3441	3475
	10.0	None	809	817	825	*	*	*	*	*	*	*	*
		Shaft Fan	2153	2174	2196	2047	2088	2719	2746	2773	1820	1839	1857
		Electric Fan	2341	2364	2387	2256	2301	2911	2940	2969	2030	2051	2071
		DuraPlate	2394	2418	2442	2977	3036	5449	5504	5558	3418	3453	3487
	11.2	None	819	827	836	751	766	767	775	782	*	*	*
		Shaft Fan	2123	2144	2165	2086	2128	2632	2658	2684	2550	2575	2601
		Electric Fan	2304	2327	2350	2274	2319	2814	2842	2871	2741	2769	2796
		DuraPlate	2355	2379	2403	2328	2374	5244	5296	5349	5293	5346	5399
12.5	None	783	791	799	786	802	751	758	766	*	*	*	
	Shaft Fan	2044	2065	2085	2095	2137	2552	2578	2603	2501	2526	2551	
	Electric Fan	2220	2243	2265	2278	2323	2730	2757	2784	2684	2710	2737	
	DuraPlate	2271	2294	2316	2330	2376	5101	5152	5203	5120	5171	5223	
14.0	None	806	814	822	757	772	1072	1083	1093	*	*	*	
	Shaft Fan	1929	1948	1967	2022	2063	2760	2788	2815	2440	2465	2489	
	Electric Fan	2086	2106	2127	2200	2244	2922	2952	2981	2618	2644	2670	
	DuraPlate	2599	2625	2651	2250	2295	3925	3964	4003	4993	5043	5093	
16.0	None	802	810	818	776	792	1018	1028	1038	1022	1032	1042	
	Shaft Fan	1891	1910	1929	1892	1930	2625	2651	2677	2701	2728	2755	
	Electric Fan	2043	2063	2084	2049	2090	2780	2808	2835	2863	2892	2920	
	DuraPlate	2538	2564	2589	2562	2614	3741	3778	3815	3867	3906	3945	
18.0	None	764	771	779	792	807	973	982	992	976	986	996	
	Shaft Fan	1821	1839	1857	1885	1922	2529	2554	2580	2572	2598	2624	
	Electric Fan	1968	1988	2008	2037	2078	2680	2707	2734	2727	2754	2782	
	DuraPlate	2452	2477	2501	2535	2586	3618	3654	3690	3688	3725	3761	
20.0	None	808	816	824	755	771	1067	1078	1089	937	946	956	
	Shaft Fan	1851	1869	1888	1816	1852	2634	2660	2686	2482	2507	2532	
	Electric Fan	1999	2019	2039	1964	2004	2788	2815	2843	2633	2659	2686	
	DuraPlate	2022	2042	2062	2451	2500	3217	3249	3281	3570	3606	3642	
22.4	None	816	824	832	786	801	1053	1063	1074	1069	1079	1090	
	Shaft Fan	2017	2037	2058	1820	1857	2588	2614	2640	2625	2651	2678	
	Electric Fan	2014	2034	2054	1968	2007	2739	2766	2794	2779	2806	2834	
	DuraPlate	2035	2056	2076	1991	2031	2935	2964	2993	3207	3239	3271	
25.0	None	772	780	787	815	831	1039	1049	1059	1060	1071	1082	
	Shaft Fan	1937	1956	1975	2026	2066	2523	2548	2573	2586	2612	2638	
	Electric Fan	1934	1953	1972	2025	2066	2669	2696	2723	2737	2764	2791	
	DuraPlate	1954	1974	1993	2047	2088	2859	2888	2917	2932	2961	2991	
28.0	None				773	788				1010	1020	1030	
	Shaft Fan				1947	1985				2483	2508	2533	
	Electric Fan				1946	1985				2629	2656	2682	
	DuraPlate				1967	2007				2819	2847	2875	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	5.00	None	892	901	909			*	*	*			
		Shaft Fan	1725	1742	1760			1927	1946	1965			
		Electric Fan	2618	2644	2671			3185	3217	3249			
		DuraPlate	3019	3049	3079			4075	4116	4157			
	5.60	None	929	938	947	789	805	*	*	*	*	*	*
		Shaft Fan	1738	1756	1773	1614	1646	1972	1992	2012	1597	1613	1628
		Electric Fan	2599	2625	2651	2507	2557	3166	3198	3230	2848	2877	2905
		DuraPlate	2984	3014	3043	2909	2967	4012	4052	4092	3743	3780	3818
	6.30	None	896	905	914	861	878	*	*	*	*	*	*
		Shaft Fan	1675	1692	1709	1674	1707	1948	1967	1987	1732	1749	1766
		Electric Fan	2508	2533	2558	2542	2593	3102	3133	3164	2919	2949	2978
		DuraPlate	2881	2910	2939	2930	2989	3922	3961	4001	3767	3804	3842
	7.10	None	940	949	959	841	858	1170	1182	1193	*	*	*
		Shaft Fan	1644	1661	1677	1622	1655	2233	2255	2278	1746	1764	1781
		Electric Fan	2397	2421	2445	2462	2511	3303	3336	3369	2894	2923	2952
		DuraPlate	2216	2238	2260	2838	2895	3204	3236	3268	3715	3752	3789
	8.00	None	940	949	958	897	915	1136	1148	1159	1064	1075	1085
		Shaft Fan	1623	1640	1656	1596	1628	2144	2166	2187	2116	2137	2158
		Electric Fan	2349	2373	2396	2346	2393	3163	3194	3226	3185	3217	3248
		DuraPlate	2175	2197	2218	2165	2209	3069	3100	3130	3086	3117	3148
	9.00	None	895	904	913	921	940	1095	1106	1117	1054	1065	1076
		Shaft Fan	1554	1570	1585	1607	1639	2067	2088	2109	2051	2072	2092
		Electric Fan	2258	2281	2303	2337	2384	3055	3086	3116	3067	3098	3128
		DuraPlate	2089	2110	2131	2162	2205	2964	2994	3023	2973	3003	3033
	10.0	None	857	866	874	880	898	1162	1174	1186	1026	1036	1046
		Shaft Fan	1462	1477	1492	1542	1573	2057	2078	2099	1987	2007	2027
		Electric Fan	2110	2131	2152	2250	2295	2953	2983	3012	2971	3001	3031
		DuraPlate	1647	1664	1680	2079	2121	3542	3577	3613	2880	2909	2938
11.2	None	850	859	867	830	847	1101	1112	1123	1116	1128	1139	
	Shaft Fan	1439	1453	1467	1430	1459	1952	1971	1991	2005	2025	2045	
	Electric Fan	2064	2085	2105	2076	2117	2807	2835	2864	2899	2928	2957	
	DuraPlate	1617	1634	1650	1614	1646	3372	3405	3439	3489	3524	3559	
12.5	None	808	816	824	843	860	1052	1062	1073	1062	1072	1083	
	Shaft Fan	1377	1390	1404	1433	1462	1874	1892	1911	1905	1924	1943	
	Electric Fan	1985	2004	2024	2061	2103	2705	2732	2759	2758	2785	2813	
	DuraPlate	1550	1566	1581	1612	1645	3255	3288	3321	3322	3355	3388	
14.0	None	740	747	754	803	819	1066	1077	1087	1017	1027	1037	
	Shaft Fan	1247	1260	1272	1373	1400	1831	1850	1868	1831	1850	1868	
	Electric Fan	1791	1809	1827	1983	2023	2598	2624	2650	2660	2686	2713	
	DuraPlate	1644	1661	1677	1547	1578	2503	2528	2553	3210	3242	3274	
16.0	None	732	740	747	720	735	1002	1012	1022	1041	1051	1061	
	Shaft Fan	1226	1238	1251	1224	1248	1730	1747	1764	1801	1819	1837	
	Electric Fan	1752	1770	1787	1765	1801	2462	2486	2511	2565	2591	2617	
	DuraPlate	1610	1627	1643	1619	1651	2371	2395	2418	2470	2495	2520	
18.0	None	696	703	710	729	743	954	963	973	977	987	997	
	Shaft Fan	1174	1186	1198	1224	1248	1657	1674	1690	1699	1716	1733	
	Electric Fan	1686	1703	1720	1752	1787	2369	2393	2417	2428	2453	2477	
	DuraPlate	1548	1564	1579	1610	1642	2281	2303	2326	2338	2361	2384	
20.0	None	687	693	700	694	708	979	989	999	931	941	950	
	Shaft Fan	1160	1171	1183	1173	1196	1692	1709	1726	1629	1645	1661	
	Electric Fan	1677	1694	1710	1687	1721	2425	2450	2474	2338	2361	2385	
	DuraPlate	1296	1309	1321	1548	1579	2060	2081	2101	2250	2272	2295	
22.4	None	697	704	711	669	682	955	964	974	962	972	981	
	Shaft Fan	1247	1259	1271	1137	1160	1653	1669	1686	1669	1685	1702	
	Electric Fan	1698	1715	1732	1652	1685	2372	2395	2419	2398	2422	2446	
	DuraPlate	1305	1318	1331	1272	1297	1899	1918	1937	2034	2055	2075	
25.0	None	658	665	671	698	712	913	922	931	939	949	958	
	Shaft Fan	1188	1199	1211	1251	1276	1585	1601	1616	1630	1647	1663	
	Electric Fan	1627	1643	1659	1710	1744	2281	2303	2326	2346	2369	2393	
	DuraPlate	1244	1257	1269	1312	1338	1822	1841	1859	1875	1894	1912	
28.0	None				660	673				892	901	910	
	Shaft Fan				1193	1217				1557	1573	1588	
	Electric Fan				1639	1672				2249	2272	2294	
	DuraPlate				1252	1277				1793	1811	1829	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	5.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	*	*	*	*	*	*	*	*	*	*	*	*
	5.60	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	*	*	*	*	*	*	*	*	*	*	*	*
	6.30	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	*	*	*	*	*	*	*	*	*	*	*	*
	7.10	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	861	870	879	*	*	*	*	*	*	*	*	*
		Electric Fan	781	789	797	*	*	*	*	*	*	*	*	*
		DuraPlate	2210	2232	2254	*	*	*	*	*	*	*	*	*
	8.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	986	995	1005	*	*	*	*	*	*	*	*	*
		Electric Fan	907	916	925	*	*	*	*	*	*	*	*	*
		DuraPlate	2319	2342	2366	1851	1888	*	*	*	*	*	*	*
	9.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	993	1003	1013	942	961	*	*	*	*	*	*	*
		Electric Fan	918	927	936	*	*	*	*	*	*	*	*	*
		DuraPlate	2289	2312	2335	2062	2103	*	*	*	*	*	*	*
	10.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1402	1416	1430	998	1018	1288	1301	1314	*	*	*	*
		Electric Fan	1335	1348	1361	905	923	1078	1089	1100	*	*	*	*
		DuraPlate	1976	1996	2015	2076	2117	4445	4489	4534	*	*	*	*
11.2	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1415	1429	1443	1595	1627	1388	1402	1416	*	*	*	*	
	Electric Fan	1349	1363	1376	1512	1542	1187	1199	1211	*	*	*	*	
	DuraPlate	1982	2002	2022	1841	1878	4391	4435	4479	4038	4078	4119	*	
12.5	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1371	1385	1399	1661	1694	1398	1412	1426	1091	1102	1113	*	
	Electric Fan	1308	1321	1334	1579	1611	1204	1216	1228	897	906	915	*	
	DuraPlate	1922	1941	1961	1899	1937	4316	4359	4402	4096	4137	4178	*	
14.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1463	1478	1493	1622	1655	2360	2384	2408	1151	1162	1174	*	
	Electric Fan	1408	1422	1436	1544	1574	2179	2201	2223	*	*	*	*	
	DuraPlate	2546	2572	2597	1853	1890	3655	3692	3728	4066	4107	4148	*	
16.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1442	1456	1471	1753	1788	2269	2292	2314	2246	2269	2291	*	
	Electric Fan	1389	1403	1416	1685	1718	2096	2117	2138	2065	2086	2106	*	
	DuraPlate	2494	2519	2543	2493	2543	3507	3542	3577	3544	3580	3615	*	
18.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1391	1404	1418	1759	1794	2195	2217	2239	2181	2203	2225	*	
	Electric Fan	1338	1352	1365	1692	1726	2027	2048	2068	2009	2029	2049	*	
	DuraPlate	2413	2437	2461	2476	2526	3401	3435	3469	3419	3453	3487	*	
20.0	None	513	518	523	*	*	639	645	652	*	*	*	*	
	Shaft Fan	1502	1517	1532	1699	1733	2438	2463	2487	2120	2141	2163	*	
	Electric Fan	1451	1466	1480	1635	1667	2271	2293	2316	1953	1973	1992	*	
	DuraPlate	2018	2038	2058	2400	2448	3052	3083	3113	3326	3359	3392	*	
22.4	None	511	516	521	608	620	658	664	671	689	695	702	*	
	Shaft Fan	1682	1698	1715	1820	1856	2423	2448	2472	2479	2504	2529	*	
	Electric Fan	1449	1464	1478	1757	1792	2259	2281	2304	2312	2335	2358	*	
	DuraPlate	2036	2056	2076	1983	2023	2770	2798	2825	3092	3123	3153	*	
25.0	None	483	488	493	624	636	730	737	744	725	732	739	*	
	Shaft Fan	1618	1635	1651	2078	2120	2443	2467	2491	2484	2508	2533	*	
	Electric Fan	1391	1405	1419	1792	1828	2283	2306	2329	2319	2343	2366	*	
	DuraPlate	1958	1978	1998	2043	2084	2779	2806	2834	2829	2857	2885	*	
28.0	None				592	604				695	702	709	*	
	Shaft Fan				2003	2043				2392	2416	2440	*	
	Electric Fan				1723	1757				2233	2255	2277	*	
	DuraPlate				1968	2008				2727	2754	2781	*	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1430	5.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	*	*	*			*	*	*			
		DuraPlate	2073	2093	2114			*	*	*			
	5.60	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	2403	2427	2451	1328	1354	*	*	*	*	*	*
	6.30	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	2455	2479	2504	1841	1878	*	*	*	*	*	*
	7.10	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1160	1172	1184	*	*	*	*	*	*	*	*
		Electric Fan	1328	1341	1354	*	*	*	*	*	*	*	*
		DuraPlate	2320	2343	2367	1991	2031	1709	1726	1743	*	*	*
	8.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1213	1226	1238	1225	1249	*	*	*	*	*	*
		Electric Fan	1375	1389	1402	1431	1460	*	*	*	*	*	*
		DuraPlate	2351	2375	2398	2115	2158	1975	1995	2014	948	958	967
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1187	1199	1211	1352	1379	*	*	*	*	*	*
		Electric Fan	1343	1356	1370	1553	1584	*	*	*	*	*	*
		DuraPlate	2291	2314	2337	2217	2261	2041	2062	2082	1430	1444	1458
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1355	1369	1382	1345	1372	1764	1782	1799	*	*	*
		Electric Fan	1496	1511	1526	1539	1570	1938	1958	1977	*	*	*
		DuraPlate	1870	1889	1907	2179	2223	4226	4268	4311	1588	1604	1619
11.2	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1350	1364	1377	1589	1620	1759	1777	1794	1522	1538	1553	
	Electric Fan	1486	1501	1516	1762	1797	1925	1944	1963	1696	1712	1729	
	DuraPlate	1857	1876	1894	1785	1821	4106	4147	4188	3993	4033	4073	
12.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1302	1315	1328	1621	1654	1723	1740	1757	1581	1597	1613	
	Electric Fan	1434	1448	1463	1790	1826	1883	1902	1921	1746	1763	1781	
	DuraPlate	1792	1810	1828	1813	1849	4006	4046	4086	3931	3971	4010	
14.0	None	459	463	468	*	*	666	672	679	*	*	*	
	Shaft Fan	1294	1307	1320	1570	1602	2194	2216	2237	1574	1589	1605	
	Electric Fan	1411	1425	1439	1734	1769	2341	2364	2388	1733	1750	1767	
	DuraPlate	2188	2209	2231	1756	1791	3218	3250	3282	3857	3895	3934	
16.0	None	461	466	470	536	547	642	648	655	*	*	*	
	Shaft Fan	1274	1286	1299	1558	1590	2093	2114	2135	2120	2142	2163	
	Electric Fan	1386	1400	1414	1702	1736	2234	2256	2278	2268	2290	2313	
	DuraPlate	2142	2163	2184	2147	2190	3072	3103	3134	3145	3177	3208	
18.0	None	439	443	448	555	566	616	622	628	*	*	*	
	Shaft Fan	1225	1237	1250	1560	1591	2017	2038	2058	2033	2053	2073	
	Electric Fan	1335	1348	1362	1700	1734	2154	2176	2197	2173	2195	2216	
	DuraPlate	2068	2089	2109	2133	2175	2972	3001	3031	3011	3041	3071	
20.0	None	512	517	522	530	541	756	763	771	*	*	*	
	Shaft Fan	1281	1294	1307	1503	1533	2162	2184	2206	1965	1985	2004	
	Electric Fan	1390	1404	1418	1639	1672	2300	2323	2346	2101	2122	2143	
	DuraPlate	1716	1733	1751	2061	2103	2654	2680	2707	2917	2947	2976	
22.4	None	515	520	525	611	623	756	763	771	775	782	790	
	Shaft Fan	1392	1406	1420	1552	1583	2134	2156	2177	2172	2194	2215	
	Electric Fan	1396	1410	1424	1686	1720	2270	2292	2315	2309	2332	2355	
	DuraPlate	1730	1747	1765	1687	1720	2416	2440	2464	2662	2688	2715	
25.0	None	486	491	496	632	645	775	783	791	784	792	800	
	Shaft Fan	1335	1348	1362	1723	1757	2109	2130	2151	2154	2176	2197	
	Electric Fan	1339	1353	1366	1731	1765	2240	2262	2285	2289	2312	2335	
	DuraPlate	1660	1676	1693	1738	1773	2382	2405	2429	2435	2459	2483	
28.0	None				599	611				748	755	763	
	Shaft Fan				1654	1687				2069	2090	2110	
	Electric Fan				1662	1695				2200	2222	2244	
	DuraPlate				1669	1702				2341	2364	2388	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	5.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	1163	1175	1186			*	*	*			
		DuraPlate	2533	2558	2584			1466	1481	1496			
	5.60	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	847	855	864	*	*	*	*	*	*	*	*
		Electric Fan	1292	1305	1318	1072	1093	*	*	*	*	*	*
		DuraPlate	2645	2672	2698	2177	2221	2041	2062	2082	*	*	*
	6.30	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	864	873	882	*	*	*	*	*	*	*	*
		Electric Fan	1292	1305	1318	1323	1349	496	501	506	*	*	*
		DuraPlate	2607	2634	2660	2394	2442	2227	2249	2271	*	*	*
	7.10	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1210	1222	1234	*	*	1300	1313	1326	*	*	*
		Electric Fan	1589	1605	1621	1370	1398	1916	1935	1954	*	*	*
		DuraPlate	2166	2187	2209	2400	2447	2452	2476	2501	1502	1517	1532
	8.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1222	1234	1247	1382	1410	1391	1405	1419	934	944	953
		Electric Fan	1588	1604	1620	1851	1888	1977	1996	2016	1535	1551	1566
		DuraPlate	2157	2178	2200	2054	2096	2485	2510	2535	2068	2089	2110
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1180	1192	1204	1441	1470	1396	1410	1424	1126	1137	1149
		Electric Fan	1535	1550	1565	1897	1935	1962	1981	2001	1702	1719	1736
		DuraPlate	2084	2105	2126	2094	2136	2454	2478	2503	2208	2230	2252
	10.0	None	491	496	501	*	*	*	*	*	*	*	*
		Shaft Fan	1210	1222	1234	1401	1429	1853	1872	1890	1175	1186	1198
		Electric Fan	1533	1548	1563	1842	1879	2371	2395	2419	1732	1749	1767
		DuraPlate	1658	1675	1691	2034	2074	3701	3738	3775	2222	2244	2266
11.2	None	498	503	508	563	574	*	*	*	*	*	*	
	Shaft Fan	1197	1209	1221	1441	1470	1793	1811	1829	1726	1743	1760	
	Electric Fan	1509	1524	1539	1839	1876	2286	2309	2332	2243	2265	2287	
	DuraPlate	1637	1654	1670	1605	1637	3557	3593	3628	3576	3612	3648	
12.5	None	475	480	484	591	602	*	*	*	*	*	*	
	Shaft Fan	1150	1161	1173	1456	1485	1735	1752	1769	1694	1711	1728	
	Electric Fan	1453	1467	1482	1844	1880	2213	2235	2258	2186	2208	2229	
	DuraPlate	1574	1590	1605	1616	1649	3451	3486	3520	3457	3492	3526	
14.0	None	487	492	497	567	578	801	809	817	*	*	*	
	Shaft Fan	1090	1101	1112	1402	1430	1908	1927	1946	1650	1667	1683	
	Electric Fan	1359	1373	1387	1778	1813	2349	2372	2396	2127	2148	2169	
	DuraPlate	1803	1821	1839	1557	1588	2693	2720	2747	3364	3398	3431	
16.0	None	486	491	496	579	591	759	767	774	763	771	778	
	Shaft Fan	1072	1083	1093	1316	1342	1811	1829	1847	1861	1880	1899	
	Electric Fan	1333	1346	1360	1648	1681	2231	2254	2276	2301	2324	2347	
	DuraPlate	1766	1784	1801	1772	1808	2561	2586	2612	2645	2672	2698	
18.0	None	462	466	471	592	604	724	731	738	728	735	742	
	Shaft Fan	1029	1039	1049	1317	1344	1739	1757	1774	1769	1787	1804	
	Electric Fan	1283	1296	1308	1641	1674	2148	2170	2191	2188	2210	2232	
	DuraPlate	1701	1718	1735	1762	1797	2469	2494	2519	2517	2542	2567	
20.0	None	491	496	501	564	575	799	807	815	697	704	711	
	Shaft Fan	1048	1058	1069	1266	1291	1820	1838	1856	1702	1719	1736	
	Electric Fan	1301	1314	1327	1580	1612	2235	2257	2279	2109	2131	2152	
	DuraPlate	1408	1423	1437	1698	1732	2207	2229	2251	2430	2454	2478	
22.4	None	496	501	506	589	600	787	795	803	798	806	814	
	Shaft Fan	1094	1105	1116	1269	1294	1787	1804	1822	1810	1828	1846	
	Electric Fan	1310	1323	1336	1580	1612	2194	2216	2238	2224	2246	2268	
	DuraPlate	1420	1434	1448	1383	1411	2016	2036	2057	2196	2218	2240	
25.0	None	469	473	478	612	624	774	782	790	791	799	807	
	Shaft Fan	1045	1055	1066	1355	1382	1738	1756	1773	1782	1800	1818	
	Electric Fan	1255	1268	1281	1626	1659	2133	2154	2175	2188	2210	2231	
	DuraPlate	1357	1371	1384	1426	1455	1961	1980	2000	2011	2031	2051	
28.0	None				579	590				752	760	767	
	Shaft Fan				1296	1322				1707	1724	1741	
	Electric Fan				1560	1591				2099	2120	2141	
	DuraPlate				1365	1392				1928	1947	1967	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
970	5.00	None	*	*	*			*	*	*				
		Shaft Fan	948	958	967			*	*	*				
		Electric Fan	1549	1565	1580			1357	1370	1384				
		DuraPlate	2485	2510	2534			2500	2525	2550				
	5.60	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1016	1026	1036	965	984	*	*	*	*	*	*	
		Electric Fan	1596	1612	1628	1704	1739	1630	1646	1663	*	*	*	
		DuraPlate	2519	2545	2570	2280	2326	2717	2744	2771	1799	1817	1835	
	6.30	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	999	1009	1019	1106	1128	815	823	831	*	*	*	
		Electric Fan	1558	1573	1589	1830	1866	1702	1719	1736	1151	1163	1174	
		DuraPlate	2454	2478	2503	2386	2434	2752	2780	2807	2221	2243	2266	
	7.10	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1137	1148	1160	1111	1133	1586	1602	1618	*	*	*	
		Electric Fan	1637	1653	1670	1807	1843	2443	2467	2492	1303	1316	1329	
		DuraPlate	1952	1972	1991	2344	2391	2522	2547	2572	2340	2364	2387	
	8.00	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1136	1147	1158	1332	1359	1584	1599	1615	1371	1384	1398	
		Electric Fan	1618	1634	1651	1949	1988	2397	2421	2445	2222	2255	2267	
		DuraPlate	1931	1951	1970	1880	1917	2472	2497	2522	2301	2324	2347	
	9.00	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1091	1102	1112	1365	1392	1549	1564	1580	1425	1439	1453	
		Electric Fan	1558	1574	1589	1965	2004	2336	2359	2383	2233	2255	2278	
		DuraPlate	1859	1878	1896	1898	1936	2408	2433	2457	2308	2331	2354	
	10.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1069	1080	1091	1316	1343	1746	1763	1781	1415	1429	1443	
		Electric Fan	1497	1512	1527	1897	1935	2487	2487	2511	2196	2218	2240	
		DuraPlate	1471	1486	1500	1832	1869	3225	3257	3290	2269	2292	2314	
	11.2	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1056	1067	1077	1282	1307	1670	1687	1703	1666	1683	1699	
		Electric Fan	1470	1485	1499	1809	1845	2353	2377	2400	2381	2405	2428	
		DuraPlate	1450	1464	1479	1432	1461	3083	3113	3144	3145	3176	3207	
	12.5	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	1011	1021	1032	1291	1317	1607	1623	1639	1605	1621	1637	
		Electric Fan	1413	1427	1442	1805	1841	2270	2293	2316	2285	2308	2331	
		DuraPlate	1390	1404	1418	1438	1467	2981	3011	3041	3014	3045	3075	
	14.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	937	947	956	1239	1264	1666	1683	1699	1551	1566	1582	
		Electric Fan	1296	1309	1322	1737	1772	2277	2300	2323	2211	2233	2255	
		DuraPlate	1536	1551	1567	1381	1409	2309	2333	2356	2921	2950	2979	
	16.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	923	932	941	1133	1155	1576	1592	1608	1631	1647	1664	
		Electric Fan	1270	1283	1295	1574	1605	2160	2181	2203	2241	2263	2285	
		DuraPlate	1506	1521	1536	1510	1540	2190	2212	2234	2273	2295	2318	
	18.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	884	892	901	1135	1158	1511	1526	1541	1543	1558	1574	
		Electric Fan	1221	1234	1246	1565	1597	2078	2099	2119	2124	2145	2167	
		DuraPlate	1447	1462	1476	1503	1533	2108	2129	2150	2155	2176	2198	
	20.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	887	895	904	1088	1110	1562	1578	1593	1481	1496	1510	
		Electric Fan	1225	1237	1249	1507	1537	2140	2162	2183	2045	2066	2086	
		DuraPlate	1203	1215	1227	1446	1475	1890	1909	1928	2075	2096	2116	
	22.4	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	894	903	912	1073	1094	1529	1544	1560	1546	1561	1577	
		Electric Fan	1233	1245	1258	1488	1518	2096	2117	2138	2121	2143	2164	
		DuraPlate	1212	1224	1236	1180	1204	1734	1751	1769	1873	1891	1910	
	25.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	851	860	868	1108	1130	1476	1491	1505	1516	1531	1546	
		Electric Fan	1181	1192	1204	1531	1562	2025	2045	2065	2080	2101	2122	
		DuraPlate	1156	1167	1179	1218	1242	1674	1691	1707	1720	1737	1754	
	28.0	None	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan				551	562					729	737	744
		Electric Fan				1056	1077					1449	1463	1478
		DuraPlate				1467	1497				1994	2014	2034	
					1162	1186					1645	1662	1678	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP2 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	5.00	None	*	*	*			*	*	*			
		Shaft Fan	993	1002	1012			861	869	878			
		Electric Fan	1654	1670	1687			1963	1982	2002			
		DuraPlate	2381	2405	2429			2730	2757	2784			
	5.60	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1035	1045	1056	1073	1095	1045	1056	1066	*	*	*
		Electric Fan	1673	1690	1706	1888	1926	2100	2121	2142	1467	1482	1497
		DuraPlate	2391	2415	2439	2229	2274	2826	2855	2883	2228	2251	2273
	6.30	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1007	1017	1027	1174	1197	1092	1103	1114	724	731	738
		Electric Fan	1623	1639	1655	1969	2009	2111	2132	2153	1745	1762	1780
		DuraPlate	2319	2342	2365	2299	2345	2813	2842	2870	2468	2493	2518
	7.10	None	545	551	556	*	*	*	*	*	*	*	*
		Shaft Fan	1075	1086	1097	1158	1181	1623	1639	1655	822	831	839
		Electric Fan	1629	1645	1661	1924	1963	2584	2610	2636	1815	1833	1852
		DuraPlate	1822	1840	1859	2243	2288	2461	2485	2510	2515	2540	2565
	8.00	None	554	560	565	624	637	679	686	693	*	*	*
		Shaft Fan	1070	1081	1092	1271	1296	1590	1606	1622	1464	1478	1493
Electric Fan		1604	1620	1637	1952	1991	2504	2529	2554	2421	2446	2470	
DuraPlate		1799	1817	1835	1764	1799	2386	2410	2434	2298	2321	2344	
9.00	None	529	534	540	657	670	667	674	681	*	*	*	
	Shaft Fan	1025	1036	1046	1295	1321	1544	1559	1575	1470	1485	1500	
	Electric Fan	1543	1558	1574	1959	1998	2428	2452	2477	2379	2403	2427	
	DuraPlate	1728	1746	1763	1776	1811	2314	2337	2360	2262	2284	2307	
10.0	None	533	538	544	631	643	831	839	847	*	*	*	
	Shaft Fan	989	998	1008	1245	1270	1652	1669	1685	1442	1457	1471	
	Electric Fan	1463	1478	1493	1887	1925	2457	2481	2506	2321	2344	2367	
	DuraPlate	1367	1380	1394	1710	1744	2958	2988	3017	2207	2229	2251	
11.2	None	532	538	543	631	643	794	802	810	777	785	793	
	Shaft Fan	976	986	995	1187	1211	1574	1589	1605	1589	1605	1621	
	Electric Fan	1435	1449	1464	1771	1807	2341	2365	2388	2392	2416	2440	
	DuraPlate	1346	1360	1373	1333	1360	2821	2849	2877	2894	2923	2952	
12.5	None	505	511	516	647	660	760	768	776	751	759	766	
	Shaft Fan	933	943	952	1196	1220	1511	1527	1542	1521	1536	1551	
	Electric Fan	1379	1393	1407	1765	1800	2256	2279	2301	2285	2308	2331	
	DuraPlate	1289	1302	1315	1338	1365	2723	2751	2778	2764	2792	2819	
14.0	None	475	480	485	616	628	828	836	844	723	730	738	
	Shaft Fan	857	866	874	1145	1168	1532	1548	1563	1465	1480	1494	
	Electric Fan	1255	1268	1281	1698	1732	2220	2242	2264	2206	2228	2250	
	DuraPlate	1400	1414	1428	1283	1309	2109	2130	2151	2673	2699	2726	
16.0	None	472	477	481	569	580	779	786	794	803	811	819	
	Shaft Fan	844	853	861	1036	1057	1448	1462	1476	1502	1517	1532	
	Electric Fan	1230	1242	1254	1525	1556	2104	2125	2146	2187	2209	2231	
	DuraPlate	1373	1387	1400	1375	1403	1997	2017	2037	2076	2097	2117	
18.0	None	448	452	457	579	590	741	748	755	756	763	771	
	Shaft Fan	808	816	824	1039	1060	1386	1400	1414	1418	1432	1446	
	Electric Fan	1183	1194	1206	1517	1547	2023	2043	2064	2071	2092	2112	
	DuraPlate	1318	1332	1345	1371	1398	1920	1939	1958	1965	1984	2004	
20.0	None	451	456	460	550	561	775	783	791	720	727	735	
	Shaft Fan	805	813	821	995	1015	1426	1440	1455	1359	1372	1386	
	Electric Fan	1181	1193	1204	1460	1489	2078	2098	2119	1993	2013	2033	
	DuraPlate	1100	1111	1122	1317	1344	1728	1746	1763	1890	1909	1928	
22.4	None	458	462	467	542	553	758	765	773	764	772	779	
	Shaft Fan	864	872	881	973	992	1394	1408	1422	1408	1422	1436	
	Electric Fan	1195	1207	1219	1434	1463	2033	2053	2074	2056	2077	2097	
	DuraPlate	1108	1119	1131	1078	1100	1589	1605	1621	1709	1726	1743	
25.0	None	431	436	440	565	576	729	736	743	749	756	764	
	Shaft Fan	822	830	838	1069	1090	1341	1354	1368	1379	1392	1406	
	Electric Fan	1143	1155	1166	1484	1514	1959	1978	1998	2013	2034	2054	
	DuraPlate	1056	1066	1077	1113	1136	1529	1545	1560	1572	1588	1604	
28.0	None				533	544				710	717	725	
	Shaft Fan				1019	1039				1316	1329	1342	
	Electric Fan				1421	1450				1930	1949	1968	
	DuraPlate				1061	1083				1503	1518	1533	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP3 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	28.0	None	528	533	538			680	687	694			
		Shaft Fan	1115	1127	1138			1449	1464	1478			
		Electric Fan	1433	1448	1462			1835	1853	1871			
		DuraPlate	2715	2742	2770			3699	3736	3773			
	31.5	None	526	531	537	514	524	649	656	662	662	669	675
		Shaft Fan	1102	1113	1124	1095	1117	1389	1403	1417	1425	1440	1454
		Electric Fan	1412	1426	1440	1408	1436	1761	1779	1796	1809	1827	1845
		DuraPlate	2653	2679	2706	2691	2745	3569	3605	3641	3673	3710	3747
	35.5	None	503	508	513	523	533	624	630	636	632	639	645
		Shaft Fan	1060	1070	1081	1099	1121	1343	1356	1370	1366	1379	1393
		Electric Fan	1361	1375	1388	1406	1434	1706	1723	1740	1736	1753	1770
		DuraPlate	2572	2598	2623	2656	2710	3482	3517	3551	3542	3578	3613
	40.0	None	471	476	481	500	510	630	636	642	609	615	621
		Shaft Fan	990	1000	1010	1058	1079	1322	1335	1348	1321	1334	1348
		Electric Fan	1272	1285	1298	1357	1384	1671	1687	1704	1683	1700	1716
		DuraPlate	2413	2437	2462	2576	2628	3372	3406	3440	3456	3491	3525
	45.0	None	469	474	478	460	469	598	604	610	617	623	629
		Shaft Fan	977	987	997	973	992	1261	1274	1287	1303	1316	1329
		Electric Fan	1252	1264	1277	1250	1275	1597	1613	1629	1651	1667	1684
DuraPlate		2355	2378	2402	2392	2439	3244	3277	3309	3351	3385	3418	
50.0	None	447	452	456	467	476	572	578	584	585	590	596	
	Shaft Fan	939	948	958	976	995	1217	1229	1241	1242	1254	1267	
	Electric Fan	1206	1218	1230	1247	1272	1544	1560	1575	1576	1592	1608	
	DuraPlate	2282	2305	2328	2358	2405	3160	3191	3223	3221	3253	3285	
56.0	None	429	433	438	446	455	577	582	588	560	566	572	
	Shaft Fan	885	894	903	938	957	1167	1179	1191	1198	1210	1222	
	Electric Fan	1133	1144	1156	1202	1227	1464	1478	1493	1524	1540	1555	
	DuraPlate	1635	1651	1667	2286	2332	2228	2251	2273	3137	3169	3200	
63.0	None	427	431	435	419	427	547	553	558	566	572	577	
	Shaft Fan	873	882	891	870	887	1114	1126	1137	1152	1163	1175	
	Electric Fan	1114	1126	1137	1113	1135	1400	1414	1428	1447	1461	1476	
	DuraPlate	1601	1617	1633	1615	1648	2141	2162	2184	2211	2233	2255	
71.0	None	407	411	415	425	434	524	529	534	536	541	547	
	Shaft Fan	838	847	855	872	890	1075	1086	1096	1098	1109	1120	
	Electric Fan	1073	1083	1094	1111	1133	1354	1367	1381	1382	1396	1410	
	DuraPlate	1546	1562	1577	1602	1634	2080	2101	2121	2121	2142	2163	
80.0	None	385	389	393	406	414	523	528	533	514	519	524	
	Shaft Fan	793	801	809	838	855	1059	1069	1080	1059	1070	1081	
	Electric Fan	1014	1024	1034	1070	1091	1328	1342	1355	1337	1350	1364	
	DuraPlate	1461	1476	1490	1548	1579	2027	2047	2067	2061	2081	2102	
90.0	None	383	387	391	376	383	511	516	521	512	517	522	
	Shaft Fan	781	789	797	778	794	1037	1048	1058	1043	1053	1064	
	Electric Fan	996	1006	1016	995	1015	1303	1316	1329	1311	1324	1337	
	DuraPlate	1429	1443	1457	1443	1472	1991	2011	2031	2007	2027	2047	
100	None	365	368	372	382	389	488	493	498	500	505	510	
	Shaft Fan	750	757	765	780	796	999	1009	1019	1021	1032	1042	
	Electric Fan	959	968	978	993	1013	1258	1270	1283	1285	1298	1311	
	DuraPlate	1380	1394	1408	1429	1458	1932	1952	1971	1972	1992	2011	
112	None	346	350	353	364	371	508	513	518	478	483	488	
	Shaft Fan	698	705	712	749	764	1030	1040	1051	984	994	1004	
	Electric Fan	888	897	906	956	975	1299	1312	1325	1241	1254	1266	
	DuraPlate	1009	1019	1029	1382	1409	1574	1590	1606	1914	1933	1952	
125	None	344	348	351	338	344	493	498	503	496	501	506	
	Shaft Fan	689	695	702	685	699	1003	1013	1023	1012	1022	1032	
	Electric Fan	874	882	891	872	889	1265	1278	1291	1278	1291	1304	
	DuraPlate	991	1001	1011	994	1014	1534	1550	1565	1552	1568	1583	
140	None	328	331	334	343	350	470	475	479	482	487	491	
	Shaft Fan	661	668	674	687	701	962	971	981	985	995	1005	
	Electric Fan	841	849	858	871	888	1216	1229	1241	1245	1258	1270	
	DuraPlate	956	965	975	991	1011	1478	1493	1508	1512	1527	1543	
160	None				327	333				459	464	469	
	Shaft Fan				660	674				945	954	964	
	Electric Fan				839	855				1198	1210	1222	
	DuraPlate				956	975				1457	1472	1487	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP3 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1170	28.0	None															326	329	333		
		Electric Fan																589	595	601	
		DuraPlate																642	649	655	
	31.5	None	66	89	102	108	110	130	132	133	168	170	171	203	205	207	307	310	313	323	
		Shaft Fan	78	106	122	155	158	216	218	220	298	301	304	291	293	296	556	561	567	586	
		DuraPlate	N/A	N/A	192	204	208	244	247	249	315	318	321	396	400	404	607	613	619	639	
	35.5	None	64	85	102	108	110	128	130	131	163	165	167	200	202	204	312	315	318	312	
		Shaft Fan	75	100	122	155	158	213	215	217	289	292	295	286	289	292	562	568	573	566	
		DuraPlate	N/A	N/A	191	203	207	240	243	245	306	309	312	390	394	398	613	619	625	618	
	40.0	None	65	86	99	105	107	122	123	124	159	160	162	207	210	212	294	297	300	314	
		Shaft Fan	76	101	118	150	153	202	204	206	281	284	287	295	298	301	529	535	540	567	
		DuraPlate	N/A	N/A	185	198	201	228	230	232	297	300	303	402	406	410	488	492	497	618	
	45.0	None	59	79	91	96	98	112	113	115	155	157	158	184	186	188	276	279	281	291	
		Shaft Fan	70	93	109	137	140	187	189	191	276	278	281	263	266	269	499	503	508	526	
		DuraPlate	N/A	N/A	146	154	157	180	182	184	249	251	254	304	307	310	459	463	468	484	
	50.0	None	57	75	92	96	98	111	112	113	151	152	154	181	183	185	280	283	286	281	
		Shaft Fan	67	89	109	137	140	184	186	188	267	270	273	259	262	264	504	509	514	508	
		DuraPlate	N/A	N/A	146	154	157	177	179	181	242	244	247	299	302	305	465	469	474	467	
	56.0	None	58	76	89	93	95	105	106	107	146	147	149	188	190	192	260	263	265	282	
		Shaft Fan	68	89	106	133	136	175	176	178	258	260	263	268	271	273	465	470	474	509	
		DuraPlate	N/A	N/A	141	149	152	168	170	171	233	235	238	309	312	315	N/A	N/A	N/A	468	
	63.0	None	49	66	79	82	84	96	97	98	135	137	138	163	164	166	244	247	249	258	
		Shaft Fan	58	79	94	118	120	160	162	163	240	242	244	231	233	236	438	442	446	461	
		DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	71.0	None	47	63	79	82	84	95	95	96	132	133	134	160	161	163	248	251	253	248	
		Shaft Fan	56	75	94	118	120	158	159	161	233	235	237	227	229	232	443	447	452	446	
		DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	80.0	None	48	64	77	80	81	90	91	91	127	128	130	166	168	169	240	243	245	250	
Shaft Fan		57	76	92	114	117	149	151	152	224	227	229	235	238	240	428	432	437	446		
DuraPlate		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
90.0	None	46	63	77	75	77	91	92	93	125	127	128	161	162	164	225	227	229	238		
	Shaft Fan	54	74	91	108	110	151	153	154	222	224	226	227	230	232	402	406	410	424		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
100	None	44	60	75	76	77	89	90	91	122	123	124	158	159	161	229	231	233	229		
	Shaft Fan	52	71	89	108	110	149	150	152	215	217	219	223	225	228	407	411	415	409		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
112	None	45	61	73	73	75	84	85	86	118	119	120	164	166	168	222	224	226	230		
	Shaft Fan	53	72	86	105	107	141	142	143	207	209	212	232	234	236	394	398	402	410		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
125	None	41	54	68	67	68	86	87	88	116	117	118	148	150	151	207	209	211	219		
	Shaft Fan	48	64	81	96	98	143	144	146	203	205	207	209	211	214	369	372	376	390		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
140	None	39	51	67	67	69	85	86	86	112	113	114	145	147	148	212	214	216	210		
	Shaft Fan	46	61	79	96	98	140	142	143	196	198	200	205	207	209	378	381	385	375		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
160	None	40	52	65	65	67	80	81	81	109	110	111	152	153	155				213		
	Shaft Fan	47	62	77	93	95	132	134	135	190	192	194	214	216	218				380		
	DuraPlate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP3 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	28.0	None	314	318	321			460	464	469			
		Shaft Fan	743	751	758			1151	1162	1174			
		Electric Fan	975	985	995			1498	1513	1528			
		DuraPlate	2338	2362	2385			3158	3190	3221			
	31.5	None	315	318	321	376	384	441	446	450	442	446	450
		Shaft Fan	736	743	751	899	917	1104	1116	1127	1126	1137	1148
		Electric Fan	962	972	982	1180	1203	1440	1454	1468	1472	1486	1501
		DuraPlate	2288	2311	2333	2315	2361	3048	3079	3109	3130	3162	3193
	35.5	None	301	304	307	385	393	424	428	433	425	430	434
		Shaft Fan	708	715	722	905	923	1067	1078	1089	1081	1092	1103
		Electric Fan	927	937	946	1182	1205	1394	1408	1422	1414	1428	1443
		DuraPlate	2217	2239	2262	2289	2335	2972	3002	3032	3020	3050	3081
	40.0	None	288	290	293	369	376	451	456	460	410	414	418
		Shaft Fan	666	673	680	871	888	1073	1084	1094	1046	1057	1067
		Electric Fan	872	881	890	1140	1163	1387	1401	1415	1371	1385	1399
		DuraPlate	2085	2106	2127	2220	2264	2898	2927	2956	2946	2976	3005
	45.0	None	287	290	293	345	352	428	432	437	440	444	448
		Shaft Fan	659	665	672	807	823	1024	1034	1044	1056	1066	1077
		Electric Fan	859	868	876	1056	1077	1326	1339	1352	1368	1381	1395
		DuraPlate	2037	2057	2078	2065	2106	2787	2814	2842	2877	2906	2935
50.0	None	273	276	279	352	359	409	414	418	417	421	425	
	Shaft Fan	632	639	645	811	827	986	996	1006	1006	1016	1026	
	Electric Fan	827	835	844	1056	1077	1280	1293	1306	1306	1319	1332	
	DuraPlate	1973	1993	2013	2039	2080	2712	2739	2766	2764	2792	2819	
56.0	None	273	276	278	336	343	445	449	454	399	403	407	
	Shaft Fan	607	613	619	780	795	979	988	998	970	979	989	
	Electric Fan	787	795	803	1017	1038	1246	1258	1271	1262	1275	1287	
	DuraPlate	1408	1422	1437	1976	2016	1917	1936	1955	2691	2718	2745	
63.0	None	272	275	277	328	335	422	426	430	436	440	444	
	Shaft Fan	599	605	611	735	750	934	943	952	965	974	984	
	Electric Fan	775	783	791	954	973	1191	1203	1215	1230	1243	1255	
	DuraPlate	1380	1394	1408	1391	1419	1840	1858	1877	1900	1919	1938	
71.0	None	259	261	264	334	341	403	407	411	412	416	420	
	Shaft Fan	575	581	586	738	753	900	909	918	919	928	937	
	Electric Fan	746	753	761	953	973	1151	1162	1174	1174	1186	1198	
	DuraPlate	1333	1346	1360	1381	1409	1786	1804	1822	1821	1840	1858	
80.0	None	246	249	251	318	325	405	409	413	394	398	402	
	Shaft Fan	544	550	555	709	723	889	898	907	886	895	903	
	Electric Fan	705	712	719	918	936	1132	1143	1155	1135	1146	1158	
	DuraPlate	1260	1273	1285	1334	1361	1744	1761	1779	1769	1786	1804	
90.0	None	245	247	250	296	302	396	400	404	396	400	404	
	Shaft Fan	537	542	548	659	672	871	880	889	875	884	892	
	Electric Fan	694	701	708	854	871	1110	1121	1132	1116	1127	1138	
	DuraPlate	1233	1246	1258	1244	1269	1713	1730	1747	1726	1743	1760	
100	None	233	235	238	301	307	378	382	385	387	391	395	
	Shaft Fan	515	520	525	662	675	838	846	855	857	866	874	
	Electric Fan	667	674	680	853	870	1071	1082	1092	1094	1105	1116	
	DuraPlate	1191	1203	1215	1234	1258	1661	1678	1694	1695	1712	1729	
112	None	226	229	231	287	292	405	410	414	370	373	377	
	Shaft Fan	484	489	494	635	648	875	883	892	825	833	841	
	Electric Fan	623	629	636	821	838	1115	1126	1137	1056	1067	1077	
	DuraPlate	868	877	886	1192	1216	1346	1359	1372	1644	1660	1677	
125	None	225	228	230	272	278	394	398	402	395	399	403	
	Shaft Fan	478	483	488	587	598	852	860	869	859	867	876	
	Electric Fan	613	620	626	754	770	1086	1097	1108	1097	1108	1119	
	DuraPlate	854	862	871	855	872	1311	1324	1338	1326	1339	1352	
140	None	214	217	219	277	283	375	379	383	384	388	392	
	Shaft Fan	459	463	468	589	601	816	824	832	836	844	852	
	Electric Fan	590	596	602	755	770	1043	1054	1064	1068	1079	1089	
	DuraPlate	823	831	839	853	870	1262	1275	1288	1292	1305	1318	
160	None				264	269				366	370	373	
	Shaft Fan				566	577				801	809	817	
	Electric Fan				726	741				1027	1037	1047	
	DuraPlate				823	839				1244	1256	1269	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP3 Parallel Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1170	28.0	None	308	311	314			509	514	519				
		Shaft Fan	533	539	544			876	885	894				
		Electric Fan	879	888	897			1409	1423	1437				
		DuraPlate	1514	1529	1544			2084	2105	2126				
	31.5	None	308	311	314	371	378	485	489	494	498	503	508	
		Shaft Fan	529	534	539	645	658	836	845	853	861	870	878	
		Electric Fan	867	875	884	1066	1087	1350	1364	1377	1391	1405	1419	
		DuraPlate	1486	1501	1515	1495	1524	2003	2023	2043	2065	2085	2106	
	35.5	None	293	296	299	378	385	464	469	474	473	478	483	
		Shaft Fan	507	512	517	651	664	805	813	821	821	829	837	
		Electric Fan	834	843	851	1066	1087	1306	1319	1332	1331	1344	1358	
		DuraPlate	1434	1449	1463	1486	1516	1946	1965	1985	1982	2002	2022	
	40.0	None	272	275	277	361	368	459	464	469	454	458	463	
		Shaft Fan	470	475	479	624	637	788	796	804	791	799	807	
		Electric Fan	776	784	792	1027	1047	1269	1282	1294	1288	1301	1314	
		DuraPlate	1338	1352	1365	1435	1464	1883	1902	1920	1926	1945	1964	
	45.0	None	271	274	276	327	334	435	440	444	450	455	459	
		Shaft Fan	466	470	475	568	580	749	757	764	775	783	791	
		Electric Fan	764	772	780	940	959	1212	1224	1236	1253	1266	1278	
		DuraPlate	1312	1325	1338	1321	1347	1804	1822	1840	1866	1884	1903	
50.0	None	258	261	263	333	340	416	420	424	426	430	434		
	Shaft Fan	446	450	455	573	585	720	727	734	736	743	751		
	Electric Fan	735	743	750	940	959	1170	1181	1193	1195	1207	1219		
	DuraPlate	1266	1279	1292	1313	1339	1749	1767	1784	1785	1803	1821		
56.0	None	243	245	248	318	324	407	411	415	407	411	415		
	Shaft Fan	417	421	425	549	560	687	694	701	707	714	721		
	Electric Fan	685	692	699	905	923	1097	1108	1119	1154	1165	1177		
	DuraPlate	913	923	932	1267	1293	1254	1267	1279	1731	1749	1766		
63.0	None	242	244	247	292	298	386	390	393	399	403	407		
	Shaft Fan	413	417	421	503	513	654	660	667	677	683	690		
	Electric Fan	675	682	689	830	846	1048	1058	1069	1083	1094	1105		
	DuraPlate	899	908	917	899	917	1200	1212	1224	1240	1253	1265		
71.0	None	230	232	235	297	303	369	372	376	377	381	385		
	Shaft Fan	395	399	403	508	518	628	634	641	642	649	655		
	Electric Fan	649	655	662	830	847	1012	1022	1032	1033	1043	1054		
	DuraPlate	864	873	882	898	916	1160	1172	1184	1185	1197	1208		
80.0	None	270	273	276	283	289	368	372	376	361	365	368		
	Shaft Fan	464	469	474	486	496	622	628	635	617	624	630		
	Electric Fan	765	772	780	798	814	994	1004	1014	998	1008	1018		
	DuraPlate	817	825	833	864	882	1138	1149	1161	1146	1157	1169		
90.0	None	217	219	221	262	267	359	363	367	360	364	367		
	Shaft Fan	369	373	377	451	460	608	614	620	611	617	623		
	Electric Fan	603	609	615	742	757	974	984	994	980	990	1000		
	DuraPlate	803	811	819	803	819	1116	1127	1138	1123	1134	1145		
100	None	206	208	210	267	272	343	346	350	351	355	358		
	Shaft Fan	353	356	360	455	464	583	589	595	597	603	609		
	Electric Fan	579	585	591	742	757	939	948	958	960	970	979		
	DuraPlate	772	780	787	802	818	1077	1088	1099	1101	1112	1123		
112	None	194	196	198	254	259	352	355	359	335	339	342		
	Shaft Fan	329	332	335	435	444	597	603	609	573	579	584		
	Electric Fan	536	541	546	713	727	965	974	984	926	935	944		
	DuraPlate	575	581	587	772	787	885	894	903	1063	1074	1084		
125	None	194	195	197	233	238	342	345	349	343	346	350		
	Shaft Fan	326	329	332	397	405	580	586	592	584	590	596		
	Electric Fan	528	533	538	648	661	939	949	958	948	958	967		
	DuraPlate	568	573	579	565	576	862	871	879	870	879	887		
140	None	184	186	188	238	243	325	328	331	333	337	340		
	Shaft Fan	311	314	318	401	409	554	560	565	568	574	579		
	Electric Fan	507	512	517	649	662	901	910	919	923	932	942		
	DuraPlate	545	550	556	567	578	826	835	843	847	855	863		
160	None				226	231				317	320	323		
	Shaft Fan				384	391				543	548	554		
	Electric Fan				624	636				886	895	904		
	DuraPlate				544	555				812	820	828		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperatures will vary based upon exact ambient conditions and load profile.

* Contact Factory.

Type VP3 Parallel Shaft

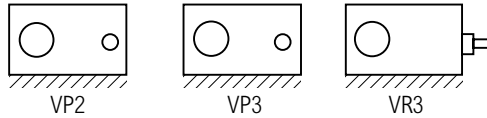
Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	28.0	None	283	286	289			480	485	490			
		Shaft Fan	416	420	424			698	705	712			
		Electric Fan	797	805	813			1289	1302	1315			
		DuraPlate	1114	1125	1136			1545	1560	1576			
	31.5	None	351	354	358	341	348	456	461	465	471	475	480
		Shaft Fan	413	417	421	502	512	664	671	678	686	693	699
		Electric Fan	785	793	801	966	985	1234	1247	1259	1274	1287	1299
		DuraPlate	1096	1107	1118	1097	1119	1481	1496	1511	1529	1544	1559
	35.5	None	269	272	275	347	354	437	441	446	446	451	455
		Shaft Fan	395	399	403	508	518	638	645	651	652	658	665
		Electric Fan	755	763	771	966	986	1193	1205	1217	1218	1230	1242
		DuraPlate	1055	1066	1076	1095	1117	1435	1449	1463	1463	1478	1493
	40.0	None	248	250	253	331	338	426	430	435	428	432	436
		Shaft Fan	364	368	371	486	496	620	626	632	627	633	639
		Electric Fan	701	708	715	930	948	1153	1165	1176	1177	1189	1201
		DuraPlate	980	990	1000	1055	1077	1385	1399	1413	1418	1432	1446
	45.0	None	247	249	252	298	304	403	407	411	418	422	426
		Shaft Fan	361	365	369	439	448	589	594	600	609	616	622
		Electric Fan	690	697	704	848	865	1101	1112	1123	1139	1151	1162
		DuraPlate	964	973	983	965	984	1324	1338	1351	1370	1384	1398
50.0	None	235	237	240	304	310	385	389	393	395	399	402	
	Shaft Fan	345	349	352	445	454	564	570	576	577	583	589	
	Electric Fan	663	670	677	849	866	1062	1073	1083	1085	1096	1107	
	DuraPlate	928	937	946	963	983	1280	1293	1306	1308	1321	1334	
56.0	None	218	220	222	289	295	369	372	376	377	381	385	
	Shaft Fan	320	323	326	425	434	534	539	545	554	559	565	
	Electric Fan	615	621	627	817	833	987	997	1007	1048	1058	1069	
	DuraPlate	679	686	692	928	946	936	946	955	1265	1277	1290	
63.0	None	217	220	222	262	267	349	353	356	377	381	385	
	Shaft Fan	318	321	324	386	393	507	512	517	554	559	565	
	Electric Fan	606	612	618	744	759	943	952	962	1048	1058	1069	
	DuraPlate	670	677	683	667	680	894	903	912	924	934	943	
71.0	None	207	209	211	267	273	333	337	340	341	345	348	
	Shaft Fan	303	306	309	391	399	486	491	496	497	502	507	
	Electric Fan	582	588	594	745	760	910	919	928	929	939	948	
	DuraPlate	643	649	655	669	682	862	871	879	881	890	898	
80.0	None	195	197	199	254	259	333	336	339	326	330	333	
	Shaft Fan	286	289	292	373	381	482	487	492	477	482	486	
	Electric Fan	550	555	561	716	731	895	904	913	897	906	915	
	DuraPlate	607	613	619	642	655	848	857	865	850	858	867	
90.0	None	195	197	199	235	239	325	328	331	325	329	332	
	Shaft Fan	284	287	290	345	352	471	476	481	473	478	482	
	Electric Fan	541	547	552	665	678	876	885	894	882	890	899	
	DuraPlate	598	604	610	596	608	831	839	847	836	844	852	
100	None	185	187	189	239	244	309	313	316	317	320	324	
	Shaft Fan	271	273	276	350	357	451	455	460	462	466	471	
	Electric Fan	520	525	530	666	679	844	853	861	863	872	880	
	DuraPlate	574	579	585	597	609	800	808	816	818	826	834	
112	None	173	174	176	227	232	314	317	320	303	306	309	
	Shaft Fan	251	254	256	333	340	458	462	467	442	447	451	
	Electric Fan	479	484	489	639	652	865	874	882	832	840	849	
	DuraPlate	437	442	446	573	585	669	676	683	788	796	804	
125	None	172	174	176	207	212	305	308	311	306	309	312	
	Shaft Fan	250	252	255	303	309	445	449	454	447	452	456	
	Electric Fan	472	477	482	579	591	842	851	859	850	859	867	
	DuraPlate	433	437	441	428	437	651	658	664	656	663	669	
140	None	164	166	167	212	216	290	292	295	297	300	303	
	Shaft Fan	239	242	244	307	313	424	428	432	435	439	443	
	Electric Fan	457	462	466	580	592	807	816	824	827	836	844	
	DuraPlate	414	418	422	431	440	623	629	635	638	645	651	
160	None				201	205				283	285	288	
	Shaft Fan				293	299				415	419	423	
	Electric Fan				558	569				794	802	810	
	DuraPlate				413	421				611	617	623	

Type VPC Double & Triple and VRC Triple Reduction — Sizes 133-187 & 193-227

Low-Speed Shaft Overhung Load •/lbs x 1000

Refer to Low-Speed Gear Position on Pages 14-15 & 142



Output rpm	107		117		127		133 137		143 145 147		153 155 157		163 165 167	
	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side
290	5.8	4.1	11.6	9.6	11.4	8.2	12.2	8.1	13.6	8.1	17.5	10.6	22.8	16.2
250	6.2	4.3	12.2	10.2	12.1	8.8	12.9	8.7	14.5	8.8	18.6	11.5	24.2	17.4
210	6.2	4.7	13.0	10.9	12.9	9.5	13.8	9.5	15.5	9.7	20.0	12.6	25.9	19.0
170	6.2	5.1	14.0	11.9	13.0	10.5	15.0	10.6	16.9	10.9	21.7	14.1	28.2	21.0
130	6.2	5.7	14.1	13.2	13.0	11.9	16.6	12.1	18.8	12.6	24.2	16.4	31.4	24.0
90	6.2	6.2	14.1	14.1	13.0	13.0	19.1	14.5	20.6	15.4	28.1	20.0	36.5	28.8
50	6.2	6.2	14.1	14.1	13.0	13.0	22.0	19.4	20.6	20.6	32.3	27.4	46.2	38.5
10	6.2	6.2	14.1	14.1	13.0	13.0	22.0	22.0	20.6	20.6	32.3	32.3	51.0	51.0

Output rpm	173 175 177		187		193 195 197		203 207		213 215 217		223 225 227	
	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side	Extension Opposite Low Speed Gear	Extension On Low Speed Gear Side
290	32.4	25.0	36.2	26.0	53.6	36.6	53.3	36.4	57.4	32.0	57.9	33.2
250	34.2	26.8	38.3	27.8	57.5	39.8	57.1	39.6	62.0	35.6	62.5	36.8
210	36.5	29.1	40.8	30.1	62.3	44.0	61.8	43.7	67.9	40.3	68.3	41.5
170	39.4	32.1	44.1	33.2	68.7	49.6	68.2	49.2	75.7	46.9	76.0	47.9
130	43.6	36.3	48.7	37.5	77.8	57.8	77.1	57.2	86.9	56.8	87.0	57.6
90	49.9	43.1	49.5	44.4	92.2	71.3	91.3	70.4	105.1	74.0	104.9	74.2
50	52.0	52.0	49.5	49.5	116.3	99.6	119.7	98.0	142.4	112.8	141.3	111.1
10	52.0	52.0	49.5	49.5	116.3	116.3	128.7	128.7	167.4	122.9	190.8	147.9

• Overhung load values shown are for loads applied at midpoint of extension key length. Published overhung load ratings are based on a combination of the most unfavorable conditions of loading. Consult the Factory for application-specific review if additional capacity is required. Interpolate for values at intermediate speeds. The last overhung load listed applies to all lower output speeds for that drive size and mounting surface.

Type VPC Single Reduction & VRC Double Reduction

Low-Speed Shaft Overhung Load

REFER TO THE FACTORY

High-Speed Shaft Overhung Load — All Reductions

REFER TO THE FACTORY

Exact Ratios/Parallel Shaft Drives

Type VP

Nominal Ratios	UNIT SIZE										
	193VP	195VP	197VP	203VP	207VP	213VP	215VP	217VP	223VP	225VP	227VP
SINGLE REDUCTION											
1.25	1.256	1.256	1.256	1.237	1.237	1.231	1.231	1.231	1.262	1.262	1.262
1.40	1.378	1.378	1.378	1.389	1.389	1.417	1.417	1.417	1.375	1.375	1.375
1.60	1.588	1.588	1.588	1.606	1.606	1.606	1.606	1.606	1.595	1.595	1.595
1.80	1.781	1.781	1.781	1.774	1.774	1.806	1.806	1.806	1.794	1.794	1.794
2.00	2.034	2.034	2.034	1.966	1.966	1.966	1.966	1.966	1.969	1.969	1.969
2.24	2.259	2.259	2.259	2.222	2.222	2.222	2.222	2.222	2.276	2.276	2.276
2.50	2.520	2.520	2.520	2.480	2.480	2.480	2.480	2.480	2.519	2.519	2.519
2.80	2.826	2.826	2.826	2.783	2.783	2.783	2.783	2.783	2.800	2.800	2.800
3.15	3.190	3.190	3.190	3.095	3.095	3.143	3.143	3.143	3.130	3.130	3.130
3.55	3.647	3.647	3.647	3.526	3.526	3.526	3.526	3.526	3.524	3.524	3.524
4.00	4.118	4.118	4.118	4.059	4.059	4.059	4.059	4.059	3.947	3.947	3.947
4.50	4.500	4.500	4.500	4.529	4.529	4.438	4.438	4.438	4.529	4.529	4.529
5.00	5.063	5.063	5.063	4.938	4.938	5.059	5.059	5.059	4.938	4.938	4.938
DOUBLE REDUCTION											
5.00	5.084	5.084	5.084	---	---	4.891	4.891	4.891	---	---	---
5.60	5.740	5.740	5.740	5.658	5.658	5.630	5.630	5.630	5.475	5.475	5.475
6.30	6.273	6.273	6.273	6.314	6.314	6.155	6.155	6.155	6.283	6.283	6.283
7.10	7.434	7.434	7.434	6.883	6.883	6.912	6.912	6.912	6.849	6.849	6.849
8.00	8.394	8.394	8.394	8.274	8.274	7.955	7.955	7.955	7.737	7.737	7.737
9.00	9.173	9.173	9.173	9.233	9.233	8.698	8.698	8.698	8.878	8.878	8.878
10.0	10.07	10.07	10.07	10.06	10.06	9.697	9.697	9.697	9.678	9.678	9.678
11.2	11.37	11.37	11.37	11.21	11.21	11.16	11.16	11.16	10.86	10.86	10.86
12.5	12.43	12.43	12.43	12.51	12.51	12.20	12.20	12.20	12.46	12.46	12.46
14.0	14.37	14.37	14.37	13.64	13.64	14.33	14.33	14.33	13.58	13.58	13.58
16.0	16.23	16.23	16.23	16.00	16.00	16.49	16.49	16.49	16.04	16.04	16.04
18.0	17.74	17.74	17.74	17.85	17.85	18.03	18.03	18.03	18.40	18.40	18.40
20.0	20.29	20.29	20.29	19.46	19.46	20.55	20.55	20.55	20.06	20.06	20.06
22.4	22.90	22.90	22.90	22.58	22.58	22.32	22.32	22.32	22.93	22.93	22.93
25.0	25.03	25.03	25.03	25.19	25.19	24.41	24.41	24.41	24.91	24.91	24.91
28.0	---	---	---	27.46	27.46	---	---	---	27.16	27.16	27.16
TRIPLE REDUCTION											
28.0	28.44	28.44	28.44	---	---	27.48	27.48	27.48	---	---	---
31.5	32.11	32.11	32.11	31.65	31.65	31.62	31.62	31.62	30.76	30.76	30.76
35.5	35.09	35.09	35.09	35.32	35.32	34.58	34.58	34.58	35.29	35.29	35.29
40.0	40.58	40.58	40.58	38.50	38.50	40.59	40.59	40.59	38.47	38.47	38.47
45.0	45.82	45.82	45.82	45.17	45.17	46.72	46.72	46.72	45.44	45.44	45.44
50.0	50.08	50.08	50.08	50.40	50.40	51.08	51.08	51.08	52.14	52.14	52.14
56.0	58.34	58.34	58.34	54.94	54.94	58.20	58.20	58.20	56.83	56.83	56.83
63.0	65.87	65.87	65.87	64.93	64.93	66.99	66.99	66.99	65.15	65.15	65.15
71.0	71.98	71.98	71.98	72.45	72.45	73.24	73.24	73.24	74.75	74.75	74.75
80.0	82.34	82.34	82.34	78.98	78.98	83.47	83.47	83.47	81.49	81.49	81.49
90.0	92.96	92.96	92.96	91.64	91.64	90.69	90.69	90.69	93.15	93.15	93.15
100	101.6	101.6	101.6	102.3	102.3	99.15	99.15	99.15	101.2	101.2	101.2
112	112.8	112.8	112.8	111.5	111.5	116.4	116.4	116.4	110.3	110.3	110.3
125	127.4	127.4	127.4	125.6	125.6	126.5	126.5	126.5	129.9	129.9	129.9
140	139.2	139.2	139.2	140.1	140.1	138.3	138.3	138.3	141.2	141.2	141.2
160	---	---	---	152.8	152.8	---	---	---	153.9	153.9	153.9

Tolerance Limits/Dimensions — Inches

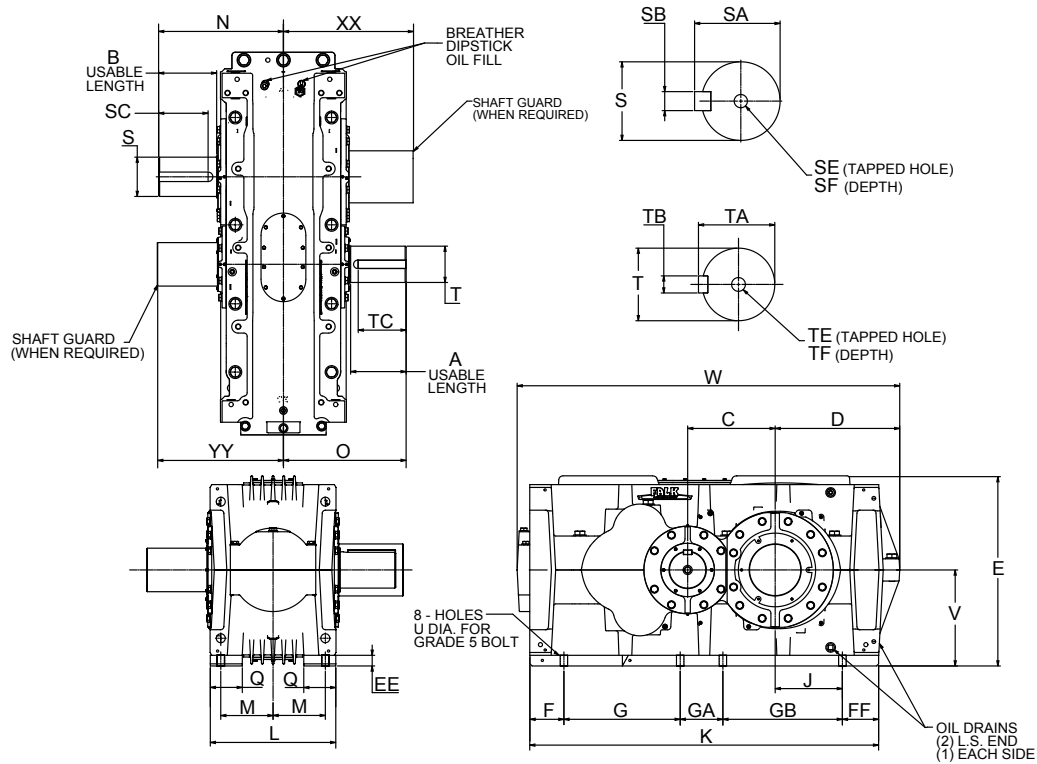
Table 1

	Shaft Tolerance										Bore Tolerance			
	Diameter	c11	g6	h6	h9	h10	h11	j6	k6	m6	D10	H7	J7	N9
	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
from	0.7087	-0.0043	-0.0003	0.0000	0.0000	0.0000	0.0000	0.0003	0.0006	0.0008	0.0059	0.0008	0.0005	0.0000
to	1.1811	-0.0094	-0.0008	-0.0005	-0.0020	-0.0033	-0.0051	-0.0003	0.0001	0.0003	0.0026	0.0000	-0.0004	-0.0020
above	1.1811	-0.0047	-0.0004	0.0000	0.0000	0.0000	0.0000	0.0003	0.0007	0.0010	0.0071	0.0010	0.0006	0.0000
to	1.5748	-0.0110	-0.0010	-0.0006	-0.0024	-0.0039	-0.0063	-0.0003	0.0001	0.0004	0.0031	0.0000	-0.0004	-0.0024
above	1.5748	-0.0051	-0.0004	0.0000	0.0000	0.0000	0.0000	0.0003	0.0007	0.0010	0.0071	0.0010	0.0006	0.0000
to	1.9685	-0.0114	-0.0010	-0.0006	-0.0024	-0.0039	-0.0063	-0.0003	0.0001	0.0004	0.0031	0.0000	-0.0004	-0.0024
above	1.9685	-0.0055	-0.0004	0.0000	0.0000	0.0000	0.0000	0.0004	0.0008	0.0012	0.0087	0.0012	0.0007	0.0000
to	2.5591	-0.0130	-0.0011	-0.0007	-0.0029	-0.0047	-0.0075	-0.0004	0.0001	0.0004	0.0039	0.0000	-0.0005	-0.0029
above	2.5591	-0.0059	-0.0004	0.0000	0.0000	0.0000	0.0000	0.0004	0.0008	0.0012	0.0087	0.0012	0.0007	0.0000
to	3.1496	-0.0134	-0.0011	-0.0007	-0.0029	-0.0047	-0.0075	-0.0004	0.0001	0.0004	0.0039	0.0000	-0.0005	-0.0029
above	3.1496	-0.0067	-0.0005	0.0000	0.0000	0.0000	0.0000	0.0004	0.0010	0.0014	0.0102	0.0014	0.0009	0.0000
to	3.9370	-0.0154	-0.0013	-0.0009	-0.0034	-0.0055	-0.0087	-0.0004	0.0001	0.0005	0.0047	0.0000	-0.0005	-0.0034
above	3.9370	-0.0071	-0.0005	0.0000	0.0000	0.0000	0.0000	0.0004	0.0010	0.0014	0.0102	0.0014	0.0009	0.0000
to	4.7244	-0.0157	-0.0013	-0.0009	-0.0034	-0.0055	-0.0087	-0.0004	0.0001	0.0005	0.0047	0.0000	-0.0005	-0.0034
above	4.7244	-0.0079	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0005	0.0011	0.0016	0.0120	0.0016	0.0010	0.0000
to	5.5118	-0.0177	-0.0015	-0.0010	-0.0039	-0.0063	-0.0098	-0.0005	0.0001	0.0006	0.0057	0.0000	-0.0006	-0.0039
above	5.5118	-0.0083	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0005	0.0011	0.0016	0.0120	0.0016	0.0010	0.0000
to	6.2992	-0.0181	-0.0015	-0.0010	-0.0039	-0.0063	-0.0098	-0.0005	0.0001	0.0006	0.0057	0.0000	-0.0006	-0.0039
above	6.2992	-0.0091	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0005	0.0011	0.0016	0.0120	0.0016	0.0010	0.0000
to	7.0866	-0.0189	-0.0015	-0.0010	-0.0039	-0.0063	-0.0098	-0.0005	0.0001	0.0006	0.0057	0.0000	-0.0006	-0.0039
above	7.0866	-0.0094	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0006	0.0013	0.0018	0.0140	0.0018	0.0012	0.0000
to	7.8740	-0.0209	-0.0017	-0.0011	-0.0045	-0.0073	-0.0114	-0.0006	0.0002	0.0007	0.0067	0.0000	-0.0006	-0.0045
above	7.8740	-0.0102	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0006	0.0013	0.0018	0.0140	0.0018	0.0012	0.0000
to	8.8583	-0.0220	-0.0017	-0.0011	-0.0045	-0.0073	-0.0114	-0.0006	0.0002	0.0007	0.0067	0.0000	-0.0006	-0.0045
above	8.8583	-0.0110	-0.0006	0.0000	0.0000	0.0000	0.0000	0.0006	0.0013	0.0018	0.0140	0.0018	0.0012	0.0000
to	9.8425	-0.0224	-0.0017	-0.0011	-0.0045	-0.0073	-0.0114	-0.0006	0.0002	0.0007	0.0067	0.0000	-0.0006	-0.0045
above	9.8425	-0.0118	-0.0007	0.0000	0.0000	0.0000	0.0000	0.0006	0.0014	0.0020	0.0157	0.0020	0.0014	0.0000
to	11.0236	-0.0244	-0.0027	-0.0013	-0.0051	-0.0083	-0.0126	-0.0006	0.0002	0.0008	0.0075	0.0000	-0.0006	-0.0051
above	11.0236	-0.0130	-0.0007	0.0000	0.0000	0.0000	0.0000	0.0006	0.0014	0.0020	0.0157	0.0020	0.0014	0.0000
to	12.4016	-0.0256	-0.0027	-0.0013	-0.0051	-0.0083	-0.0126	-0.0006	0.0002	0.0008	0.0075	0.0000	-0.0006	-0.0051
above	12.4016	-0.0142	-0.0007	0.0000	0.0000	0.0000	0.0000	0.0007	0.0016	0.0022	0.0173	0.0022	0.0015	0.0000
to	13.9764	-0.0283	-0.0030	-0.0014	-0.0055	-0.0091	-0.0142	-0.0007	0.0002	0.0008	0.0083	0.0000	-0.0007	-0.0055

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Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
133	1.25-5.00	7.68	8.66	10.238	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	17.80	17.05	4.44
143	1.25-5.00	7.68	8.66	11.419	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	18.11	17.17	4.25
153	1.25-5.00	7.48	8.66	13.191	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	19.09	18.11	4.49
163	1.25-5.00	9.25	10.04	14.569	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	21.46	20.79	4.88
173	1.25-5.00	10.24	10.63	16.143	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	22.64	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.	
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
133	1.25-3.55							3.9370m6	4.17	1.10										
	4.00-5.00	5.1181m6	5.39	1.26	7.09	M24	1.97	3.1496m6	3.34	0.87	7.09	M20	1.65	0.94	11.02	42.59	18.11	17.44	1854	
143	1.25-3.55							4.3307m6	4.56	1.10										
	4.00-5.00	5.5118m6	5.82	1.42	8.66	M30	2.36	3.5433m6	3.73	0.98	7.09	M24	1.97	0.94	12.40	47.36	18.58	17.64	2480	
153	1.25-3.15							5.1181m6	5.39	1.26										
	3.55-5.00	5.9055m6	6.21	1.42	7.87	M30	2.36	4.1338m6	4.36	1.10	7.09	M24	1.97	1.10	13.19	52.52	19.65	18.74	3171	
163	1.25-4.00							5.5118m6	5.82	1.42										
	4.50-5.00	7.0866m6	7.47	1.77	8.66	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	14.76	59.45	22.17	21.93	4623	
173	1.25-3.15							6.6929m6	7.04	1.57										
	3.55-5.00	7.6772m6	8.06	1.77	9.84	M30	2.36	4.7244m6	4.99	1.26	8.86	M24	1.97	1.38	17.72	70.59	24.09	23.27	6777	

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

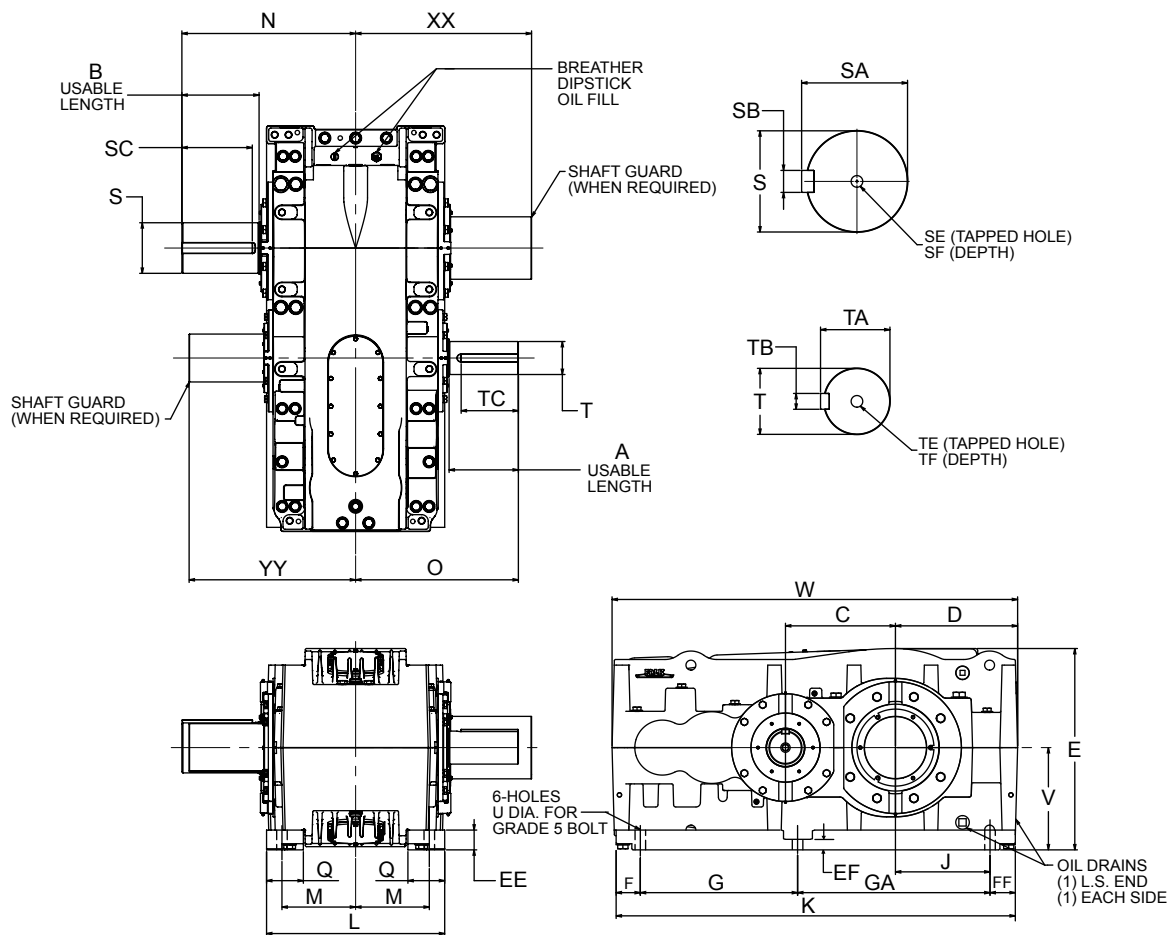
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 193 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N*	O	Q
193	1.25-5.00	11.81	13.78	18.112	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	29.13	6.59
203	1.25-5.00	11.81	13.78	19.687	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	29.13	6.59
213	1.25-5.00	13.78	16.14	21.261	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	33.27	6.80
223	1.25-5.00	13.78	16.14	23.230	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	33.27	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.	
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
193	1.25-3.55							7.0866m6	7.47	1.77										
	4.00-5.00	9.0551m6	9.48	1.97	12.60	M30	2.36	5.9055m6	6.21	1.42	10.24	M30	2.36	1.89	18.31	72.60	31.50	29.81	9180	
203	1.25-3.55							7.0866m6	7.47	1.77										
	4.00-5.00	9.0551m6	9.48	1.97	12.60	M30	2.36	5.9055m6	6.21	1.42	10.24	M30	2.36	1.89	18.31	72.60	31.50	29.81	9528	
213	1.25-3.15							8.0709m6	8.50	1.97										
	3.55-5.00	10.6299m6	11.09	2.48	14.17	M30	2.36	7.0866m6	7.47	1.77	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14031	
223	1.25-3.15							8.0709m6	8.50	1.97										
	3.55-5.00	10.6299m6	11.09	2.48	14.17	M30	2.36	7.0866m6	7.47	1.77	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14629	

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

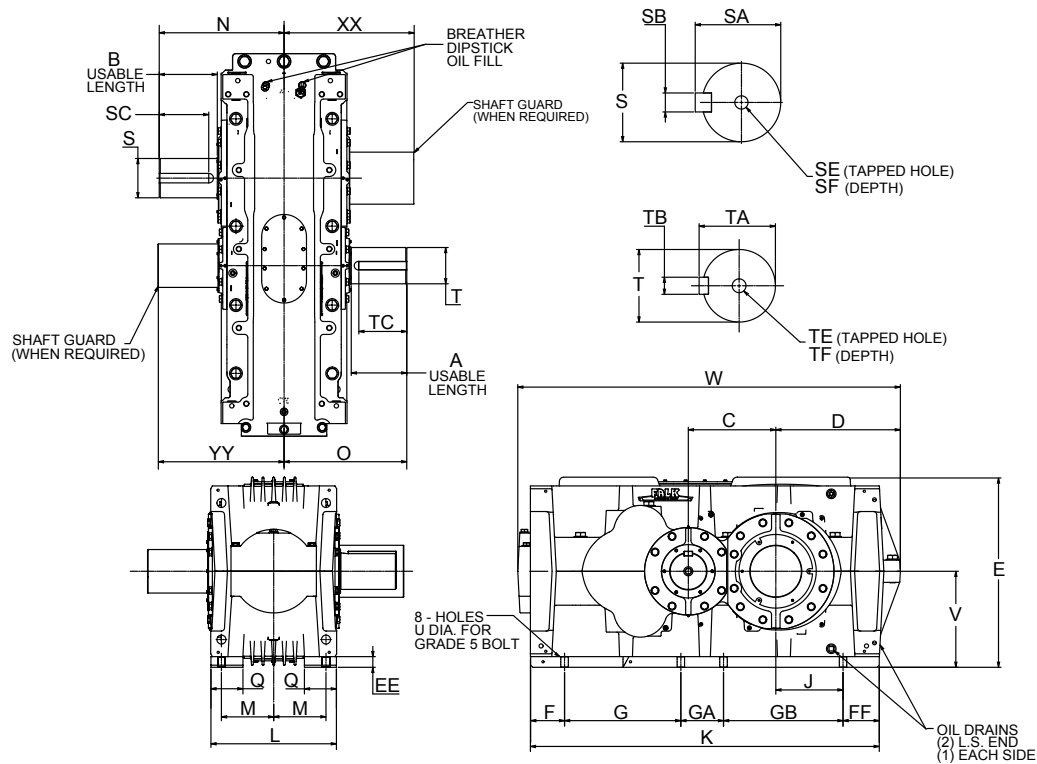
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
145	1.25-5.00	7.68	8.66	11.419	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	18.11	17.17	4.25
155	1.25-5.00	7.48	8.66	13.191	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	19.09	18.11	4.49
165	1.25-5.00	9.25	10.04	14.569	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	21.46	20.79	4.88
175	1.25-5.00	10.24	10.63	16.143	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	22.64	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T *	TA	TB	TC	TE	TF							
145	1.25-3.55	5.5118m6	5.82	1.42	8.66	M30	2.36	4.3307m6	4.56	1.10	7.09	M24	1.97	0.94	12.40	47.36	18.58	17.64	2480	
	4.00-5.00	5.5118m6	5.82	1.42	8.66	M30	2.36	3.5433m6	3.73	0.98	7.09	M24	1.97	0.94	12.40	47.36	18.58	17.64	2480	
155	1.25-3.15	5.9055m6	6.21	1.42	7.87	M30	2.36	5.1181m6	5.39	1.26	7.09	M24	1.97	1.10	13.19	52.52	19.65	18.74	3171	
	3.55-5.00	5.9055m6	6.21	1.42	7.87	M30	2.36	4.1338m6	4.36	1.10	7.09	M24	1.97	1.10	13.19	52.52	19.65	18.74	3171	
165	1.25-4.00	7.0866m6	7.47	1.77	8.66	M30	2.36	5.5118m6	5.82	1.42	8.66	M30	2.36	1.38	14.76	59.45	22.17	21.93	4623	
	4.50-5.00	7.0866m6	7.47	1.77	8.66	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	14.76	59.45	22.17	21.93	4623	
175	1.25-3.15	7.6772m6	8.06	1.77	9.84	M30	2.36	6.6929m6	7.04	1.57	8.86	M30	2.36	1.38	17.72	70.59	24.09	23.27	6777	
	3.55-5.00	7.6772m6	8.06	1.77	9.84	M30	2.36	4.7244m6	4.99	1.26	8.86	M24	1.97	1.38	17.72	70.59	24.09	23.27	6777	

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

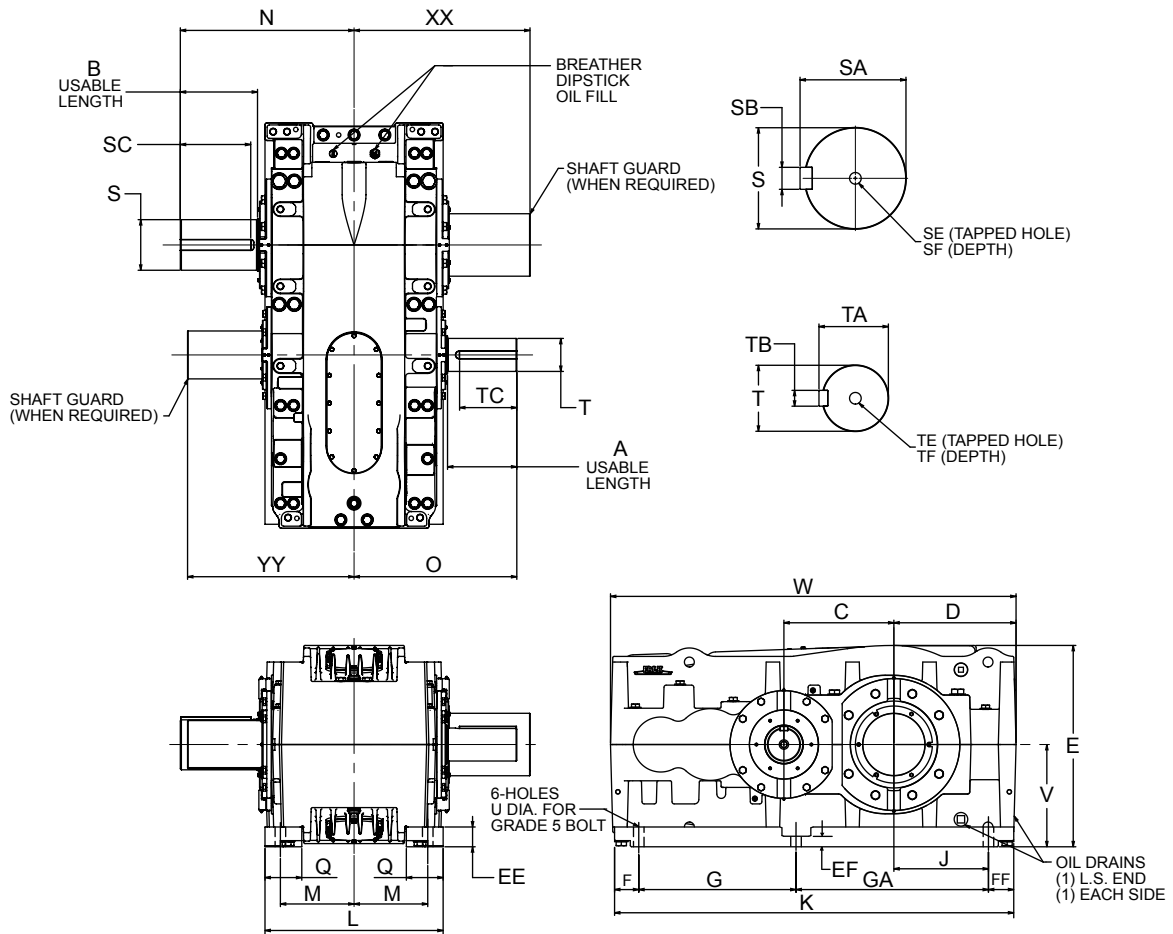
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 195 – 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
195	1.25-5.00	11.81	13.78	18.112	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	29.13	6.59
215	1.25-5.00	13.78	16.14	21.261	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	33.27	6.80
225	1.25-5.00	13.78	16.14	23.230	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	33.27	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
195	1.25-3.55	9.0551m6	9.48	1.97	12.60	M30	2.36	7.0866m6	7.47	1.77	10.24	M30	2.36	1.89	18.31	72.60	31.50	29.81	9180
	4.00-5.00							5.9055m6	6.21	1.42									
215	1.25-3.15	10.6299m6	11.09	2.48	14.17	M30	2.36	8.0709m6	8.50	1.97	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14031
	3.55-5.00							7.0866m6	7.47	1.77									
225	1.25-3.15	10.6299m6	11.09	2.48	14.17	M30	2.36	8.0709m6	8.50	1.97	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14629
	3.55-5.00							7.0866m6	7.47	1.77									

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

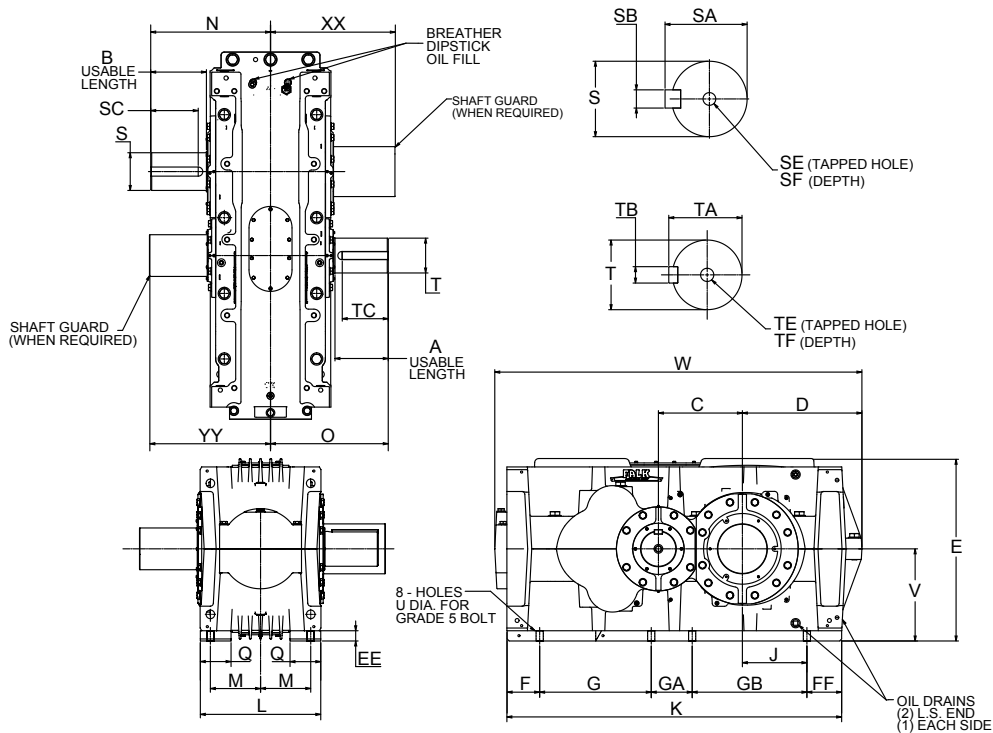
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
107	1.25-5.00	4.92	5.91	7.285	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	12.80	12.01	3.07
117	1.25-5.00	4.92	6.10	8.269	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	13.98	12.99	3.62
127	1.25-5.00	6.30	7.09	9.254	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	15.67	14.76	4.00
137	1.25-5.00	7.68	8.66	10.238	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	17.80	17.05	4.44
147	1.25-5.00	7.68	8.66	11.419	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	18.11	17.17	4.25
157	1.25-5.00	7.48	8.66	13.191	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	19.09	18.11	4.49
167	1.25-5.00	9.25	10.04	14.569	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	21.46	20.79	4.88
177	1.25-5.00	10.24	10.63	16.143	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	22.64	5.91
187	1.25-5.00	10.24	10.63	17.128	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	23.03	22.64	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
107	1.25-3.55	3.9370m6	4.17	1.10	4.92	M24	1.97	2.3622m6	2.51	0.71	4.33	M20	1.65	0.57	8.35	32.17	13.15	12.31	733	
	1.8898k6							2.02	0.55	M16		1.42								
117	1.25-3.55	4.3307m6	4.56	1.10	5.51	M24	1.97	2.7559m6	2.93	0.79	4.33	M20	1.65	0.73	9.29	36.11	14.37	13.29	1027	
	2.1654m6							2.32	0.63	M16		1.42								
127	1.25-3.55	4.1339m6	4.36	1.10	6.30	M24	1.97	3.3465m6	3.54	0.87	5.51	M20	1.65	0.73	10.43	38.87	16.11	15.08	1396	
	2.9528m6							3.12	0.79	M16		1.42								
137	1.25-3.55	5.1181m6	5.39	1.26	7.09	M24	1.97	3.9370m6	4.17	1.10	7.09	M24	1.97	0.94	11.02	42.59	18.11	17.41	1854	
	3.1496m6							3.34	0.87	M20		1.65								
147	1.25-3.55	5.5118m6	5.82	1.42	8.66	M30	2.36	4.3307m6	4.56	1.10	7.09	M24	1.97	0.94	12.40	47.37	18.57	17.62	2480	
	3.5433m6							3.73	0.98	M20		1.65								
157	1.25-3.15	5.9055m6	6.21	1.42	7.87	M30	2.36	5.1181m6	5.39	1.26	7.09	M24	1.97	1.10	13.19	52.52	19.64	18.72	3171	
	4.1338m6							4.36	1.10	M20		1.65								
167	1.25-4.00	7.0866m6	7.47	1.77	8.66	M30	2.36	5.5118m6	5.82	1.42	8.66	M30	2.36	1.38	14.76	59.46	22.17	21.94	4623	
	3.9370m6							4.17	1.10	M24		1.97								
177	1.25-3.15	7.6772m6	8.06	1.77	9.84	M30	2.36	6.6929m6	7.04	1.57	8.86	M30	2.36	1.38	17.72	70.58	24.07	23.27	6777	
	4.7244m6							4.99	1.26	M24		1.97								
187	1.25-3.15	7.6772m6	8.06	1.77	9.84	M30	2.36	6.6929m6	7.04	1.57	8.86	M30	2.36	1.38	17.72	70.58	24.07	23.27	6999	
	4.7244m6							4.99	1.26	M24		1.97								

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

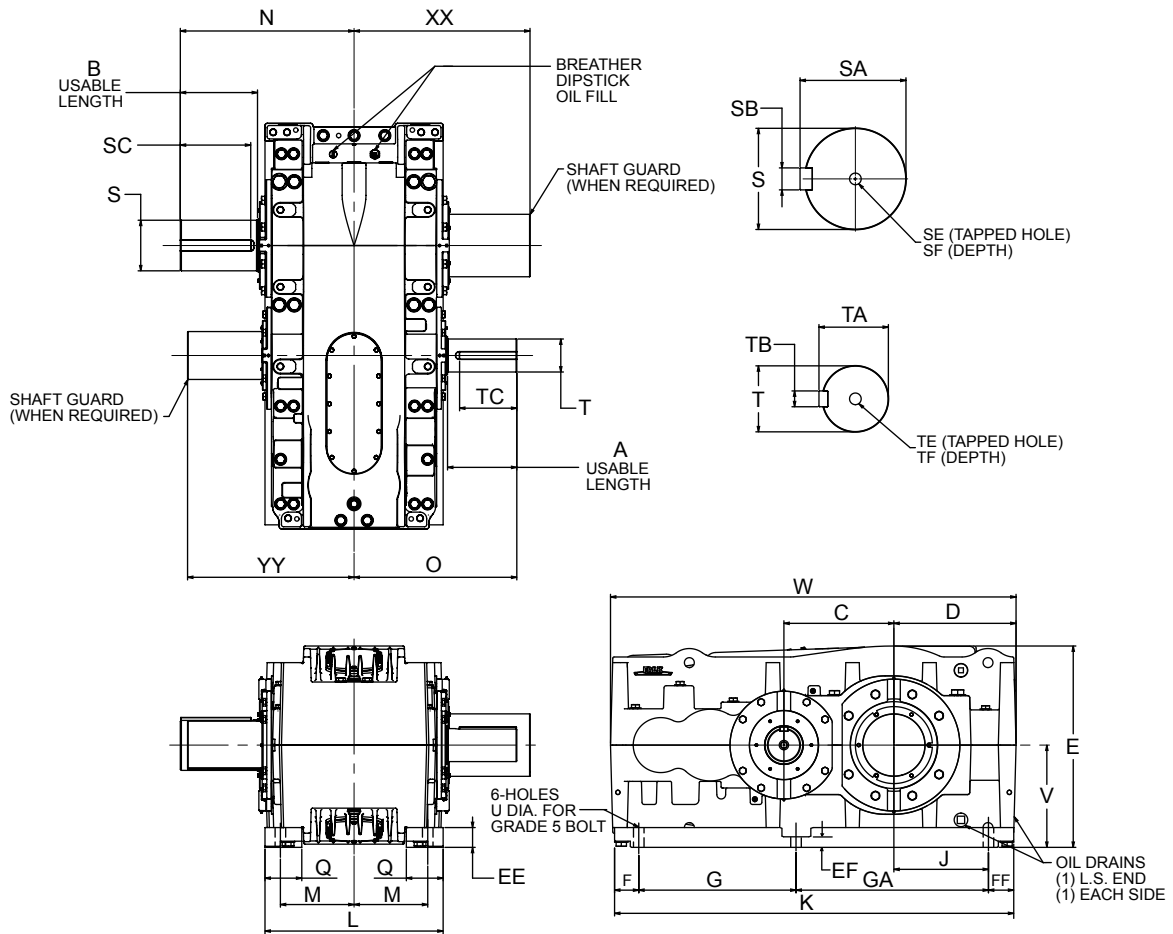
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC1 Single Reduction Solid Low-Speed Shaft, Base Drive

Sizes 197 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N*	O	Q
197	1.25-5.00	11.81	13.78	18.112	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	29.13	6.59
207	1.25-5.00	11.81	13.78	19.687	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	29.13	6.59
217	1.25-5.00	13.78	16.14	21.261	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	33.27	6.80
227	1.25-5.00	13.78	16.14	23.230	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	33.27	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.	
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
197	1.25-3.55							7.0866m6	7.47	1.77										
	4.00-5.00	9.0551m6	9.48	1.97	12.60	M30	2.36	5.9055m6	6.21	1.42	10.24	M30	2.36	1.89	18.31	72.60	31.50	29.81	9180	
207	1.25-3.55							7.0866m6	7.47	1.77										
	4.00-5.00	9.0551m6	9.48	1.97	12.60	M30	2.36	5.9055m6	6.21	1.42	10.24	M30	2.36	1.89	18.31	72.60	31.50	29.81	9528	
217	1.25-3.15							8.0709m6	8.50	1.97										
	3.55-5.00	10.6299m6	11.09	2.48	14.17	M30	2.36	7.0866m6	7.47	1.77	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14031	
227	1.25-3.15							8.0709m6	8.50	1.97										
	3.55-5.00	10.6299m6	11.09	2.48	14.17	M30	2.36	7.0866m6	7.47	1.77	12.20	M30	2.36	2.17	21.65	85.79	35.69	33.68	14629	

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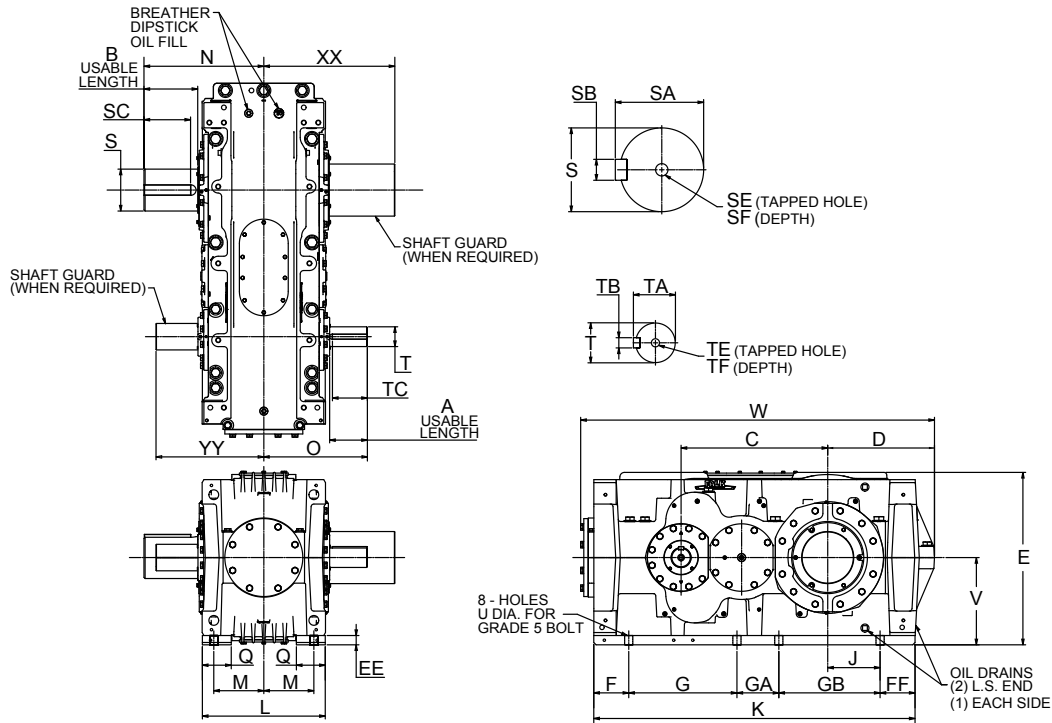
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
133	5.60-28.0	3.94	7.48	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	13.07	4.44
143	5.60-28.0	4.92	7.48	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	14.33	4.25
153	5.60-28.0	5.12	7.48	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	15.55	4.49
163	5.60-28.0	6.10	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	17.52	4.88
173	5.00-25.0	6.30	10.63	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	18.70	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.	
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
133	5.60-20.0							2.2047m6	2.36	0.63										
	22.4-28.0	5.1181m6	5.39	1.26	7.09	M24	1.97	1.6535k6	1.77	0.47	3.94		M20	1.65	0.94	11.02	43.35	16.99	13.46	1755
143	5.60-20.0							2.5591m6	2.71	0.71										
	22.4-28.0	5.5118m6	5.82	1.42	7.09	M30	2.36	1.7717k6	1.90	0.55	4.53		M20	1.65	0.94	12.40	48.11	17.32	14.80	2295
153	5.60-20.0							2.9528m6	3.12	0.79										
	22.4-28.0	6.2992m6	6.65	1.57	7.09	M30	2.36	2.1654m6	2.32	0.63	4.92		M20	1.65	1.10	13.19	52.72	18.55	16.26	3115
163	5.60-20.0							3.3465m6	3.54	0.87										
	22.4-28.0	7.0866m6	7.47	1.77	7.87	M30	2.36	2.5591m6	2.71	0.71	5.91		M20	1.65	1.38	14.76	59.88	22.17	18.23	4332
173	5.00-18.0							3.7402m6	3.93	0.98										
	20.0-25.0	7.6772m6	8.06	1.77	9.84	M30	2.36	2.9528m6	3.12	0.79	6.10		M24	1.97	1.38	17.72	71.46	24.09	19.33	6355

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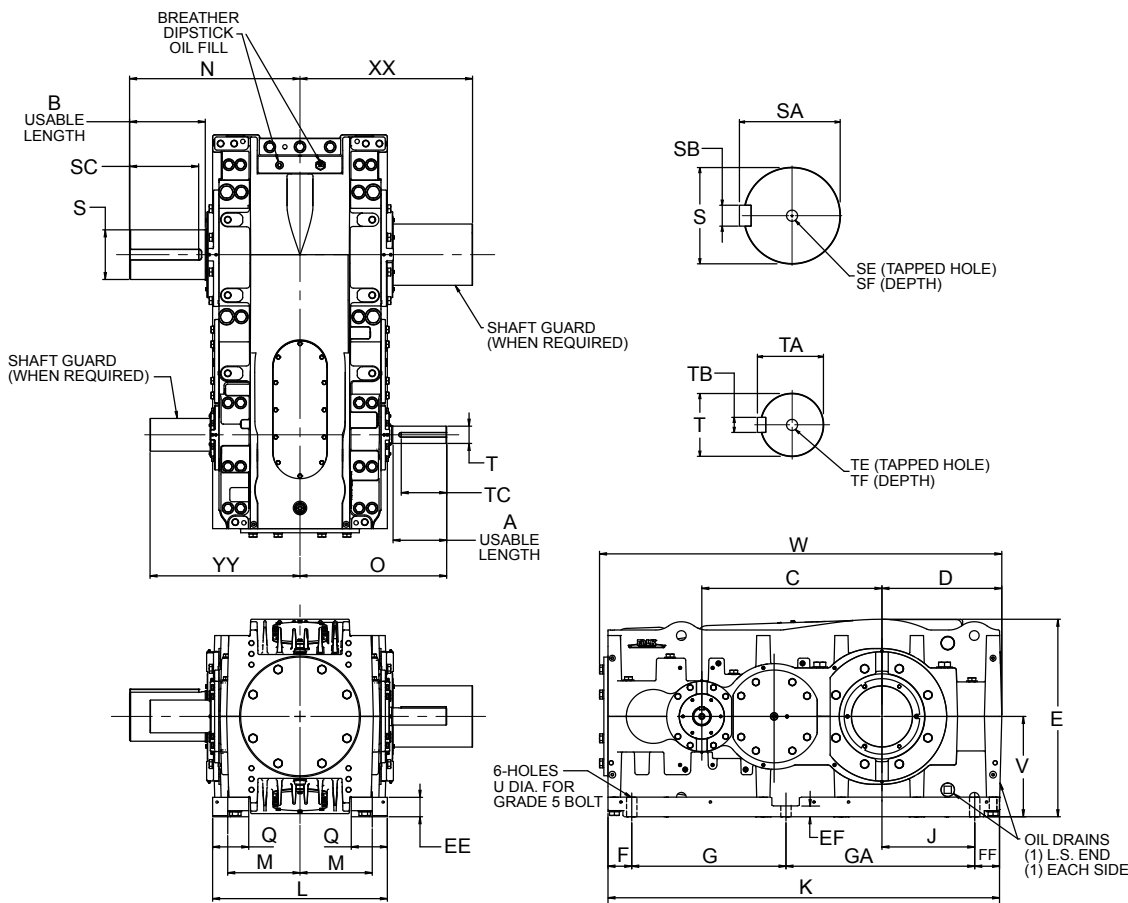
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 193 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
193	5.00-25.0	9.45	13.78	31.302	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	26.77	6.59
203	5.60-28.0	9.45	13.78	32.877	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	26.77	6.59
213	5.00-25.0	10.63	16.14	36.617	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	30.12	6.80
223	5.60-28.0	10.63	16.14	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	30.12	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
193	5.00-18.0	9.0551m6	9.48	1.97	12.60	M30	2.36	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	18.31	73.42	31.50	27.37	10105
	20.0-25.0							3.1496m6	3.34	0.87	8.27	M20	1.65						
203	5.60-20.0	9.0551m6	9.48	1.97	12.60	M30	2.36	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	18.31	73.42	31.50	27.37	10508
	22.4-28.0							3.1496m6	3.34	0.87	8.27	M20	1.65						
213	5.00-18.0	10.6299m6	11.09	2.48	14.17	M30	2.36	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	21.65	85.79	35.69	30.59	14319
	20.0-25.0							3.9370m6	4.17	1.10		M24	1.97						
223	5.60-20.0	10.6299m6	11.09	2.48	14.17	M30	2.36	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	21.65	85.79	35.69	30.59	15124
	22.4-28.0							3.9370m6	4.17	1.10		M24	1.97						

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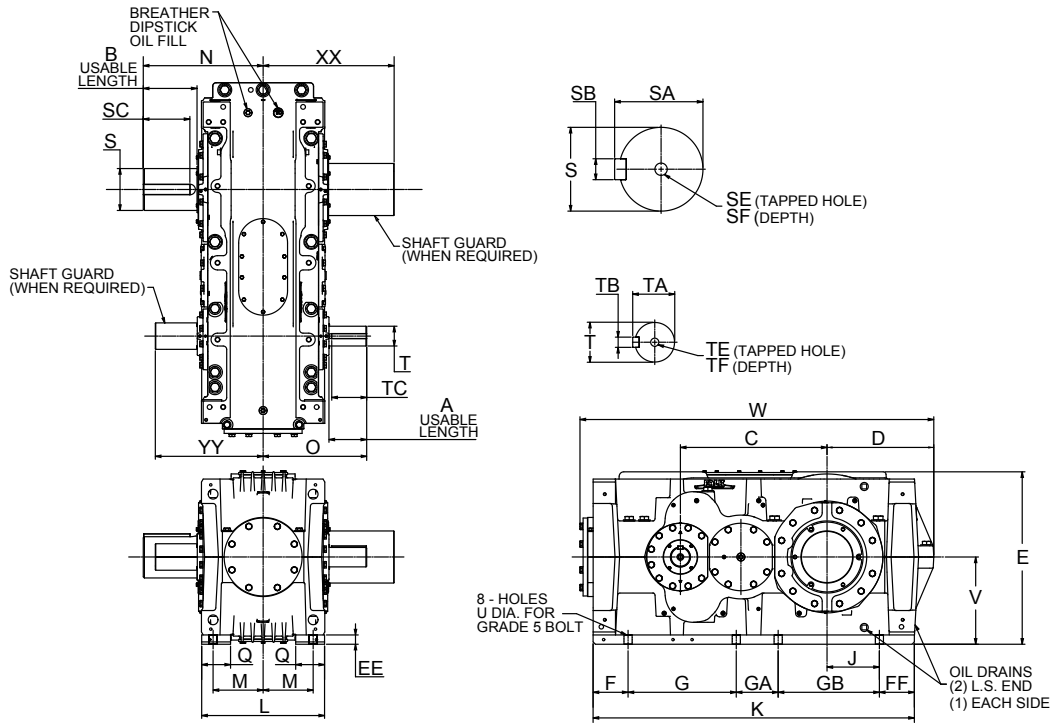
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
145	5.60-28.0	4.92	7.48	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	14.33	4.25
	22.4-28.0	5.12	7.48	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	15.55	4.49
155	5.60-28.0	6.10	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	17.52	4.88
	22.4-28.0	6.30	10.63	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	18.70	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
145	5.60-20.0	5.5118m6	5.82	1.42	7.09	M30	2.36	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	12.40	48.11	17.32	14.80	2295
	22.4-28.0	1.7717k6	1.90	0.55	M16	1.42													
155	5.60-20.0	6.2992m6	6.65	1.57	7.09	M30	2.36	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	13.19	52.72	18.55	16.26	3115
	22.4-28.0	2.1654m6	2.32	0.63															
165	5.60-20.0	7.0866m6	7.47	1.77	7.87	M30	2.36	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	14.76	59.88	22.17	18.23	4332
	22.4-28.0	2.5591m6	2.71	0.71															
175	5.00-18.0	7.6772m6	8.06	1.77	9.84	M30	2.36	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	24.09	19.33	6355
	20.0-25.0	2.9528m6	3.12	0.79	M20	1.65													

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

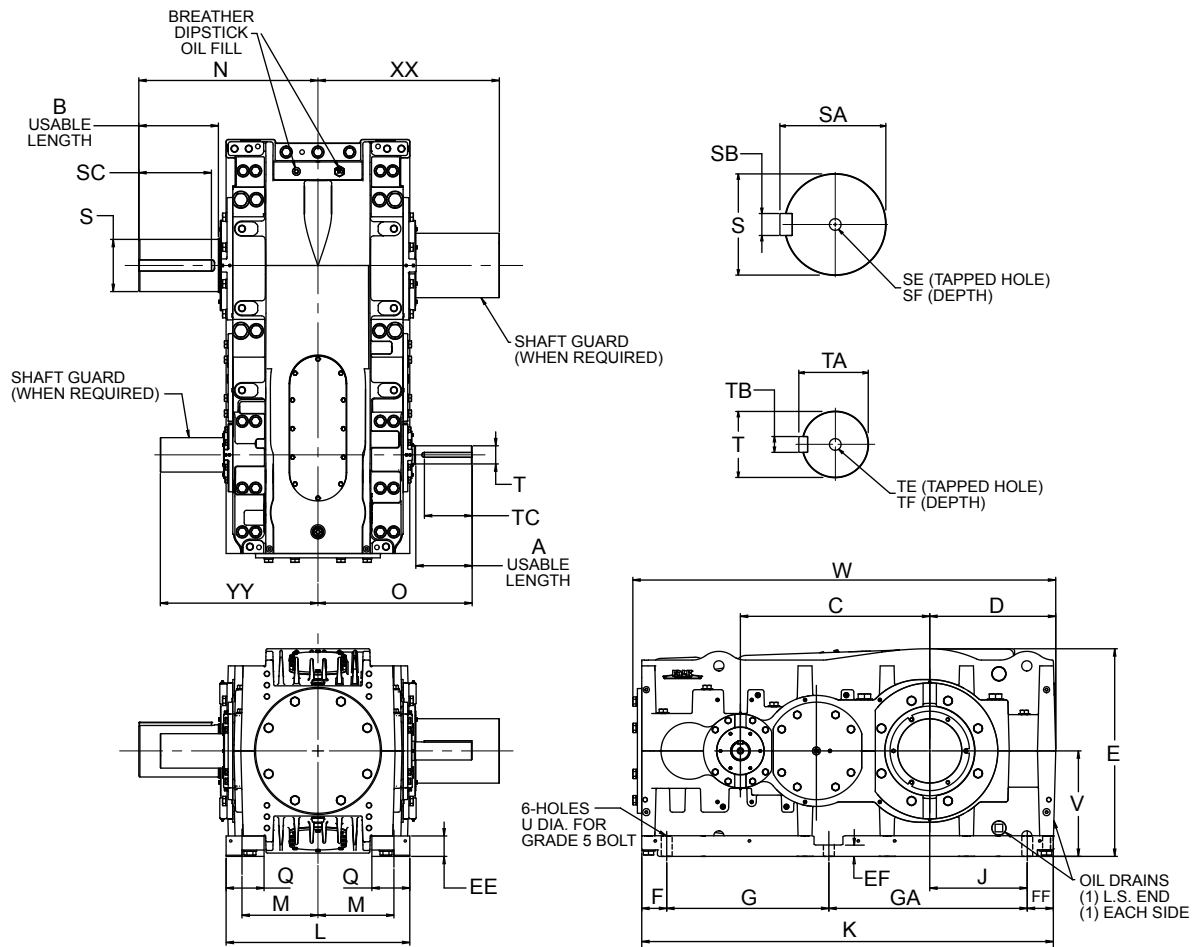
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 195 – 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
195	5.00-25.0	9.45	13.78	31.302	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	26.77	6.59
215	5.00-25.0	10.63	16.14	36.617	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	30.12	6.80
225	5.60-28.0	10.63	16.14	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	30.12	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
195	5.00-18.0							4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	18.31	73.42	31.50	27.37	10105
	20.0-25.0	9.0551m6	9.48	1.97	12.60	M30	2.36	3.1496m6	3.34	0.87	8.27	M20	1.65						
215	5.00-18.0							5.5118m6	5.82	1.42		M30	2.36	2.17	21.65	85.79	35.69	30.59	14319
	20.0-25.0	10.6299m6	11.09	2.48	14.17	M30	2.36	3.9370m6	4.17	1.10	9.06	M24	1.97						
225	5.60-20.0							5.5118m6	5.82	1.42		M30	2.36	2.17	21.65	85.79	35.69	30.59	15124
	22.4-28.0	10.6299m6	11.09	2.48	14.17	M30	2.36	3.9370m6	4.17	1.10	9.06	M24	1.97						

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

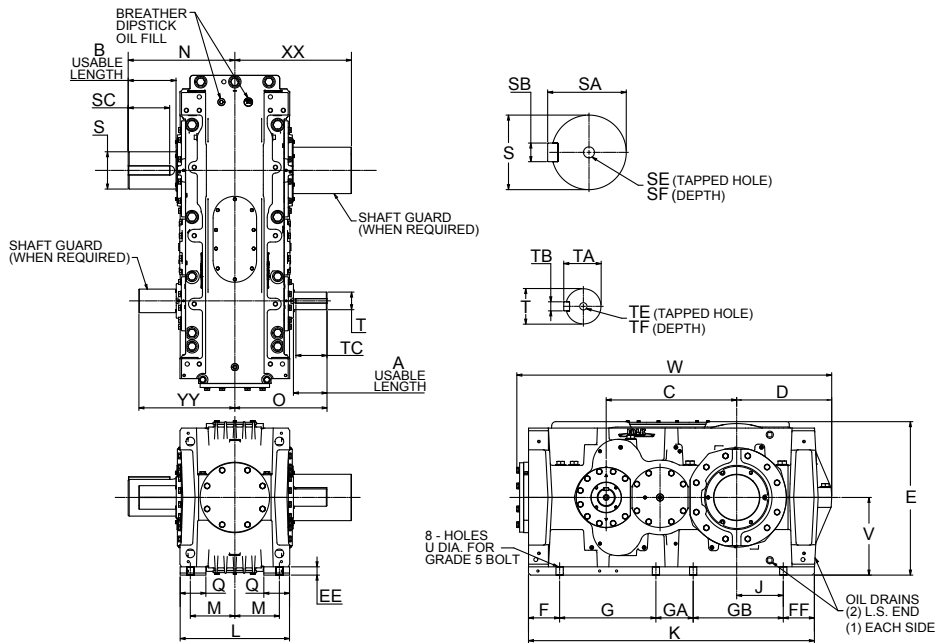
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
107	5.60-28.0	3.94	4.72	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	11.61	10.83	3.07
117	5.60-28.0	3.94	6.10	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	13.98	11.79	3.62
127	5.60-28.0	3.94	6.10	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	14.69	12.52	4.00
137	5.60-28.0	3.94	7.48	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	13.07	4.44
147	5.60-28.0	4.92	7.48	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	14.33	4.25
157	5.60-28.0	5.12	7.48	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	15.55	4.49
167	5.60-28.0	6.10	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	17.52	4.88
177	5.00-25.0	6.30	10.63	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	18.70	5.91
187	5.60-28.0	6.30	10.63	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	23.03	18.70	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
107	5.6-20.0	3.9370m6	4.17	1.10	4.33	M24	1.97	1.6535k6	1.77	0.47	3.94	M16	1.42	0.57	8.35	32.17	12.01	11.11	725	
	1.1024j6							1.21	0.31	M10		0.87								
117	5.6-20.0	4.3307m6	4.56	1.10	5.51	M24	1.97	1.6535k6	1.77	0.47	3.94	M16	1.42	0.73	9.29	36.10	14.37	12.13	1039	
	1.3780k6							1.49	0.39	M12		1.10								
127	5.60-20.0	4.7244m6	4.99	1.26	5.51	M24	1.97	2.0472m6	2.20	0.63	3.94	M20	1.65	0.73	10.43	39.64	14.98	12.88	1360	
	1.3780k6							1.49	0.39	M12		1.10								
137	5.60-20.0	5.1181m6	5.39	1.26	7.09	M24	1.97	2.2047m6	2.36	0.63	3.94	M20	1.65	0.94	11.02	43.34	16.99	13.49	1755	
	1.6535k6							1.77	0.47	M16		1.42								
147	5.60-20.0	5.5118m6	5.82	1.42	7.09	M30	2.36	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	12.40	48.11	17.31	14.81	2295	
	1.7717k6							1.90	0.55	M16		1.42								
157	5.60-20.0	6.2992m6	6.65	1.57	7.09	M30	2.36	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	13.19	52.70	18.55	16.60	3115	
	2.1654m6							2.32	0.63											
167	5.60-20.0	7.0866m6	7.47	1.77	7.87	M30	2.36	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	14.76	59.87	22.17	18.24	4332	
	2.5591m6							2.71	0.71											
177	5.00-18.0	7.6772m6	8.06	1.77	9.84	M30	2.36	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	24.07	19.31	6355	
	2.9528m6							3.12	0.79	M20		1.65								
187	5.60-20.0	7.6772m6	8.06	1.77	9.84	M30	2.36	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	24.07	19.31	6351	
	2.9528m6							3.12	0.79	M20		1.65								

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

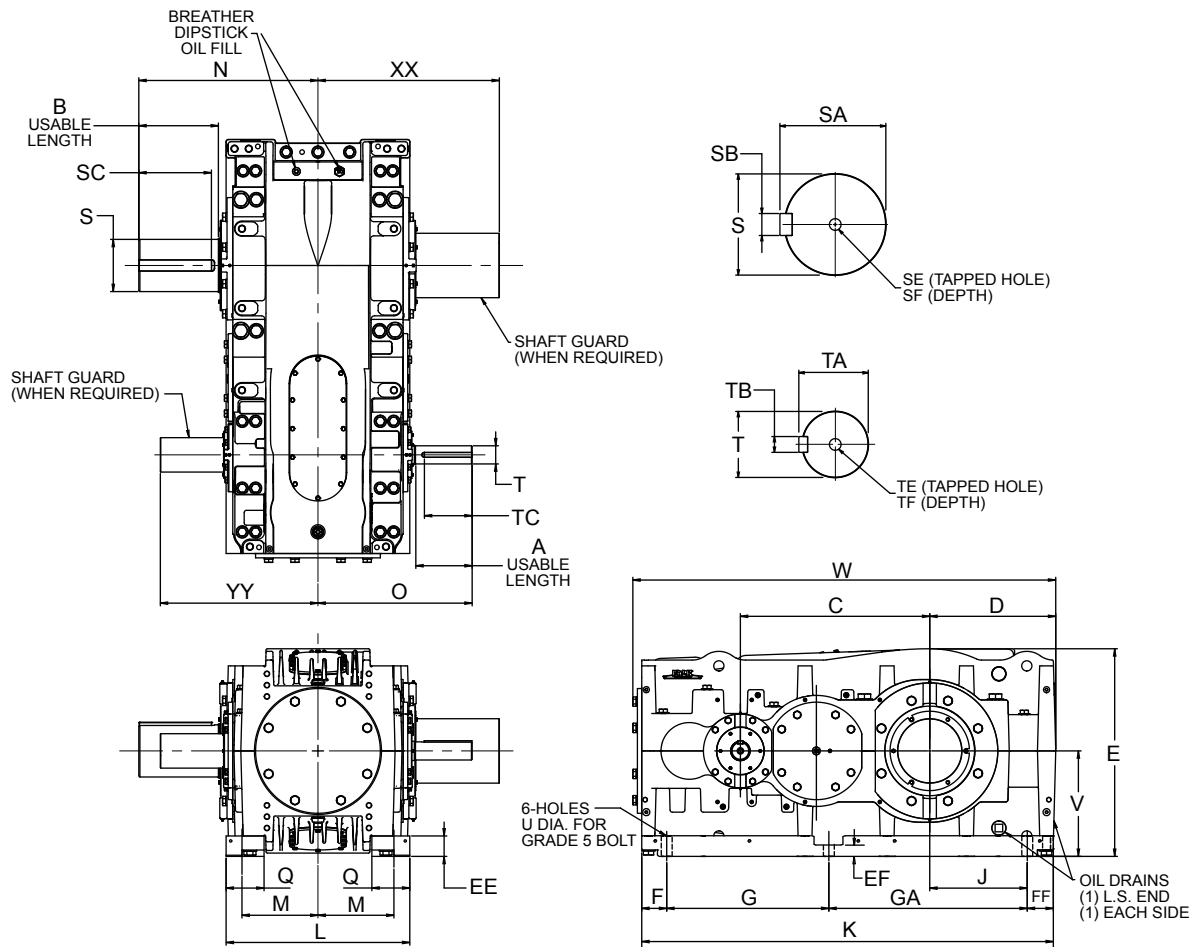
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 197 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
197	5.00-25.0	9.45	13.78	31.302	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	26.77	6.59
207	5.60-28.0	9.45	13.78	32.877	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	26.77	6.59
217	5.00-25.0	10.63	16.14	36.617	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	30.12	6.80
227	5.60-28.0	10.63	16.14	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	30.12	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
197	5.00-18.0	9.0551m6	9.48	1.97	12.60	M30	2.36	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	18.31	73.42	31.50	27.37	10105
	20.0-25.0							3.1496m6	3.34	0.87	8.27	M20	1.65						
207	5.60-20.0	9.0551m6	9.48	1.97	12.60	M30	2.36	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	18.31	73.42	31.50	27.37	10508
	22.4-28.0							3.1496m6	3.34	0.87	8.27	M20	1.65						
217	5.00-18.0	10.6299m6	11.09	2.48	14.17	M30	2.36	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	21.65	85.79	35.69	30.59	14319
	20.0-25.0							3.9370m6	4.17	1.10		M24	1.97						
227	5.60-20.0	10.6299m6	11.09	2.48	14.17	M30	2.36	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	21.65	85.79	35.69	30.59	15124
	22.4-28.0							3.9370m6	4.17	1.10		M24	1.97						

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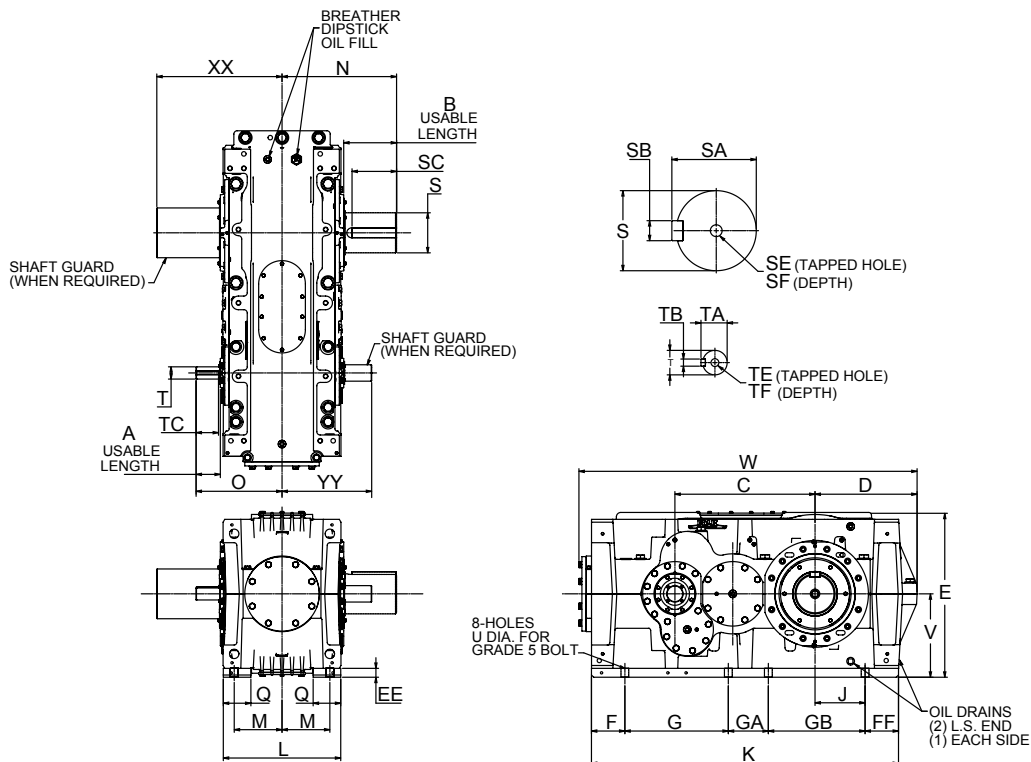
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
133	31.5-160	2.76	7.48	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	11.89	4.44
143	31.5-160	3.94	7.48	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	13.15	4.25
153	31.5-160	3.94	7.48	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	14.37	4.49
163	31.5-160	3.94	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	15.24	4.88
173	28.0-140	5.12	10.63	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	17.52	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
133	31.5-112	5.1181m6	5.39	1.26	7.09	M24	1.97	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	11.02	43.35	16.99	12.43	1799	
	0.9843j6							1.10	0.31	M10		0.87								
143	31.5-112	5.5118m6	5.82	1.42	7.09	M30	2.36	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	17.32	13.90	2221	
	1.1181j6							1.29	0.31	M10		0.87								
153	31.5-112	6.2992m6	6.65	1.57	7.09	M30	2.36	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.72	18.55	14.69	3157	
	1.3780k6							1.49	0.39	M12		1.10								
163	31.5-112	7.0866m6	7.47	1.77	7.87	M30	2.36	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.88	22.17	15.87	4408	
	1.6535k6							1.77	0.47	M16		1.42								
173	28.0-100	7.6772m6	8.06	1.77	9.84	M30	2.36	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	24.09	18.35	6335	
	1.9685k6							2.10	0.55	M16		1.42								

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

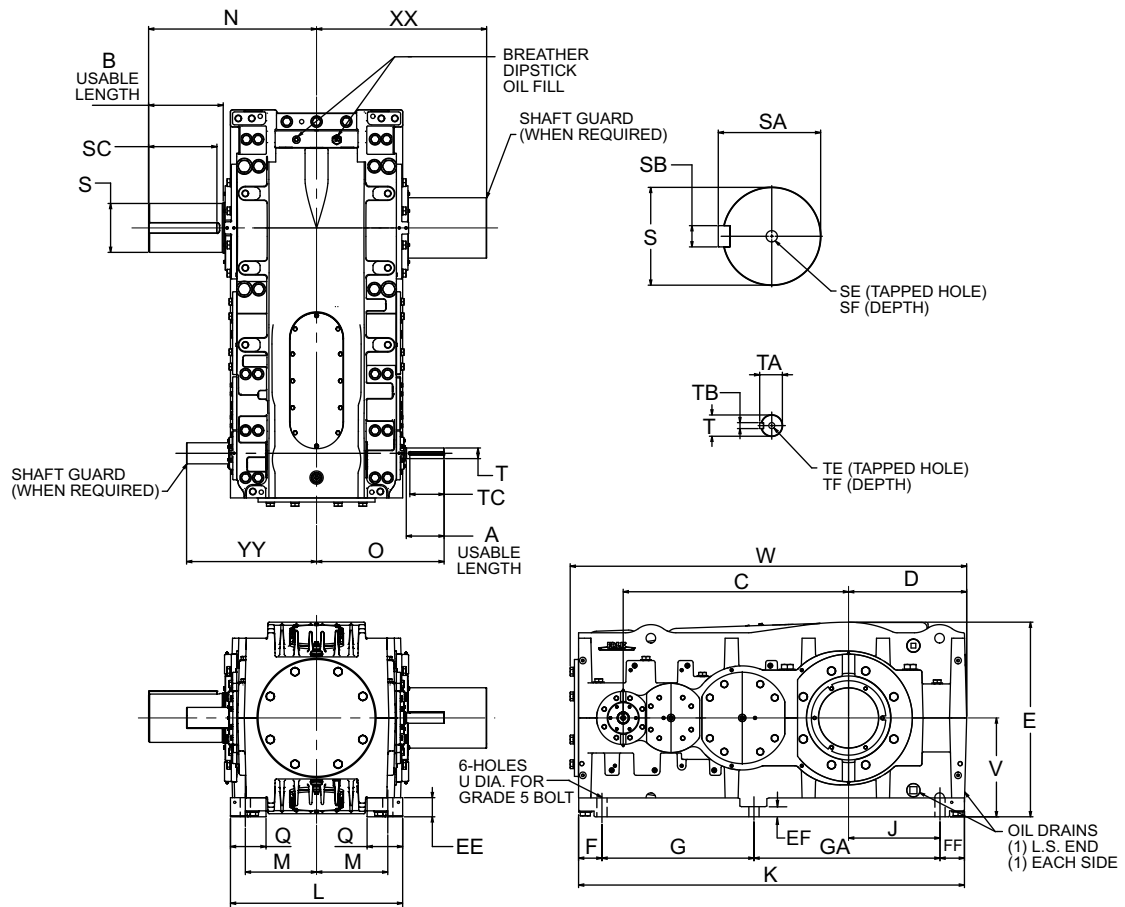
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 193 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
193	28.0-140	6.69	13.78	40.162	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	23.62	6.59
203	31.5-160	6.69	13.78	41.737	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	23.62	6.59
213	28.0-140	7.87	16.14	46.855	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	26.57	6.80
223	31.5-160	7.87	16.14	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	26.57	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
193	28.0-100							2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	18.31	73.42	31.50	24.07	10213
	112-140	9.0551m6	9.48	1.97	12.60	M30	2.36	1.9685k6	2.10	0.55		M16	1.42						
203	31.5-112							2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	18.31	73.42	31.50	24.07	10640
	125-160	9.0551m6	9.48	1.97	12.60	M30	2.36	1.9685k6	2.10	0.55		M16	1.42						
213	28.0-100							3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	14472
	112-140	10.6299m6	11.09	2.48	14.17	M30	2.36	2.5591m6	2.71	0.71		M20	1.65						
223	31.5-112							3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	15221
	125-160	10.6299m6	11.09	2.48	14.17	M30	2.36	2.5591m6	2.71	0.71		M20	1.65						

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

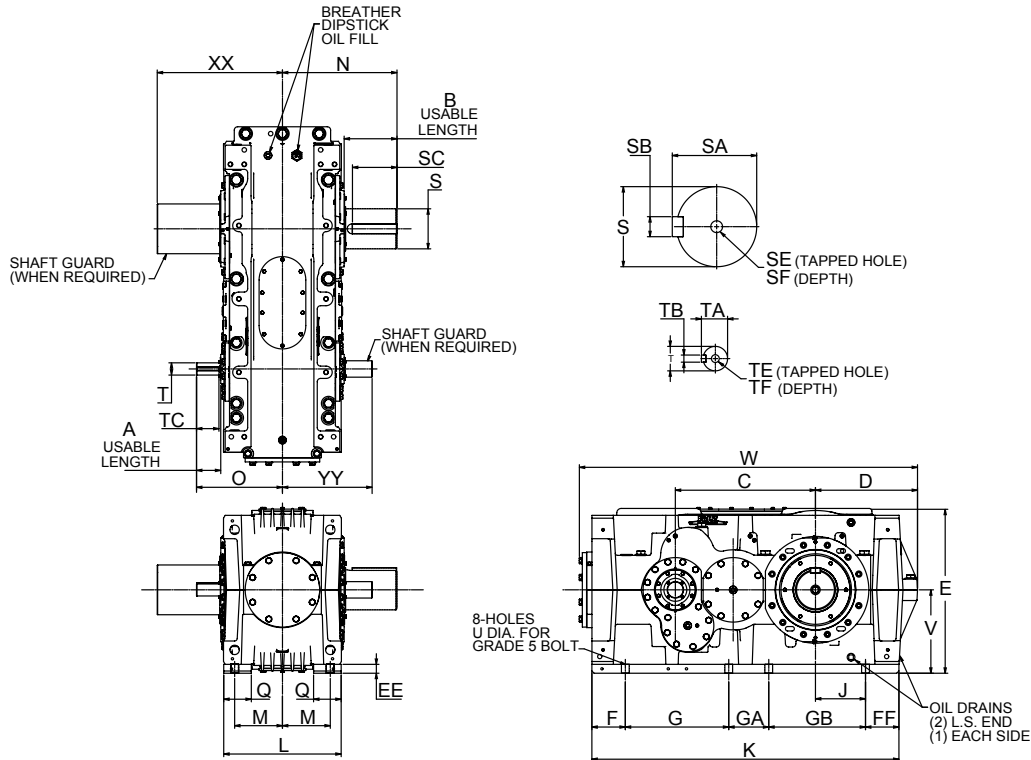
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
145	31.5-160	3.94	7.48	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	13.15	4.25
155	31.5-160	3.94	7.48	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	14.37	4.49
165	31.5-160	3.94	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	15.24	4.88
175	28.0-140	5.12	10.63	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	17.52	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
145	31.5-112	5.5118m6	5.82	1.42	7.09	M30	2.36	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	17.32	13.90	2221
	125-160							1.1181j6	1.29	0.31		M10	0.87						
155	31.5-112	6.2992m6	6.65	1.57	7.09	M30	2.36	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.72	18.55	14.69	3157
	125-160							1.3780k6	1.49	0.39		M12	1.10						
165	31.5-112	7.0866m6	7.47	1.77	7.87	M30	2.36	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.88	22.17	15.87	4408
	125-160							1.6535k6	1.77	0.47		M16	1.42						
175	28.0-100	7.6772m6	8.06	1.77	9.84	M30	2.36	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	24.09	18.35	6335
	112-140							1.9685k6	2.10	0.55		M16	1.42						

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

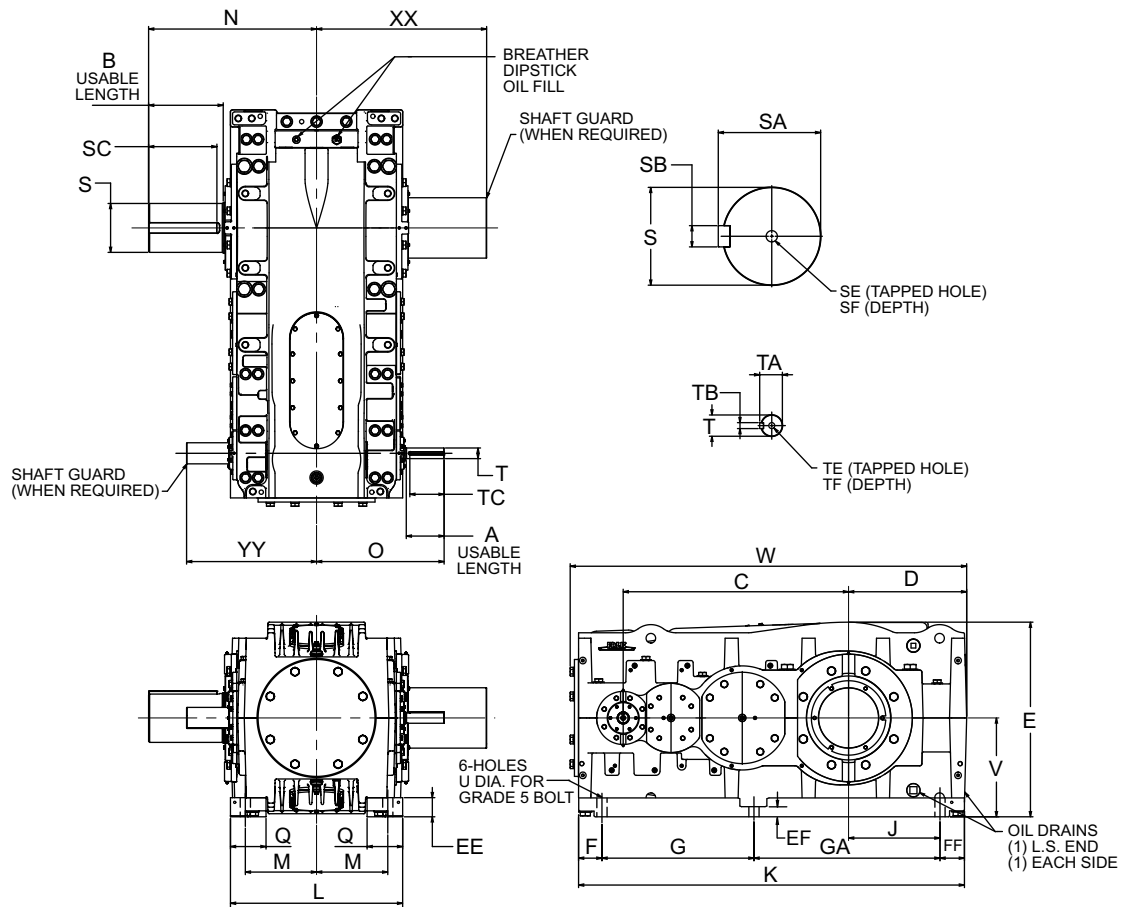
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 195 – 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
195	28.0-140	6.69	13.78	40.162	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	23.62	6.59
215	28.0-140	7.87	16.14	46.855	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	26.57	6.80
225	31.5-160	7.87	16.14	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	26.57	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
195	28.0-100	9.0551m6	9.48	1.97	12.60	M30	2.36	2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	18.31	73.42	31.50	24.07	10213
	1.9685k6							2.10	0.55	M16		1.42							
215	28.0-100	10.6299m6	11.09	2.48	14.17	M30	2.36	3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	14472
	2.5591m6							2.71	0.71	M20		1.65							
225	31.5-112	10.6299m6	11.09	2.48	14.17	M30	2.36	3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	15221
	2.5591m6							2.71	0.71	M20		1.65							

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

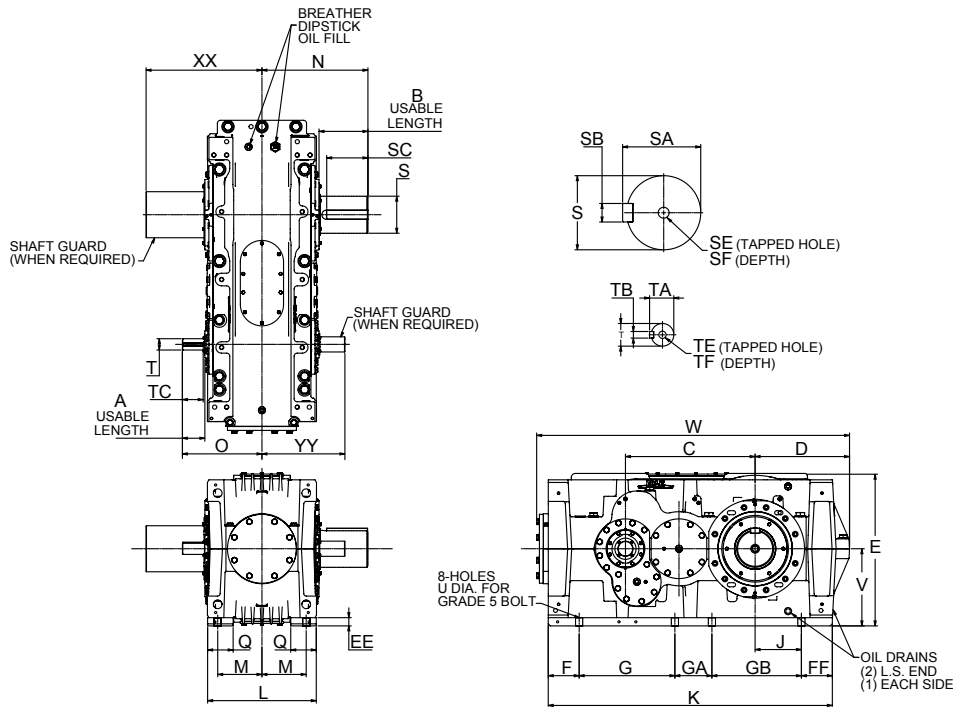
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
107	31.5-160	2.20	4.72	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	11.61	8.86	3.07
117	31.5-160	2.20	6.10	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	13.98	9.80	3.62
127	31.5-160	2.95	6.10	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	14.69	11.32	4.00
137	31.5-160	2.76	7.48	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	11.89	4.44
147	31.5-160	3.94	7.48	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	13.15	4.25
157	31.5-160	3.94	7.48	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	14.37	4.49
167	31.5-160	3.94	8.86	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	15.24	4.88
177	28.0-140	5.12	10.63	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	17.52	5.91
187	31.5-160	5.12	10.63	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	23.03	17.52	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft †							High-Speed Shaft †						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF							
107	31.5-112	3.9370m6	4.17	1.10	4.33	M24	1.97	1.1024j6	1.21	0.31	1.97	M10	0.87	0.57	8.35	32.17	12.01	9.15	736	
	0.9449j6							1.06	M8			0.75								
117	31.5-112	4.3307m6	4.56	1.10	5.51	M24	1.97	1.1811j6	1.29	0.31	2.09	M10	0.87	0.73	9.29	36.10	14.37	10.10	1050	
	0.9843j6							1.10	M10			0.87								
127	31.5-112	4.7244m6	4.99	1.26	5.51	M24	1.97	1.3780k6	1.49	0.39	2.76	M12	1.10	0.73	10.43	39.64	14.98	11.73	1384	
	0.9843j6							1.10	0.31			2.64	M10							0.87
137	31.5-112	5.1181m6	5.39	1.26	7.09	M24	1.97	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	11.02	43.34	16.99	12.43	1799	
	0.9843j6							1.10	0.31			M10	0.87							
147	31.5-112	5.5118m6	5.82	1.42	7.09	M30	2.36	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	17.31	13.84	2221	
	1.1181j6							1.29	0.31			M10	0.87							
157	31.5-112	6.2992m6	6.65	1.57	7.09	M30	2.36	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.70	18.55	14.64	3157	
	1.3780k6							1.49	0.39			M12	1.10							
167	31.5-112	7.0866m6	7.47	1.77	7.87	M30	2.36	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.87	22.17	15.91	4408	
	1.6535k6							1.77	0.47			M16	1.42							
177	28.0-100	7.6772m6	8.06	1.77	9.84	M30	2.36	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	24.07	18.34	6335	
	1.9685k6							2.10	0.55			M16	1.42							
187	31.5-112	7.6772m6	8.06	1.77	9.84	M30	2.36	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	24.07	18.34	6468	
	1.9685k6							2.10	0.55			M16	1.42							

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

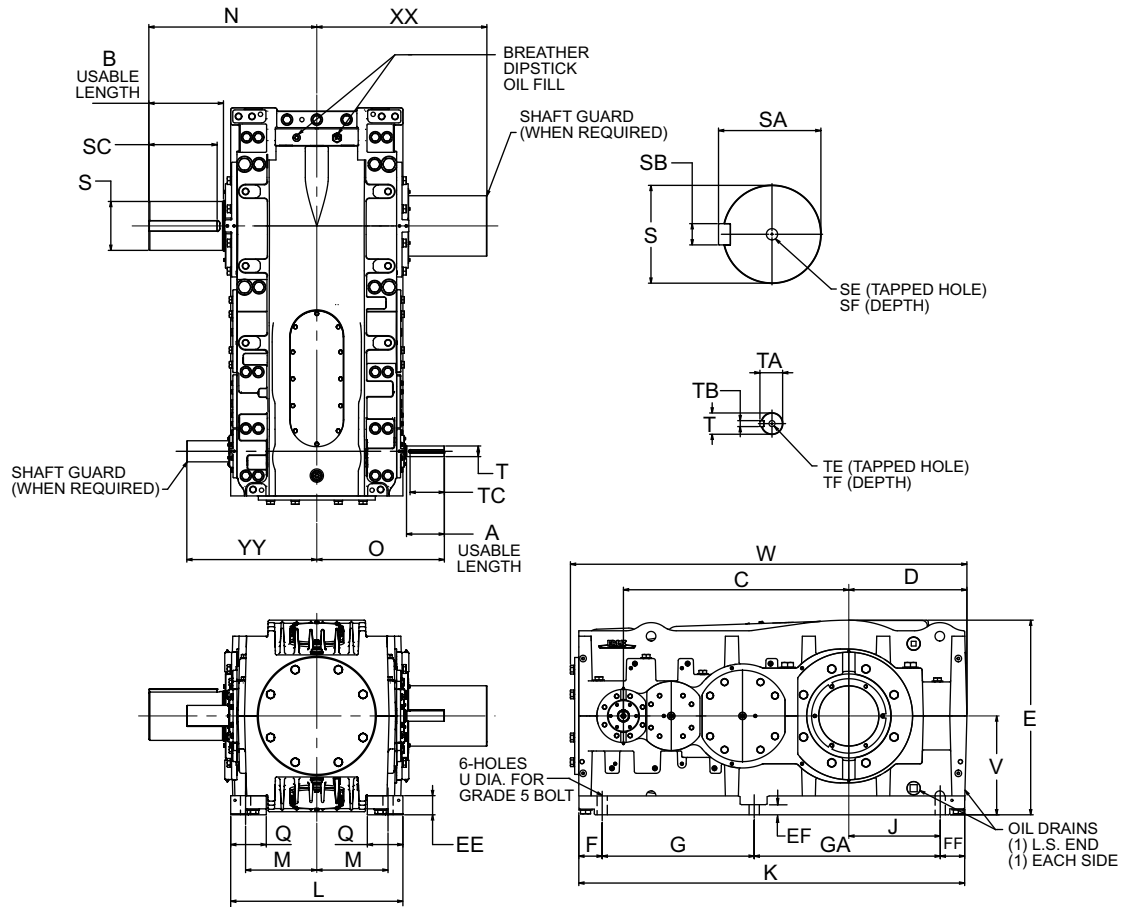
† Key Sizes per ISO/R73-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 197 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
197	28.0-140	6.69	13.78	40.162	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	23.62	6.59
207	31.5-160	6.69	13.78	41.737	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	23.62	6.59
217	28.0-140	7.87	16.14	46.855	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	26.57	6.80
227	31.5-160	7.87	16.14	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	26.57	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	YY	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
197	28.0-100							2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	18.31	73.42	31.50	24.07	10213
	112-140	9.0551m6	9.48	1.97	12.60	M30	2.36	1.9685k6	2.10	0.55		M16	1.42						
207	31.5-112							2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	18.31	73.42	31.50	24.07	10640
	125-160	9.0551m6	9.48	1.97	12.60	M30	2.36	1.9685k6	2.10	0.55		M16	1.42						
217	28.0-100							3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	14472
	112-140	10.6299m6	11.09	2.48	14.17	M30	2.36	2.5591m6	2.71	0.71		M20	1.65						
227	31.5-112							3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	21.65	85.79	35.69	26.97	15221
	125-160	10.6299m6	11.09	2.48	14.17	M30	2.36	2.5591m6	2.71	0.71		M20	1.65						

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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

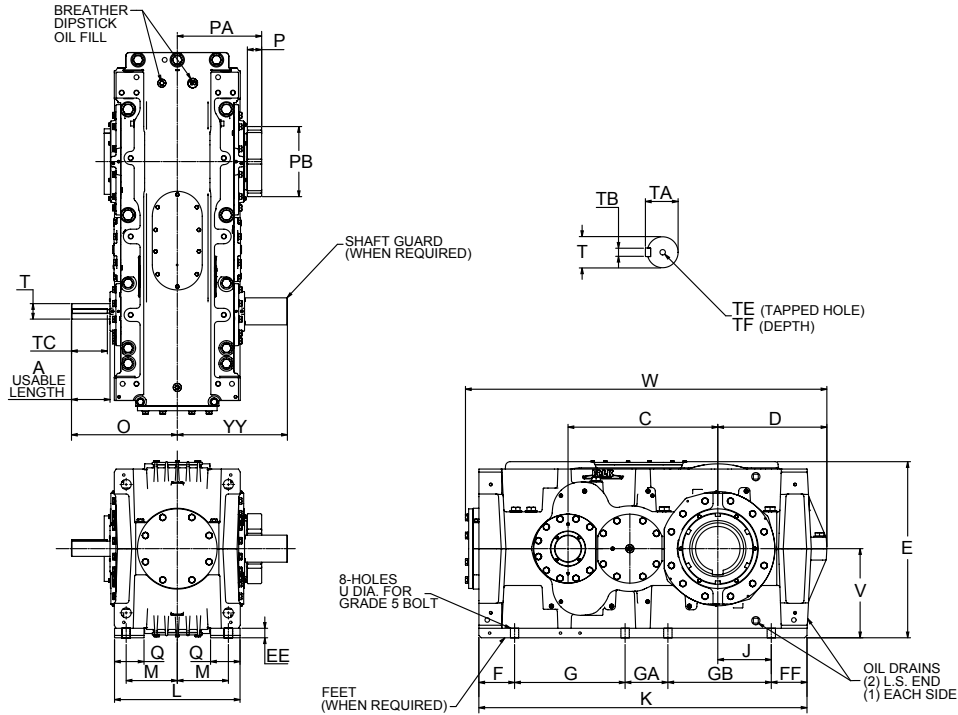
* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VPT2 Double Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 133 – 173/Dimensions — Inches

Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
133	5.60-28.0	3.94	16.9323	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	2.24	11.93	9.45	4.44
143	5.60-28.0	4.92	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	2.24	11.81	10.24	4.25
153	5.60-28.0	5.12	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	2.32	13.19	11.02	4.49
163	5.60-28.0	6.10	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.35	20.79	8.46	17.52	2.36	13.98	11.61	4.88
173	5.00-25.0	6.30	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	5.60-20.0	2.2047m6	2.36	0.63	3.94	M20	1.65	0.94	11.02	43.35	13.46	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42					
143	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42					
153	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	13.19	52.72	16.26	2887
	22.4-28.0	2.1654m6	2.32	0.63								
163	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71								
173	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65					

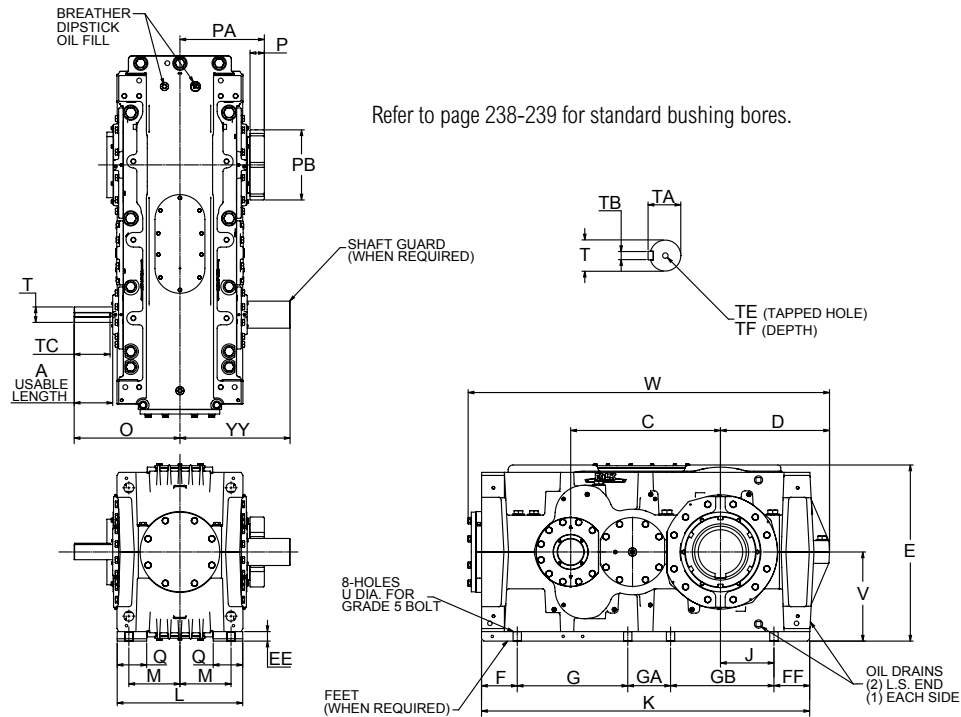
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPT2 Double Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
145	5.60-28.0	4.92	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	2.24	11.81	10.24	4.25
155	5.60-28.0	5.12	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	2.32	13.19	11.02	4.49
165	5.60-28.0	6.10	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	2.36	13.98	11.61	4.88
175	5.00-25.0	6.30	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
145	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42					
155	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	13.19	52.72	16.26	2887
	22.4-28.0	2.1654m6	2.32	0.63								
165	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71								
175	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65					

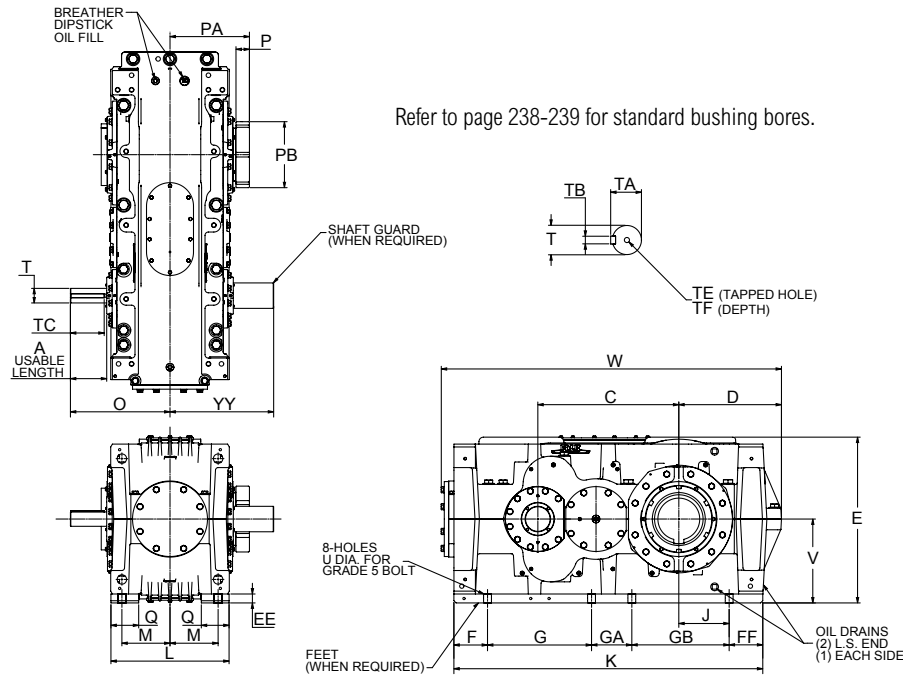
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPT2 Double Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
107	5.60-28.0	3.94	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	10.83	2.20	9.53	7.28	3.07
117	5.60-28.0	3.94	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	11.79	2.20	10.51	8.07	3.62
127	5.60-28.0	3.94	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	12.52	2.20	10.94	8.86	4.00
137	5.60-28.0	3.94	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	2.24	11.93	9.45	4.44
147	5.60-28.0	4.92	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	2.24	11.81	10.24	4.25
157	5.60-28.0	5.12	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	2.32	13.19	11.02	4.49
167	5.60-28.0	6.10	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	2.36	13.98	11.61	4.88
177	5.00-25.0	6.30	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	...	13.03	10.98	5.91
187	5.60-28.0	6.30	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	18.70	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.57	8.35	32.17	11.11	646
	22.4-28.0	1.1024j6	1.21	0.31		M10	0.87					
117	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.73	9.29	36.10	12.13	916
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10					
127	5.60-20.0	2.0472m6	2.20	0.63	3.94	M20	1.65	0.73	10.43	39.64	12.88	1268
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10					
137	5.60-20.0	2.2047m6	2.36	0.63	3.94	M20	1.65	0.94	11.02	43.34	13.49	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42					
147	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	12.40	48.11	14.81	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42					
157	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	13.19	52.70	16.60	2887
	22.4-28.0	2.1654m6	2.32	0.63		M20	1.65					
167	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	14.76	59.87	18.24	3988
	22.4-28.0	2.5591m6	2.71	0.71		M20	1.65					
177	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	19.31	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65					
187	5.60-20.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	17.72	71.46	19.31	5946
	22.4-28.0	2.9528m6	3.12	0.79		M20	1.65					

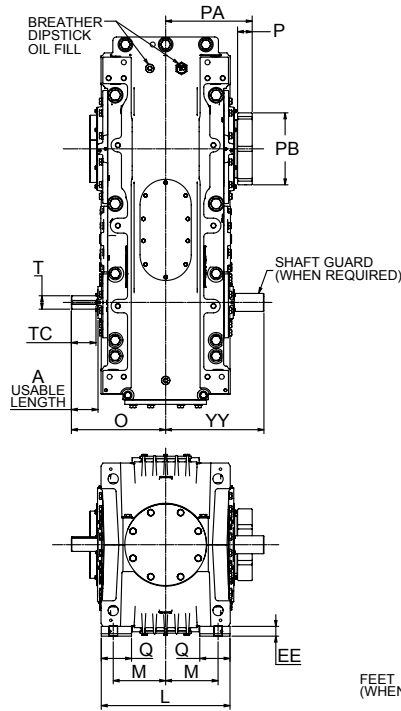
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

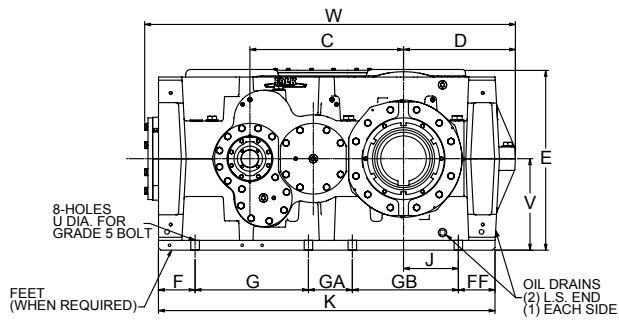
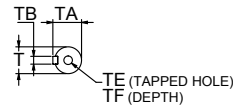
* See table 1 on page 98 for tolerance

Type VPT3 Triple Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 133 – 173/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
133	31.5-160	2.76	16.9323	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	2.24	11.93	9.45	4.44
143	31.5-160	3.94	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	2.24	11.81	10.24	4.25
153	31.5-160	3.94	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	2.32	13.19	11.02	4.49
163	31.5-160	3.94	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	2.36	13.98	11.61	4.88
173	28.0-140	5.12	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	11.02	43.35	12.43	1662
	125-160	0.9843j6	1.10	0.31		M10	0.87					
143	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	13.90	2059
	125-160	1.1811j6	1.29	0.31		M10	0.87					
153	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10					
163	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42					
173	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42					

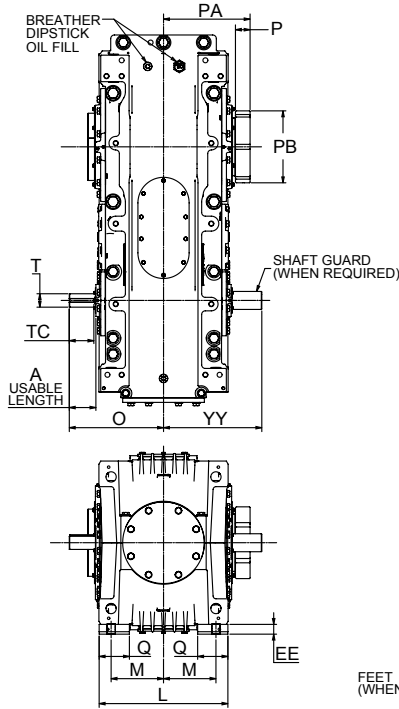
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

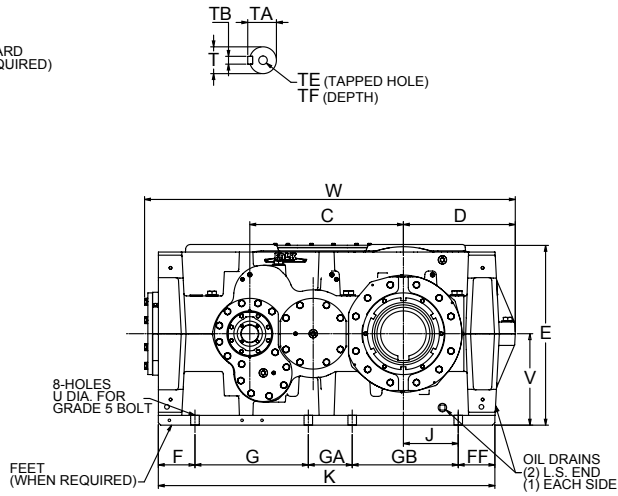
* See table 1 on page 98 for tolerance

Type VPT3 Triple Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 145 – 175/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
145	31.5-160	3.94	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	2.24	11.81	10.24	4.25
155	31.5-160	3.94	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	2.32	13.19	11.02	4.49
165	31.5-160	3.94	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	2.36	13.98	11.61	4.88
175	28.0-140	5.12	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
145	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	13.90	2059
	125-160	1.1811j6	1.29	0.31		M10	0.87					
155	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10					
165	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42					
175	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42					

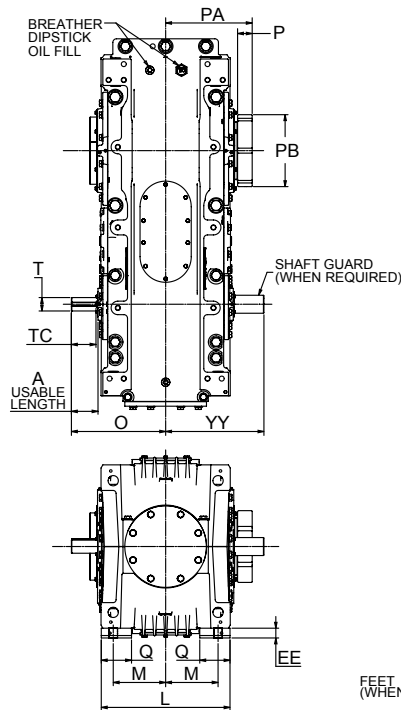
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† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

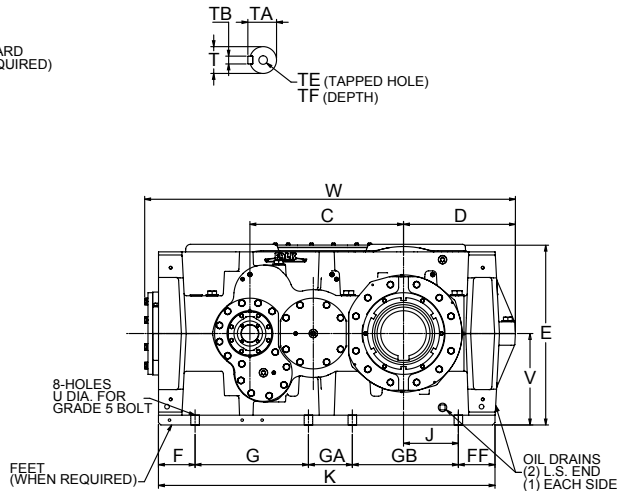
* See table 1 on page 98 for tolerance

Type VPT3 Triple Reduction Hollow Low-Speed Shaft with Taper Bushing

Sizes 107 – 187/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
107	31.5-160	2.20	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	8.86	2.20	9.53	7.28	3.07
117	31.5-160	2.20	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	9.80	2.20	10.51	8.07	3.62
127	31.5-160	2.95	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	11.32	2.20	10.94	8.86	4.00
137	31.5-160	2.76	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	2.24	11.93	9.45	4.44
147	31.5-160	3.94	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	2.24	11.81	10.24	4.25
157	31.5-160	3.94	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	2.32	13.19	11.02	4.49
167	31.5-160	3.94	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	2.36	13.98	11.61	4.88
177	28.0-140	5.12	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	...	13.03	10.98	5.91
187	31.5-160	5.12	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	17.52	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	31.5-112	1.1024j6	1.21	0.31	1.97	M10	0.87	0.57	8.35	32.17	9.15	657
	125-160	0.9449j6	1.06			M8	0.75					
117	31.5-112	1.1811j6	1.29	0.31	2.09	M10	0.87	0.73	9.29	36.10	10.10	927
	125-160	0.9843j6	1.10									
127	31.5-112	1.3780k6	1.49	0.39	2.76	M12	1.10	0.73	10.43	39.64	11.73	1292
	125-160	0.9843j6	1.10			M10	0.87					
137	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	11.02	43.34	12.43	1662
	125-160	0.9843j6	1.10			M10	0.87					
147	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	12.40	48.11	13.84	2059
	125-160	1.1811j6	1.29			M10	0.87					
157	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	13.19	52.70	14.64	2929
	125-160	1.3780k6	1.49			M12	1.10					
167	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	14.76	59.87	15.91	4064
	125-160	1.6535k6	1.77			M16	1.42					
177	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	18.34	5925
	112-140	1.9685k6	2.10			M16	1.42					
187	31.5-112	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	17.72	71.46	18.34	6063
	125-160	1.9685k6	2.10			M16	1.42					

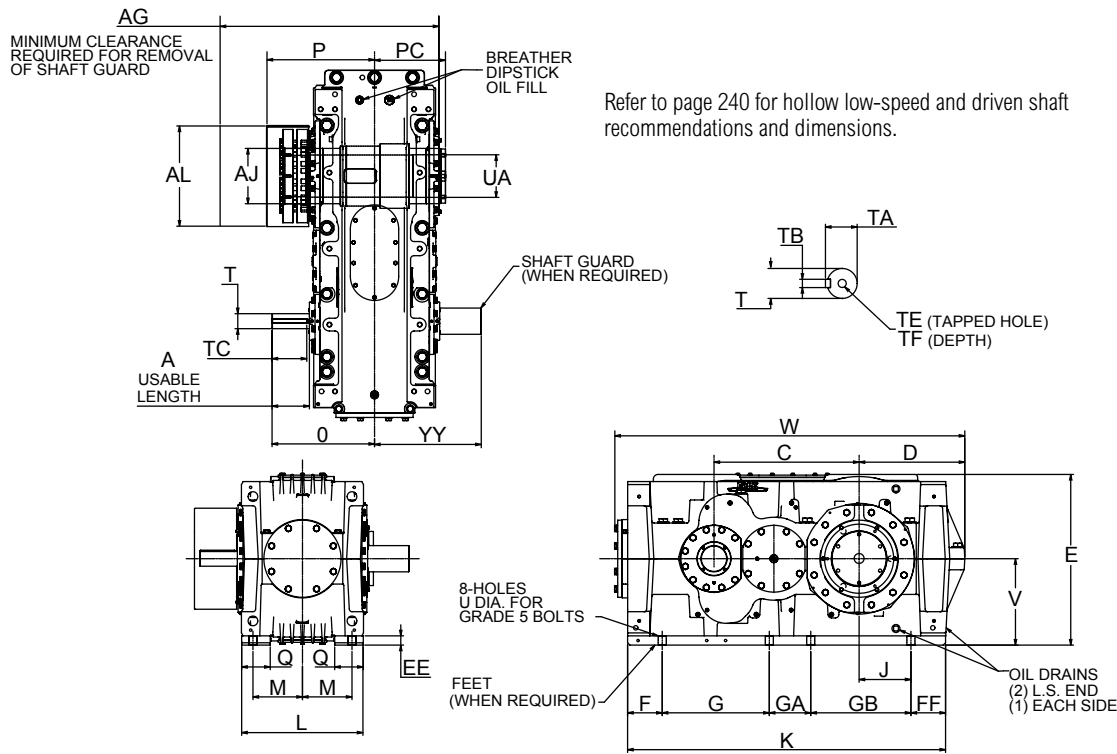
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	5.60-28.0	3.94	30.04	5.3150 J7	13.46	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	13.68	8.50	4.44
143	5.60-28.0	4.92	31.81	5.9055 J7	15.12	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	15.31	9.33	4.25
153	5.60-28.0	5.12	34.49	6.4961 J7	15.91	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	16.85	9.72	4.49
163	5.60-28.0	6.10	36.73	7.0866 J7	17.28	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	18.46	11.34	4.88
173	5.00-25.0	6.30	40.71	7.8740 J7	18.70	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
133	5.60-20.0	2.2050m6	2.36	0.63	3.94	M20	1.65	0.94	5.5118 H7	11.02	43.35	13.46	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42						
143	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	6.1024 H7	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
153	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.72	16.26	2887
	22.4-28.0	2.1654m6	2.32	0.63									
163	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835 H7	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71									
173	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.2677 H7	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						

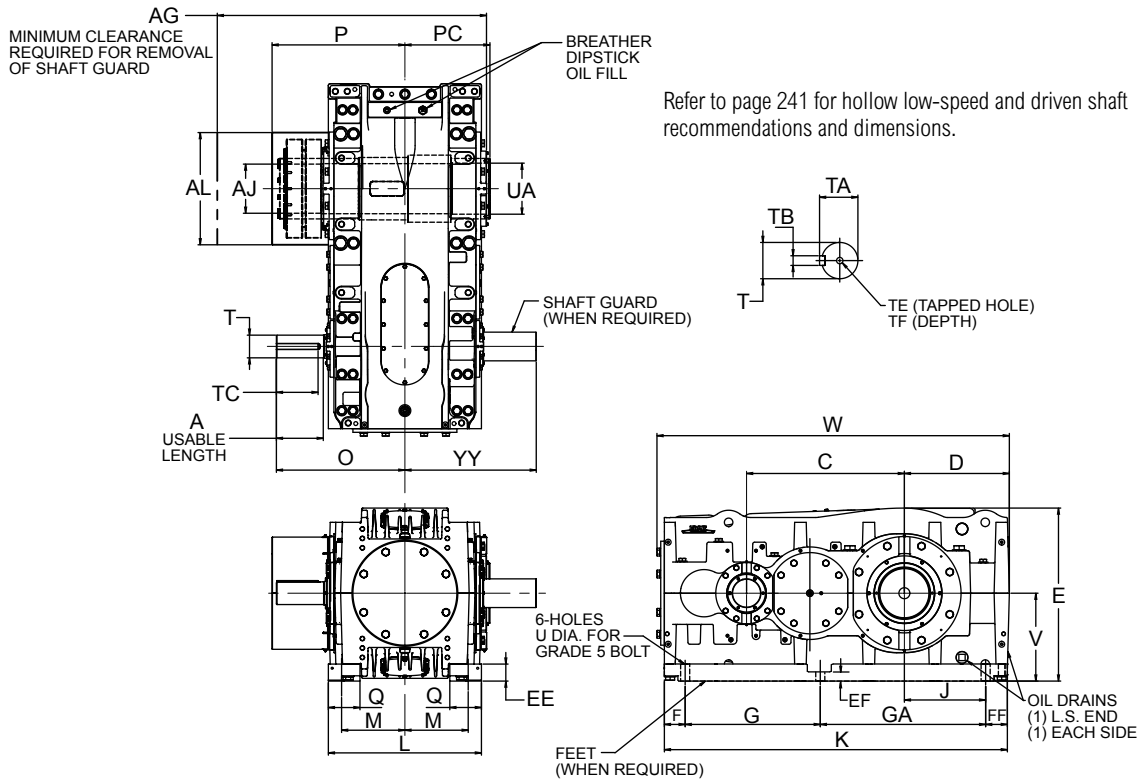
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* j6 tolerance for shaft diameters 1.2" and less, k6 tolerance for shaft diameters over 1.2" to 2.0", m6 tolerance for shaft diameters above 2.0".

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 203 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
203	5.60-28.0	9.45	56.24	10.2362J7	23.38	32.877	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	26.77	27.67	17.72	6.59
223	5.60-28.0	10.63	63.32	12.2047J7	26.72	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	30.12	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
203	5.60-20.0	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	10.6299H7	18.31	73.42	27.37	10117
	22.4-28.0	3.1496m6	3.34	0.87	8.27	M20	1.65						
223	5.60-20.0	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	12.5984H7	21.65	85.79	30.59	14698
	22.4-28.0	3.9370m6	4.17	1.10		M24	1.97						

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

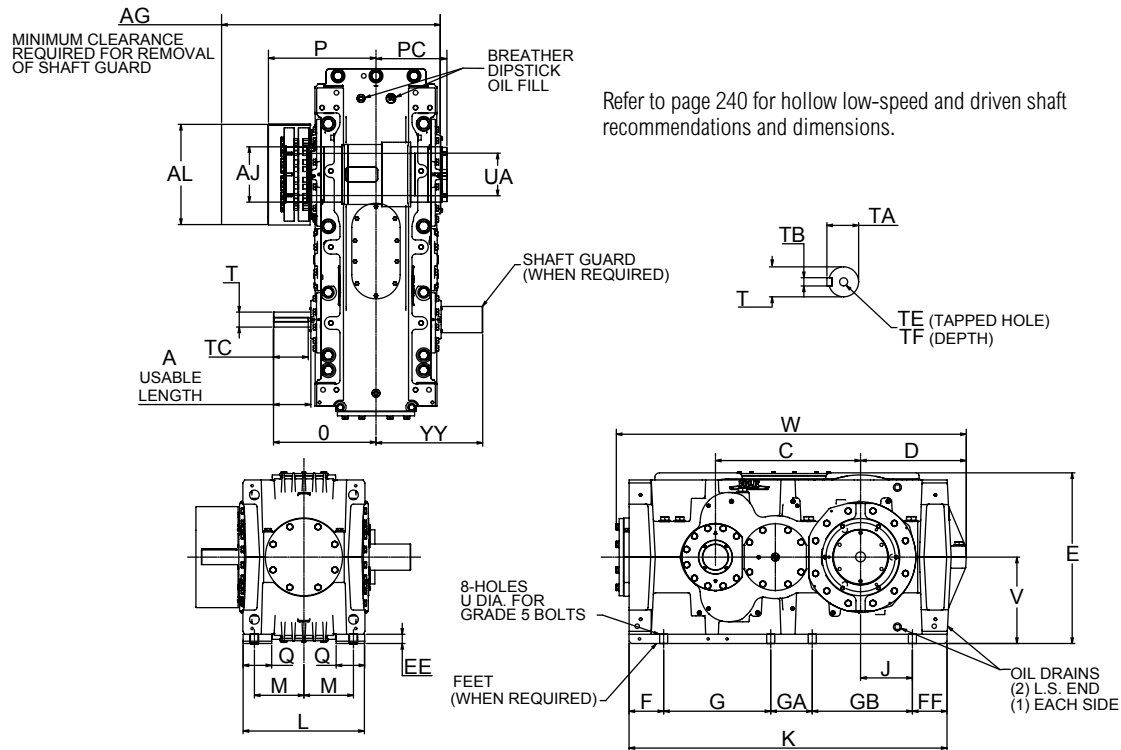
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* j6 tolerance for shaft diameters 1.2" and less, k6 tolerance for shaft diameters over 1.2" to 2.0", m6 tolerance for shaft diameters above 2.0".

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	5.60-28.0	4.92	31.81	5.9055 J7	15.12	19.098	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	15.31	9.33	4.25
155	5.60-28.0	5.12	34.49	6.4961 J7	15.91	22.050	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	16.85	9.72	4.49
165	5.60-28.0	6.10	36.73	7.0866 J7	17.28	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	18.46	11.34	4.88
175	5.00-25.0	6.30	40.71	7.8740 J7	18.70	27.562	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	6.1024 H7	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
155	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.72	16.26	2887
	22.4-28.0	2.1654m6	2.32	0.63									
165	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835 H7	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71									
175	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.2677 H7	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						

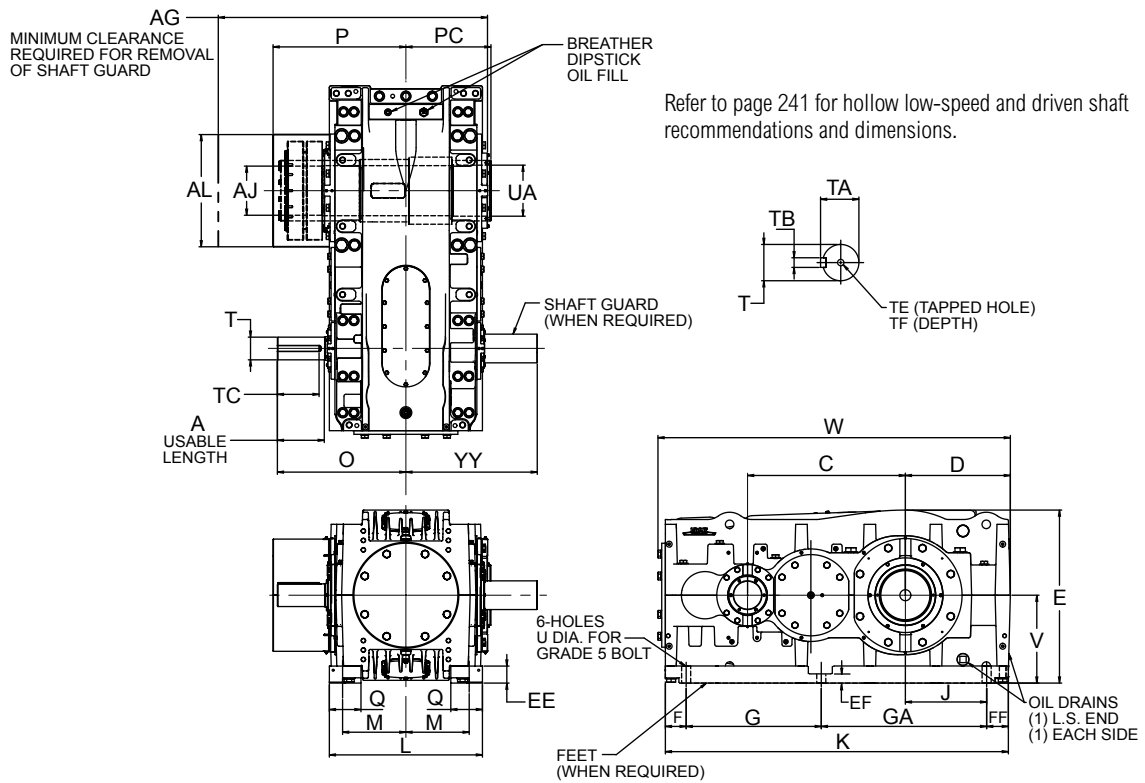
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* j6 tolerance for shaft diameters 1.2" and less, k6 tolerance for shaft diameters over 1.2" to 2.0", m6 tolerance for shaft diameters above 2.0".

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc Size 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
225	5.60-28.0	10.63	63.32	12.2047J7	26.72	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	30.12	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
225	5.60-20.0	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	12.5984H7	21.65	85.79	30.59	14698
	22.4-28.0	3.9370m6	4.17	1.10		M24	1.97						

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

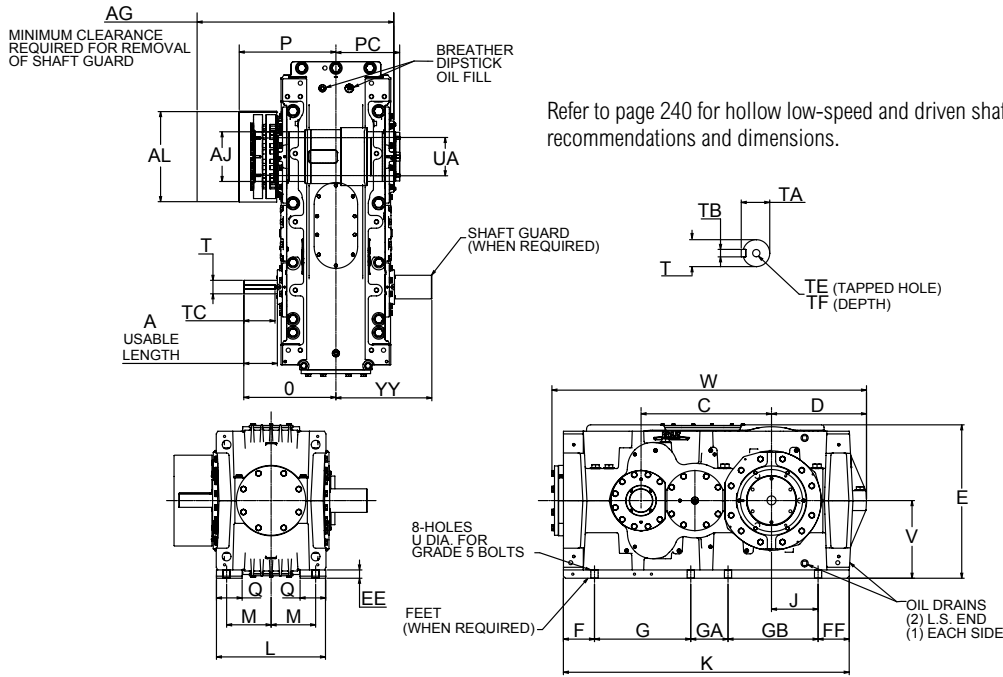
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* j6 tolerance for shaft diameters 1.2" and less, k6 tolerance for shaft diameters over 1.2" to 2.0", m6 tolerance for shaft diameters above 2.0".

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	5.60-28.0	3.94	21.46	3.3465 J7	10.39	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	10.83	10.58	6.89	3.07
117	5.60-28.0	3.94	24.84	4.1339 J7	11.76	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	11.79	12.20	7.83	3.62
127	5.60-28.0	3.94	26.50	4.9213 J7	12.24	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	12.52	12.98	8.50	4.00
137	5.60-28.0	3.94	30.04	5.3150 J7	13.46	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	13.68	8.50	4.44
147	5.60-28.0	4.92	31.81	5.9055 J7	15.12	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	15.31	9.33	4.25
157	5.60-28.0	5.12	34.49	6.4961 J7	15.91	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	16.85	9.72	4.49
167	5.60-28.0	6.10	36.73	7.0866 J7	17.28	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	18.46	11.34	4.88
177	5.00-25.0	6.30	40.71	7.8740 J7	18.70	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	20.39	12.48	5.91
187	5.60-28.0	6.30	40.71	8.0709 J7	18.70	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	18.70	20.39	12.48	5.91

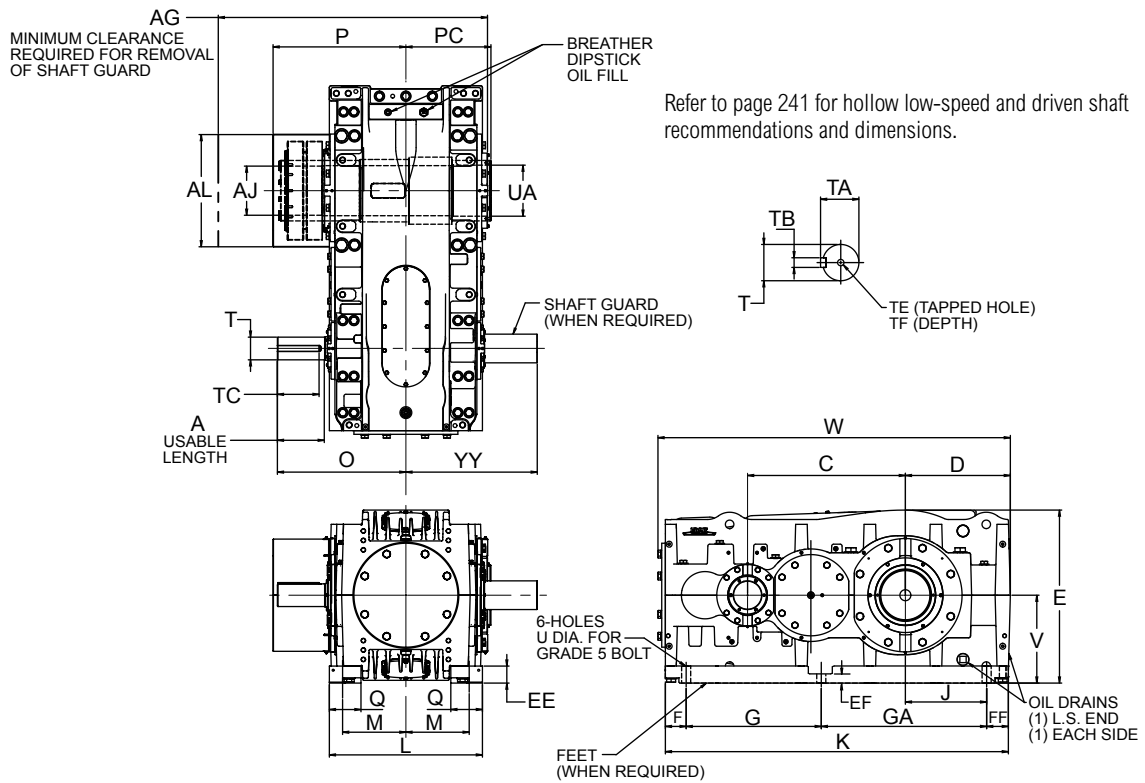
DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
107	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.57	3.5433 H7	8.35	32.17	11.11	646
	22.4-28.0	1.1024j6	1.21	0.31		M10	0.87						
117	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.73	4.3307 H7	9.29	36.10	12.13	916
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10						
127	5.60-20.0	2.0472m6	2.20	0.63	3.94	M20	1.65	0.73	5.1181 H7	10.43	39.64	12.88	1268
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10						
137	5.60-20.0	2.2050m6	2.36	0.63	3.94	M20	1.65	0.94	5.5118 H7	11.02	43.34	13.49	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42						
147	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	6.1024 H7	12.40	48.11	14.81	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
157	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.70	16.60	2887
	22.4-28.0	2.1654m6	2.32	0.63		M20	1.65						
167	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835 H7	14.76	59.87	18.24	3988
	22.4-28.0	2.5591m6	2.71	0.71		M20	1.65						
177	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.2677 H7	17.72	71.46	19.31	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						
187	5.60-20.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.2677 H7	17.72	71.46	19.31	5946
	22.4-28.0	2.9528m6	3.12	0.79		M20	1.65						

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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 207 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
207	5.60-28.0	9.45	56.24	10.2362J7	23.38	32.872	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	26.77	27.67	17.72	6.59
227	5.60-28.0	10.63	63.32	12.2047J7	26.72	38.586	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	30.12	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
207	5.60-20.0	4.7244m6	4.99	1.26	8.66	M24	1.97	1.89	10.6299H7	18.31	73.42	27.37	10117
	22.4-28.0	3.1496m6	3.34	0.87	8.27	M20	1.65						
227	5.60-20.0	5.5118m6	5.82	1.42	9.06	M30	2.36	2.17	12.5984H7	21.65	85.79	30.59	14698
	22.4-28.0	3.9370m6	4.17	1.10		M24	1.97						

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

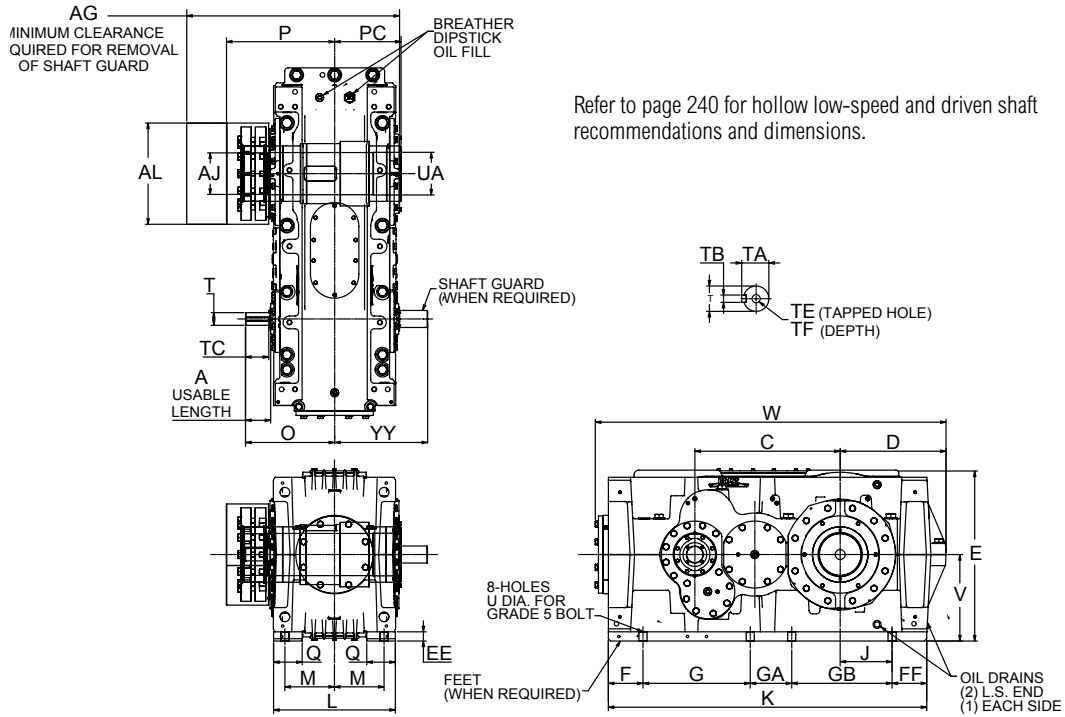
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* j6 tolerance for shaft diameters 1.2" and less, k6 tolerance for shaft diameters over 1.2" to 2.0", m6 tolerance for shaft diameters above 2.0".

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	31.5-160	2.76	30.04	5.3150 J7	13.46	16.9323	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	13.68	8.50	4.44
143	31.5-160	3.94	31.81	5.9055 J7	15.12	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	15.31	9.33	4.25
153	31.5-160	3.94	34.49	6.4961 J7	15.91	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	16.85	9.72	4.49
163	31.5-160	3.94	36.73	7.0866 J7	17.28	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	18.46	11.34	4.88
173	28.0-140	5.12	40.71	7.8740 J7	18.70	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
133	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	5.5118 H7	11.02	43.35	12.43	1662
	125-160	0.9843j6	1.10	0.31		M10	0.87						
143	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	6.1024 H7	12.40	48.11	13.90	2059
	125-160	1.1181j6	1.29	0.31		M10	0.87						
153	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10						
163	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	7.2835 H7	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42						
173	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.2677 H7	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42						

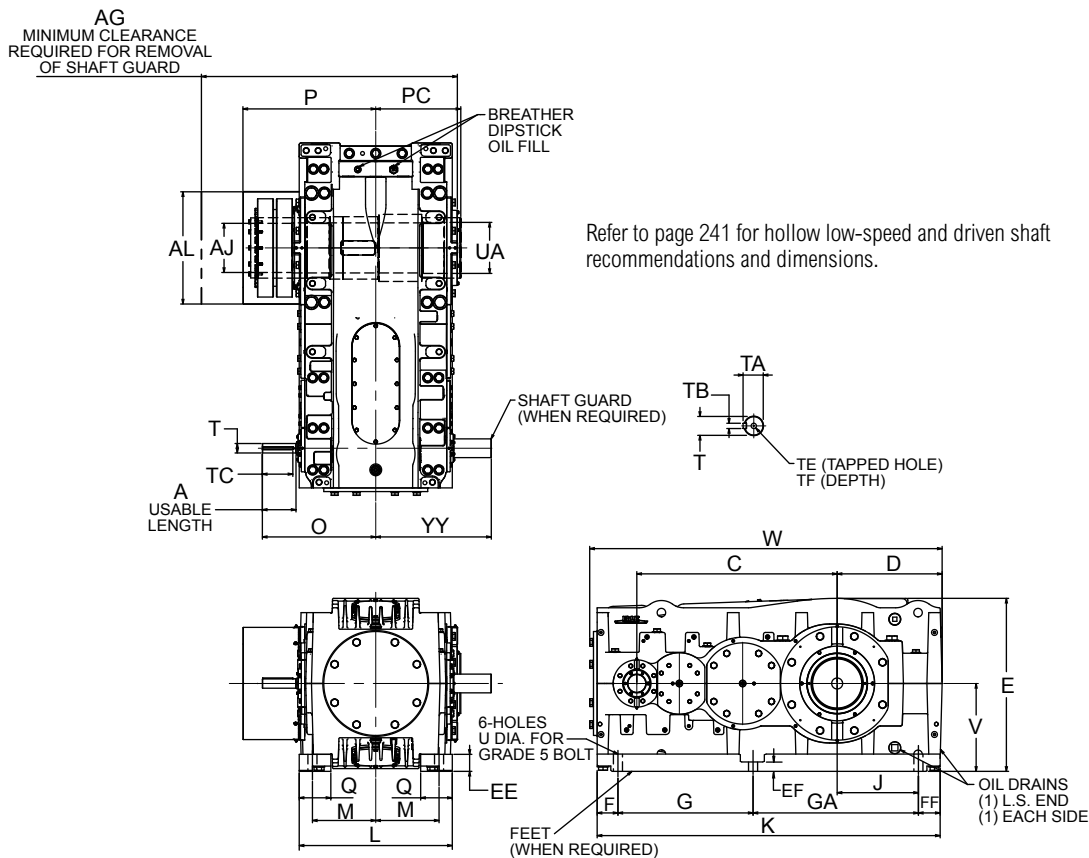
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 203 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
203	31.5-160	6.69	56.24	10.2362J7	23.38	41.737	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	23.62	27.67	17.72	6.59
223	31.5-160	7.87	63.32	12.2047J7	26.72	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	26.57	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
203	31.5-112	2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	10.6299H7	18.31	73.42	24.07	10249
	125-160	1.9685k6	2.10	0.55		M16	1.42						
223	31.5-112	3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	12.5984H7	21.65	85.79	26.97	14795
	125-160	2.5591m6	2.71	0.71		M20	1.65						

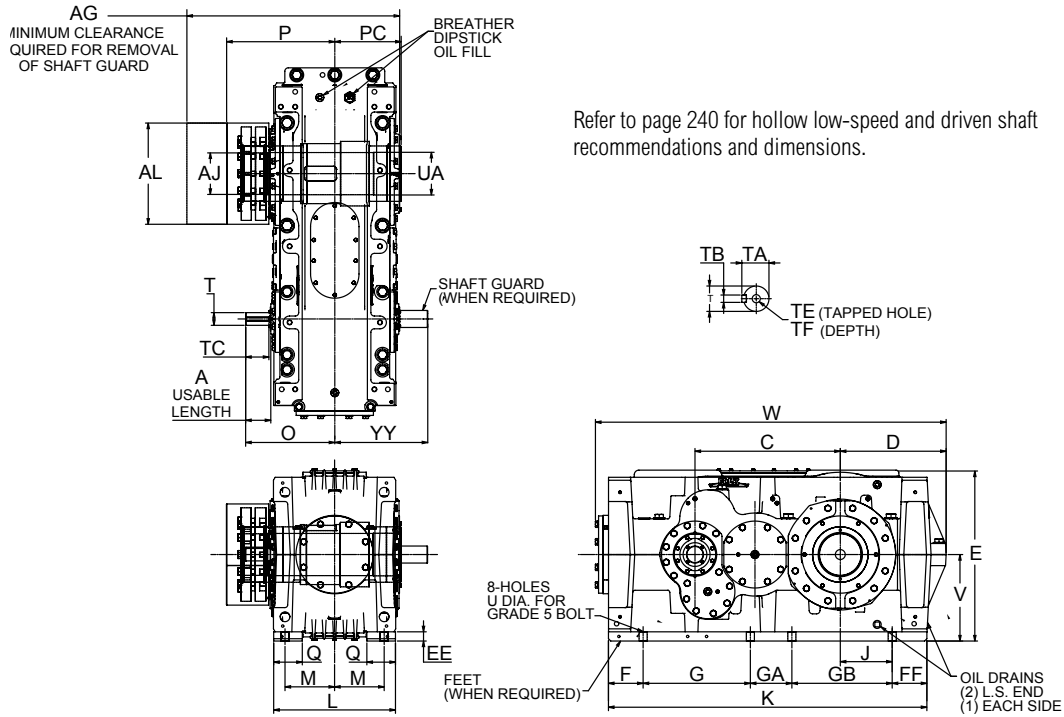
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	31.5-160	3.94	31.81	5.9055 J7	15.12	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	15.31	9.33	4.25
155	31.5-160	3.94	34.49	6.4961 J7	15.91	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	16.85	9.72	4.49
165	31.5-160	3.94	36.73	7.0866 J7	17.28	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	18.46	11.34	4.88
175	28.0-140	5.12	40.71	7.8740 J7	18.70	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	20.39	12.48	5.91

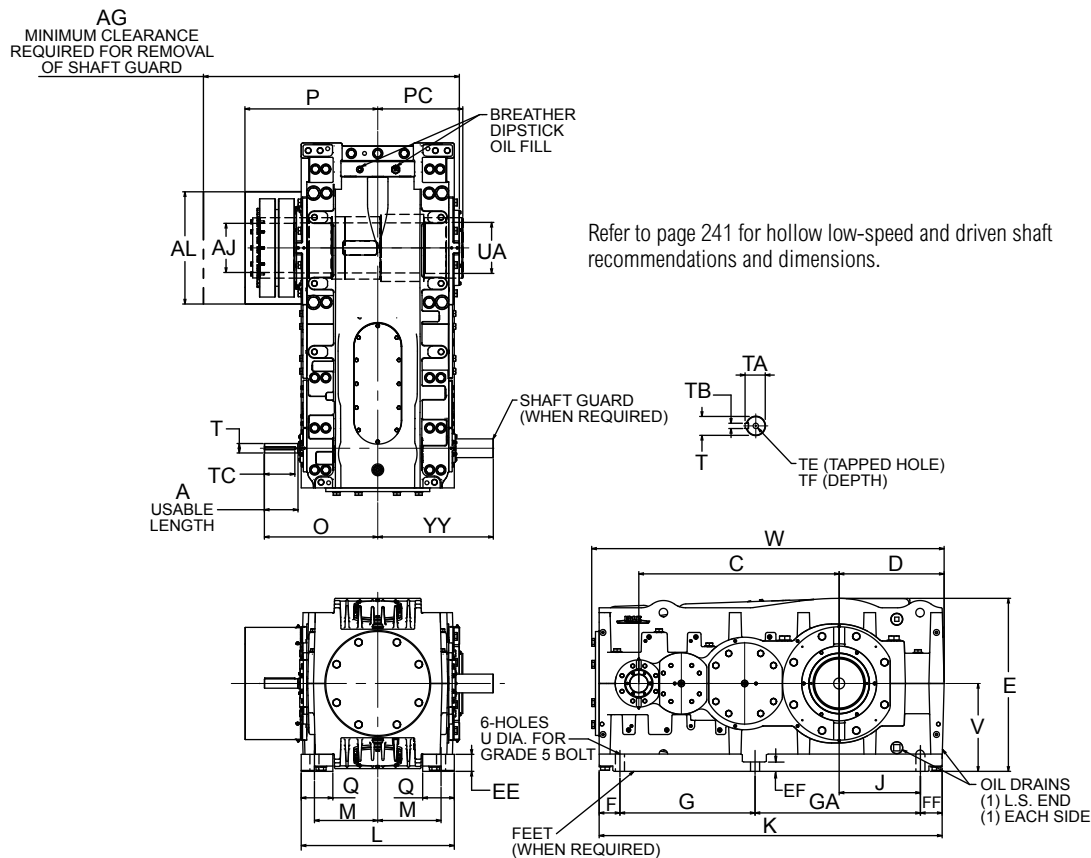
DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	6.1024 H7	12.40	48.11	13.90	2059
	125-160	1.1181j6	1.29	0.31		M10	0.87						
155	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10						
165	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	7.2835 H7	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42						
175	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.2677 H7	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42						

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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
225	31.5-160	7.87	63.32	12.2047J7	26.72	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	26.57	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
225	31.5-112	3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	12.5984H7	21.65	85.79	26.97	14795
	125-160	2.5591m6	2.71	0.71		M20	1.65						

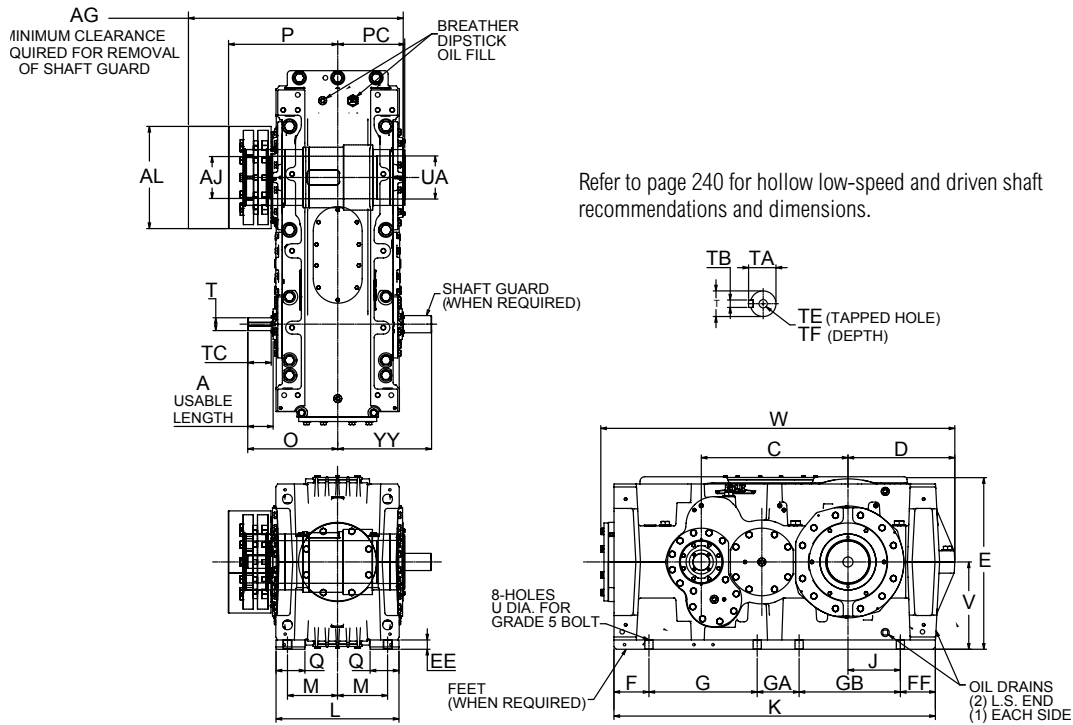
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	31.5-160	2.20	21.46	3.3465 J7	10.39	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	8.86	10.58	6.89	3.07
117	31.5-160	2.20	24.84	4.1339 J7	11.76	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	9.80	12.20	7.83	3.62
127	31.5-160	2.95	26.50	4.9213 J7	12.24	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	11.32	12.98	8.50	4.00
137	31.5-160	2.76	30.04	5.3150 J7	13.46	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	13.68	8.50	4.44
147	31.5-160	3.94	31.81	5.9055 J7	15.12	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	15.31	9.33	4.25
157	31.5-160	3.94	34.49	6.4961 J7	15.91	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	16.85	9.72	4.49
167	31.5-160	3.94	36.73	7.0866 J7	17.28	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	18.46	11.34	4.88
177	28.0-140	5.12	40.71	7.8740 J7	18.70	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	20.39	12.48	5.91
187	31.5-160	5.12	40.71	8.0709 J7	18.70	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	17.52	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
107	31.5-112	1.1024j6	1.21	0.31	1.97	M10	0.87	0.57	3.5433 H7	8.35	32.17	9.15	657
	125-160	0.9449j6	1.06			M8	0.75						
117	31.5-112	1.1811j6	1.29	0.31	2.09	M10	0.87	0.73	4.3307 H7	9.29	36.10	10.10	927
	125-160	0.9843j6	1.10			M10	0.87						
127	31.5-112	1.3780k6	1.49	0.39	2.76	M12	1.10	0.73	5.1181 H7	10.43	39.64	11.73	1292
	125-160	0.9843j6	1.10	0.31	2.64	M10	0.87						
137	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	5.5118 H7	11.02	43.34	12.43	1662
	125-160	0.9843j6	1.10	0.31		M10	0.87						
147	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	6.1024 H7	12.40	48.11	13.84	2059
	125-160	1.1181j6	1.29	0.31		M10	0.87						
157	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.70	14.64	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10						
167	31.5-112	2.1654m6	2.32	0.63	3.94	M20	1.65	1.38	7.2835 H7	14.76	59.87	15.91	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42						
177	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.2677 H7	17.72	71.46	18.34	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42						
187	31.5-112	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.2677 H7	17.72	71.46	18.34	6063
	125-160	1.9685k6	2.10	0.55		M16	1.42						

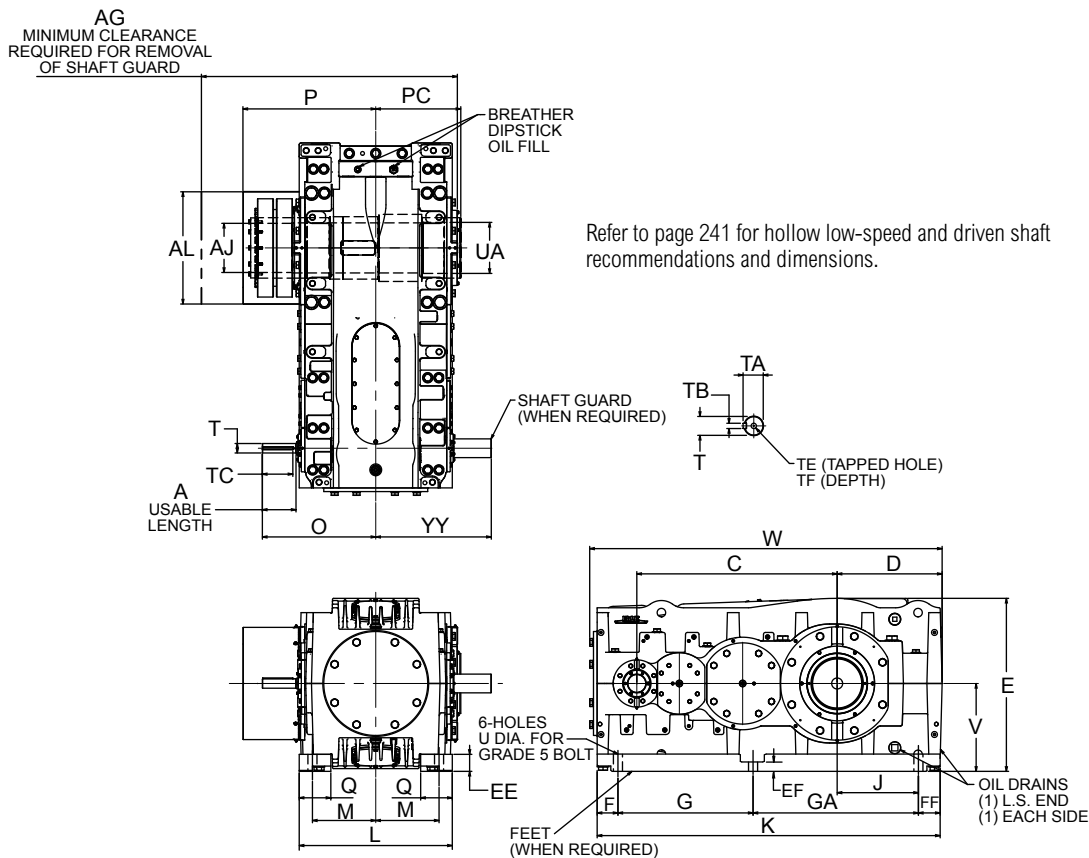
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† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 207 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	C	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
207	31.5-160	6.69	56.24	10.2362J7	23.38	41.737	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	23.62	27.67	17.72	6.59
227	31.5-160	7.87	63.32	12.2047J7	26.72	48.824	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	26.57	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
207	31.5-112	2.7559m6	2.93	0.79	6.30	M20	1.65	1.89	10.6299H7	18.31	73.42	24.07	10249
	125-160	1.9685k6	2.10	0.55		M16	1.42						
227	31.5-112	3.5433m6	3.73	0.98	7.09	M24	1.97	2.17	12.5984H7	21.65	85.79	26.97	14795
	125-160	2.5591m6	2.71	0.71		M20	1.65						

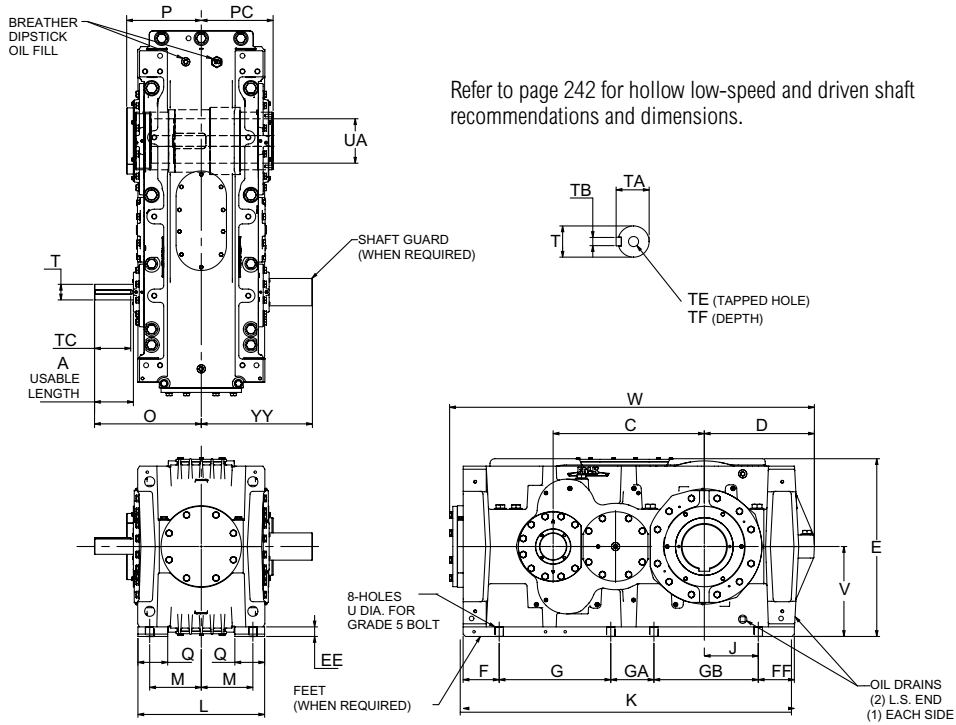
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	5.60-28.0	3.94	16.9323	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	9.94	9.17	4.44
143	5.60-28.0	4.92	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	10.05	9.33	4.25
153	5.60-28.0	5.12	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	11.25	10.43	4.49
163	5.60-28.0	6.10	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	12.25	11.34	4.88
173	5.00-25.0	6.30	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
133	5.60-20.0	2.2047m6	2.36	0.63	3.94	M20	1.65	0.94	5.3150 H7	11.02	43.35	13.46	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42						
143	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	5.9055 H7	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
153	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.72	16.26	2950
	22.4-28.0	2.1654m6	2.32	0.63									
163	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835H7	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71									
173	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.6614H7	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						

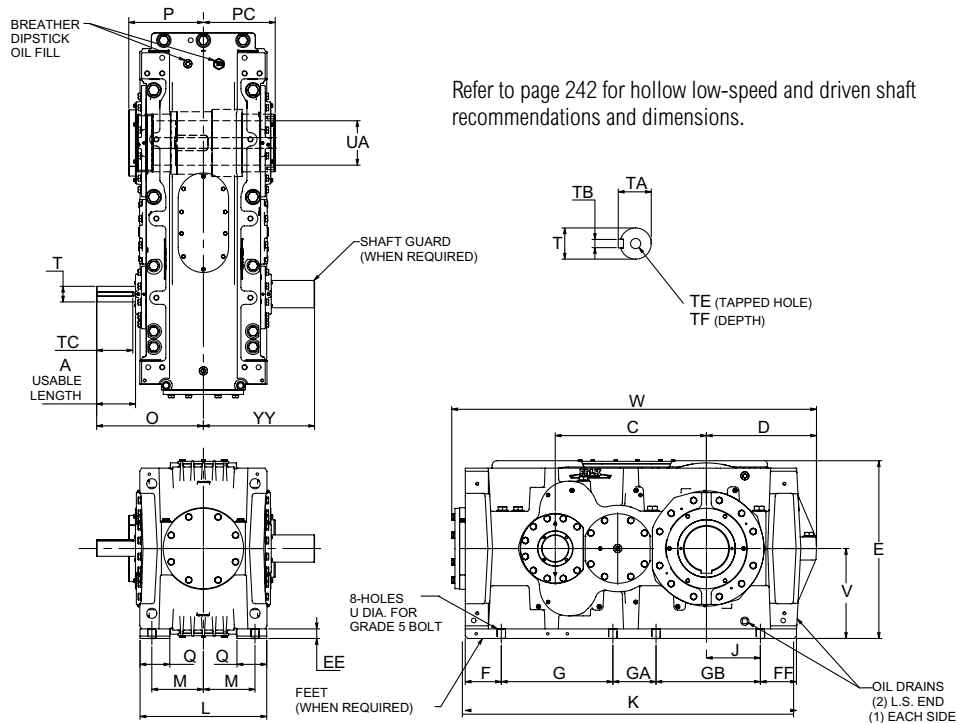
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	5.60-28.0	4.92	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	10.05	9.33	4.25
155	5.60-28.0	5.12	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	11.25	10.43	4.49
165	5.60-28.0	6.10	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	12.25	11.34	4.88
175	5.00-25.0	6.30	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	5.9055 H7	12.40	48.11	14.80	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
155	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.72	16.26	2950
	22.4-28.0	2.1654m6	2.32	0.63									
165	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835H7	14.76	59.88	18.23	3988
	22.4-28.0	2.5591m6	2.71	0.71									
175	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.6614H7	17.72	71.46	19.33	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						

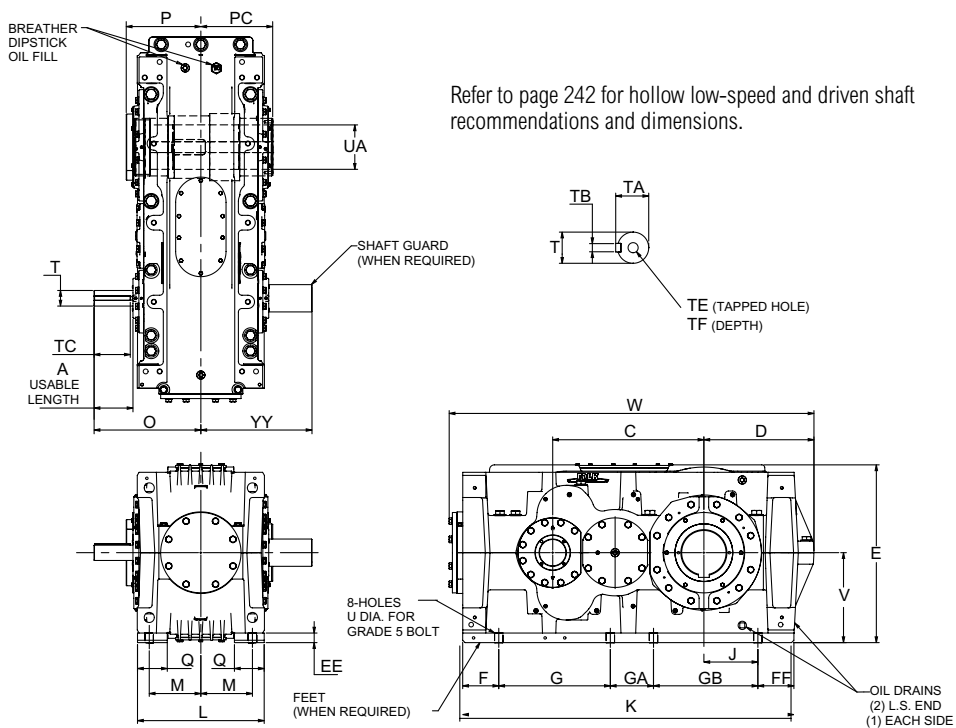
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	5.60-28.0	3.94	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	10.83	7.05	6.93	3.07
117	5.60-28.0	3.94	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	11.79	8.07	7.83	3.62
127	5.60-28.0	3.94	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	12.52	8.86	8.54	4.00
137	5.60-28.0	3.94	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	13.07	9.94	9.17	4.44
147	5.60-28.0	4.92	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	14.33	10.05	9.33	4.25
157	5.60-28.0	5.12	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	15.55	11.25	10.43	4.49
167	5.60-28.0	6.10	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	17.52	12.25	11.34	4.88
177	5.00-25.0	6.30	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	18.70	13.15	12.48	5.91
187	5.60-28.0	6.30	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	18.70	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
107	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.57	3.7402 H7	8.35	32.17	11.11	646
	22.4-28.0	1.1024j6	1.21	0.31		M10	0.87						
117	5.60-20.0	1.6535k6	1.77	0.47	3.94	M16	1.42	0.73	4.3307 H7	9.29	36.10	12.13	916
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10						
127	5.60-20.0	2.0472m6	2.20	0.63	3.94	M20	1.65	0.73	4.7244 H7	10.43	39.64	12.88	1268
	22.4-28.0	1.3780k6	1.49	0.39		M12	1.10						
137	5.60-20.0	2.2047m6	2.36	0.63	3.94	M20	1.65	0.94	5.3150 H7	11.02	43.34	13.49	1618
	22.4-28.0	1.6535k6	1.77	0.47		M16	1.42						
147	5.60-20.0	2.5591m6	2.71	0.71	4.53	M20	1.65	0.94	5.9055 H7	12.40	48.11	14.81	2133
	22.4-28.0	1.7717k6	1.90	0.55		M16	1.42						
157	5.60-20.0	2.9528m6	3.12	0.79	4.92	M20	1.65	1.10	6.6929 H7	13.19	52.70	16.60	2950
	22.4-28.0	2.1654m6	2.32	0.63									
167	5.60-20.0	3.3465m6	3.54	0.87	5.91	M20	1.65	1.38	7.2835H7	14.76	59.87	18.24	3988
	22.4-28.0	2.5591m6	2.71	0.71									
177	5.00-18.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.6614H7	17.72	71.46	19.31	5945
	20.0-25.0	2.9528m6	3.12	0.79		M20	1.65						
187	5.60-28.0	3.7402m6	3.93	0.98	6.10	M24	1.97	1.38	8.6614H7	17.72	71.46	19.31	5946
	22.4-28.0	2.9528m6	3.12	0.79		M20	1.65						

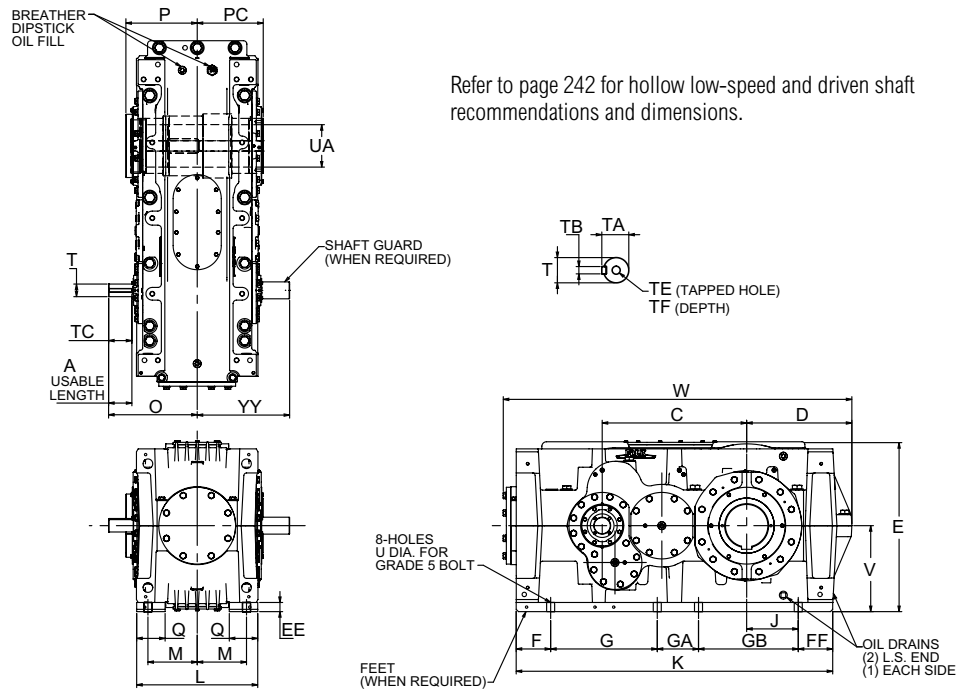
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† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	31.5-160	2.76	16.9323	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	9.94	9.17	4.44
143	31.5-160	3.94	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	10.05	9.33	4.25
153	31.5-160	3.94	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	11.25	10.43	4.49
163	31.5-160	3.94	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	12.25	11.34	4.88
173	28.0-140	5.12	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
133	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	5.3150 H7	11.02	43.35	12.43	1662
	125-160	0.9843j6	1.10	0.31		M10	0.87						
143	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	5.9055 H7	12.40	48.11	13.90	2059
	125-160	1.1181j6	1.29	0.31		M10	0.87						
153	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10						
163	31.5-112	2.1653k6	2.32	0.63	3.94	M20	1.65	1.38	7.2835H7	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42						
173	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.6614H7	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42						

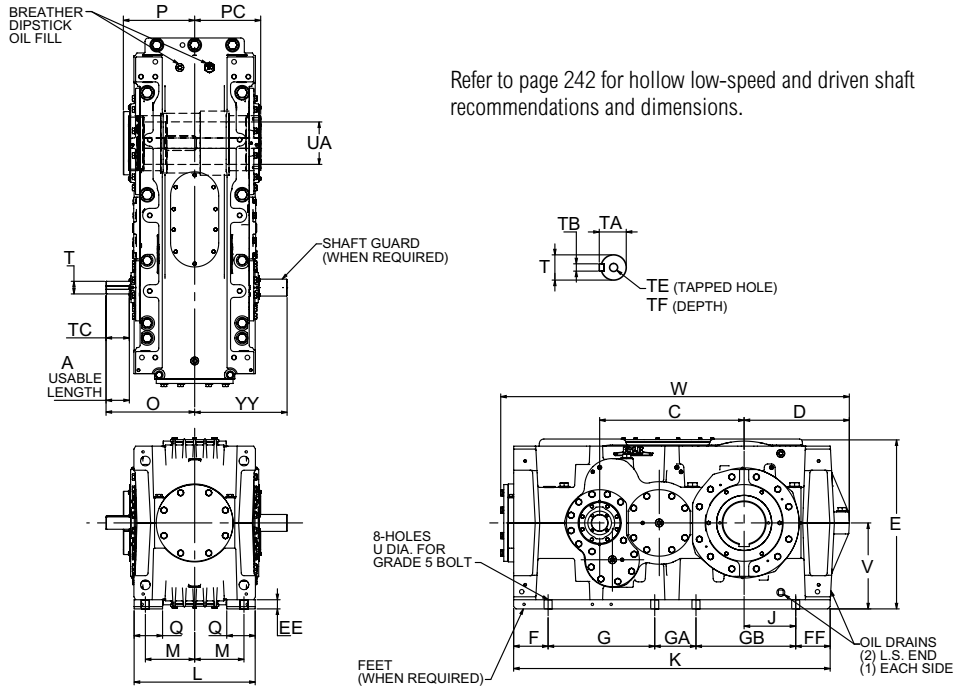
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† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VPQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	31.5-160	3.94	19.0976	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	10.05	9.33	4.25
155	31.5-160	3.94	22.0504	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	11.25	10.43	4.49
165	31.5-160	3.94	24.8063	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	12.25	11.34	4.88
175	28.0-140	5.12	27.5622	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	5.9055 H7	12.40	48.11	13.90	2059
	125-160	1.1181j6	1.29	0.31		M10	0.87						
155	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.72	14.69	2929
	125-160	1.3780k6	1.49	0.39		M12	1.10						
165	31.5-112	2.1653k6	2.32	0.63	3.94	M20	1.65	1.38	7.2835H7	14.76	59.88	15.87	4064
	125-160	1.6535k6	1.77	0.47		M16	1.42						
175	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.6614H7	17.72	71.46	18.35	5925
	112-140	1.9685k6	2.10	0.55		M16	1.42						

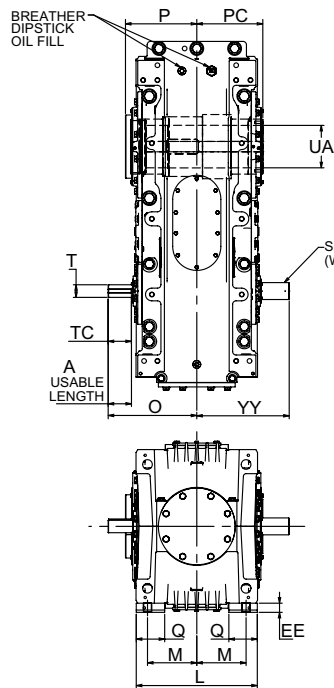
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

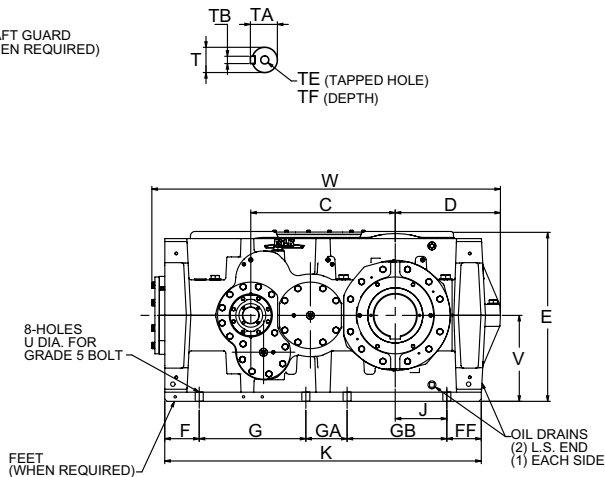
* See table 1 on page 98 for tolerance

Type VPQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 107 – 187/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	C	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	31.5-160	2.20	11.814	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	8.86	7.05	6.93	3.07
117	31.5-160	2.20	13.389	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	9.80	8.07	7.83	3.62
127	31.5-160	2.95	15.161	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	11.32	8.86	8.54	4.00
137	31.5-160	2.76	16.932	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	11.89	9.94	9.17	4.44
147	31.5-160	3.94	19.098	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	13.15	10.05	9.33	4.25
157	31.5-160	3.94	22.050	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	14.37	11.25	10.43	4.49
167	31.5-160	3.94	24.806	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	15.24	12.25	11.34	4.88
177	28.0-140	5.12	27.562	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	17.52	13.15	12.48	5.91
187	31.5-160	5.12	28.546	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	17.52	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	YY	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
107	31.5-112	1.1024j6	1.21	0.31	1.97	M10	0.87	0.57	3.7402 H7	8.35	32.17	9.15	657
	125-160	0.9449j6	1.06			M8	0.75						
117	31.5-112	1.1811j6	1.29	0.31	2.09	M10	0.87	0.73	4.3307 H7	9.29	36.10	10.10	927
	125-160	0.9843j6	1.10										
127	31.5-112	1.3780k6	1.49	0.39	2.76	M12	1.10	0.73	4.7244 H7	10.43	39.64	11.73	1292
	125-160	0.9843j6	1.10											0.31	2.64	M10	0.87
137	31.5-112	1.3780k6	1.49	0.39	2.56	M12	1.10	0.94	5.3150 H7	11.02	43.34	12.43	1662
	125-160	0.9843j6	1.10											0.31	M10	0.87
147	31.5-112	1.7717k6	1.90	0.55	3.54	M16	1.42	0.94	5.9055 H7	12.40	48.11	13.84	2059
	125-160	1.1181j6	1.29											0.31	M10	0.87
157	31.5-112	1.8898k6	2.02	0.55	3.94	M16	1.42	1.10	6.6929 H7	13.19	52.70	14.64	2929
	125-160	1.3780k6	1.49											0.39	M12	1.10
167	31.5-112	2.1653k6	2.32	0.63	3.94	M20	1.65	1.38	7.2835H7	14.76	59.87	15.91	4064
	125-160	1.6535k6	1.77											0.47	M16	1.42
177	28.0-100	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.6614H7	17.72	71.46	18.34	5925
	112-140	1.9685k6	2.10											0.55	M16	1.42
187	31.5-112	2.5591m6	2.71	0.71	4.72	M20	1.65	1.38	8.6614H7	17.72	71.46	18.34	6063
	125-160	1.9685k6	2.10											0.55	M16	1.42

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

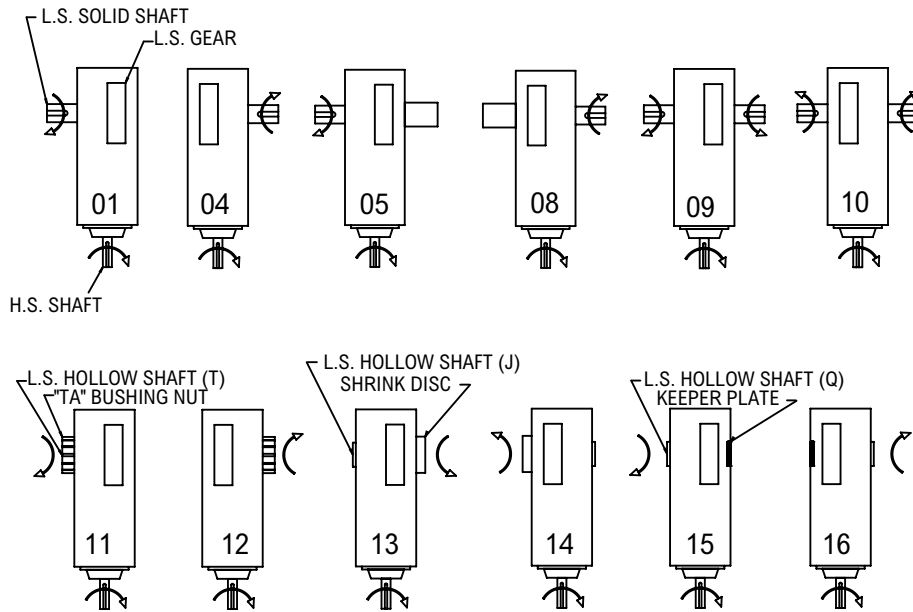
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

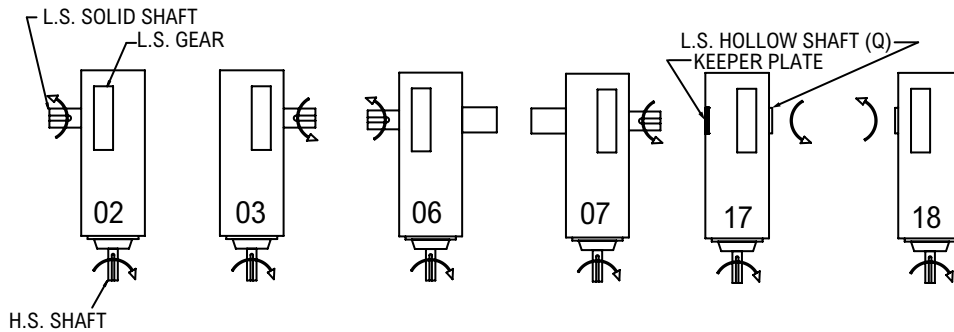
Type VR Right Angle Shaft Shaft Assemblies & Rotations

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

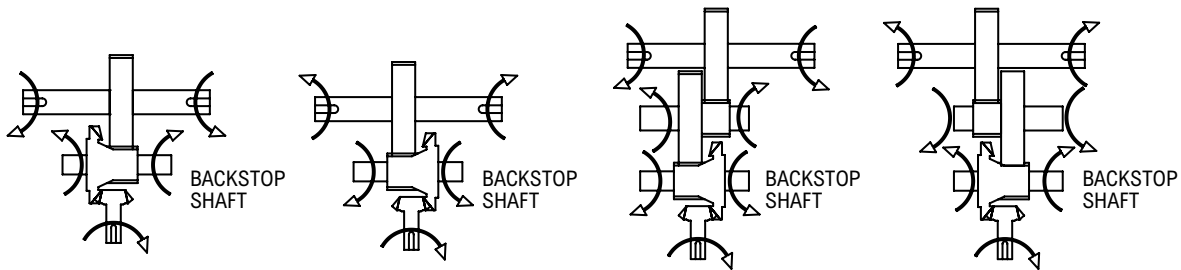
Preferred Assemblies



Alternate Assemblies



Relative Rotations[‡]



Assemblies:
01, 03, 05, 07, 09,
11, 13, 15 & 17

Assemblies:
02, 04, 06, 08, 10,
12, 14, 16 & 18

Assemblies:
01, 03, 05, 07, 09,
11, 13, 15 & 17

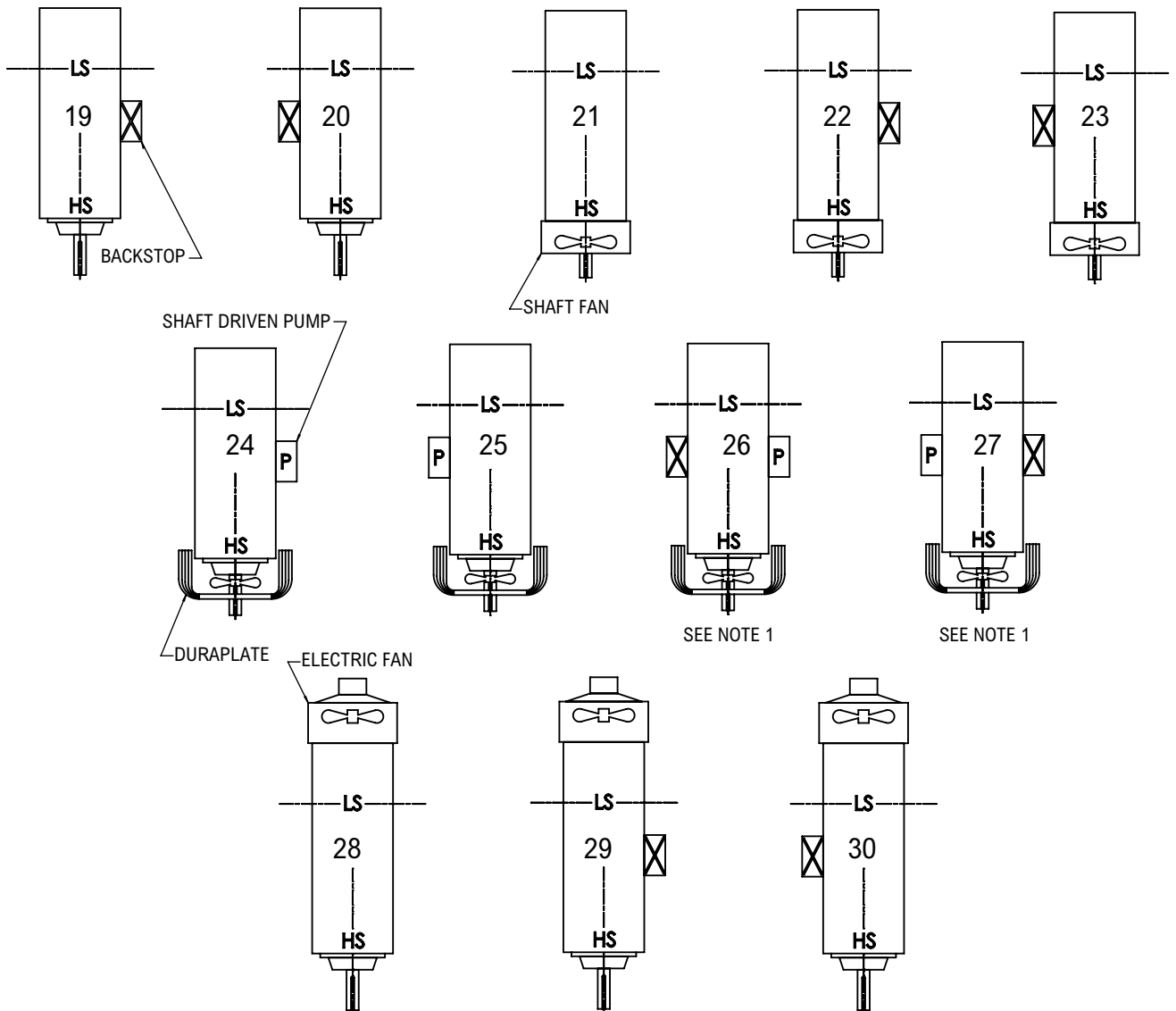
Assemblies:
02, 04, 06, 08, 10,
12, 14, 16 & 18

[‡] If the input shaft rotation is opposite the rotation shown, the output shaft rotation will also be opposite the rotation shown.

Type VR Right Angle Shaft 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



Note:

- Figures 26-27 are valid option selections for 100-180VR2 and 160-220VR3 drives. 100-150VR3 drives must be reviewed by engineering for interference between accessory components before Figures 26-27 are selected.

Type VR2 Right Angle

Power Ratings – Hp/Double Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	6.30	278															1991	2243	2495	
	7.10	246	164	275	406	537	664	711	783	846	1058	1199	1322	1286	1438	1613	1991	2243	2495	2495
	8.00	219	156	253	386	524	648	734	808	873	988	1119	1234	1365	1526	1712	1991	2243	2495	2495
	9.00	194	161	220	344	456	564	641	706	762	876	993	1095	1259	1408	1580	1608	1811	2014	2495
	10.0	175	122	202	310	397	491	537	592	639	764	866	955	983	1099	1233	1538	1733	1927	2011
	11.2	156	117	187	295	388	479	555	612	660	718	813	897	1045	1168	1311	1513	1704	1896	1928
	12.5	140	120	164	265	340	421	487	537	579	643	729	804	963	1077	1208				1895
1430	6.30	227														1729	1947	2166		
	7.10	201	142	239	353	467	577	617	680	734	918	1041	1148	1116	1248	1400	1729	1947	2166	2166
	8.00	179	136	220	335	455	563	637	702	758	857	972	1071	1185	1325	1486	1729	1947	2166	2166
	9.00	159	140	191	299	396	489	556	613	662	761	862	951	1093	1222	1371	1396	1572	1749	2166
	10.0	143	106	175	269	345	426	466	514	555	664	752	829	853	954	1070	1336	1504	1673	1746
	11.2	128	102	162	256	337	416	482	531	573	623	706	779	907	1014	1138	1314	1480	1646	1674
	12.5	114	105	142	230	296	365	423	466	503	558	633	698	836	935	1049				1645
1170	6.30	186														1502	1692	1882		
	7.10	165	124	208	306	405	501	537	591	638	798	904	997	970	1085	1217	1502	1692	1882	1882
	8.00	146	118	191	291	396	489	554	610	658	745	844	931	1030	1151	1292	1502	1692	1882	1882
	9.00	130	121	166	260	344	425	484	533	575	661	749	826	950	1062	1192	1213	1366	1519	1882
	10.0	117	92	152	234	300	370	405	446	482	577	653	721	741	829	930	1161	1307	1454	1517
	11.2	104	88	141	223	293	362	419	461	498	541	614	677	788	881	989	1142	1286	1430	1455
	12.5	94	91	123	200	257	317	368	405	437	485	550	606	726	812	911				1430
970	6.30	154														1318	1484	1650		
	7.10	137	108	182	269	355	439	466	513	554	700	793	875	817	913	1024	1318	1484	1650	1650
	8.00	121	103	168	255	347	429	476	524	566	653	740	817	903	1009	1133	1273	1433	1594	1650
	9.00	108	107	145	228	302	373	424	467	504	580	657	725	833	931	1045	1064	1198	1333	1594
	10.0	97	81	133	205	263	325	355	391	423	506	573	632	620	693	777	1018	1146	1275	1330
	11.2	87	78	124	195	257	317	367	405	437	475	538	593	691	773	867	1001	1128	1254	1276
	12.5	78	80	108	175	225	278	322	355	383	426	482	532	637	712	799				1254
870	6.30	138														1221	1375	1529		
	7.10	123	100	169	249	318	393	418	460	497	649	735	811	732	819	919	1221	1375	1529	1529
	8.00	109	96	155	236	318	393	427	470	507	605	686	757	830	928	1041	1141	1285	1430	1529
	9.00	97	99	135	211	280	346	393	433	467	537	609	672	771	862	967	986	1110	1235	1430
	10.0	87	75	124	190	243	301	329	363	392	469	531	586	556	621	697	943	1062	1182	1233
	11.2	78	72	115	181	238	294	341	375	405	440	499	550	641	716	804	928	1045	1162	1182
	12.5	70	74	100	162	209	258	299	329	355	394	447	493	590	660	741				1162

Type VR2 Right Angle

Torque Ratings – lb-in/Double Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	6.30	278															483	544	605	
	7.10	246	43	70	108	142	176	183	201	217	269	305	336	340	380	427	534	602	669	659
	8.00	219	45	73	116	156	193	211	232	251	290	329	363	398	445	499	611	688	765	717
	9.00	194	52	72	111	147	181	212	233	252	279	316	348	406	454	509	534	601	669	822
	10.0	175	44	71	112	147	182	188	208	224	268	304	335	356	398	446	565	636	708	727
	11.2	156	46	75	120	161	199	218	240	259	291	330	364	417	466	523	635	715	796	759
	12.5	140	53	74	116	153	189	220	242	261	282	320	353	425	475	533				855
1430	6.30	227															513	578	643	
	7.10	201	46	74	115	151	187	194	214	231	285	324	357	361	404	453	568	639	711	701
	8.00	179	48	78	123	166	205	224	247	267	308	350	386	422	472	530	649	731	813	762
	9.00	159	55	76	118	156	193	225	248	267	296	335	370	431	482	541	567	639	710	874
	10.0	143	47	75	119	156	193	200	220	238	285	323	356	378	422	474	600	676	752	773
	11.2	128	49	79	127	171	212	232	255	275	310	351	387	443	495	555	675	760	845	806
	12.5	114	56	78	123	163	201	233	257	277	300	340	375	451	504	566				908
1170	6.30	186															545	614	683	
	7.10	165	49	79	122	161	198	206	227	245	303	344	379	384	429	481	603	679	755	744
	8.00	146	51	83	130	176	217	238	262	283	328	371	409	449	502	563	689	776	863	809
	9.00	130	59	81	126	165	205	239	263	284	314	356	393	458	512	574	602	678	754	928
	10.0	117	50	80	126	166	205	213	234	253	302	343	378	401	449	503	637	718	798	821
	11.2	104	52	84	135	182	225	246	271	293	329	373	411	470	526	590	717	807	898	856
	12.5	94	60	83	131	173	213	248	273	295	319	361	398	479	536	601				965
970	6.30	154															577	649	722	
	7.10	137	52	83	129	169	209	216	238	257	321	363	401	390	436	489	638	718	799	787
	8.00	121	54	88	138	186	230	247	272	293	347	393	433	475	531	595	704	793	882	856
	9.00	108	62	86	133	175	216	253	278	300	333	377	416	484	541	608	637	718	798	948
	10.0	97	53	84	134	175	217	225	248	267	320	363	400	405	452	508	674	759	845	868
	11.2	87	55	89	143	192	238	260	287	309	348	394	435	497	556	624	758	854	950	906
	12.5	78	63	88	139	183	226	262	289	312	337	382	421	507	567	636				1021
870	6.30	138															596	671	746	
	7.10	123	53	86	134	169	209	216	238	257	331	376	414	390	436	489	659	742	826	813
	8.00	109	56	91	143	190	235	247	272	293	358	406	447	486	544	610	704	793	882	884
	9.00	97	64	88	138	181	224	261	287	310	344	389	429	500	559	627	658	741	825	948
	10.0	87	55	87	138	181	224	232	256	276	331	375	413	405	452	508	697	785	873	897
	11.2	78	57	92	148	199	246	269	296	320	359	407	449	514	574	645	783	882	981	936
	12.5	70	65	91	143	189	233	271	298	322	348	395	435	524	585	657				1055

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	12.5	140														1292	1395	1502		
	14.0	125	119	181	310	316	372	432	478	528	601	671	759	873	999	1108	1292	1395	1502	1502
	16.0	109	119	181	307	316	372	432	478	528	601	671	759	873	999	1108	1292	1395	1502	1502
	18.0	97	119	170	281	316	372	432	478	528	601	671	759	873	999	1108	1226	1324	1426	1502
	20.0	88	102	157	253	295	347	398	441	486	583	651	737	800	916	1015	1046	1129	1216	1483
	22.4	78	101	141	222	272	320	355	393	434	514	573	649	714	817	906	993	1073	1155	1320
	25.0	70	91	123	211	256	301	323	357	394	449	501	567	643	736	816	908	981	1056	1231
	28.0	63	74	103	172	231	271	294	325	359	417	465	526	579	663	734	774	836	900	1090
	31.5	56	72	103	152	197	232	264	292	322	367	409	463	516	591	655	734	793	854	977
	35.5	49	64	89	145	185	218	239	265	293	320	357	404	465	532	589	649	701	755	910
	40.0	44	58	80	127	166	195	218	241	266	292	326	369	407	466	516	552	597	642	761
	45.0	39	51	72	110	140	165	192	212	234	257	286	324	363	415	460	524	566	609	698
	50.0	35	45	63	104	132	155	174	192	212	224	250	283	326	373	414	465	503	541	649
	56.0	31	31	58	86	105	124	146	162	179	197	220	249	293	336	372	396	428	461	563
	63.0	28	31	45	74	97	114	135	149	164	188	210	237	261	299	331	375	405	436	500
	71.0	25	31	45	74	94	110	122	135	149	164	183	207	235	269	298	304	328	353	465
	80.0	22	27	36	62	78	92	106	118	130	132	147	166	205	235	260	287	310	334	369
	90.0	19	26	35	59	73	86	97	107	118	127	141	160	184	211	234	255	276	297	356
	100	18	19	30	48	59	70	79	88	97	113	126	143	166	189	210	217	234	252	309
	112	16	19	24	41	53	63	75	83	92	106	118	134	147	169	187	205	222	239	274
	125	14	18	24	41	52	61	68	75	83	93	103	117	132	152	168				255
1430	12.5	114														1121	1211	1304		
	14.0	102	104	148	254	275	323	375	415	458	522	582	659	758	868	962	1121	1211	1304	1304
	16.0	89	104	148	252	275	323	375	415	458	522	582	659	758	868	962	1105	1193	1285	1304
	18.0	79	102	140	239	275	323	375	415	458	506	564	639	756	865	958	1010	1091	1174	1304
	20.0	72	89	129	206	256	301	325	360	397	479	535	606	658	753	835	861	930	1001	1221
	22.4	64	84	116	182	223	263	292	323	356	422	471	533	587	672	745	817	882	950	1087
	25.0	57	75	101	173	210	247	265	293	323	369	411	466	529	605	670	747	806	868	1012
	28.0	51	64	85	141	189	222	240	266	293	342	381	432	475	544	603	636	687	739	903
	31.5	45	59	84	125	161	190	216	239	264	301	335	380	424	485	537	603	651	701	803
	35.5	40	52	73	118	152	179	196	217	240	262	293	332	381	436	483	532	575	619	747
	40.0	36	47	66	104	136	160	178	197	217	239	267	302	334	382	423	453	489	527	622
	45.0	32	42	59	90	115	135	157	174	192	210	235	266	297	340	377	429	464	499	572
	50.0	29	37	51	85	108	127	142	158	174	183	205	232	267	306	339	381	412	443	532
	56.0	26	27	47	70	86	102	120	133	147	163	182	206	240	275	305	324	350	377	461
	63.0	23	27	37	60	80	94	110	122	135	154	172	194	214	245	271	307	332	357	410
	71.0	20	26	37	60	77	90	100	110	122	134	150	170	192	220	244	248	268	289	381
	80.0	18	23	31	51	64	75	88	97	107	114	128	144	168	192	213	235	254	274	314
	90.0	16	21	29	48	60	71	79	88	97	104	116	131	151	173	191	209	226	243	292
	100	14	15	25	39	48	57	65	72	79	93	104	117	135	155	172	178	192	206	252
	112	13	15	19	33	44	51	61	68	75	87	97	110	121	138	153	168	182	195	224
	125	11	15	19	33	43	50	56	61	68	76	85	96	108	124	137				208

Type VR3 Right Angle Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	12.5	140														639	690	743		
	14.0	125	63	94	159	165	194	219	243	268	311	348	394	453	518	574	707	764	822	810
	16.0	109	69	107	177	185	217	245	272	300	361	402	456	499	571	632	808	873	940	881
	18.0	97	77	113	175	200	235	282	312	344	390	435	493	552	631	699	830	896	965	1010
	20.0	88	74	113	180	214	251	293	324	358	418	467	528	600	686	761	783	845	910	1093
	22.4	78	79	116	178	222	261	292	324	357	427	476	539	590	675	748	850	918	988	1059
	25.0	70	80	114	183	226	265	305	337	373	403	450	509	587	672	745	839	907	976	1132
	28.0	63	76	102	180	233	274	293	324	358	422	471	534	606	693	769	791	854	920	1098
	31.5	56	82	116	180	223	262	294	326	360	430	480	543	595	681	755	858	926	997	1070
	35.5	49	80	114	184	227	267	307	339	375	406	453	513	592	678	751	847	915	985	1142
	40.0	44	85	114	185	236	278	300	332	367	425	475	537	611	699	774	798	862	928	1083
	45.0	39	82	117	180	224	264	296	327	362	433	483	547	599	686	760	864	933	1005	1079
	50.0	35	81	115	185	228	268	308	341	377	409	456	516	596	682	756	852	921	991	1151
	56.0	31	64	117	181	217	255	288	319	352	394	439	498	614	702	778	802	867	933	1123
	63.0	28	70	99	170	220	258	297	329	363	435	485	549	602	689	763	869	938	1010	1086
	71.0	25	78	112	184	229	269	309	342	378	410	457	518	599	685	759	805	870	936	1157
	80.0	22	76	106	181	225	265	296	327	361	395	441	499	603	691	765	871	941	1013	1050
	90.0	19	81	115	186	229	269	310	343	379	411	459	519	600	687	761	858	927	998	1160
100	18	67	111	180	219	258	282	312	345	403	449	509	617	706	782	808	872	939	1131	
112	16	73	94	167	217	255	298	330	365	437	487	551	605	692	767	874	944	1016	1093	
125	14	81	106	181	229	270	310	344	379	412	459	520	601	688	763				1164	
1430	12.5	114														679	733	790		
	14.0	102	67	94	159	175	206	233	258	285	331	369	418	481	550	610	751	811	873	860
	16.0	89	73	107	178	196	231	261	289	319	383	427	484	530	606	672	846	914	984	936
	18.0	79	80	114	182	212	250	299	331	366	401	448	507	584	668	741	836	903	972	1073
	20.0	72	78	114	180	227	267	293	324	358	421	470	532	604	691	766	788	852	917	1102
	22.4	64	82	116	179	223	262	294	325	359	429	478	542	593	679	752	855	924	994	1067
	25.0	57	80	114	184	226	266	306	339	374	405	452	512	591	676	749	844	912	982	1139
	28.0	51	81	103	180	233	274	293	324	358	424	473	536	609	697	772	795	859	925	1112
	31.5	45	82	117	180	224	263	295	327	361	432	482	546	598	684	758	862	931	1002	1076
	35.5	40	81	115	184	228	268	308	341	376	408	455	515	595	680	754	850	918	989	1148
	40.0	36	85	115	185	237	278	300	332	367	427	476	539	613	701	777	801	865	931	1083
	45.0	32	82	117	181	225	264	297	328	362	434	484	548	601	688	762	867	936	1008	1083
	50.0	29	81	115	185	228	269	309	342	377	410	457	517	598	684	758	855	923	994	1155
	56.0	26	68	117	181	218	256	290	321	354	399	445	504	615	704	780	804	869	935	1126
	63.0	23	75	99	170	221	260	298	329	364	435	486	550	603	690	765	871	940	1012	1088
	71.0	20	81	112	184	229	269	310	343	378	411	458	519	600	686	761	807	871	938	1160
	80.0	18	80	112	181	226	265	298	330	364	420	468	530	604	692	767	873	943	1015	1091
	90.0	16	81	115	186	229	270	310	343	379	412	459	520	601	688	762	860	929	1000	1163
100	14	67	111	180	220	259	282	312	345	404	451	510	618	707	783	809	873	940	1132	
112	13	73	94	167	217	255	299	330	365	437	488	552	606	693	768	875	945	1017	1094	
125	11	81	106	181	230	270	311	344	380	412	460	521	602	689	764				1165	

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	8.00	219	2770	3096	3409			4008	4624	5063			
	9.00	194	2770	3096	3409	3110	3409	4008	4624	5063	4574	4819	5063
	10.0	175	2770	3096	3409	3110	3409	4008	4624	5063	4574	4819	5063
	11.2	156	2506	2802	3084	3110	3409	4008	4624	5063	4574	4819	5063
	12.5	140	2341	2617	2881	3171	3475	3507	4046	4430	4574	4819	5063
	14.0	125	1997	2232	2457	2629	2881	3507	4046	4430	4002	4217	4430
	16.0	109	1990	2224	2448	2526	2769	3462	3994	4373	4002	4217	4430
	18.0	97	1815	2029	2233	2474	2712	2974	3431	3756	4002	4217	4430
	20.0	88	1498	1674	1843	2230	2444	2580	2977	3260	3456	3642	3826
	22.4	78	1491	1666	1834	1895	2077	2520	2907	3183	3231	3405	3577
	25.0	70	1345	1504	1656	1854	2032	2051	2367	2591	3124	3292	3458
	28.0	63	1109	1240	1365	1646	1804	1886	2176	2383	2569	2707	2844
	31.5	56	1103	1233	1357	1403	1538	1840	2123	2324	2335	2460	2585
	35.5	49	953	1065	1173	1372	1503	1495	1725	1889	2249	2370	2489
	40.0	44	785	877	966	1171	1283	1293	1492	1633	1706	1798	1888
	45.0	39	780	872	960	993	1088	1260	1454	1592	1619	1706	1792
	50.0	35	672	752	827	970	1063	1043	1203	1318	1573	1657	1741
	56.0	31	560	626	689	755	827	962	1109	1215	1279	1347	1415
	63.0	28	556	621	684	708	776	937	1081	1183	1100	1159	1218
	71.0	25	444	496	546	691	758	727	839	919	1100	1159	1218
80.0	22	441	493	542	562	616	708	817	894	869	916	962	
90.0	19	384	429	472	548	601	585	675	739	869	916	962	
100	18	316	353	388	431	473	518	597	654	733	772	811	
112	16	313	350	386	400	438	518	597	654	591	622	654	
125	14				390	427				591	622	654	
1430	8.00	219	2405	2688	2959			3324	3836	4200			
	9.00	194	2405	2688	2959	2700	2959	3324	3836	4200	3794	3998	4200
	10.0	175	2405	2688	2959	2700	2959	3324	3836	4200	3794	3998	4200
	11.2	156	2078	2323	2558	2700	2959	3324	3836	4200	3794	3998	4200
	12.5	140	1929	2156	2373	2630	2882	2907	3353	3672	3794	3998	4200
	14.0	125	1650	1845	2031	2166	2373	2907	3353	3672	3317	3495	3672
	16.0	89	1643	1837	2022	2088	2288	2867	3308	3622	3317	3495	3672
	18.0	79	1496	1673	1841	2043	2239	2457	2835	3104	3317	3495	3672
	20.0	72	1234	1379	1519	1839	2015	2130	2457	2690	2824	2976	3126
	22.4	64	1227	1372	1510	1562	1711	2078	2398	2625	2667	2810	2952
	25.0	57	1107	1237	1362	1527	1673	1689	1949	2134	2553	2690	2826
	28.0	51	912	1019	1122	1347	1476	1552	1791	1961	2116	2229	2342
	31.5	45	906	1013	1115	1154	1264	1513	1746	1912	1934	2037	2140
	35.5	40	782	874	963	1127	1235	1222	1409	1543	1838	1936	2034
	40.0	36	644	720	792	961	1053	1062	1225	1341	1394	1469	1543
	45.0	32	640	715	787	815	893	1034	1193	1306	1330	1401	1472
	50.0	29	555	620	683	796	872	856	987	1081	1285	1354	1422
	56.0	26	459	513	564	623	683	788	909	995	1071	1129	1186
	63.0	23	455	509	561	581	636	768	886	970	899	947	995
	71.0	20	364	406	447	567	621	596	687	753	899	947	995
80.0	18	361	404	444	460	504	580	669	733	733	773	812	
90.0	16	314	351	386	449	492	479	553	605	714	753	791	
100	14	258	289	318	353	386	423	488	534	600	632	664	
112	13	256	287	316	327	358	423	488	534	483	509	534	
125	11				319	350				483	509	534	

Forced lubrication may be required. Consult factory

Type VR3 Right Angle

Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	8.00	219	838	936	1031				1137	1311	1436			
	9.00	194	946	1057	1164	1047	1147		1308	1509	1653	1452	1530	1607
	10.0	175	1033	1155	1272	1168	1280		1430	1650	1807	1666	1756	1844
	11.2	156	1073	1200	1321	1273	1395		1590	1834	2008	1816	1914	2011
	12.5	140	1134	1268	1396	1494	1637		1556	1795	1966	2025	2133	2241
	14.0	125	1092	1221	1344	1417	1553		1791	2066	2262	1988	2094	2200
	16.0	109	1189	1330	1464	1520	1666		1933	2230	2442	2281	2403	2525
	18.0	97	1191	1332	1466	1623	1779		1851	2136	2339	2486	2620	2752
	20.0	88	1110	1241	1366	1629	1785		1849	2133	2336	2409	2538	2666
	22.4	78	1207	1350	1486	1545	1693		1974	2277	2493	2584	2723	2860
	25.0	70	1207	1350	1486	1648	1806		1871	2159	2363	2723	2869	3014
	28.0	63	1123	1256	1383	1644	1801		1878	2166	2372	2615	2755	2894
	31.5	56	1221	1365	1503	1564	1714		2002	2310	2529	2594	2733	2871
	35.5	49	1220	1364	1502	1666	1826		1910	2204	2413	2723	2869	3014
	40.0	44	1134	1268	1396	1669	1829		1901	2194	2402	2440	2571	2701
	45.0	39	1232	1377	1516	1579	1731		2026	2337	2559	2657	2800	2941
	50.0	35	1215	1358	1495	1682	1843		1911	2205	2414	2813	2964	3114
	56.0	31	1142	1277	1405	1518	1664		1914	2209	2418	2615	2755	2894
	63.0	28	1240	1386	1525	1590	1742		2039	2352	2575	2444	2575	2705
	71.0	25	1146	1281	1410	1692	1854		1923	2219	2430	2664	2807	2949
	80.0	22	1243	1390	1530	1595	1748		2048	2362	2587	2565	2703	2840
	90.0	19	1239	1385	1524	1697	1860		1929	2226	2437	2796	2946	3095
	100	18	1150	1286	1415	1549	1698		1854	2139	2342	2696	2840	2984
112	16	1248	1395	1535	1601	1755		2027	2338	2560	2361	2488	2613	
125	14				1703	1866					2573	2712	2849	
1430	8.00	219	890	995	1095				1154	1331	1458			
	9.00	194	1005	1123	1236	1112	1219		1328	1532	1678	1474	1553	1632
	10.0	175	1098	1227	1351	1241	1360		1452	1675	1834	1691	1782	1872
	11.2	156	1089	1218	1340	1353	1483		1614	1862	2039	1844	1943	2041
	12.5	114	1144	1278	1407	1516	1661		1578	1821	1994	2055	2166	2275
	14.0	102	1105	1235	1359	1429	1566		1817	2096	2295	2016	2125	2232
	16.0	89	1202	1344	1479	1538	1685		1959	2260	2475	2314	2438	2561
	18.0	79	1202	1344	1479	1640	1797		1872	2160	2365	2522	2657	2792
	20.0	72	1119	1251	1377	1644	1801		1868	2155	2359	2409	2538	2666
	22.4	64	1217	1360	1497	1558	1707		1992	2299	2517	2610	2750	2889
	25.0	57	1215	1358	1495	1660	1820		1886	2175	2382	2723	2869	3014
	28.0	51	1130	1263	1391	1646	1804		1891	2182	2389	2635	2777	2917
	31.5	45	1228	1372	1511	1573	1724		2015	2325	2546	2628	2769	2909
	35.5	40	1226	1370	1509	1676	1836		1910	2204	2413	2723	2869	3014
	40.0	36	1139	1273	1402	1676	1837		1910	2204	2413	2440	2571	2701
	45.0	32	1237	1383	1522	1586	1738		2035	2348	2570	2670	2813	2955
	50.0	29	1227	1371	1510	1688	1850		1919	2213	2424	2813	2964	3114
	56.0	26	1145	1280	1409	1533	1680		1919	2214	2424	2681	2825	2968
	63.0	23	1243	1389	1530	1595	1747		2045	2360	2584	2444	2575	2705
	71.0	20	1148	1284	1413	1697	1859		1929	2225	2436	2664	2807	2949
	80.0	18	1246	1393	1533	1599	1752		2053	2368	2593	2649	2792	2933
	90.0	16	1240	1386	1526	1701	1864		1933	2230	2442	2813	2964	3114
	100	14	1152	1288	1417	1549	1698		1854	2139	2342	2701	2846	2990
112	13	1250	1397	1538	1604	1758		2027	2338	2560	2361	2488	2613	
125	11				1706	1869					2573	2712	2849	

Forced lubrication may be required. Consult factory

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1170	12.5	94															968	1045	1125	
	14.0	84	90	121	208	239	281	326	361	398	454	506	573	659	754	836	959	1036	1115	1125
	16.0	73	90	121	207	239	281	326	361	398	454	506	573	659	754	836	911	984	1059	1125
	18.0	65	84	115	196	239	281	313	346	382	416	464	526	622	712	789	832	898	967	1125
	20.0	59	77	106	169	214	252	266	295	325	394	440	498	541	620	687	708	765	824	1006
	22.4	52	69	95	150	183	216	239	265	293	347	387	438	483	552	612	672	726	781	894
	25.0	47	61	83	142	172	203	217	240	265	303	338	383	434	497	551	614	663	714	832
	28.0	42	55	70	115	154	182	196	217	240	281	313	355	390	447	495	522	564	607	742
	31.5	37	48	69	102	132	156	178	196	217	247	275	312	348	398	441	495	535	576	660
	35.5	33	43	60	97	125	146	161	178	197	215	240	272	313	358	397	437	472	508	614
	40.0	29	39	54	85	111	131	146	161	178	196	219	248	274	313	347	372	402	432	509
	45.0	26	34	48	74	94	111	129	142	157	172	192	218	244	279	309	352	380	409	470
	50.0	23	30	42	70	88	104	117	129	143	150	168	190	219	251	278	313	338	364	436
	56.0	21	23	39	58	71	84	99	109	121	134	150	170	197	225	250	266	287	309	378
	63.0	19	23	30	49	66	77	90	100	110	126	141	159	175	201	222	252	272	293	336
	71.0	16	22	30	49	63	74	82	91	100	110	123	139	158	180	200	204	220	237	312
	80.0	15	20	27	42	52	62	72	79	88	97	109	123	137	157	174	193	208	224	257
90.0	13	17	23	39	49	58	65	72	79	85	95	107	124	141	157	171	185	199	239	
100	12	12	20	32	40	47	53	59	65	76	85	96	111	127	141	145	157	169	207	
112	10	12	16	27	36	42	50	56	61	71	79	90	99	113	125	138	149	160	184	
125	9	12	16	27	35	41	45	50	56	62	69	78	89	102	113				171	
970	12.5	78														802	867	933		
	14.0	69	75	100	172	205	242	286	316	349	398	444	502	578	661	733	800	864	930	933
	16.0	61	75	100	172	205	242	286	316	349	397	443	501	576	659	731	759	820	883	933
	18.0	54	69	95	163	199	234	260	288	318	347	387	438	519	593	658	693	748	806	933
	20.0	49	65	88	140	178	209	221	244	270	328	366	414	451	516	572	590	637	686	838
	22.4	43	58	79	124	152	179	199	220	243	289	322	364	402	460	509	559	604	650	745
	25.0	39	51	69	118	143	169	181	200	221	252	281	318	361	413	458	511	551	594	693
	28.0	35	45	58	95	128	150	163	180	199	233	260	295	325	371	412	435	469	505	617
	31.5	31	40	57	85	110	129	148	163	180	205	229	259	289	331	367	412	445	479	549
	35.5	27	36	50	81	103	122	134	148	163	179	200	226	260	298	330	363	392	422	510
	40.0	24	32	45	70	92	109	121	134	147	163	182	206	227	260	288	309	334	359	422
	45.0	22	29	40	61	78	92	107	118	131	143	160	181	202	232	257	293	316	340	390
	50.0	19	25	35	58	73	86	97	107	118	125	139	158	182	208	231	260	281	302	363
	56.0	17	19	32	48	59	70	82	91	100	112	125	141	163	187	207	221	239	257	314
	63.0	15	19	25	41	55	64	75	83	92	105	117	132	146	166	185	209	226	243	279
	71.0	14	18	25	41	52	61	68	75	83	91	102	115	131	150	166	169	183	197	259
	80.0	12	16	22	35	43	51	59	66	73	81	90	102	114	131	145	160	173	186	213
90.0	11	14	19	33	41	48	54	60	66	70	79	89	103	117	130	142	153	165	198	
100	10	10	17	27	33	39	44	49	54	63	71	80	92	105	117	121	130	140	172	
112	9	10	13	23	30	35	42	46	51	59	66	75	82	94	104	114	123	133	152	
125	8	10	13	23	29	34	38	42	46	51	57	65	74	84	93				141	

Type VR3 Right Angle

Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1170	12.5	94															716	774	833	
	14.0	84	71	94	159	186	218	247	274	302	351	392	444	511	585	648	785	848	913	907
	16.0	73	78	107	179	208	245	277	306	338	407	454	514	563	644	714	852	920	991	987
	18.0	65	80	114	183	225	265	305	338	373	404	450	510	588	673	746	842	909	979	1132
	20.0	59	83	114	180	233	274	293	324	358	423	472	534	607	695	770	793	857	922	1109
	22.4	52	82	117	180	223	263	295	326	360	431	481	544	596	682	756	860	928	999	1073
	25.0	47	81	114	184	227	267	307	340	375	407	454	514	593	679	752	848	916	986	1145
	28.0	42	85	104	180	233	274	293	324	358	426	475	538	611	699	775	799	863	929	1117
	31.5	37	82	117	180	224	264	296	328	362	433	483	547	600	686	760	865	934	1006	1080
	35.5	33	81	115	185	228	268	309	341	377	409	456	516	597	683	757	853	921	992	1152
	40.0	29	85	115	185	237	279	300	332	367	428	477	540	614	703	779	803	867	934	1083
	45.0	26	82	118	181	225	265	297	329	363	435	485	549	602	689	764	869	939	1011	1086
	50.0	23	81	115	185	229	269	309	342	378	410	458	518	599	685	760	857	925	996	1158
	56.0	21	70	117	181	219	257	291	322	356	401	448	507	616	705	781	806	871	937	1129
	63.0	19	76	99	170	221	261	298	330	364	436	487	551	604	691	766	872	942	1014	1091
	71.0	16	81	112	184	229	270	310	343	379	411	459	520	601	687	762	808	873	939	1162
	80.0	15	82	118	181	226	266	298	330	365	437	487	552	605	693	768	874	944	1016	1093
	90.0	13	81	115	186	229	270	311	344	379	412	460	520	602	688	763	861	930	1001	1164
100	12	67	111	180	220	259	282	312	345	405	452	512	618	708	784	810	874	941	1134	
112	10	73	94	167	217	255	299	331	365	437	488	553	606	694	769	876	946	1018	1095	
125	9	81	106	181	230	270	311	344	380	413	460	521	603	689	764				1166	
970	12.5	78															716	774	833	
	14.0	69	72	94	159	193	227	262	290	320	372	415	470	540	618	685	790	854	919	907
	16.0	61	78	107	179	217	255	293	324	358	429	479	543	593	679	753	857	925	996	987
	18.0	54	80	114	184	227	267	306	339	374	405	452	512	591	676	749	846	913	983	1132
	20.0	49	85	114	180	233	274	293	324	358	424	474	536	609	697	773	797	860	926	1114
	22.4	43	82	117	180	224	263	296	327	361	432	482	546	598	684	759	863	932	1003	1078
	25.0	39	81	115	184	228	268	308	341	376	408	455	515	595	681	755	851	919	990	1150
	28.0	35	85	105	180	233	274	293	324	358	427	476	539	613	701	777	801	865	932	1121
	31.5	31	82	117	181	225	264	297	329	363	434	484	548	601	688	763	867	937	1009	1084
	35.5	27	81	115	185	228	269	309	342	378	410	457	518	598	684	758	855	923	994	1156
	40.0	24	85	115	185	237	279	300	332	367	428	478	541	615	704	780	805	869	936	1083
	45.0	22	82	118	181	225	265	298	329	364	436	486	550	604	691	765	871	941	1013	1089
	50.0	19	81	115	186	229	269	310	343	379	411	459	519	600	687	761	858	927	998	1160
	56.0	17	70	117	181	219	258	292	323	356	403	449	509	617	706	782	807	872	939	1131
	63.0	15	76	99	170	222	261	298	330	365	437	487	552	605	692	767	873	943	1016	1092
	71.0	14	81	112	184	229	270	310	344	379	412	459	520	601	688	763	809	874	941	1164
	80.0	12	82	118	182	226	266	299	331	365	437	488	552	606	693	768	875	945	1017	1095
	90.0	11	81	115	186	230	270	311	344	380	412	460	521	602	689	764	862	931	1002	1166
100	10	67	111	180	221	260	282	312	345	406	453	513	619	708	785	810	875	942	1135	
112	9	73	94	167	217	255	299	331	365	438	488	553	607	694	770	876	946	1019	1096	
125	8	81	106	181	230	270	311	344	380	413	461	521	603	690	765				1166	

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	8.00	146	1995	2231	2456			2759	3183	3486			
	9.00	130	1995	2231	2456	2241	2456	2759	3183	3486	3149	3318	3486
	10.0	117	1995	2231	2456	2241	2456	2759	3183	3486	3149	3318	3486
	11.2	104	1721	1923	2117	2241	2456	2759	3183	3486	3149	3318	3486
	12.5	94	1578	1764	1942	2177	2386	2411	2781	3045	3149	3318	3486
	14.0	84	1362	1523	1677	1772	1942	2111	2781	3045	2751	2899	3045
	16.0	73	1356	1515	1668	1724	1890	2371	2735	2995	2751	2899	3045
	18.0	65	1233	1379	1518	1686	1848	2025	2337	2558	2751	2899	3045
	20.0	59	1016	1136	1251	1506	1651	1757	2027	2219	2311	2435	2558
	22.4	52	1010	1130	1243	1286	1410	1713	1976	2164	2200	2318	2435
	25.0	47	910	1017	1120	1257	1377	1391	1605	1757	2089	2201	2312
	28.0	42	749	838	922	1102	1208	1278	1474	1614	1742	1835	1928
	31.5	37	745	832	916	948	1039	1245	1436	1573	1600	1686	1771
	35.5	33	642	718	791	926	1015	1000	1153	1263	1504	1584	1664
	40.0	29	529	591	650	789	865	872	1006	1102	1141	1202	1263
	45.0	26	525	587	646	669	733	849	980	1073	1092	1151	1209
	50.0	23	457	511	563	653	716	702	810	887	1051	1108	1164
	56.0	21	376	420	463	513	563	644	743	814	879	927	973
	63.0	19	373	418	460	476	522	630	727	796	735	775	814
	71.0	16	298	333	367	465	509	488	564	617	735	775	814
80.0	15	296	331	364	377	413	475	549	601	612	645	677	
90.0	13	257	287	316	368	403	393	453	496	584	616	647	
100	12	212	237	260	288	316	346	399	437	492	518	544	
112	10	210	235	259	268	294	346	399	437	395	416	437	
125	9				261	286				395	416	437	
970	8.00	121	1675	1872	2061			2317	2673	2927			
	9.00	108	1675	1872	2061	1881	2061	2317	2673	2927	2644	2786	2927
	10.0	97	1675	1872	2061	1881	2061	2317	2673	2927	2644	2786	2927
	11.2	87	1439	1609	1771	1881	2061	2317	2673	2927	2644	2786	2927
	12.5	78	1308	1462	1610	1821	1996	2023	2334	2555	2644	2786	2927
	14.0	69	1137	1272	1400	1469	1610	2023	2334	2555	2309	2432	2555
	16.0	61	1131	1265	1392	1439	1578	1982	2286	2503	2309	2432	2555
	18.0	54	1028	1149	1265	1407	1542	1679	1937	2121	2309	2432	2555
	20.0	49	847	947	1042	1249	1369	1465	1691	1851	1916	2019	2121
	22.4	43	842	941	1036	1072	1175	1428	1648	1804	1835	1934	2031
	25.0	39	758	847	932	1047	1147	1159	1337	1464	1732	1825	1917
	28.0	35	624	697	767	914	1001	1064	1227	1344	1451	1529	1606
	31.5	31	619	693	762	789	865	1036	1196	1309	1332	1404	1475
	35.5	27	534	597	657	771	844	829	956	1047	1247	1313	1380
	40.0	24	439	491	541	656	719	725	837	916	946	996	1047
	45.0	22	436	488	537	556	609	706	815	892	908	957	1005
	50.0	19	380	425	468	543	595	584	673	737	872	918	965
	56.0	17	312	349	384	428	469	534	616	675	731	770	809
	63.0	15	310	347	382	395	433	523	604	661	610	642	675
	71.0	14	247	277	304	386	423	406	468	512	610	642	675
80.0	12	246	275	302	313	343	395	455	499	508	535	562	
90.0	11	213	238	262	306	335	326	376	412	485	511	536	
100	10	176	196	216	239	262	287	331	362	408	430	452	
112	9	174	195	215	222	244	287	331	362	327	345	362	
125	8				217	238				327	345	362	

Type VR3 Right Angle

Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	8.00	146	902	1009	1111			1170	1350	1479			
	9.00	130	1019	1139	1254	1128	1236	1347	1554	1702	1495	1575	1655
	10.0	117	1113	1245	1370	1259	1379	1473	1699	1861	1716	1808	1899
	11.2	104	1102	1232	1356	1372	1504	1637	1889	2068	1870	1971	2070
	12.5	94	1144	1278	1407	1534	1681	1800	2046	2212	2085	2197	2308
	14.0	84	1115	1246	1372	1429	1566	1681	2046	2212	2085	2197	2308
	16.0	73	1212	1355	1492	1552	1701	1980	2285	2501	2345	2471	2596
	18.0	65	1211	1354	1490	1654	1813	1886	2176	2382	2556	2694	2830
	20.0	59	1127	1259	1386	1646	1804	1883	2172	2379	2409	2538	2666
	22.4	52	1224	1368	1506	1568	1719	2007	2316	2536	2631	2773	2913
	25.0	47	1222	1366	1503	1671	1831	1898	2189	2397	2723	2869	3014
	28.0	42	1136	1270	1398	1646	1804	1902	2194	2403	2652	2794	2935
	31.5	37	1233	1379	1518	1581	1733	2026	2338	2560	2658	2801	2942
	35.5	33	1230	1375	1514	1683	1845	1910	2204	2413	2723	2869	3014
	40.0	29	1143	1278	1407	1682	1844	1918	2213	2423	2440	2571	2701
	45.0	26	1241	1387	1527	1591	1744	2042	2356	2580	2680	2824	2967
	50.0	23	1236	1382	1521	1693	1856	1924	2220	2431	2813	2964	3114
	56.0	21	1148	1283	1413	1545	1693	1919	2214	2424	2689	2834	2977
	63.0	19	1246	1393	1533	1598	1752	2051	2366	2591	2444	2575	2705
	71.0	16	1151	1286	1416	1700	1863	1933	2230	2441	2664	2807	2949
80.0	15	1248	1395	1536	1602	1756	2057	2373	2598	2701	2846	2990	
90.0	13	1240	1386	1526	1704	1867	1936	2234	2446	2813	2964	3114	
100	12	1153	1289	1419	1549	1698	1854	2139	2342	2706	2851	2995	
112	10	1251	1399	1540	1606	1760	2027	2338	2560	2361	2488	2613	
125	9				1708	1871				2573	2712	2849	
970	8.00	121	914	1021	1124			1186	1368	1498			
	9.00	108	1031	1153	1269	1142	1251	1365	1574	1724	1514	1596	1676
	10.0	97	1127	1260	1387	1274	1396	1492	1721	1885	1738	1831	1924
	11.2	87	1112	1243	1369	1389	1522	1658	1913	2095	1895	1996	2097
	12.5	78	1144	1278	1407	1548	1696	1619	1868	2046	2112	2225	2338
	14.0	69	1123	1255	1381	1429	1566	1864	2150	2355	2069	2180	2290
	16.0	61	1220	1364	1501	1563	1712	1996	2303	2522	2374	2501	2627
	18.0	54	1218	1361	1499	1665	1825	1886	2176	2382	2588	2726	2864
	20.0	49	1132	1266	1394	1646	1804	1895	2186	2393	2409	2538	2666
	22.4	43	1230	1375	1514	1576	1728	2019	2329	2550	2648	2790	2931
	25.0	39	1227	1371	1510	1679	1840	1907	2200	2409	2723	2869	3014
	28.0	35	1140	1274	1403	1646	1804	1910	2204	2413	2665	2808	2950
	31.5	31	1237	1383	1523	1587	1739	2035	2347	2570	2670	2813	2955
	35.5	27	1234	1379	1518	1689	1851	1910	2204	2413	2723	2869	3014
	40.0	24	1146	1281	1410	1687	1849	1924	2219	2430	2440	2571	2701
	45.0	22	1244	1390	1530	1595	1748	2048	2362	2587	2688	2832	2976
	50.0	19	1239	1385	1524	1697	1860	1929	2226	2437	2813	2964	3114
	56.0	17	1150	1286	1415	1554	1703	1919	2214	2424	2696	2840	2984
	63.0	15	1248	1395	1536	1601	1755	2055	2371	2596	2444	2575	2705
	71.0	14	1152	1288	1418	1703	1866	1936	2233	2445	2664	2807	2949
80.0	12	1250	1397	1538	1604	1758	2060	2376	2602	2705	2851	2995	
90.0	11	1240	1386	1526	1706	1870	1939	2237	2449	2813	2964	3114	
100	10	1155	1291	1421	1549	1698	1854	2139	2342	2709	2855	2999	
112	9	1252	1400	1541	1607	1762	2027	2338	2560	2361	2488	2613	
125	8				1709	1873				2573	2712	2849	

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
870	12.5	70															720	777	837	
	14.0	62	68	90	154	184	217	265	293	324	369	411	466	524	599	664	720	777	837	837
	16.0	54	68	90	154	184	217	258	285	315	357	398	451	518	593	657	683	737	794	837
	18.0	48	62	86	147	179	210	234	259	286	311	348	394	466	533	591	623	673	724	837
	20.0	44	58	79	126	159	188	198	219	242	295	329	372	405	463	514	530	573	617	753
	22.4	39	52	71	112	137	161	179	198	218	259	289	327	361	413	458	502	543	584	670
	25.0	35	46	62	106	129	151	162	179	198	226	252	286	325	371	412	459	496	533	623
	28.0	31	41	53	86	115	135	146	162	178	210	234	265	292	334	370	390	422	454	555
	31.5	28	36	51	76	99	116	132	147	162	184	205	233	260	297	329	370	399	430	493
	35.5	25	32	45	72	93	109	120	133	147	161	179	203	234	267	296	326	352	379	458
	40.0	22	29	40	63	83	98	108	120	132	146	163	185	204	234	259	277	300	323	379
	45.0	19	26	36	55	70	82	96	106	117	129	143	162	182	208	231	263	284	305	350
	50.0	17	23	31	52	66	78	87	96	106	112	125	142	163	187	207	233	252	271	325
	56.0	16	17	29	43	53	62	74	81	90	100	112	127	147	168	186	198	214	231	282
	63.0	14	17	22	37	49	58	67	74	82	94	105	119	131	149	166	188	203	218	250
	71.0	12	16	22	37	47	55	61	67	74	82	91	104	117	134	149	152	164	176	233
	80.0	11	15	20	31	39	46	53	59	65	72	81	92	102	117	130	144	155	167	192
	90.0	10	13	17	29	37	43	48	53	59	63	71	80	92	105	117	127	138	148	178
	100	9	9	15	24	30	35	39	44	48	57	63	72	83	94	105	108	117	126	154
	112	8	9	12	20	26	31	37	41	46	53	59	67	74	84	93	102	111	119	137
125	7	9	12	20	26	31	34	37	41	46	52	58	66	76	84				127	

Type VR3 Right Angle

Torque Ratings – lb-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
870	12.5	70															716	774	833	
	14.0	62	72	94	159	193	227	270	299	330	384	429	485	546	625	693	792	856	921	907
	16.0	54	79	107	179	217	255	295	326	360	430	480	544	595	681	755	859	928	999	987
	18.0	48	80	114	184	227	267	307	340	375	406	453	513	592	678	751	848	916	986	1132
	20.0	44	85	114	180	233	274	293	324	358	425	474	537	611	699	774	798	862	928	1117
	22.4	39	82	117	180	224	264	296	328	362	433	483	547	599	686	760	865	934	1005	1080
	25.0	35	81	115	185	228	268	308	341	377	409	456	516	596	682	756	852	921	991	1152
	28.0	31	85	105	180	233	274	293	324	358	427	477	540	614	702	778	802	867	933	1123
	31.5	28	82	117	181	225	265	297	329	363	435	485	549	602	689	764	869	938	1010	1086
	35.5	25	81	115	185	229	269	309	342	378	410	458	518	599	685	759	855	923	994	1157
	40.0	22	85	115	185	238	280	300	332	367	429	478	542	616	705	781	806	870	937	1083
	45.0	19	82	118	181	225	265	298	330	364	436	486	551	604	691	766	872	942	1014	1090
	50.0	17	81	115	186	229	270	310	343	379	411	459	520	601	687	762	859	928	999	1161
	56.0	16	70	117	181	220	258	292	323	356	403	450	510	617	706	783	808	873	940	1132
	63.0	14	76	99	170	222	262	299	330	365	437	487	552	605	693	768	874	944	1016	1093
	71.0	12	81	112	184	230	270	311	344	379	412	460	521	602	689	763	809	874	941	1164
	80.0	11	82	118	182	226	266	299	331	365	437	488	553	606	694	769	875	946	1018	1095
	90.0	10	81	115	186	230	270	311	344	380	413	460	521	603	689	764	862	931	1002	1166
	100	9	67	111	180	221	260	282	312	345	406	453	513	619	708	785	811	876	943	1135
	112	8	73	94	167	217	255	299	331	365	438	489	553	607	694	770	877	947	1019	1097
125	7	81	106	181	230	270	311	344	380	413	461	522	603	690	765					

Type VR3 Right Angle

Power Ratings – Hp/Triple Reduction

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	8.00	109	1513	1691	1861			2093	2415	2644			
	9.00	97	1513	1691	1861	1698	1861	2093	2415	2644	2389	2517	2644
	10.0	87	1513	1691	1861	1698	1861	2093	2415	2644	2389	2517	2644
	11.2	78	1297	1450	1596	1698	1861	2093	2415	2644	2389	2517	2644
	12.5	70	1173	1312	1444	1641	1798	1827	2108	2308	2389	2517	2644
	14.0	62	1024	1144	1260	1318	1444	1827	2108	2308	2085	2197	2308
	16.0	54	1018	1138	1253	1296	1420	1785	2059	2254	2085	2197	2308
	18.0	48	925	1034	1138	1266	1387	1506	1737	1902	2085	2197	2308
	20.0	44	762	851	937	1120	1227	1318	1521	1666	1718	1811	1902
	22.4	39	757	846	931	964	1056	1285	1482	1623	1651	1740	1828
	25.0	35	681	761	838	941	1032	1042	1202	1316	1553	1636	1719
	28.0	31	560	626	690	819	898	956	1103	1208	1305	1375	1444
	31.5	28	557	622	685	709	777	931	1075	1177	1197	1262	1326
	35.5	25	480	536	590	692	759	743	858	939	1118	1178	1238
	40.0	22	395	441	486	589	646	651	751	823	848	894	939
	45.0	19	392	438	482	499	547	634	732	801	816	859	903
	50.0	17	341	381	420	487	534	524	605	662	782	824	865
	56.0	16	280	314	345	385	422	479	553	605	656	691	726
	63.0	14	278	311	343	355	389	470	542	594	547	576	605
	71.0	12	222	248	273	346	380	364	420	460	547	576	605
80.0	11	220	246	271	281	308	354	409	448	456	480	505	
90.0	10	191	214	235	274	301	293	338	370	435	458	481	
100	9	158	176	194	214	235	257	297	325	366	386	406	
112	8	156	175	193	200	219	257	297	325	294	309	325	
125	7				195	213				294	309	325	

Type VR3 Right Angle

Torque Ratings – 1b-in/Triple Reduction

(MULTIPLY VALUES LISTED BY 1000)

High-Speed Shaft rpm	Nom Ratio	Approx LS Shaft rpm	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
870	8.00	109	920	1028	1132				1194	1378	1508			
	9.00	97	1039	1161	1278	1150	1260	1374	1586	1736	1525	1607	1689	
	10.0	87	1135	1269	1397	1283	1406	1503	1734	1898	1750	1844	1938	
	11.2	78	1117	1249	1375	1399	1533	1670	1927	2110	1908	2011	2112	
	12.5	70	1144	1278	1407	1555	1704	1630	1881	2060	2127	2241	2355	
	14.0	62	1126	1259	1386	1429	1566	1877	2165	2371	2083	2195	2306	
	16.0	54	1224	1368	1506	1568	1718	2004	2313	2532	2390	2518	2645	
	18.0	48	1221	1365	1503	1670	1831	1886	2176	2382	2605	2745	2884	
	20.0	44	1135	1269	1397	1646	1804	1900	2193	2401	2409	2538	2666	
	22.4	39	1233	1378	1517	1580	1732	2025	2336	2558	2656	2798	2940	
	25.0	35	1229	1374	1513	1683	1844	1911	2205	2414	2723	2869	3014	
	28.0	31	1142	1277	1405	1646	1804	1915	2209	2419	2671	2814	2957	
	31.5	28	1240	1386	1525	1590	1742	2039	2352	2575	2676	2819	2962	
	35.5	25	1236	1381	1521	1692	1854	1910	2204	2413	2723	2869	3014	
	40.0	22	1147	1283	1412	1689	1851	1926	2223	2434	2440	2571	2701	
	45.0	19	1245	1392	1532	1598	1751	2050	2366	2590	2692	2837	2980	
	50.0	17	1240	1386	1526	1699	1862	1931	2228	2440	2813	2964	3114	
	56.0	16	1151	1287	1417	1558	1708	1919	2214	2424	2699	2844	2988	
	63.0	14	1249	1396	1537	1603	1756	2057	2373	2598	2444	2575	2705	
	71.0	12	1153	1289	1419	1705	1868	1937	2235	2447	2664	2807	2949	
	80.0	11	1251	1398	1539	1605	1759	2061	2378	2604	2707	2853	2997	
90.0	10	1240	1386	1526	1707	1871	1940	2238	2451	2813	2964	3114		
100	9	1155	1291	1421	1549	1698	1854	2139	2342	2711	2857	3001		
112	8	1253	1401	1542	1608	1763	2027	2338	2560	2361	2488	2613		
125	7				1710	1874				2573	2712	2849		

Type VR2 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1170	6.30	None															484	489	494		
		Shaft Fan																928	937	946	
		Electric Fan																1497	1512	1527	
		DuraPlate																2542	2567	2593	
	7.10	None	101	123	142	169	172	218	220	222	248	250	252	337	341	344	462	466	471	463	
		Shaft Fan	157	211	276	290	296	406	410	414	522	528	533	685	692	699	884	892	901	1120	
		Electric Fan	211	293	345	465	475	577	583	589	777	785	792	1129	1140	1152	1426	1440	1454	1607	
		DuraPlate	271	332	406	502	512	960	969	979	1405	1419	1433	1757	1775	1792	2424	2448	2472	2528	
	8.00	None	98	119	143	169	173	217	219	221	243	245	248	337	340	344	475	479	484	453	
		Shaft Fan	152	203	275	290	296	405	409	413	510	515	520	687	694	700	901	910	919	1093	
		Electric Fan	205	283	343	464	473	576	582	588	756	763	771	1135	1146	1158	1446	1460	1475	1567	
		DuraPlate	264	320	403	500	510	960	969	979	1362	1375	1389	1772	1790	1808	2443	2468	2492	2465	
	9.00	None	99	119	138	163	167	206	208	210	236	238	240	352	356	359	450	455	459	462	
		Shaft Fan	154	203	265	278	284	382	386	389	491	496	501	707	714	721	841	850	858	1103	
		Electric Fan	207	282	330	443	452	542	547	553	725	732	739	1155	1167	1178	1339	1352	1365	1576	
		DuraPlate	266	319	387	477	486	899	908	917	1297	1310	1323	1786	1804	1822	2386	2410	2434	2469	
	10.0	None	82	105	125	136	139	184	185	187	228	230	233	274	276	279	426	430	435	431	
		Shaft Fan	128	179	242	235	240	338	342	345	469	473	478	550	556	561	798	806	814	1002	
		Electric Fan	172	249	303	377	384	478	483	488	689	696	702	906	915	924	1272	1285	1297	1420	
		DuraPlate	183	272	346	401	409	660	667	673	988	998	1008	1156	1168	1179	2273	2296	2319	2321	
	11.2	None	80	101	125	137	140	183	184	186	223	225	227	273	275	278	435	440	444	419	
		Shaft Fan	124	173	242	235	240	337	340	344	456	461	465	550	556	561	811	819	827	975	
		Electric Fan	168	240	302	376	384	477	482	487	669	676	683	909	918	927	1287	1300	1313	1382	
		DuraPlate	178	263	344	400	408	659	666	672	958	968	978	1162	1174	1185	2287	2310	2333	2262	
	12.5	None	81	103	121	132	135	165	166	168	215	218	220	283	286	289				424	
		Shaft Fan	126	174	233	226	231	309	312	315	439	443	448	565	570	576				980	
		Electric Fan	169	241	290	360	368	440	445	449	642	648	655	924	933	943				1387	
		DuraPlate	179	264	330	383	391	610	616	622	916	926	935	1176	1188	1199				2262	
	970	6.30	None														498	503	508		
			Shaft Fan															780	787	795	
Electric Fan																	1466	1481	1496		
DuraPlate																	2020	2040	2061		
7.10		None	97	116	138	164	167	211	213	215	247	249	251	337	340	344	472	477	482	477	
		Shaft Fan	133	176	231	250	251	343	346	350	443	450	452	588	594	599	739	747	754	971	
		Electric Fan	201	278	329	443	452	550	555	561	747	754	762	1086	1097	1108	1393	1407	1421	1565	
		DuraPlate	231	270	332	408	416	770	778	786	1121	1132	1143	1414	1428	1442	1921	1940	1960	2071	
8.00		None	94	112	135	164	167	210	212	214	241	243	246	336	339	343	483	488	493	464	
		Shaft Fan	129	169	227	250	251	341	345	348	432	436	441	588	593	599	753	761	768	944	
		Electric Fan	195	267	323	442	451	548	554	559	725	733	740	1090	1101	1112	1410	1424	1439	1523	
		DuraPlate	225	260	326	407	415	769	777	784	1086	1097	1108	1422	1436	1451	1939	1958	1977	2016	
9.00		None	95	114	130	151	154	198	200	202	233	236	238	350	353	357	454	458	463	471	
		Shaft Fan	130	171	219	229	234	322	325	328	416	420	424	605	611	617	701	708	715	952	
		Electric Fan	197	269	311	414	422	515	520	525	695	702	709	1109	1120	1131	1301	1314	1327	1529	
		DuraPlate	227	261	313	381	388	720	728	735	1036	1047	1057	1438	1453	1467	1899	1918	1937	2019	
10.0		None	79	101	122	133	136	171	173	174	224	226	229	268	271	273	428	432	437	433	
		Shaft Fan	108	151	204	201	205	279	282	284	397	401	405	466	471	475	663	670	676	861	
		Electric Fan	164	237	290	360	368	448	452	457	659	666	672	864	873	881	1234	1246	1259	1372	
		DuraPlate	159	223	284	329	336	527	532	537	794	802	810	929	938	947	1805	1823	1841	1901	
11.2		None	77	97	122	134	136	170	172	173	207	209	211	266	269	272	437	441	445	420	
		Shaft Fan	105	146	204	201	205	278	280	283	373	377	380	465	470	474	674	681	687	837	
		Electric Fan	160	229	289	360	367	447	451	456	626	632	638	866	875	883	1248	1260	1273	1335	
		DuraPlate	154	215	283	329	335	526	531	536	756	763	771	932	941	950	1819	1837	1855	1851	
12.5		None	78	98	118	129	132	161	163	164	200	202	204	276	279	282				424	
		Shaft Fan	106	147	196	193	197	262	265	268	359	363	366	478	483	488				841	
		Electric Fan	161	230	278	344	351	421	425	430	600	606	612	881	889	898				1338	
		DuraPlate	156	216	272	315	321	495	500	505	724	731	739	946	955	965				1852	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

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Type VR2 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
870	6.30	None															498	503	508		
		Shaft Fan																702	709	716	
		Electric Fan																1439	1454	1468	
		DuraPlate																1763	1780	1798	
	7.10	None	94	113	132	160	163	206	208	210	243	245	248	333	336	339	471	476	481	477	
		Shaft Fan	120	159	206	224	228	311	314	317	403	407	411	536	542	547	664	671	677	890	
		Electric Fan	195	270	316	430	438	533	538	544	726	734	741	1057	1067	1078	1366	1379	1393	1532	
		DuraPlate	212	248	293	363	370	678	684	691	981	991	1001	1244	1257	1269	1674	1690	1707	1842	
	8.00	None	91	109	132	155	158	205	207	209	237	240	242	331	335	338	481	486	491	463	
		Shaft Fan	117	153	205	218	222	309	312	315	392	396	400	536	541	546	677	683	690	865	
		Electric Fan	190	260	315	422	430	531	537	542	705	712	719	1060	1071	1081	1382	1396	1410	1490	
		DuraPlate	205	239	291	340	347	676	683	690	951	961	970	1250	1262	1275	1690	1707	1724	1791	
	9.00	None	92	111	128	149	152	186	187	189	230	232	234	345	348	351	450	454	459	469	
		Shaft Fan	118	155	198	209	214	283	286	289	378	381	385	552	558	563	629	635	641	871	
		Electric Fan	191	261	302	403	411	490	495	500	676	682	689	1078	1089	1100	1273	1286	1299	1495	
		DuraPlate	207	240	280	356	363	624	631	637	909	918	927	1267	1280	1292	1712	1730	1747	1795	
	10.0	None	77	98	119	131	133	168	169	171	211	213	215	262	265	267	424	428	433	429	
		Shaft Fan	98	137	185	183	186	253	256	259	350	353	357	423	427	431	594	600	606	788	
		Electric Fan	159	231	282	350	357	435	440	444	629	635	642	838	846	854	1207	1219	1231	1340	
		DuraPlate	147	206	254	293	299	466	471	476	688	695	702	817	825	833	1626	1642	1658	1692	
	11.2	None	74	94	119	131	133	167	168	170	206	208	210	248	250	253	433	437	441	416	
		Shaft Fan	95	132	184	183	186	252	255	257	340	344	347	407	411	415	604	610	616	765	
		Electric Fan	155	222	281	349	356	434	438	443	611	617	623	823	831	839	1220	1232	1245	1302	
		DuraPlate	143	199	253	293	299	465	470	474	668	675	682	802	810	818	1639	1656	1672	1646	
12.5	None	75	95	115	126	129	158	159	161	199	201	203	258	260	263				420		
	Shaft Fan	96	133	178	176	180	238	241	243	328	331	335	420	424	428				769		
	Electric Fan	156	223	270	334	341	409	413	417	586	592	598	838	846	855				1305		
	DuraPlate	144	200	244	281	286	438	442	447	641	647	654	817	825	833				1647		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR2 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	6.30	None														*	*	*		
		Shaft Fan															849	857	866	
		Electric Fan															963	972	982	
		DuraPlate															3271	3304	3337	
	7.10	None	87	98	89	104	106	*	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	195	255	318	318	325	450	455	459	523	528	534	641	647	654	836	844	853	995
		Electric Fan	196	264	286	392	400	480	484	489	579	585	591	833	842	850	945	955	964	1077
		DuraPlate	N/A	439	518	644	657	1298	1311	1324	1886	1905	1924	2279	2302	2325	3160	3191	3223	3099
	8.00	None	85	96	91	106	108	*	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	190	248	318	320	327	453	457	462	521	526	531	651	658	664	875	884	892	997
		Electric Fan	192	256	287	394	402	482	487	492	575	581	587	846	854	863	985	995	1005	1077
		DuraPlate	N/A	425	516	643	656	1304	1317	1330	1837	1855	1873	2301	2324	2347	3202	3234	3266	3051
	9.00	None	87	98	89	104	106	131	132	133	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	193	250	307	308	315	432	436	440	507	512	517	687	693	700	872	880	889	1037
		Electric Fan	194	258	277	378	385	459	464	468	559	565	570	882	891	900	973	983	993	1118
DuraPlate		N/A	425	495	613	625	1224	1236	1248	1750	1768	1785	2335	2358	2381	3180	3211	3243	3082	
10.0	None	72	87	85	94	96	124	125	126	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	160	219	289	272	277	389	393	397	502	507	512	583	589	595	838	846	855	1004	
	Electric Fan	161	227	261	332	338	413	417	421	551	556	562	740	747	755	935	945	954	1076	
	DuraPlate	240	359	449	529	539	882	890	899	1306	1319	1332	1527	1542	1558	3052	3082	3113	2959	
11.2	None	65	85	86	95	97	124	125	126	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	149	213	289	272	278	389	393	397	492	497	502	586	592	598	858	867	876	987	
	Electric Fan	150	220	261	332	338	413	417	421	540	545	550	745	752	760	956	966	976	1057	
	DuraPlate	227	347	446	527	538	884	892	901	1270	1283	1295	1543	1559	1574	3071	3101	3132	2896	
12.5	None	66	86	84	93	95	119	120	121	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	151	214	278	262	267	369	373	377	475	480	485	605	611	617				1002	
	Electric Fan	152	221	251	319	325	392	396	400	521	526	531	764	772	779				1072	
	DuraPlate	229	348	428	504	514	833	841	849	1214	1226	1238	1556	1572	1587				2902	
1430	6.30	None														*	*	*		
		Shaft Fan															810	818	826	
		Electric Fan															1118	1130	1141	
		DuraPlate															2707	2734	2761	
	7.10	None	85	98	100	117	119	151	152	154	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	165	216	273	279	284	394	398	402	477	481	486	606	612	618	784	792	800	964
		Electric Fan	190	257	289	394	402	486	491	496	619	625	631	901	910	919	1080	1090	1101	1224
		DuraPlate	297	358	428	530	541	1055	1065	1076	1534	1550	1565	1883	1902	1921	2600	2626	2652	2624
	8.00	None	83	95	101	118	121	151	153	154	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	160	209	273	280	285	394	398	402	470	475	479	611	617	623	811	819	827	953
		Electric Fan	185	249	288	395	402	487	492	496	608	614	620	908	917	926	1109	1120	1131	1207
		DuraPlate	290	346	425	530	540	1057	1068	1078	1491	1506	1521	1896	1915	1934	2630	2656	2683	2573
	9.00	None	78	97	98	115	117	146	147	149	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	155	211	263	269	274	374	378	382	455	460	465	637	644	650	784	792	800	977
		Electric Fan	179	250	278	378	385	461	465	470	587	593	599	937	946	956	1057	1067	1078	1231
DuraPlate		283	347	409	505	515	992	1002	1012	1422	1436	1450	1924	1943	1962	2597	2623	2649	2590	
10.0	None	66	86	92	102	104	134	135	136	142	143	145	173	175	177	258	260	263	*	
	Shaft Fan	130	185	247	235	240	335	338	342	444	448	453	519	524	529	749	756	764	918	
	Electric Fan	150	220	261	329	336	411	415	419	568	573	579	758	765	773	1009	1020	1030	1144	
	DuraPlate	192	294	371	433	442	719	726	734	1067	1078	1088	1248	1261	1273	2485	2510	2535	2468	
11.2	None	64	81	93	103	105	133	135	136	140	142	143	173	175	177	267	270	273	*	
	Shaft Fan	126	176	246	235	240	334	338	341	434	438	442	520	526	531	765	772	780	898	
	Electric Fan	146	210	260	329	335	410	414	418	554	559	565	761	769	776	1027	1037	1047	1118	
	DuraPlate	187	281	368	432	441	720	727	734	1037	1047	1057	1258	1271	1283	2501	2526	2551	2411	
12.5	None	65	82	81	100	102	127	129	130	137	138	140	183	185	186				*	
	Shaft Fan	128	178	227	227	231	317	320	323	418	423	427	536	541	547				908	
	Electric Fan	148	211	240	316	322	388	392	396	533	538	544	778	785	793				1128	
	DuraPlate	189	282	343	414	422	678	685	692	991	1001	1011	1272	1284	1297				2415	

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† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR2 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Double Reduction Maximum 180°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1170	6.30	None														336	339	343		
		Shaft Fan														709	716	723		
		Electric Fan														1196	1208	1220		
		DuraPlate														2100	2121	2142		
	7.10	None	78	96	104	123	126	160	161	163	168	169	171	228	230	232	324	327	330	*
		Shaft Fan	129	175	224	232	237	327	331	334	408	412	416	533	538	543	678	685	692	866
		Electric Fan	175	246	283	384	392	475	480	485	627	634	640	917	926	935	1144	1155	1167	1289
		DuraPlate	227	279	336	415	424	811	819	827	1177	1189	1201	1467	1481	1496	2007	2027	2047	2101
	8.00	None	75	93	105	124	127	159	161	163	166	168	169	229	231	233	336	340	343	*
		Shaft Fan	125	169	224	233	238	327	330	334	400	404	408	535	540	545	696	703	710	848
		Electric Fan	171	237	282	384	391	475	480	484	612	619	625	920	929	939	1165	1176	1188	1260
		DuraPlate	221	270	335	415	423	812	820	828	1143	1154	1166	1472	1487	1502	2029	2049	2069	2052
	9.00	None	77	91	102	120	123	152	153	155	162	164	165	242	245	247	329	332	335	*
		Shaft Fan	127	168	216	224	228	309	312	316	387	391	394	554	560	565	660	667	674	862
		Electric Fan	172	235	271	367	374	448	452	457	589	595	601	944	953	962	1089	1100	1111	1273
		DuraPlate	223	267	322	396	404	761	769	777	1091	1102	1113	1497	1512	1527	1998	2018	2038	2061
10.0	None	64	82	90	98	100	137	138	140	160	162	163	194	196	198	312	315	318	*	
	Shaft Fan	106	148	195	186	190	276	278	281	373	377	380	438	442	446	627	634	640	795	
	Electric Fan	144	208	247	309	315	397	401	405	563	569	574	746	753	761	1036	1046	1057	1160	
	DuraPlate	153	228	285	330	337	556	562	568	825	834	842	964	974	983	1905	1924	1943	1956	
11.2	None	62	79	90	98	100	136	138	139	157	159	160	193	195	197	320	324	327	284	
	Shaft Fan	103	143	195	187	191	275	277	280	364	367	371	438	442	446	639	646	652	774	
	Electric Fan	140	201	246	309	315	396	400	404	548	553	559	748	756	763	1050	1061	1071	1130	
	DuraPlate	149	220	283	330	336	556	561	567	802	810	818	969	979	989	1920	1939	1959	1907	
12.5	None	63	80	88	95	97	118	119	120	152	154	155	202	204	206				289	
	Shaft Fan	104	145	188	180	184	246	249	251	351	354	358	451	455	460				781	
	Electric Fan	141	202	237	296	302	360	363	367	526	532	537	763	770	778				1136	
	DuraPlate	150	221	273	316	322	509	514	519	768	775	783	983	993	1003				1910	
970	6.30	None														375	379	382		
		Shaft Fan														613	620	626		
		Electric Fan														1205	1217	1229		
		DuraPlate														1683	1700	1716		
	7.10	None	75	90	104	123	126	160	161	163	177	179	181	243	246	248	357	361	364	*
		Shaft Fan	109	145	189	199	203	279	282	285	353	356	360	467	471	476	584	590	595	769
		Electric Fan	168	233	273	370	377	458	463	467	615	621	627	899	908	917	1147	1158	1170	1287
		DuraPlate	194	226	276	339	345	652	659	665	941	951	960	1186	1198	1210	1603	1619	1635	1733
	8.00	None	73	87	100	124	126	159	161	162	175	176	178	368	371	375	319	322	325	*
		Shaft Fan	106	140	183	199	203	278	281	284	345	348	352	597	603	609	735	743	750	476
		Electric Fan	164	224	266	369	377	457	462	466	599	605	611	1164	1176	1188	1230	1242	1254	918
		DuraPlate	189	218	269	338	345	652	658	665	914	923	932	1621	1637	1654	1656	1673	1689	1212
	9.00	None	74	89	97	110	113	151	152	154	170	171	173	255	258	260	350	354	357	333
		Shaft Fan	108	142	177	181	185	263	265	268	333	336	340	484	488	493	562	567	573	759
		Electric Fan	165	226	256	341	348	430	435	439	575	580	586	922	931	940	1080	1091	1102	1262
		DuraPlate	190	219	259	312	318	612	618	624	873	882	891	1211	1223	1235	1598	1614	1630	1696
10.0	None	62	79	91	99	101	127	128	130	165	167	168	198	200	202	331	335	338	312	
	Shaft Fan	89	125	166	161	164	225	227	229	320	323	326	375	379	383	532	537	542	694	
	Electric Fan	138	199	240	300	306	371	375	378	547	552	558	721	728	735	1025	1036	1046	1140	
	DuraPlate	133	188	234	272	278	440	444	449	666	672	679	777	784	792	1520	1535	1550	1608	
11.2	None	60	76	91	100	102	127	128	129	145	146	148	197	199	201	339	342	346	304	
	Shaft Fan	87	121	166	161	165	224	226	228	293	295	298	375	378	382	542	547	553	675	
	Electric Fan	134	192	239	299	305	370	374	377	511	516	521	723	730	737	1038	1049	1059	1110	
	DuraPlate	129	181	234	272	277	439	443	448	625	632	638	779	787	794	1533	1549	1564	1566	
12.5	None	61	77	88	97	99	120	122	123	141	142	144	205	208	210				308	
	Shaft Fan	88	122	160	156	159	212	214	216	282	285	288	386	390	394				680	
	Electric Fan	135	194	230	287	293	349	353	356	491	496	501	736	744	751				1114	
	DuraPlate	131	182	225	261	266	414	418	423	600	606	612	792	800	808				1568	

[★] Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

[†] Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR2 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Double Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
870	6.30	None															386	390	394		
		Shaft Fan																559	565	570	
		Electric Fan																1196	1207	1219	
		DuraPlate																1473	1488	1503	
	7.10	None	74	89	99	122	124	158	159	161	179	181	183	246	249	251	366	370	374	344	
		Shaft Fan	99	132	167	182	185	254	256	259	323	326	329	430	434	438	531	536	541	712	
		Electric Fan	164	227	262	360	368	447	451	455	603	609	615	882	891	899	1136	1147	1159	1272	
		DuraPlate	178	208	241	302	308	574	580	585	825	834	842	1045	1056	1066	1401	1415	1429	1545	
	8.00	None	72	85	100	115	117	157	158	160	176	177	179	246	248	250	376	380	383	335	
		Shaft Fan	97	127	167	174	177	253	255	258	315	318	322	429	434	438	542	548	553	694	
		Electric Fan	159	219	261	350	357	445	450	454	586	592	598	882	891	900	1152	1164	1175	1239	
		DuraPlate	173	200	240	293	298	573	579	584	801	809	817	1046	1056	1067	1418	1432	1446	1505	
	9.00	None	73	87	97	111	113	138	139	141	170	172	174	257	259	262	355	359	362	341	
		Shaft Fan	98	129	161	167	171	227	229	231	304	307	310	445	449	453	508	514	519	701	
		Electric Fan	161	220	251	335	342	405	409	413	563	568	574	902	911	921	1066	1076	1087	1245	
		DuraPlate	174	202	232	280	286	524	529	534	766	774	782	1067	1078	1088	1455	1469	1484	1510	
	10.0	None	60	77	90	99	101	127	128	129	152	154	155	198	200	202	335	339	342	317	
		Shaft Fan	81	114	151	148	151	206	208	210	277	280	282	343	346	349	481	485	490	639	
		Electric Fan	134	194	235	293	299	363	366	370	518	524	529	703	710	717	1011	1021	1031	1121	
		DuraPlate	123	172	210	243	247	390	394	398	571	576	582	685	692	699	1382	1396	1409	1433	
	11.2	None	59	74	91	99	101	126	127	129	149	150	152	179	180	182	343	346	350	308	
		Shaft Fan	79	110	151	148	151	205	207	209	270	273	275	321	324	327	490	495	499	621	
		Electric Fan	130	187	234	292	298	362	365	369	504	509	514	680	687	694	1023	1034	1044	1091	
		DuraPlate	120	166	209	242	247	389	393	397	555	560	566	662	669	675	1395	1409	1423	1394	
12.5	None	59	75	88	96	98	120	121	122	144	146	147	187	188	190				312		
	Shaft Fan	80	111	145	143	145	194	196	198	261	263	266	332	335	339				625		
	Electric Fan	131	188	225	280	286	341	345	348	484	489	494	694	701	708				1094		
	DuraPlate	121	168	202	233	237	367	371	375	532	538	543	676	683	690				1397		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	12.5	None														*	*	*		
		Shaft Fan															904	913	922	
		Electric Fan															693	700	707	
		DuraPlate															2687	2714	2741	
	14.0	None	79	114	127	130	132	134	136	137	154	156	157	*	*	*	*	*	*	*
		Shaft Fan	161	253	325	300	306	370	374	378	518	523	529	563	568	574	878	887	900	832
		Electric Fan	130	208	237	279	285	303	306	309	426	430	435	522	527	532	674	681	688	631
		DuraPlate	295	411	582	662	676	991	1001	1011	1589	1605	1621	1732	1749	1766	2606	2633	2659	2571
	16.0	None	77	110	128	130	133	134	135	137	155	156	158	*	*	*	*	*	*	*
		Shaft Fan	157	244	325	300	306	367	371	375	511	516	521	560	566	571	900	906	915	825
		Electric Fan	126	201	237	279	285	301	304	307	421	425	429	519	525	530	693	700	707	628
		DuraPlate	287	397	579	658	672	980	990	1000	1553	1568	1584	1718	1735	1752	2613	2639	2666	2528
	18.0	None	78	111	125	128	131	130	132	133	153	155	156	*	*	*	*	*	*	*
		Shaft Fan	158	244	317	294	300	355	358	362	501	506	511	584	590	596	900	909	918	841
		Electric Fan	128	202	232	273	279	290	293	296	413	417	421	543	548	553	703	710	718	644
		DuraPlate	289	395	564	642	655	943	953	962	1514	1529	1544	1747	1764	1782	2556	2581	2607	2607
	20.0	None	71	101	114	121	124	130	131	132	148	149	151	*	*	*	*	*	*	*
		Shaft Fan	147	225	294	279	284	347	350	353	474	478	483	539	545	550	864	873	881	842
		Electric Fan	118	185	214	259	265	284	287	290	391	395	399	502	507	512	675	682	689	654
		DuraPlate	271	367	530	614	626	919	928	937	1443	1457	1472	1596	1612	1628	2466	2491	2515	2460
	22.4	None	69	97	115	122	124	129	130	131	146	147	149	154	155	157	*	*	*	*
		Shaft Fan	143	217	294	278	284	343	346	350	464	468	473	534	539	545	875	884	892	825
		Electric Fan	115	179	214	259	264	281	284	287	383	387	391	497	502	507	686	693	700	641
		DuraPlate	264	354	527	610	622	908	917	926	1406	1420	1434	1581	1597	1613	2465	2490	2515	2408
25.0	None	70	98	112	119	121	123	125	126	143	144	146	162	164	166	244	246	249	*	
	Shaft Fan	144	217	286	271	276	328	332	335	452	457	461	551	557	562	909	918	927	831	
	Electric Fan	116	179	209	252	257	270	272	275	374	378	381	514	519	524	737	744	752	648	
	DuraPlate	265	352	513	593	605	870	878	887	1367	1381	1394	1604	1620	1636	2469	2494	2518	2397	
28.0	None	59	86	99	109	111	128	130	131	154	156	157	173	175	176	232	235	237	241	
	Shaft Fan	123	193	246	243	248	318	322	325	432	437	441	505	510	515	871	879	888	907	
	Electric Fan	98	159	180	227	231	264	267	270	362	366	370	473	478	483	705	712	719	735	
	DuraPlate	220	306	437	527	537	672	679	685	1324	1337	1350	1184	1196	1207	2382	2406	2429	2483	
31.5	None	57	82	99	109	111	127	128	129	154	156	157	171	172	174	237	240	242	235	
	Shaft Fan	119	186	245	242	247	315	318	321	432	437	441	499	504	509	878	887	896	885	
	Electric Fan	95	153	180	226	231	261	264	266	362	366	370	468	473	477	713	720	727	717	
	DuraPlate	214	295	434	523	533	664	670	677	1291	1304	1317	1171	1183	1195	2378	2402	2425	2428	
35.5	None	58	83	97	107	109	121	123	124	148	149	151	178	180	182	238	240	242	238	
	Shaft Fan	120	187	239	236	241	301	305	308	412	416	420	514	519	524	854	862	871	887	
	Electric Fan	96	153	176	220	225	250	253	255	346	349	353	482	487	492	695	702	709	719	
	DuraPlate	215	294	424	509	519	636	643	649	1256	1269	1281	1190	1202	1214	2291	2314	2337	2411	
40.0	None	54	78	88	100	102	115	116	117	147	148	150	163	165	166	225	227	229	235	
	Shaft Fan	113	176	223	222	227	286	289	292	405	409	413	469	473	478	815	823	831	853	
	Electric Fan	91	144	162	207	211	237	239	242	340	344	347	439	444	448	663	669	676	693	
	DuraPlate	204	278	399	481	491	606	612	618	1225	1237	1249	1090	1101	1111	2206	2228	2250	2304	
45.0	None	52	75	88	100	102	113	115	116	143	145	146	161	163	164	229	231	233	228	
	Shaft Fan	110	169	222	222	226	282	285	288	395	399	403	463	468	472	822	830	838	830	
	Electric Fan	88	138	162	207	211	234	236	239	332	335	339	434	438	443	669	676	682	674	
	DuraPlate	198	267	397	478	488	599	605	611	1192	1204	1216	1078	1089	1100	2202	2224	2246	2249	
50.0	None	53	75	86	97	99	108	109	110	139	141	142	168	170	171	231	234	236	230	
	Shaft Fan	111	169	217	216	220	270	273	275	384	388	391	476	481	486	805	813	821	830	
	Electric Fan	89	139	158	201	205	224	226	228	323	326	329	447	452	456	658	665	671	675	
	DuraPlate	199	266	387	465	474	573	579	585	1155	1167	1178	1096	1107	1118	2128	2149	2170	2233	
56.0	None	52	74	85	88	90	96	97	98	111	112	114	165	167	168	218	220	222	229	
	Shaft Fan	110	170	213	201	205	253	255	258	346	350	353	460	464	469	767	774	782	804	
	Electric Fan	88	139	156	187	191	208	210	212	288	291	293	429	433	437	626	632	638	656	
	DuraPlate	197	275	379	436	444	547	552	558	1069	1079	1090	1015	1025	1035	2044	2065	2085	2138	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	63.0	None	50	71	84	88	90	94	95	96	109	110	111	162	164	166	222	224	226	221
		Shaft Fan	106	164	209	199	203	250	252	255	337	341	344	450	455	459	773	781	789	781
		Electric Fan	85	134	154	185	189	205	207	209	280	283	286	423	428	432	632	638	644	637
		DuraPlate	191	266	364	425	433	540	546	551	1042	1052	1063	1004	1014	1025	2042	2063	2083	2084
	71.0	None	51	72	82	86	87	90	91	92	105	107	108	170	172	173	197	199	201	223
		Shaft Fan	107	164	203	193	197	238	240	243	328	331	334	464	468	473	649	656	662	781
		Electric Fan	86	134	150	180	184	195	197	199	273	275	278	437	441	445	532	538	543	638
		DuraPlate	192	263	355	413	422	516	521	526	1012	1022	1032	1022	1032	1042	1236	1248	1261	2070
	80.0	None	46	59	75	78	79	91	92	93	117	119	120	134	136	137	200	202	204	200
		Shaft Fan	94	132	185	170	174	222	225	227	313	316	319	370	374	378	655	661	668	661
		Electric Fan	76	109	136	159	162	185	187	188	264	266	269	348	351	355	538	543	548	542
		DuraPlate	142	181	238	269	274	358	362	366	640	647	653	780	788	796	1240	1252	1264	1260
	90.0	None	47	60	73	76	77	87	88	89	114	115	117	140	141	143	198	200	202	202
		Shaft Fan	96	132	181	166	169	213	215	217	304	307	310	382	386	390	638	644	651	662
		Electric Fan	77	109	133	155	158	177	178	180	257	259	262	359	362	366	525	530	536	543
		DuraPlate	144	181	232	262	267	343	347	350	622	628	634	796	804	812	1201	1213	1225	1255
	100	None	46	59	72	73	74	87	88	89	115	116	117	136	137	138	186	188	190	196
		Shaft Fan	94	135	177	160	163	212	214	216	303	306	309	366	370	374	608	614	620	637
		Electric Fan	75	110	130	149	152	176	178	180	256	258	261	344	348	351	499	504	509	523
		DuraPlate	141	186	226	253	258	340	343	346	617	623	630	752	759	767	1150	1162	1173	1204
	112	None	44	57	72	73	74	86	87	88	112	113	114	133	135	136	190	192	194	190
		Shaft Fan	91	130	175	159	162	209	211	213	296	298	301	361	365	368	613	619	625	619
		Electric Fan	73	106	129	149	152	174	176	178	249	252	254	339	343	346	504	509	514	508
		DuraPlate	137	180	223	251	256	335	339	342	602	608	614	743	750	758	1154	1166	1178	1172
125	None	45	58	70	71	72	82	83	84	109	110	111	140	141	142				191	
	Shaft Fan	92	130	170	155	158	199	201	203	287	290	293	373	377	381				619	
	Electric Fan	74	106	125	145	148	166	167	169	243	245	247	351	354	358				509	
	DuraPlate	138	179	217	244	249	320	323	326	585	590	596	759	766	774				1168	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	8.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	*	*	*			*	*	*			
		DuraPlate	6563	6629	6694			4902	4951	5000			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	6549	6614	6680	6233	6357	5444	5498	5553	3547	3582	3618
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	6454	6519	6583	6322	6448	5603	5659	5715	4490	4535	4580
	11.2	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	584	590	596	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	6330	6393	6457	6264	6389	6419	6483	6547	4809	4857	4905
	12.5	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1029	1039	1050	443	452	*	*	*	*	*	*
		Electric Fan	595	601	607	*	*	*	*	*	*	*	*
		DuraPlate	4994	5044	5094	6230	6355	5909	5968	6027	5897	5956	6015
	14.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1058	1069	1080	942	961	*	*	*	*	*	*
		Electric Fan	630	636	642	*	*	*	*	*	*	*	*
		DuraPlate	4910	4960	5009	4915	5013	5856	5914	5973	5614	5670	5726
	16.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1036	1047	1057	999	1019	*	*	*	*	*	*
		Electric Fan	620	626	632	571	583	*	*	*	*	*	*
		DuraPlate	4808	4856	4904	4876	4974	5787	5845	5903	5639	5696	5752
18.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1093	1104	1115	987	1007	679	686	693	*	*	*	
	Electric Fan	700	707	714	571	583	*	*	*	*	*	*	
	DuraPlate	4615	4662	4708	4781	4877	5797	5855	5913	5603	5659	5715	
20.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1095	1106	1117	1051	1072	695	702	709	*	*	*	
	Electric Fan	709	716	723	661	675	*	*	*	*	*	*	
	DuraPlate	4518	4563	4608	4576	4667	5649	5705	5762	5694	5750	5807	
22.4	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1063	1073	1084	1073	1095	688	695	701	*	*	*	
	Electric Fan	687	694	701	687	701	*	*	*	*	*	*	
	DuraPlate	4419	4463	4507	4513	4604	5545	5601	5656	5566	5622	5678	
25.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1287	1300	1313	1045	1065	880	889	898	*	*	*	
	Electric Fan	959	968	978	669	682	173	175	177	*	*	*	
	DuraPlate	3358	3391	3425	4416	4505	5380	5433	5487	5473	5528	5583	
28.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1276	1289	1301	1263	1288	1578	1593	1609	836	845	853	
	Electric Fan	954	964	973	936	955	861	869	878	*	*	*	
	DuraPlate	3294	3327	3360	3333	3400	4378	4422	4466	5333	5386	5440	
31.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1238	1250	1263	1269	1294	1536	1552	1567	1539	1554	1569	
	Electric Fan	924	933	942	946	965	836	845	853	827	835	843	
	DuraPlate	3220	3252	3284	3295	3361	4291	4334	4377	4339	4382	4426	
35.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1167	1179	1190	1232	1257	1573	1589	1605	1502	1517	1532	
	Electric Fan	878	887	895	917	936	902	911	920	807	815	823	
	DuraPlate	2987	3017	3047	3222	3286	4177	4219	4261	4256	4298	4341	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	40.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1154	1165	1177	1150	1172	1513	1528	1543	1549	1564	1580	
		Electric Fan	871	879	888	862	879	865	874	883	881	890	899	
		DuraPlate	2927	2956	2986	2969	3028	4042	4083	4123	4154	4195	4237	
	45.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1118	1129	1141	1151	1174	1467	1482	1497	1489	1504	1519	
		Electric Fan	841	850	858	867	885	835	844	852	846	854	863	
		DuraPlate	2861	2890	2918	2931	2989	3956	3995	4035	4018	4058	4098	
	50.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1130	1141	1153	1116	1139	1536	1551	1567	1446	1460	1474	
		Electric Fan	848	857	865	839	856	885	894	902	818	826	834	
		DuraPlate	2963	2993	3023	2865	2923	4193	4235	4276	3932	3971	4011	
56.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1113	1124	1135	1113	1135	1515	1530	1546	1514	1529	1544		
	Electric Fan	838	847	855	833	850	874	883	891	867	876	884		
	DuraPlate	2885	2914	2943	2945	3004	4138	4179	4220	4168	4210	4252		
63.0	None	107	108	109	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1075	1086	1097	1111	1134	1464	1479	1494	1494	1508	1523		
	Electric Fan	808	816	824	836	853	841	849	857	857	866	874		
	DuraPlate	2813	2841	2869	2891	2949	4034	4074	4114	4114	4155	4196		
71.0	None	248	251	253	*	*	305	308	311	*	*	*	*	
	Shaft Fan	980	990	1000	1077	1098	1552	1567	1583	1472	1486	1501		
	Electric Fan	789	796	804	809	825	1085	1096	1107	851	860	868		
	DuraPlate	2317	2340	2364	2821	2877	3543	3579	3614	4037	4078	4118		
80.0	None	238	241	243	247	252	292	295	298	298	301	304		
	Shaft Fan	954	963	973	979	999	1511	1526	1541	1536	1551	1567		
	Electric Fan	766	774	781	787	803	1052	1063	1074	1071	1082	1092		
	DuraPlate	2271	2294	2317	2320	2367	3475	3510	3545	3527	3563	3598		
90.0	None	163	165	167	238	242	301	304	307	286	289	292		
	Shaft Fan	882	891	900	953	973	1575	1591	1607	1496	1511	1526		
	Electric Fan	687	694	701	765	781	1088	1098	1109	1039	1050	1060		
	DuraPlate	2299	2322	2345	2274	2320	3744	3781	3819	3460	3494	3529		
100	None	164	165	167	159	162	130	131	133	294	297	300		
	Shaft Fan	872	880	889	871	888	1337	1350	1363	1558	1573	1589		
	Electric Fan	681	687	694	677	690	859	867	876	1073	1083	1094		
	DuraPlate	2249	2271	2294	2285	2331	3491	3526	3561	3726	3763	3801		
112	None	156	158	159	163	166	124	125	126	127	128	129		
	Shaft Fan	845	854	862	871	888	1295	1308	1320	1320	1333	1347		
	Electric Fan	658	665	672	679	693	828	837	845	845	854	862		
	DuraPlate	2198	2220	2242	2253	2298	3410	3444	3478	3473	3508	3542		
125	None				156	159				121	122	123		
	Shaft Fan				845	862				1279	1292	1305		
	Electric Fan				658	671				816	824	832		
	DuraPlate				2202	2246				3392	3426	3460		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1430	12.5	None														243	245	248		
		Shaft Fan														888	897	905		
		Electric Fan														833	842	850		
		DuraPlate														2303	2326	2349		
	14.0	None	77	111	126	132	134	146	148	149	184	186	188	202	204	206	236	238	240	*
		Shaft Fan	137	215	276	259	264	325	329	332	466	471	476	535	540	545	856	864	873	825
		Electric Fan	125	201	231	275	280	309	312	315	450	454	459	580	586	592	803	811	819	771
		DuraPlate	242	340	478	542	553	814	822	830	1308	1321	1334	1454	1469	1483	2225	2247	2269	2199
	16.0	None	74	107	127	132	135	145	146	148	182	184	186	201	203	205	245	248	250	*
		Shaft Fan	133	207	276	259	264	322	326	329	458	462	467	530	536	541	869	878	886	810
		Electric Fan	122	194	231	274	280	306	309	312	441	446	450	575	581	587	816	824	833	759
		DuraPlate	235	328	475	539	550	804	812	820	1277	1290	1302	1440	1455	1469	2230	2252	2274	2156
	18.0	None	76	108	124	129	132	140	141	143	179	181	183	213	215	217	252	254	257	*
		Shaft Fan	134	208	269	253	258	310	313	316	447	452	456	550	555	561	848	856	865	819
		Electric Fan	123	195	226	268	273	294	297	300	431	436	440	596	602	607	798	806	813	768
		DuraPlate	237	326	463	525	536	773	780	788	1244	1256	1269	1466	1480	1495	2157	2179	2200	2152
	20.0	None	69	98	113	121	124	136	137	139	167	169	170	194	196	198	240	242	245	228
		Shaft Fan	124	190	248	238	243	300	303	306	417	422	426	493	498	503	811	819	828	800
		Electric Fan	114	178	208	253	258	285	287	290	402	406	410	534	540	545	763	771	778	746
		DuraPlate	221	301	432	499	509	749	756	764	1164	1176	1187	1320	1333	1347	2076	2097	2117	2069
	22.4	None	67	94	113	121	124	135	136	137	164	165	167	192	194	196	246	248	251	224
		Shaft Fan	120	183	248	237	242	296	299	302	408	412	416	488	493	498	820	828	837	776
		Electric Fan	110	171	207	252	257	281	284	287	393	397	401	528	533	539	772	779	787	729
		DuraPlate	215	290	430	496	506	739	747	754	1135	1146	1158	1307	1320	1333	2077	2097	2118	2021
25.0	None	68	95	110	118	121	129	130	131	160	162	163	201	203	205	279	282	285	228	
	Shaft Fan	122	183	241	231	236	284	286	289	397	401	405	504	509	514	802	810	818	779	
	Electric Fan	112	172	202	245	250	269	272	274	383	387	391	545	550	556	759	766	774	732	
	DuraPlate	216	289	418	482	492	707	715	722	1104	1115	1126	1329	1342	1355	2039	2060	2080	2012	
28.0	None	57	84	93	107	109	128	129	130	158	159	161	188	190	192	265	268	270	277	
	Shaft Fan	104	164	204	206	210	271	274	277	370	373	377	444	449	453	767	775	782	801	
	Electric Fan	95	153	171	218	223	258	260	263	357	360	364	479	484	488	725	732	739	757	
	DuraPlate	179	252	353	427	436	549	554	560	1070	1080	1091	975	985	995	1963	1982	2002	2049	
31.5	None	55	80	94	107	109	126	128	129	154	156	157	186	188	190	270	273	275	269	
	Shaft Fan	101	157	203	205	209	268	271	273	361	365	368	439	443	448	774	781	789	780	
	Electric Fan	92	147	171	218	222	255	257	260	349	352	356	473	478	483	731	739	746	737	
	DuraPlate	174	243	352	425	433	542	547	553	1043	1053	1064	964	974	983	1962	1982	2001	2000	
35.5	None	56	81	91	104	106	121	122	123	150	152	153	194	196	198	264	266	269	271	
	Shaft Fan	102	158	199	200	204	256	259	262	352	355	359	452	457	461	747	754	761	781	
	Electric Fan	93	148	167	212	216	519	524	529	340	343	347	487	492	497	706	713	720	739	
	DuraPlate	176	242	343	414	422	519	524	529	1015	1025	1035	982	992	1002	1885	1904	1923	1988	
40.0	None	52	76	86	93	95	105	106	107	148	150	151	175	176	178	249	252	254	261	
	Shaft Fan	95	148	188	183	187	232	234	237	345	348	352	409	413	417	711	718	726	745	
	Electric Fan	87	139	157	194	198	220	222	224	333	337	340	441	445	450	673	679	686	705	
	DuraPlate	166	228	325	385	392	481	486	491	989	999	1009	894	903	912	1810	1828	1846	1893	
45.0	None	51	72	86	93	95	103	104	105	145	146	147	175	175	176	254	256	259	253	
	Shaft Fan	92	142	187	183	186	229	231	234	336	339	343	404	408	412	718	725	732	724	
	Electric Fan	85	133	157	194	198	217	219	221	325	328	331	435	439	444	679	686	692	685	
	DuraPlate	161	219	324	382	390	475	480	485	962	972	981	884	893	902	1810	1828	1846	1845	
50.0	None	51	73	84	91	92	99	100	101	141	142	143	180	181	183	252	254	257	255	
	Shaft Fan	94	143	183	178	181	219	221	223	326	330	333	416	421	425	700	707	714	725	
	Electric Fan	86	133	153	189	192	207	209	211	315	319	322	448	453	457	663	670	676	686	
	DuraPlate	162	219	316	372	379	455	459	464	932	942	951	902	911	920	1748	1765	1782	1834	
56.0	None	50	72	83	88	89	100	101	102	124	126	127	131	132	133	237	239	242	249	
	Shaft Fan	92	144	180	172	175	219	221	223	304	307	310	349	352	355	665	672	679	698	
	Electric Fan	84	134	151	182	186	207	209	211	294	297	300	378	382	386	630	636	642	661	
	DuraPlate	160	225	309	355	362	449	453	458	874	882	891	782	790	798	1675	1692	1708	1754	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1430	63.0	None	49	69	82	88	89	98	99	100	121	122	123	128	130	131	241	243	246	241
		Shaft Fan	89	138	176	170	173	216	218	220	296	299	302	342	345	349	672	678	685	678
		Electric Fan	81	129	148	180	183	205	207	209	286	289	292	370	374	378	636	642	648	641
		DuraPlate	155	217	298	347	353	444	448	452	851	860	868	773	781	789	1676	1693	1710	1707
	71.0	None	49	70	80	85	87	93	94	95	118	119	120	135	136	137	205	207	209	242
		Shaft Fan	90	138	171	165	168	205	207	209	288	291	294	354	357	361	557	562	568	678
		Electric Fan	82	129	144	175	178	195	197	199	278	281	284	386	390	393	527	532	538	642
		DuraPlate	156	216	290	337	344	423	427	431	827	835	843	790	798	806	1017	1027	1038	1698
	80.0	None	44	56	72	74	76	88	89	90	115	116	117	138	139	140	208	210	212	208
		Shaft Fan	79	110	154	142	145	186	188	190	263	266	268	317	321	324	562	567	573	567
		Electric Fan	72	103	129	151	154	177	179	180	254	257	259	342	345	349	532	538	543	537
		DuraPlate	115	148	194	219	223	291	294	297	518	523	528	636	643	649	1022	1032	1042	1036
	90.0	None	44	57	70	72	74	84	85	85	112	113	114	144	145	146	204	206	208	210
		Shaft Fan	80	110	150	139	142	178	180	181	256	258	261	328	331	335	547	552	558	567
		Electric Fan	73	103	126	147	150	169	171	172	247	250	252	353	357	360	518	523	529	537
		DuraPlate	117	148	189	213	217	279	281	284	503	508	513	651	658	664	990	1000	1009	1034
	100	None	43	56	69	69	71	84	85	86	112	113	114	138	140	141	192	194	196	202
		Shaft Fan	78	112	147	134	136	177	179	181	255	257	260	314	317	320	519	525	530	545
		Electric Fan	71	104	123	142	144	168	170	172	246	249	251	338	341	345	492	497	502	516
		DuraPlate	114	152	185	205	209	276	279	282	499	504	509	615	621	628	946	955	964	990
	112	None	42	54	68	70	71	83	84	85	109	110	111	136	137	139	196	198	200	196
		Shaft Fan	75	108	145	133	136	175	177	178	248	251	253	309	312	316	525	530	535	529
		Electric Fan	69	101	122	141	144	166	168	170	240	242	245	333	336	340	497	502	507	501
		DuraPlate	111	147	182	204	208	273	275	278	486	491	496	608	614	620	950	960	969	963
	125	None	42	55	66	68	69	79	80	80	106	107	108	142	144	145				197
		Shaft Fan	76	108	141	130	132	167	168	170	241	244	246	320	324	327				530
		Electric Fan	70	101	119	137	140	158	160	161	233	235	238	344	348	351				502
		DuraPlate	112	146	177	199	203	260	263	265	472	477	482	623	629	635				961

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1430	8.00	None	*	*	*			*	*	*			
		Shaft Fan	819	827	835			*	*	*			
		Electric Fan	637	643	649			*	*	*			
		DuraPlate	5876	5935	5993			5989	6048	6108			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	914	924	933	604	616	*	*	*	*	*	*
		Electric Fan	733	740	748	429	438	*	*	*	*	*	*
		DuraPlate	5815	5873	5931	5679	5793	6166	6228	6290	5279	5332	5384
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	921	930	940	743	758	*	*	*	*	*	*
		Electric Fan	745	752	760	563	574	*	*	*	*	*	*
		DuraPlate	5706	5763	5820	5691	5805	6178	6240	6301	5650	5706	5763
	11.2	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1020	1031	1041	776	792	*	*	*	*	*	*
		Electric Fan	851	860	868	600	612	*	*	*	*	*	*
		DuraPlate	5529	5584	5640	5602	5714	6582	6648	6714	5743	5800	5858
	12.5	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1194	1206	1218	933	952	1026	1036	1047	*	*	*
		Electric Fan	1043	1053	1063	762	777	526	531	536	*	*	*
		DuraPlate	4316	4359	4402	5475	5584	5586	5642	5698	6286	6349	6412
	14.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1202	1214	1226	1138	1161	1065	1076	1087	854	863	871
		Electric Fan	1054	1064	1075	988	1007	578	584	590	377	381	384
		DuraPlate	4237	4280	4322	4263	4348	5478	5533	5587	5414	5468	5522
	16.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1169	1181	1193	1170	1193	1062	1073	1084	938	947	957
		Electric Fan	1025	1035	1045	1021	1041	588	594	600	467	472	476
		DuraPlate	4141	4182	4224	4221	4306	5388	5441	5495	5349	5402	5456
18.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1161	1173	1184	1142	1165	1243	1255	1268	955	965	974	
	Electric Fan	1026	1036	1046	998	1017	781	789	796	494	499	504	
	DuraPlate	3943	3982	4022	4130	4212	5251	5303	5356	5274	5327	5380	
20.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1155	1167	1178	1130	1153	1216	1228	1240	1175	1187	1198	
	Electric Fan	1023	1033	1043	996	1016	771	778	786	719	726	733	
	DuraPlate	3859	3898	3937	3912	3990	5098	5149	5200	5186	5238	5290	
22.4	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1119	1130	1141	1143	1166	1185	1196	1208	1162	1173	1185	
	Electric Fan	989	999	1009	1010	1030	752	759	767	723	730	737	
	DuraPlate	3769	3807	3845	3859	3936	4995	5045	5094	5043	5093	5143	
25.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1181	1192	1204	1109	1131	1257	1270	1282	1138	1149	1161	
	Electric Fan	1068	1078	1089	979	999	844	852	861	711	718	725	
	DuraPlate	2824	2852	2880	3771	3846	4780	4827	4875	4945	4994	5044	
28.0	None	222	225	227	*	*	*	*	*	*	*	*	
	Shaft Fan	1169	1181	1193	1161	1184	1571	1586	1602	1223	1235	1248	
	Electric Fan	1059	1069	1080	1048	1069	1192	1204	1216	814	822	830	
	DuraPlate	2772	2800	2828	2802	2859	3772	3810	3848	4744	4792	4839	
31.5	None	213	215	217	*	*	*	*	*	*	*	*	
	Shaft Fan	1133	1144	1156	1165	1188	1527	1542	1557	1541	1557	1572	
	Electric Fan	1025	1035	1045	1054	1075	1156	1168	1180	1165	1176	1188	
	DuraPlate	2706	2733	2760	2774	2829	3692	3729	3766	3742	3779	3817	
35.5	None	209	211	213	*	*	*	*	*	*	*	*	
	Shaft Fan	1057	1067	1078	1130	1152	1520	1535	1550	1500	1515	1530	
	Electric Fan	957	967	976	1022	1042	1166	1178	1190	1132	1143	1155	
	DuraPlate	2502	2527	2552	2708	2762	3569	3605	3641	3663	3700	3737	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1430	40.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1154	1165	1177	1150	1172	1513	1528	1543	1549	1564	1580	
		Electric Fan	871	879	888	862	879	865	874	883	881	890	899	
		DuraPlate	2927	2956	2986	2969	3028	4042	4083	4123	4154	4195	4237	
	45.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1118	1129	1141	1151	1174	1467	1482	1497	1489	1504	1519	
		Electric Fan	841	850	858	867	885	835	844	852	846	854	863	
		DuraPlate	2861	2890	2918	2931	2989	3956	3995	4035	4018	4058	4098	
	50.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1130	1141	1153	1116	1139	1536	1551	1567	1446	1460	1474	
		Electric Fan	848	857	865	839	856	885	894	902	818	826	834	
		DuraPlate	2963	2993	3023	2865	2923	4193	4235	4276	3932	3971	4011	
56.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1113	1124	1135	1113	1135	1515	1530	1546	1514	1529	1544		
	Electric Fan	838	847	855	833	850	874	883	891	867	876	884		
	DuraPlate	2885	2914	2943	2945	3004	4138	4179	4220	4168	4210	4252		
63.0	None	107	108	109	*	*	*	*	*	*	*	*	*	
	Shaft Fan	1075	1086	1097	1111	1134	1464	1479	1494	1494	1508	1523		
	Electric Fan	808	816	824	836	853	841	849	857	857	866	874		
	DuraPlate	2813	2841	2869	2891	2949	4034	4074	4114	4114	4155	4196		
71.0	None	248	251	253	*	*	305	308	311	*	*	*	*	
	Shaft Fan	980	990	1000	1077	1098	1552	1567	1583	1472	1486	1501		
	Electric Fan	789	796	804	809	825	1085	1096	1107	851	860	868		
	DuraPlate	2317	2340	2364	2821	2877	3543	3579	3614	4037	4078	4118		
80.0	None	238	241	243	247	252	292	295	298	298	301	304		
	Shaft Fan	954	963	973	979	999	1511	1526	1541	1536	1551	1567		
	Electric Fan	766	774	781	787	803	1052	1063	1074	1071	1082	1092		
	DuraPlate	2271	2294	2317	2320	2367	3475	3510	3545	3527	3563	3598		
90.0	None	163	165	167	238	242	301	304	307	286	289	292		
	Shaft Fan	882	891	900	953	973	1575	1591	1607	1496	1511	1526		
	Electric Fan	687	694	701	765	781	1088	1098	1109	1039	1050	1060		
	DuraPlate	2299	2322	2345	2274	2320	3744	3781	3819	3460	3494	3529		
100	None	164	165	167	159	162	130	131	133	294	297	300		
	Shaft Fan	872	880	889	871	888	1337	1350	1363	1558	1573	1589		
	Electric Fan	681	687	694	677	690	859	867	876	1073	1083	1094		
	DuraPlate	2249	2271	2294	2285	2331	3491	3526	3561	3726	3763	3801		
112	None	156	158	159	163	166	124	125	126	127	128	129		
	Shaft Fan	845	854	862	871	888	1295	1308	1320	1320	1333	1347		
	Electric Fan	658	665	672	679	693	828	837	845	845	854	862		
	DuraPlate	2198	2220	2242	2253	2298	3410	3444	3478	3473	3508	3542		
125	None				156	159				121	122	123		
	Shaft Fan				845	862				1279	1292	1305		
	Electric Fan				658	671				816	824	832		
	DuraPlate				2202	2246				3392	3426	3460		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1170	12.5	None															323	326	329		
		Shaft Fan																801	809	817	
		Electric Fan																899	908	917	
		DuraPlate																1861	1879	1898	
	14.0	None	73	106	122	129	131	149	150	152	197	199	201	235	237	240	309	312	315	292	
		Shaft Fan	112	175	225	214	218	272	275	278	396	400	404	472	477	482	768	775	783	750	
		Electric Fan	119	191	221	263	269	303	306	309	450	455	459	599	605	611	861	870	879	838	
		DuraPlate	191	268	375	423	431	634	640	646	1018	1028	1038	1153	1165	1176	1790	1808	1826	1769	
	16.0	None	71	102	122	129	131	147	149	150	194	196	198	232	235	237	316	320	323	286	
		Shaft Fan	108	169	224	213	218	269	272	274	388	392	395	467	472	477	777	785	793	728	
		Electric Fan	116	184	221	263	268	299	302	305	440	445	449	592	598	604	871	880	888	819	
		DuraPlate	185	258	373	420	429	626	632	638	993	1002	1012	1141	1152	1164	1795	1813	1831	1730	
	18.0	None	69	103	119	126	128	141	143	144	189	191	193	244	246	248	306	309	312	292	
		Shaft Fan	107	170	219	208	212	258	261	263	378	382	386	484	489	493	744	751	759	733	
		Electric Fan	114	184	215	256	261	287	290	293	429	434	438	611	617	623	833	842	850	823	
		DuraPlate	187	258	363	410	418	600	606	612	966	976	985	1163	1175	1187	1720	1737	1754	1725	
	20.0	None	63	90	108	117	119	135	137	138	173	175	177	213	215	217	290	293	296	280	
		Shaft Fan	98	152	200	195	199	248	250	253	348	352	355	424	428	433	709	716	724	696	
		Electric Fan	105	165	197	240	245	275	278	281	396	400	404	537	543	548	795	803	811	781	
		DuraPlate	170	234	336	387	394	578	584	590	897	906	915	1037	1047	1057	1649	1666	1682	1640	
	22.4	None	61	87	108	117	119	134	135	136	169	171	173	210	212	214	296	299	302	273	
		Shaft Fan	95	146	200	194	198	245	247	249	340	343	347	419	423	427	717	724	731	677	
		Electric Fan	102	159	197	239	244	272	275	277	387	391	395	531	536	541	803	811	819	761	
		DuraPlate	165	225	335	384	392	571	577	582	874	883	891	1022	1032	1042	1652	1669	1685	1600	
	25.0	None	64	88	105	114	116	128	129	130	165	167	168	219	221	223	294	297	300	276	
		Shaft Fan	99	146	195	189	193	234	236	238	331	334	338	433	437	442	674	681	687	679	
		Electric Fan	105	160	192	233	238	260	262	265	376	380	384	547	552	558	751	758	766	763	
		DuraPlate	167	225	326	374	381	546	551	557	850	858	867	1042	1052	1063	1599	1615	1631	1593	
28.0	None	54	80	90	99	101	118	119	120	154	156	158	192	194	196	278	281	284	292		
	Shaft Fan	84	133	165	165	168	216	218	220	302	305	308	372	376	379	642	649	655	672		
	Electric Fan	90	145	163	203	207	240	242	244	342	346	349	468	473	477	716	724	731	750		
	DuraPlate	140	199	276	327	334	419	423	428	820	829	837	761	769	776	1534	1550	1565	1604		
31.5	None	53	76	90	99	101	117	118	119	151	152	154	190	191	193	283	286	289	283		
	Shaft Fan	82	128	165	164	168	213	215	217	295	298	301	367	371	374	648	655	661	654		
	Electric Fan	87	139	163	203	207	237	239	241	334	338	341	462	466	471	723	730	737	729		
	DuraPlate	136	191	275	326	332	414	418	422	799	807	815	752	759	767	1537	1552	1568	1564		
35.5	None	53	77	88	96	98	111	112	113	147	148	150	200	201	201	275	275	278	285		
	Shaft Fan	83	128	161	160	163	203	205	207	287	290	293	379	383	387	622	628	635	655		
	Electric Fan	88	140	159	198	202	226	228	231	326	329	332	475	480	485	693	700	707	730		
	DuraPlate	137	191	268	317	323	396	400	404	778	786	793	769	776	784	1472	1487	1502	1556		
40.0	None	50	72	82	90	92	105	106	107	135	136	137	153	154	156	257	260	262	270		
	Shaft Fan	77	120	152	150	153	192	194	196	270	273	275	313	316	319	591	597	603	620		
	Electric Fan	83	131	149	185	189	213	215	218	307	310	313	399	403	407	659	666	672	691		
	DuraPlate	129	179	253	298	304	375	379	382	745	753	760	665	671	678	1409	1424	1438	1476		
45.0	None	48	69	82	90	92	103	104	105	131	133	134	150	152	153	262	264	267	262		
	Shaft Fan	75	115	152	150	153	189	191	193	263	266	268	309	312	315	597	603	609	602		
	Electric Fan	80	126	149	185	188	211	213	215	299	302	305	394	398	402	665	672	679	671		
	DuraPlate	125	172	252	296	302	375	379	382	725	732	740	657	663	670	1412	1427	1441	1437		
50.0	None	49	70	80	88	89	98	99	100	128	129	130	157	159	160	225	227	229	263		
	Shaft Fan	76	116	148	146	149	181	182	184	255	258	261	320	323	326	543	549	554	603		
	Electric Fan	81	126	145	179	183	201	203	205	290	293	296	407	411	415	609	615	621	672		
	DuraPlate	126	172	246	288	294	353	357	360	703	710	717	673	679	686	1322	1335	1348	1430		
56.0	None	48	69	79	84	86	99	100	101	128	129	131	152	154	155	211	213	215	221		
	Shaft Fan	74	116	145	140	143	180	182	184	254	256	259	305	308	311	515	520	525	540		
	Electric Fan	80	127	143	173	176	200	202	204	288	290	293	386	389	393	577	583	588	605		
	DuraPlate	124	176	241	275	281	350	353	357	677	684	691	627	633	639	1262	1275	1288	1323		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

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Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1170	63.0	None	46	66	78	84	86	98	99	100	125	126	127	150	151	153	215	217	219	214
		Shaft Fan	72	112	142	139	142	178	180	181	247	250	252	301	304	307	521	526	531	523
		Electric Fan	77	122	140	170	174	198	200	202	280	283	286	380	384	388	583	589	595	587
		DuraPlate	120	170	233	269	275	345	349	352	660	666	673	619	625	631	1266	1279	1292	1286
	71.0	None	47	67	76	82	84	93	94	94	121	122	124	157	159	160	202	204	207	215
		Shaft Fan	73	112	139	135	138	169	171	172	240	242	245	312	315	318	455	460	464	524
		Electric Fan	78	122	136	166	169	188	190	192	272	275	277	393	397	401	507	512	517	587
		DuraPlate	121	169	227	262	267	329	332	335	641	647	653	634	641	647	796	804	812	1281
	80.0	None	41	52	67	69	71	83	84	84	109	110	111	135	136	137	206	208	210	206
		Shaft Fan	63	88	123	114	117	149	151	152	212	214	216	259	262	265	460	465	470	464
		Electric Fan	67	96	121	141	144	166	168	169	240	242	245	327	330	333	512	517	522	516
		DuraPlate	90	115	152	170	173	226	228	231	398	402	406	493	498	503	801	809	817	811
	90.0	None	41	53	65	68	69	79	80	80	106	107	108	141	142	143	201	203	205	207
		Shaft Fan	64	88	120	112	114	143	144	145	206	208	210	269	272	274	448	452	456	464
		Electric Fan	68	96	118	137	140	158	160	161	233	236	238	338	341	344	498	503	508	517
		DuraPlate	91	116	148	165	169	216	218	220	387	390	394	506	511	517	776	784	792	810
	100	None	40	53	64	65	66	79	80	81	106	107	108	135	136	138	189	191	193	199
		Shaft Fan	62	89	117	107	109	142	144	145	205	207	209	257	260	262	424	428	432	445
		Electric Fan	67	98	115	132	135	158	159	161	232	234	237	322	326	329	472	477	481	495
		DuraPlate	90	118	145	159	162	215	217	219	384	388	392	479	484	489	739	747	754	775
	112	None	39	50	63	65	66	78	79	80	103	104	105	132	134	135	192	194	196	192
		Shaft Fan	60	86	116	107	109	140	142	143	199	201	203	253	256	258	429	433	438	431
		Electric Fan	64	94	114	132	134	156	157	159	226	228	230	317	321	324	477	482	487	480
		DuraPlate	86	114	143	159	162	212	214	216	374	377	381	473	477	482	744	752	759	753
125	None	39	51	62	63	64	74	75	76	100	101	102	139	140	142				194	
	Shaft Fan	61	86	113	104	106	133	135	136	194	196	198	263	265	268				433	
	Electric Fan	65	94	111	128	131	148	150	151	219	222	224	329	332	335				481	
	DuraPlate	87	114	139	154	157	202	204	206	363	367	370	486	491	496				752	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	8.00	None	*	*	*			*	*	*			
		Shaft Fan	1123	1134	1145			571	577	583			
		Electric Fan	1262	1275	1288			*	*	*			
		DuraPlate	4897	4946	4995			5853	5912	5970			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1161	1172	1184	1001	1021	734	742	749	*	*	*
		Electric Fan	1297	1310	1323	1136	1159	638	645	651	*	*	*
		DuraPlate	4822	4871	4919	4784	4880	5840	5899	5957	5508	5563	5618
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1138	1150	1161	1073	1094	783	791	798	*	*	*
		Electric Fan	1271	1284	1296	1206	1231	689	695	702	*	*	*
		DuraPlate	4715	4762	4810	4761	4856	5778	5836	5893	5578	5634	5690
	11.2	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1152	1164	1176	1063	1084	987	997	1007	*	*	*
		Electric Fan	1278	1291	1304	1193	1217	894	903	912	*	*	*
		DuraPlate	4531	4576	4622	4664	4757	5937	5996	6055	5554	5609	5665
	12.5	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1167	1179	1190	1105	1127	1434	1449	1463	834	843	851
		Electric Fan	1279	1292	1305	1229	1253	1347	1361	1374	744	751	759
		DuraPlate	3512	3547	3582	4503	4593	4817	4865	4913	5777	5835	5893
	14.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1164	1176	1187	1132	1154	1414	1428	1442	1340	1353	1367
		Electric Fan	1274	1287	1299	1243	1268	1330	1343	1356	1254	1266	1279
		DuraPlate	3446	3480	3515	3475	3545	4693	4740	4787	4721	4768	4816
	16.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1128	1139	1150	1148	1171	1383	1397	1411	1341	1354	1367
		Electric Fan	1235	1247	1259	1258	1284	1301	1314	1327	1257	1270	1283
		DuraPlate	3361	3394	3428	3440	3509	4596	4642	4688	4615	4661	4707
18.0	None	256	258	261	*	*	*	*	*	*	*	*	
	Shaft Fan	1086	1097	1108	1115	1137	1425	1440	1454	1320	1333	1347	
	Electric Fan	1187	1199	1210	1222	1247	1348	1362	1375	1239	1251	1264	
	DuraPlate	3179	3211	3243	3358	3425	4408	4452	4496	4527	4573	4618	
20.0	None	259	262	264	*	*	*	*	*	*	*	*	
	Shaft Fan	1078	1088	1099	1064	1085	1377	1390	1404	1384	1397	1411	
	Electric Fan	1176	1187	1199	1163	1187	1302	1315	1328	1307	1320	1333	
	DuraPlate	3114	3145	3176	3154	3217	4266	4309	4351	4367	4410	4454	
22.4	None	248	251	253	253	258	*	*	*	*	*	*	
	Shaft Fan	1041	1052	1062	1071	1093	1336	1349	1362	1341	1354	1368	
	Electric Fan	1137	1148	1160	1170	1193	1263	1276	1288	1267	1280	1292	
	DuraPlate	3036	3066	3097	3116	3178	4171	4213	4254	4228	4270	4312	
25.0	None	306	309	313	243	248	*	*	*	*	*	*	
	Shaft Fan	1015	1026	1036	1037	1057	1335	1348	1361	1304	1317	1330	
	Electric Fan	1099	1110	1121	1132	1155	1266	1279	1292	1232	1244	1256	
	DuraPlate	2254	2277	2299	3039	3099	3960	4000	4039	4135	4177	4218	
28.0	None	307	310	313	297	303	320	324	327	*	*	*	
	Shaft Fan	1006	1016	1026	999	1019	1420	1434	1448	1309	1322	1335	
	Electric Fan	1088	1099	1110	1083	1104	1358	1372	1385	1241	1254	1266	
	DuraPlate	2215	2237	2259	2235	2280	3064	3094	3125	3932	3971	4010	
31.5	None	294	297	300	304	310	308	311	314	*	*	*	
	Shaft Fan	973	982	992	1003	1023	1378	1391	1405	1398	1412	1426	
	Electric Fan	1053	1064	1074	1085	1107	1317	1330	1343	1336	1349	1363	
	DuraPlate	2158	2180	2201	2216	2260	2992	3022	3052	3039	3069	3099	
35.5	None	276	279	282	292	298	320	324	327	*	*	*	
	Shaft Fan	900	909	918	971	990	1349	1363	1376	1357	1371	1384	
	Electric Fan	974	984	993	1051	1072	1291	1304	1317	1297	1310	1323	
	DuraPlate	1990	2010	2029	2160	2203	2880	2909	2938	2969	2999	3028	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	40.0	None	276	279	282	269	274	304	307	310	312	315	318
		Shaft Fan	890	899	908	886	904	1293	1306	1319	1332	1345	1359
		Electric Fan	963	972	982	960	979	1237	1250	1262	1274	1287	1300
		DuraPlate	1954	1973	1993	1973	2013	2778	2806	2834	2861	2890	2919
	45.0	None	264	266	269	274	280	291	294	297	296	299	302
		Shaft Fan	861	869	878	889	907	1252	1265	1277	1275	1288	1301
		Electric Fan	931	941	950	961	981	1197	1209	1221	1220	1232	1244
		DuraPlate	1904	1923	1942	1955	1994	2710	2737	2764	2758	2785	2813
	50.0	None	171	173	175	263	268	304	307	310	284	287	289
		Shaft Fan	756	764	771	860	877	1292	1305	1318	1235	1248	1260
		Electric Fan	829	837	845	931	949	1235	1248	1260	1181	1193	1205
		DuraPlate	1854	1873	1891	1906	1944	2852	2880	2909	2690	2717	2744
56.0	None	172	173	175	166	170	298	301	304	296	299	302	
	Shaft Fan	747	755	762	743	758	1270	1282	1295	1274	1287	1299	
	Electric Fan	818	826	834	815	831	1213	1225	1238	1217	1229	1242	
	DuraPlate	1812	1830	1848	1837	1874	2808	2836	2864	2830	2858	2886	
63.0	None	163	165	166	171	174	284	287	289	290	293	296	
	Shaft Fan	719	726	734	746	761	1224	1237	1249	1251	1264	1276	
	Electric Fan	788	796	804	817	833	1170	1181	1193	1195	1207	1219	
	DuraPlate	1760	1777	1795	1814	1850	2728	2755	2782	2785	2813	2841	
71.0	None	229	231	234	163	166	290	293	296	283	286	288	
	Shaft Fan	652	659	665	720	734	1009	1019	1029	1214	1227	1239	
	Electric Fan	702	709	716	788	804	969	978	988	1160	1172	1183	
	DuraPlate	1469	1483	1498	1763	1799	2202	2224	2246	2714	2741	2768	
80.0	None	220	222	224	228	233	278	281	284	284	287	290	
	Shaft Fan	632	639	645	651	664	979	988	998	996	1006	1016	
	Electric Fan	681	688	695	701	715	939	948	958	956	966	975	
	DuraPlate	1435	1449	1463	1469	1499	2152	2173	2195	2186	2208	2230	
90.0	None	215	217	220	219	224	286	288	291	273	275	278	
	Shaft Fan	634	640	646	632	644	1017	1027	1038	967	976	986	
	Electric Fan	684	691	698	681	694	975	985	995	927	937	946	
	DuraPlate	1484	1499	1514	1457	1486	2300	2323	2346	2137	2158	2179	
100	None	215	217	219	210	214	280	282	285	279	282	285	
	Shaft Fan	627	633	640	624	636	999	1009	1019	1003	1013	1023	
	Electric Fan	677	683	690	674	688	958	968	977	962	971	981	
	DuraPlate	1456	1470	1485	1471	1501	2266	2288	2311	2282	2305	2328	
112	None	206	208	210	214	218	267	270	273	273	276	279	
	Shaft Fan	606	612	618	626	639	965	975	985	986	995	1005	
	Electric Fan	654	661	667	676	689	925	934	943	944	954	963	
	DuraPlate	1418	1432	1446	1457	1486	2205	2227	2249	2248	2270	2293	
125	None				205	209				262	264	267	
	Shaft Fan				605	618				952	962	971	
	Electric Fan				654	667				912	921	930	
	DuraPlate				1419	1448				2188	2210	2232	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	12.5	None															349	352	356	
		Shaft Fan															712	719	726	
		Electric Fan															904	913	922	
		DuraPlate															1543	1558	1574	
	14.0	None	68	99	117	124	126	146	147	148	197	199	201	242	245	247	332	335	338	317
		Shaft Fan	93	147	189	182	186	233	235	238	342	345	348	416	420	424	680	686	693	660
		Electric Fan	112	180	211	252	257	292	295	298	439	443	447	591	597	603	864	873	881	844
		DuraPlate	161	220	306	344	351	514	519	525	825	833	841	944	954	963	1480	1495	1510	1460
	16.0	None	66	95	117	124	126	144	145	147	193	195	197	239	242	244	338	342	345	310
		Shaft Fan	90	141	189	182	185	230	232	235	334	337	340	411	415	419	688	695	701	644
		Electric Fan	108	173	211	251	256	288	291	294	428	432	437	584	590	596	872	881	890	823
		DuraPlate	156	211	305	343	350	508	513	518	804	812	820	933	943	952	1485	1500	1515	1425
	18.0	None	67	97	114	121	123	138	139	140	188	190	192	250	252	255	321	324	327	313
		Shaft Fan	91	142	184	177	181	220	222	225	325	328	332	425	429	434	652	658	665	650
		Electric Fan	110	174	205	244	249	276	279	282	417	421	425	601	607	613	827	835	844	825
		DuraPlate	158	211	297	334	341	486	491	496	782	790	798	954	963	973	1414	1428	1442	1422
	20.0	None	61	87	101	112	114	131	133	134	171	173	174	214	217	219	304	307	310	294
		Shaft Fan	83	128	165	165	168	210	213	215	297	300	303	368	372	375	620	626	632	607
		Electric Fan	100	158	185	228	233	264	267	269	383	387	390	524	529	535	788	796	804	775
		DuraPlate	145	193	271	314	320	467	471	476	727	734	742	838	847	855	1352	1366	1380	1342
	22.4	None	59	83	101	112	114	130	131	132	167	169	170	211	213	216	309	312	315	286
Shaft Fan		81	123	165	164	168	208	210	212	290	293	296	363	367	370	626	633	639	591	
Electric Fan		97	151	185	228	232	260	263	266	373	377	381	517	522	527	795	803	811	754	
DuraPlate		141	185	270	312	318	461	465	470	703	710	717	828	837	845	1357	1370	1384	1307	
25.0	None	61	84	98	109	111	124	125	126	162	164	166	220	222	225	293	300	301	288	
	Shaft Fan	83	124	161	160	163	198	200	202	282	285	288	376	379	383	578	584	590	592	
	Electric Fan	100	152	180	221	226	249	251	254	363	367	370	533	538	543	730	737	744	755	
	DuraPlate	142	185	263	303	309	440	444	449	683	690	697	847	856	864	1305	1318	1331	1303	
28.0	None	52	76	86	95	97	115	116	118	142	144	145	189	191	192	277	280	282	290	
	Shaft Fan	71	112	139	140	143	184	186	188	248	250	253	319	322	325	550	555	561	576	
	Electric Fan	86	138	165	194	198	231	233	236	320	323	326	451	456	460	695	702	709	728	
	DuraPlate	120	163	225	266	271	343	346	350	650	656	663	820	826	832	1249	1262	1274	1308	
31.5	None	50	73	86	95	97	114	115	116	139	140	142	186	188	190	281	284	287	281	
	Shaft Fan	69	108	139	140	143	182	184	185	242	244	247	314	318	321	556	561	567	560	
	Electric Fan	83	132	155	194	197	228	230	232	312	315	318	445	449	454	701	708	715	708	
	DuraPlate	116	157	225	265	270	338	342	345	633	639	646	812	818	824	1253	1266	1279	1273	
35.5	None	51	74	84	92	94	108	109	111	135	137	138	194	195	200	248	251	253	283	
	Shaft Fan	70	109	136	136	139	173	175	177	236	238	240	325	329	332	508	513	518	561	
	Electric Fan	84	133	151	188	192	218	220	222	304	307	310	458	463	468	646	652	659	708	
	DuraPlate	118	158	219	258	263	323	326	330	616	622	628	827	834	840	1172	1183	1195	1268	
40.0	None	47	68	79	86	88	102	103	104	133	134	136	159	160	162	234	236	239	250	
	Shaft Fan	65	101	127	127	130	163	165	166	231	233	236	276	278	281	481	486	491	505	
	Electric Fan	79	124	142	176	180	205	207	209	297	300	303	395	399	403	613	619	626	643	
	DuraPlate	110	147	207	242	246	305	308	311	601	607	613	808	815	821	1119	1130	1141	1172	
45.0	None	46	65	79	86	88	100	101	102	130	131	132	156	158	159	238	240	243	238	
	Shaft Fan	63	97	128	127	129	161	162	164	225	227	229	272	274	277	487	492	496	489	
	Electric Fan	76	119	142	176	179	202	204	206	289	292	295	390	394	397	619	625	632	624	
	DuraPlate	107	141	206	241	245	287	290	293	584	590	596	811	817	823	1123	1134	1146	1140	
50.0	None	47	66	77	84	85	95	96	97	126	127	128	163	165	166	234	236	239	239	
	Shaft Fan	64	98	124	123	126	153	155	156	218	221	223	282	285	287	474	479	484	490	
	Electric Fan	77	120	138	171	174	193	195	196	281	284	286	402	406	410	602	608	614	625	
	DuraPlate	108	142	201	234	239	301	304	307	566	572	578	756	761	767	1086	1097	1108	1136	
56.0	None	45	65	76	81	82	96	97	98	126	127	129	157	159	160	220	222	224	231	
	Shaft Fan	62	98	122	119	121	153	155	156	217	219	221	268	271	273	448	453	457	471	
	Electric Fan	76	121	136	164	167	192	194	196	277	280	282	379	383	386	570	576	582	599	
	DuraPlate	106	144	197	223	228	285	287	290	547	553	558	758	763	768	1035	1045	1055	1085	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	63.0	None	44	63	75	80	82	94	95	96	123	124	125	154	156	157	224	226	228	225
		Shaft Fan	60	94	120	118	120	151	152	154	211	213	215	264	267	269	454	458	463	456
		Electric Fan	73	116	133	161	165	189	191	193	269	272	275	373	377	381	576	582	588	580
		DuraPlate	102	139	190	219	223	281	284	286	533	538	543	511	516	521	1040	1050	1060	1054
	71.0	None	44	63	73	78	80	90	90	91	119	120	121	162	163	165	196	198	200	225
		Shaft Fan	61	94	116	114	117	143	145	146	205	207	209	274	277	280	384	388	392	457
		Electric Fan	74	117	129	157	160	180	182	183	262	264	267	386	390	394	485	490	495	581
		DuraPlate	104	139	185	213	217	267	270	272	517	522	528	525	531	536	650	656	663	1051
	80.0	None	38	49	63	65	67	78	79	80	104	105	106	129	131	132	199	201	203	199
		Shaft Fan	53	73	102	96	98	125	126	127	177	179	181	219	221	223	389	393	397	391
		Electric Fan	64	90	114	133	136	157	158	160	227	229	232	311	314	317	490	495	500	494
		DuraPlate	78	95	125	139	142	184	185	187	321	324	327	399	403	407	655	661	668	662
	90.0	None	39	50	61	64	65	74	75	76	101	102	103	135	136	138	194	196	198	200
		Shaft Fan	53	74	99	93	95	119	120	121	172	174	176	227	230	232	378	382	386	392
		Electric Fan	64	91	111	130	132	149	151	152	221	223	225	322	325	328	476	481	486	495
		DuraPlate	79	95	121	135	138	175	177	179	312	315	318	411	415	419	634	641	647	661
	100	None	38	49	60	61	62	75	75	76	100	101	102	129	131	132	182	184	186	192
		Shaft Fan	52	74	97	90	92	119	120	121	171	173	175	217	219	222	357	361	364	376
		Electric Fan	63	92	109	125	127	149	150	152	219	222	224	307	310	313	451	455	460	474
		DuraPlate	77	97	119	130	132	174	176	178	309	312	316	389	393	397	603	609	615	632
	112	None	36	47	60	61	62	74	74	75	98	99	100	127	128	129	186	187	189	185
		Shaft Fan	50	71	96	90	91	117	118	119	167	168	170	214	216	218	362	366	369	364
		Electric Fan	61	89	107	124	127	147	148	150	214	216	218	302	305	308	456	460	465	459
		DuraPlate	74	93	117	129	132	172	174	175	301	304	307	383	387	391	608	614	620	614
125	None	37	48	58	59	61	70	71	71	95	96	97	133	134	136				187	
	Shaft Fan	51	72	94	87	89	111	112	114	162	164	165	223	225	227				365	
	Electric Fan	61	89	104	121	123	140	141	142	207	210	212	313	316	319				460	
	DuraPlate	75	94	114	126	128	163	165	167	292	295	298	396	400	404				614	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	8.00	None	*	*	*			*	*	*			
		Shaft Fan	1139	1150	1162			1140	1152	1163			
		Electric Fan	1474	1488	1503			1361	1374	1388			
		DuraPlate	4122	4164	4205			5275	5327	5380			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1154	1165	1177	1060	1081	1201	1213	1225	933	943	952
		Electric Fan	1481	1496	1511	1390	1417	1414	1428	1442	1150	1161	1173
		DuraPlate	4052	4093	4133	4044	4125	5199	5251	5303	5074	5125	5176
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	1122	1133	1145	1101	1123	1200	1212	1224	1041	1051	1062
		Electric Fan	1441	1455	1469	1427	1455	1408	1422	1436	1251	1263	1276
		DuraPlate	3953	3993	4032	4016	4096	5115	5166	5217	5040	5090	5140
	11.2	None	315	318	321	*	*	*	*	*	*	*	*
		Shaft Fan	1106	1117	1128	1077	1098	1292	1305	1318	1065	1075	1086
		Electric Fan	1408	1422	1436	1394	1421	1498	1513	1528	1269	1282	1295
		DuraPlate	3783	3821	3859	3923	4001	5174	5226	5278	4977	5027	5077
	12.5	None	351	355	358	*	*	*	*	*	*	*	*
		Shaft Fan	1066	1076	1087	1076	1097	1464	1478	1493	1194	1206	1218
		Electric Fan	1336	1349	1362	1376	1403	1649	1665	1682	1398	1412	1426
		DuraPlate	2924	2953	2982	3765	3841	4121	4163	4204	5071	5122	5172
	14.0	None	356	359	363	334	341	*	*	*	*	*	*
		Shaft Fan	1060	1071	1081	1040	1060	1423	1437	1452	1404	1418	1432
		Electric Fan	1324	1337	1350	1308	1334	1602	1618	1634	1588	1604	1620
		DuraPlate	2870	2898	2927	2894	2952	4000	4040	4080	4058	4099	4139
	16.0	None	342	345	349	347	354	*	*	*	*	*	*
		Shaft Fan	1024	1035	1045	1051	1072	1384	1398	1412	1375	1388	1402
		Electric Fan	1281	1294	1307	1315	1342	1558	1574	1590	1552	1567	1583
		DuraPlate	2794	2822	2850	2868	2925	3909	3948	3987	3945	3984	4024
18.0	None	334	338	341	335	341	*	*	*	*	*	*	
	Shaft Fan	975	984	994	1017	1037	1375	1389	1402	1342	1355	1369	
	Electric Fan	1216	1228	1240	1275	1300	1538	1554	1569	1515	1530	1545	
	DuraPlate	2634	2660	2687	2794	2850	3723	3760	3797	3859	3898	3936	
20.0	None	336	339	342	323	330	323	326	329	*	*	*	
	Shaft Fan	966	976	985	956	975	1322	1335	1348	1345	1358	1372	
	Electric Fan	1202	1214	1226	1196	1219	1480	1494	1509	1508	1523	1538	
	DuraPlate	2582	2608	2634	2612	2664	3595	3631	3667	3691	3728	3765	
22.4	None	321	324	328	332	338	311	314	317	*	*	*	
	Shaft Fan	932	941	951	962	981	1280	1293	1305	1295	1308	1320	
	Electric Fan	1162	1174	1185	1198	1222	1434	1448	1462	1451	1466	1480	
	DuraPlate	2514	2539	2564	2584	2635	3509	3544	3579	3564	3600	3635	
25.0	None	336	339	342	318	324	330	333	336	*	*	*	
	Shaft Fan	879	888	897	929	948	1255	1267	1280	1255	1268	1280	
	Electric Fan	1081	1092	1103	1160	1183	1399	1413	1427	1408	1422	1436	
	DuraPlate	1860	1879	1897	2516	2566	3323	3356	3389	3480	3515	3549	
28.0	None	336	339	342	327	333	401	405	409	319	322	325	
	Shaft Fan	871	880	888	865	882	1256	1269	1282	1233	1246	1258	
	Electric Fan	1069	1080	1090	1066	1087	1388	1402	1415	1377	1391	1405	
	DuraPlate	1830	1848	1866	1843	1880	2549	2575	2600	3298	3331	3364	
31.5	None	321	324	328	333	340	385	389	393	391	395	398	
	Shaft Fan	841	850	858	869	886	1217	1229	1241	1238	1250	1262	
	Electric Fan	1035	1045	1055	1067	1089	1345	1359	1372	1368	1382	1395	
	DuraPlate	1780	1798	1816	1831	1867	2486	2511	2536	2527	2552	2578	
35.5	None	298	301	304	320	326	386	389	393	376	380	383	
	Shaft Fan	775	783	791	840	857	1184	1195	1207	1200	1212	1224	
	Electric Fan	953	963	972	1034	1054	1306	1319	1332	1327	1341	1354	
	DuraPlate	1638	1654	1671	1781	1817	2388	2412	2436	2465	2490	2514	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	40.0	None	297	300	303	290	296	366	370	374	377	381	385
		Shaft Fan	767	775	783	763	778	1133	1145	1156	1168	1180	1192
		Electric Fan	942	951	960	940	958	1251	1264	1276	1290	1303	1316
		DuraPlate	1610	1626	1642	1623	1655	2300	2323	2346	2370	2394	2418
	45.0	None	284	287	290	296	302	350	354	357	358	361	365
		Shaft Fan	741	748	756	766	781	1096	1106	1117	1117	1128	1139
		Electric Fan	911	920	929	941	959	1211	1223	1235	1235	1247	1259
		DuraPlate	1566	1582	1598	1611	1643	2240	2262	2285	2281	2304	2326
	50.0	None	226	228	231	283	289	360	363	367	343	346	350
		Shaft Fan	679	685	692	740	755	1128	1139	1151	1081	1091	1102
		Electric Fan	853	862	870	911	929	1249	1262	1274	1195	1207	1219
		DuraPlate	1543	1558	1574	1568	1599	2350	2374	2397	2221	2244	2266
	56.0	None	226	228	230	1526	1557	237	239	242	351	355	358
		Shaft Fan	671	677	684	666	680	967	977	987	1111	1122	1133
		Electric Fan	841	850	858	840	856	1086	1097	1107	1232	1244	1256
		DuraPlate	1510	1525	1540	1526	1557	2170	2192	2213	2329	2352	2376
	63.0	None	215	217	219	225	229	225	228	230	231	233	235
		Shaft Fan	645	651	658	669	683	931	940	949	952	961	971
		Electric Fan	811	819	827	840	857	1046	1056	1066	1069	1080	1090
		DuraPlate	1464	1479	1493	1511	1541	2103	2125	2146	2149	2170	2192
71.0	None	230	232	234	215	219	306	309	312	220	222	224	
	Shaft Fan	554	560	566	645	658	860	869	878	916	925	934	
	Electric Fan	675	682	689	811	827	946	955	965	1030	1040	1051	
	DuraPlate	1204	1216	1228	1466	1496	1799	1817	1835	2083	2104	2125	
80.0	None	221	223	225	229	234	294	297	300	300	303	306	
	Shaft Fan	537	542	547	553	565	833	842	850	849	857	866	
	Electric Fan	655	662	668	675	688	917	926	935	934	943	952	
	DuraPlate	1174	1186	1197	1204	1228	1755	1773	1790	1784	1802	1820	
90.0	None	216	218	220	220	224	301	304	307	288	291	294	
	Shaft Fan	536	541	547	536	547	865	873	882	822	831	839	
	Electric Fan	659	665	672	655	668	954	963	973	906	915	924	
	DuraPlate	1209	1221	1233	1187	1210	1869	1887	1906	1741	1758	1776	
100	None	215	217	220	211	215	294	297	300	294	297	300	
	Shaft Fan	531	536	542	527	538	849	857	866	852	861	869	
	Electric Fan	651	658	664	649	662	937	946	955	940	950	959	
	DuraPlate	1188	1199	1211	1197	1221	1840	1858	1876	1852	1870	1889	
112	None	206	208	210	214	219	281	284	287	288	291	293	
	Shaft Fan	512	517	523	530	541	819	827	835	836	844	853	
	Electric Fan	630	636	642	650	663	904	913	922	923	933	942	
	DuraPlate	1154	1166	1178	1188	1212	1787	1805	1823	1823	1841	1859	
125	None				205	209				275	278	281	
	Shaft Fan				512	522				807	815	823	
	Electric Fan				629	642				892	901	910	
	DuraPlate				1155	1178				1771	1789	1806	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
870	12.5	None															354	357	361		
		Shaft Fan																660	666	673	
		Electric Fan																896	905	914	
		DuraPlate																1379	1393	1407	
870	14.0	None	66	97	112	120	123	143	144	145	195	197	199	242	244	246	336	339	343	322	
		Shaft Fan	85	134	169	166	169	212	215	217	312	315	319	384	388	391	628	635	641	611	
		Electric Fan	109	175	203	244	249	284	287	290	429	433	438	581	587	593	855	864	872	836	
		DuraPlate	148	203	270	305	311	455	460	464	728	736	743	839	848	856	1321	1334	1347	1301	
870	16.0	None	64	93	112	120	123	141	142	144	190	192	194	238	241	243	342	345	349	314	
		Shaft Fan	82	128	169	165	169	210	212	214	305	308	311	379	383	386	636	642	649	600	
		Electric Fan	106	168	202	243	248	281	284	287	418	423	427	829	837	846	863	871	880	814	
		DuraPlate	143	195	270	304	310	449	454	458	710	717	724	839	848	856	1326	1339	1353	1269	
870	18.0	None	65	94	109	117	120	135	136	137	185	187	189	249	251	254	322	325	329	317	
		Shaft Fan	83	129	165	161	165	201	203	205	297	300	303	392	396	400	600	606	612	600	
		Electric Fan	107	169	197	237	242	269	271	274	407	411	416	591	596	602	815	823	832	816	
		DuraPlate	145	196	263	296	302	430	434	439	690	697	704	849	857	866	1258	1271	1283	1266	
870	20.0	None	59	84	98	105	108	122	123	124	168	169	171	212	214	216	305	308	311	295	
		Shaft Fan	76	116	150	146	149	185	186	188	270	273	276	337	341	344	570	575	581	558	
		Electric Fan	98	153	180	218	222	249	252	254	373	376	380	513	518	523	776	784	792	763	
		DuraPlate	133	177	241	274	279	404	409	413	635	641	647	742	749	757	1202	1214	1226	1190	
870	22.4	None	57	81	98	105	108	120	122	123	164	165	167	209	211	213	310	313	316	287	
		Shaft Fan	73	112	150	146	149	182	184	186	264	266	269	333	336	339	576	582	588	542	
		Electric Fan	95	147	180	217	222	246	249	251	363	367	371	506	511	516	783	791	798	742	
		DuraPlate	129	170	240	272	278	399	403	407	618	625	631	733	740	747	1207	1219	1231	1159	
870	25.0	None	59	82	96	103	105	115	116	117	159	161	162	218	220	222	289	292	294	289	
		Shaft Fan	76	113	146	142	145	174	175	177	257	259	262	345	348	352	528	533	539	544	
		Electric Fan	97	147	175	211	215	235	237	240	354	357	361	521	526	532	714	721	728	743	
		DuraPlate	130	171	234	265	270	381	385	389	601	607	613	751	758	766	1159	1171	1182	1156	
870	28.0	None	50	74	83	92	94	113	114	115	140	142	143	175	175	177	275	276	278	286	
		Shaft Fan	65	102	126	127	130	168	170	171	226	228	231	278	281	284	502	507	512	526	
		Electric Fan	83	134	151	188	192	225	227	229	312	315	319	426	430	434	680	686	693	712	
		DuraPlate	110	151	201	236	241	305	308	311	573	578	584	735	740	747	1108	1119	1130	1160	
870	31.5	None	49	70	84	92	94	111	112	113	137	138	140	175	175	176	277	280	283	277	
		Shaft Fan	63	98	126	127	130	166	167	169	221	223	225	274	277	280	507	512	517	511	
		Electric Fan	81	128	151	188	192	222	224	226	305	308	311	420	424	428	685	692	699	692	
		DuraPlate	107	145	200	235	240	300	303	306	558	564	569	727	733	738	1112	1123	1135	1129	
870	35.5	None	49	71	81	90	92	106	107	108	133	135	136	178	180	182	250	252	255	279	
		Shaft Fan	63	99	123	124	126	158	160	161	215	217	219	285	287	290	467	472	477	512	
		Electric Fan	82	129	147	183	187	212	214	216	297	300	303	433	437	442	637	643	650	692	
		DuraPlate	108	146	195	229	233	287	290	293	543	548	554	727	733	738	1103	1114	1125	1125	
870	40.0	None	46	66	76	84	85	99	100	101	131	132	133	159	160	162	235	237	240	247	
		Shaft Fan	59	92	115	115	118	148	150	151	210	212	215	254	257	259	442	447	451	464	
		Electric Fan	76	120	138	171	174	199	201	203	290	293	296	389	392	396	604	611	617	634	
		DuraPlate	101	136	184	214	218	270	273	276	529	535	540	717	723	728	1103	1114	1125	1125	
870	45.0	None	44	63	76	84	85	98	99	100	127	129	130	156	158	159	239	241	244	239	
		Shaft Fan	57	88	115	115	118	146	148	149	205	207	209	251	253	256	448	452	457	450	
		Electric Fan	74	115	138	170	174	196	198	200	282	285	288	383	387	391	610	616	623	615	
		DuraPlate	98	130	184	213	217	267	269	272	515	520	525	711	717	722	1000	1010	1020	1013	
870	50.0	None	45	64	74	81	83	93	94	95	124	125	126	163	165	166	234	237	239	240	
		Shaft Fan	58	88	112	112	114	139	141	142	199	201	203	260	263	265	436	440	445	451	
		Electric Fan	75	116	134	166	169	187	189	191	274	277	279	396	400	404	592	598	604	616	
		DuraPlate	99	131	179	207	211	254	257	259	499	504	509	695	700	705	966	976	986	1011	
870	56.0	None	44	63	73	78	80	93	94	95	124	125	126	157	158	160	220	222	224	231	
		Shaft Fan	57	88	110	108	110	139	141	142	197	199	201	247	250	252	411	416	420	433	
		Electric Fan	73	117	132	159	162	186	188	190	269	272	275	371	375	379	561	566	572	589	
		DuraPlate	97	133	175	198	202	252	255	257	483	488	492	671	676	681	919	928	938	965	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
870	63.0	None	42	61	72	78	79	92	93	94	120	121	122	154	155	157	224	226	228	223
		Shaft Fan	54	85	108	107	109	137	139	140	192	194	196	243	246	248	417	421	425	418
		Electric Fan	71	113	129	156	159	184	186	187	262	265	267	366	370	373	567	572	578	571
		DuraPlate	94	128	170	194	198	249	251	254	470	475	479	455	460	464	925	934	943	936
	71.0	None	43	61	70	76	77	87	88	89	117	118	119	161	163	164	191	192	194	225
		Shaft Fan	55	86	105	104	106	130	131	133	186	188	190	253	256	258	348	352	355	420
		Electric Fan	72	113	125	152	155	175	176	178	255	257	260	379	382	386	472	476	481	571
		DuraPlate	95	128	165	189	193	236	239	241	456	461	465	469	474	479	577	583	588	934
	80.0	None	37	47	61	63	64	75	76	77	100	101	102	125	127	128	194	196	198	194
		Shaft Fan	48	66	92	87	88	113	114	115	160	161	163	198	200	202	353	356	360	354
		Electric Fan	61	87	110	128	131	151	153	154	220	222	224	301	304	307	477	481	486	480
		DuraPlate	71	87	112	123	126	163	165	166	283	286	289	352	356	360	582	588	594	587
	90.0	None	38	48	59	61	63	72	73	73	97	98	99	131	132	134	189	191	193	195
		Shaft Fan	48	67	89	84	86	107	108	109	155	157	159	206	208	210	343	346	350	355
		Electric Fan	62	88	107	125	128	144	146	147	213	216	218	312	315	318	462	467	472	481
		DuraPlate	72	88	109	120	122	155	157	159	275	278	281	364	368	371	564	570	575	588
	100	None	37	48	58	59	60	72	73	73	97	98	99	125	127	128	177	179	181	187
		Shaft Fan	47	67	88	81	83	107	108	109	155	156	158	197	199	201	323	327	330	340
		Electric Fan	61	89	105	120	122	144	145	147	212	214	216	297	300	303	438	442	446	460
		DuraPlate	71	89	106	115	118	155	156	158	273	276	279	345	348	352	535	540	546	562
	112	None	35	46	57	59	60	71	72	72	94	95	96	123	124	126	181	182	184	180
		Shaft Fan	45	64	87	81	83	106	107	108	150	152	153	194	196	198	328	331	335	329
		Electric Fan	58	86	103	120	122	142	143	145	206	208	211	292	295	298	443	447	452	445
		DuraPlate	68	86	105	115	117	153	154	156	266	269	271	340	343	347	540	546	551	545
	125	None	36	46	56	57	58	67	68	69	92	93	94	129	130	132				182
		Shaft Fan	46	65	84	79	80	100	101	102	146	148	149	202	204	206				330
		Electric Fan	59	86	101	117	119	135	136	137	200	202	204	303	306	309				446
		DuraPlate	69	86	102	112	114	145	147	148	258	261	263	351	355	358				545

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 200°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	8.00	None	359	363	367			*	*	*			
		Shaft Fan	1102	1113	1124			1282	1295	1307			
		Electric Fan	1525	1540	1556			1654	1671	1688			
		DuraPlate	3708	3745	3782			4873	4922	4971			
	9.00	None	376	380	384	*	*	*	*	*	*	*	*
		Shaft Fan	1109	1120	1131	1038	1059	1305	1318	1331	1129	1140	1152
		Electric Fan	1523	1539	1554	1457	1486	1664	1681	1698	1498	1513	1528
		DuraPlate	3643	3679	3716	3642	3715	4780	4828	4876	4724	4771	4818
	10.0	None	366	370	373	*	*	*	*	*	*	*	*
		Shaft Fan	1076	1086	1097	1069	1090	1289	1301	1314	1184	1196	1208
		Electric Fan	1479	1493	1508	1482	1511	1639	1655	1672	1541	1556	1571
		DuraPlate	3549	3585	3620	3615	3687	4692	4738	4785	4658	4704	4751
	11.2	None	373	377	381	*	*	*	*	*	*	*	*
		Shaft Fan	1050	1061	1071	1041	1062	1341	1354	1368	1186	1197	1209
		Electric Fan	1432	1447	1461	1442	1471	1690	1707	1724	1533	1548	1563
		DuraPlate	3391	3425	3459	3526	3596	4716	4764	4811	4585	4631	4677
12.5	None	385	389	393	*	*	407	411	415	*	*	*	
	Shaft Fan	995	1005	1015	1026	1047	1419	1434	1448	1264	1277	1290	
	Electric Fan	1337	1350	1364	1407	1435	1731	1749	1766	1610	1627	1643	
	DuraPlate	2619	2645	2671	3377	3444	3733	3770	3808	4634	4680	4726	
14.0	None	388	392	396	370	378	400	404	408	*	*	*	
	Shaft Fan	989	999	1009	973	992	1374	1387	1401	1373	1387	1400	
	Electric Fan	1323	1336	1350	1312	1339	1674	1691	1708	1683	1700	1717	
	DuraPlate	2571	2597	2623	2592	2644	3617	3653	3689	3682	3718	3755	
16.0	None	372	376	380	382	389	388	392	396	*	*	*	
	Shaft Fan	954	964	974	982	1002	1333	1346	1360	1334	1347	1361	
	Electric Fan	1280	1293	1306	1317	1343	1627	1643	1659	1633	1650	1666	
	DuraPlate	2501	2526	2551	2570	2621	3529	3565	3600	3570	3606	3641	
18.0	None	358	362	365	367	374	409	414	418	*	*	*	
	Shaft Fan	904	913	922	949	968	1308	1321	1334	1298	1311	1324	
	Electric Fan	1209	1221	1233	1276	1301	1583	1599	1615	1590	1606	1622	
	DuraPlate	2354	2377	2401	2501	2551	3353	3386	3420	3487	3522	3557	
20.0	None	359	362	366	348	355	393	397	401	393	397	401	
	Shaft Fan	896	905	914	887	904	1256	1268	1281	1283	1296	1308	
	Electric Fan	1194	1206	1218	1190	1214	1521	1536	1552	1557	1572	1588	
	DuraPlate	2309	2332	2355	2333	2380	3235	3267	3299	3325	3358	3391	
22.4	None	343	347	350	356	363	377	381	385	379	382	386	
	Shaft Fan	864	872	881	893	910	1215	1227	1239	1232	1244	1256	
	Electric Fan	1155	1166	1178	1192	1216	1474	1488	1503	1496	1511	1525	
	DuraPlate	2246	2268	2291	2310	2357	3154	3185	3217	3206	3238	3270	
25.0	None	342	345	349	341	348	386	390	394	365	369	372	
	Shaft Fan	804	812	820	861	879	1183	1195	1207	1193	1205	1217	
	Electric Fan	1061	1071	1082	1153	1176	1426	1440	1455	1450	1465	1479	
	DuraPlate	1661	1678	1694	2248	2293	2984	3014	3044	3127	3158	3190	
28.0	None	342	345	348	333	340	426	430	435	376	379	383	
	Shaft Fan	797	805	813	791	807	1159	1171	1182	1164	1175	1187	
	Electric Fan	1048	1059	1069	1046	1067	1380	1394	1408	1405	1419	1433	
	DuraPlate	1635	1652	1668	1645	1678	2283	2306	2329	2961	2990	3020	
31.5	None	327	330	333	340	346	409	413	417	416	420	424	
	Shaft Fan	769	777	785	795	811	1122	1133	1144	1142	1153	1165	
	Electric Fan	1015	1025	1035	1047	1068	1338	1351	1365	1362	1375	1389	
	DuraPlate	1589	1605	1621	1636	1668	2224	2247	2269	2263	2285	2308	
35.5	None	260	262	265	326	332	405	409	413	400	404	408	
	Shaft Fan	664	670	677	768	783	1088	1099	1110	1106	1117	1128	
	Electric Fan	889	898	907	1014	1034	1294	1307	1320	1321	1334	1347	
	DuraPlate	1419	1434	1448	1590	1622	2135	2157	2178	2205	2227	2249	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 200°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	40.0	None	260	262	265	253	258	384	388	392	396	400	404
		Shaft Fan	658	664	671	652	665	1041	1051	1062	1074	1085	1095
		Electric Fan	879	888	897	876	894	1240	1252	1265	1279	1292	1305
		DuraPlate	1397	1411	1425	1405	1433	2055	2076	2096	2119	2140	2161
	45.0	None	248	251	253	259	264	368	371	375	376	379	383
		Shaft Fan	634	640	647	656	669	1006	1016	1026	1026	1036	1046
		Electric Fan	850	858	867	878	896	1200	1212	1224	1224	1236	1248
		DuraPlate	1357	1371	1384	1397	1425	1999	2019	2039	2036	2057	2077
	50.0	None	243	245	248	247	252	289	292	295	360	363	367
		Shaft Fan	629	635	642	633	646	933	942	952	991	1001	1011
		Electric Fan	851	859	868	850	867	1136	1147	1159	1185	1197	1208
		DuraPlate	1381	1395	1409	1358	1385	1991	2011	2031	1981	2001	2021
56.0	None	243	245	248	237	241	283	286	289	282	285	288	
	Shaft Fan	622	628	635	617	630	915	924	933	918	927	936	
	Electric Fan	838	847	855	837	854	1115	1126	1137	1119	1130	1141	
	DuraPlate	1353	1367	1380	1365	1393	1957	1977	1996	1970	1990	2010	
63.0	None	231	233	236	242	246	270	272	275	276	279	282	
	Shaft Fan	598	604	610	621	633	880	888	897	900	909	918	
	Electric Fan	808	816	824	837	854	1074	1084	1095	1098	1109	1120	
	DuraPlate	1311	1324	1337	1354	1381	1895	1914	1933	1937	1956	1975	
71.0	None	227	229	232	231	236	308	311	314	263	266	269	
	Shaft Fan	503	508	514	598	610	781	789	797	866	874	883	
	Electric Fan	657	664	670	808	824	925	934	943	1058	1069	1079	
	DuraPlate	1071	1082	1093	1312	1339	1597	1613	1629	1876	1895	1913	
80.0	None	218	220	222	226	231	295	298	301	301	304	307	
	Shaft Fan	487	492	497	502	513	756	763	771	770	778	785	
	Electric Fan	637	644	650	656	669	896	905	914	913	922	931	
	DuraPlate	1044	1054	1065	1071	1093	1556	1572	1587	1583	1598	1614	
90.0	None	213	215	217	217	222	302	305	308	289	292	295	
	Shaft Fan	485	490	495	486	496	783	791	799	745	753	760	
	Electric Fan	641	648	654	637	650	933	943	952	885	894	903	
	DuraPlate	1072	1083	1093	1053	1074	1654	1670	1687	1543	1558	1574	
100	None	212	215	217	208	212	295	298	301	295	298	301	
	Shaft Fan	481	486	491	477	486	769	776	784	771	779	787	
	Electric Fan	634	640	647	632	644	916	926	935	920	930	939	
	DuraPlate	1054	1064	1075	1060	1081	1627	1643	1659	1637	1654	1670	
112	None	203	205	207	212	216	282	285	288	289	292	294	
	Shaft Fan	464	468	473	480	490	741	748	756	757	764	772	
	Electric Fan	613	619	625	633	646	885	893	902	903	912	921	
	DuraPlate	1023	1034	1044	1054	1075	1579	1595	1610	1611	1627	1643	
125	None				203	207				276	279	282	
	Shaft Fan				463	472				730	737	744	
	Electric Fan				612	624				872	881	890	
	DuraPlate				1024	1044				1563	1579	1595	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1750	12.5	None															*	*	*		
		Shaft Fan																480	485	490	
		Electric Fan																311	314	317	
		DuraPlate																2003	2023	2043	
	14.0	None	60	85	90	87	89	*	*	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	133	209	265	236	241	276	278	281	362	366	369	337	340	343	477	482	487	423	
		Electric Fan	106	170	188	218	222	218	220	222	284	287	289	303	306	309	314	317	320	265	
		DuraPlate	248	347	488	550	561	814	822	830	1289	1301	1314	1334	1348	1361	1953	1972	1992	1895	
	16.0	None	58	83	91	88	90	*	*	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	129	203	265	237	242	275	277	280	361	365	368	338	341	345	500	505	510	431	
		Electric Fan	103	165	189	219	223	217	220	222	285	287	290	305	308	311	334	338	341	275	
		DuraPlate	242	336	486	548	559	807	815	823	1264	1277	1290	1327	1340	1354	1971	1991	2011	1875	
	18.0	None	59	84	90	87	89	*	*	*	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	131	203	259	233	237	267	270	272	356	360	363	361	365	368	547	553	558	455	
		Electric Fan	104	165	185	215	219	212	214	216	282	284	287	327	330	333	386	389	393	297	
		DuraPlate	243	334	475	535	546	778	786	794	1235	1248	1260	1359	1373	1386	1970	1989	2009	1891	
	20.0	None	55	76	83	85	87	80	81	81	*	*	*	*	*	*	*	*	*	*	
		Shaft Fan	122	188	242	223	227	266	269	272	350	351	352	357	361	365	529	534	539	504	
		Electric Fan	97	152	171	206	210	213	215	217	275	277	280	326	330	333	373	377	381	350	
		DuraPlate	228	311	447	514	524	763	771	779	1176	1188	1199	1269	1282	1294	1904	1923	1942	1886	
22.4	None	53	74	84	85	87	79	80	81	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	118	181	241	223	227	264	266	269	339	343	346	355	358	362	541	546	552	497		
	Electric Fan	94	147	172	206	210	211	213	215	271	273	276	324	327	330	384	388	392	347		
	DuraPlate	222	300	444	511	521	755	762	770	1149	1161	1172	1259	1271	1284	1910	1929	1948	1850		
25.0	None	54	75	82	84	85	77	77	78	*	*	*	*	*	*	*	*	*	*		
	Shaft Fan	120	181	236	217	222	253	256	258	332	335	339	370	374	377	673	680	687	507		
	Electric Fan	95	148	168	201	205	203	205	207	265	268	270	338	342	345	526	532	537	356		
	DuraPlate	224	299	433	497	507	724	731	738	1119	1130	1141	1281	1294	1306	2026	2046	2066	1849		
28.0	None	44	64	74	81	82	91	92	102	103	104	*	*	*	*	*	*	*	*		
	Shaft Fan	101	160	204	199	203	257	259	262	343	346	349	376	380	384	646	652	659	670		
	Electric Fan	80	129	147	184	188	210	212	214	282	285	288	350	353	356	504	509	514	523		
	DuraPlate	183	258	370	444	453	563	568	574	1117	1129	1140	962	971	981	1955	1975	1994	2035		
31.5	None	43	62	75	81	83	90	90	91	101	102	103	*	*	*	*	*	*	*		
	Shaft Fan	98	154	204	198	202	254	256	259	335	339	342	372	376	380	653	660	666	655		
	Electric Fan	77	125	147	184	188	207	209	211	276	279	282	350	351	352	512	517	522	511		
	DuraPlate	179	249	368	442	451	556	562	567	1090	1101	1112	952	961	971	1955	1975	1994	1991		
35.5	None	44	63	73	79	81	86	87	88	98	99	100	99	100	101	*	*	*	*		
	Shaft Fan	99	155	199	194	198	243	246	248	327	331	334	385	388	392	646	653	659	659		
	Electric Fan	78	125	144	180	183	199	201	203	270	273	275	357	361	364	510	515	520	515		
	DuraPlate	180	248	360	430	439	534	539	545	1062	1073	1083	969	979	989	1896	1915	1933	1981		
40.0	None	41	59	64	75	76	82	83	84	100	101	102	95	96	97	117	118	119	*		
	Shaft Fan	93	146	183	183	186	232	234	236	324	327	331	355	358	362	617	623	629	645		
	Electric Fan	74	118	131	170	173	189	191	193	268	271	273	330	333	336	486	491	495	508		
	DuraPlate	170	235	336	407	416	509	514	519	1038	1049	1059	892	901	910	1825	1843	1861	1905		
45.0	None	39	56	64	75	76	81	82	83	97	98	99	93	94	95	120	121	122	*		
	Shaft Fan	91	140	183	182	186	229	231	233	316	319	323	350	354	357	623	629	635	627		
	Electric Fan	71	113	131	169	173	187	189	191	262	264	267	326	329	332	492	497	501	494		
	DuraPlate	165	226	335	405	413	503	508	513	1011	1021	1031	883	891	900	1824	1842	1860	1860		
50.0	None	40	57	63	73	74	77	78	79	95	96	97	98	99	100	129	130	131	120		
	Shaft Fan	92	140	179	178	181	219	221	223	308	311	314	362	365	369	619	625	631	629		
	Electric Fan	72	114	128	165	168	179	180	182	254	257	260	337	340	343	492	497	502	496		
	DuraPlate	167	225	326	394	402	482	487	492	980	990	1000	899	908	917	1771	1789	1807	1849		
56.0	None	40	56	63	62	63	60	60	61	57	57	58	100	101	102	121	122	123	127		
	Shaft Fan	90	141	176	161	164	195	197	199	256	259	261	352	356	359	589	595	601	617		
	Electric Fan	71	113	126	149	152	156	158	160	205	207	209	329	332	335	467	472	476	490		
	DuraPlate	165	231	320	369	376	450	454	459	889	898	907	842	850	858	1702	1719	1736	1780		

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† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1750	63.0	None	38	54	62	62	63	59	60	60	55	56	57	98	99	100	123	125	126	122
		Shaft Fan	88	136	173	160	163	193	195	197	250	252	255	348	351	355	595	601	606	599
		Electric Fan	69	109	125	148	151	155	156	158	200	202	204	324	328	331	472	477	482	475
		DuraPlate	160	223	310	358	365	445	449	454	867	875	884	833	841	849	1702	1719	1736	1735
	71.0	None	39	54	61	60	62	56	57	57	54	54	55	103	104	105	126	127	128	124
		Shaft Fan	89	136	169	156	159	184	186	187	243	245	248	359	363	366	514	519	524	600
		Electric Fan	70	109	121	145	147	147	149	150	194	196	198	336	339	342	413	417	422	477
		DuraPlate	161	221	302	348	355	424	429	433	842	851	859	870	879	887	1022	1032	1042	1724
	80.0	None	36	47	59	60	61	69	69	70	86	87	88	88	88	89	128	129	131	128
		Shaft Fan	79	112	157	142	145	184	186	188	257	259	262	291	293	296	519	524	529	524
		Electric Fan	63	91	114	132	135	151	153	154	214	216	218	271	274	276	418	422	426	421
		DuraPlate	120	154	202	227	232	302	305	308	541	546	551	645	651	658	1026	1036	1046	1041
	90.0	None	37	48	58	59	60	65	66	67	84	85	85	92	93	94	129	130	131	129
		Shaft Fan	80	112	153	138	141	176	178	180	250	253	255	300	303	306	509	514	519	524
		Electric Fan	64	92	111	129	131	145	146	147	208	211	213	280	283	286	411	415	419	422
		DuraPlate	121	154	197	222	226	289	292	295	525	531	536	659	665	672	997	1007	1017	1038
	100	None	36	47	57	57	58	66	67	68	85	85	86	90	91	92	121	122	123	127
		Shaft Fan	79	114	150	134	136	176	178	179	250	252	255	289	292	295	484	489	494	507
		Electric Fan	63	92	109	124	127	145	146	148	209	211	213	270	273	276	390	394	398	409
		DuraPlate	120	158	193	214	218	287	290	292	523	528	533	628	634	640	955	964	974	999
	112	None	35	45	56	57	58	65	66	67	82	83	84	88	89	90	123	125	126	123
		Shaft Fan	76	110	148	133	136	174	175	177	244	246	248	285	288	291	489	494	499	493
		Electric Fan	61	89	108	124	126	143	144	146	203	205	207	266	269	272	395	399	403	397
		DuraPlate	116	152	190	213	217	283	286	289	509	514	519	620	627	633	959	969	978	973
125	None	35	46	55	55	56	62	63	63	80	81	82	93	94	95				124	
	Shaft Fan	77	110	144	130	132	166	167	169	237	239	242	295	298	301				494	
	Electric Fan	61	89	105	121	123	136	138	139	198	200	202	276	279	282				398	
	DuraPlate	117	152	185	207	211	270	273	276	495	500	505	635	641	647				970	

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† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 180°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1750	8.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	*	*	*			*	*	*			
		DuraPlate	4273	4316	4358			*	*	*			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4430	4475	4519	3736	3810	*	*	*	*	*	*
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4421	4465	4510	4032	4113	*	*	*	*	*	*
	11.2	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4542	4587	4632	4087	4168	1577	1593	1609	*	*	*
	12.5	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	3710	3748	3785	4362	4449	2953	2982	3012	*	*	*
14.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	
	DuraPlate	3683	3720	3757	3594	3665	3086	3117	3148	2472	2497	2522	
16.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	
	DuraPlate	3613	3649	3685	3613	3686	3107	3138	3169	2743	2770	2798	
18.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	
	DuraPlate	3556	3592	3627	3556	3627	3558	3594	3630	2818	2846	2874	
20.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	
	DuraPlate	3496	3531	3566	3503	3574	3506	3541	3576	3397	3431	3465	
22.4	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	*	*	*	*	*	*	*	*	*	*	*	
	Electric Fan	*	*	*	*	*	*	*	*	*	*	*	
	DuraPlate	3419	3453	3488	3477	3546	3451	3485	3520	3384	3417	3451	
25.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	664	671	677	*	*	*	*	*	*	*	*	
	Electric Fan	425	429	434	*	*	*	*	*	*	*	*	
	DuraPlate	2715	2742	2769	3404	3472	3571	3607	3643	3345	3379	3412	
28.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	664	670	677	794	810	695	701	708	*	*	*	
	Electric Fan	429	433	437	502	512	*	*	*	*	*	*	
	DuraPlate	2670	2696	2723	2687	2740	3244	3276	3309	3507	3542	3577	
31.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	643	650	656	808	824	679	686	692	652	659	665	
	Electric Fan	414	419	423	518	528	*	*	*	*	*	*	
	DuraPlate	2608	2634	2660	2665	2718	3179	3211	3242	3194	3226	3258	
35.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	628	635	641	785	800	801	809	817	643	649	656	
	Electric Fan	417	421	426	502	512	*	*	*	*	*	*	
	DuraPlate	2441	2465	2489	2605	2657	3175	3207	3239	3135	3166	3198	

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1750	40.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	624	630	636	760	775	771	779	787	777	785	793	
		Electric Fan	417	421	425	501	512	*	*	*	*	*	*	
		DuraPlate	2395	2419	2443	2422	2470	3072	3102	3133	3148	3179	3211	
	45.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	603	609	615	766	781	746	753	761	750	758	765	
		Electric Fan	401	405	409	510	520	*	*	*	*	*	*	
		DuraPlate	2339	2362	2386	2396	2444	3002	3032	3062	3044	3075	3105	
	50.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	618	624	631	741	756	815	824	832	727	734	741	
		Electric Fan	416	420	424	492	502	281	284	287	*	*	*	
		DuraPlate	2418	2443	2467	2341	2387	3181	3212	3244	2976	3006	3036	
	56.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	611	617	624	749	764	810	818	826	797	805	813	
		Electric Fan	413	417	422	502	512	284	287	290	271	274	277	
		DuraPlate	2359	2382	2406	2400	2448	3143	3175	3206	3155	3187	3218	
	63.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	589	595	601	752	768	780	788	795	793	801	809	
Electric Fan		397	401	405	508	518	272	275	277	275	277	280		
DuraPlate		2298	2321	2344	2362	2409	3060	3091	3121	3119	3150	3181		
71.0	None	*	*	*	*	*	154	155	157	*	*	*	*	
	Shaft Fan	658	665	672	728	742	1252	1265	1277	805	813	821		
	Electric Fan	519	524	529	490	500	834	842	851	298	301	304		
	DuraPlate	2013	2034	2054	2303	2350	3043	3073	3103	3079	3110	3141		
80.0	None	123	124	125	157	161	147	149	150	*	*	*		
	Shaft Fan	640	647	653	812	828	1218	1230	1242	1238	1250	1263		
	Electric Fan	504	509	514	640	652	808	816	824	822	830	838		
	DuraPlate	1973	1993	2012	2015	2056	2983	3012	3042	3027	3057	3088		
90.0	None	*	*	*	151	154	156	157	159	*	*	*	*	
	Shaft Fan	545	551	556	790	806	1266	1278	1291	1204	1216	1228		
	Electric Fan	405	409	413	621	633	834	843	851	796	804	812		
	DuraPlate	1939	1958	1978	1975	2015	3194	3226	3258	2968	2997	3027		
100	None	*	*	*	*	*	*	*	*	151	153	154		
	Shaft Fan	540	545	551	663	677	921	930	939	1250	1263	1275		
	Electric Fan	402	406	410	492	502	506	511	516	822	830	838		
	DuraPlate	1899	1918	1937	1926	1964	2838	2866	2894	3177	3209	3241		
112	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	523	528	533	666	679	890	899	907	907	916	925		
	Electric Fan	388	392	396	495	505	487	492	497	497	502	507		
	DuraPlate	1855	1873	1892	1901	1939	2769	2797	2825	2820	2848	2877		
125	None				*	*				*	*	*	*	
	Shaft Fan				645	658				877	886	895		
	Electric Fan				479	488				478	483	488		
	DuraPlate				1858	1895				2752	2780	2807		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1430	12.5	None															*	*	*		
		Shaft Fan																586	592	598	
		Electric Fan																540	545	550	
		DuraPlate																1805	1823	1841	
	14.0	None	59	86	94	95	97	97	98	99	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	113	179	227	208	212	253	256	258	351	354	358	371	375	379	570	576	582	533	
		Electric Fan	103	167	188	222	226	238	241	243	336	339	342	409	413	418	525	530	536	489	
		DuraPlate	203	287	403	454	463	677	684	691	1080	1091	1102	1161	1173	1184	1749	1766	1784	1712	
	16.0	None	58	83	95	96	98	97	98	99	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	110	173	228	209	213	252	254	257	346	350	353	370	374	377	586	592	598	530	
		Electric Fan	100	161	188	222	226	237	239	242	332	335	339	408	412	416	541	546	551	486	
		DuraPlate	198	277	401	452	461	670	677	684	1057	1068	1078	1152	1164	1175	1760	1778	1795	1684	
	18.0	None	59	84	93	95	96	94	95	96	109	110	111	*	*	*	*	*	*	*	*
		Shaft Fan	111	173	222	204	208	243	245	248	340	343	347	388	392	396	594	600	606	544	
		Electric Fan	102	162	184	217	222	229	231	233	326	329	332	427	431	435	551	556	562	501	
		DuraPlate	199	277	391	441	450	645	652	658	1031	1041	1052	1178	1190	1202	1725	1742	1759	1690	
	20.0	None	54	76	85	90	91	95	95	96	105	106	108	*	*	*	*	*	*	*	*
		Shaft Fan	103	159	205	193	197	238	240	243	321	324	328	360	364	368	570	576	581	552	
		Electric Fan	94	148	170	206	210	224	226	229	308	311	314	395	399	403	528	533	539	510	
DuraPlate		186	256	365	420	428	628	634	640	972	981	991	1076	1087	1098	1661	1678	1694	1648		
22.4	None	52	73	85	90	92	94	95	96	104	105	106	*	*	*	*	*	*	*	*	
	Shaft Fan	100	153	205	193	197	235	238	240	315	318	321	357	360	364	579	585	591	541		
	Electric Fan	91	143	170	206	210	222	224	226	302	305	308	391	395	399	537	543	548	500		
	DuraPlate	181	246	364	418	426	620	627	633	949	958	967	1066	1077	1087	1666	1683	1699	1613		
25.0	None	53	74	83	88	90	90	91	92	102	103	104	*	*	*	*	*	*	*	*	
	Shaft Fan	101	154	200	188	192	225	228	230	307	310	313	370	374	378	623	629	635	546		
	Electric Fan	92	143	166	200	204	213	215	217	295	298	301	405	409	413	585	590	596	506		
	DuraPlate	182	246	354	406	415	594	600	606	923	932	942	1086	1097	1108	1696	1713	1730	1610		
28.0	None	44	64	70	81	83	95	96	97	113	114	116	125	126	127	165	166	168	171		
	Shaft Fan	86	136	168	170	173	222	224	226	299	302	305	346	349	353	596	602	608	621		
	Electric Fan	78	127	139	180	184	210	212	214	288	290	293	375	379	383	559	564	570	582		
	DuraPlate	150	213	298	362	369	462	467	472	907	916	925	804	812	820	1633	1649	1665	1703		
31.5	None	43	62	71	81	83	94	95	96	111	112	113	123	124	125	169	170	172	166		
	Shaft Fan	83	131	168	169	173	219	221	223	292	295	298	342	345	349	602	608	614	605		
	Electric Fan	76	122	140	180	184	207	209	211	281	284	287	371	375	378	565	571	577	568		
	DuraPlate	146	205	297	360	367	457	461	466	885	893	902	795	803	811	1634	1651	1667	1664		
35.5	None	43	63	69	79	81	90	91	92	108	109	111	129	130	131	170	172	173	169		
	Shaft Fan	84	132	164	165	169	210	212	214	285	288	291	353	357	360	587	593	599	607		
	Electric Fan	76	122	136	176	179	198	200	202	274	277	280	383	387	390	552	557	563	570		
	DuraPlate	147	205	290	350	357	438	442	447	861	870	878	811	820	828	1577	1592	1608	1656		
40.0	None	40	58	65	69	70	72	73	74	108	109	110	118	119	120	160	162	164	168		
	Shaft Fan	79	123	156	148	151	183	185	187	281	284	286	321	325	328	559	565	570	585		
	Electric Fan	72	115	129	158	161	173	174	176	270	273	276	348	352	355	525	530	536	550		
	DuraPlate	139	193	275	323	330	399	403	407	841	849	858	741	748	756	1514	1529	1544	1583		
45.0	None	39	56	65	69	70	71	72	73	105	106	107	116	118	119	164	165	167	163		
	Shaft Fan	76	119	156	148	151	181	183	185	274	276	279	317	320	324	565	571	576	569		
	Electric Fan	69	110	129	158	161	171	172	174	264	266	269	344	348	351	531	536	541	534		
	DuraPlate	135	186	274	321	328	394	398	402	819	827	835	733	740	747	1516	1531	1546	1543		
50.0	None	40	57	64	67	68	68	69	69	103	104	105	122	123	124	167	168	170	164		
	Shaft Fan	77	119	152	144	147	173	175	176	266	269	271	328	331	334	556	562	567	570		
	Electric Fan	70	111	126	154	157	163	165	166	256	259	261	355	359	362	523	528	534	536		
	DuraPlate	136	185	267	313	319	377	381	385	794	802	810	748	756	763	1469	1483	1498	1535		
56.0	None	39	55	63	65	66	70	71	71	80	81	82	61	61	62	157	158	160	165		
	Shaft Fan	76	119	150	140	142	174	176	177	237	239	242	241	244	246	528	533	539	554		
	Electric Fan	69	111	124	149	152	164	166	167	228	230	232	266	269	272	496	501	506	521		
	DuraPlate	135	189	262	300	306	374	378	381	735	742	750	619	625	631	1408	1422	1436	1473		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1430	63.0	None	38	53	63	65	66	69	70	70	78	79	79	59	60	61	160	161	163	159
		Shaft Fan	74	115	147	139	142	172	173	175	231	233	236	238	240	242	534	539	544	538
		Electric Fan	67	106	122	148	150	162	164	165	222	224	226	262	265	268	502	507	512	505
		DuraPlate	130	182	254	293	299	369	373	377	716	723	731	612	618	624	1410	1424	1438	1435
	71.0	None	38	54	61	63	65	65	66	67	76	76	77	63	63	64	145	147	148	160
		Shaft Fan	75	115	143	135	138	163	165	167	224	227	229	247	250	252	451	456	460	538
		Electric Fan	68	107	119	144	146	154	156	157	215	218	220	272	275	278	425	429	434	507
		DuraPlate	131	181	247	286	291	352	356	359	696	703	710	626	633	639	851	859	868	1428
	80.0	None	35	45	57	58	59	68	69	69	87	88	89	99	100	101	150	151	152	148
		Shaft Fan	66	93	130	119	121	155	156	158	218	220	222	255	258	261	456	460	465	459
		Electric Fan	60	87	109	126	129	147	148	150	210	212	214	276	279	282	430	434	438	433
		DuraPlate	97	126	165	185	189	246	249	251	439	444	448	531	537	542	855	863	872	867
	90.0	None	35	45	55	57	58	65	65	66	85	86	87	103	104	105	146	148	149	149
		Shaft Fan	67	94	127	116	118	148	150	151	212	214	216	264	267	270	445	450	454	460
		Electric Fan	61	87	106	123	126	140	141	143	204	207	209	286	289	291	420	424	428	434
		DuraPlate	98	126	161	180	184	236	238	240	427	431	436	544	550	555	830	838	847	865
	100	None	34	45	55	55	56	65	66	67	85	86	87	100	101	102	138	139	140	145
		Shaft Fan	66	94	124	112	114	148	149	151	212	214	216	254	257	259	423	427	431	444
		Electric Fan	60	88	104	119	121	140	141	143	204	206	208	274	277	280	399	403	407	418
		DuraPlate	97	128	157	174	177	234	236	239	425	429	433	519	524	529	793	801	809	830
	112	None	33	43	54	55	56	64	65	66	83	84	85	98	99	100	140	142	143	140
		Shaft Fan	63	91	123	112	114	146	147	149	206	208	210	250	253	255	428	432	436	430
		Electric Fan	58	84	103	118	121	138	140	141	199	201	203	270	273	276	403	407	411	406
		DuraPlate	93	124	156	173	176	231	233	236	414	418	422	512	517	522	798	806	814	808
	125	None	34	44	52	53	54	61	62	62	81	82	83	103	104	105				141
		Shaft Fan	64	91	120	109	111	139	140	142	201	203	205	259	262	265				431
		Electric Fan	58	85	100	115	118	132	133	134	193	195	197	280	283	286				407
		DuraPlate	94	124	152	168	172	220	222	225	402	406	410	525	530	536				806

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 180°F Sump Temperature[†]

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1430	8.00	None	*	*	*			*	*	*			
		Shaft Fan	*	*	*			*	*	*			
		Electric Fan	*	*	*			*	*	*			
		DuraPlate	4343	4387	4430			2157	2179	2200			
	9.00	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4381	4424	4468	4042	4123	2718	2745	2772	960	970	979
	10.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4324	4367	4411	4168	4252	2902	2931	2960	1861	1880	1898
	11.2	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	*	*	*	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	4293	4336	4379	4145	4228	3649	3686	3722	2189	2211	2233
	12.5	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	447	452	456	*	*	*	*	*	*	*	*
		Electric Fan	*	*	*	*	*	*	*	*	*	*	*
		DuraPlate	3408	3443	3477	4196	4280	3674	3710	3747	3180	3212	3244
	14.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	471	476	480	484	494	*	*	*	*	*	*
		Electric Fan	366	370	373	*	*	*	*	*	*	*	*
		DuraPlate	3365	3399	3433	3336	3403	3671	3708	3745	3410	3444	3478
	16.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	463	467	472	532	543	*	*	*	*	*	*
		Electric Fan	361	364	368	*	*	*	*	*	*	*	*
		DuraPlate	3292	3325	3358	3330	3397	3634	3670	3707	3477	3512	3547
18.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	515	520	526	530	541	*	*	*	*	*	*	
	Electric Fan	418	422	426	*	*	*	*	*	*	*	*	
	DuraPlate	3180	3212	3244	3263	3328	3755	3792	3830	3469	3504	3539	
20.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	521	527	532	603	615	*	*	*	*	*	*	
	Electric Fan	425	430	434	485	495	*	*	*	*	*	*	
	DuraPlate	3122	3153	3184	3143	3206	3662	3698	3735	3660	3696	3733	
22.4	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	505	510	515	625	637	*	*	*	*	*	*	
	Electric Fan	412	416	420	507	517	*	*	*	*	*	*	
	DuraPlate	3048	3079	3109	3113	3175	3590	3626	3661	3586	3622	3658	
25.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	687	694	701	608	620	*	*	*	*	*	*	
	Electric Fan	604	610	616	493	503	*	*	*	*	*	*	
	DuraPlate	2339	2363	2386	3042	3103	3548	3584	3619	3524	3559	3594	
28.0	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	684	691	697	828	845	968	977	987	*	*	*	
	Electric Fan	602	608	614	727	741	634	641	647	*	*	*	
	DuraPlate	2300	2323	2346	2317	2363	2959	2988	3018	3504	3539	3574	
31.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	662	668	675	837	854	940	950	959	937	946	955	
	Electric Fan	582	588	594	736	751	616	622	628	607	613	619	
	DuraPlate	2244	2267	2289	2299	2345	2894	2923	2952	2923	2952	2982	
35.5	None	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	628	634	641	812	828	988	998	1007	913	922	931	
	Electric Fan	555	560	566	713	727	674	681	688	592	598	604	
	DuraPlate	2087	2108	2128	2244	2289	2842	2870	2899	2862	2890	2919	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1430	40.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	623	629	635	761	776	948	957	967	968	978	987	
		Electric Fan	551	556	562	671	685	646	652	659	657	664	670	
		DuraPlate	2049	2069	2090	2070	2111	2745	2772	2800	2819	2848	2876	
	45.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	602	608	614	766	781	916	926	935	929	938	948	
		Electric Fan	532	537	542	677	691	623	629	635	630	636	643	
		DuraPlate	1998	2018	2038	2050	2091	2679	2706	2733	2722	2749	2776	
	50.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	607	613	619	741	756	964	974	983	899	908	917	
		Electric Fan	536	541	547	654	667	663	670	676	608	615	621	
		DuraPlate	2055	2075	2096	2000	2040	2823	2851	2879	2657	2684	2711	
56.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	600	606	612	736	751	951	961	970	947	956	966		
	Electric Fan	530	536	541	649	662	655	662	668	649	655	662		
	DuraPlate	2006	2026	2046	2037	2078	2784	2812	2840	2800	2828	2856		
63.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	578	583	589	739	753	916	926	935	935	944	953		
	Electric Fan	510	516	521	653	666	629	635	642	641	648	654		
	DuraPlate	1951	1971	1990	2008	2049	2707	2735	2762	2762	2789	2817		
71.0	None	95	96	97	*	*	213	215	217	*	*	*	*	
	Shaft Fan	508	513	518	413	421	1087	1097	1108	924	933	942		
	Electric Fan	459	464	468	333	340	866	874	883	638	645	651		
	DuraPlate	1595	1611	1627	1669	1702	2505	2530	2555	2709	2736	2763		
80.0	None	91	91	92	116	118	204	206	208	208	210	212		
	Shaft Fan	493	498	503	626	638	1055	1066	1076	1074	1084	1095		
	Electric Fan	445	449	454	565	577	839	847	856	854	862	871		
	DuraPlate	1560	1576	1591	1596	1628	2452	2476	2501	2490	2515	2539		
90.0	None	91	92	93	111	113	*	*	*	*	*	*	*	
	Shaft Fan	495	500	505	608	620	911	920	929	1043	1053	1064		
	Electric Fan	446	450	455	548	559	685	692	699	828	836	844		
	DuraPlate	1616	1632	1648	1624	1656	2436	2461	2485	2437	2462	2486		
100	None	91	92	93	109	111	*	*	*	*	*	*	*	
	Shaft Fan	490	495	500	601	613	896	905	914	898	907	916		
	Electric Fan	442	446	450	541	552	673	680	687	674	680	687		
	DuraPlate	1584	1600	1616	1603	1635	2403	2427	2451	2419	2444	2468		
112	None	87	88	89	112	114	*	*	*	*	*	*	*	
	Shaft Fan	474	478	483	604	616	865	874	883	883	892	901		
	Electric Fan	427	431	435	544	555	649	655	662	662	669	676		
	DuraPlate	1545	1560	1576	1585	1617	2342	2365	2389	2386	2410	2434		
125	None				107	109				*	*	*	*	
	Shaft Fan				584	596				853	862	870		
	Electric Fan				526	537				639	645	651		
	DuraPlate				1547	1578				2326	2349	2372		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
1170	12.5	None																185	187	188	
		Shaft Fan																	594	600	606
		Electric Fan																	676	683	690
		DuraPlate																	1509	1525	1540
	14.0	None	57	83	94	98	100	109	110	111	138	139	140	152	153	155	179	181	182	163	
		Shaft Fan	93	147	187	175	178	218	221	223	312	316	319	358	361	365	571	577	582	546	
		Electric Fan	99	160	183	218	222	244	247	249	358	362	366	466	470	475	650	657	663	624	
		DuraPlate	160	227	316	356	363	532	538	543	852	860	869	945	955	964	1455	1469	1484	1429	
	16.0	None	56	80	95	98	100	108	109	110	136	138	139	151	152	154	186	188	190	162	
		Shaft Fan	90	141	187	175	178	216	219	221	307	310	313	355	358	362	582	587	593	537	
		Electric Fan	96	154	183	217	222	242	244	247	352	355	359	461	466	471	661	668	674	613	
		DuraPlate	156	219	315	355	362	526	532	537	832	840	849	936	945	955	1463	1477	1492	1400	
	18.0	None	53	81	93	96	98	104	105	106	134	135	136	160	162	163	189	191	193	168	
		Shaft Fan	88	142	182	171	174	208	210	212	300	303	306	369	373	377	567	572	578	544	
		Electric Fan	94	155	179	212	216	232	235	237	344	347	351	478	483	488	642	649	655	621	
		DuraPlate	157	219	307	346	353	505	510	516	811	819	827	957	967	976	1411	1425	1439	1401	
	20.0	None	49	70	84	90	92	101	102	103	124	125	127	145	146	148	180	182	184	171	
		Shaft Fan	81	126	167	160	163	201	203	205	278	281	284	329	332	336	541	546	552	527	
		Electric Fan	86	137	163	199	203	224	227	229	319	322	325	426	430	435	613	620	626	599	
		DuraPlate	142	198	284	327	333	488	493	498	756	764	771	857	866	875	1354	1368	1381	1343	
22.4	None	47	67	84	90	92	100	101	102	122	123	124	143	144	146	185	187	189	168		
	Shaft Fan	78	121	167	160	163	198	200	202	272	275	277	325	328	332	548	554	559	514		
	Electric Fan	84	132	163	199	203	222	224	226	312	315	318	421	425	429	621	627	633	585		
	DuraPlate	138	190	283	325	332	482	487	492	738	745	752	848	857	865	1359	1373	1386	1311		
25.0	None	51	68	82	88	89	95	96	97	119	120	121	150	152	153	208	210	212	171		
	Shaft Fan	82	122	163	156	159	190	192	194	265	268	270	337	341	344	540	546	551	518		
	Electric Fan	88	133	159	194	198	212	214	216	304	307	310	435	439	444	606	612	618	588		
	DuraPlate	139	190	276	316	323	461	466	471	718	725	732	867	875	884	1344	1357	1370	1308		
28.0	None	42	62	70	75	77	87	88	89	117	118	119	140	142	143	197	199	201	206		
	Shaft Fan	70	111	138	135	138	174	176	177	248	250	253	298	301	304	515	520	525	538		
	Electric Fan	75	121	135	168	171	194	196	198	282	285	288	381	385	388	578	584	590	604		
	DuraPlate	118	168	233	276	281	350	354	357	697	704	711	835	841	847	1289	1302	1315	1347		
31.5	None	41	60	70	75	77	86	87	88	114	115	117	138	140	141	201	203	205	200		
	Shaft Fan	68	107	138	135	137	172	173	175	242	245	247	294	297	300	521	526	531	524		
	Electric Fan	72	117	135	168	171	192	194	196	276	278	281	376	380	383	584	590	596	588		
	DuraPlate	114	161	232	274	280	346	349	353	680	687	693	827	833	839	1293	1306	1319	1314		
35.5	None	42	61	68	74	75	82	83	84	111	113	114	144	146	147	196	198	200	202		
	Shaft Fan	68	107	134	131	134	164	166	167	236	238	241	305	308	311	502	507	512	525		
	Electric Fan	73	117	132	163	167	183	185	187	269	271	274	388	392	395	563	569	574	589		
	DuraPlate	115	162	227	267	273	331	334	338	662	668	675	809	816	822	1242	1254	1267	1309		
40.0	None	39	56	64	69	70	78	78	79	96	97	98	96	97	98	185	187	189	194		
	Shaft Fan	64	100	127	123	126	155	157	158	215	217	220	234	237	239	477	482	487	500		
	Electric Fan	69	110	124	153	157	173	175	177	247	249	252	308	311	314	535	541	546	561		
	DuraPlate	109	152	214	251	256	314	317	320	627	633	639	773	780	787	1189	1201	1213	1244		
45.0	None	38	54	64	69	70	77	77	78	94	95	96	95	96	96	188	190	192	188		
	Shaft Fan	62	96	127	123	125	153	155	156	210	212	214	231	233	236	483	487	492	486		
	Electric Fan	66	105	124	153	156	171	173	175	240	243	245	304	307	310	541	546	552	545		
	DuraPlate	105	146	214	250	255	310	313	316	610	616	623	757	764	771	1192	1204	1216	1211		
50.0	None	38	55	63	67	69	73	74	74	91	92	93	99	100	101	141	142	144	189		
	Shaft Fan	63	97	123	120	122	146	148	149	204	206	208	240	242	245	416	421	425	487		
	Electric Fan	67	106	121	149	152	163	165	167	234	236	238	314	317	320	472	476	481	546		
	DuraPlate	106	146	208	243	248	296	299	302	592	598	604	738	745	751	1091	1102	1113	1207		
56.0	None	37	54	62	65	66	74	75	76	93	93	94	98	99	100	132	133	135	138		
	Shaft Fan	62	97	121	115	118	147	148	150	204	206	209	232	235	237	394	398	402	413		
	Electric Fan	66	106	119	144	147	164	165	167	233	236	238	302	305	308	447	451	456	468		
	DuraPlate	105	148	204	233	238	294	297	300	574	580	586	720	727	733	1042	1052	1063	1092		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
1170	63.0	None	36	51	61	65	66	73	74	74	90	91	92	97	97	98	135	136	138	133
		Shaft Fan	60	93	119	115	117	145	146	148	199	201	203	229	231	234	399	403	407	400
		Electric Fan	64	102	117	142	145	161	163	165	227	230	232	297	300	303	452	456	461	453
		DuraPlate	101	143	198	229	233	290	293	296	559	565	570	505	510	515	1046	1057	1067	1062
	71.0	None	37	52	59	63	64	69	70	71	88	88	89	102	103	104	153	154	156	135
		Shaft Fan	60	93	116	112	114	137	139	140	193	195	197	238	241	243	375	379	383	401
		Electric Fan	65	102	114	138	141	154	155	157	221	223	225	308	311	314	419	424	428	455
		DuraPlate	102	142	193	223	227	276	279	282	543	549	554	519	524	529	671	677	684	1058
	80.0	None	32	42	53	55	56	65	66	66	85	86	87	102	103	104	156	157	159	155
		Shaft Fan	53	74	104	96	98	125	126	127	177	178	180	213	215	217	380	383	387	382
		Electric Fan	56	81	102	119	121	139	140	142	201	203	205	270	273	276	424	428	432	427
		DuraPlate	76	98	129	144	147	191	193	195	338	342	345	414	418	422	675	682	689	683
	90.0	None	33	43	52	54	55	62	63	63	83	84	85	107	108	109	153	154	156	157
		Shaft Fan	54	75	101	93	95	119	120	121	172	174	175	220	223	225	370	374	377	383
		Electric Fan	57	82	99	116	118	133	134	135	195	197	199	280	283	285	413	417	421	428
		DuraPlate	77	98	126	140	143	183	185	186	329	332	335	426	430	434	655	662	669	683
	100	None	32	42	51	52	53	62	63	64	83	84	85	103	104	105	144	145	146	151
		Shaft Fan	52	75	99	90	92	119	120	121	171	173	175	211	213	216	350	354	357	368
		Electric Fan	56	82	97	111	114	132	134	135	194	196	198	268	270	273	391	395	399	411
		DuraPlate	75	100	123	135	138	182	184	185	327	330	333	406	410	414	624	630	637	654
	112	None	31	40	51	52	53	62	62	63	83	84	85	101	102	103	146	148	149	146
		Shaft Fan	50	72	98	90	92	117	119	120	171	173	175	208	210	212	355	358	362	357
		Electric Fan	54	79	96	111	113	131	132	133	194	196	198	264	266	269	396	400	404	398
		DuraPlate	73	96	122	134	137	179	181	183	318	321	325	400	404	408	629	635	642	636
125	None	31	41	49	50	51	58	59	60	79	79	80	106	107	108				147	
	Shaft Fan	51	73	95	87	89	112	113	114	162	164	165	216	218	221				358	
	Electric Fan	55	80	94	108	110	124	125	127	184	186	188	273	276	279				399	
	DuraPlate	74	96	118	131	133	171	173	174	309	312	315	412	416	420				635	

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† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
1170	8.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	378	382	386			*	*	*				
		Electric Fan	472	476	481			*	*	*				
		DuraPlate	3900	3939	3978			3701	3738	3775				
	9.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	435	439	444	320	327	*	*	*	*	*	*	*
		Electric Fan	529	534	539	426	434	*	*	*	*	*	*	*
		DuraPlate	3878	3917	3956	3740	3815	3863	3902	3940	3146	3177	3209	
	10.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	441	445	450	417	425	*	*	*	*	*	*	*
		Electric Fan	532	537	542	527	537	*	*	*	*	*	*	*
		DuraPlate	3803	3841	3879	3776	3851	3882	3921	3960	3457	3492	3526	
	11.2	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	504	509	514	442	451	*	*	*	*	*	*	*
		Electric Fan	592	598	603	549	560	*	*	*	*	*	*	*
		DuraPlate	3702	3739	3776	3716	3791	4193	4235	4277	3541	3576	3612	
	12.5	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	619	625	631	559	570	584	590	596	*	*	*	*
		Electric Fan	698	705	712	664	677	510	515	521	*	*	*	*
		DuraPlate	2889	2917	2946	3654	3727	3621	3657	3693	3959	3999	4038	
14.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	626	633	639	722	737	616	622	628	467	471	476		
	Electric Fan	705	712	719	820	836	544	549	555	396	400	404		
	DuraPlate	2844	2873	2901	2844	2901	3551	3587	3622	3486	3521	3556		
16.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	608	614	620	749	764	617	623	629	528	533	539		
	Electric Fan	684	691	698	845	862	547	552	557	459	464	468		
	DuraPlate	2775	2802	2830	2829	2885	3488	3523	3558	3448	3482	3517		
18.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	608	614	620	730	745	753	761	768	542	548	553		
	Electric Fan	680	686	693	824	841	684	691	698	475	479	484		
	DuraPlate	2647	2673	2699	2763	2818	3438	3473	3507	3398	3432	3466		
20.0	None	*	49	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	608	614	620	728	743	738	745	752	705	712	719		
	Electric Fan	678	684	691	815	832	672	678	685	637	644	650		
	DuraPlate	2597	2623	2649	2619	2672	3334	3367	3400	3384	3418	3451		
22.4	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	587	593	598	741	755	718	725	732	700	707	714		
	Electric Fan	655	661	668	827	844	653	660	667	634	641	647		
	DuraPlate	2531	2557	2582	2594	2646	3259	3291	3324	3287	3320	3353		
25.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	636	642	649	717	731	780	787	795	685	692	699		
	Electric Fan	696	703	710	801	817	718	725	732	622	628	634		
	DuraPlate	1902	1921	1940	2530	2581	3147	3179	3210	3217	3249	3281		
28.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	632	638	644	770	785	1023	1033	1044	755	762	770		
	Electric Fan	690	697	704	843	860	966	975	985	694	701	708		
	DuraPlate	1871	1890	1909	1883	1921	2499	2524	2549	3116	3147	3178		
31.5	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	610	616	622	776	791	992	1002	1011	1001	1011	1021		
	Electric Fan	668	674	681	849	866	936	945	954	944	953	963		
	DuraPlate	1822	1840	1859	1871	1908	2440	2464	2488	2473	2498	2522		
35.5	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	570	575	581	750	765	994	1004	1014	972	981	991		
	Electric Fan	622	629	635	821	838	940	950	959	916	925	934		
	DuraPlate	1686	1702	1719	1822	1859	2369	2393	2417	2415	2439	2464		

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
1170	40.0	None	121	122	124	*	*	*	*	*	*	*	*
		Shaft Fan	565	570	576	691	705	952	962	971	978	988	998
		Electric Fan	616	622	629	756	771	900	909	918	925	934	943
		DuraPlate	1657	1673	1690	1670	1704	2284	2307	2330	2351	2374	2398
	45.0	None	115	116	118	148	151	*	*	*	*	*	*
		Shaft Fan	545	550	556	695	709	920	929	938	936	945	955
		Electric Fan	595	601	607	759	774	869	878	887	885	894	902
		DuraPlate	1613	1629	1645	1657	1690	2226	2248	2271	2264	2287	2310
	50.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	418	422	427	671	685	953	962	972	905	914	923
		Electric Fan	469	474	478	734	749	901	910	919	855	864	872
		DuraPlate	1498	1513	1528	1614	1647	2334	2357	2381	2207	2229	2251
	56.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	415	419	423	506	516	937	946	956	937	947	956
		Electric Fan	464	469	474	568	579	886	895	903	885	894	903
		DuraPlate	1467	1481	1496	1482	1512	2298	2321	2344	2313	2336	2359
	63.0	None	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	398	402	406	510	521	902	911	920	921	931	940
		Electric Fan	446	451	455	572	583	852	861	869	871	879	888
		DuraPlate	1423	1437	1451	1467	1497	2231	2253	2276	2278	2300	2323
	71.0	None	127	128	130	*	*	169	171	173	*	*	*
		Shaft Fan	434	439	443	492	501	803	811	819	899	908	916
		Electric Fan	470	474	479	551	562	766	773	781	849	858	866
		DuraPlate	1267	1280	1292	1425	1454	1870	1889	1907	2222	2245	2267
	80.0	None	122	123	124	156	159	162	164	165	165	167	169
		Shaft Fan	421	425	429	535	546	778	786	793	792	800	808
		Electric Fan	455	460	465	579	591	741	749	756	755	762	770
		DuraPlate	1237	1250	1262	1267	1293	1826	1844	1863	1856	1874	1893
90.0	None	120	121	122	150	153	169	171	172	158	160	161	
	Shaft Fan	420	425	429	519	529	807	815	823	767	775	783	
	Electric Fan	456	461	465	562	573	768	776	784	731	738	746	
	DuraPlate	1275	1287	1300	1270	1295	1941	1961	1980	1812	1831	1849	
100	None	120	121	122	144	147	166	167	169	165	166	168	
	Shaft Fan	417	421	425	510	521	793	801	808	795	803	811	
	Electric Fan	452	456	461	554	565	755	762	770	757	764	772	
	DuraPlate	1251	1264	1276	1263	1288	1913	1932	1951	1925	1944	1964	
112	None	114	115	117	147	150	158	159	161	161	163	165	
	Shaft Fan	402	406	410	513	524	765	772	780	781	789	796	
	Electric Fan	436	441	445	557	568	728	735	742	743	750	758	
	DuraPlate	1218	1230	1243	1252	1277	1860	1879	1897	1896	1915	1934	
125	None				141	143				154	156	157	
	Shaft Fan				496	506				754	761	769	
	Electric Fan				538	549				717	724	731	
	DuraPlate				1219	1244				1845	1863	1882	

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings [★] – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	12.5	None															236	238	240	
		Shaft Fan															553	559	564	
		Electric Fan															717	725	732	
		DuraPlate															1272	1285	1298	
	14.0	None	53	78	92	96	98	111	112	113	146	148	149	173	174	176	225	227	230	212
		Shaft Fan	76	122	158	150	153	190	192	193	275	278	281	327	330	333	529	534	540	510
		Electric Fan	92	150	176	210	214	240	243	245	358	362	366	477	482	487	687	694	701	666
		DuraPlate	134	184	259	291	296	434	439	443	694	701	708	783	791	799	1222	1234	1246	1200
	16.0	None	51	75	92	96	98	110	111	112	144	145	147	171	173	174	231	233	236	208
		Shaft Fan	74	117	158	150	153	188	189	191	270	272	275	323	326	330	537	543	548	499
		Electric Fan	90	145	176	210	214	237	240	242	351	354	358	472	477	481	695	702	709	651
		DuraPlate	131	178	258	290	295	429	433	438	677	684	690	775	782	790	1228	1241	1253	1173
	18.0	None	52	76	90	94	96	105	106	107	141	142	143	180	181	183	224	226	229	212
		Shaft Fan	75	118	154	146	149	180	182	183	263	266	268	336	339	343	514	520	525	503
		Electric Fan	91	145	172	204	208	228	230	232	342	345	349	488	492	497	665	671	678	655
		DuraPlate	132	178	252	282	288	411	415	420	659	666	672	794	801	809	1175	1186	1198	1173
	20.0	None	47	68	78	87	89	101	102	103	128	130	131	157	158	160	212	214	217	204
		Shaft Fan	69	107	137	136	139	172	174	176	241	244	246	293	296	299	489	494	499	478
		Electric Fan	83	132	153	191	195	218	221	223	315	318	321	428	432	436	634	640	646	621
		DuraPlate	122	162	227	265	271	396	400	404	610	616	622	702	709	716	1124	1135	1147	1113
	22.4	None	46	65	78	87	89	100	101	102	125	127	128	155	156	158	217	219	221	199
		Shaft Fan	66	103	137	136	139	170	172	174	236	238	240	289	292	295	496	501	506	465
Electric Fan		81	127	153	191	195	216	218	220	307	310	313	422	426	431	640	647	653	605	
DuraPlate		118	156	227	264	269	390	394	398	595	601	607	694	700	707	1129	1141	1152	1084	
25.0	None	48	66	76	85	87	95	96	97	122	124	125	162	163	165	218	220	223	201	
	Shaft Fan	69	103	133	132	135	163	164	166	230	232	234	300	303	306	471	475	480	467	
	Electric Fan	84	128	149	186	189	206	208	210	299	302	305	436	440	444	601	607	613	607	
	DuraPlate	119	156	221	257	262	373	377	381	579	585	590	710	717	725	1101	1112	1123	1083	
28.0	None	41	60	67	74	75	88	89	90	106	107	108	143	144	146	206	208	211	216	
	Shaft Fan	59	94	116	115	118	150	152	153	200	202	204	259	262	265	448	452	457	469	
	Electric Fan	71	116	130	162	165	190	192	194	261	264	267	373	377	381	572	578	584	599	
	DuraPlate	101	138	190	224	229	287	290	293	547	553	558	519	524	529	1054	1065	1075	1103	
31.5	None	40	58	68	74	75	87	88	89	103	104	105	141	142	144	210	212	214	210	
	Shaft Fan	57	90	116	115	117	148	150	151	195	197	199	256	258	261	453	457	462	455	
	Electric Fan	69	111	130	162	165	188	190	192	255	258	260	368	372	376	578	584	589	583	
	DuraPlate	98	133	190	223	228	284	286	289	534	539	544	512	517	522	1059	1069	1080	1074	
35.5	None	40	58	66	72	73	83	84	84	101	102	103	147	148	150	172	174	176	211	
	Shaft Fan	58	91	113	112	114	142	143	145	190	192	194	265	268	270	399	403	407	457	
	Electric Fan	70	112	126	157	161	179	181	183	249	251	254	380	384	387	517	523	528	583	
	DuraPlate	99	133	185	218	222	271	274	277	519	525	530	526	531	536	974	983	993	1071	
40.0	None	37	54	62	67	69	78	79	79	100	101	102	112	113	114	162	164	165	170	
	Shaft Fan	54	85	106	105	107	133	135	136	187	189	191	215	217	219	378	382	386	396	
	Electric Fan	66	105	119	147	150	169	171	172	244	247	249	317	321	324	491	496	501	515	
	DuraPlate	93	125	175	204	208	256	259	261	508	513	518	449	453	458	930	939	948	974	
45.0	None	36	52	62	67	69	77	77	78	97	98	99	110	111	112	165	167	169	164	
	Shaft Fan	52	81	107	105	107	132	133	134	182	184	186	212	214	216	383	387	391	384	
	Electric Fan	63	100	119	147	150	167	169	170	238	240	243	313	316	319	497	502	507	499	
	DuraPlate	90	120	174	203	207	253	255	258	494	499	504	443	447	452	934	944	953	947	
50.0	None	37	52	60	65	67	73	74	74	94	95	96	115	116	117	165	166	168	166	
	Shaft Fan	53	82	104	102	104	125	127	128	177	179	181	220	223	225	376	380	383	386	
	Electric Fan	64	101	116	143	146	159	161	162	231	233	236	324	327	330	485	490	495	500	
	DuraPlate	91	120	170	198	202	241	244	246	479	484	489	456	460	465	906	915	924	945	
56.0	None	36	52	60	63	64	74	74	75	95	96	97	112	113	114	154	156	157	162	
	Shaft Fan	52	81	102	98	100	126	127	128	177	179	181	212	214	216	355	359	362	373	
	Electric Fan	63	101	114	138	140	159	161	162	229	231	234	308	311	314	459	464	469	482	
	DuraPlate	89	122	167	189	193	240	242	244	465	470	475	428	433	437	863	872	880	905	

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
970	63.0	None	35	49	59	63	64	73	73	74	93	94	94	110	111	112	157	159	160	156
		Shaft Fan	50	78	101	98	100	124	125	126	172	174	176	209	211	213	360	363	367	361
		Electric Fan	61	97	112	136	139	157	158	160	223	225	228	303	306	309	465	469	474	467
		DuraPlate	86	117	162	186	190	236	239	241	453	458	462	423	427	431	868	877	885	879
	71.0	None	35	50	57	61	63	69	70	70	90	91	92	116	117	118	152	153	155	158
		Shaft Fan	51	79	98	95	97	118	119	120	167	169	171	217	219	221	319	322	325	362
		Electric Fan	62	98	109	132	135	149	150	152	217	219	221	314	317	320	406	410	414	468
		DuraPlate	87	117	158	181	185	225	227	229	440	444	449	435	440	444	549	554	560	877
	80.0	None	31	39	50	52	53	62	63	63	82	83	84	100	101	102	154	156	157	154
		Shaft Fan	44	62	86	80	82	104	105	106	148	150	151	181	183	184	323	326	330	325
		Electric Fan	53	76	96	112	115	132	133	134	191	193	195	260	263	265	410	414	419	413
		DuraPlate	65	80	106	117	120	155	157	159	273	275	278	336	340	343	553	559	565	559
	90.0	None	31	40	49	51	52	59	60	60	80	80	81	105	106	107	151	152	154	155
		Shaft Fan	45	62	84	78	80	99	100	101	144	146	147	188	190	192	315	318	321	326
		Electric Fan	54	77	94	109	112	126	127	128	186	188	190	269	272	275	399	403	407	414
		DuraPlate	66	81	103	114	117	148	150	151	265	267	270	347	350	354	537	542	548	559
	100	None	30	40	48	49	50	59	60	61	80	80	81	101	102	103	142	143	145	149
		Shaft Fan	44	62	82	75	77	100	101	102	143	145	146	180	182	183	297	300	303	312
		Electric Fan	53	78	92	105	107	125	127	128	185	187	189	257	260	263	378	382	385	397
		DuraPlate	65	82	101	110	112	148	149	151	263	266	268	330	334	337	510	515	520	535
	112	None	29	38	48	49	50	58	59	60	77	78	79	99	100	101	144	146	147	144
		Shaft Fan	42	60	81	75	77	98	99	100	140	141	142	177	179	180	301	304	307	302
		Electric Fan	51	75	91	105	107	124	125	126	180	182	184	253	256	258	382	386	390	384
		DuraPlate	62	79	100	110	112	146	147	149	256	259	261	326	329	332	515	520	525	519
	125	None	30	39	46	47	48	55	56	57	75	76	77	104	105	106				145
		Shaft Fan	43	61	79	73	75	93	94	95	136	137	138	184	186	188				304
		Electric Fan	52	75	88	102	104	118	119	120	175	177	178	263	265	268				385
		DuraPlate	63	79	97	107	109	139	140	141	249	251	254	336	340	343				520

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
970	8.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	561	566	572			*	*	*				
		Electric Fan	798	806	814			*	*	*				
		DuraPlate	3392	3426	3460			3838	3877	3915				
	9.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	590	596	602	595	607	*	*	*	*	*	*	*
		Electric Fan	824	832	840	881	899	*	*	*	*	*	*	*
		DuraPlate	3355	3389	3422	3290	3356	3863	3902	3940	3531	3566	3601	
	10.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	580	586	591	655	669	*	*	*	*	*	*	*
		Electric Fan	807	815	823	941	960	482	487	492	*	*	*	*
		DuraPlate	3278	3311	3344	3297	3363	3828	3867	3905	3630	3667	3703	
	11.2	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	599	605	611	654	667	490	495	500	*	*	*	*
		Electric Fan	816	824	832	932	950	653	660	666	*	*	*	*
		DuraPlate	3164	3195	3227	3229	3294	3972	4012	4051	3630	3666	3703	
	12.5	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	630	636	643	701	715	883	891	900	*	*	*	*
		Electric Fan	824	832	840	966	985	1041	1051	1061	532	537	543	
		DuraPlate	2452	2476	2501	3135	3198	3268	3301	3333	3830	3869	3907	
	14.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	632	638	644	749	764	876	885	894	807	815	823	
		Electric Fan	822	830	838	987	1006	1029	1039	1049	962	972	982	
		DuraPlate	2412	2436	2461	2419	2467	3182	3214	3246	3186	3218	3250	
16.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	611	617	623	766	781	858	867	875	818	826	834		
	Electric Fan	796	804	812	1001	1021	1006	1016	1026	968	978	988		
	DuraPlate	2349	2372	2396	2405	2453	3113	3145	3176	3115	3147	3178		
18.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	593	598	604	743	758	910	920	929	808	816	824		
	Electric Fan	766	774	781	971	991	1051	1062	1072	955	964	974		
	DuraPlate	2226	2248	2271	2343	2390	3015	3045	3075	3055	3086	3116		
20.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	590	596	602	713	728	880	888	897	877	886	895		
	Electric Fan	760	767	775	926	944	1015	1025	1036	1017	1027	1037		
	DuraPlate	2186	2207	2229	2204	2248	2914	2943	2972	2977	3007	3036		
22.4	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	569	574	580	722	737	852	860	869	851	860	869		
	Electric Fan	734	741	749	932	951	984	994	1003	986	996	1005		
	DuraPlate	2127	2148	2169	2185	2228	2843	2872	2900	2879	2908	2937		
25.0	None	174	175	177	*	*	*	*	*	*	*	*	*	
	Shaft Fan	569	575	580	697	711	867	876	884	827	835	844		
	Electric Fan	714	722	729	902	920	992	1002	1012	958	967	977		
	DuraPlate	1583	1599	1615	2127	2169	2722	2749	2777	2811	2839	2868		
28.0	None	175	176	178	208	212	*	*	*	*	*	*	*	
	Shaft Fan	565	570	576	689	703	963	972	982	847	855	864		
	Electric Fan	708	715	722	868	885	1077	1088	1098	971	981	990		
	DuraPlate	1559	1575	1590	1567	1598	2118	2140	2161	2696	2723	2750		
31.5	None	167	168	170	213	218	*	*	*	*	*	*	*	
	Shaft Fan	545	550	556	695	708	932	941	950	945	954	963		
	Electric Fan	684	691	698	871	889	1043	1053	1064	1058	1069	1079		
	DuraPlate	1516	1531	1546	1559	1590	2064	2085	2106	2096	2117	2138		
35.5	None	157	159	160	204	208	215	217	219	*	*	*	*	
	Shaft Fan	505	510	515	671	684	918	927	937	915	924	933		
	Electric Fan	633	639	646	843	860	1025	1035	1045	1026	1036	1046		
	DuraPlate	1398	1412	1426	1516	1546	1995	2015	2035	2044	2064	2085		

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
970	40.0	None	157	159	161	189	192	204	206	208	209	211	213
		Shaft Fan	501	506	511	612	624	878	887	896	904	914	923
		Electric Fan	626	632	639	769	785	981	991	1001	1010	1021	1031
		DuraPlate	1376	1389	1403	1384	1412	1921	1940	1959	1979	1998	2018
	45.0	None	150	152	153	193	197	195	197	199	198	200	202
		Shaft Fan	483	487	492	616	629	848	856	865	864	873	881
		Electric Fan	605	611	617	772	787	948	958	967	966	976	986
		DuraPlate	1337	1351	1364	1376	1403	1869	1888	1906	1903	1922	1941
	50.0	None	90	91	92	184	188	205	207	209	189	191	193
		Shaft Fan	409	413	417	595	607	873	882	891	835	843	851
		Electric Fan	533	538	544	746	761	978	987	997	934	944	953
		DuraPlate	1274	1287	1300	1338	1365	1953	1973	1992	1852	1870	1889
	56.0	None	91	92	93	108	110	*	*	*	*	*	*
		Shaft Fan	405	409	413	494	504	649	656	662	859	868	876
		Electric Fan	527	532	537	646	659	749	757	764	962	972	982
		DuraPlate	1249	1262	1274	1259	1285	1705	1722	1739	1934	1953	1972
	63.0	None	86	87	88	111	114	*	*	*	*	*	*
		Shaft Fan	389	393	396	499	509	623	629	635	637	643	649
		Electric Fan	507	512	517	649	662	720	727	734	736	743	750
		DuraPlate	1210	1222	1234	1249	1274	1650	1667	1683	1686	1703	1720
	71.0	None	137	139	140	106	109	209	211	213	*	*	*
		Shaft Fan	374	378	382	480	489	702	709	716	611	618	624
		Electric Fan	461	466	470	626	638	777	784	792	707	714	721
		DuraPlate	1042	1052	1063	1212	1236	1539	1554	1570	1632	1649	1665
	80.0	None	131	133	134	169	172	200	202	204	204	206	208
		Shaft Fan	362	366	369	461	470	679	686	693	692	699	706
		Electric Fan	447	451	456	568	580	752	760	767	766	774	781
		DuraPlate	1016	1026	1036	1042	1063	1501	1516	1531	1526	1541	1556
90.0	None	129	130	131	162	165	206	208	210	196	198	200	
	Shaft Fan	360	364	368	446	455	703	710	717	670	677	683	
	Electric Fan	448	452	457	551	562	780	788	795	742	749	757	
	DuraPlate	1042	1052	1063	1035	1055	1590	1605	1621	1488	1503	1518	
100	None	129	130	131	155	158	201	203	205	201	203	205	
	Shaft Fan	357	361	365	437	446	690	697	704	692	699	706	
	Electric Fan	443	448	452	544	555	766	773	781	768	776	784	
	DuraPlate	1024	1034	1045	1031	1051	1565	1580	1596	1574	1590	1606	
112	None	123	124	125	158	161	192	194	196	196	198	200	
	Shaft Fan	345	348	352	440	449	665	672	678	679	686	693	
	Electric Fan	428	432	437	546	557	738	746	753	754	762	769	
	DuraPlate	995	1005	1015	1024	1045	1519	1534	1550	1549	1565	1580	
125	None				151	154				188	190	192	
	Shaft Fan				425	433				655	661	668	
	Electric Fan				528	539				728	735	742	
	DuraPlate				996	1016				1505	1520	1535	

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																		
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187	
870	12.5	None															251	254	257		
		Shaft Fan																522	527	532	
		Electric Fan																724	731	739	
		DuraPlate																1144	1156	1167	
	14.0	None	52	76	87	94	96	110	111	112	148	149	150	178	180	182	239	242	244	227	
		Shaft Fan	70	111	140	137	140	174	176	177	254	256	259	306	309	312	498	503	508	481	
		Electric Fan	90	147	168	205	209	236	238	241	354	358	361	476	480	485	692	699	706	673	
		DuraPlate	124	171	227	258	263	385	389	392	614	620	626	700	707	714	1097	1108	1119	1077	
	16.0	None	50	73	87	94	96	109	110	111	145	146	147	176	178	180	245	247	250	222	
		Shaft Fan	68	107	140	137	139	172	174	175	248	251	253	302	305	308	505	510	515	469	
		Electric Fan	88	141	168	204	208	233	235	238	346	349	353	470	475	479	700	707	714	657	
		DuraPlate	120	164	226	257	262	380	384	388	599	605	611	692	698	705	1103	1114	1125	1051	
	18.0	None	51	74	85	92	94	104	105	106	141	143	144	185	186	188	234	236	239	226	
		Shaft Fan	69	108	136	133	136	165	166	168	242	245	247	314	317	320	480	485	490	473	
		Electric Fan	89	142	164	199	203	223	225	228	337	341	344	485	490	495	665	672	678	660	
		DuraPlate	121	165	221	250	255	364	368	371	583	589	595	709	716	724	1050	1061	1071	1051	
	20.0	None	46	67	77	81	83	91	91	92	128	129	131	159	161	162	221	224	226	214	
		Shaft Fan	62	97	124	119	122	148	149	150	221	223	225	272	274	277	456	461	465	445	
		Electric Fan	81	129	150	181	184	203	205	207	309	313	316	423	427	431	633	640	646	621	
		DuraPlate	112	150	203	229	234	338	341	345	538	543	548	623	629	635	1004	1014	1024	992	
22.4	None	45	64	77	81	83	89	90	91	125	126	128	157	158	160	226	228	230	208		
	Shaft Fan	60	93	124	119	122	146	147	149	216	218	220	268	271	273	462	467	471	433		
	Electric Fan	79	124	150	180	184	200	202	204	302	305	308	417	421	426	640	646	652	605		
	DuraPlate	108	144	202	228	233	333	337	340	524	529	535	615	622	628	1009	1019	1029	966		
25.0	None	47	65	75	79	81	85	86	87	122	123	124	164	165	167	219	222	224	210		
	Shaft Fan	63	94	121	116	118	139	140	142	210	212	214	278	281	284	432	437	441	435		
	Electric Fan	81	124	146	176	179	191	193	195	294	297	300	430	435	439	592	598	604	606		
	DuraPlate	109	144	197	222	227	318	322	325	510	515	520	631	638	644	980	989	999	965		
28.0	None	40	59	66	72	74	87	88	89	106	107	108	125	127	128	207	209	211	217		
	Shaft Fan	54	85	105	105	107	138	139	140	184	186	188	219	221	224	411	415	419	430		
	Electric Fan	70	113	126	158	161	187	189	190	258	260	263	346	349	352	564	569	575	591		
	DuraPlate	92	129	169	199	203	256	258	261	484	488	493	440	444	449	936	946	955	980		
31.5	None	39	56	66	72	74	86	87	88	104	105	106	124	125	126	211	213	215	211		
	Shaft Fan	52	82	105	105	107	136	137	139	180	181	183	216	218	220	416	420	424	418		
	Electric Fan	67	108	126	157	161	184	186	188	252	254	257	341	344	348	569	575	581	574		
	DuraPlate	90	123	169	198	202	252	255	257	471	476	481	434	438	443	941	950	960	954		
35.5	None	39	57	64	71	72	82	83	84	101	102	103	129	130	132	181	182	184	212		
	Shaft Fan	53	82	103	102	104	130	131	132	175	177	178	224	227	229	373	377	380	419		
	Electric Fan	68	109	123	153	156	176	178	179	245	248	250	352	356	359	518	523	529	575		
	DuraPlate	91	124	165	193	197	241	244	246	459	463	468	447	451	456	871	880	889	952		
40.0	None	36	53	60	66	67	77	78	78	100	101	102	116	117	118	170	172	173	178		
	Shaft Fan	49	77	96	95	97	122	123	124	172	173	175	202	204	206	353	356	360	370		
	Electric Fan	64	102	116	143	146	165	167	169	240	243	245	317	320	323	492	497	502	516		
	DuraPlate	85	116	155	180	184	227	230	232	448	453	457	403	407	411	831	839	847	871		
45.0	None	35	50	60	66	67	76	76	77	97	98	99	114	115	116	173	175	177	172		
	Shaft Fan	47	73	96	95	97	120	121	123	167	169	171	199	201	203	358	361	365	359		
	Electric Fan	62	97	116	143	146	163	165	166	234	236	239	312	316	319	497	502	507	500		
	DuraPlate	82	111	155	180	183	224	227	229	436	440	445	397	401	405	836	844	852	846		
50.0	None	36	51	59	64	65	72	73	74	94	95	96	119	121	122	171	173	174	174		
	Shaft Fan	48	74	94	93	95	114	116	117	162	164	166	207	209	211	350	353	357	360		
	Electric Fan	62	98	113	139	142	156	157	159	227	229	232	323	326	330	485	489	494	501		
	DuraPlate	83	111	151	175	178	214	216	218	423	427	431	409	414	418	810	818	826	845		
56.0	None	35	50	58	62	63	73	73	74	95	96	97	116	117	118	160	162	164	169		
	Shaft Fan	47	74	93	89	91	115	116	117	162	164	165	198	200	202	330	333	337	347		
	Electric Fan	61	98	111	134	136	155	157	158	225	227	229	306	309	312	458	463	468	481		
	DuraPlate	82	113	148	168	171	213	215	217	411	415	419	385	388	392	770	778	786	809		

★ Basic thermal ratings listed are based on an ambient temperature of 68°F(20°C) at sea level. Application-adjusted thermal ratings must be calculated using the application-adjusted thermal factors on Page 6 before comparing to the required load. For cooling beyond the range of values listed, contact the Factory.

† Actual sump temperature will vary based upon exact ambient conditions and load profile.

* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE																	
			107	117	127	133	137	143	145	147	153	155	157	163	165	167	173	175	177	187
870	63.0	None	34	48	57	62	63	72	72	73	92	93	94	113	115	116	163	165	167	163
		Shaft Fan	45	71	91	89	91	113	114	115	158	159	161	195	197	199	335	338	341	335
		Electric Fan	59	95	109	132	135	153	155	156	219	221	223	301	304	307	464	468	473	466
		DuraPlate	79	108	144	165	168	210	212	214	400	404	408	379	383	387	776	783	791	785
	71.0	None	34	49	56	60	61	68	69	69	90	90	91	119	120	122	149	151	152	164
		Shaft Fan	46	71	89	86	88	107	108	109	153	155	156	203	205	207	290	293	295	337
		Electric Fan	60	95	106	128	131	145	147	148	212	214	217	312	315	318	396	400	404	467
		DuraPlate	80	109	140	160	163	199	201	203	389	393	397	391	395	399	488	493	498	783
	80.0	None	30	38	49	50	51	60	61	61	80	80	81	98	99	100	152	153	155	152
		Shaft Fan	40	56	77	73	74	94	95	96	134	135	136	164	166	168	294	297	299	295
		Electric Fan	52	74	93	109	111	127	129	130	185	187	189	253	256	258	401	405	409	403
		DuraPlate	60	74	94	104	106	138	139	141	241	243	245	297	300	303	493	497	502	497
	90.0	None	30	39	47	49	50	57	58	58	77	78	79	103	104	105	148	150	151	153
		Shaft Fan	40	56	75	71	72	90	91	91	130	131	133	171	173	174	286	289	291	296
		Electric Fan	52	74	91	106	108	121	123	124	180	182	184	262	265	267	389	393	397	404
		DuraPlate	61	75	92	101	103	132	133	134	234	236	238	307	310	313	478	483	487	497
	100	None	29	38	47	47	48	57	58	59	77	78	79	99	100	101	139	140	142	147
		Shaft Fan	39	56	74	68	69	90	91	92	129	131	132	164	165	167	270	272	275	284
		Electric Fan	51	75	89	102	104	121	122	124	179	181	183	250	253	255	368	372	376	387
		DuraPlate	60	75	90	97	99	131	132	134	232	235	237	293	296	298	453	458	462	476
	112	None	28	37	46	47	48	57	57	58	75	76	77	97	98	99	142	143	145	141
		Shaft Fan	38	54	73	68	69	88	89	90	126	127	129	161	162	164	274	276	279	274
		Electric Fan	49	72	88	101	103	120	121	122	174	176	178	246	249	251	373	376	380	375
		DuraPlate	57	72	89	97	99	129	131	132	226	228	231	288	291	294	458	462	467	461
125	None	29	37	45	46	47	54	54	55	73	74	74	102	103	104				142	
	Shaft Fan	38	55	71	66	67	84	85	86	122	124	125	168	169	171				276	
	Electric Fan	50	73	85	99	101	114	115	116	169	171	173	256	258	261				376	
	DuraPlate	58	73	87	94	96	123	124	125	220	222	224	298	301	304				462	

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE											
			193	195	197	203	207	213	215	217	223	225	227	
870	8.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	598	604	610			474	478	483				
		Electric Fan	902	911	920			784	792	800				
		DuraPlate	3089	3120	3151			3712	3749	3787				
	9.00	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	617	624	630	663	677	562	568	574	*	*	*	
		Electric Fan	915	924	934	1031	1051	866	874	883	571	576	582	
		DuraPlate	3051	3081	3112	3008	3069	3695	3731	3768	3490	3525	3560	
	10.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	603	609	615	708	722	584	590	596	*	*	*	
		Electric Fan	892	901	910	1073	1095	879	888	897	702	709	716	
		DuraPlate	2976	3006	3035	3007	3068	3644	3681	3717	3522	3557	3593	
	11.2	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	607	613	619	698	712	696	703	710	*	*	*	
		Electric Fan	882	891	900	1053	1074	989	999	1009	741	748	756	
		DuraPlate	2862	2891	2919	2939	2998	3730	3767	3804	3496	3531	3566	
	12.5	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	611	617	623	720	734	947	956	966	604	610	616	
		Electric Fan	856	865	874	1057	1078	1218	1230	1242	890	899	908	
		DuraPlate	2213	2235	2257	2840	2897	3020	3051	3081	3621	3657	3694	
	14.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	610	617	623	730	745	928	937	947	889	898	907	
		Electric Fan	851	860	868	1031	1052	1189	1201	1213	1157	1169	1180	
		DuraPlate	2178	2199	2221	2185	2228	2932	2961	2990	2957	2986	3016	
	16.0	None	*	*	*	*	*	*	*	*	*	*	*	*
		Shaft Fan	589	595	601	744	758	904	913	922	882	891	900	
		Electric Fan	824	832	840	1042	1062	1158	1170	1181	1141	1152	1164	
		DuraPlate	2118	2139	2160	2172	2216	2864	2893	2921	2879	2907	2936	
18.0	None	*	*	*	*	*	*	*	*	*	*	*	*	
	Shaft Fan	566	571	577	719	734	927	936	945	865	873	882		
	Electric Fan	786	793	801	1009	1030	1167	1179	1190	1116	1127	1139		
	DuraPlate	2002	2022	2042	2115	2157	2755	2783	2810	2817	2845	2873		
20.0	None	174	175	177	204	208	*	*	*	*	*	*	*	
	Shaft Fan	563	568	574	682	696	892	901	910	900	909	917		
	Electric Fan	778	786	794	952	971	1123	1135	1146	1138	1149	1161		
	DuraPlate	1966	1986	2006	1981	2021	2660	2686	2713	2724	2751	2778		
22.4	None	166	168	169	211	215	*	*	*	*	*	*	*	
	Shaft Fan	542	547	553	690	704	863	871	880	868	877	885		
	Electric Fan	752	759	767	957	976	1088	1099	1109	1097	1108	1119		
	DuraPlate	1912	1931	1950	1966	2005	2592	2618	2644	2629	2656	2682		
25.0	None	189	191	193	202	206	*	*	*	*	*	*	*	
	Shaft Fan	527	532	538	666	679	862	871	880	841	850	858		
	Electric Fan	712	719	726	925	943	1075	1086	1097	1064	1075	1086		
	DuraPlate	1419	1433	1447	1912	1950	2475	2500	2524	2564	2590	2615		
28.0	None	190	192	194	227	231	259	261	264	*	*	*	*	
	Shaft Fan	523	529	534	639	651	909	918	927	844	853	861		
	Electric Fan	705	712	719	865	882	1103	1114	1125	1055	1066	1076		
	DuraPlate	1398	1412	1426	1403	1431	1912	1931	1950	2451	2476	2500		
31.5	None	181	183	185	232	237	248	250	253	250	253	255	255	
	Shaft Fan	505	510	515	644	657	878	887	896	892	901	910		
	Electric Fan	681	688	695	868	886	1068	1079	1089	1085	1096	1107		
	DuraPlate	1358	1371	1385	1397	1425	1861	1880	1899	1892	1911	1930		
35.5	None	121	122	123	222	227	253	256	258	241	243	245	245	
	Shaft Fan	412	416	420	621	634	861	869	878	864	872	881		
	Electric Fan	574	580	586	840	857	1042	1052	1063	1052	1062	1073		
	DuraPlate	1187	1198	1210	1358	1385	1796	1814	1832	1842	1861	1879		

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* Consult Factory.

Type VR3 Right Angle Shaft

Basic Thermal Ratings ★ – Hp/Triple Reduction Maximum 180°F Sump Temperature†

HSS rpm	Nom. Ratio	Auxiliary Cooling	DRIVE SIZE										
			193	195	197	203	207	213	215	217	223	225	227
870	40.0	None	121	123	124	145	148	240	243	245	247	249	252
		Shaft Fan	409	413	417	499	508	823	831	839	848	857	865
		Electric Fan	569	574	580	698	712	997	1007	1017	1028	1038	1049
		DuraPlate	1169	1181	1192	1173	1196	1727	1745	1762	1780	1798	1816
	45.0	None	116	117	118	149	152	229	232	234	234	236	239
		Shaft Fan	393	397	401	503	513	794	802	810	810	818	826
		Electric Fan	549	555	560	701	715	964	974	983	983	993	1002
		DuraPlate	1135	1146	1157	1169	1192	1679	1696	1712	1710	1727	1744
	50.0	None	115	116	118	142	145	121	123	124	224	226	228
		Shaft Fan	391	394	398	485	495	664	671	677	781	789	797
		Electric Fan	548	554	559	677	691	838	847	855	950	960	969
		DuraPlate	1151	1162	1174	1135	1158	1594	1610	1625	1663	1679	1696
56.0	None	115	117	118	138	141	120	121	122	*	*	*	
	Shaft Fan	387	391	395	472	482	652	658	665	652	658	665	
	Electric Fan	541	547	552	665	679	823	832	840	824	833	841	
	DuraPlate	1129	1140	1152	1137	1159	1567	1583	1598	1575	1591	1607	
63.0	None	110	111	112	142	145	114	115	116	*	*	*	
	Shaft Fan	371	375	379	477	486	625	632	638	640	646	652	
	Electric Fan	521	526	532	667	681	792	799	807	809	818	826	
	DuraPlate	1093	1103	1114	1129	1152	1516	1531	1546	1549	1564	1580	
71.0	None	139	140	142	135	138	220	222	225	*	*	*	
	Shaft Fan	342	345	348	458	467	644	650	657	614	620	627	
	Electric Fan	452	456	461	644	657	770	777	785	779	786	794	
	DuraPlate	928	938	947	1094	1116	1370	1383	1397	1498	1513	1528	
80.0	None	133	135	136	171	174	211	213	215	215	218	220	
	Shaft Fan	330	333	337	421	429	622	628	635	634	640	647	
	Electric Fan	438	442	447	557	568	745	753	760	759	767	774	
	DuraPlate	904	913	922	928	947	1334	1347	1361	1357	1370	1384	
90.0	None	130	131	133	164	167	216	218	220	207	209	211	
	Shaft Fan	328	331	335	407	415	643	649	656	613	619	626	
	Electric Fan	439	443	448	540	551	773	781	789	736	743	750	
	DuraPlate	924	934	943	918	936	1410	1424	1439	1322	1335	1348	
100	None	130	131	133	157	160	211	213	216	211	213	215	
	Shaft Fan	326	329	332	398	406	631	637	643	633	639	645	
	Electric Fan	434	439	443	533	544	759	767	774	762	770	777	
	DuraPlate	910	919	928	914	932	1387	1401	1415	1396	1410	1424	
112	None	124	125	127	160	163	202	204	206	206	209	211	
	Shaft Fan	314	317	320	401	409	607	614	620	621	627	633	
	Electric Fan	420	424	428	536	546	732	740	747	748	755	763	
	DuraPlate	883	892	901	910	928	1346	1359	1373	1373	1387	1400	
125	None				153	156				197	199	201	
	Shaft Fan				387	394				598	604	610	
	Electric Fan				518	528				722	729	736	
	DuraPlate				883	901				1332	1345	1358	

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* Consult Factory.

Exact Ratios/Right Angle Shaft Drives

Type VR

Nominal Ratios	DRIVE SIZE																	
	107VR	117VR	127VR	133VR	137VR	143VR	145VR	147VR	153VR	155VR	157VR	163VR	165VR	167VR	173VR	175VR	177VR	187VR
DOUBLE REDUCTION																		
6.30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.735	6.735	6.735	---
7.10	7.344	7.058	7.408	7.351	7.351	7.132	7.132	7.132	7.053	7.053	7.053	7.344	7.344	7.344	7.451	7.451	7.451	7.339
8.00	8.030	8.053	8.320	8.256	8.256	7.983	7.983	7.983	8.165	8.165	8.165	8.090	8.090	8.090	8.515	8.515	8.515	7.983
9.00	8.941	9.059	8.996	8.927	8.927	9.168	9.168	9.168	8.828	8.828	8.828	8.947	8.947	8.947	9.217	9.217	9.217	9.154
10.0	10.03	9.745	10.04	10.28	10.28	9.737	9.737	9.737	9.737	9.737	9.737	10.05	10.05	10.05	10.20	10.20	10.20	10.04
11.2	10.96	11.12	11.27	11.54	11.54	10.90	10.90	10.90	11.27	11.27	11.27	11.07	11.07	11.07	11.65	11.65	11.65	10.92
12.5	12.21	12.51	12.19	12.48	12.48	12.52	12.52	12.52	12.19	12.19	12.19	12.24	12.24	12.24	---	---	---	12.53
TRIPLE REDUCTION																		
12.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13.74	13.74	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	15.20	15.20	14.97
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	17.37	17.37	16.29
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	18.79	18.79	18.67
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	20.78	20.78	20.47
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	23.75	23.75	22.27
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	25.65	25.65	25.53
28.0	28.74	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	28.38	28.38	27.95
31.5	31.42	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	32.43	32.43	30.40
35.5	34.99	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	36.24	36.24	34.86
40.0	40.57	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	40.09	40.09	39.49
45.0	44.35	45.22	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	45.82	45.82	42.96
50.0	49.39	50.88	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	50.85	50.85	49.26
56.0	57.31	56.28	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	56.25	56.25	55.40
63.0	62.66	61.55	63.81	62.70	62.70	61.31	61.31	61.31	64.19	64.19	64.19	64.00	64.00	64.00	64.29	64.29	64.29	60.27
71.0	69.77	69.25	69.00	67.80	67.80	70.41	70.41	70.41	69.41	69.41	69.41	70.78	70.78	70.78	73.65	73.65	73.65	69.11
80.0	77.83	81.43	80.84	80.02	80.02	77.30	77.30	77.30	83.33	83.33	83.33	81.73	81.73	81.73	84.18	84.18	84.18	78.91
90.0	86.67	91.61	87.41	86.53	86.53	88.77	88.77	88.77	90.11	90.11	90.11	90.39	90.39	90.39	93.41	93.41	93.41	90.49
100	100.6	101.3	103.9	103.0	103.0	98.75	98.75	98.75	98.65	98.65	98.65	103.5	103.5	103.5	103.3	103.3	103.3	101.8
112	110.0	110.8	113.5	113.1	113.1	110.5	110.5	110.5	114.2	114.2	114.2	114.0	114.0	114.0	118.1	118.1	118.1	110.7
125	122.4	124.7	122.8	122.2	122.2	127.0	127.0	127.0	123.5	123.5	123.5	126.1	126.1	126.1	---	---	---	127.0

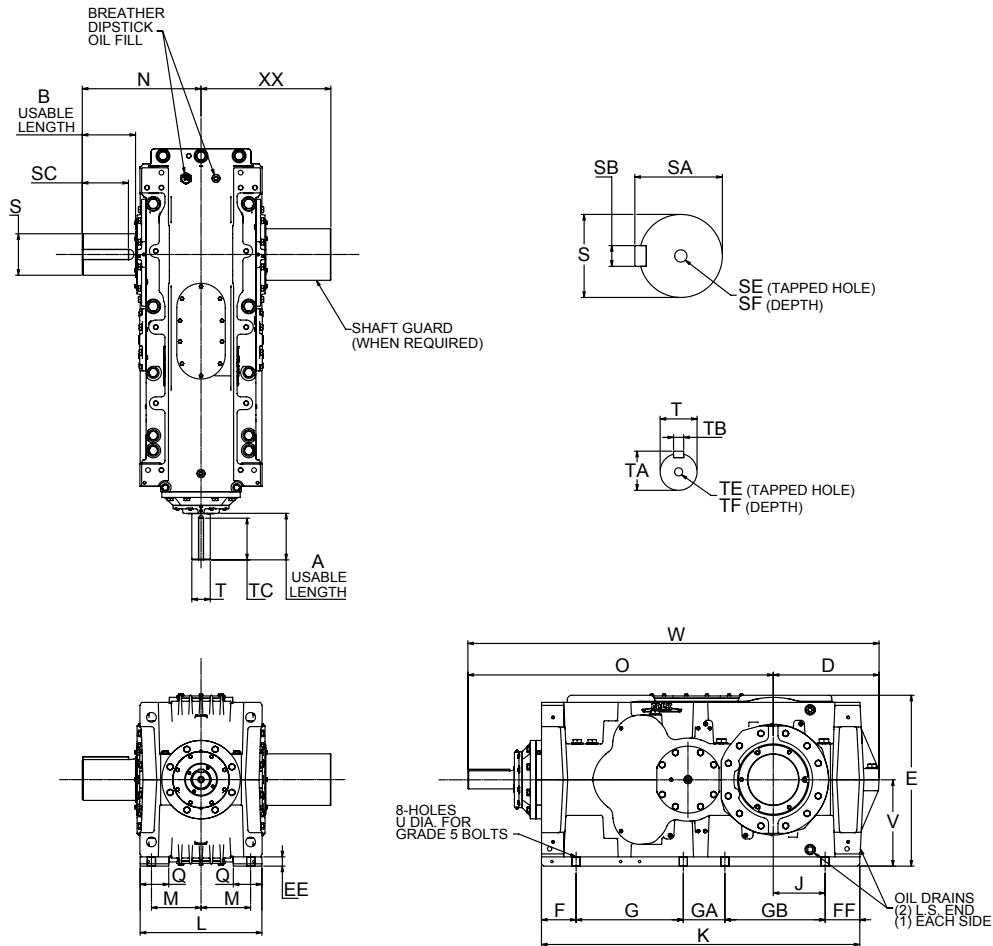
Exact Ratios/Right Angle Shaft Drives

Type VR

Nominal Ratios	DRIVE SIZE										
	193VR	195VR	197VR	203VR	207VR	213VR	215VR	217VR	223VR	225VR	227VR
TRIPLE REDUCTION											
8.00	8.396	8.396	8.396	---	---	7.875	7.875	7.875	---	---	---
9.00	9.479	9.479	9.479	9.344	9.344	9.064	9.064	9.064	8.815	8.815	8.815
10.0	10.36	10.36	10.36	10.43	10.43	9.910	9.910	9.910	10.12	10.12	10.12
11.2	11.89	11.89	11.89	11.37	11.37	11.01	11.01	11.01	11.03	11.03	11.03
12.5	13.45	13.45	13.45	13.08	13.08	12.32	12.32	12.32	12.29	12.29	12.29
14.0	15.19	15.19	15.19	14.97	14.97	14.18	14.18	14.18	13.79	13.79	13.79
16.0	16.60	16.60	16.60	16.71	16.71	15.50	15.50	15.50	15.83	15.83	15.83
18.0	18.23	18.23	18.23	18.21	18.21	17.29	17.29	17.29	17.25	17.25	17.25
20.0	20.58	20.58	20.58	20.28	20.28	19.90	19.90	19.90	19.35	19.35	19.35
22.4	22.49	22.49	22.49	22.64	22.64	21.75	21.75	21.75	22.20	22.20	22.20
25.0	24.92	24.92	24.92	24.68	24.68	25.32	25.32	25.32	24.20	24.20	24.20
28.0	28.13	28.13	28.13	27.73	27.73	27.64	27.64	27.64	28.26	28.26	28.26
31.5	30.74	30.74	30.74	30.95	30.95	30.22	30.22	30.22	30.84	30.84	30.84
35.5	35.56	35.56	35.56	33.73	33.73	35.47	35.47	35.47	33.62	33.62	33.62
40.0	40.14	40.14	40.14	39.57	39.57	40.83	40.83	40.83	39.71	39.71	39.71
45.0	43.87	43.87	43.87	44.16	44.16	44.64	44.64	44.64	45.56	45.56	45.56
50.0	50.18	50.18	50.18	48.14	48.14	50.88	50.88	50.88	49.67	49.67	49.67
56.0	56.66	56.66	56.66	55.85	55.85	55.28	55.28	55.28	56.78	56.78	56.78
63.0	61.92	61.92	61.92	62.32	62.32	60.43	60.43	60.43	61.69	61.69	61.69
71.0	71.68	71.68	71.68	67.94	67.94	73.45	73.45	73.45	67.24	67.24	67.24
80.0	78.33	78.33	78.33	78.84	78.84	80.30	80.30	80.30	81.97	81.97	81.97
90.0	89.60	89.60	89.60	85.95	85.95	91.53	91.53	91.53	89.35	89.35	89.35
100	101.2	101.2	101.2	99.72	99.72	99.44	99.44	99.44	102.1	102.1	102.1
112	110.6	110.6	110.6	111.3	111.3	108.7	108.7	108.7	111.0	111.0	111.0
125	---	---	---	121.3	121.3	---	---	---	121.0	121.0	121.0

Type VRC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
133	7.10-12.5	5.91	7.48	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	40.51	4.44
143	7.10-12.5	6.10	7.48	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
153	7.10-12.5	7.09	7.48	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
163	7.10-12.5	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
173	6.30-11.2	9.45	10.63	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
133	7.10-12.5	5.1181m6	5.39	1.26	7.09	M24	1.97	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	11.02	53.54	16.99	1900
143	7.10-12.5	5.5118m6	5.82	1.42	7.09	M30	2.36	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.73	17.32	2426
153	7.10-12.5	6.2992m6	6.65	1.57	7.09	M30	2.36	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.15	18.55	3303
163	7.10-12.5	7.0866m6	7.47	1.77	7.87	M30	2.36	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	22.17	4765
173	6.30-11.2	7.6772m6	8.06	1.77	9.84	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.09	6571

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

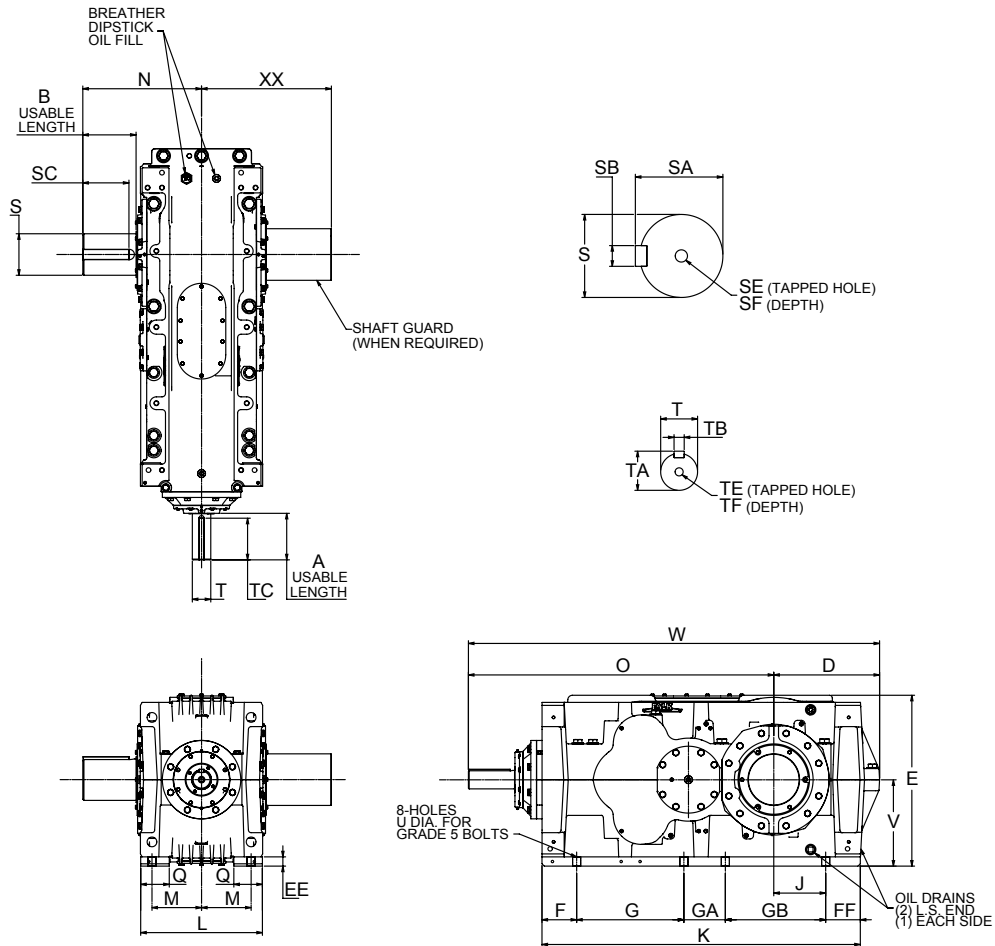
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N*	O	Q
145	7.10-12.5	6.10	7.48	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
155	7.10-12.5	7.09	7.48	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
165	7.10-12.5	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
175	6.30-11.2	9.45	10.63	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
145	7.10-12.5	5.5118m6	5.82	1.42	7.09	M30	2.36	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.73	17.32	2426	
155	7.10-12.5	6.2992m6	6.65	1.57	7.09	M30	2.36	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.15	18.55	3303	
165	7.10-12.5	7.0866m6	7.47	1.77	7.87	M30	2.36	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	22.17	4765	
175	6.30-11.2	7.6772m6	8.06	1.77	9.84	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.09	6571	

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

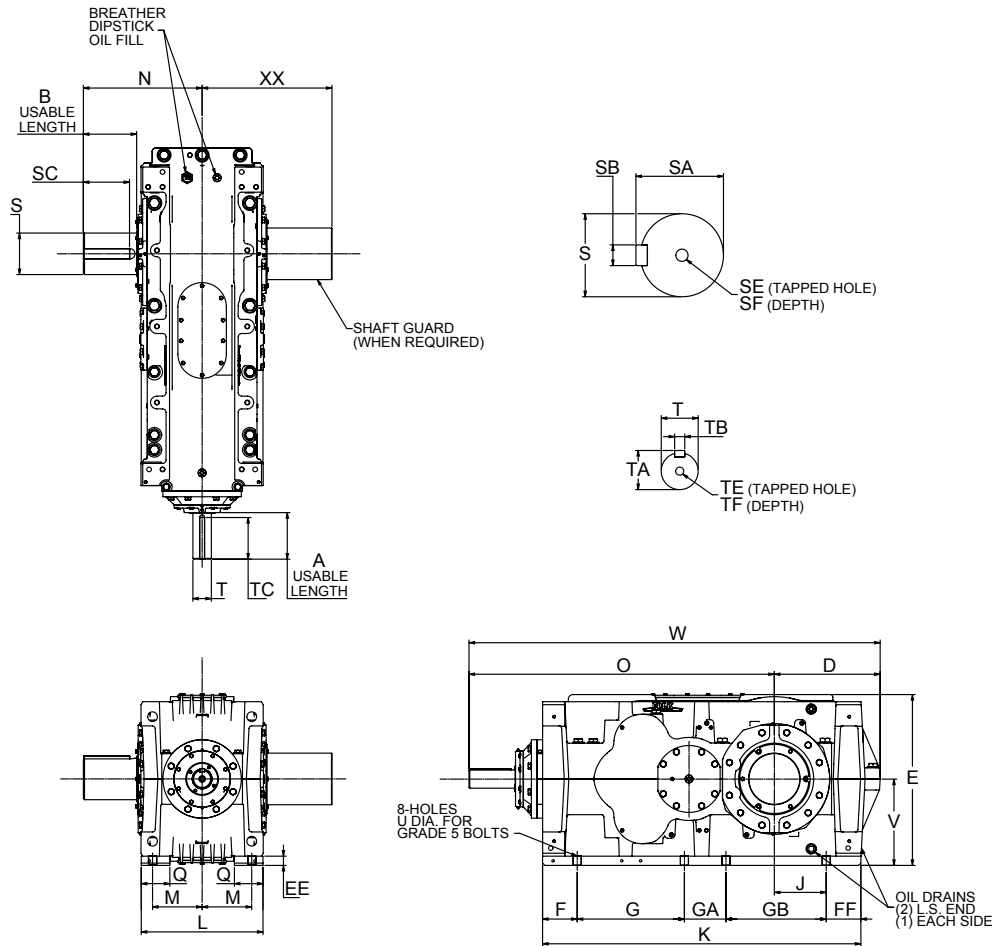
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC2 Double Reduction Solid Low-Speed Shaft, Base Drive

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
107	7.10-12.5	3.94	4.72	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	11.61	30.12	3.07
117	7.10-12.5	4.33	6.10	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	13.98	33.06	3.62
127	7.10-12.5	5.91	6.10	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	14.69	36.40	4.00
137	7.10-12.5	5.91	7.48	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	40.51	4.44
147	7.10-12.5	6.10	7.48	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
157	7.10-12.5	7.09	7.48	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
167	7.10-12.5	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
177	6.30-11.2	9.45	10.63	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91
187	7.10-12.5	9.45	10.63	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	23.03	61.03	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†							High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF						
107	7.10-12.5	3.9370m6	4.17	1.10	4.33	M24	1.97	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	8.35	40.39	12.01	781	
117	7.10-12.5	4.3307m6	4.56	1.10	5.51	M24	1.97	1.9685k6	2.10	0.55	4.33	M16	1.42	0.73	9.29	44.30	14.37	1117	
127	7.10-12.5	4.7244m6	4.99	1.26	5.51	M24	1.97	2.1654m6	2.32	0.63	5.51	M20	1.65	0.73	10.43	48.42	14.98	1496	
137	7.10-12.5	5.1181m6	5.39	1.26	7.09	M24	1.97	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	11.02	53.55	16.99	1900	
147	7.10-12.5	5.5118m6	5.82	1.42	7.09	M30	2.36	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.72	17.31	2426	
157	7.10-12.5	6.2992m6	6.65	1.57	7.09	M30	2.36	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.16	18.55	3303	
167	7.10-12.5	7.0866m6	7.47	1.77	7.87	M30	2.36	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	22.17	4765	
177	6.30-11.2	7.6772m6	8.06	1.77	9.84	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.07	6571	
187	7.10-12.5	7.6772m6	8.06	1.77	9.84	M30	2.36	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.07	6717	

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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

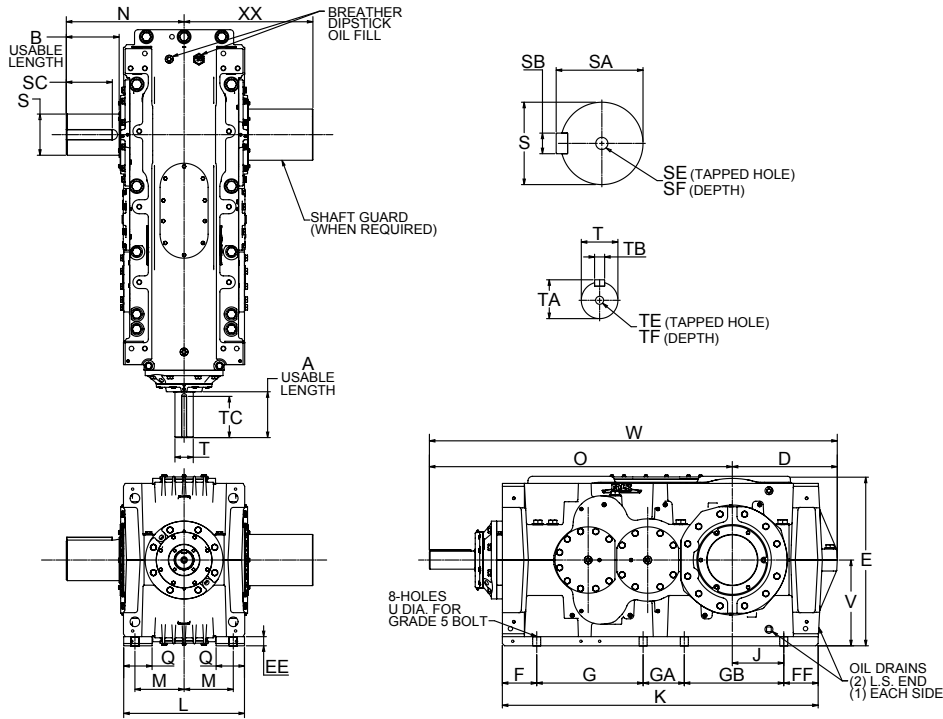
* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

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Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
133	14.0-125	5.91	7.48	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	40.51	4.44
143	14.0-125	6.10	7.48	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
153	14.0-125	7.09	7.48	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
163	14.0-125	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
173	12.5-112	9.45	10.63	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
133	14.0-71.0	5.1181m6	5.39	1.26	7.09	M24	1.97	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	11.02	53.54	16.99	1898
	1.5748k6							1.69	0.47	M16		1.42						
143	14.0-71.0	5.5118m6	5.82	1.42	7.09	M30	2.36	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	12.40	56.73	17.32	2438
	1.9685k6							2.10	0.55	5.51								
153	14.0-71.0	6.2992m6	6.65	1.57	7.09	M30	2.36	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	13.19	63.15	18.55	3372
	2.1654m6							2.32	0.63									
163	14.0-71.0	7.0866m6	7.47	1.77	7.87	M30	2.36	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	22.17	4647
	2.3622m6							2.51	0.71									
173	12.5-63.0	7.6772m6	8.06	1.77	9.84	M30	2.36	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.09	6689
	2.7559m6							2.93	0.79	M20		1.65						

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

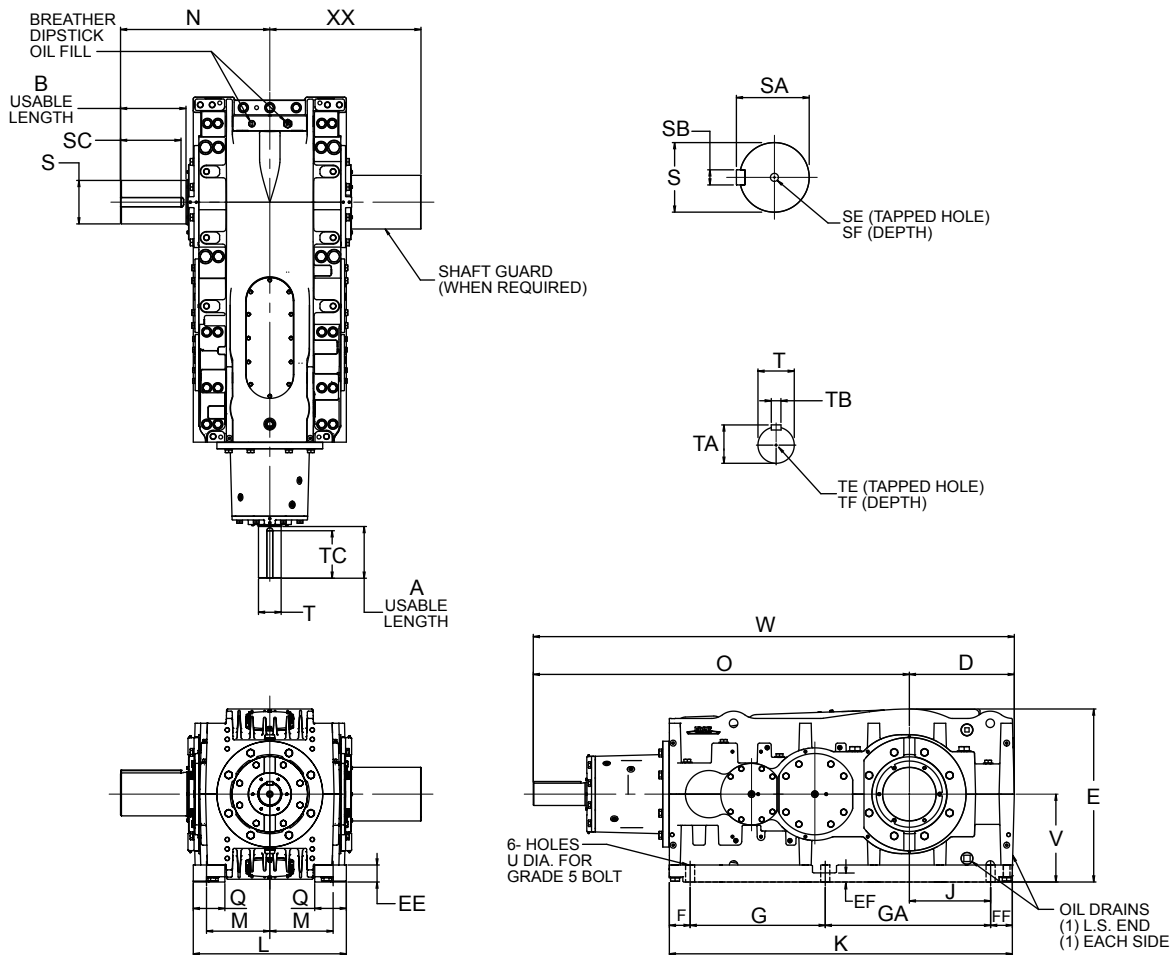
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 193 – 223/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
193	8.00-112	10.63	13.78	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	76.77	6.59
203	9.00-125	10.63	13.78	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	78.35	6.59
213	8.00-112	10.63	16.14	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	82.09	6.80
223	9.00-125	10.63	16.14	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	84.06	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
193	8.00-63.0							4.7244m6	4.99	1.26		M24	1.97	1.89	18.31	100.2	31.50	11039
	71.0-112	9.0551m6	9.48	1.97	12.60	M30	2.36	3.3465m6	3.54	0.87	9.84	M20	1.65					
203	9.00-71.0							4.7244m6	4.99	1.26		M24	1.97	1.89	18.31	100.2	31.50	11776
	80.0-125	9.0551m6	9.48	1.97	12.60	M30	2.36	3.3465m6	3.54	0.87	9.84	M20	1.65					
213	8.00-63.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	15515
	71.0-112	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					
223	9.00-71.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	16340
	80.0-125	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					

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

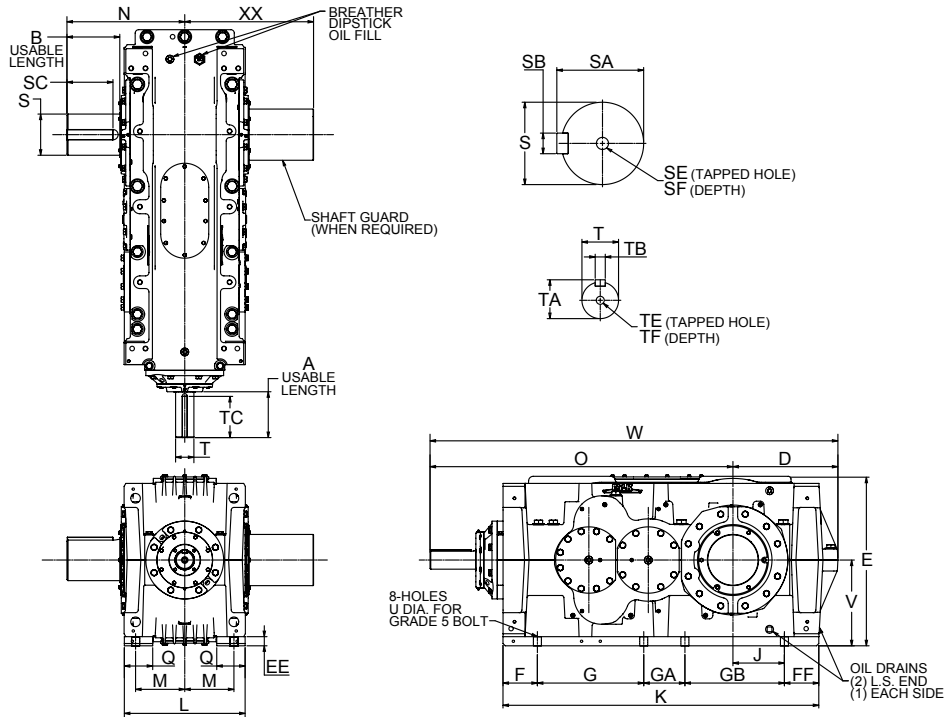
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
145	14.0-125	6.10	7.48	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
155	14.0-125	7.09	7.48	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
165	14.0-125	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
175	12.5-112	9.45	10.63	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
145	14.0-71.0							2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	12.40	56.73	17.32	2438
	80.0-125	5.5118m6	5.82	1.42	7.09	M30	2.36	1.9685k6	2.10	0.55	5.51							
155	14.0-71.0							2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	13.19	63.15	18.55	3372
	80.0-125	6.2992m6	6.65	1.57	7.09	M30	2.36	2.1654m6	2.32	0.63								
165	14.0-71.0							3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	22.17	4647
	80.0-125	7.0866m6	7.47	1.77	7.87	M30	2.36	2.3622m6	2.51	0.71								
175	12.5-63.0							4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	24.09	6689
	71.0-112	7.6772m6	8.06	1.77	9.84	M30	2.36	2.7559m6	2.93	0.79									M20	1.65

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

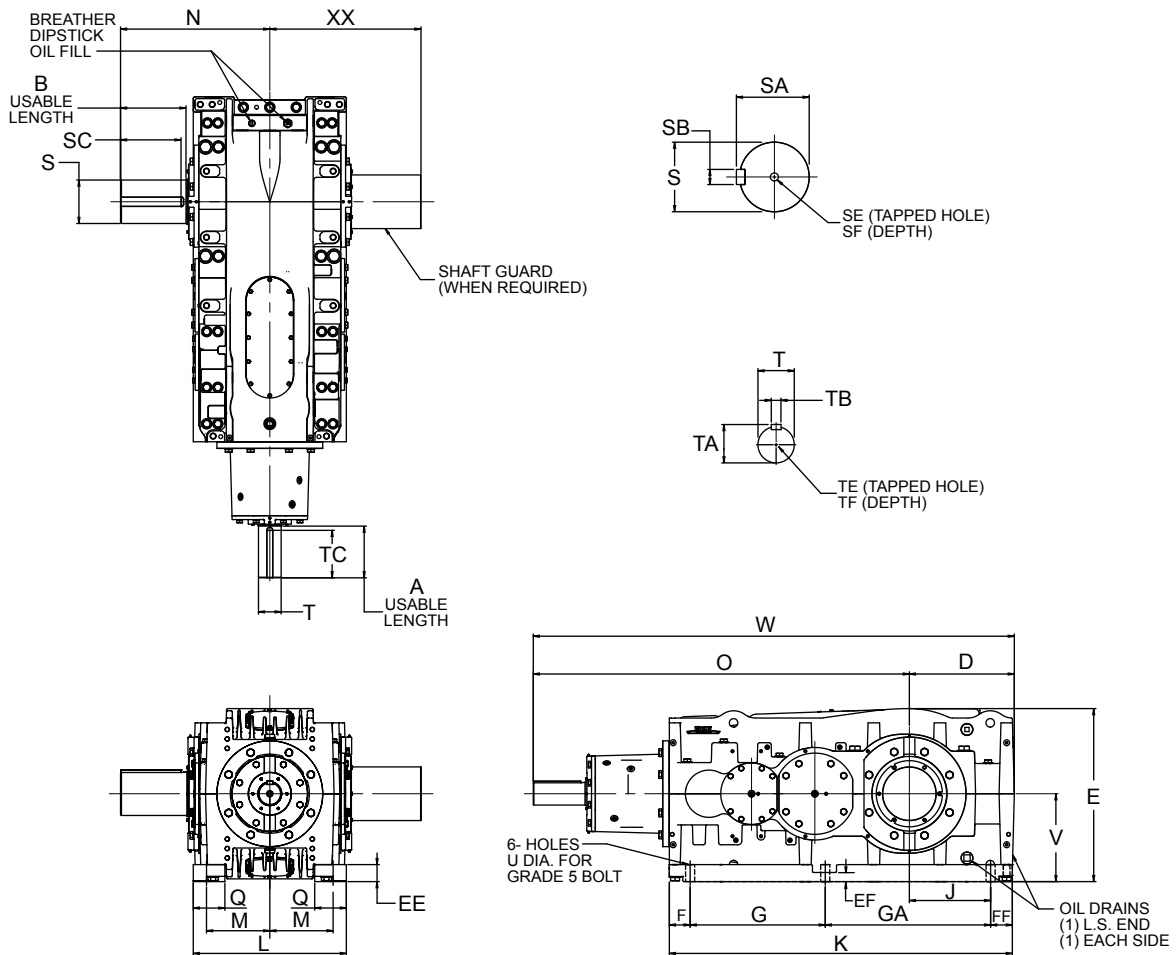
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 195 – 225/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N•	O	Q
195	8.00-112	10.63	13.78	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	76.77	6.59
215	8.00-112	10.63	16.14	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	82.09	6.80
225	9.00-125	10.63	16.14	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	84.06	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
195	8.00-63.0							4.7244m6	4.99	1.26		M24	1.97	1.89	18.31	100.2	31.50	11039
	71.0-112	9.0551m6	9.48	1.97	12.60	M30	2.36	3.3465m6	3.54	0.87	9.84	M20	1.65					
215	8.00-63.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	15515
	71.0-112	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					
225	9.00-71.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	16340
	80.0-125	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					

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

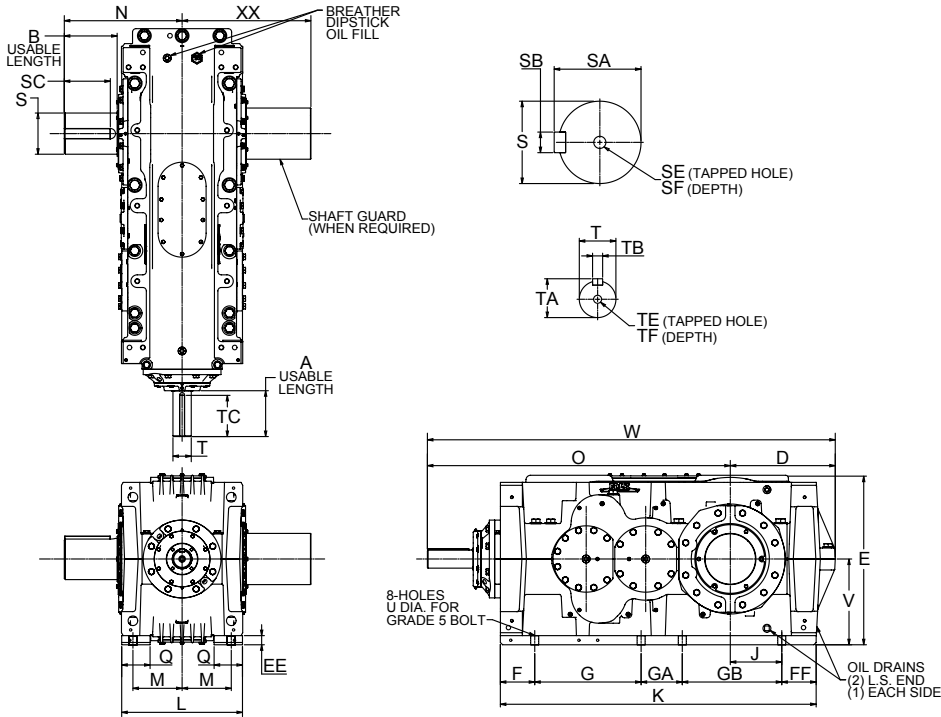
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	F	FF	G	GA	GB	J	K	L	M	N•	O	Q
107	14.0-125	3.94	4.72	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	11.61	30.12	3.07
117	14.0-125	4.33	6.10	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	13.98	33.06	3.62
127	14.0-125	5.91	6.10	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	14.69	36.40	4.00
137	14.0-125	5.91	7.48	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	16.61	40.51	4.44
147	14.0-125	6.10	7.48	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	16.93	42.80	4.25
157	14.0-125	7.09	7.48	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	17.91	47.83	4.49
167	14.0-125	7.68	8.86	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	20.28	52.13	4.88
177	12.5-112	9.45	10.63	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	23.03	60.04	5.91
187	14.0-125	9.45	10.63	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	23.03	61.03	5.91

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
107	14.0-71.0							1.5748k6	1.69	0.47		M16	1.42	0.57	8.35	40.39	12.01	776
	80.0-125	3.9370m6	4.17	1.10	4.33	M24	1.97	0.9449j6	1.06	0.31	3.94	M8	0.75					
117	14.0-71.0							1.6535k6	1.77	0.47	4.84	M16	1.42	0.73	9.29	44.30	14.37	1131
	80.0-125	4.3307m6	4.56	1.10	5.51	M24	1.97	1.1811j6	1.29	0.31	4.72	M10	0.87					
127	14.0-71.0							1.9685k6	2.10	0.55		M16	1.42	0.73	10.43	48.42	14.98	1469
	80.0-125	4.7244m6	4.99	1.26	5.51	M24	1.97	1.3780k6	1.49	0.39	5.51	M12	1.10					
137	14.0-71.0							2.1654m6	2.32	0.63		M20	1.65	0.94	11.02	53.55	16.99	1898
	80.0-125	5.1181m6	5.39	1.26	7.09	M24	1.97	1.5748k6	1.69	0.47	5.91	M16	1.42					
147	14.0-71.0							2.3622m6	2.51	0.71	5.59		1.65	0.94	12.40	56.72	17.31	2438
	80.0-125	5.5118m6	5.82	1.42	7.09	M30	2.36	1.9685k6	2.10	0.55	5.51	M20	1.65					
157	14.0-71.0							2.7559m6	2.93	0.79		M20	1.65	1.10	13.19	63.16	18.55	3372
	80.0-125	6.2992m6	6.65	1.57	7.09	M30	2.36	2.1654m6	2.32	0.63	7.09		1.65					
167	14.0-71.0							3.1496m6	3.34	0.87		M20	1.65	1.38	14.76	70.20	22.17	4647
	80.0-125	7.0866m6	7.47	1.77	7.87	M30	2.36	2.3622m6	2.51	0.71	7.09		1.65					
177	12.5-63.0							4.3307m6	4.56	1.10		M24	1.97	1.38	17.72	83.03	24.07	6689
	71.0-112	7.6772m6	8.06	1.77	9.84	M30	2.36	2.7559m6	2.93	0.79	8.66	M20	1.65					
187	14.0-71.0							4.3307m6	4.56	1.10		M24	1.97	1.38	17.72	83.03	24.07	6810
	80.0-125	7.6772m6	8.06	1.77	9.84	M30	2.36	2.7559m6	2.93	0.79	8.66	M20	1.65					

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

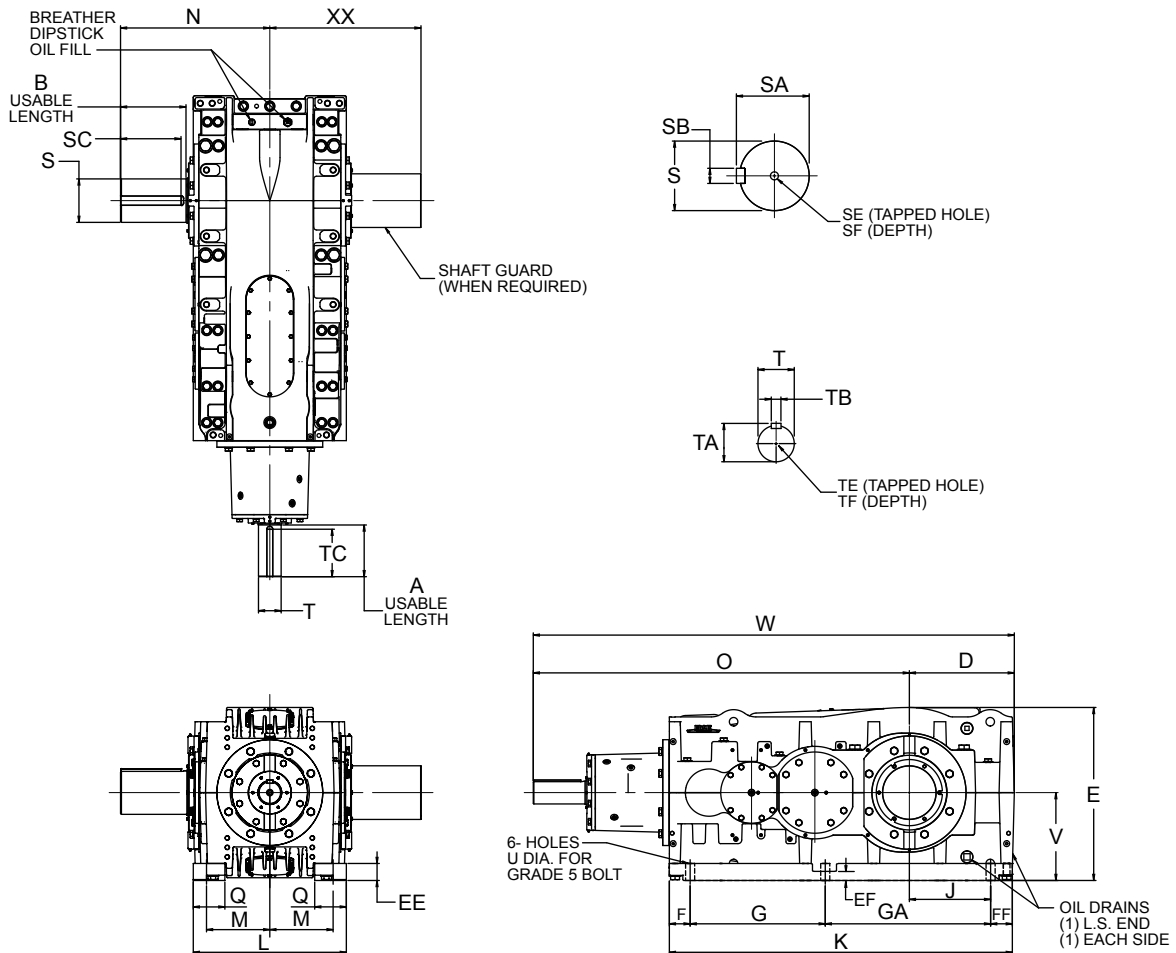
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

● Single low-speed shaft extension is standard; double extension is special.

Type VRC3 Triple Reduction Solid Low-Speed Shaft, Base Drive

Sizes 197 – 227/Dimensions — Inches



DRIVE SIZE★	Ratios	A	B	D	E	EE	EF	F	FF	G	GA	J	K	L	M	N*	O	Q
197	8.00-112	10.63	13.78	23.44	36.04	3.54	2.17	4.29	4.53	28.15	34.45	18.50	71.42	31.89	13.19	31.10	76.77	6.59
207	9.00-125	10.63	13.78	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	31.10	78.35	6.59
217	8.00-112	10.63	16.14	27.55	42.67	4.53	2.95	5.28	6.18	32.68	39.57	20.87	83.70	35.43	14.76	35.24	82.09	6.80
227	9.00-125	10.63	16.14	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	35.24	84.06	6.80

DRIVE SIZE★	Ratios	Low-Speed Shaft†						High-Speed Shaft†						U	V	W	XX	Approx. Wt. lb.
		S*	SA	SB	SC	SE	SF	T*	TA	TB	TC	TE	TF					
197	8.00-63.0							4.7244m6	4.99	1.26		M24	1.97	1.89	18.31	100.2	31.50	11039
	71.0-112	9.0551m6	9.48	1.97	12.60	M30	2.36	3.3465m6	3.54	0.87	9.84	M20	1.65					
207	9.00-71.0							4.7244m6	4.99	1.26		M24	1.97	1.89	18.31	100.2	31.50	11776
	80.0-125	9.0551m6	9.48	1.97	12.60	M30	2.36	3.3465m6	3.54	0.87	9.84	M20	1.65					
217	8.00-63.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	15515
	71.0-112	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					
227	9.00-71.0							5.1181m6	5.39	1.26		M24	1.97	2.17	21.65	109.6	35.69	16340
	80.0-125	10.6299m6	11.09	2.4803	14.17	M30	2.36	3.9370m6	4.17	1.10	9.84	M24	1.97					

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

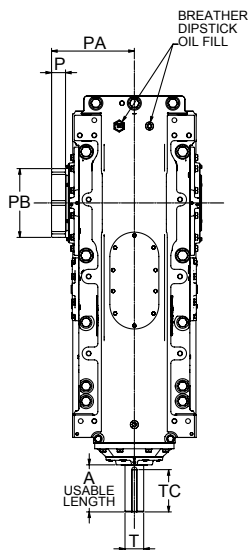
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

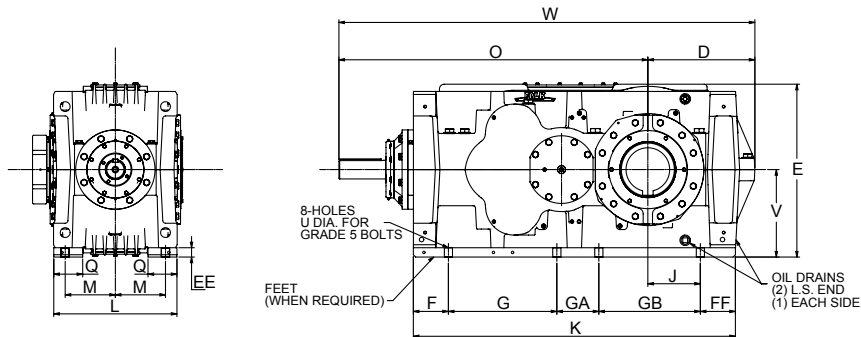
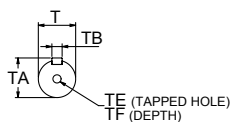
● Single low-speed shaft extension is standard; double extension is special.

Type VRT2 Double Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 133 – 173/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
133	7.10-12.5	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	2.24	11.93	9.45	4.44
143	7.10-12.5	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
153	7.10-12.5	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
163	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
173	6.30-11.2	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF				
133	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	11.02	53.54	1763
143	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.73	2264
153	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.15	3075
163	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4421
173	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	6161

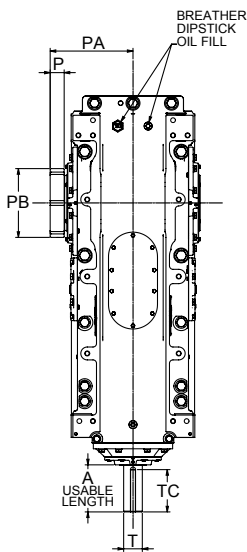
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

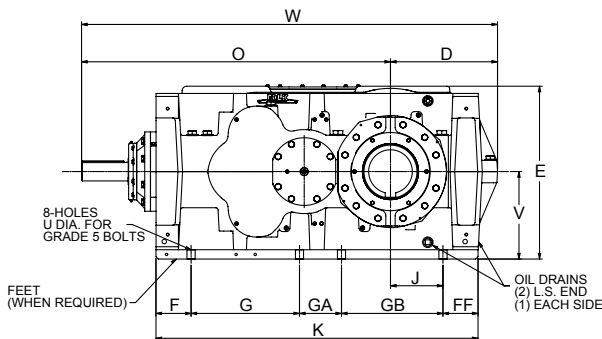
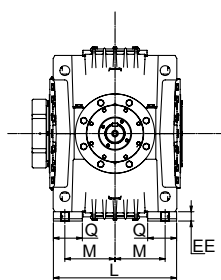
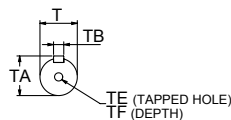
* See table 1 on page 98 for tolerance

Type VRT2 Double Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 145 – 175/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
145	7.10-12.5	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
155	7.10-12.5	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
165	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
175	6.30-11.2	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	...	13.03	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF				
145	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.73	2264
155	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.15	3075
165	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4421
175	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	6161

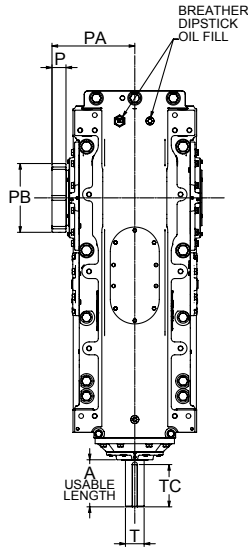
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

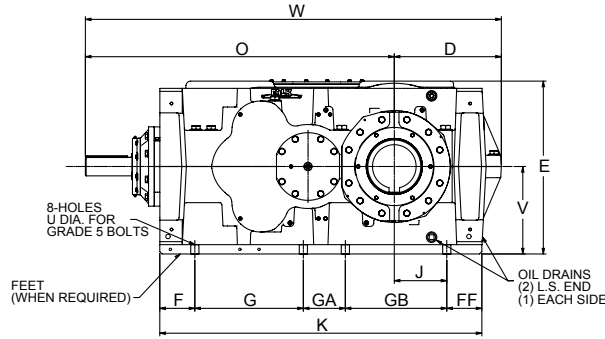
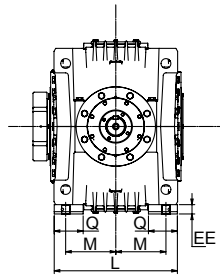
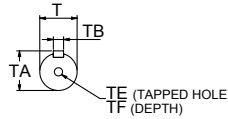
* See table 1 on page 98 for tolerance

Type VRT2 Double Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 107 – 187/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
107	7.10-12.5	3.94	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	2.20	9.53	7.28	3.07
117	7.10-12.5	4.33	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	2.20	10.51	8.07	3.62
127	7.10-12.5	5.91	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	2.20	10.94	8.86	4.00
137	7.10-12.5	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	2.24	11.93	9.45	4.44
147	7.10-12.5	6.10	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
157	7.10-12.5	7.09	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
167	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
177	6.30-11.2	9.45	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	...	13.03	10.98	5.91
187	7.10-12.5	9.45	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	...	12.95	10.98	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†							U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	7.10-12.5	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	8.35	40.39	702	
117	7.10-12.5	1.9685k6	2.10	0.55	4.33	M16	1.42	0.73	9.29	44.30	994	
127	7.10-12.5	2.1654m6	2.32	0.63	5.51	M20	1.65	0.73	10.43	48.42	1404	
137	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	11.02	53.55	1763	
147	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	12.40	56.72	2264	
157	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	13.19	63.16	3075	
167	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4421	
177	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	6161	
187	7.10-12.5	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	17.72	83.03	6312	

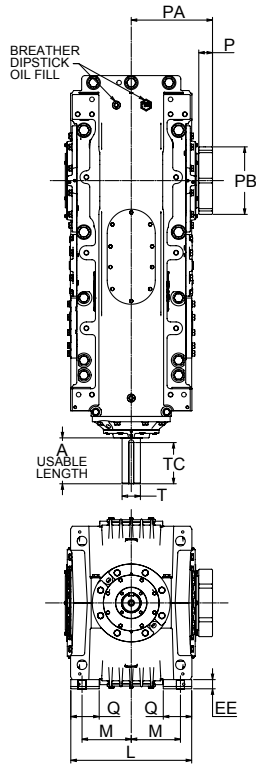
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

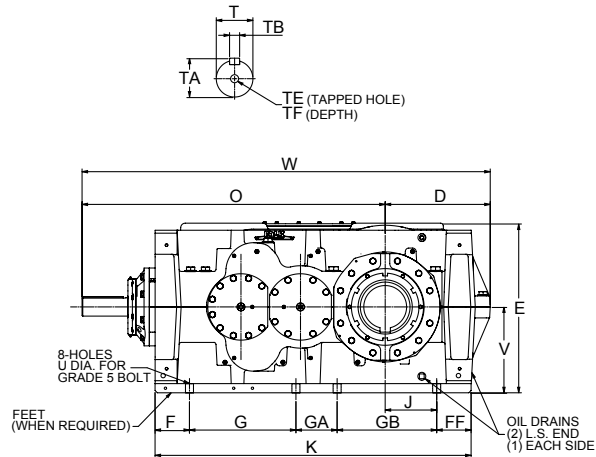
* See table 1 on page 98 for tolerance

Type VRT3 Triple Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 133 – 173/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
133	14.0-125	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	2.24	11.93	9.45	4.44
143	14.0-125	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
153	14.0-125	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
163	14.0-125	7.68	18.07	29.36	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
173	12.5-112	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	---	13.03	11.00	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF				
133	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	11.02	53.54	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42				
143	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	12.40	56.73	2276
	80.0-125	1.9685k6	2.10	0.55								5.51
153	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	13.19	63.15	3144
	80.0-125	2.1654m6	2.32	0.63							
163	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71							
173	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79		M20	1.65				

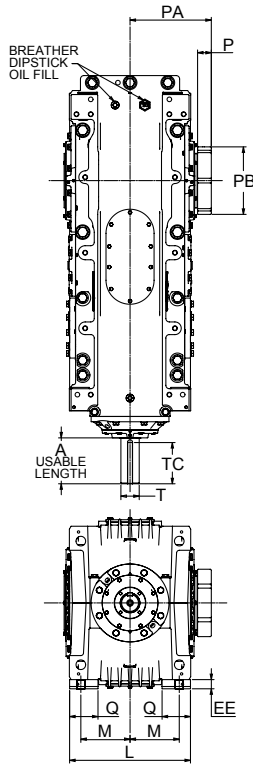
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

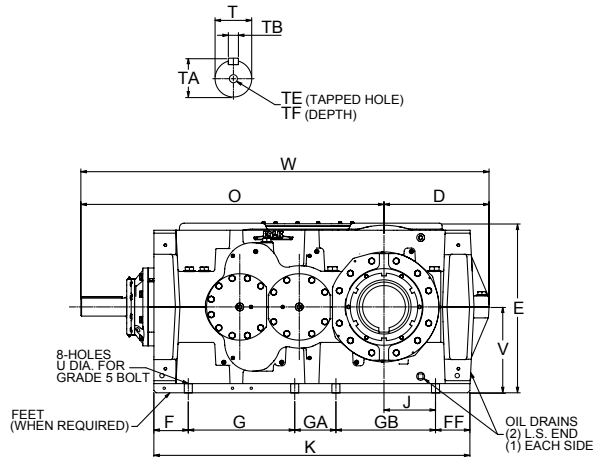
* See table 1 on page 98 for tolerance

Type VRT3 Triple Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 145 – 175/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
145	14.0-125	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
155	14.0-125	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
165	14.0-125	7.68	18.07	29.36	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
175	12.5-112	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	---	13.03	11.00	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF				
145	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	12.40	56.73	2276
	80.0-125	1.9685k6	2.10	0.55	5.51						
155	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	13.19	63.15	3144
	80.0-125	2.1654m6	2.32	0.63							
165	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71							
175	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79								M20	1.65

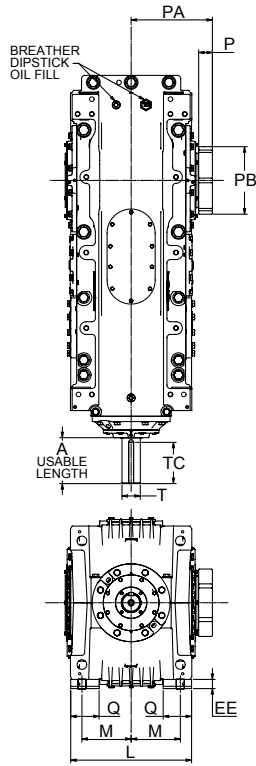
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

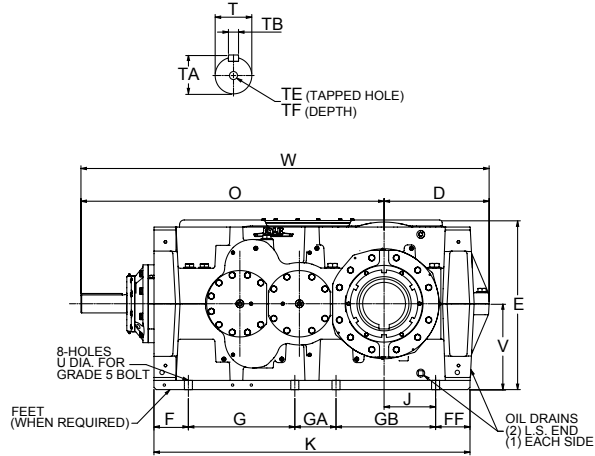
* See table 1 on page 98 for tolerance

Type VRT3 Triple Reduction Hollow Low-Speed Shaft with TA Taper Bushing

Sizes 107 – 187/Dimensions — Inches



Refer to page 238-239 for standard bushing bores.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PA	PB	Q
107	14.0-125	3.94	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	2.20	9.53	7.28	3.07
117	14.0-125	4.33	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	2.20	10.51	8.07	3.62
127	14.0-125	5.91	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	2.20	10.94	8.86	4.00
137	14.0-125	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	2.24	11.93	9.45	4.44
147	14.0-125	6.10	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	2.24	11.81	10.24	4.25
157	14.0-125	7.09	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	2.32	13.19	11.02	4.49
167	14.0-125	7.68	18.07	29.36	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	2.36	13.98	11.61	4.88
177	12.5-112	9.45	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	---	13.03	11.00	5.91
187	14.0-125	9.45	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	---	13.03	11.00	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF				
107	14.0-71.0	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	8.35	40.39	697
	80.0-125	0.9449j6	1.06	0.31		M8	0.75				
117	14.0-71.0	1.6535k6	1.77	0.47	4.72	M16	1.42	0.73	9.29	44.30	1008
	80.0-125	1.1811j6	1.29	0.31		M10	0.87				
127	14.0-71.0	1.9685k6	2.10	0.55	5.51	M16	1.42	0.73	10.43	48.42	1377
	80.0-125	1.3780k6	1.49	0.39		M12	1.10				
137	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	11.02	53.55	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42				
147	14.0-71.0	2.3622m6	2.51	0.71	5.51	M20	1.65	0.94	12.40	56.72	2276
	80.0-125	1.9685k6	2.10	0.55							
157	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	13.19	63.16	3144
	80.0-125	2.1654m6	2.32	0.63							
167	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71							
177	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79		M20	1.65				
187	14.0-71.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	17.72	83.03	6405
	80.0-125	2.7559m6	2.93	0.79		M20	1.65				

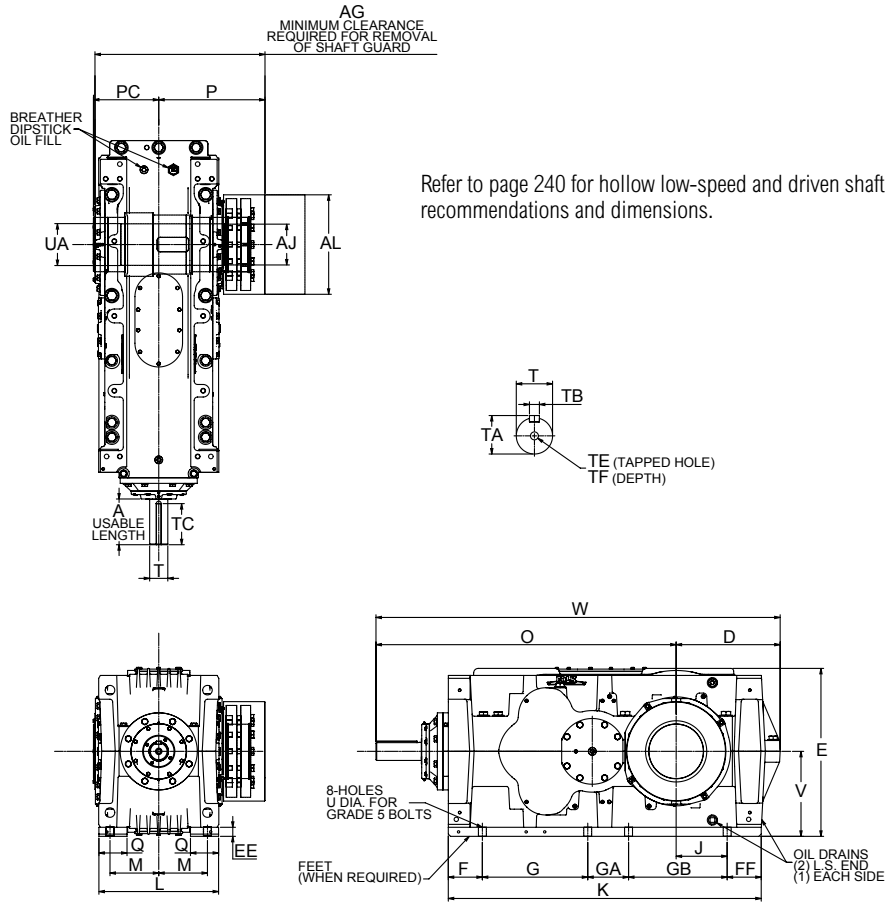
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VRJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	7.10-12.5	5.91	30.04	5.3150 J7	13.46	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	13.68	8.50	4.44
143	7.10-12.5	6.10	31.81	5.9055 J7	15.12	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
153	7.10-12.5	7.09	34.49	6.4961 J7	15.91	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
163	7.10-12.5	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
173	6.30-11.2	9.45	40.71	7.8740 J7	18.70	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91

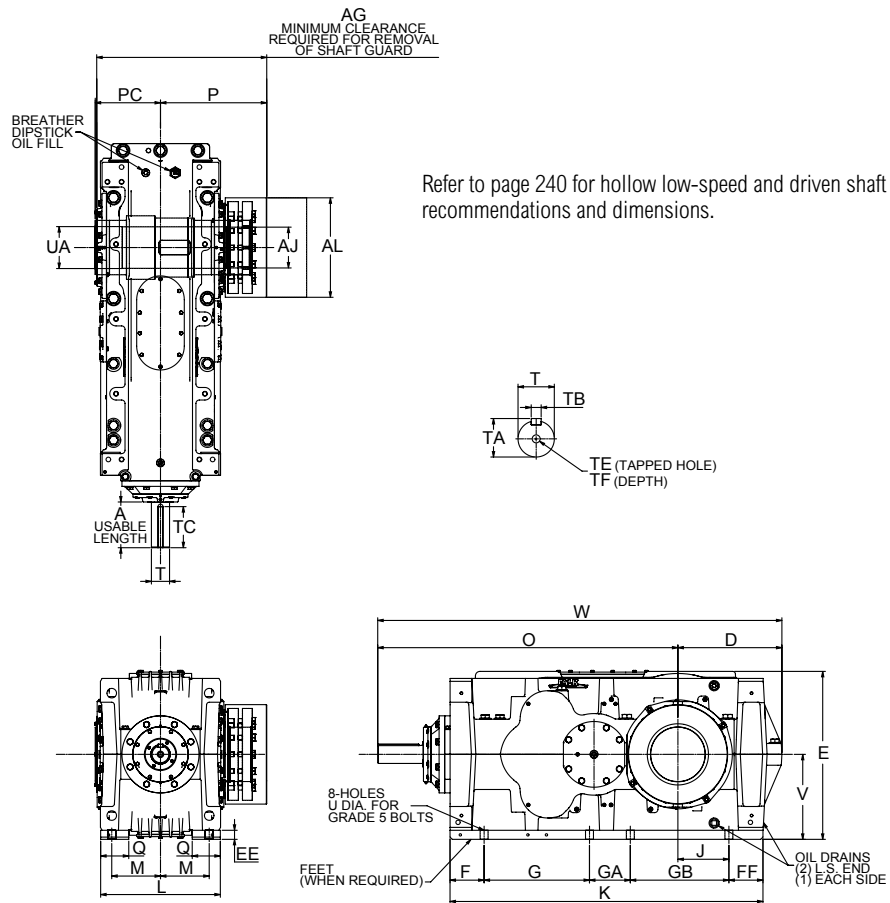
DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.5118 H7	11.02	53.54	1763
143	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	6.1024 H7	12.40	56.73	2264
153	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.15	3075
163	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4421
173	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6161

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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VRJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	7.10-12.5	6.10	31.81	5.9055 J7	15.12	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
155	7.10-12.5	7.09	34.49	6.4961 J7	15.91	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
165	7.10-12.5	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
175	6.30-11.2	9.45	40.71	7.8740 J7	18.70	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
145	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	6.1024 H7	12.40	56.73	2264
155	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.15	3075
165	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4421
175	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6161

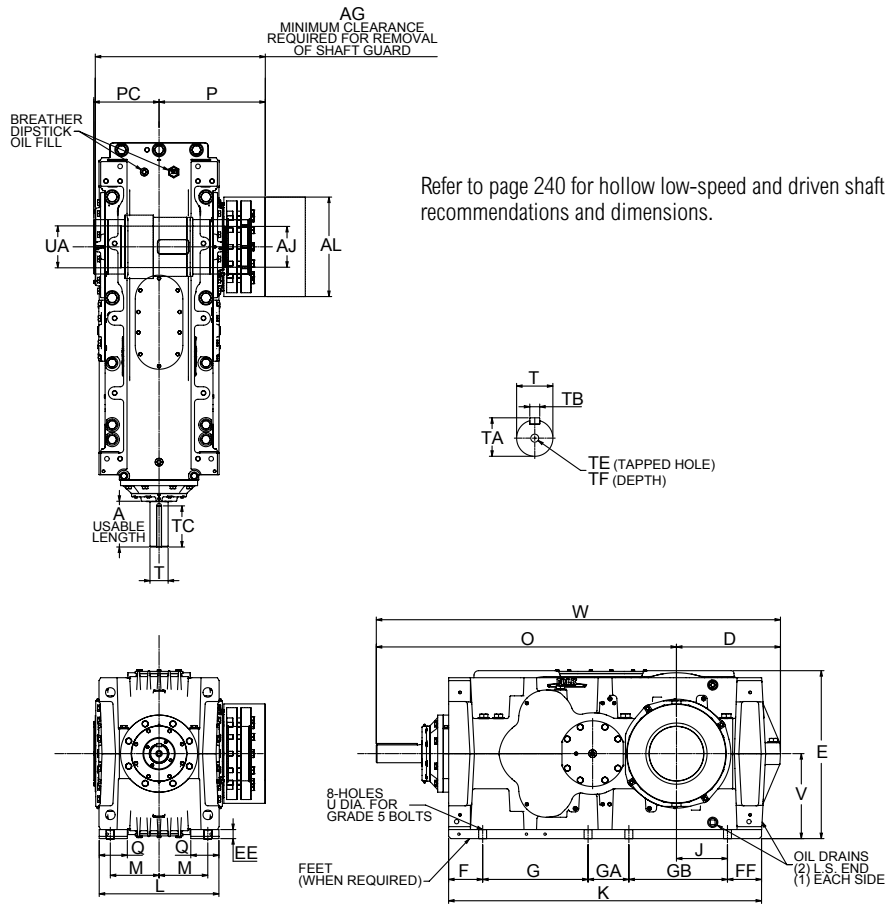
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VRJ2 Double Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 107 – 187/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	7.10-12.5	3.94	21.46	3.3465 J7	10.39	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	10.58	6.89	3.07
117	7.10-12.5	4.33	24.84	4.1339 J7	11.76	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	12.20	7.83	3.62
127	7.10-12.5	5.91	26.50	4.9213 J7	12.24	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	12.98	8.50	4.00
137	7.10-12.5	5.91	30.04	5.3150 J7	13.46	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	13.68	8.50	4.44
147	7.10-12.5	6.10	31.81	5.9055 J7	15.12	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
157	7.10-12.5	7.09	34.49	6.4961 J7	15.91	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
167	7.10-12.5	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
177	6.30-11.2	9.45	40.71	7.8740 J7	18.70	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91
187	7.10-12.5	9.45	40.71	8.0709 J7	18.70	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	7.10-12.5	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	3.5433 H7	8.35	40.39	702
117	7.10-12.5	1.9685k6	2.10	0.55	4.33	M16	1.42	0.73	4.3307 H7	9.29	44.30	994
127	7.10-12.5	2.1654m6	2.32	0.63	5.51	M20	1.65	0.73	5.1181 H7	10.43	48.42	1404
137	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.5118 H7	11.02	53.55	1763
147	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	6.1024 H7	12.40	56.72	2264
157	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.16	3075
167	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4421
177	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6161
187	7.10-12.5	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6312

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

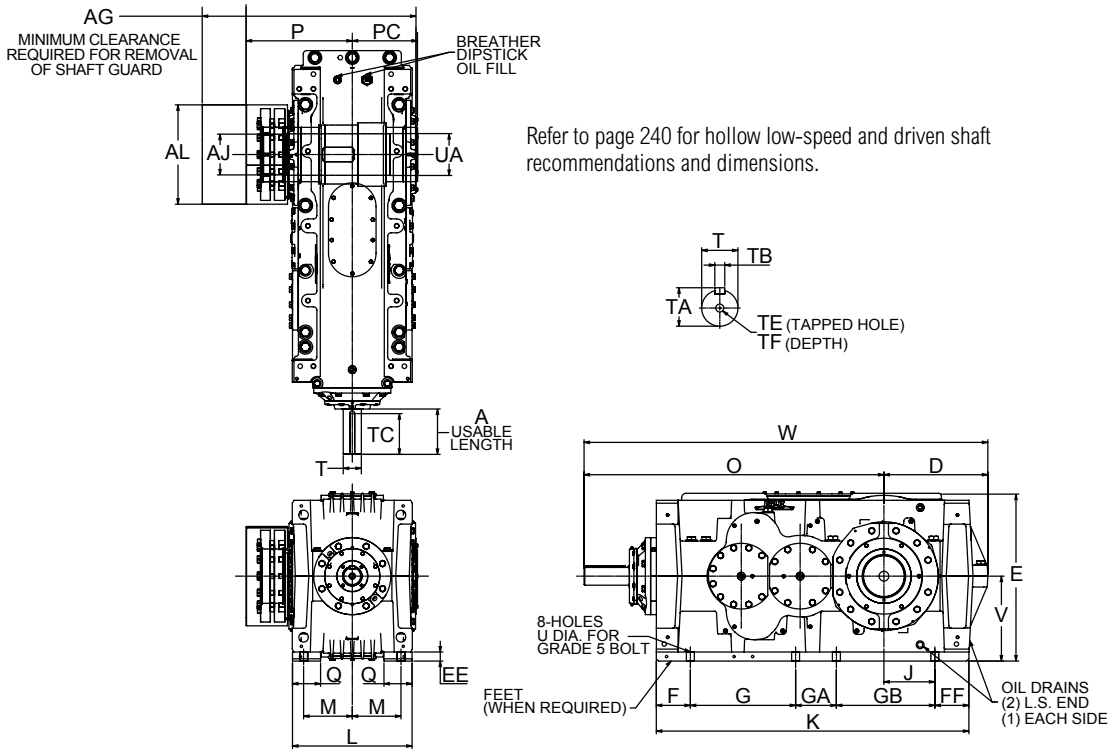
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

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Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 133 – 173/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	14.0-125	5.91	30.04	5.3150 J7	13.46	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	13.68	8.50	4.44
143	14.0-125	6.10	31.81	5.9055 J7	15.12	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
153	14.0-125	7.09	34.49	6.4961 J7	15.91	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
163	14.0-125	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
173	12.5-112	9.45	40.71	7.8740 J7	18.70	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	5.5118 H7	11.02	53.54	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42					
143	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	6.1024 H7	12.40	56.73	2276
	80.0-125	1.9685k6	2.10	0.55									5.51
153	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.15	3144
	80.0-125	2.1654m6	2.32	0.63								
163	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71								
173	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79		M20	1.65					

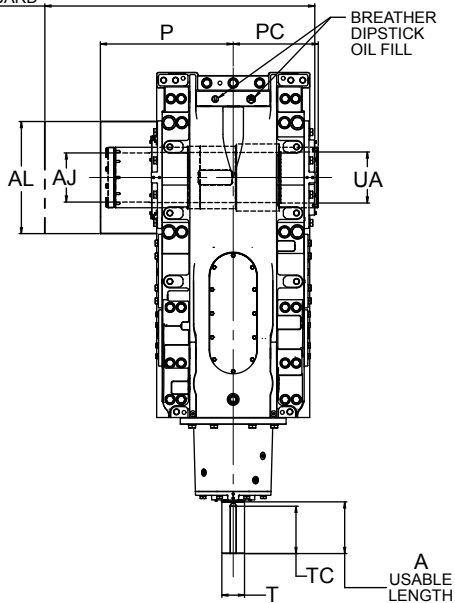
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

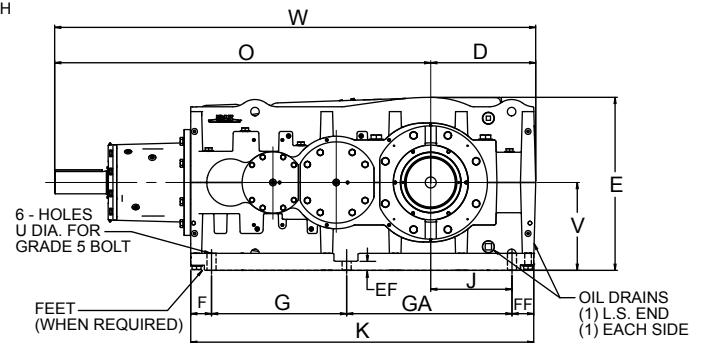
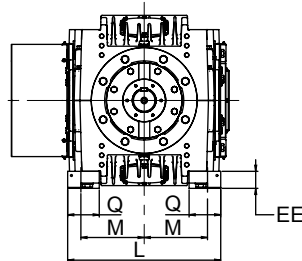
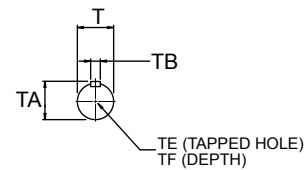
* See table 1 on page 98 for tolerance

Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 203 – 223/Dimensions — Inches

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Refer to page 241 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
203	9.00-125	10.63	56.24	10.2362J7	23.38	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	78.35	27.67	17.72	6.59
223	9.00-125	10.63	63.32	12.2047J7	26.72	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	84.06	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
203	9.00-71.0	4.7244m6	4.99	1.26	9.84	M24	1.97	1.89	10.6299H7	18.31	100.2	11385
	80.0-125	3.3465m6	3.54	0.87		M20	1.65					
223	9.00-71.0	5.1181m6	5.39	1.26	9.84	M24	1.97	2.17	12.5984H7	21.65	109.6	15914
	80.0-125	3.9370m6	4.17	1.10								

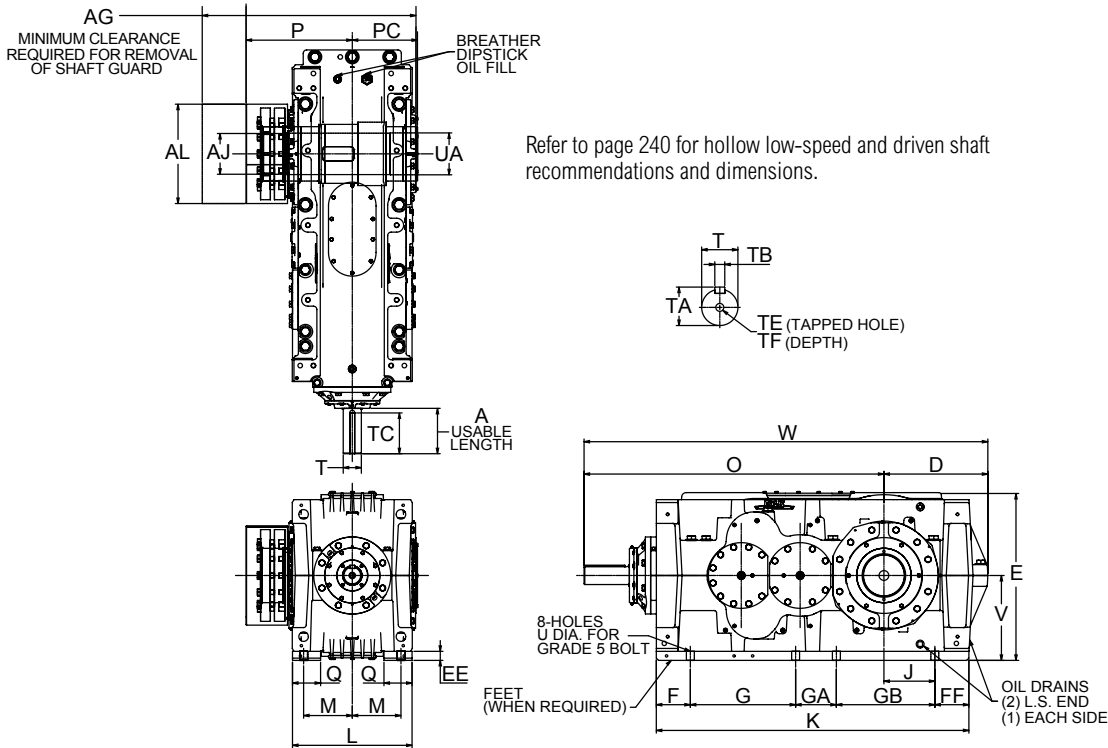
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 145 – 175/Dimensions — Inches



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	14.0-125	6.10	31.81	5.9055 J7	15.12	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
155	14.0-125	7.09	34.49	6.4961 J7	15.91	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
165	14.0-125	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
175	12.5-112	9.45	40.71	7.8740 J7	18.70	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
145	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	6.1024 H7	12.40	56.73	2276
	80.0-125	1.9685k6	2.10	0.55	5.51							
155	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.15	3144
	80.0-125	2.1654m6	2.32	0.63								
165	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71								
175	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79									M20	1.65

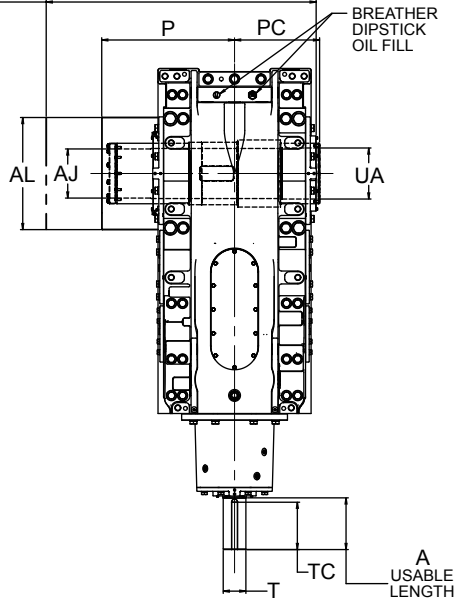
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

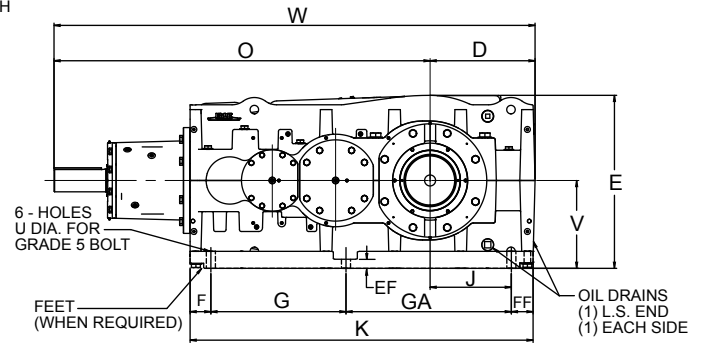
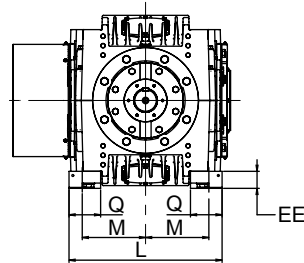
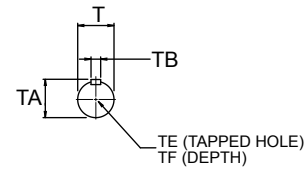
* See table 1 on page 98 for tolerance

Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc Sizes 225/Dimensions — Inches

AG
MINIMUM CLEARANCE
REQUIRED FOR REMOVAL
OF SHAFT GUARD



Refer to page 241 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
225	9.00-125	10.63	63.32	12.2047J7	26.72	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	84.06	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
225	9.00-71.0	5.1181m6	5.39	1.26	9.84	M24	1.97	2.17	12.5984H7	21.65	109.6	15914
	80.0-125	3.9370m6	4.17	1.10								

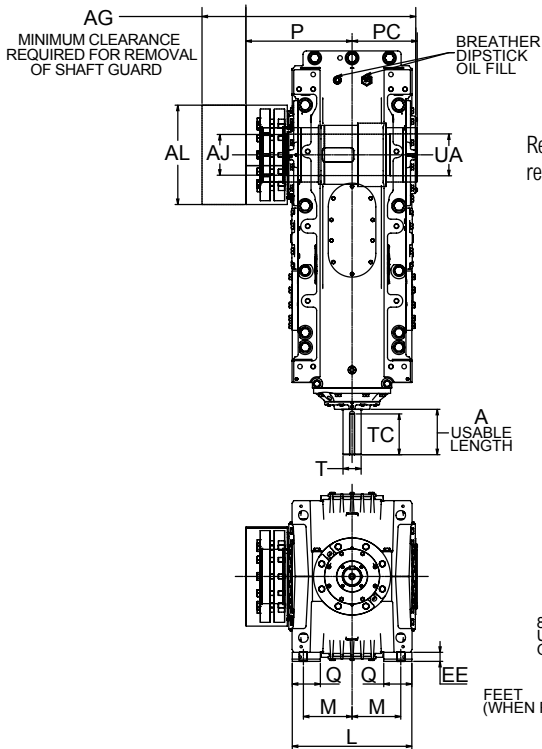
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

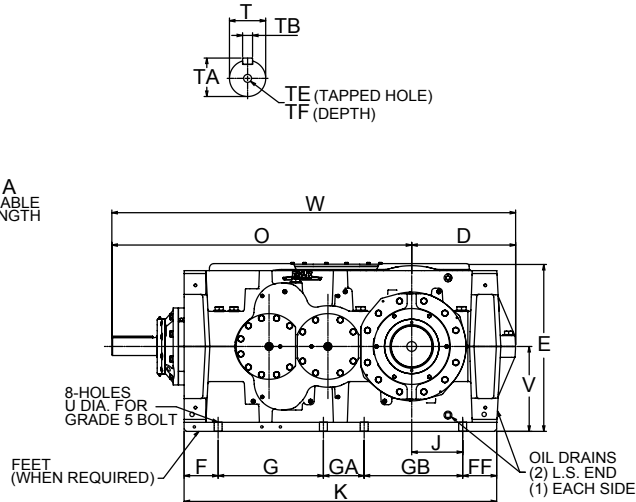
* See table 1 on page 98 for tolerance

Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 107 – 187/Dimensions — Inches



Refer to page 240 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	14.0-125	3.94	21.46	3.3465 J7	10.39	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	10.58	6.89	3.07
117	14.0-125	4.33	24.84	4.1339 J7	11.76	11.25	18.25	0.98	4.72	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	12.20	7.83	3.62
127	14.0-125	5.91	26.50	4.9213 J7	12.24	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	12.98	8.50	4.00
137	14.0-125	5.91	30.04	5.3150 J7	13.46	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	13.68	8.50	4.44
147	14.0-125	6.10	31.81	5.9055 J7	15.12	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	15.31	9.33	4.25
157	14.0-125	7.09	34.49	6.4961 J7	15.91	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	16.85	9.72	4.49
167	14.0-125	7.68	36.73	7.0866 J7	17.28	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	18.46	11.34	4.88
177	12.5-112	9.45	40.71	7.8740 J7	18.70	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	20.39	12.48	5.91
187	14.0-125	9.45	40.71	8.0709 J7	18.70	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	20.39	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	14.0-71.0	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	3.5433 H7	8.35	40.39	697
	80.0-125	0.9449j6	1.06	0.31		M8	0.75					
117	14.0-71.0	1.6535k6	1.77	0.47	4.84	M16	1.42	0.73	4.3307 H7	9.29	44.30	1008
	80.0-125	1.1811j6	1.29	0.31		M10	0.87					
127	14.0-71.0	1.9685k6	2.10	0.55	5.51	M16	1.42	0.73	5.1181 H7	10.43	48.42	1377
	80.0-125	1.3780k6	1.49	0.39		M12	1.10					
137	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	5.5118 H7	11.02	53.55	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42					
147	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	6.1024 H7	12.40	56.72	2276
	80.0-125	1.9685k6	2.10	0.55									5.51
157	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.16	3144
	80.0-125	2.1654m6	2.32	0.63									7.09
167	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71									7.09
177	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79			M20						1.65
187	14.0-71.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.2677 H7	17.72	83.03	6405
	80.0-125	2.7559m6	2.93	0.79			M20						1.65

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

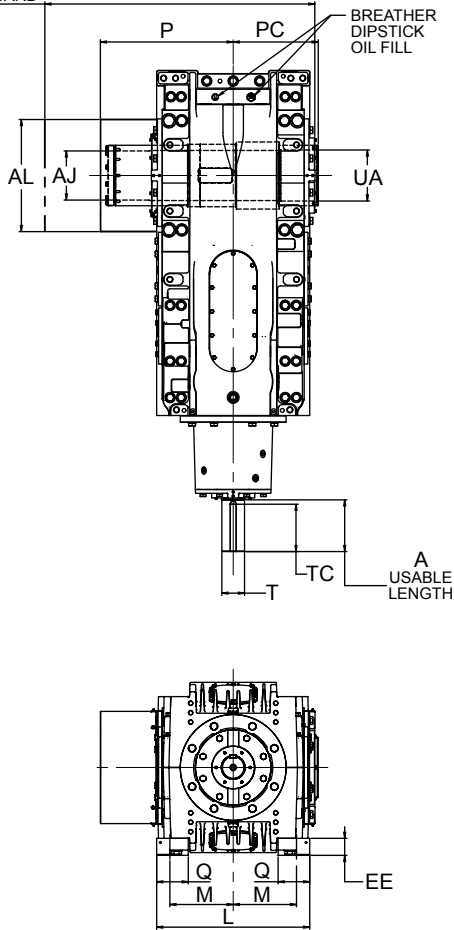
† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 98 for tolerance

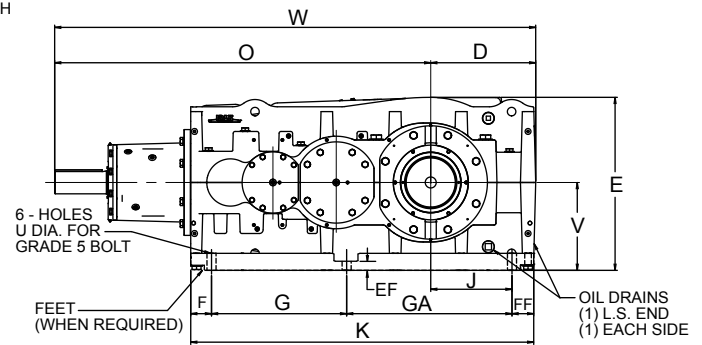
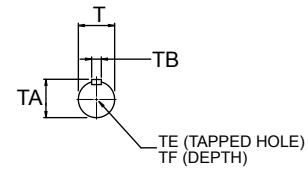
Type VRJ3 Triple Reduction Hollow Low-Speed Shaft with Shrink Disc

Sizes 207 – 227/Dimensions — Inches

AG
MINIMUM CLEARANCE
REQUIRED FOR REMOVAL
OF SHAFT GUARD



Refer to page 241 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	AG	AJ*	AL	D	E	EE	EF	F	FF	G	GA	J	K	L	M	O	P	PC	Q
207	9.00-125	10.63	56.24	10.2362J7	23.38	21.87	36.04	3.54	2.17	4.29	4.53	28.15	34.45	16.93	71.42	31.89	13.19	78.35	27.67	17.72	6.59
227	9.00-125	10.63	63.32	12.2047J7	26.72	25.58	42.67	4.53	2.95	5.28	6.18	32.68	39.57	18.90	83.70	35.43	14.76	84.06	31.23	19.69	6.80

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
207	9.00-71.0	4.7244m6	4.99	1.26	9.84	M24	1.97	1.89	10.6299H7	18.31	100.2	11385
	80.0-125	3.3465m6	3.54	0.87		M20	1.65					
227	9.00-71.0	5.1181m6	5.39	1.26	9.84	M24	1.97	2.17	12.5984H7	21.65	109.6	15914
	80.0-125	3.9370m6	4.17	1.10								

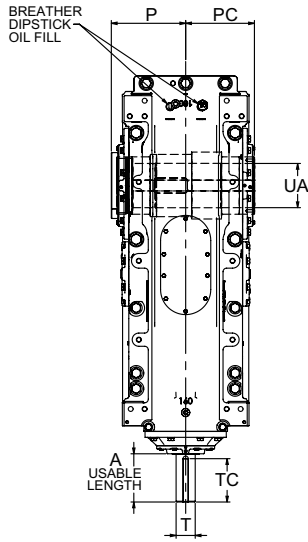
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

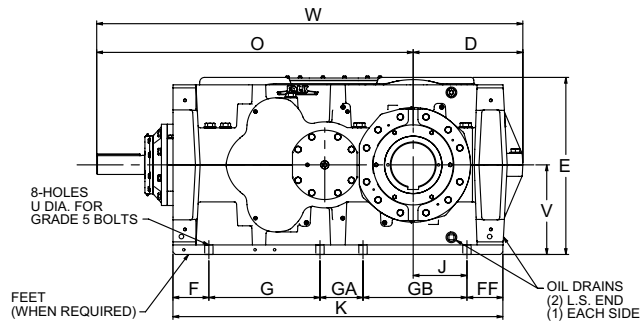
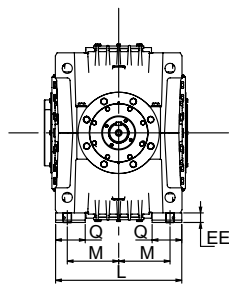
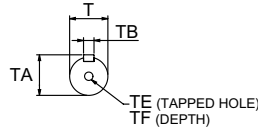
* See table 1 on page 98 for tolerance

Type VRQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 133 – 173/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	7.10-12.5	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	9.94	9.17	4.44
143	7.10-12.5	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
153	7.10-12.5	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
163	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
173	6.30-11.2	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.3150 H7	11.02	53.54	1763
143	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.9055 H7	12.40	56.73	2264
153	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.15	3075
163	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835H7	14.76	70.20	4421
173	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.6614H7	17.72	83.03	6161

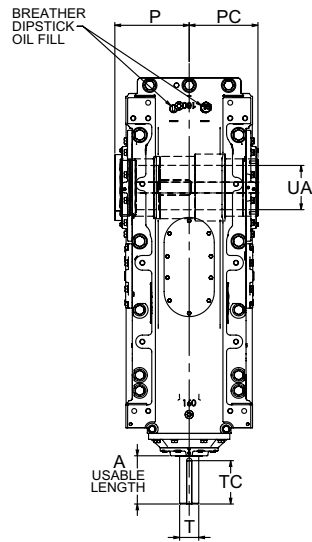
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

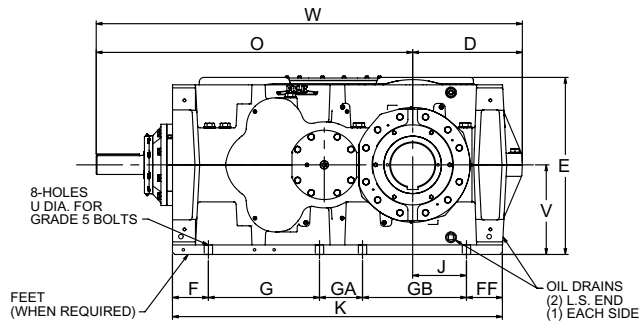
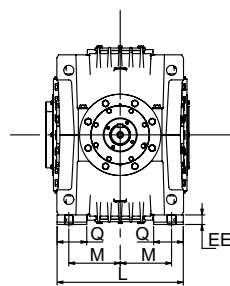
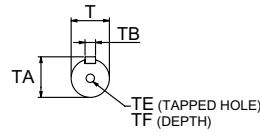
* See table 1 on page 59 for tolerance

Type VRQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 145 – 175/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	7.10-12.5	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
155	7.10-12.5	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
165	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
175	6.30-11.2	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	UE	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.9055 H7	10.51	12.40	56.73	2264
155	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	11.57	13.19	63.15	3075
165	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835H7	13.43	14.76	70.20	4421
175	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.6614H7	14.76	17.72	83.03	6161

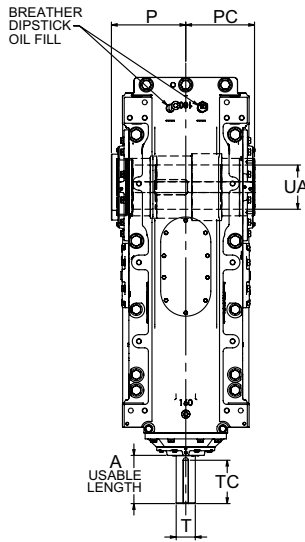
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

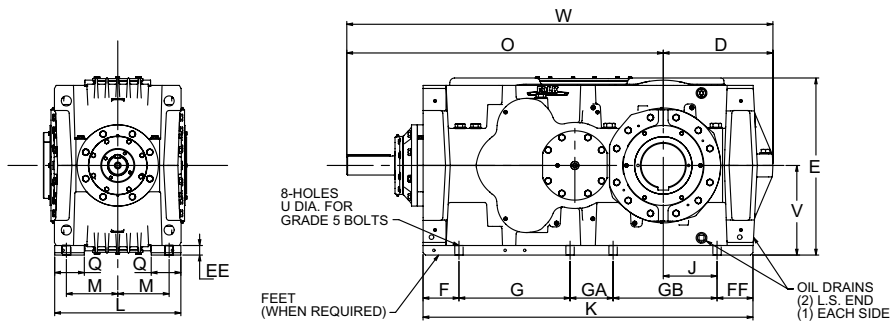
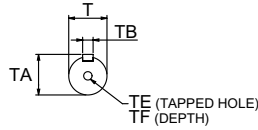
* See table 1 on page 59 for tolerance

Type VRQ2 Double Reduction with Hollow Low-Speed Shaft

Sizes 107 – 187/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	7.10-12.5	3.94	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	7.05	6.93	3.07
117	7.10-12.5	4.33	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	8.07	7.83	3.62
127	7.10-12.5	5.91	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	8.86	8.54	4.00
137	7.10-12.5	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.51	9.94	9.17	4.44
147	7.10-12.5	6.10	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
157	7.10-12.5	7.09	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
167	7.10-12.5	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
177	6.30-11.2	9.45	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91
187	7.10-12.5	9.45	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	7.10-12.5	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	3.7402 H7	8.35	40.39	702
117	7.10-12.5	1.9685k6	2.10	0.55	4.33	M16	1.42	0.73	4.3307 H7	9.29	44.30	994
127	7.10-12.5	2.1654m6	2.32	0.63	5.51	M20	1.65	0.73	4.7244 H7	10.43	48.42	1404
137	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.3150 H7	11.02	53.55	1763
147	7.10-12.5	2.3622m6	2.51	0.71	5.91	M20	1.65	0.94	5.9055 H7	12.40	56.72	2264
157	7.10-12.5	2.9528m6	3.12	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.16	3075
167	7.10-12.5	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835H7	14.76	70.20	4421
177	6.30-11.2	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	8.6614H7	17.72	83.03	6161
187	7.10-12.5	3.9370m6	4.17	1.10	8.66	M24	1.97	1.38	9.6614H7	17.72	83.03	6312

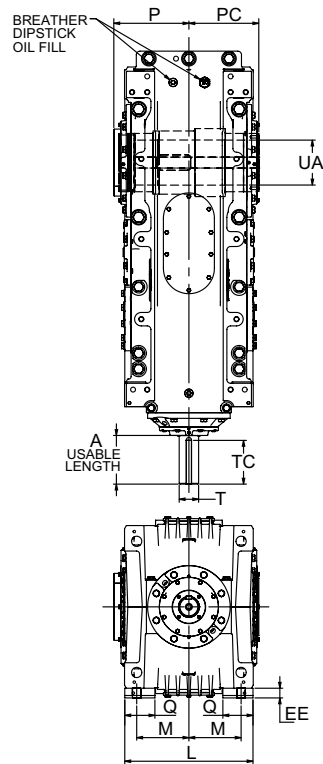
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

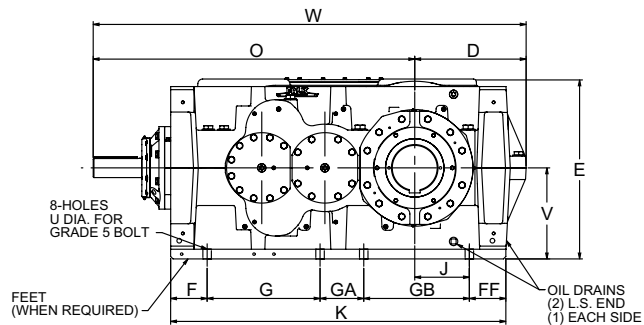
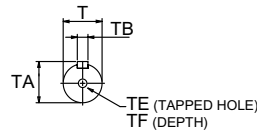
* See table 1 on page 59 for tolerance

Type VRQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 133 – 173/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
133	14.0-125	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.50	9.94	9.17	4.44
143	14.0-125	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
153	14.0-125	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
163	14.0-125	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
173	12.5-112	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
133	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	5.3150 H7	11.02	53.55	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42					
143	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	5.9055 H7	12.40	56.72	2276
	80.0-125	1.9685k6	2.10	0.55									5.51
153	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.16	3144
	80.0-125	2.1654m6	2.32	0.63								
163	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835H7	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71								
173	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.6614H7	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79		M20	1.65					

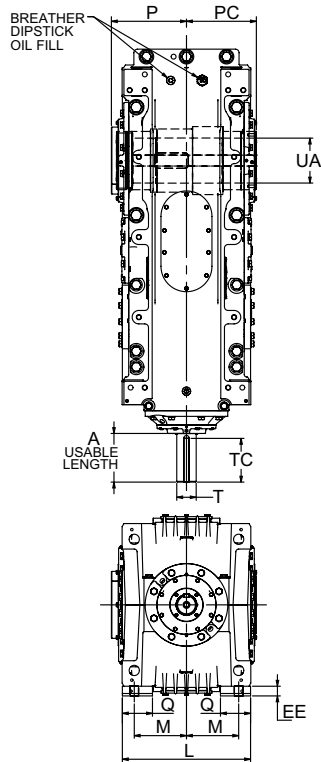
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

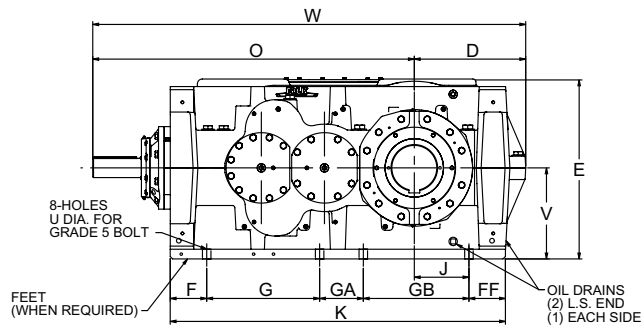
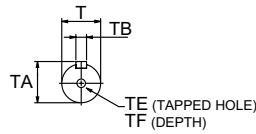
* See table 1 on page 59 for tolerance

Type VRQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 145 – 175/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
145	14.0-125	6.10	13.90	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
155	14.0-125	7.09	15.31	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
165	14.0-125	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
175	12.5-112	9.45	22.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	UE	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF						
145	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	5.9055 H7	10.51	12.40	56.72	2276
	80.0-125	1.9685k6	2.10	0.55	5.51								
155	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	11.57	13.19	63.16	3144
	80.0-125	2.1654m6	2.32	0.63									
165	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2834H7	13.43	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71									
175	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.6614H7	14.76	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79									

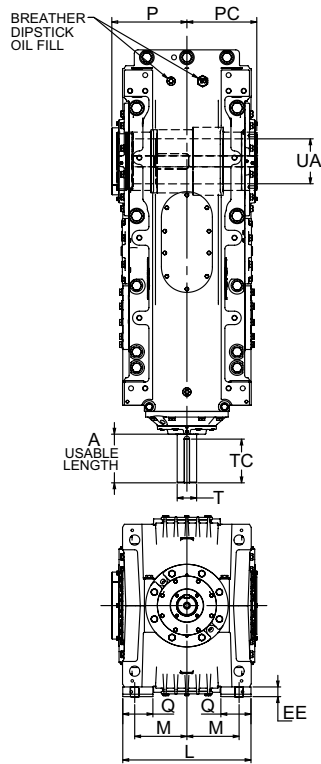
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

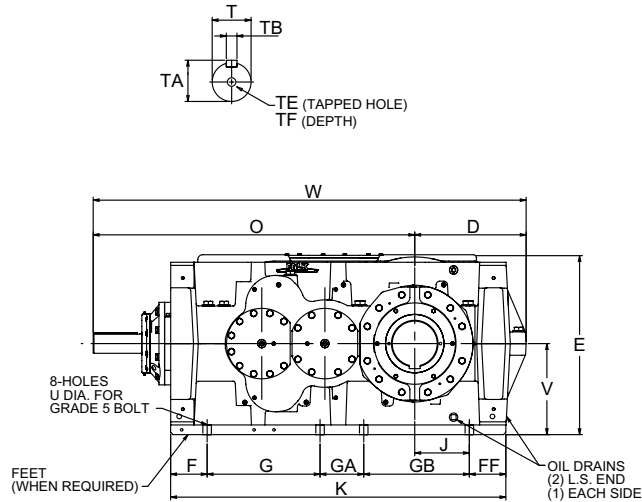
* See table 1 on page 59 for tolerance

Type VRQ3 Triple Reduction with Hollow Low-Speed Shaft

Sizes 107 – 187/Dimensions — Inches



Refer to page 242 for hollow low-speed and driven shaft recommendations and dimensions.



DRIVE SIZE★	Ratios	A	D	E	EE	F	FF	G	GA	GB	J	K	L	M	O	P	PC	Q
107	14.0-125	3.94	10.27	16.51	0.98	4.37	4.37	7.87	3.94	7.87	3.94	28.43	12.68	4.92	30.12	7.05	6.93	3.07
117	14.0-125	4.33	11.25	18.25	0.98	4.53	4.53	9.06	4.72	9.06	4.72	31.89	14.33	5.91	33.06	8.07	7.83	3.62
127	14.0-125	5.91	12.02	20.55	0.98	4.72	4.13	10.63	5.91	9.96	5.67	35.35	16.14	6.50	36.40	8.86	8.54	4.00
137	14.0-125	5.91	13.06	21.73	1.37	4.86	4.62	11.71	6.50	10.93	6.10	38.61	16.61	6.99	40.50	9.94	9.17	4.44
147	14.0-125	6.10	13.91	24.49	1.77	5.47	5.20	13.78	5.91	12.60	6.30	42.95	16.85	7.09	42.80	10.05	9.33	4.25
157	14.0-125	7.09	15.32	26.20	1.57	5.46	5.13	16.14	7.09	14.17	7.68	47.99	19.21	8.27	47.83	11.25	10.43	4.49
167	14.0-125	7.68	18.07	29.34	1.57	5.87	5.94	18.31	7.09	17.13	8.86	54.33	20.79	8.46	52.13	12.25	11.34	4.88
177	12.5-112	9.45	22.98	35.08	1.97	6.25	6.69	21.46	7.87	22.05	12.40	64.31	23.15	9.65	60.04	13.15	12.48	5.91
187	14.0-125	9.45	21.99	35.08	1.97	6.25	6.69	21.46	7.87	22.05	11.42	64.31	23.15	9.65	61.03	13.15	12.48	5.91

DRIVE SIZE★	Ratios	High-Speed Shaft†						U	UA*	V	W	Approx. Wt. lb.
		T*	TA	TB	TC	TE	TF					
107	14.0-71.0	1.5748k6	1.69	0.47	3.94	M16	1.42	0.57	3.7402 H7	8.35	40.39	697
	80.0-125	0.9449j6	1.06	0.31		M8	0.75					
117	14.0-71.0	1.6535k6	1.77	0.47	4.72	M16	1.42	0.73	4.3307 H7	9.29	44.30	1008
	80.0-125	1.1811j6	1.29	0.31		M10	0.87					
127	14.0-71.0	1.9685k6	2.10	0.55	5.51	M16	1.42	0.73	4.7244 H7	10.43	48.42	1377
	80.0-125	1.3780k6	1.49	0.39		M12	1.10					
137	14.0-71.0	2.1654m6	2.32	0.63	5.91	M20	1.65	0.94	5.3150 H7	11.02	53.55	1761
	80.0-125	1.5748k6	1.69	0.47		M16	1.42					
147	14.0-71.0	2.3622m6	2.51	0.71	5.59	M20	1.65	0.94	5.9055 H7	12.40	56.72	2276
	80.0-125	1.9685k6	2.10	0.55									5.51
157	14.0-71.0	2.7559m6	2.93	0.79	7.09	M20	1.65	1.10	6.6929 H7	13.19	63.16	3144
	80.0-125	2.1654m6	2.32	0.63								
167	14.0-71.0	3.1496m6	3.34	0.87	7.09	M20	1.65	1.38	7.2835 H7	14.76	70.20	4303
	80.0-125	2.3622m6	2.51	0.71								
177	12.5-63.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.6614 H7	17.72	83.03	6279
	71.0-112	2.7559m6	2.93	0.79		M20	1.65					
187	14.0-71.0	4.3307m6	4.56	1.10	8.66	M24	1.97	1.38	8.6614 H7	17.72	83.03	6405
	80.0-125	2.7559m6	2.93	0.79		M20	1.65					

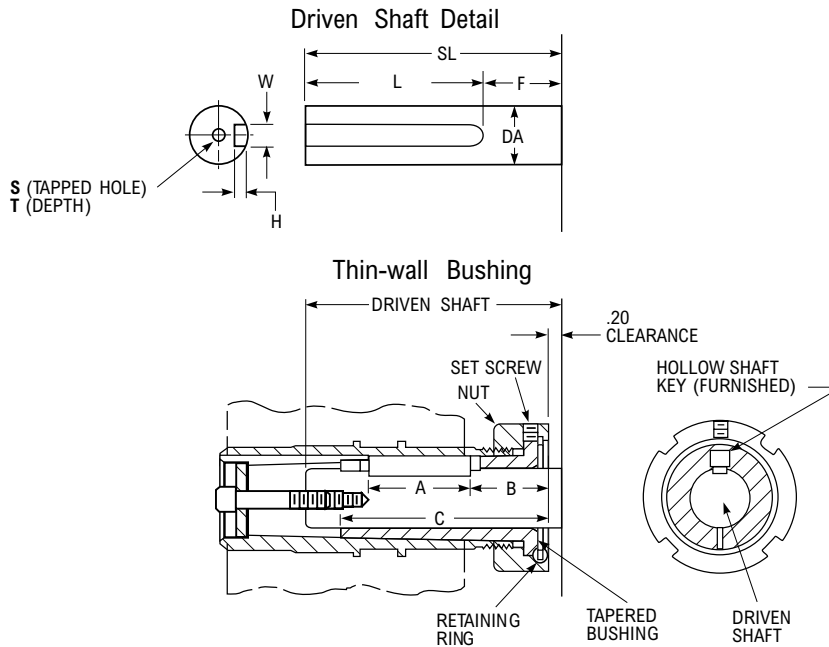
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, floor-mounted operation unless specifically stated otherwise. Consult the Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Key Sizes per ISO/R773-1969, Form B. Tapped center hole to DIN 332, threads 6H.

* See table 1 on page 59 for tolerance

Type VPT & VRT Sizes 107-167

TA Taper Bushing & Driven Shaft/Dimensions — Inches



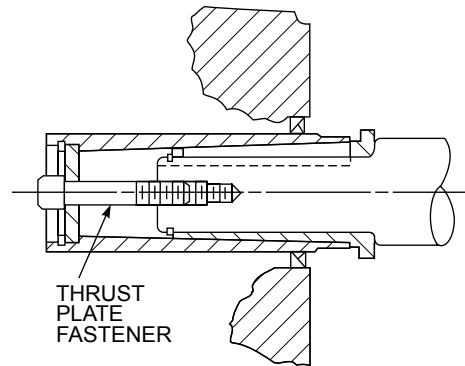
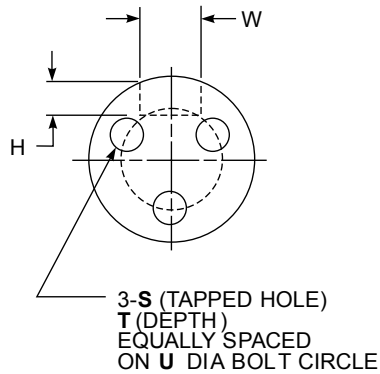
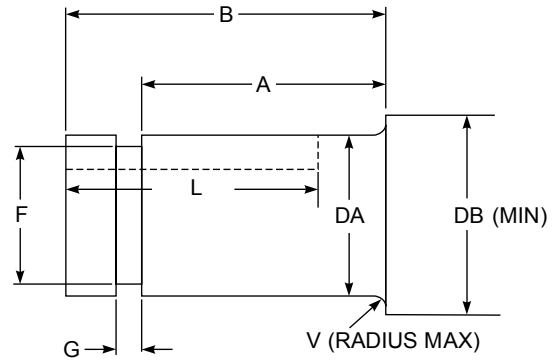
DRIVE SIZE	Bushing				Driven Shaft							
	Bushing Size	A	B	C Min Shaft Engagement	DA	Tolerance	SL	W x H ●	F	L Min	S	T Min
107	2.938	7.087	2.55	10.91	2.9375	+ 0.000 - 0.006	13.58 ± 0.39	.750 x .375	2.38	7.84	.750-10 UNC	1.50
	3.188				3.1875							
	3.438				3.4375							
117	3.438	7.087	3.00	11.89	3.4375	+ 0.000 - 0.006	15.35 ± 0.47	.875 x .4375	2.31	7.96	1.000-8 UNC	2.00
	3.938				3.9375							
	4.188				4.1875							
127	3.938	7.087	3.19	12.09	3.9375	+ 0.000 - 0.006	16.30 ± 0.47	1.000 x .500	2.76	8.09	1.000-8 UNC	2.00
	4.188				4.1875							
	4.438				4.4375							
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				4.9375			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				5.4375			1.500 x .750 *	1.78	11.34		
	5.938				5.9375							
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				6.0000							
	6.500				6.5000							
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				6.0000							
	6.500				6.5000							
	6.938				6.9375							
	7.000				7.0000							

● Check strength of driven shaft.

* 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 Sizes 173-187

Driven Shaft Recommendations Using TA Taper Bushing With Keeper Plate
 Sizes 173-187/Dimensions — Inches



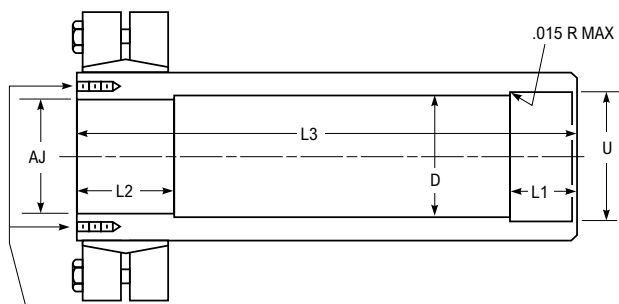
DRIVE SIZE	A	B	DA*	DB	Retaining Ring				Keyway			Shaft End			V
					Groove		Mfg No.	Max OD	W	H	L (Min)	S	T (Min)	U	
					F	G									
173 175 177 187	15.630	16.805	7.500h10	8.25	7.180	0.209	Smalley WST-750	7.930	1.750	0.750	14.81	1.250-7 UNC	2.500	4.750	0.15
173 175 177 187	15.630	16.805	8.000h10	8.75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

* See table 1 on page 98 for tolerance

Type VPJ & VRJ Sizes 107-187

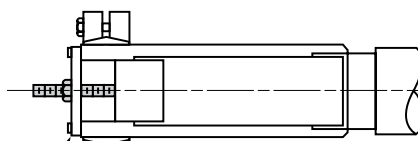
Hollow Low-Speed Shaft — Shrink Disc Mounted/Dimensions — Inches

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



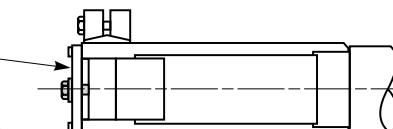
Z - QUANTITY
 ZA - DIA. TAPPED HOLES IN HOLLOW SHAFT
 ZB - DEEP
 Y - DIA. BOLT CIRCLE - EQUALLY SPACED HOLES FOR KEEPER PLATE RETENTION

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

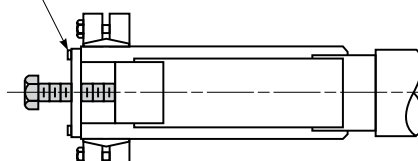


INSTALLATION

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



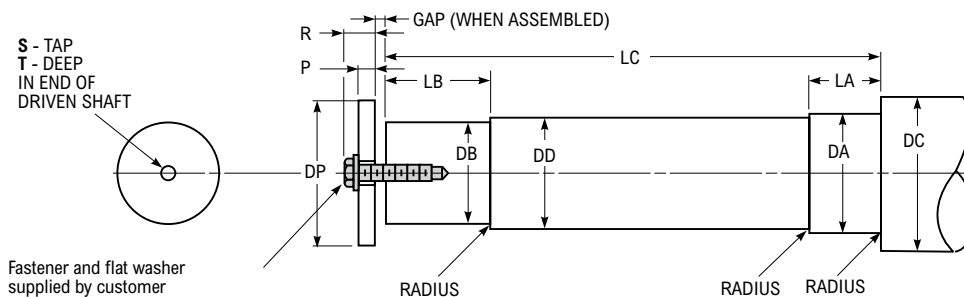
REMOVAL

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 — Inches

DRIVE SIZE	AJ*	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	6.1031 H7	8	M8 x 1.25	0.63	6.575
153, 155, 157	6.4961 J7	6.614	4.33	4.13	24.96	6.6937 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

* See table 1 on page 98 for tolerance



Driven Shaft Recommended Dimensions — Inches

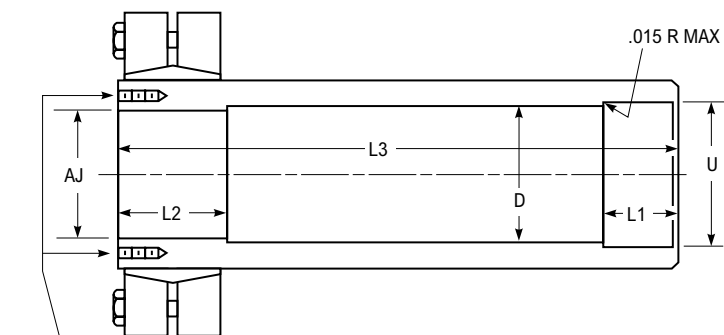
DRIVE SIZE	DA*	DB*	DC Min	DD	Radius Max	LA	LB	LC	DP	P	R	S	T	Fastener Length	Tapped Hole in Center of Keeper Plate	Gap
107	3.5433 h6	3.3465 g6	4.13	3.4646 c11	0.118	2.13	2.598	15.512	4.33	0.59	1.22	M20 x 2.5	1.57	2.17	M24 x 3.0	0.16
117	4.3307 h6	4.1339 g6	4.92	4.2520 c11	0.118	2.72	2.598	18.031	5.47	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	6.4950 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

* See table 1 on page 98 for tolerance

Type VPJ & VRJ Sizes 203-227

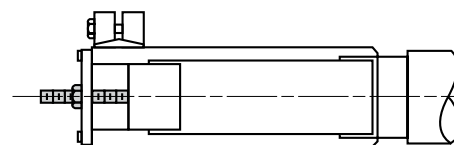
Hollow Low-Speed Shaft — Shrink Disc Mounted/Dimensions — Inches

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



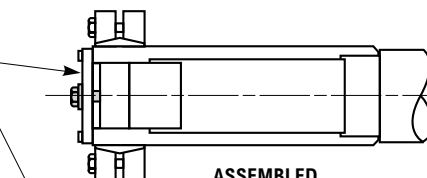
Z - QUANTITY
 ZA - DIA. UNC TAPPED HOLES IN HOLLOW SHAFT
 ZB - DEEP
 Y - DIA. BOLT CIRCLE - EQUALLY SPACED HOLES FOR KEEPER PLATE RETENTION

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

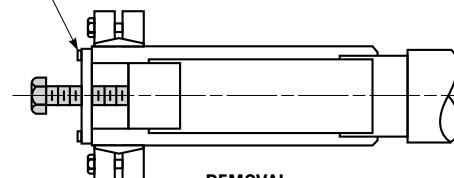


INSTALLATION

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

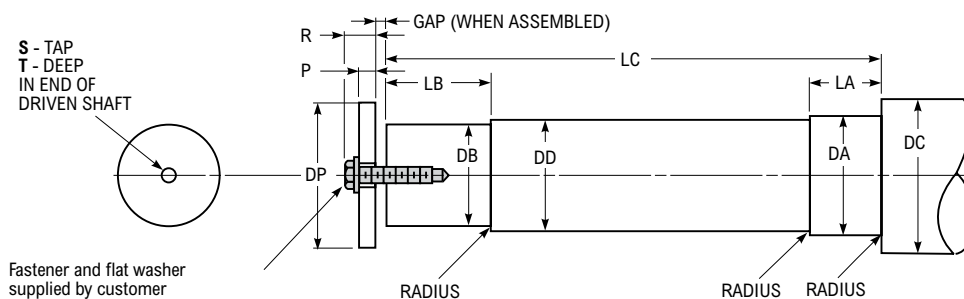


REMOVAL

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 — Inches

DRIVE SIZE	AJ*	D	L1	L2	L3	U*	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



Fastener and flat washer supplied by customer

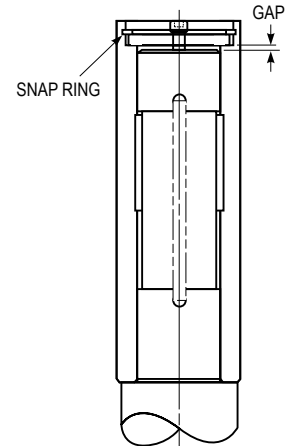
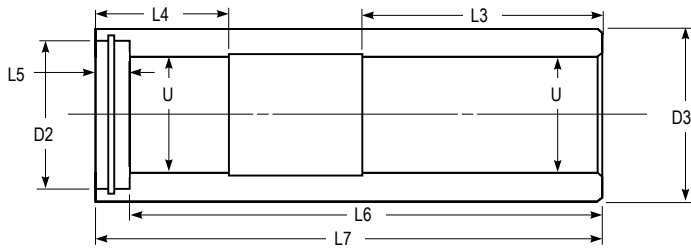
Driven Shaft Recommended Dimensions — Inches

DRIVE SIZE	DA*	DB*	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

* See table 1 on page 98 for tolerance

Type VPQ & VRQ Sizes 107-187

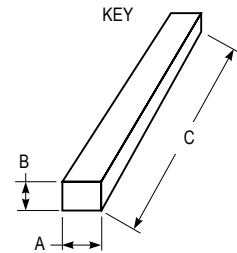
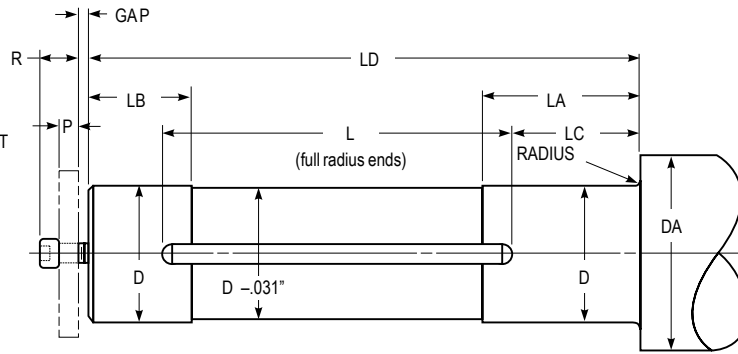
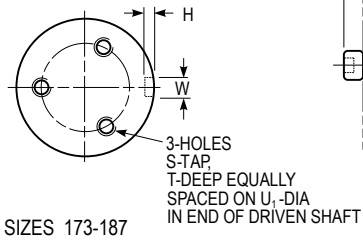
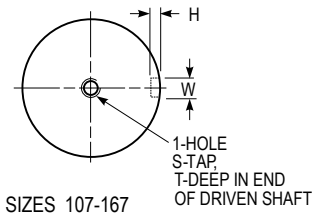
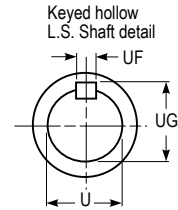
Hollow Low-Speed Shaft With Keeper Plate/Dimensions — Inches



Hollow Low-Speed Shaft Dimensions — Inches

DRIVE SIZE★	Shaft-Diameters					L3	L4	L5	L6	L7	Gap Between Shaft & Plate
	U*	UF*	UG	D2 +0.009 -0.000	D3						
107	3.7343 H7	0.9843 D10	3.957	4.528	5.118	2.362	4.567	2.598	11.024	13.622	0.197
117	4.3307 H7	1.1024 D10	4.587	5.118	5.906	2.559	4.213	2.047	13.543	15.591	0.197
127	4.7244 H7	1.2598 D10	5.020	5.906	6.693	2.756	4.685	2.362	14.724	17.087	0.197
133, 137	5.3150 H7	1.4173 D10	5.654	6.496	7.087	3.543	4.685	2.047	16.181	18.228	0.197
143, 145, 147	5.9055 H7	1.4173 D10	6.244	7.283	7.874	3.543	4.803	2.835	15.827	18.661	0.197
153, 155, 157	6.6929 H7	1.5748 D10	7.071	8.071	8.661	4.331	6.220	2.677	18.189	20.866	0.197
163, 165, 167	7.2835 H7	1.7717 D10	7.693	8.937	9.449	4.724	7.913	2.598	19.961	22.598	0.197
173, 175, 177	8.6614 H7	1.9685 D10	9.110	9.449	11.024	5.118	6.969	2.953	21.811	24.764	0.197
187	8.6614 H7	1.9685 D10	9.110	9.449	11.024	5.118	6.969	2.953	21.811	24.764	0.197

* See table 1 on page 98 for tolerance



Driven Shaft Recommended Dimensions – Inches

DRIVE SIZE★	Shaft			LD	LA	LB	LC	R	S	T	Thrust Plate (Keeper Plate)			Keyway			Key			
	D*	DA Min	Radius Max								Snap Ring • (mm)	P +0.000 -0.005	U ₁	Fastener Length	W*	H ■	L	A*	B*	C
107	3.7343 g6	4.724	0.118	10.827	3.150	1.575	0.984	1.870	M24 x 3.0	1.890	115	23.5	---	2.559	0.9843 N9	0.354	8.858	0.9843 h9	0.5512 h11	7.874
117	4.3307 g6	5.512	0.118	13.346	3.346	1.772	1.181	1.870	M24 x 3.0	1.890	130	23.5	---	2.559	1.1024 N9	0.394	10.945	1.1024 h9	0.6299 h11	9.843
127	4.7244 g6	5.906	0.118	14.528	3.543	1.929	1.575	1.870	M24 x 3.0	1.890	150	0.925	...	2.559	1.2598 N9	0.433	11.102	1.2598 h9	0.7087 h11	9.843
133, 137	5.3150 g6	6.496	0.118	15.984	4.213	2.244	1.772	1.870	M24 x 3.0	1.890	165	0.925	...	2.559	1.4173 N9	0.472	12.441	1.4173 h9	0.7874 h11	11.024
143, 145, 147	5.9055 g6	7.480	0.118	15.630	4.016	1.575	0.984	2.106	M30 x 3.5	2.362	185	0.925	...	2.756	1.4173 N9	0.472	14.016	1.4173 h9	0.7874 h11	12.598
153, 155, 157	6.6929 g6	8.268	0.118	17.992	5.118	3.150	1.181	2.067	M30 x 3.5	2.362	205	0.925	...	2.756	1.5748 N9	0.512	15.748	1.5748 h9	0.8661 h11	14.173
163, 165, 167	7.2835 g6	9.055	0.118	19.803	7.402	4.921	1.496	2.067	M30 x 3.5	2.362	227	0.886	...	2.756	1.7717 N9	0.591	17.520	1.7717 h9	0.8661 h11	15.748
173, 175, 177	8.6614 g6	10.433	0.118	21.614	8.661	3.622	1.575	2.657	M30 x 3.5	2.362	240	1.476	3.346	3.543	1.9685 N9	0.669	17.717	1.9685 h9	0.8661 h11	15.748
187	8.6614 g6	10.433	0.118	21.614	8.661	3.622	1.575	2.657	M30 x 3.5	2.362	240	1.476	3.346	3.543	1.9685 N9	0.669	17.717	1.9685 h9	0.8661 h11	15.748

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

● Rotor clip DHO series or equivalent.

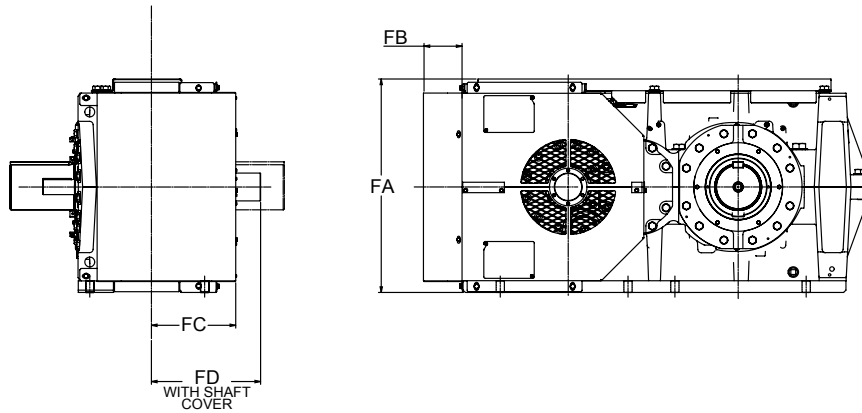
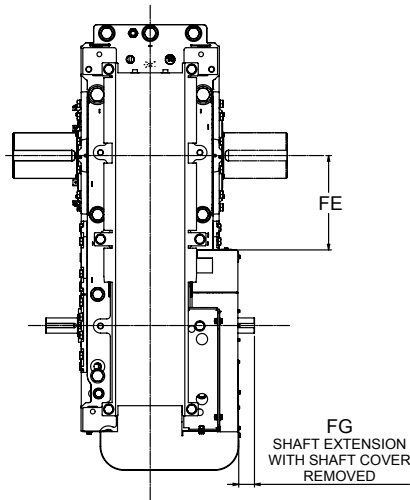
■ Keyway tolerance for Sizes 107 thru 127 +0.008 inch/-0.000 inch, for Sizes 133 thru 187 +0.012 inch/-0.000 inch.

* See table 1 on page 98 for tolerance

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Type VP2 & VP3 Sizes 107-187

Shaft-Driven Fan Clearance/Dimensions — Inches



VP2 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC	FD	FE	FG ‡
107	5.60 - 28.0	16.69	5.43	8.20	11.09	5.03	2.92
117	5.60 - 28.0	19.26	5.43	9.56	12.09	4.70	2.53
127	5.60 - 28.0	21.39	5.43	10.15	12.84	6.28	2.67
133 137	5.60 - 28.0	22.39	6.65	11.31	13.49	8.65	2.05
143 145 147	5.60 - 28.0	25.14	6.63	11.52	14.83	8.76	3.11
153 155 157	5.60 - 28.0	26.90	6.65	12.70	16.02	10.62	3.15
163 165 167	5.60-28.0	29.64	6.54	13.66	17.83	12.87	3.85
173 175 177	5.00-25.0	35.67	6.61	15.12	19.06	14.49	3.86
187	5.60-28.0	35.67	6.61	15.12	19.06	15.47	3.86

‡ Allows 0.12" clearance from shroud.

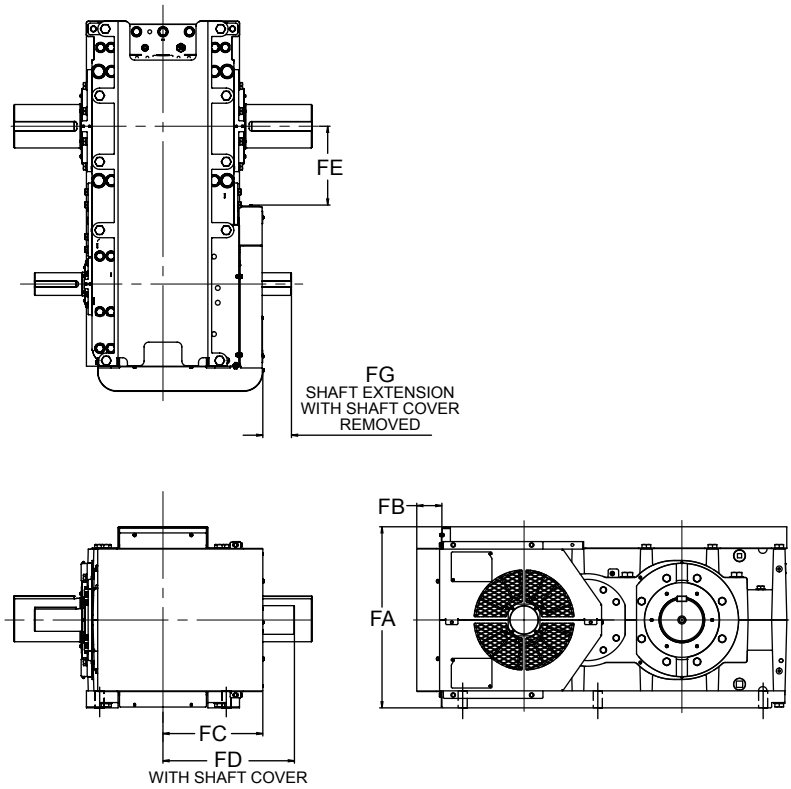
VP3 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC	FD	FE	FG ‡
107	31.5-160	16.69	5.43	7.94	9.13	5.03	1.21
117	31.5-160	19.26	5.43	8.93	10.12	6.28	1.18
127	31.5-160	21.39	5.39	9.78	11.64	7.66	1.84
133 137	31.5-160	22.39	6.65	10.85	13.02	8.65	1.34
143 145 147	31.5-160	25.14	6.65	11.52	14.83	8.65	1.93
153 155 157	31.5-160	26.90	6.65	12.70	16.02	10.62	1.97
163 165 167	31.5-160	29.64	6.54	13.07	15.55	16.02	2.13
173 175 177	28.0-140	35.67	6.61	15.12	19.06	14.49	2.68
187	31.5-160	35.67	6.61	15.12	19.06	15.47	2.68

‡ Allows 0.12" clearance from shroud.

Type VP2 & VP3 Sizes 193-227

Shaft-Driven Fan Clearance/Dimensions — Inches



VP2 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC	FD	FE	FG ‡
193 195 197	5.00 - 25.0	34.63	5.23	20.81	27.39	14.85	5.99
203 207	5.60 - 28.0	34.63	5.23	20.81	27.39	16.42	5.99
213 215 217	5.00 - 25.0	40.50	5.70	23.42	30.99	20.16	6.72
223 225 227	5.60 - 28.0	40.50	5.70	23.42	30.99	22.13	6.72

‡ Allows 0.12" clearance from shroud.

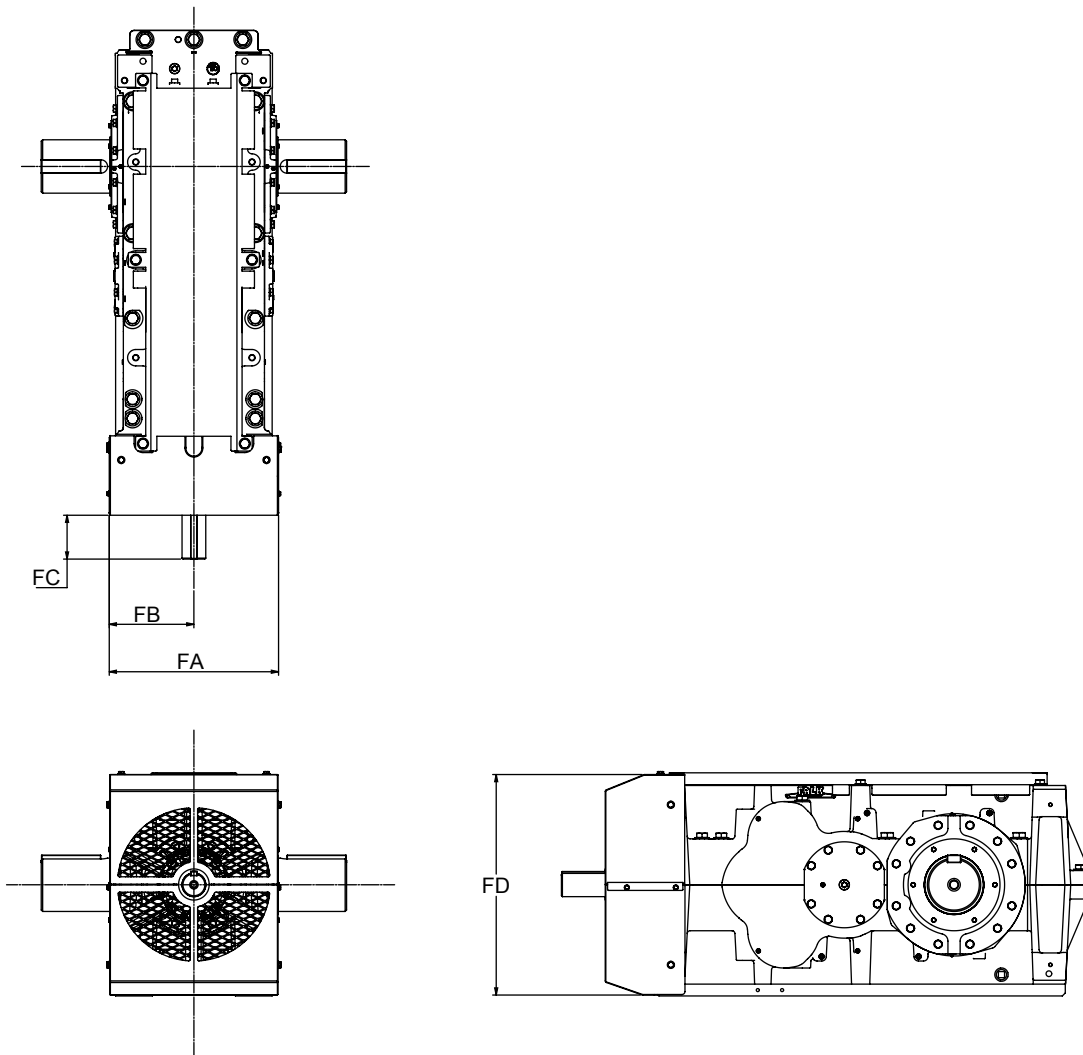
VP3 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC	FD	FE	FG ‡
193 195 197	28.0 - 140	34.63	5.99	19.02	25.59	26.16	4.63
203 207	31.5 - 160	34.63	5.99	19.02	25.59	28.13	4.63
213 215 217	28.0 - 140	40.50	6.46	20.79	27.01	30.77	5.81
223 225 227	31.5 - 160	40.50	6.46	20.79	27.01	32.74	5.81

‡ Allows 0.12" clearance from shroud.

Type VR2 & VR3 Sizes 107-187

Shaft-Driven Fan Clearance/Dimensions — Inches



VR2 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC‡	FD
107	7.10-12.5	16.69	8.35	2.86	16.96
117	7.10-12.5	18.19	9.09	3.02	18.85
127	7.10-12.5	20.05	10.02	4.29	20.93
133 137	7.10-12.5	18.19	9.09	4.61	21.93
143 145 147	7.10-12.5	20.28	10.14	4.45	24.70
153 155 157	7.10-12.5	22.67	11.33	4.45	26.27
163 165 167	7.10-12.5	22.32	11.18	5.70	29.29
173 175 177	6.30-11.2	29.21	14.61	6.74	35.20
187	7.10-12.5	29.21	14.61	6.74	35.20

‡ Allows 0.12" clearance from shroud.

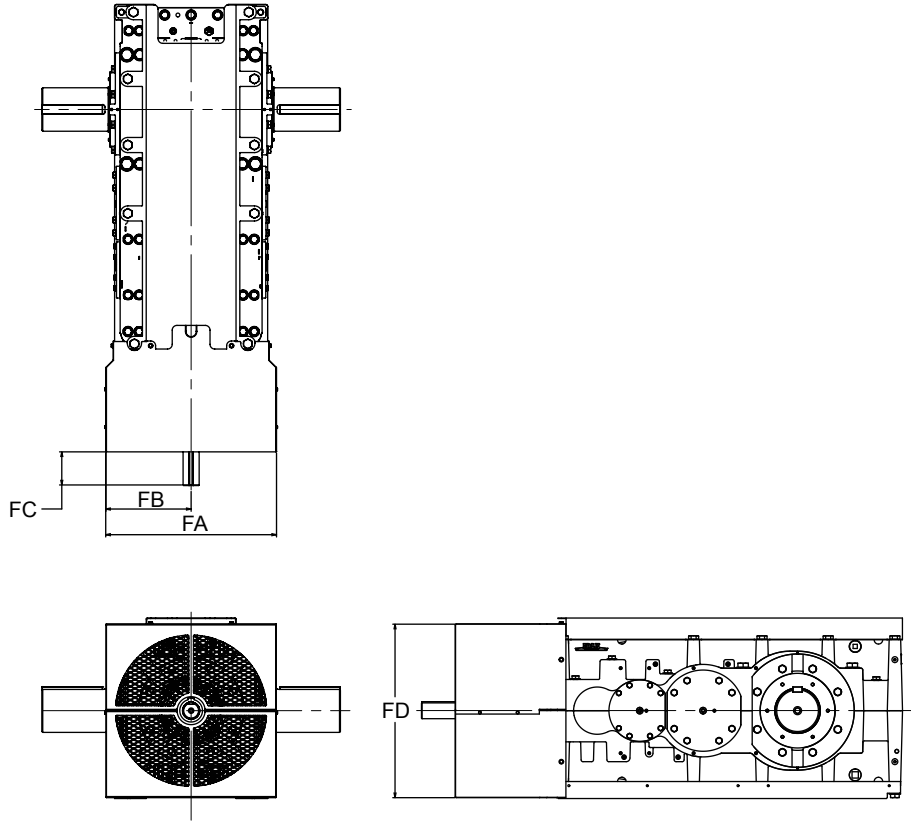
VR3 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC‡	FD
107	14.0-125	16.69	8.35	2.86	16.96
117	14.0-125	18.19	9.09	3.02	18.85
127	14.0-125	20.05	10.02	4.29	20.93
133 137	14.0-125	18.19	9.09	4.61	21.93
143 145 147	14.0-125	20.28	10.14	4.45	24.70
153 155 157	14.0-125	22.67	11.33	4.45	26.27
163 165 167	14.0-125	22.32	11.18	5.70	29.29
173 175 177	12.5-112	29.21	14.61	6.74	35.20
187	14.0-125	29.21	14.61	6.74	35.20

‡ Allows 0.12" clearance from shroud.

Type VR3 Sizes 193-227

Shaft-Driven Fan Clearance/Dimensions — Inches



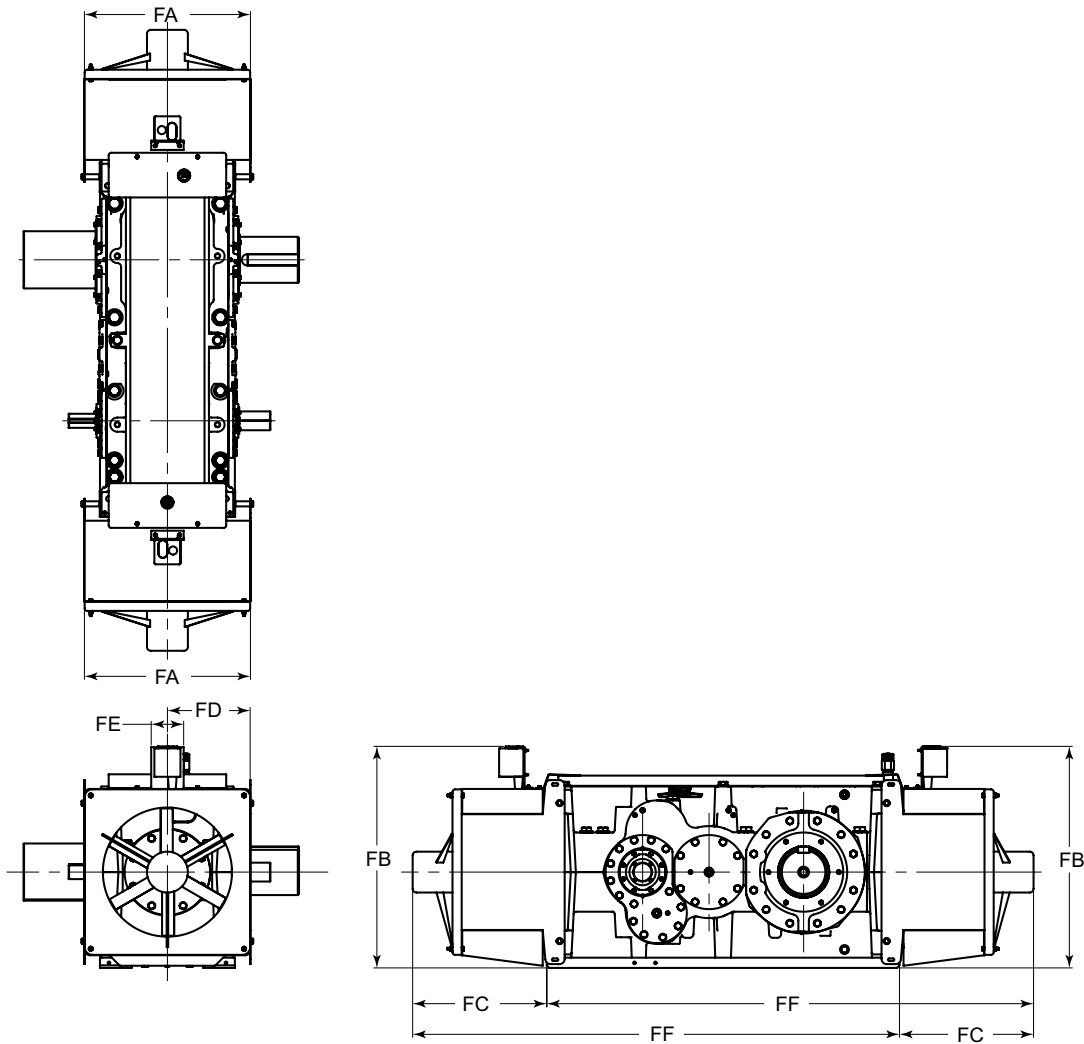
VR3 Shaft-Driven Fan Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA	FB	FC ‡	FD
193 195 197	8.00 - 112	35.43	17.72	6.90	36.22
203 207	9.00 - 125	35.43	17.72	6.90	36.22
213 215 217	8.00 - 112	39.17	19.59	6.77	42.95
223 225 227	9.00 - 125	39.17	19.59	6.77	42.95

‡ Allows 0.12" clearance from shroud.

Type VP1, VP2 & VP3 Sizes 107-187

Electric Fan Clearance/Dimensions — Inches



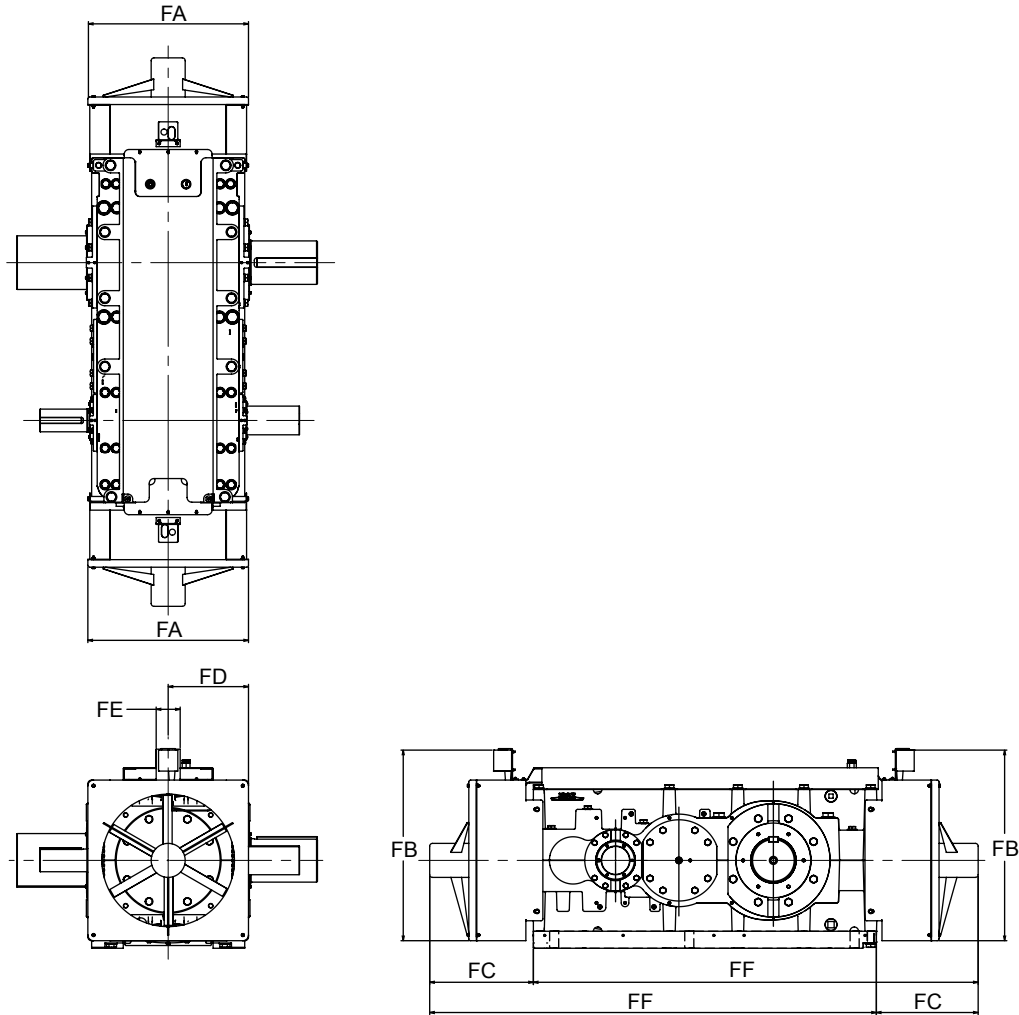
NOTE: ELECTRIC FAN CAN BE MOUNTED ON H.S. END OR L.S. END OF DRIVE

All Reductions and Ratios — Inches

DRIVE SIZE	FA	FB	FC	FD	FE	FF
107	17.55	24.31	16.73	8.78	5.00	45.24
117	19.52	25.45	17.20	9.76	5.00	49.01
127	19.52	26.63	18.02	9.76	5.00	53.37
133 137	21.50	28.21	18.69	10.75	5.00	57.06
143 145 147	21.50	29.59	19.69	10.75	5.00	62.07
153 155 157	23.46	31.38	21.00	11.73	5.00	68.09
163 165 167	25.63	34.13	20.67	12.83	5.00	75.00
173 175 177	28.58	40.16	24.69	14.29	5.00	88.98
187	28.58	40.16	24.69	14.29	5.00	88.98

Type VP1, VP2 & VP3 Sizes 193-227

Electric Fan Clearance/Dimensions — Inches



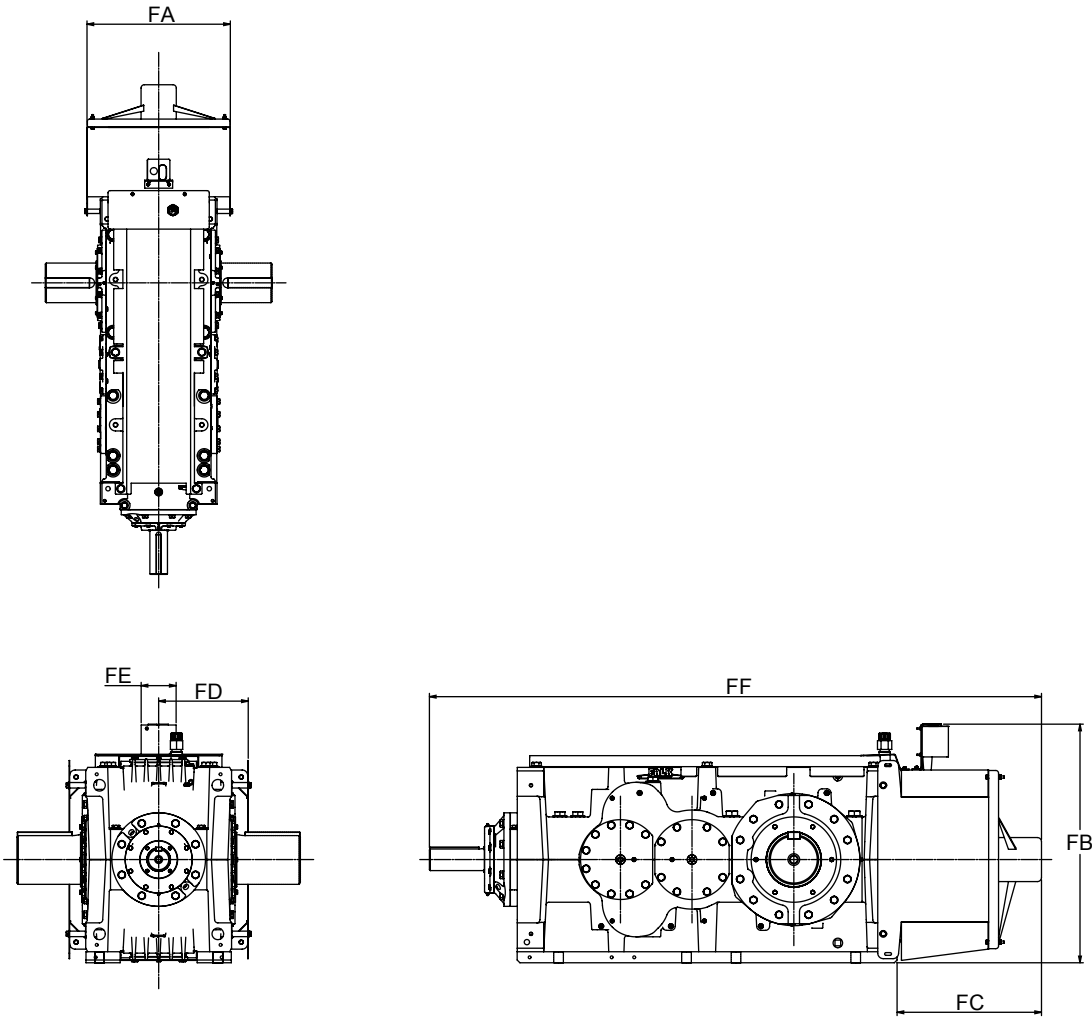
NOTE: ELECTRIC FAN CAN BE MOUNTED ON H.S. END OR L.S. END OF DRIVE

All Reductions and Ratios — Inches

DRIVE SIZE	FA	FB	FC	FD	FE	FF
193 195 197	33.46	41.48	21.20	16.73	5.00	93.05
203 207	33.46	41.48	21.20	16.73	5.00	93.05
213 215 217	33.46	46.40	20.93	16.73	5.00	105.14
223 225 227	33.46	46.40	20.93	16.73	5.00	105.14

Type VR2 & VR3 All Reductions — Sizes 107-187

Electric Fan Clearance/Dimensions — Inches



VR2 All Reductions and Ratios — Inches

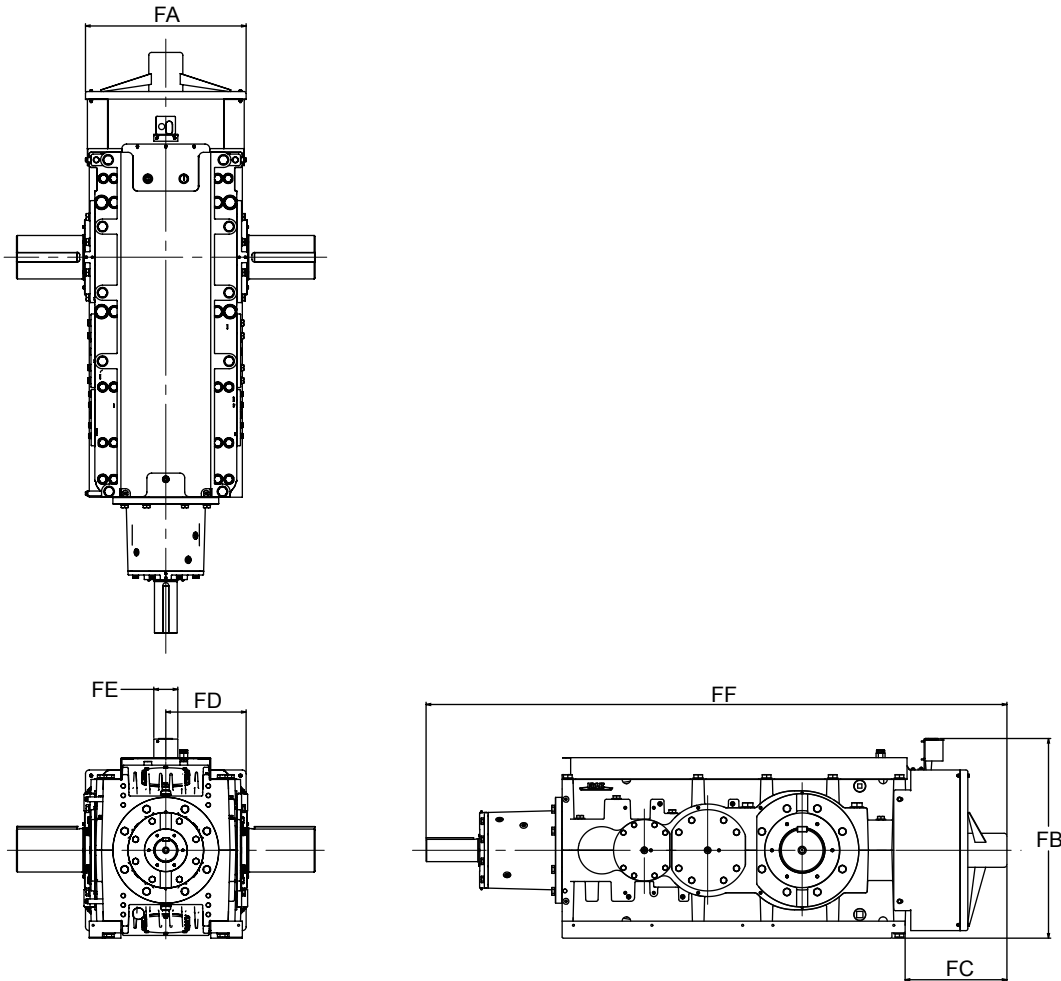
DRIVE SIZE	FA	FB	FC	FD	FE	FF
107	17.55	24.31	16.73	8.78	5.00	55.16
117	19.52	25.45	17.20	9.76	5.00	59.51
127	19.52	26.63	18.02	9.76	5.00	64.22
133 137	21.50	28.21	18.69	10.75	5.00	72.24
143 145 147	21.50	29.59	19.69	10.75	5.00	76.41
153 155 157	23.46	31.38	21.00	11.73	5.00	81.64
163 165 167	25.63	34.13	20.67	12.83	5.00	87.58
173 175 177	28.58	40.16	24.69	14.29	5.00	103.82
187	28.58	40.16	24.69	14.29	5.00	103.82

VR3 All Reductions and Ratios — Inches

DRIVE SIZE	FA	FB	FC	FD	FE	FF
107	17.55	24.31	16.73	8.78	5.00	55.16
117	19.52	25.45	17.20	9.76	5.00	59.51
127	19.52	26.63	18.02	9.76	5.00	64.22
133 137	21.50	28.21	18.69	10.75	5.00	72.24
143 145 147	21.50	29.59	19.69	10.75	5.00	76.41
153 155 157	23.46	31.38	21.00	11.73	5.00	81.64
163 165 167	25.63	34.13	20.67	12.83	5.00	87.58
173 175 177	28.58	40.16	24.69	14.29	5.00	103.82
187	28.58	40.16	24.69	14.29	5.00	103.82

Type VR3 All Reductions — Sizes 193-227

Electric Fan Clearance/Dimensions — Inches



All Reductions and Ratios — Inches

DRIVE SIZE	FA	FB	FC	FD	FE	FF
193 195 197	33.46	41.48	21.20	16.73	5.00	121.00
203 207	33.46	41.48	21.20	16.73	5.00	121.00
213 215 217	33.46	46.40	20.93	16.73	5.00	130.06
223 225 227	33.46	46.40	20.93	16.73	5.00	130.06

Type VP1

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nom Ratio	REDUCER 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					
1750	1.25	300PA	300PA	305PA	310PA	Cooler Not Available	310PA	Cooler Not Available	630PA	630PA	640PA	Cooler Not Available	Cooler Not Available	Cooler Not Available					
	1.40					310PA		320PA				640PA	350PA	350BPA					
	1.60				305PA				620PA						640PA	350PA			
	1.80							300PA				610PA	630PA	640PA					
	2.00								610PA						630PA	640PA			
	2.24											610PA	630PA	640PA					
	2.50								610PA						630PA	640PA			
	2.80							610PA				630PA	640PA						
	3.15				610PA				630PA					640PA					
	3.55					610PA		630PA				640PA							
4.00	610PA	630PA	640PA																
4.50				610PA	630PA	640PA													
5.00	610PA	630PA	640PA																
1.25				300PA	300PA	305PA	310PA	310PA	320PA	630PA	630PA	640PA	640PA	640PA	640PA	350PA			
1.40	305PA	640PA	640PA			640PA													
1.60																	300PA	620PA	630PA	640PA
1.80	610PA	620PA	630PA			640PA													
2.00																		610PA	630PA	640PA
2.24		610PA	630PA			640PA													
2.50																		610PA	630PA	640PA
2.80	610PA	630PA	640PA																
3.15						610PA											630PA	640PA	
3.55	610PA	630PA	640PA																
4.00				610PA	630PA	640PA													
4.50	610PA	630PA	640PA																
5.00				610PA	630PA	640PA													
1.25	300PA	300PA	300PA				305PA	310PA	610PA	320PA	620PA	630PA	640PA	640PA	640PA	640PA	350PA		
1.40				610PA	620PA	630PA												640PA	
1.60																			610PA	610PA	620PA	630PA
1.80				610PA	610PA	620PA												630PA	
2.00																				610PA	620PA	630PA
2.24					610PA	620PA												630PA	
2.50																				610PA	620PA	630PA
2.80				610PA	620PA	630PA													
3.15																		610PA	620PA	630PA
3.55				610PA	620PA	630PA													
4.00	610PA	620PA	630PA																
4.50				610PA	620PA	630PA													
5.00	610PA	620PA	630PA																
1.25				300PA	300PA	300PA	605PA	305PA	610PA	610PA	610PA	620PA	630PA	640PA	640PA	640PA	640PA		
1.40	610PA	620PA	630PA															640PA	
1.60																			610PA	610PA	620PA	630PA
1.80	610PA	610PA	620PA															630PA	
2.00																				610PA	620PA	630PA
2.24		610PA	620PA															630PA	
2.50																				610PA	620PA	630PA
2.80	610PA	620PA	630PA																
3.15																		610PA	620PA	630PA
3.55	610PA	620PA	630PA																
4.00				610PA	620PA	630PA													
4.50	610PA	620PA	630PA																
5.00				610PA	620PA	630PA													

Minimum mechanical service factor = 1.25
 Maximum ambient temperature = 110°F
 Maximum altitude = 10,000 ft
 For input speeds below 1170 rpm, use 1170 rpm selection

Type VP2

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nominal Ratio	REDUCER SIZE												
		107	117	127	133 137	143 145 147	153 155 157	163 165 167	173 173 177	187	193 195 197	203 207	213 215 217	223 225 227
1750	5.00													
	5.60													
	6.30					610PA		620PA	630PA	630PA	640PA	640PA	350BPA	350BPA
	7.10													350PA
	8.00						610PA		310PA					
	9.00			605PA										
	10.0				605PA									
	11.2	300PA	300PA						620PA	620PA	630PA	630PA	640PA	640PA
	12.5					605PA								
	14.0													
	16.0													
	18.0													
	20.0			300PA			605PA		610PA					630PA
	22.4									610PA	610PA	620PA		630PA
25.0				300PA							620PA			
28.0														
1430	5.00										640PA		340PA	
	5.60													
	6.30							620PA				640PA		350PA
	7.10								610PA					
	8.00									620PA				
	9.00			605PA						620PA	630PA		640PA	
	10.0				605PA									640PA
	11.2	300PA	300PA			605PA						630PA		
	12.5													
	14.0													
	16.0													
	18.0						605PA		610PA					
	20.0			300PA						610PA	620PA		630PA	630PA
	22.4				300PA							620PA		
25.0														
28.0														
1170	5.00													
	5.60													
	6.30							610PA		620PA			640PA	
	7.10										630PA	630PA	640PA	640PA
	8.00									620PA				
	9.00			605PA										
	10.0				605PA									
	11.2	300PA	300PA			605PA							630PA	
	12.5													
	14.0													
	16.0													
	18.0													
	20.0						605PA		610PA					
	22.4			300PA						610PA	620PA	620PA		630PA
25.0		605PA		300PA								620PA		
28.0														

Not applicable.

Minimum mechanical service factor = 1.25
 Maximum ambient temperature = 110°F
 Maximum altitude = 10,000 ft
 For input speeds below 1170 rpm, use 1170 rpm selection

Type VP3

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nominal Ratio	REDUCER 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
1750	28.0													
	31.5													
	35.5													
	40.0													
	45.0		300PA										630PA	630PA
	50.0													
	56.0													
	63.0													
	71.0	300PA		605PA	605PA	605PA	605PA	610PA	610PA	610PA	620PA	620PA		
	80.0													
	90.0												620PA	620PA
	100		605PA											
	112													
	125													
140														
160														
1430	28.0													
	31.5													
	35.5												630PA	630PA
	40.0													
	45.0													
	50.0													
	56.0													
	63.0													
	71.0	300PA	605PA	605PA	605PA	605PA	605PA	610PA	610PA	610PA	620PA	620PA	620PA	620PA
	80.0													
	90.0													
	100													620PA
	112													
	125													
140														
160														
1170	28.0													
	31.5													
	35.5													630PA
	40.0													
	45.0													
	50.0													
	56.0													
	63.0													
	71.0	300PA	605PA	605PA	605PA	605PA	605PA	610PA	610PA	610PA	620PA	620PA	620PA	620PA
	80.0													
	90.0													
	100													
	112													
	125													
140														
160														

Not applicable.

Minimum mechanical service factor = 1.25
 Maximum ambient temperature = 110°F
 Maximum altitude = 10,000 ft
 For input speeds below 1170 rpm, use 1170 rpm selection

Type VR2

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nominal Ratio	REDUCER SIZE									
		107	117	127	133 137	143 145 147	153 155 157	163 165 167	173 175 177	187	
1750	6.30										
	7.10	300PA	300PA	605PA	605PA	605PA	610PA	310PA	630PA	630PA	
	8.00					610PA					
	9.00					605PA					
	10.0			300PA							
	11.2										
	12.5					610PA					
1430	6.30										
	7.10	300PA	300PA	605PA	605PA	605PA	610PA	310PA	630PA	630PA	
	8.00										300PA
	9.00										
	10.0		605PA	620PA					620PA		
	11.2										
	12.5		605PA								
1170	6.30										
	7.10	300PA	300PA	605PA	605PA	605PA	610PA	310PA	630PA	630PA	
	8.00										
	9.00		605PA								620PA
	10.0										
	11.2										
	12.5								620PA		

Not applicable.

Minimum mechanical service factor = 1.25

Maximum ambient temperature = 110°F

Maximum altitude = 10,000 ft

For input speeds below 1170 rpm, use 1170 rpm selection

Type VR3

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nominal Ratio	REDUCER 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
1750	8.00													
	9.00													
	10.0													
	11.2													
	12.5													
	14.0													
	16.0													
	18.0													
	20.0													
	22.4													
	25.0													
	28.0													
	31.5													
	35.5													
	40.0													
	45.0	300PA												
	50.0													
	56.0													
	63.0													
	71.0													
80.0														
90.0														
100														
112														
125														
1430	8.00													
	9.00													
	10.0													
	11.2													
	12.5													
	14.0													
	16.0													
	18.0													
	20.0													
	22.4													
	25.0													
	28.0													
	31.5													
	35.5													
	40.0													
	45.0	300PA												
	50.0													
	56.0													
	63.0													
	71.0													
80.0														
90.0														
100														
112														
125														

Not applicable.

Minimum mechanical service factor = 1.25
 Maximum ambient temperature = 110°F
 Maximum altitude = 10,000 ft
 For input speeds below 1170 rpm, use 1170 rpm selection

Type VR3

Pump and Cooler Selections, Oil-to-Air Coolers, Reducer Mounted

Input rpm	Nominal Ratio	REDUCER 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
1170	8.00													
	9.00													
	10.0													
	11.2													
	12.5													
	14.0													
	16.0		300PA				610PA		620PA					
	18.0													
	20.0													
	22.4													
	25.0													
	28.0													
	31.5													
	35.5													
	40.0		300PA		605PA	605PA	605PA							
	45.0													
	50.0		605PA				605PA		610PA	610PA		620PA		
	56.0													
	63.0													
	71.0													
80.0														
90.0														
100														
112														
125														

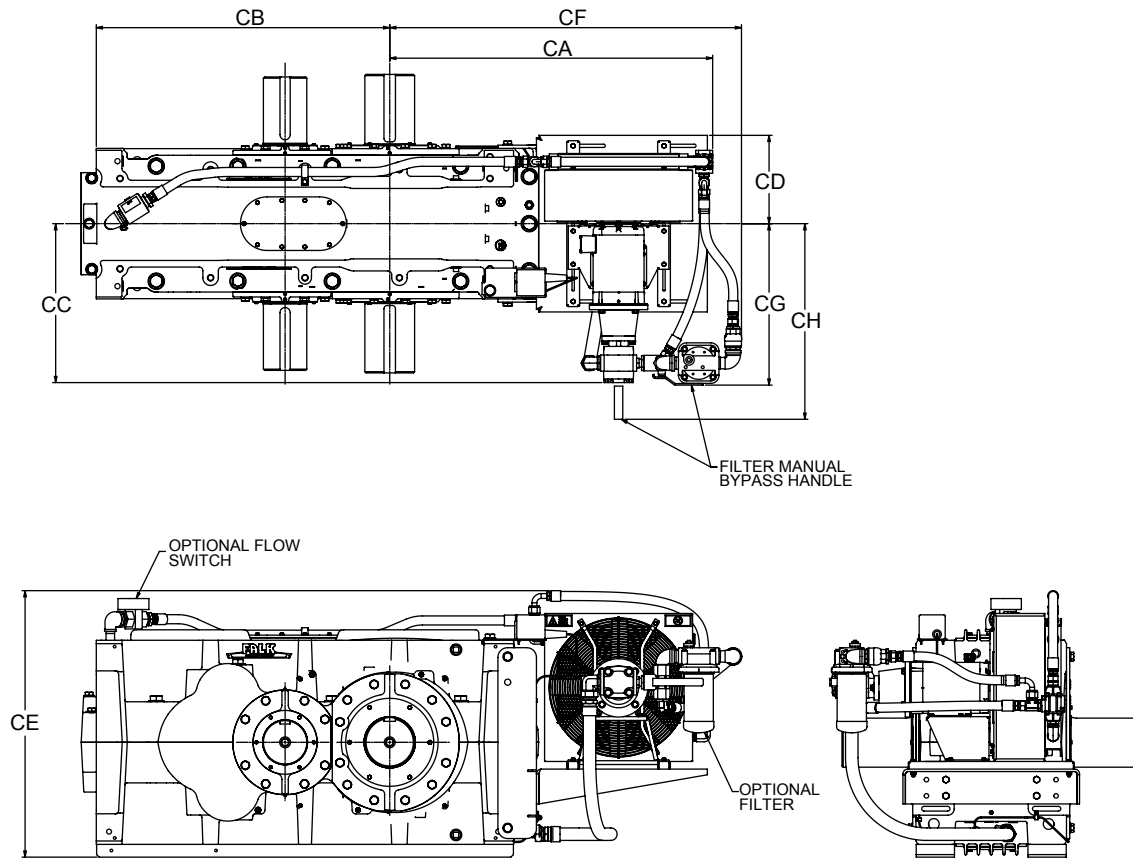
Not applicable.

Minimum mechanical service factor = 1.25
 Maximum ambient temperature = 110°F
 Maximum altitude = 10,000 ft
 For input speeds below 1170 rpm, use 1170 rpm selection

Type VP1, VP2, VP3, VR2 & VR3 600PA Sizes 117-187

Type PA Pump and Cooler Clearance/Dimensions — Inches

Contact Factory for 300PA Dimensions — Inches

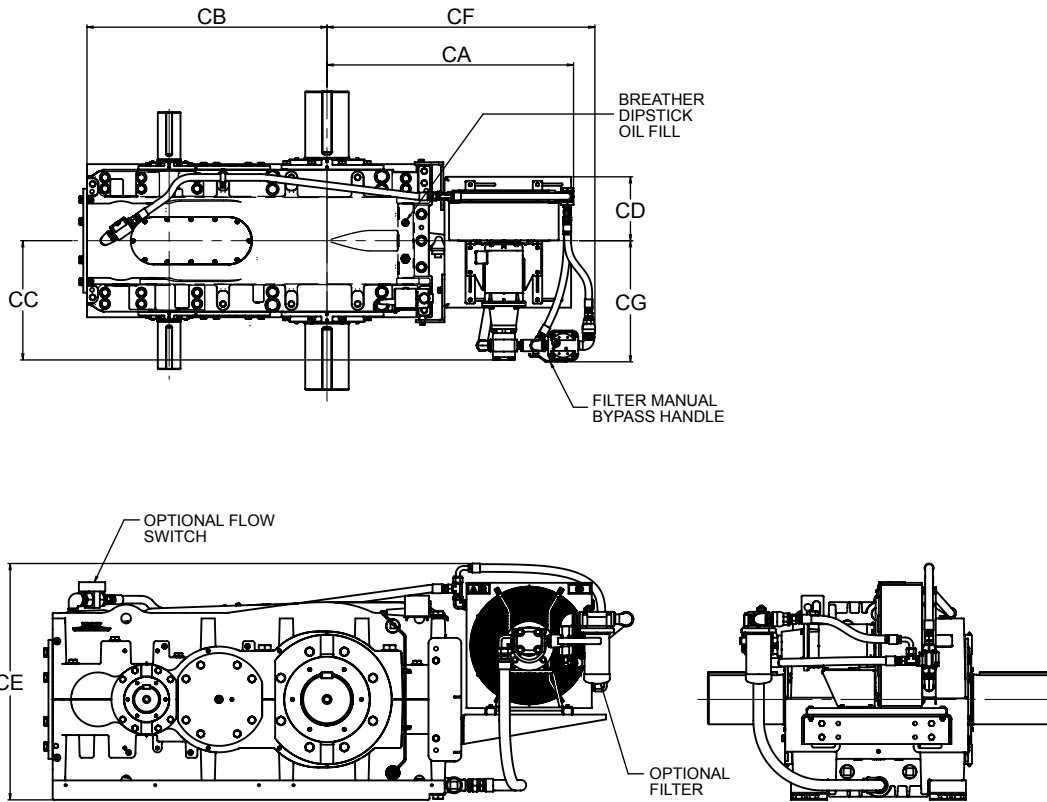


DRIVE SIZE	Pump & Cooler	CA	CB	CC	CD	CE	Optional Filter		
							CF	CG	CH
117	605PA	36.29	22.68	24.27	12.37	31.62	38.94	---	29.59
	605PA	35.00	25.59	24.00	12.76	32.17	37.65	---	29.20
127	610PA	35.15	25.59	25.31	12.38	35.20	36.15	---	30.51
	605PA	36.02	27.95	24.39	12.37	34.19	38.76	---	29.59
133 137	610PA	36.02	27.95	25.31	12.37	36.63	36.76	---	30.52
	620PA	41.02	27.95	22.14	14.20	39.70	45.99	24.33	---
	605PA	36.85	31.50	24.39	12.37	33.57	39.58	---	29.59
143 145 147	610PA	36.85	31.50	25.31	12.37	36.02	37.59	---	30.52
	620PA	41.85	31.50	22.72	13.63	39.08	46.82	24.91	---
	630PA	45.85	31.50	25.48	14.37	45.72	52.65	27.67	---
153 155 157	605PA	38.15	35.24	24.39	12.37	32.31	40.88	---	29.59
	610PA	38.15	35.24	24.11	12.37	34.75	38.89	---	30.51
	620PA	43.15	35.24	22.72	13.63	38.63	48.10	24.91	---
	630PA	47.15	35.24	25.48	14.37	45.27	53.94	27.67	---
163 165 167	610PA	41.83	39.57	24.43	12.38	37.18	41.65	---	30.51
	620PA	45.44	39.57	24.52	13.63	40.25	49.67	24.91	---
	630PA	50.71	39.57	27.41	14.38	46.89	54.94	27.67	---
173 175 177	610PA	46.29	45.28	24.43	12.38	38.07	46.37	---	30.51
	620PA	49.76	45.28	24.52	13.63	41.12	54.28	24.91	---
	630PA	55.10	45.28	27.41	14.38	47.77	59.57	27.67	---
187	610PA	47.28	46.26	24.43	12.38	38.07	47.35	---	30.51
	620PA	48.78	46.26	24.52	13.63	41.12	53.29	24.91	---
	630PA	54.12	46.26	27.41	14.38	47.77	58.59	27.67	---

Type VP1, VP2, VP3, & VR3 600PA Sizes 193-227

Type PA Pump and Cooler Clearance/Dimensions — Inches

Contact Factory for 300PA Dimensions — Inches



DRIVE SIZE	Pump & Cooler	CA	CB	CC	CD	CE	Optional Filter	
							CF	CG
193 195 197	620PA	52.94	48.43	24.84	13.31	43.09	57.39	25.23
	630PA	58.82	48.43	27.42	14.36	52.28	63.23	27.69
	640PA	71.88	48.43	32.68	20.20	65.14	69.77	32.82
203 207	620PA	51.37	50.00	24.84	13.31	43.09	55.82	25.23
	630PA	57.25	50.00	27.42	14.36	52.28	61.65	27.69
	640PA	70.31	50.00	32.68	20.20	65.14	68.20	32.82
213 215 217	620PA	57.09	56.65	24.54	13.61	46.43	61.53	24.93
	630PA	62.96	56.65	27.42	14.36	55.63	67.36	27.69
	640PA	76.02	56.65	32.89	19.98	67.87	73.91	33.04
223 225 227	620PA	55.12	58.62	24.54	13.61	46.43	59.56	24.93
	630PA	60.99	58.62	27.42	14.36	55.63	65.39	27.69
	640PA	74.05	58.62	32.89	19.98	67.87	71.94	33.04

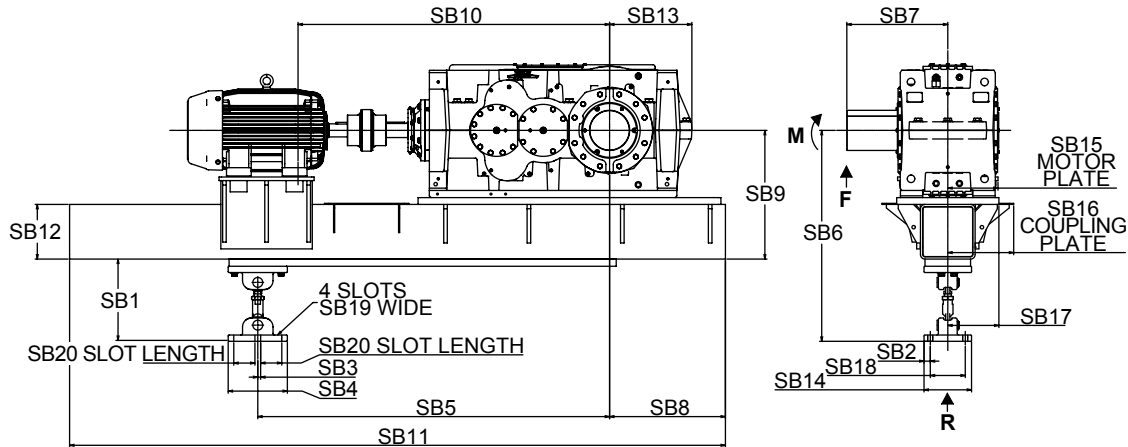
Type VRC2 & VRC3 Sizes 107-187

Swing Base and Reaction Loads/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGE 206-208, 210, 212 & 214

STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 VRC Drives (Solid LS Shaft)
 NEMA or IEC Motors to limits shown below
 Falk Steelflex (T10), Falk Wrapflex (R10), or Falk Fluid Couplings

Consult the Factory for non-standard arrangements.



Dimensions - Inches

DRIVE SIZE	SB1		SB2	SB3	SB4	SB5	SB6		SB7	SB8	SB9	SB10	SB11	SB12	SB13	SB14	SB15	SB16	SB17	SB18	SB19	SB20
	Min	Max					Min	Max														
107	13.86	14.41	1.38	0.63	12.99	57.24	*	*	11.61	14.65	*	*	*	6.00	10.27	10.43	*	*	7.28	7.68	1.10	4.65
117	13.86	14.41	1.38	0.63	12.99	59.72	*	*	13.98	12.17	*	*	*	6.00	11.25	10.43	*	*	7.28	7.68	1.10	4.65
127	16.18	16.73	1.38	0.63	12.99	61.65	*	*	14.69	10.24	*	*	*	6.00	12.02	10.43	*	*	7.28	7.68	1.10	4.65
133, 137	16.77	17.32	1.38	0.63	12.99	66.97	*	*	11.93	18.50	*	*	*	10.00	13.06	10.43	*	*	9.25	7.68	1.10	4.65
143, 145, 147	16.77	17.32	1.38	0.63	12.99	66.18	40.43	40.98	11.81	15.55	23.66	*	*	10.00	13.91	10.43	*	*	9.25	7.68	1.10	4.65
153, 155, 157	17.60	18.50	1.38	0.63	12.99	64.80	42.05	42.95	12.91	12.99	24.45	*	*	10.00	15.32	10.43	*	*	9.25	7.68	1.10	4.65
163, 165, 167	17.60	18.50	1.38	0.63	12.99	77.24	45.86	46.76	20.28	25.43	28.27	*	*	12.00	18.07	10.43	*	*	11.22	7.68	1.10	4.65
173, 175, 177	18.78	19.40	1.38	0.63	12.99	100.00	49.99	50.61	23.03	18.10	31.22	*	*	12.00	22.99	10.43	*	*	11.22	7.68	1.10	4.65
187	18.78	19.40	1.38	0.63	12.99	101.00	49.99	50.61	23.03	17.13	31.22	*	*	12.00	21.99	10.43	*	*	11.22	7.68	1.10	4.65

* Consult Factory.

Loads Generated/Torque Arm Forces, Shaft Forces & Motor Limits

DRIVE SIZE★	Maximum Torque Arm Force †	Maximum Loads at End of Shaft †		IEC Motors ‡		NEMA Motors ‡	
		Radial Force	Bending Force	Frame	Weight (kg)	Frame	Weight (lb)
		R (lb)	F (lb)	M (lb-in)			
107	3,600	3,400	39,400	200L-225M	529-728	324T-365T	565-875
117	5,900	4,600	64,400	200L-280M	529-1455	324T-444T	565-1650
127	7,600	6,400	93,200	200L-280M	529-1455	324T-447T	565-2000
133, 137	10,500	8,900	147,300	160M-280M	238-1455	254T-449T	250-2300
143, 145, 147	13,800	11,900	201,200	160L-315L	287-2646	284T-449T	335-2300
153, 155, 157	19,000	16,300	292,500	180M-315L	364-2646	286T-449T	410-2300
163, 165, 167	24,200	20,900	424,900	200M-355L	529-4409	324T-449T	565-2300
173, 175, 177	30,600	22,600	519,400	315S-400L	1830-6614	404T-449T	1100-2300
187	31,600	25,300	583,100	315S-400L	1830-6614	404T-449T	1100-2300

★ 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.

† 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.

‡ Refer to the Factory for larger motors or other input speeds.

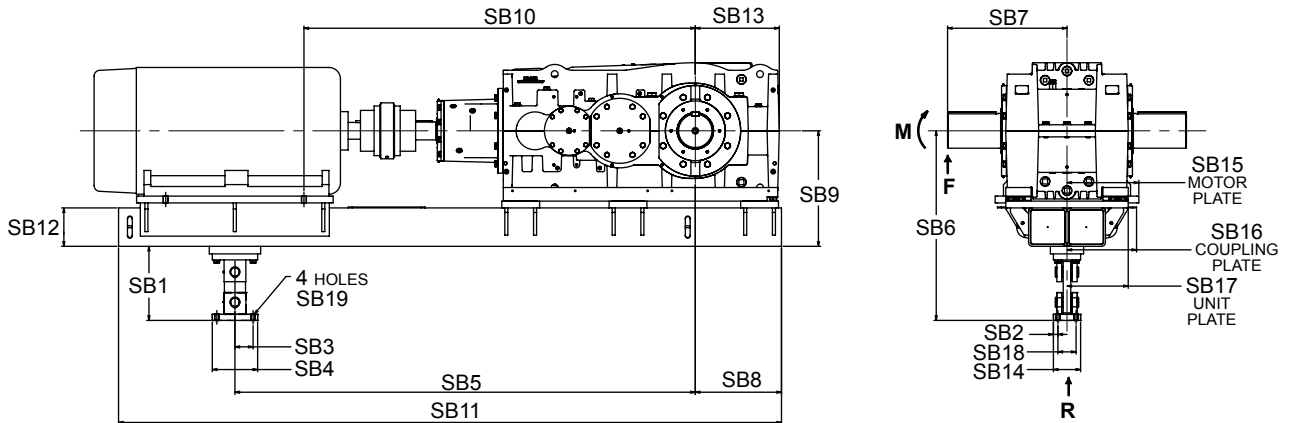
Type VRC3 Sizes 193-227

Swing Base and Reaction Loads/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGE 211, 213 & 215

STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 VRC Drives (Solid LS Shaft)
 NEMA or IEC Motors to limits shown below
 Falk Steelflex (T10), Falk Wrapflex (R10), or Falk Fluid Couplings

Consult the Factory for non-standard arrangements.



Dimensions - Inches

DRIVE SIZE	SB1	SB2	SB3	SB4	SB5	SB6	SB7	SB8	SB9	SB10	SB11	SB12	SB13	SB14	SB15	SB16	SB17	SB18	SB19
193, 195, 197	19.29	1.18	4.72	11.81	*	49.37	31.10	24.02	30.08	*	*	10.00	23.44	7.09	*	*	18.50	4.72	1.10
203, 207	19.29	1.18	4.72	11.81	*	49.37	31.10	22.44	30.08	*	*	10.00	21.87	7.09	*	*	18.50	4.72	1.10
213, 215, 217	19.29	1.18	4.72	11.81	*	54.92	35.24	27.56	35.63	*	*	12.00	27.55	7.09	*	*	18.50	4.72	1.10
223, 225, 227	19.29	1.18	4.72	11.81	*	54.92	35.24	25.59	35.63	*	*	12.00	25.58	7.09	*	*	18.50	4.72	1.10

* Consult Factory.

Loads Generated/Torque Arm Forces, Shaft Forces & Motor Limits

DRIVE SIZE★	Maximum Torque Arm Force †	Maximum Loads at End of Shaft †		Motor Limits at 1750 rpm ‡ Maximum	
		Radial Force	Bending Force	Power (hp)	Weight (lbs)
		R (lb)	M (lb-in)		
193, 195, 197	33,800	28,300	880,300	1750	13,700
203, 207	35,600	30,400	944,000	1750	13,700
213, 215, 217	44,100	36,200	1,280,000	2250	19,700
223, 225, 227	49,600	42,800	1,510,000	2250	19,700

★ 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.

† 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.

‡ Refer to the Factory for larger motors or other input speeds.

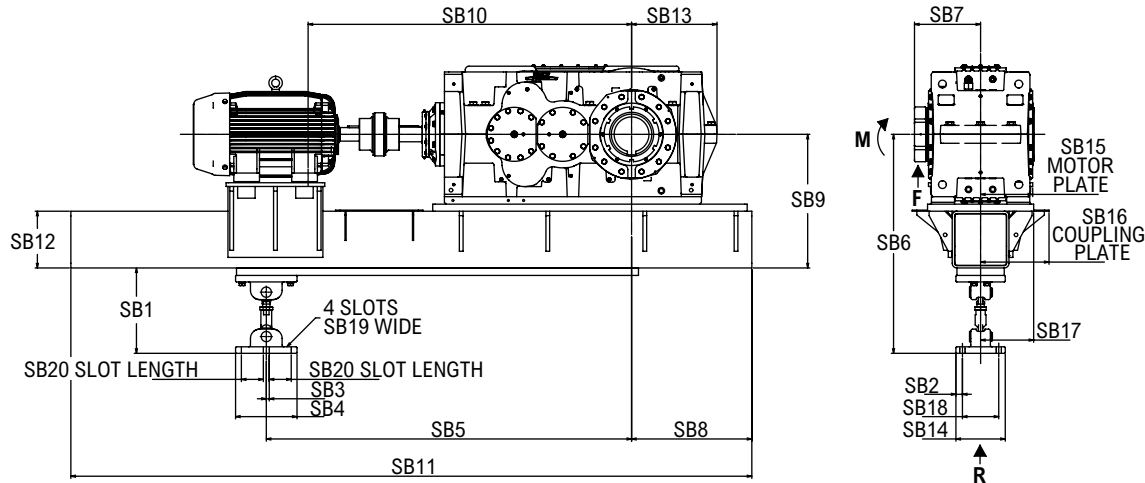
Type VRT2 & VRT3 Sizes 107-187

Swing Base and Reaction Loads/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGE 216-221

STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 VRT Drives (with TA Bushing)
 NEMA or IEC Motors to limits shown below
 Falk Steelflex® (T10), Falk Wrapflex® (R10), or Falk Fluid Couplings

Consult the Factory for non-standard arrangements.



Dimensions - Inches

DRIVE SIZE	SB1		SB2	SB3	SB4	SB5	SB6		SB7	SB8	SB9	SB10	SB11	SB12	SB13	SB14	SB15	SB16	SB17	SB18	SB19	SB20
	Min	Max					Min	Max														
107	13.86	14.41	1.38	0.63	12.99	57.24	*	*	9.53	14.65	*	*	*	6.00	10.27	10.43	*	*	7.28	7.68	1.10	4.65
117	13.86	14.41	1.38	0.63	12.99	59.72	*	*	10.51	12.17	*	*	*	6.00	11.25	10.43	*	*	7.28	7.68	1.10	4.65
127	16.18	16.73	1.38	0.63	12.99	61.65	*	*	10.94	10.24	*	*	*	6.00	12.02	10.43	*	*	7.28	7.68	1.10	4.65
133, 137	16.77	17.32	1.38	0.63	12.99	66.97	*	*	11.93	18.50	*	*	*	10.00	13.06	10.43	*	*	9.25	7.68	1.10	4.65
143, 145, 147	16.77	17.32	1.38	0.63	12.99	66.18	40.43	40.98	11.81	15.55	23.66	*	*	10.00	13.91	10.43	*	*	9.25	7.68	1.10	4.65
153, 155, 157	17.60	18.50	1.38	0.63	12.99	64.80	42.05	42.95	12.91	12.99	24.45	*	*	10.00	15.32	10.43	*	*	9.25	7.68	1.10	4.65
163, 165, 167	17.60	18.50	1.38	0.63	12.99	77.24	45.86	46.76	13.98	25.43	28.26	*	*	12.00	18.07	10.43	*	*	11.22	7.68	1.10	4.65
173, 175, 177	18.78	19.40	1.38	0.63	12.99	100.00	49.99	50.61	13.03	18.10	31.21	*	*	12.00	22.98	10.43	*	*	11.22	7.68	1.10	4.65
187	18.78	19.40	1.38	0.63	12.99	101.00	49.99	50.61	13.03	17.13	31.21	*	*	12.00	21.99	10.43	*	*	11.22	7.68	1.10	4.65

* Consult Factory.

Loads Generated★/Torque Arm Forces, Shaft Forces & Motor Limits

DRIVE SIZE	Maximum Torque Arm Force †	Maximum Loads at Face of Bushing Nut †		IEC Motors ‡		NEMA Motors ‡	
		Radial Force	Bending Force	Frame	Weight (lb)	Frame	Weight (lb)
		R (lb)	F (lb)	M (lb-in)			
107	3,600	3,300	31,700	200L-225M	529-728	324T-365T	565-875
117	5,900	4,500	47,600	200L-280M	529-1455	324T-444T	565-1650
127	7,600	6,300	66,000	200L-280M	529-1455	324T-447T	565-2000
133, 137	10,500	8,700	95,100	160M-280M	238-1455	254T-449T	250-2300
143, 145, 147	13,800	11,700	138,300	160L-315L	287-2646	284T-449T	335-2300
153, 155, 157	19,000	16,000	210,700	180M-315L	364-2646	286T-449T	410-2300
163, 165, 167	24,200	20,700	288,800	200M-355L	529-4409	324T-449T	565-2300
173, 175, 177	30,600	21,900	296,000	315S-400L	1830-6614	404T-449T	1100-2300
187	31,600	25,000	326,100	315S-400L	1830-6614	404T-449T	1100-2300

★ 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.

† 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.

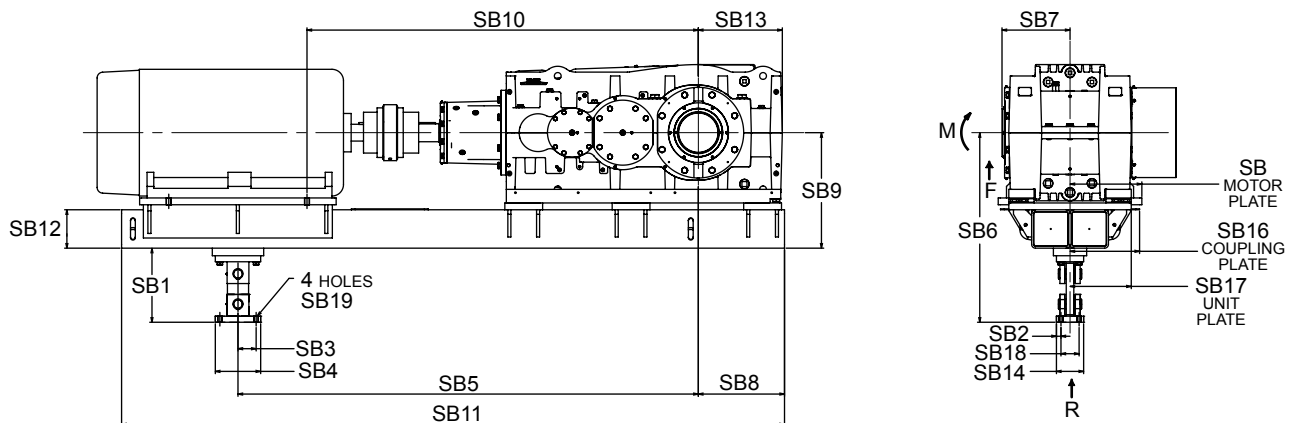
‡ Refer to the factory for larger motors or other input speeds.

Type VRJ3 Sizes 203-207 & 223-227

Swing Base and Reaction Loads/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGE 227, 229 & 231

STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 VRT Drives (with TA Bushing)
 NEMA or IEC Motors to limits shown below
 Falk Steelflex® (T10), Falk Wrapflex® (R10), or Falk Fluid Couplings
 Consult the Factory for non-standard arrangements.



Dimensions - Inches

DRIVE SIZE	SB1	SB2	SB3	SB4	SB5	SB6	SB7	SB8	SB9	SB10	SB11	SB12	SB13	SB14	SB15	SB16	SB17	SB18	SB19
203, 207	19.29	1.18	4.72	11.81	*	49.37	17.72	22.44	30.08	*	*	10.00	21.87	7.09	*	*	18.50	4.72	1.10
223, 225, 227	19.29	1.18	4.72	11.81	*	54.92	19.69	25.59	35.63	*	*	12.00	25.58	7.09	*	*	18.50	4.72	1.10

* Consult Factory.

Loads Generated/Torque Arm Forces, Shaft Forces & Motor Limits

DRIVE SIZE★	Maximum Torque Arm Force †	Maximum Loads at End of Shaft †		NEMA Motors ‡	
		Radial Force	Bending Force	Power (hp)	Weight (lbs)
		R (lb)	M (lb-in)		
203, 207	35,600	28,800	511,000	1750	13,700
223, 225, 227	49,600	41,000	807,000	2250	19,700

★ 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.

† 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.

‡ Refer to the factory for larger motors or other input speeds.

Type VRC/VRT Double & Triple Reduction Sizes 117-187

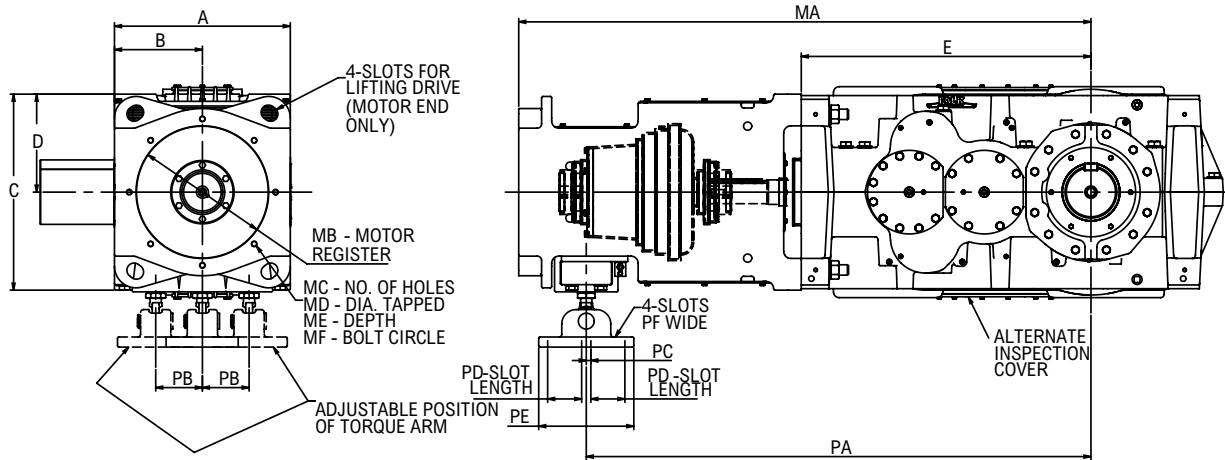
Alignment-Free Drive/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGES 206-208, 210, 212, 214 & 216-221

Refer to Pages 238-239 for standard bushing bores.

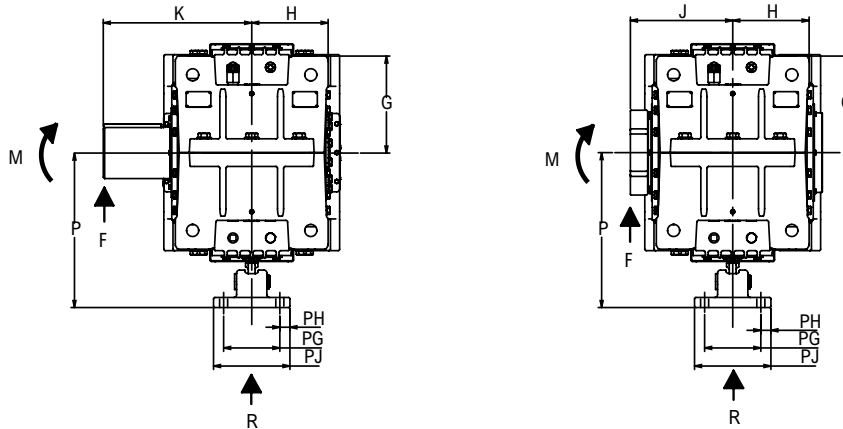
STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 NEMA TD Flange, NEMA TC C-FACE or IEC B5 Flange Motors as shown below
 Falk True Torque® Fluid (HFDD-20 or 28) Couplings
 Also Falk Lifelign® (G52 Floating Shaft), Steelflex® (T50 Floating Shaft),
 and Thomas® (SN Floating Shaft) couplings

Consult the Factory for non-standard arrangements and non-Falk-branded couplings.



SOLID LOW SPEED SHAFT, VRC

HOLLOW LOW SPEED SHAFT, VRT



Loads Generated/Torque Arm Forces, Low-Speed Shaft Forces

DRIVE SIZE	Max Torque Arm Force R (lb)	Max Loads at Face of Bushing Nut, VRT †		Max Loads at End of Shaft, VRC †		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
117	6,800	4,400	40,600	4,400	61,400	364T - 445T	225S - 280S	---	---
127	9,700	6,700	64,800	6,400	94,400	364T - 447T	225S - 280S	---	---
133, 137	12,400	8,600	94,000	10,800	179,200	365T - 499T	225M - 315L	---	---
143, 145, 147	17,300	11,400	134,900	14,200	240,500	365T - 499T	225M - 355S	5011, 588	585, 586, 587SDZ
153, 155, 157	24,800	14,400	189,500	14,600	262,000	404T - 449T	250M - 355L	5011, 588, 5809	585, 586, 587SDZ
163, 165, 167	29,400	19,000	267,000	19,400	393,000	404T - 449T	280S - 355L	5011, 588, 5810	585, 586, 587SDZ
173, 175, 177	32,800	22,000	286,000	22,500	519,000	444T - 449T	280M - 355L	5011, 588, 5810	585, 586, 587SDZ
187	34,700	26,000	337,000	26,500	610,000	444T - 449T	280M - 355L	5011, 588, 5810	585, 586, 587SDZ

★ 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.

† 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/VRT Double & Triple Reduction Sizes 117-187

Alignment-Free Drive/Dimensions — Inches

Fluid Coupling

COUPLING SIZE*	DRIVE SIZE★	A	B	C	D	P		PB	PC	PD	PE	PF	PG	PH	PJ
						Min	Max								
1420HFDD	127	24.02	12.01	26.77	13.39	20.67	21.57	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43
	133, 137														
	143, 145, 147														
	153, 155, 157														
1480HFDD	127	26.38	13.19	31.89	15.94	21.57	22.48	7.56	0.63	4.65	12.99	1.10	7.68	1.38	10.43
	133, 137														
	143, 145, 147														
	153, 155, 157														
1584HFDD	143, 145, 147	31.10	15.55	31.89	15.94	24.53	25.31	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43
	153, 155, 157														
	163, 165, 167														
	173, 175, 177														
1660HFDD	153, 155, 157	35.04	17.52	35.83	17.91	26.50	27.28	10.94	0.63	4.65	12.99	1.10	7.68	1.38	10.43
	163, 165, 167														
	173, 175, 177														
	187														

★ 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 Factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

* Fluid coupling size selected based on motor power. See Falk selection guide, True Torque fluid couplings, 521-110 for information

DRIVE SIZE★	E	G	H	J	K	Motor Adapter						PA - HS Coupling Size and Type							
						MA	MB	MC	MD	ME	MF	1420HFDD		1480HFDD		1584HFDD		1660HFDD	
												Type 20	Type 28	Type 20	Type 28	Type 20	Type 28	Type 20	Type 28
117	22.68	8.31	7.20	10.51	13.98	‡	†	8	†	†	†	50.31	50.55	---	---	---	---	---	---
127	25.59	9.45	8.11	10.94	14.69	‡	†	8	†	†	†	53.19	53.43	55.37	55.43	---	---	---	---
133, 137	27.95	9.65	8.37	11.93	16.61	‡	†	8	†	†	†	57.24	57.48	58.94	59.25	---	---	---	---
143, 145, 147	31.50	10.63	8.46	11.81	16.93	‡	†	8	†	†	†	59.57	59.80	61.46	61.57	64.45	64.49	---	---
153, 155, 157	35.24	11.61	9.65	12.91	17.91	‡	†	8	†	†	†	64.61	64.84	66.30	66.61	68.23	68.78	72.40	72.40
163, 165, 167	39.57	13.19	10.43	13.98	20.28	‡	†	8	†	†	†	68.94	69.17	70.63	70.94	72.56	73.11	76.50	76.50
173, 175, 177	45.28	15.75	11.61	13.03	23.03	‡	†	8	†	†	†	---	---	78.43	78.74	80.35	80.91	83.54	83.54
187	46.26	15.75	11.61	13.03	23.03	‡	†	8	†	†	†	---	---	79.41	79.72	81.34	81.89	84.53	84.53

★ 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 Factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

† Dimensions vary with motor selections. Certified prints will be provided after receipt or order.

‡ "MA" dimension typically varies from 200% to 250% of "E" dimension.

VFD Floating Shaft Coupling

DRIVE SIZE★	Motor Frame	A	B	C	D	P		PA	PB	PC	PD	PE	PF	PG	PH	PJ	E	G	H	J	K	Motor Adapter					
						Min	Max															MA	MB	MC	MD	ME	MF
117	ALL	24.02	12.01	26.77	13.39	20.67	21.57	50.31	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	22.68	8.31	7.20	10.51	13.98	‡	†	8	†	†	†
127	ALL	24.02	12.01	26.77	13.39	20.67	21.57	53.19	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	25.59	9.45	8.11	10.94	14.69	‡	†	8	†	†	†
133 137	ALL	24.02	12.01	26.77	13.39	20.67	21.57	57.24	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	27.95	11.02	8.37	11.93	16.61	‡	†	8	†	†	†
143 145 147	◆	24.02	12.01	26.77	13.39	20.67	21.57	59.57	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	31.50	12.40	8.46	11.81	16.93	‡	†	8	†	†	†
	■	31.10	15.55	31.89	15.94	24.53	25.31	63.19	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43											
153 155 157	◆	24.02	12.01	26.77	13.39	20.67	21.57	64.61	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	35.24	13.19	9.65	13.19	17.91	‡	†	8	†	†	†
	■	31.10	15.55	31.89	15.94	24.53	25.31	68.23	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43											
163 165 167	◆	24.02	12.01	26.77	13.39	20.67	21.57	68.94	6.38	0.63	4.65	12.99	1.10	7.68	1.38	10.43	39.57	14.76	10.43	13.98	20.28	‡	†	8	†	†	†
	■	31.10	15.55	31.89	15.94	24.53	25.31	72.56	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43											
173 175 177	ALL	31.10	15.55	31.89	15.94	24.53	25.31	80.35	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43	45.28	17.72	11.61	13.03	23.03	‡	†	8	†	†	†
187	ALL	31.10	15.55	31.89	15.94	24.53	25.31	81.34	9.02	0.63	4.65	12.99	1.10	7.68	1.38	10.43	46.26	17.72	11.61	13.03	23.03	‡	†	8	†	†	†

★ 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 Factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

◆ NEMA 449T (up to and including 300 HP) or IEC 280M and smaller motors.

■ NEMA 449T (larger than 300 HP) or IEC 315S and larger motors.

† Dimensions vary with motor selections. Certified prints will be provided after receipt or order.

‡ "MA" dimension typically varies from 200% to 250% of "E" dimension.

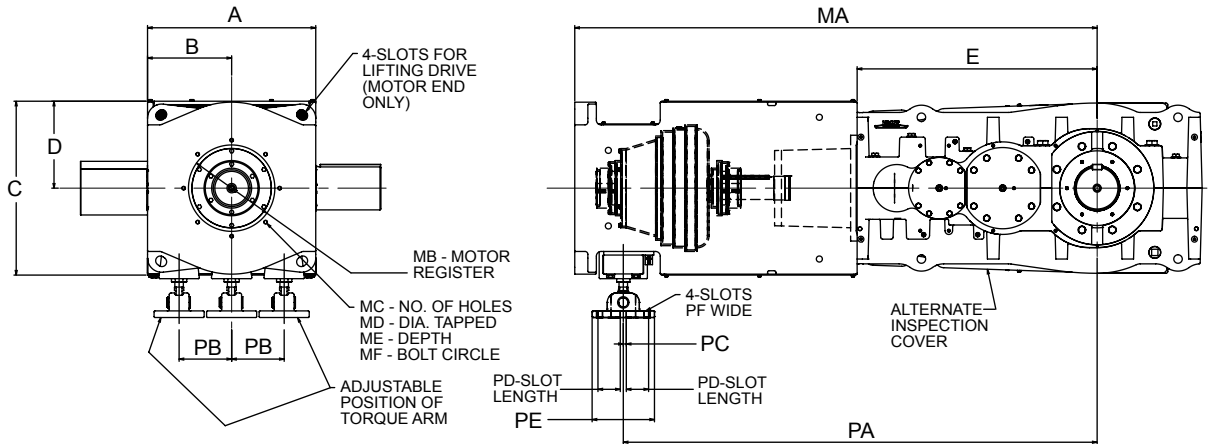
Type VRC/VRJ Triple Reduction Sizes 193-207

Alignment-Free Drive/Dimensions — Inches

DRIVE DIMENSIONS - REFER TO PAGES 211, 215, 217, 227 & 231

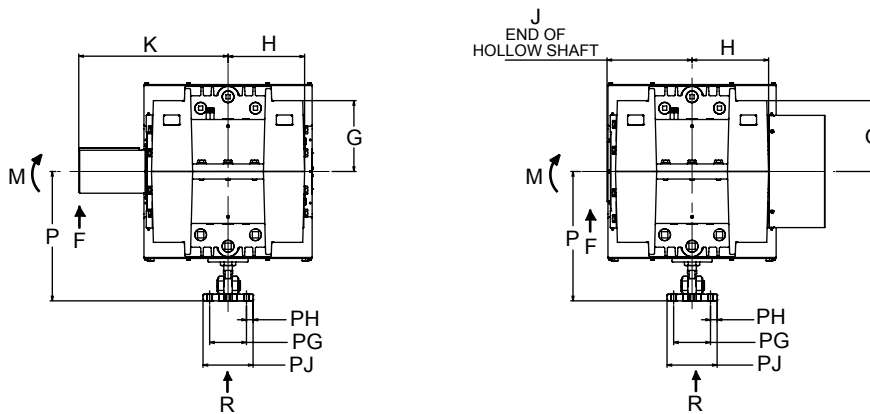
STANDARD ARRANGEMENTS AVAILABLE TO SUIT:
 NEMA TD Flange, NEMA TC C-FACE or IEC B5 Flange Motors as shown below
 Falk True Torque® Fluid (HFDD-20 or 28) Couplings
 Also Falk Lifelign® (G52 Floating Shaft), Steelflex® (T50 Floating Shaft),
 and Thomas® (SN Floating Shaft) couplings

Consult the Factory for non-standard arrangements and non-Falk-branded couplings.



SOLID LOW SPEED SHAFT, VRC

HOLLOW LOW SPEED SHAFT, VRJ



Loads Generated/Torque Arm Forces, Low-Speed Shaft Forces

DRIVE SIZE	Max Torque Arm Force R (lb)	Max Loads at Face of Bushing Nut, VRT †		Max Loads at End of Shaft, VRC †		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
193, 195, 197	36,200	...	...	32,400	1,009,000	447T - 449T	315S - 355L	5011, 588, 5810	585, 586, 587SDZ
203, 207	43,800	37,600	666,000	38,100	1,185,000	447T - 449T	315S - 355L	5011, 588, 5810	585, 586, 587SDZ

★ 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.

† 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 Sizes 193-207

Alignment-Free Drive/Dimensions — Inches

Fluid Coupling

COUPLING SIZE*	DRIVE SIZE★	A	B	C	D	P		PB	PC	PD	PE	PF	PG	PH	PJ
						Min	Max								
1584HFDD	193, 195, 197 203, 207	35.04	17.52	36.22	18.11	26.50	27.40	10.94	0.63	4.65	12.99	1.10	7.68	1.38	10.43
1660HFDD	193, 195, 197 203, 207	35.04	17.52	36.22	18.11	26.50	27.40	10.94	0.63	4.65	12.99	1.10	7.68	1.38	10.43

★ 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 Factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

* Fluid coupling size selected based on motor power. See Falk selection guide, True Torque fluid couplings, 521-110 for information

DRIVE SIZE★	E	G	H	J	K	Motor Adapter						PA - HS Coupling Size and Type			
						MA	MB	MC	MD	ME	MF	1584HFDD		1660HFDD	
												Type 20	Type 28	Type 20	Type 28
193, 195, 197	48.43	14.76	15.95	-	31.10	‡	†	8	†	†	†	97.05	97.60	100.20	100.20
203, 207	50.00	14.76	15.95	17.72	31.10	‡	†	8	†	†	†	98.62	99.17	101.77	101.77

★ 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 Factory for other mountings. Dimensions are for reference only and are subject to change without notice unless certified.

† Dimensions vary with motor selections. Certified prints will be provided after receipt or order.

‡ "MA" dimension typically varies from 200% to 250% of "E" dimension.

VFD Floating Shaft Coupling

DRIVE SIZE★	Motor Frame	A	B	C	D	P		PA	PB	PC	PD	PE	PF	PG	PH	PJ	E	G	H	J	K	Motor Adapter					
						Min	Max															MA	MB	MC	MD	ME	MF
193, 195, 197	ALL	35.04	17.52	36.22	18.11	26.50	27.40	97.05	10.94	0.63	4.65	12.99	1.10	7.68	1.38	10.43	48.43	14.76	15.95	...	31.10	‡	†	8	†	†	†
203, 207	ALL	35.04	17.52	36.22	18.11	26.50	27.40	98.62	10.94	0.63	4.65	12.99	1.10	7.68	1.38	10.43	50.00	14.76	15.95	17.72	31.10	‡	†	8	†	†	†

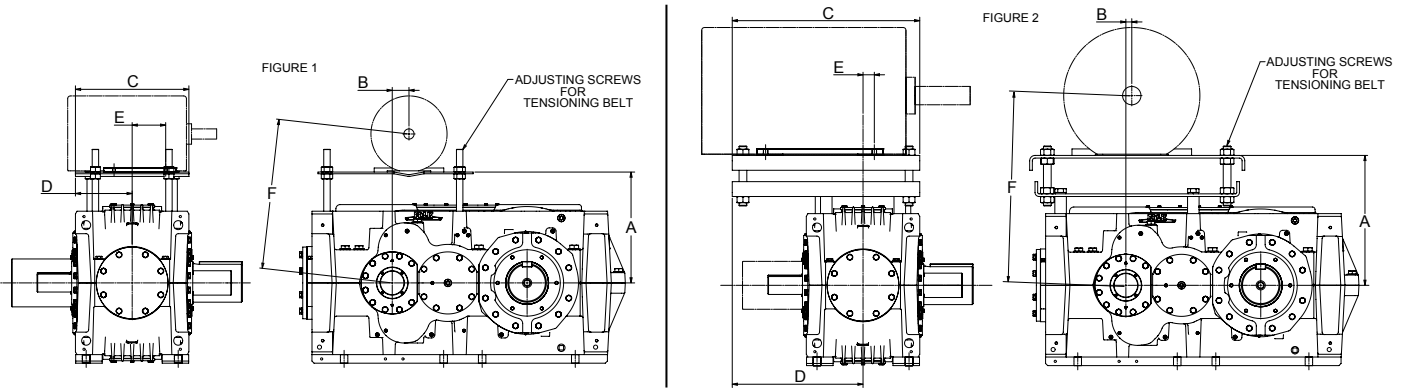
★ Drawings are representative of this series of drives and do not agree in exact detail for all sizes. Gear drives are for horizontal, shaft-mounted operation unless specifically stated otherwise. Consult Factory for other mountings. Dimensions are for reference only and are subject to change without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

† Dimensions vary with motor selections. Certified prints will be provided after receipt or order.

‡ "MA" dimension typically varies from 200% to 250% of "E" dimension.

Type VP Double & Triple Reduction Sizes 107-167

Motor Mounts — Top Mount/Dimensions — Inches



DRIVE SIZE★	140T-250T					280T-400T				
	A		B	C	D	A		B	C	D
	Min	Max				Min	Max			
107	9.67	15.35	2.76	17.36	11.26	12.49	17.24	0.31	25.59	19.49
117	10.62	16.29	1.97	17.36	10.28	13.67	18.26	0.88	25.59	18.50

DRIVE SIZE★	180T					210T					250T - 320T					360T - 440T				
	A		B	C	D	A		B	C	D	A		B	C	D	A		B	C	D
	Min	Max				Min	Max				Min	Max				Min	Max			
127	11.76	16.61	3.30	21.22	13.54	11.76	16.61	3.30	21.22	13.54	11.76	16.61	3.30	21.22	13.54	14.65	19.37	2.76	34.59	26.89
133-137	---	---	---	---	---	11.96	16.81	4.73	21.42	13.03	11.96	16.81	4.73	21.42	13.03	14.88	19.72	4.72	34.59	26.22
143-147	---	---	---	---	---	---	---	---	---	---	12.94	17.8	4.14	21.42	12.91	15.87	20.71	4.13	34.59	26.06
153-157	---	---	---	---	---	---	---	---	---	---	16.97	21.98	4.92	21.42	11.77	16.85	21.69	4.92	34.59	24.92
163-167	---	---	---	---	---	---	---	---	---	---	15.24	19.29	1.10	20.87	10.43	20.94	24.45	1.09	34.49	24.76

DRIVE SIZE★	140T				180T				210T				250T			280T				320T				
	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.
		Min	Max			Min	Max			Min	Max			Max	Min			Max	Min			Max		
107	4.75	13.46	19.05	1	3.75	14.44	20.04	1	2.96	15.18	20.78	1	2.25	16.16	21.78	1	---	---	---	---	---	---	---	---
117	5.73	14.26	19.89	1	4.73	15.25	20.89	1	3.94	15.99	21.63	1	3.23	16.98	22.63	1	---	---	---	---	---	---	---	---
127	---	---	---	---	5.32	16.59	21.37	1	4.57	17.33	22.11	1	3.82	18.31	23.10	1	3.32	19.05	23.84	1	2.82	20.03	24.83	1
133, 137	---	---	---	---	---	---	---	---	5.26	17.84	22.56	1	4.51	18.81	23.54	1	4.00	19.54	24.28	1	3.51	20.51	25.26	1
143, 145, 147	---	---	---	---	---	---	---	---	---	---	---	---	4.65	19.68	24.45	1	4.14	20.37	25.14	1	6.65	21.35	26.12	1
153, 155, 157	---	---	---	---	---	---	---	---	---	---	---	---	5.79	23.78	28.70	1	5.28	24.47	29.39	1	4.80	25.45	30.38	1
163, 165, 167	---	---	---	---	---	---	---	---	---	---	---	---	6.68	21.51	25.57	1	6.18	22.26	26.31	1	5.68	23.26	27.31	1

DRIVE SIZE★	280T				320T				360T				400T				440T			
	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.	E ‡	F †		Fig. No.
		Min	Max			Min	Max			Min	Max			Max	Min			Max	Min		Max
107	1.74	19.49	24.40	2	1.25	20.49	25.24	2	0.62	21.49	26.24	2	0.13	22.49	27.24	2	---	---	---	---
117	2.72	20.65	25.28	2	2.23	21.65	26.28	2	1.61	22.65	27.28	2	0.85	23.64	28.28	2	---	---	---	---
127	---	---	---	---	---	---	---	---	2.22	23.81	28.50	2	1.47	24.81	29.50	2	0.59	23.80	30.50	2
133, 137	---	---	---	---	---	---	---	---	2.89	24.33	29.09	2	2.13	25.31	30.08	2	1.26	26.30	31.10	2
143, 145, 147	---	---	---	---	---	---	---	---	3.02	25.20	30.00	2	2.27	26.18	30.98	2	1.40	27.17	31.97	2
153, 155, 157	---	---	---	---	---	---	---	---	4.17	26.30	31.10	2	3.43	27.28	32.09	2	2.52	28.27	33.07	2
163, 165, 167	---	---	---	---	---	---	---	---	5.04	29.96	33.47	2	4.30	30.94	34.45	2	3.43	31.93	35.43	2

★ Dimensions are for reference only and are subject to change without notice unless certified. Due to interferences, Falk cannot offer a drive with both shaft fan and backstop.

Shaft Fan Only - Mount shaft fan on bushing side.

Backstop Only - Mount backstop on bushing side.

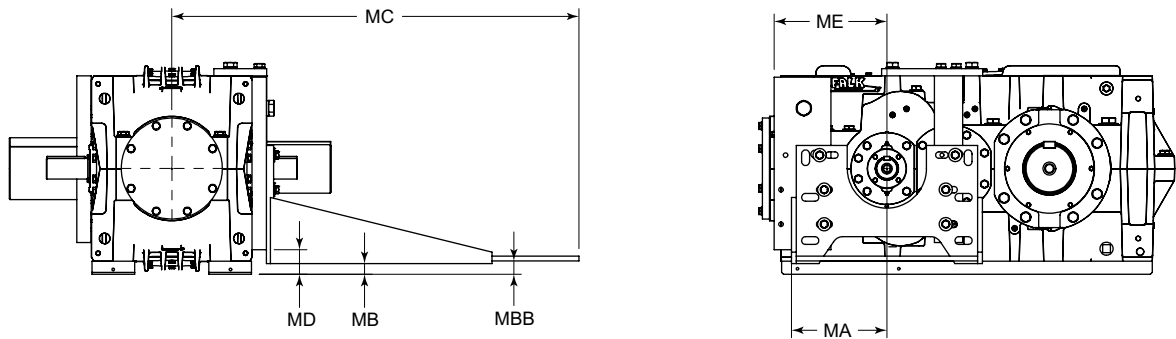
Backstop and Fan - Mount backstop on bushing side, use electric fan.

† Minimum center distance does not include belt installation allowance. When determining belt length for minimum shaft centers, follow manufacturer's installation allowance recommendations and also provide for future belt tensioning.

‡ "E" is the distance from the centerline of the housing to the motor front mounting hole.

Type VP Double & Triple Reduction Sizes 107-137

Motor Brackets/Dimensions — Inches



VP Motor Bracket — Inches

Drive Size*	Motor Frame		High Speed Coupling		MA	MB \blacklozenge	MC	MD	ME	MBB \blacklozenge
			Wrapflex	Steelflex						
107	IEC	132	10R10	1040T10	8.97	0.78	37.87	0.83	8.74	0.54
		160	10R10	1040T10	8.97	0.78	36.10	0.83	8.74	1.52
		180	20R10	1050T10	8.97	0.78	36.89	0.83	8.74	0.85
		200	20R10	1060T10	9.89	0.78	39.69	0.83	8.74	-0.15
	NEMA	213T, 215T	10R10	1040T10	8.97	0.78	28.19	0.83	8.74	0.53
		254T, 256T	10R10	1040T10	8.97	0.78	33.07	0.83	8.74	1.67
117	IEC	180	20R10	1050T10	8.97	1.72	37.91	0.79	9.46	1.79
		200	20R10	1060T10	9.89	1.72	40.70	0.79	9.46	0.79
		225	30R10	1070T10	9.94	-0.61	41.26	0.79	9.46	-0.33
		132	20R10	1050T10	8.97	1.72	38.91	0.79	9.46	1.47
	NEMA	213T, 215T	20R10	1050T10	8.97	1.72	29.20	0.79	9.46	1.47
		254T, 256T	20R10	1050T10	8.97	1.72	34.11	0.79	9.46	2.60
127	IEC	180	20R10	1060T10	8.97	2.87	38.81	1.14	12.82	2.93
		200	20R10	1060T10	9.89	2.87	41.61	1.14	12.82	1.93
		225	30R10	1070T10	9.94	0.54	42.16	1.14	12.82	0.81
		132	20R10	1060T10	8.97	2.87	39.81	1.14	12.82	4.74
	NEMA	213T, 215T	20R10	1060T10	8.97	2.87	30.11	1.14	12.82	4.74
		254T, 256T	20R10	1060T10	8.97	2.87	35.01	1.14	12.82	3.74
133, 137	IEC	180	20R10	1060T10	8.97	3.46	39.06	2.57	11.69	3.52
		200	20R10	1060T10	9.89	3.46	41.85	2.57	11.69	2.52
		225	30R10	1070T10	9.94	1.13	42.40	2.57	11.69	1.40
		160	20R10	1060T10	8.97	3.46	38.27	2.57	11.69	4.20
	NEMA	254T, 256T	20R10	1060T10	8.97	3.46	35.27	2.57	11.69	4.33
		284T, 286T	20R10	1060T10	8.97	3.46	39.05	2.57	11.69	3.52
NEMA	324T, 326T	20R10	1060T10	9.89	3.46	41.85	2.57	11.69	2.52	
	364T, 365T	30R10	1070T10	9.94	1.12	42.41	2.57	11.69	1.40	

* Dimensions are for reference only and are subject to change without notice unless certified. Available only for use with base-mounted drives; cannot be used with shaft-mounted drives.

Due to interference, motor brackets cannot be used on the same side of the housing as a backstop or shaft fan.

Shaft fan only - Mount shaft fan opposite bracket side.

Backstop only - Mount backstop opposite bracket side.

Backstop and fan - Mount backstop opposite bracket side, use electric fan.

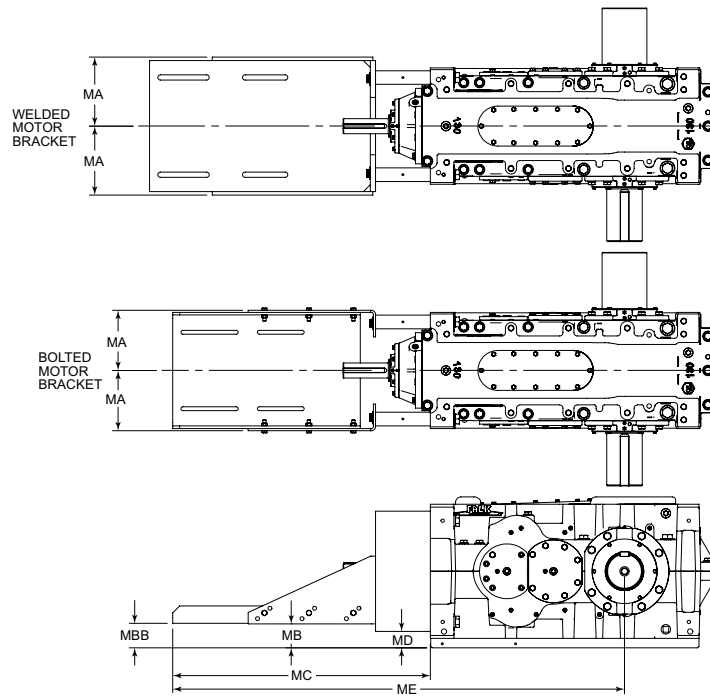
Brackets for IEC motors are furnished blank/undrilled.

Brackets for NEMA motors are furnished slotted for motor mounting.

\blacklozenge Negative MB and MBB dimensions indicate bracket extends below drive feet. Customer must provide clearance for bracket and for motor mounting hardware.

Type VR Double & Triple Reduction Sizes 107-137

Motor Brackets/Dimensions — Inches



VR Motor Bracket — Inches

Drive Size*	Motor Frame		High Speed Coupling		MA	MB ♦	MC	MD	ME	MBB ♦
			Wrapflex	Steelflex						
107	IEC	132	10R10	1040T10	8.97	0.78	29.33	1.29	49.48	0.59
		160	10R10	1040T10	8.97	0.78	31.53	1.29	51.69	1.62
		180	20R10	1050T10	8.97	0.78	34.33	1.29	54.48	0.85
		200	20R10	1060T10	9.89	0.78	37.13	1.29	57.29	-0.01
	NEMA	213T, 215T	10R10	1040T10	8.97	0.78	25.63	1.29	45.79	0.53
		254T, 256T	10R10	1040T10	8.97	0.78	30.53	1.29	50.69	1.66
		284T, 286T	20R10	1050T10	8.97	0.78	34.33	1.29	54.48	0.85
		324T, 326T	20R10	1060T10	9.89	0.78	37.13	1.29	57.29	-0.15
117	IEC	132	20R10	1050T10	8.97	1.72	30.11	1.69	52.78	1.53
		160	20R10	1050T10	8.97	1.72	32.31	1.69	54.98	2.56
		180	20R10	1050T10	8.97	1.72	35.11	1.69	57.78	1.80
		200	20R10	1060T10	9.89	1.72	37.91	1.69	60.58	0.93
	225	30R10	1070T10	9.94	-0.60	38.46	1.69	61.13	-0.19	
	NEMA	213T, 215T	20R10	1050T10	8.97	1.73	26.41	1.69	49.08	1.47
		254T, 256T	20R10	1050T10	8.97	1.73	31.31	1.69	53.98	2.60
		284T, 286T	20R10	1050T10	8.97	1.73	35.11	1.69	57.78	1.79
324T, 326T		20R10	1060T10	9.89	1.73	37.91	1.69	60.58	0.79	
364T, 365T	30R10	1070T10	9.94	-0.61	38.46	1.69	61.13	-0.33		
127	IEC	132	20R10	1060T10	8.97	2.87	30.50	2.56	56.09	2.68
		160	20R10	1060T10	8.97	2.87	32.70	2.56	58.29	3.70
		180	20R10	1060T10	8.97	2.87	35.50	2.56	61.09	2.94
		200	20R10	1060T10	9.89	2.87	38.30	2.56	63.89	2.07
	225	30R10	1070T10	9.94	0.54	38.85	2.56	64.44	0.96	
	NEMA	213T, 215T	20R10	1060T10	8.97	2.87	26.80	2.56	52.39	2.61
		254T, 256T	20R10	1060T10	8.97	2.87	31.70	2.56	57.29	3.74
		284T, 286T	20R10	1060T10	8.97	2.87	35.50	2.56	61.09	2.93
324T, 326T		20R10	1060T10	9.89	2.87	38.30	2.56	63.89	1.93	
364T, 365T	30R10	1070T10	9.94	0.53	38.85	2.56	64.44	0.81		
133, 137	IEC	160	20R10	1060T10	8.97	3.46	34.29	2.36	62.24	4.30
		180	20R10	1060T10	8.97	3.46	37.07	2.36	65.04	3.52
		200	20R10	1060T10	9.89	3.46	39.87	2.36	67.83	2.67
		225	30R10	1070T10	9.94	1.12	40.43	2.36	68.39	1.55
	NEMA	254T, 256T	20R10	1060T10	8.97	3.46	33.27	2.36	61.33	4.33
		284T, 286T	20R10	1060T10	8.97	3.46	37.07	2.36	65.13	3.52
		324T, 326T	20R10	1060T10	9.89	3.46	39.87	2.36	67.93	2.52
		364T, 365T	30R10	1070T10	9.94	1.12	40.39	2.36	68.45	1.40

* Dimensions are for reference only and are subject to change without notice unless certified. Available only for use with base-mounted drives; cannot be used with shaft-mounted drives.

Due to interference, motor brackets cannot be used on the same side of the housing as a backstop or shaft fan.

Shaft fan only - Mount shaft fan opposite bracket side.

Backstop only - Mount backstop opposite bracket side.

Backstop and fan - Mount backstop opposite bracket side, use electric fan.

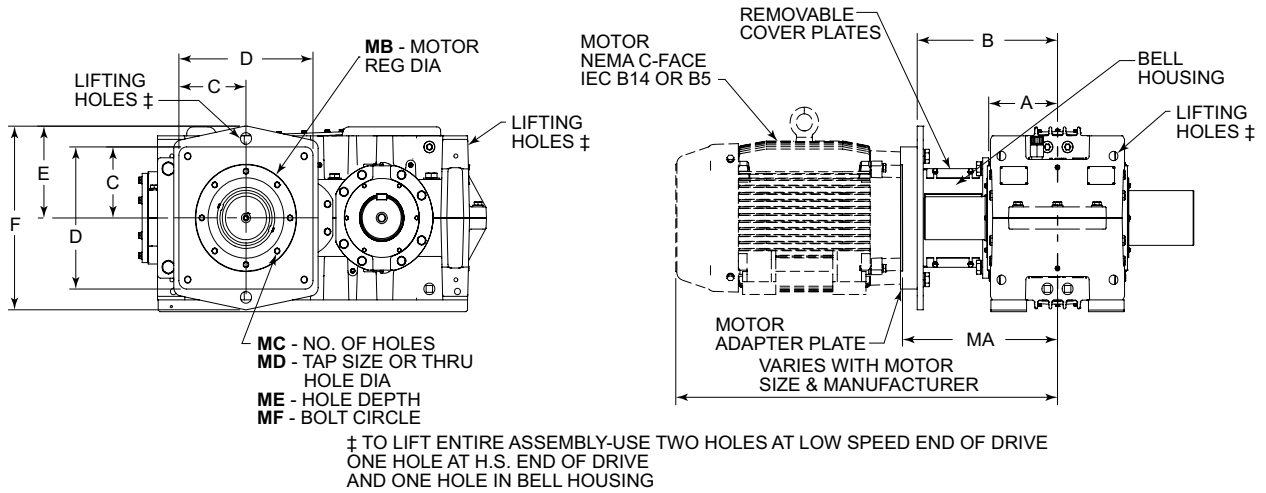
Brackets for IEC motors are furnished blank/undrilled.

Brackets for NEMA motors are furnished slotted for motor mounting.

♦ Negative MB and MBB dimensions indicate bracket extends below drive feet. Customer must provide clearance for bracket and for motor mounting hardware.

Type VP Double & Triple Reduction Sizes 107-117

C-Face Adapters/Dimensions — Inches

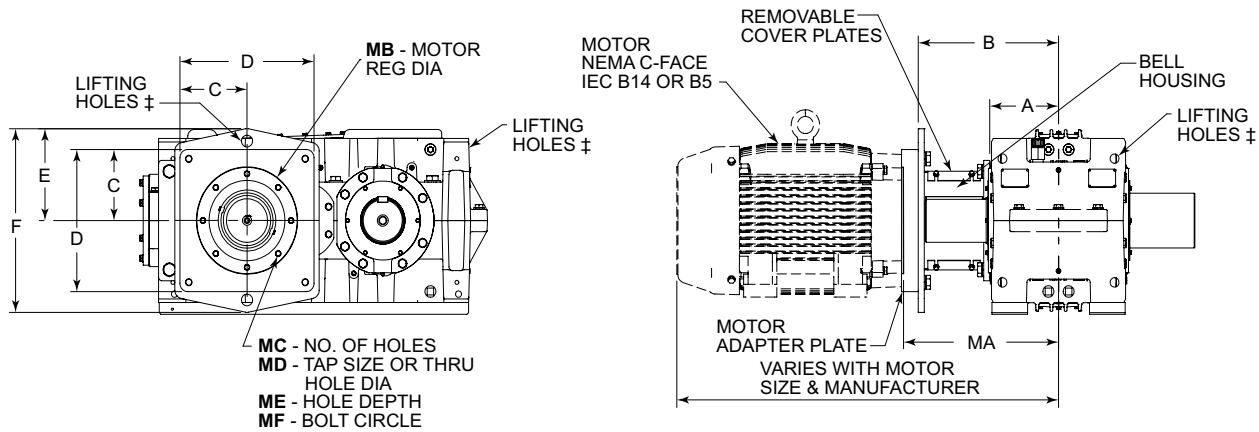


DRIVE SIZE ★	Motor Type	Motor Frame	Motor Coupling		DIMENSIONS - INCHES †											
			Drive Reduction & Nominal Ratio		A	B	C	D	E	F	MA	MB (mm)	MC	MD	ME	MF
			VP2	VP3												
			ALL	ALL												
107	IEC B5 Flange	112	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.28	7.0866 H7	4	M12 x 1.75	THRU TAP HOLE	8.46
		132	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.28	9.0551 H7	4	M12 x 1.75		10.43
		160	20R10	20R35	6.46	14.35	6.59	13.19	8.15	16.30	16.61	9.8425 H7	4	M16 x 2.0		11.81
		180	20R10	20R35	6.46	14.35	6.59	13.19	8.15	16.30	16.61	9.8425 H7	4	M16 x 2.0		11.81
		200	30R10	...	6.46	14.35	9.06	18.11	8.15	16.30	16.77	11.8110 H7	4	M16 x 2.0		13.78
		225	40R10	...	6.46	14.35	9.06	18.11	8.15	16.30	17.03	13.7795 H7	8	M16 x 2.0		15.75
	IEC B14 Flange	112	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.12	4.3307 H7	4	0.3937	THRU CLEARANCE HOLE	5.12
		132	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.12	5.1181 H7	4	0.4724		6.50
		160	20R10	20R35	6.46	14.35	6.59	13.19	8.15	16.30	16.61	7.0866 H7	4	0.5709		8.46
	NEMA	182/184TC	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.08	8.50 H7	4	0.5625	THRU CLEARANCE HOLE	7.25
		213/215TC	...	10R35	6.46	14.35	6.59	13.19	8.15	16.30	15.08	8.50 H7	4	0.5625		7.25
		254/256TC	20R10	20R35	6.46	14.35	6.59	13.19	8.15	16.30	15.08	8.50 H7	4	0.5625		7.25
		284/286TC	20R10	20R35	6.46	14.35	6.59	13.19	8.15	16.30	16.65	10.50 H7	4	0.5625		9.00
		324/326TC	30R10	...	6.46	14.35	6.59	13.19	8.15	16.30	16.65	12.50 H7	4	0.6875		11.00
		364/365TC	40R10	...	6.46	14.35	6.59	13.19	8.15	16.30	16.65	12.50 H7	8	0.6875		11.00
117	IEC B5 Flange	132	...	10R35	7.20	16.79	7.28	14.57	9.09	18.19	17.52	9.0551 H7	4	M12 x 1.75	THRU TAP HOLE	10.43
		160	...	20R35	7.20	16.79	7.28	14.57	9.09	18.19	18.35	9.8425 H7	4	M16 x 2.0		11.81
		180	20R35	20R35	7.20	16.79	7.28	14.57	9.09	18.19	18.35	9.8425 H7	4	M16 x 2.0		11.81
		200	30R35	30R35	7.20	16.79	7.28	14.57	9.09	18.19	18.50	11.8110 H7	4	M16 x 2.0		13.78
		225	40R10	...	7.20	16.79	8.07	16.14	9.09	18.19	18.76	13.7795 H7	8	M16 x 2.0		15.75
		250	40R10	...	7.20	16.79	10.71	21.42	9.09	18.19	18.76	17.7165 H7	8	M16 x 2.0		19.69
	IEC B14 Flange	132	...	10R35	7.20	16.79	7.28	14.57	9.09	18.19	17.52	5.1181 H7	4	0.4724	THRU CLEARANCE HOLE	6.50
		160	...	20R35	7.20	16.79	7.28	14.57	9.09	18.19	18.35	7.0866 H7	4	0.5709		8.46
		213/215TC	...	10R35	7.20	16.79	7.28	14.57	9.09	18.19	17.52	8.50 H7	4	0.5625		7.25
	NEMA	254/256TC	...	20R35	7.20	16.79	7.28	14.57	9.09	18.19	17.52	8.50 H7	4	0.5625	7.25	
		284/286TC	20R10	20R35	7.20	16.79	7.28	14.57	9.09	18.19	17.52	10.50 H7	4	0.5625	9.00	
		324/326TC	30R35	30R35	7.20	16.79	7.28	14.57	9.09	18.19	19.00	12.50 H7	4	0.6875	11.00	
		364/365TC	40R10	...	7.20	16.79	7.28	14.57	9.09	18.19	19.00	12.50 H7	8	0.6875	11.00	
		404/405TC	40R10	...	7.20	16.79	7.28	14.57	9.09	18.19	19.00	12.50 H7	8	0.6875	11.00	

★ Dimensions are for reference only and are subject to change without notice unless certified.
 † Due to interference, motor flanges cannot be used on the same side of the housing as a backstop or shaft fan.
 Shaft fan only - Mount shaft fan opposite bracket side.
 Backstop only - Mount backstop opposite bracket side.
 Backstop and fan - Mount backstop opposite bracket side, use electric fan.

Type VP Double & Triple Reduction Sizes 127-137

C-Face Adapters/Dimensions — Inches



MC - NO. OF HOLES
MD - TAP SIZE OR THRU HOLE DIA
ME - HOLE DEPTH
MF - BOLT CIRCLE

‡ TO LIFT ENTIRE ASSEMBLY-USE TWO HOLES AT LOW SPEED END OF DRIVE
 ONE HOLE AT H.S. END OF DRIVE
 AND ONE HOLE IN BELL HOUSING

DRIVE SIZE ★	Motor Type	Motor Frame	Motor Coupling		DIMENSIONS - INCHES †												
			Drive Reduction & Nominal Ratio		A	B	C	D	E	F	MA	MB (mm)	MC	MD	ME	MF	
			VP2	VP3													
			ALL	ALL													
127	IEC B5	132	...	10R35	8.11	16.57	7.87	15.75	10.24	20.47	17.30	9.0551H7	4	M12 x 1.75	THRU TAP HOLE	10.43	
		160	...	20R35	8.11	16.57	7.87	15.75	10.24	20.47	18.13	9.8425H7	4	M16 x 2.0		11.81	
		180	...	20R35	8.11	16.57	7.87	15.75	10.24	20.47	18.13	9.8425H7	4	M16 x 2.0		11.81	
		200	30R35	30R35	8.11	16.57	7.87	15.75	10.24	20.47	18.29	11.8110H7	4	M16 x 2.0		13.78	
		225	40R10	40R10	8.11	16.57	8.07	16.14	10.24	20.47	18.54	13.7795H7	8	M16 x 2.0		15.75	
		250	40R10	...	8.11	16.57	10.71	21.42	10.24	20.47	18.54	17.7165H7	8	M16 x 2.0		19.69	
	IEC B14	132	...	10R35	8.11	16.57	7.87	15.75	10.24	20.47	17.30	5.1181H7	4	0.4724	THRU CLEARANCE HOLE	6.50	
		160	...	20R35	8.11	16.57	7.87	15.75	10.24	20.47	18.13	7.0866H7	4	0.5709		8.46	
		NEMA	213/215TC	...	10R35	8.11	16.57	7.87	15.75	10.24	20.47	17.30	8.50H7	4		0.5625	7.25
			254/256TC	...	20R10	8.11	16.57	7.87	15.75	10.24	20.47	17.30	8.50H7	4		0.5625	7.25
			284/286TC	...	20R10	8.11	16.57	7.87	15.75	10.24	20.47	17.30	10.50H7	4		0.5625	9.00
			324/326TC	30R35	30R10	8.11	16.57	7.87	15.75	10.24	20.47	18.79	12.50H7	4		0.6875	11.00
364/365TC	40R10	40R10	8.11	16.57	7.87	15.75	10.24	20.47	19.72	12.50H7	8	0.6875	11.00				
404/405TC	40R10	...	8.11	16.57	7.87	15.75	10.24	20.47	19.72	12.50H7	8	0.6875	11.00				
133, 137	IEC B5	160	...	20R35	8.37	17.50	8.37	16.73	10.83	21.65	18.66	9.8425H7	4	M16 x 2.0	THRU TAP HOLE	11.81	
		180	...	20R35	8.37	17.50	8.37	16.73	10.83	21.65	18.66	9.8425H7	4	M16 x 2.0		11.81	
		200	...	30R35	8.37	17.50	8.37	16.73	10.83	21.65	18.66	11.8110H7	4	M16 x 2.0		13.78	
		225	40R10	40R10	8.37	17.50	8.37	16.73	10.83	21.65	20.00	13.7795H7	8	M16 x 2.0		15.75	
		250	40R10	40R10	8.37	17.50	11.38	22.76	10.83	21.65	19.49	17.7165H7	8	M16 x 2.0		19.69	
		IEC B14	160	...	20R35	8.37	17.50	8.37	16.73	10.83	21.65	18.66	7.0866H7	4		0.5709	8.46
	NEMA	254/256TC	...	20R35	8.37	17.50	8.37	16.73	10.83	21.65	18.23	8.50H7	4	0.5625	THRU CLEARANCE HOLE	7.25	
		284/286TC	...	20R35	8.37	17.50	8.37	16.73	10.83	21.65	18.71	10.50H7	4	0.5625		9.00	
		324/326TC	...	30R35	8.37	17.50	8.37	16.73	10.83	21.65	19.33	12.50H7	4	0.6875		11.00	
		364/365TC	40R10	40R10	8.37	17.50	8.37	16.73	10.83	21.65	19.33	12.50H7	8	0.6875		11.00	
		405TC	40R10	40R10	8.37	17.50	8.37	16.73	10.83	21.65	20.28	12.50H7	8	0.6875		11.00	
			40R10	40R10	8.37	17.50	8.37	16.73	10.83	21.65	20.28	12.50H7	8	0.6875		11.00	

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† Due to interference, motor flanges cannot be used on the same side of the housing as a backstop or shaft fan.

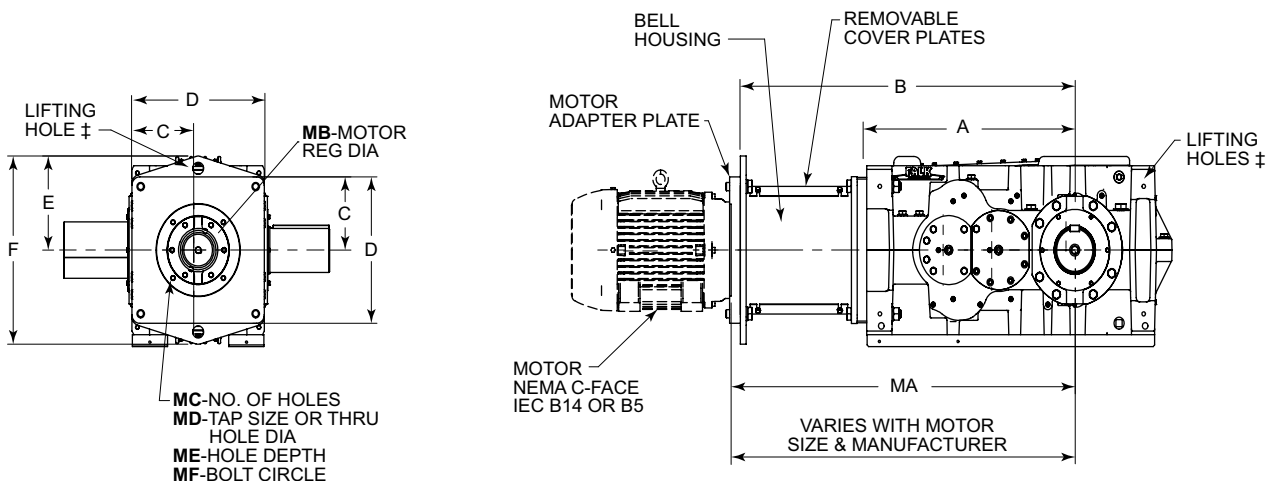
Shaft fan only - Mount shaft fan opposite bracket side.

Backstop only - Mount backstop opposite bracket side.

Backstop and fan - Mount backstop opposite bracket side, use electric fan.

Type VR Double & Triple Reduction Sizes 107-117

C-Face Adapters/Dimensions — Inches



‡ TO LIFT ENTIRE ASSEMBLY-USE TWO HOLES AT LOW SPEED END OF DRIVE AND ONE HOLE IN BELL HOUSING

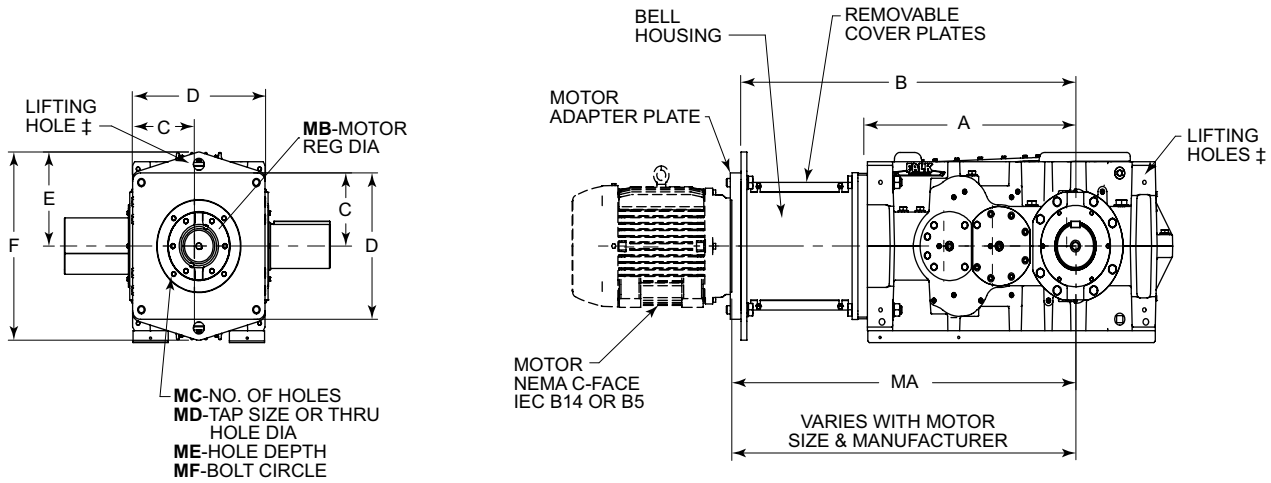
DRIVE SIZE ★	Motor Type	Motor Frame	Motor Coupling		DIMENSIONS - INCHES †												
			Drive Reduction & Nominal Ratio		A	B	C	D	E	F	MA	MB (mm)	MC	MD	ME	MF	
			VR2	VR3													
107	IEC B5	132	10R10	10R10	20.16	33.45	6.85	13.70	8.15	16.30	34.37	9.0551 H7	4	M12 x 1.75	THRU TAP HOLE	10.43	
		160	20R10	20R10	20.16	33.45	6.85	13.70	8.15	16.30	35.71	9.8425 H7	4	M16 x 2.0		11.81	
		180	20R10	20R10	20.16	33.45	6.85	13.70	8.15	16.30	35.71	9.8425 H7	4	M16 x 2.0		11.81	
		200	30R10	30R10	20.16	33.45	6.85	13.70	8.15	16.30	35.87	11.8110 H7	4	M16 x 2.0		13.78	
		225	30R10	30R10	20.16	33.45	6.85	13.70	8.15	16.30	36.12	13.7795 H7	8	M16 x 2.0		15.75	
	IEC B14 Flange	132	10R10	10R10	20.16	33.45	6.85	13.70	8.15	16.30	34.21	5.1181 H7	4	0.4724	THRU CLEARANCE HOLE	6.50	
		160	20R10	20R10	20.16	33.45	6.85	13.70	8.15	16.30	35.71	7.0866 H7	4	0.5709		8.46	
		NEMA	213/215TC	10R10	10R10	20.16	33.45	6.85	13.70	8.15	16.30	34.17	8.50 H7	4		0.5625	7.25
			254/256TC	20R10	20R10	20.16	33.45	6.85	13.70	8.15	16.30	34.17	8.50 H7	4		0.5625	7.25
			284/286TC	20R10	20R10	20.16	33.45	6.85	13.70	8.15	16.30	35.75	10.50 H7	4		0.5625	9.00
324/326TC	30R10		30R10	20.16	33.45	6.85	13.70	8.15	16.30	35.75	12.50 H7	4	0.6875	11.00			
117	IEC B5 Flange	132	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	37.81	9.0551 H7	4	M12 x 1.75	THRU TAP HOLE	10.43	
		160	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	38.64	9.8425 H7	4	M16 x 2.0		11.81	
		180	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	38.64	9.8425 H7	4	M16 x 2.0		11.81	
		200	30R10	30R10	22.68	37.09	7.28	14.57	9.09	18.19	38.80	11.8110 H7	4	M16 x 2.0		13.78	
		225	30R10	30R10	22.68	37.09	7.28	14.57	9.09	18.19	39.06	13.7795 H7	8	M16 x 2.0		15.75	
		250	40R10	40R10	22.68	37.09	7.28	14.57	9.09	18.19	39.06	17.7165 H7	8	M16 x 2.0		19.69	
	IEC B14 Flange	132	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	37.81	5.1181 H7	4	0.4724	THRU CLEARANCE HOLE	6.50	
		160	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	38.64	7.0866 H7	4	0.5709		8.46	
		NEMA	213/215TC	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	37.81	8.50 H7	4		0.5625	7.25
			254/256TC	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	37.81	8.50 H7	4		0.5625	7.25
			284/286TC	20R10	20R10	22.68	37.09	7.28	14.57	9.09	18.19	37.81	10.50 H7	4		0.5625	9.00
			324/326TC	30R10	30R10	22.68	37.09	7.28	14.57	9.09	18.19	39.29	12.50 H7	4		0.6875	11.00
			364/365TC	30R10	30R10	22.68	37.09	7.28	14.57	9.09	18.19	39.29	12.50 H7	4		0.6875	11.00
				40R10	40R10	22.68	37.09	7.28	14.57	9.09	18.19	39.29	12.50 H7	8		0.6875	11.00

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† Due to interference, motor flanges cannot be used with a shaft fan. If cooling is required, use electric fan.

Type VR Double & Triple Reduction Sizes 127-137

C-Face Adapters/Dimensions — Inches



‡ TO LIFT ENTIRE ASSEMBLY-USE TWO HOLES AT LOW SPEED END OF DRIVE AND ONE HOLE IN BELL HOUSING

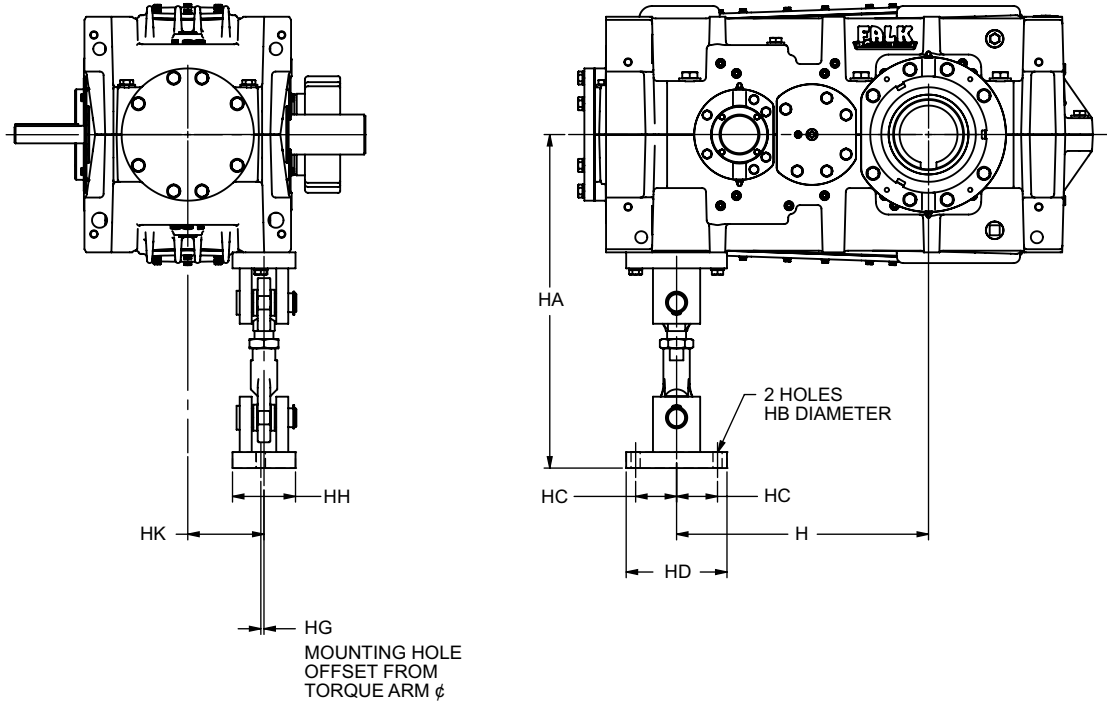
DRIVE SIZE ★	Motor Type	Motor Frame	Motor Coupling		DIMENSIONS - INCHES †												
			Drive Reduction & Nominal Ratio		A	B	C	D	E	F	MA	MB (mm)	MC	MD	ME	MF	
			VR2	VR3													
			ALL	ALL													
127	IEC B5	132	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	41.18	9.0551H7	4	M12 x 1.75	THRU TAP HOLE	10.43	
		160	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	42.01	9.8425H7	4	M16 x 2.0		11.81	
		180	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	42.01	9.8425H7	4	M16 x 2.0		11.81	
		200	30R10	30R10	25.59	40.45	7.87	15.75	10.24	20.47	42.17	11.8110H7	4	M16 x 2.0		13.78	
		225	30R10	30R10	25.59	40.45	7.87	15.75	10.24	20.47	42.42	13.7795H7	8	M16 x 2.0		15.75	
		250	40R10	40R10	25.59	40.45	7.87	15.75	10.24	20.47	42.42	17.7165H7	8	M16 x 2.0		19.69	
	IEC B14 Flange	132	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	41.18	5.1181H7	4	0.4724	THRU CLEARANCE HOLE	6.50	
		160	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	42.01	7.0866H7	4	0.5709		8.46	
		NEMA	213/215TC	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	41.18	8.50H7	4		0.5625	7.25
			254/256TC	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	41.18	8.50H7	4		0.5625	7.25
			284/286TC	20R10	20R10	25.59	40.45	7.87	15.75	10.24	20.47	41.18	10.50H7	4		0.5625	9.00
			324/326TC	30R10	30R10	25.59	40.45	7.87	15.75	10.24	20.47	42.67	12.50H7	4		0.6875	11.00
364/365TC	40R10	40R10	25.59	40.45	7.87	15.75	10.24	20.47	43.60	12.50H7	8	0.6875	11.00				
404/405TC	40R10	40R10	25.59	40.45	7.87	15.75	10.24	20.47	43.60	12.50H7	8	0.6875	11.00				
133, 137	IEC B5 Flange	160	20R10	20R10	27.95	44.92	8.37	16.73	10.79	21.57	46.08	9.8425H7	4	M16 x 2.0	THRU TAP HOLE	11.81	
		180	20R10	20R10	27.95	44.92	8.37	16.73	10.79	21.57	46.08	9.8425H7	4	M16 x 2.0		11.81	
		200	30R10	30R10	27.95	44.92	8.37	16.73	10.79	21.57	46.08	11.8110H7	4	M16 x 2.0		13.78	
		225	30R10	30R10	27.95	44.92	8.37	16.73	10.79	21.57	47.42	13.7795H7	8	M16 x 2.0		15.75	
		250	40R10	40R10	27.95	44.92	8.37	16.73	10.79	21.57	46.89	17.7165H7	8	M16 x 2.0		19.69	
		IEC B14 Flange	160	20R10	20R10	27.95	44.92	8.37	16.73	10.79	21.57	45.87	7.0866H7	4		0.5709	8.46
	NEMA	254/256TC	20R10	20R10	27.95	44.92	8.37	16.73	10.79	21.57	45.65	8.50H7	4	0.5625	7.25		
		284/286TC	20R10	20R10	27.95	44.92	8.37	16.73	10.79	21.57	46.13	10.50H7	4	0.5625	9.00		
		324/326TC	30R10	30R10	27.95	44.92	8.37	16.73	10.79	21.57	46.76	12.50H7	4	0.6875	11.00		
		364/365TC	40R10	40R10	27.95	44.92	8.37	16.73	10.79	21.57	46.76	12.50H7	8	0.6875	11.00		
		404/405TC	40R10	40R10	27.95	44.92	8.37	16.73	10.79	21.57	47.70	12.50H7	8	0.6875	11.00		

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† Due to interference, motor flanges cannot be used with a shaft fan. If cooling is required, use electric fan.

Type VP/VR Double & Triple Reduction Sizes 107-117

Torque Arm/Dimensions — Inches

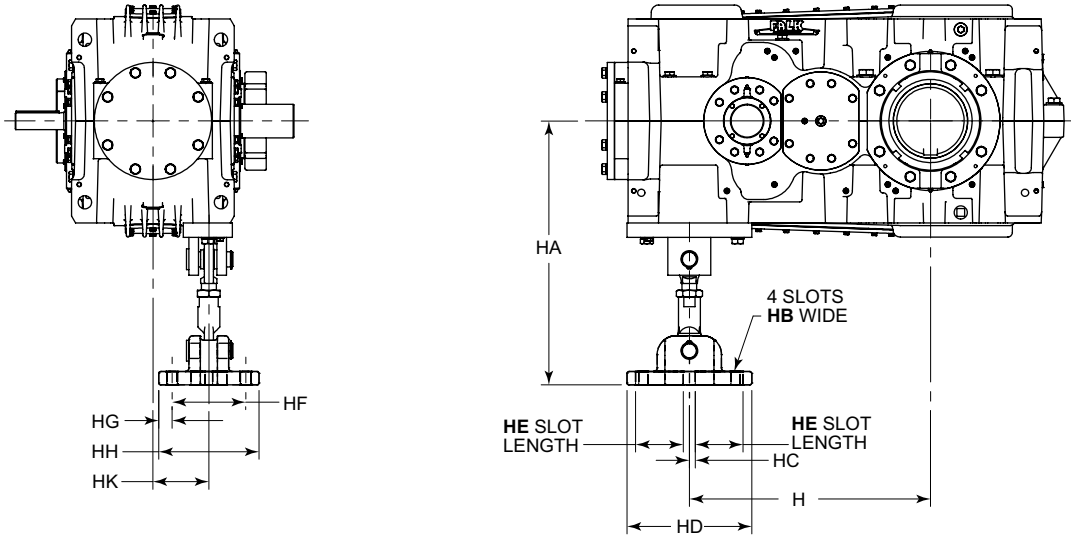


DRIVE SIZE*	H	HA		HB	HC	HD	HG	HH	HK
		Min	Max						
107	15.75	20.55	21.06	0.57	2.56	6.30	0.20	3.94	4.76
117	18.17	21.50	22.01	0.73	3.29	8.86	0.00	3.94	5.04

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

Type VP/VR Double & Triple Reduction Sizes 127-157

Torque Arm/Dimensions — Inches

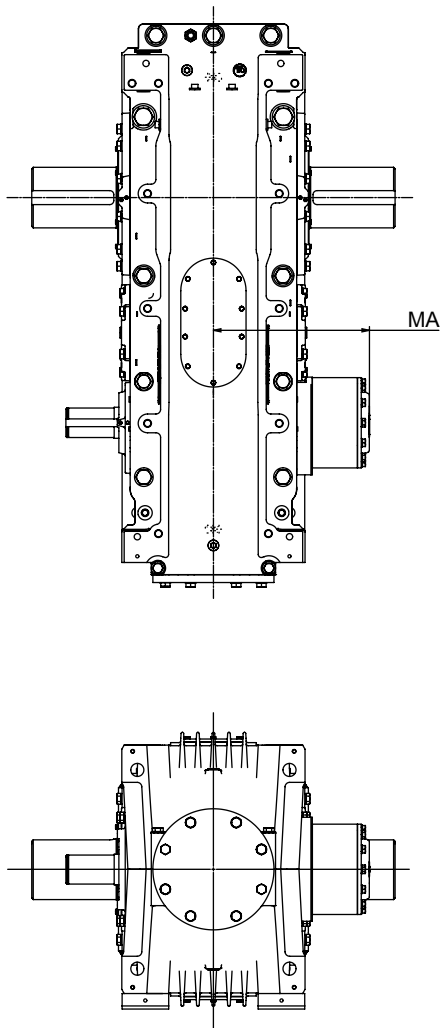


DRIVE SIZE*	H	HA		HB	HC	HD	HE	HF	HG	HH	HK
		Min	Max								
127	19.88	25.20	26.10	1.10	0.63	12.99	4.65	7.68	1.38	10.43	5.75
133, 137	20.55	25.91	26.81	1.10	0.63	12.99	4.65	7.68	1.38	10.43	6.10
143, 145, 147	25.12	26.89	27.80	1.10	0.63	12.99	4.65	7.68	1.38	10.43	5.71
153, 155, 157	29.33	27.87	28.78	1.10	0.63	12.99	4.65	7.68	1.38	10.43	6.69

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

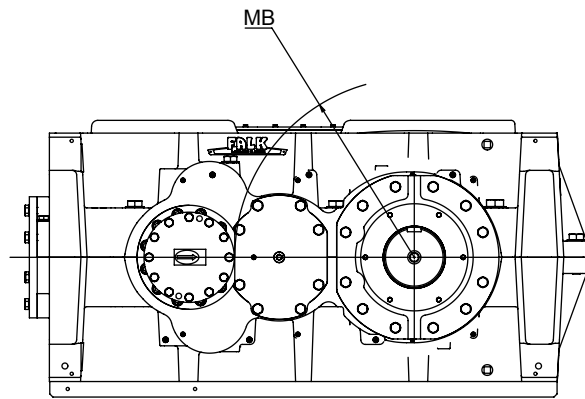
Type VP2 & VP3 Sizes 107-187

Backstop Clearance/Dimensions — Inches



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

NOTE: If shaft fan is required, refer to page 244 for useable shaft length (FG).



VP2 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	Ratios	MA	MB
107	5.60 - 20.0	10.16	9.04
	22.4 - 28.0	8.31	9.73
117	5.60 - 20.0	10.52	10.78
	22.4 - 28.0	10.16	11.50
127	5.60 - 20.0	12.29	11.70
	22.4 - 28.0	10.31	12.39
133, 137	5.60 - 20.0	14.12	13.18
	22.4 - 28.0	12.04	13.48
143, 145, 147	5.60 - 20.0	13.07	14.95
	22.4 - 28.0	12.60	15.34
153, 155, 157	5.60 - 20.0	16.32	17.90
	22.4 - 28.0	13.38	18.30
163, 165, 167	5.60 - 20.0	16.85	19.97
	22.4 - 28.0	14.06	20.66
173, 175, 177	5.00 - 18.0	19.77	21.84
	20.0 - 25.0	16.54	22.72
187	5.60 - 20.0	19.77	22.82
	22.4 - 28.0	16.54	23.71

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

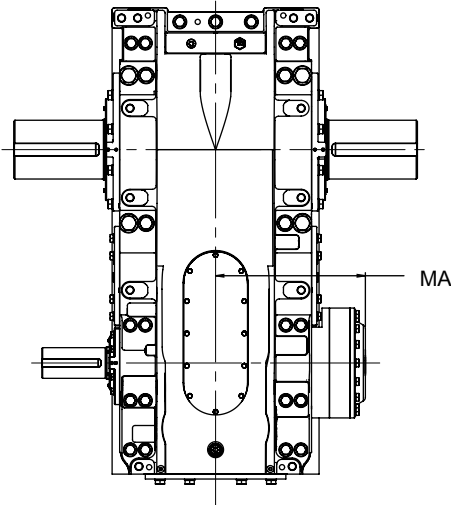
VP3 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	Ratios	MA	MB
107	31.5 - 112	8.41	9.93
	125 - 160	8.01	10.13
117	31.5 - 112	9.43	11.31
	125 - 160	9.04	11.60
127	31.5 - 112	11.10	13.28
	125 - 160	10.57	13.47
133, 137	31.5 - 112	10.63	13.97
	125 - 160	10.41	15.06
143, 145, 147	31.5 - 112	11.99	15.65
	125 - 160	11.12	17.03
153, 155, 157	31.5 - 112	12.71	18.61
	125 - 160	11.92	19.45
163, 165, 167	31.5 - 112	14.33	20.66
	125 - 160	12.29	22.04
173, 175, 177	28.0 - 100	15.24	23.41
	112 - 140	13.62	24.60
187	31.5 - 112	15.24	24.40
	125 - 160	13.62	25.58

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

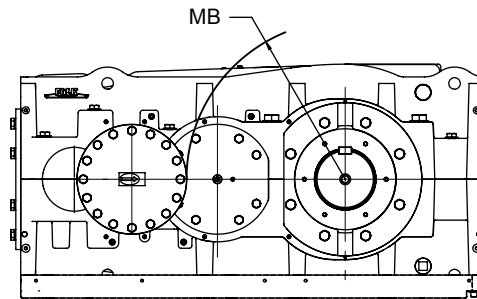
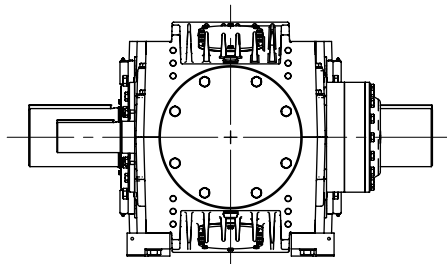
Type VP2 & VP3 Sizes 193-227

Backstop Clearance/Dimensions — Inches



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

NOTE: If shaft fan is required, refer to page 245 for useable shaft length (FG).



VP2 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	Ratios	MA	MB
193, 195, 197	5.00 - 18.0	23.09	24.41
	20.0 - 25.0	21.64	27.15
203, 207	5.60 - 20.0	23.09	24.41
	22.4 - 28.0	21.64	27.15
213, 215, 217	5.00 - 18.0	27.64	30.48
	20.0 - 25.0	23.27	32.86
223, 225, 227	5.60 - 20.0	27.64	30.48
	22.4 - 28.0	23.27	32.86

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

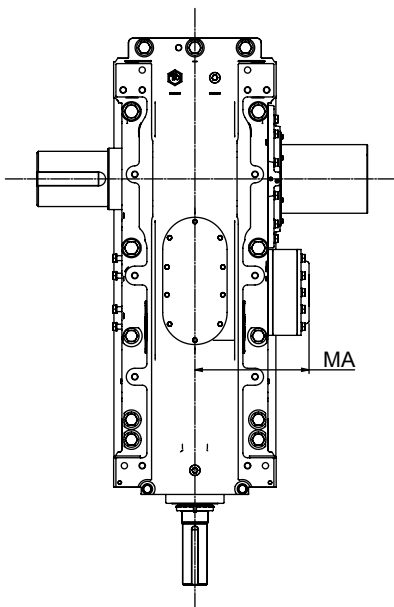
VP3 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	Ratios	MA	MB
193, 195, 197	28.0 - 100	20.20	37.60
	112 - 140	19.24	38.29
203, 207	31.5 - 112	20.20	37.60
	125 - 160	19.24	38.29
213, 215, 217	28.0 - 100	23.35	43.10
	112 - 140	22.13	44.69
223, 225, 227	31.5 - 112	23.35	43.10
	125 - 160	22.13	44.69

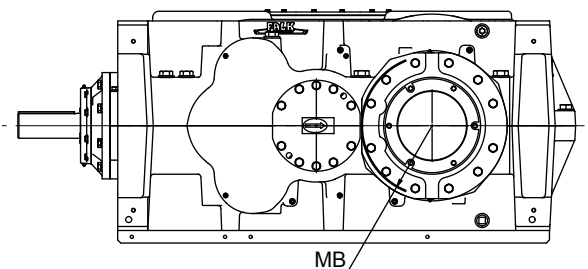
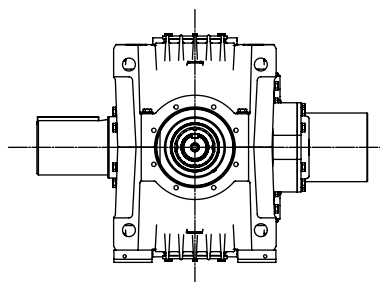
★ Dimensions are for reference only and are subject to change without notice unless certified.

Type VR2 Sizes 107-187

Backstop Clearance/Dimensions — Inches



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



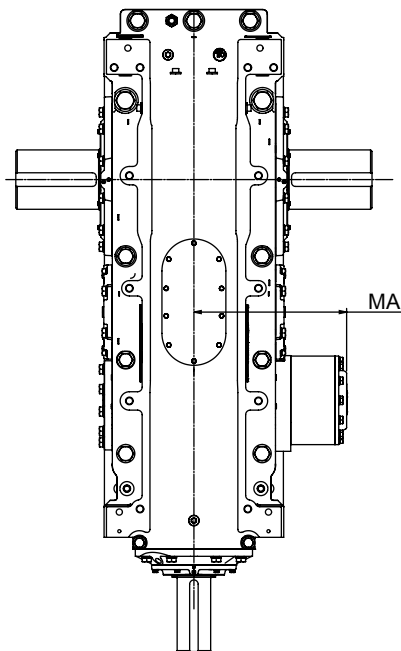
VR2 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	Ratios	MA	MB
107	ALL	9.61	4.51
117	ALL	11.50	4.81
127	ALL	11.89	5.12
133, 137	ALL	13.24	5.40
143, 145, 147	ALL	15.48	7.27
153, 155, 157	ALL	14.96	7.47
163, 165, 167	ALL	14.65	9.06
173, 175, 177	ALL	19.41	10.42
187	ALL	19.41	11.40

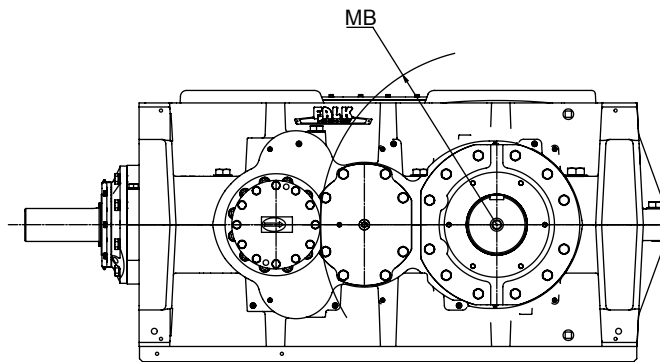
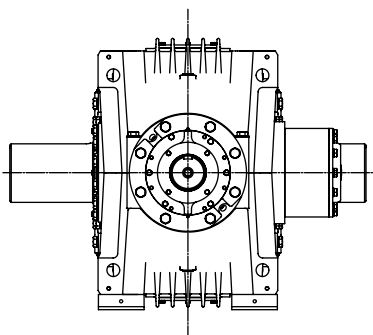
★ Dimensions are for reference only and are subject to change without notice unless certified.

Type VR3 Sizes 107-187

Backstop Clearance/Dimensions — Inches



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



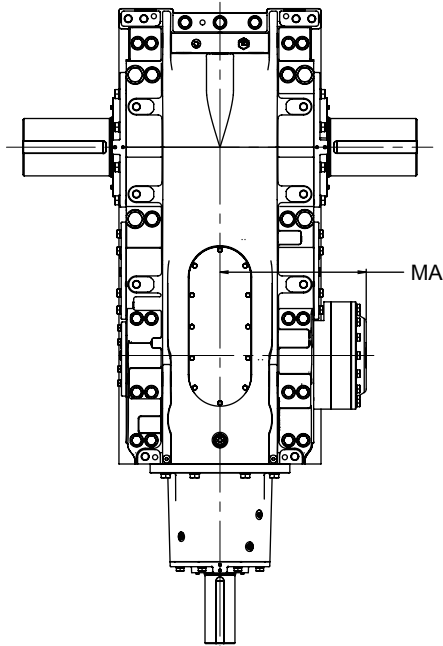
VR3 Backstop Clearance Dimensions — Inches

DRIVE SIZE★	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

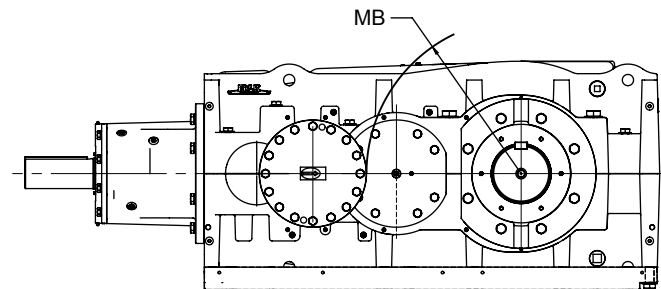
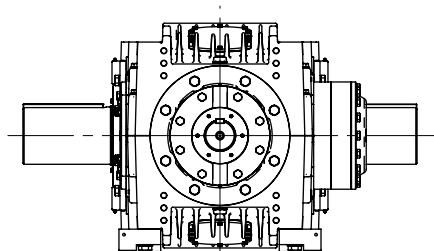
★ Dimensions are for reference only and are subject to change without notice unless certified.

Type VR3 Sizes 193-227

Backstop Clearance/Dimensions — Inches



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



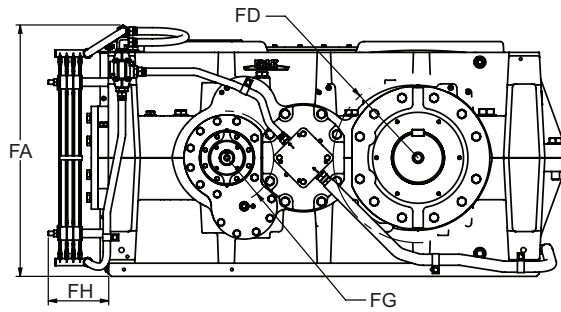
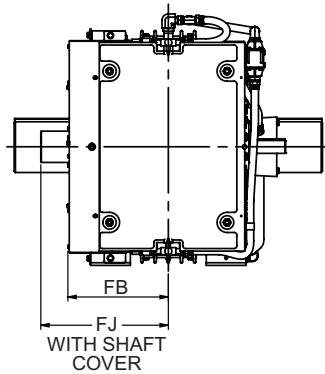
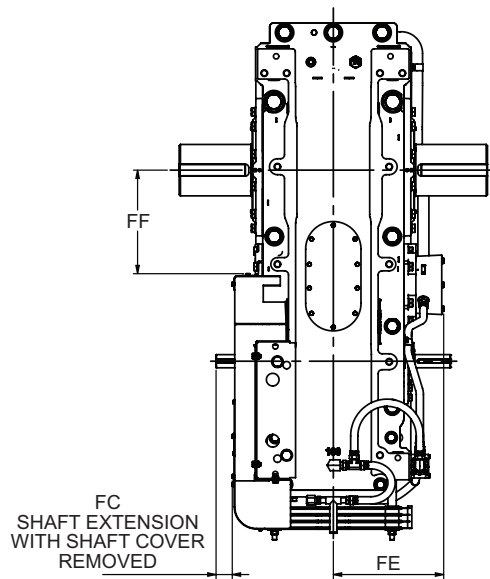
VR3 Backstop Clearance Dimensions — Inches

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

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

Type VP2 & VP3 Sizes 107-187

DuraPlate/Dimensions — Inches



VP2 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF	FG *	FH	FJ
107	ALL	23.57	8.17	2.92	4.79	10.92	5.03	2.03	7.52	11.09
117	ALL	24.93	9.53	2.53	5.77	11.74	4.70	2.62	7.36	12.09
127	ALL	26.88	10.12	2.67	5.96	12.75	6.28	3.41	7.83	12.84
133-137	ALL	28.56	11.29	2.05	7.74	13.11	8.44	4.20	7.86	13.49
143-147	ALL	30.57	11.49	3.11	8.56	13.42	8.44	5.18	7.83	14.83
153-157	ALL	33.31	12.67	3.15	8.74	14.42	10.41	4.41	7.84	16.02
163-167	ALL	35.78	13.89	3.84	10.12	15.26	12.57	5.79	7.83	17.83
173-177	ALL	41.57	15.08	3.86	11.70	16.49	14.55	6.97	8.64	19.05
187	ALL	41.57	15.08	3.86	12.68	16.49	15.53	6.97	8.64	19.05

† Includes 3.94" for hose clearance.

‡ Allows 0.12" clearance from shroud.

* Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

VP3 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF	FG *	FH	FJ
107		- NOT AVAILABLE -								
117		- NOT AVAILABLE -								
127		- NOT AVAILABLE -								
133-137	ALL	28.56	10.81	1.34	5.79	13.36	8.44	2.25	7.86	13.02
143-147	ALL	30.57	11.49	1.93	6.97	13.65	8.44	3.23	7.83	14.83
153-157	ALL	33.31	12.67	1.97	8.74	14.42	10.41	4.41	7.84	16.02
163-167	ALL	35.78	13.39	2.13	10.12	15.26	15.67	5.79	7.83	15.56
173-177	ALL	41.57	15.08	2.68	11.70	16.49	14.55	6.97	8.64	19.05
187	ALL	41.57	15.08	2.68	12.68	16.49	15.53	6.97	8.64	19.05

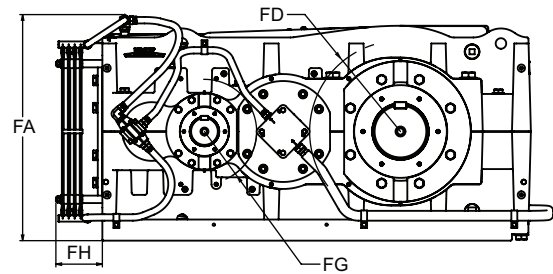
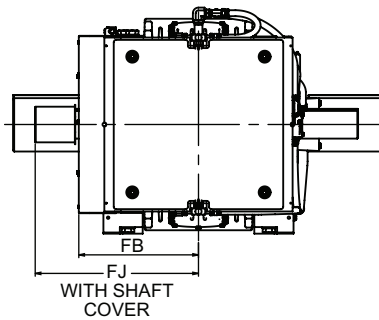
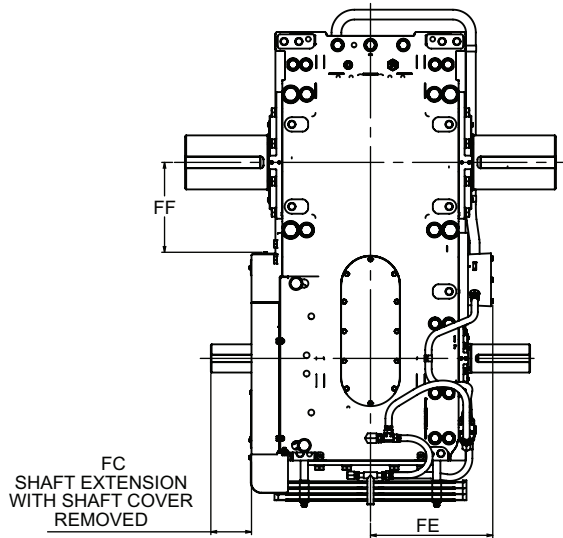
† Includes 3.94" for hose clearance.

‡ Allows 0.12" clearance from shroud.

* Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

Type VP2 & VP3 Sizes 193-227

DuraPlate/Dimensions — Inches



VP2 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF	FG *	FH	FJ
193, 195, 197	ALL	41.85	21.05	5.99	13.67	20.51	14.85	8.74	7.83	27.39
203, 207	ALL	41.85	21.05	5.99	15.24	20.51	16.42	8.74	7.83	27.39
213, 215, 217	ALL	50.81	23.67	6.72	16.81	22.48	20.16	10.91	7.83	30.99
223, 225, 227	ALL	50.81	23.67	6.72	18.78	22.48	22.13	10.91	7.83	30.99

† Includes 3.94" for hose clearance.
 ‡ Allows 0.12" clearance from shroud.
 * Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

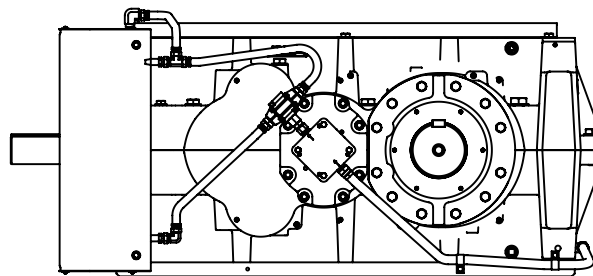
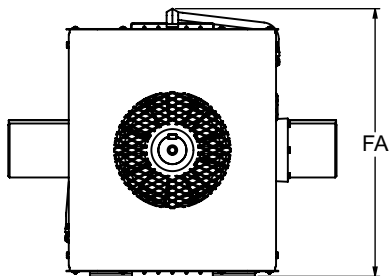
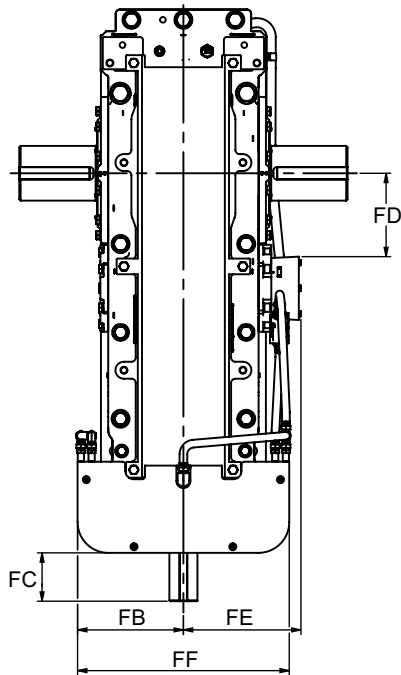
VP3 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF	FG *	FH	FJ
193, 195, 197	ALL	41.85	19.26	4.63	26.86	20.23	26.56	4.41	7.83	25.24
203, 207	ALL	41.85	19.26	4.63	28.43	20.23	28.13	4.41	7.83	25.24
213, 215, 217	ALL	47.81	21.03	5.81	32.17	22.28	30.77	5.79	7.83	27.01
223, 225, 227	ALL	47.81	21.03	5.81	34.14	22.28	32.74	5.79	7.83	27.01

† Includes 3.94" for hose clearance.
 ‡ Allows 0.12" clearance from shroud.
 * Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

Type VR2 & VR3 Sizes 107-187

DuraPlate/Dimensions — Inches



VR2 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF
107	ALL	23.57	9.21	2.86	4.79	13.17	18.43
117	ALL	25.44	10.03	3.02	5.77	13.99	20.06
127	ALL	27.38	10.94	4.29	6.75	15.00	21.89
133-137	ALL	28.56	11.59	4.69	7.74	13.11	23.19
143-147	ALL	32.07	12.36	4.41	8.92	13.42	24.72
153-157	ALL	34.03	12.81	5.02	8.74	14.42	25.63
163-167	ALL	36.28	13.67	5.72	10.12	15.26	27.34
173-177	ALL	41.50	14.85	6.79	11.70	16.49	29.70
187	ALL	41.50	14.85	6.79	12.68	16.49	29.70

† Includes 3.94" for hose clearance.

‡ Allows 0.12" clearance from shroud.

* Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

VR3 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD *	FE	FF
107	14.0-50.0	23.57	9.21	2.86	9.32	12.86	18.43
	80.0-90.0						
	56.0-71.0 100-125						
117	14.0-50.0	25.43	10.03	3.02	11.56	13.64	20.06
	80.0-90.0						
	56.0-71.0 100-125						
127	14.0-50.0	24.02	10.94	4.29	13.33	14.39	21.89
	80.0-90.0						
	56.0-71.0 100-125						
133-137	ALL	28.56	11.59	4.68	15.10	14.75	23.19
143-147	ALL	32.07	12.36	4.41	17.27	15.36	24.72
153-157	ALL	34.03	12.81	5.02	17.61	15.87	25.63
163-167	ALL	32.34	13.67	5.73	21.48	16.80	27.34
173-177	ALL	42.00	14.85	6.79	24.24	17.83	29.70
187	ALL	42.00	14.85	6.79	25.22	17.83	29.70

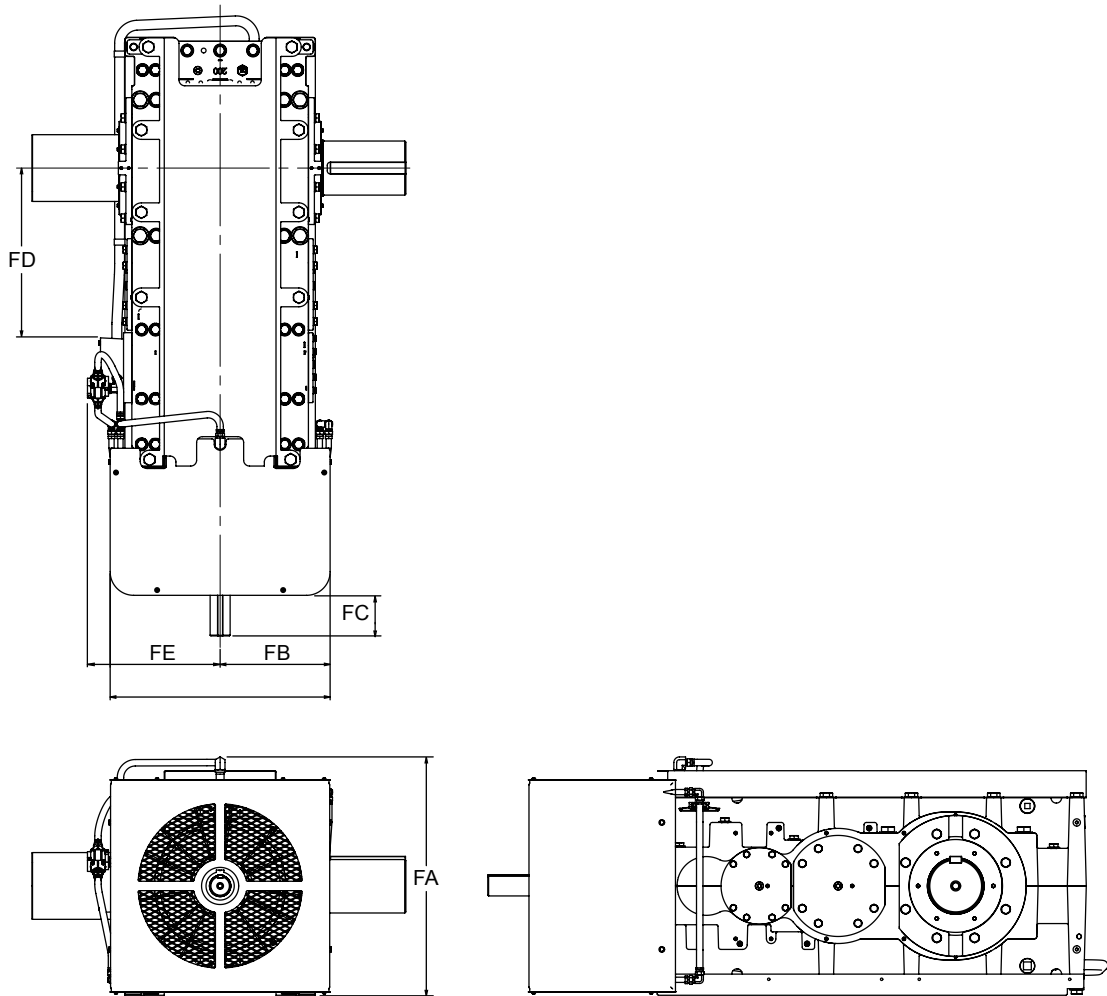
† Includes 3.94" for hose clearance.

‡ Allows 0.12" clearance from shroud.

* Clearance to first point of interference at a depth of 1.0 times shaft extension diameter.

Type VR3 Sizes 193-227

DuraPlate/Dimensions — Inches



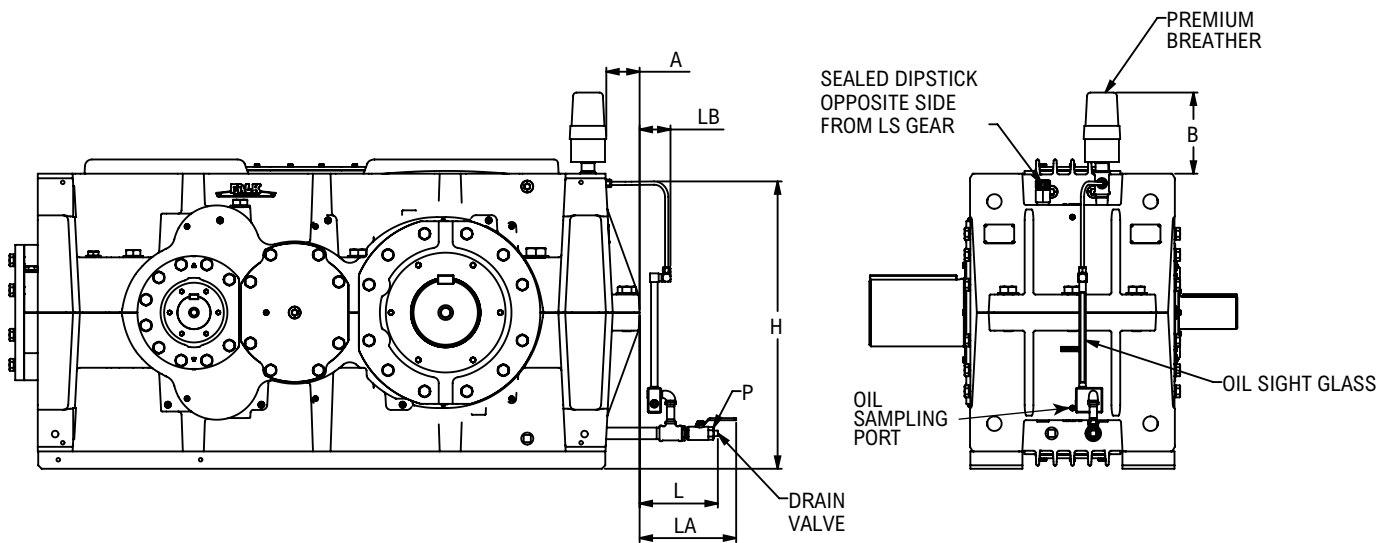
VR3 DuraPlate Clearance Dimensions — Inches

DRIVE SIZE	Ratios	FA †	FB	FC ‡	FD	FE	FF
193, 195, 197	ALL	43.85	18.42	6.89	26.86	22.22	36.83
203, 207	ALL	43.85	18.42	6.89	28.43	22.22	36.83
213, 215, 217	ALL	51.81	20.19	6.74	32.17	24.17	40.38
223, 225, 227	ALL	51.81	20.19	6.74	34.14	24.17	40.38

† Includes 3.94" for hose clearance.
 ‡ Allows 0.12" clearance from shroud.

Type VP & VR Sizes 107-187

Lubrication Package/Dimensions — Inches

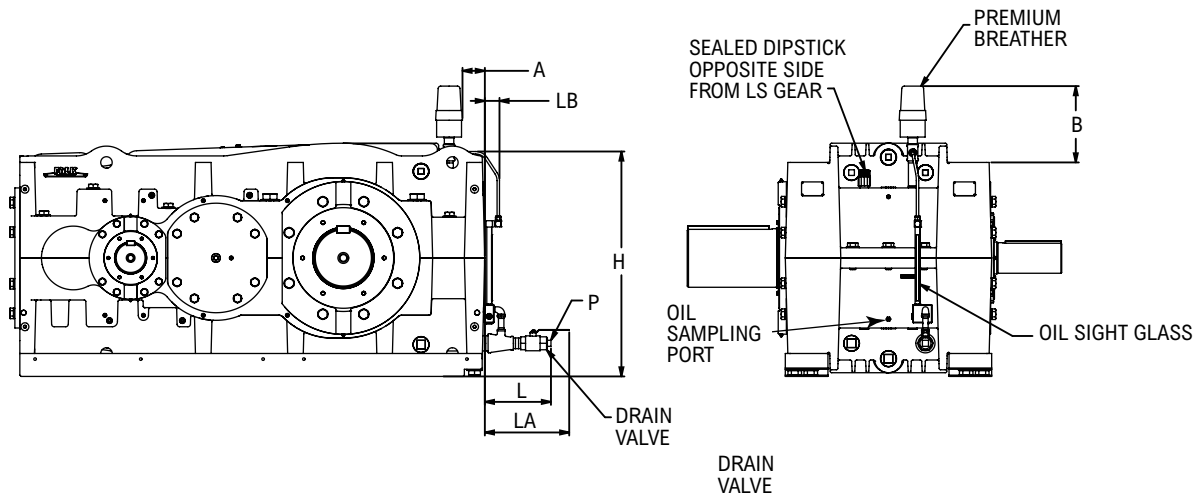


All Reductions and Ratios

DRIVE SIZE	A	B	H	L	LA	LB	P
107	0.70	13.12	18.48	7.96	10.88	2.57	0.75-14 NPT
117	0.57	12.96	20.22	8.09	11.01	2.69	0.75-14 NPT
127	1.39	12.49	23.53	8.25	10.32	2.88	0.75-14 NPT
133, 137	1.78	13.26	23.83	8.85	10.93	3.48	0.75-14 NPT
143, 145, 147	1.47	13.38	26.31	9.17	11.24	3.80	0.75-14 NPT
153, 155, 157	1.70	13.38	28.09	8.93	11.01	3.57	0.75-14 NPT
163, 165, 167	3.50	12.54	29.63	8.90	10.94	3.50	0.75-14 NPT
173, 175, 177	4.67	11.52	34.88	8.90	10.94	3.50	0.75-14 NPT
187	4.67	11.52	34.88	8.90	10.94	3.50	0.75-14 NPT

Type VP & VR Sizes 193-227

Lubrication Package/Dimensions — Inches

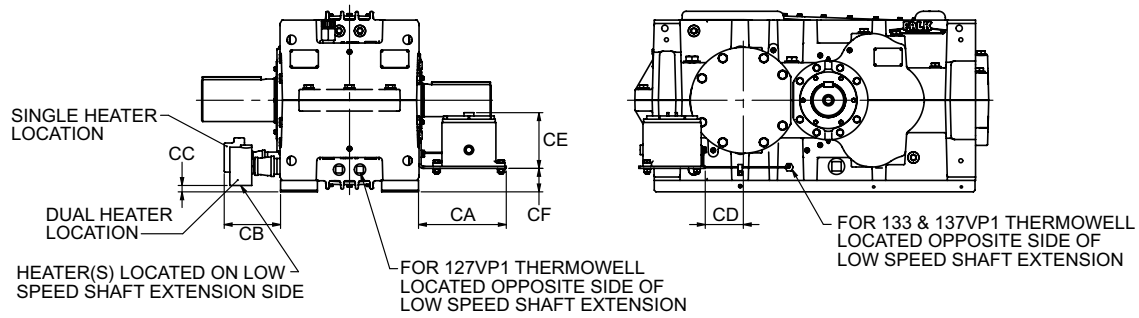


All Reductions and Ratios

DRIVE SIZE	A	B	H	L	LA	LB	P
193, 195, 197	2.5	14.1	36.9	10.2	13.0	2.5	1.250-11.5 NPT
203, 207	2.5	14.1	36.9	10.2	13.0	2.5	1.250-11.5 NPT
213, 215, 217	5.1	16.5	43.9	10.8	13.6	3.1	1.250-11.5 NPT
223, 225, 227	5.1	16.5	43.9	10.8	13.6	3.1	1.250-11.5 NPT

Type VP1 Sizes 107-137

Immersion Heater Package/Dimensions — Inches

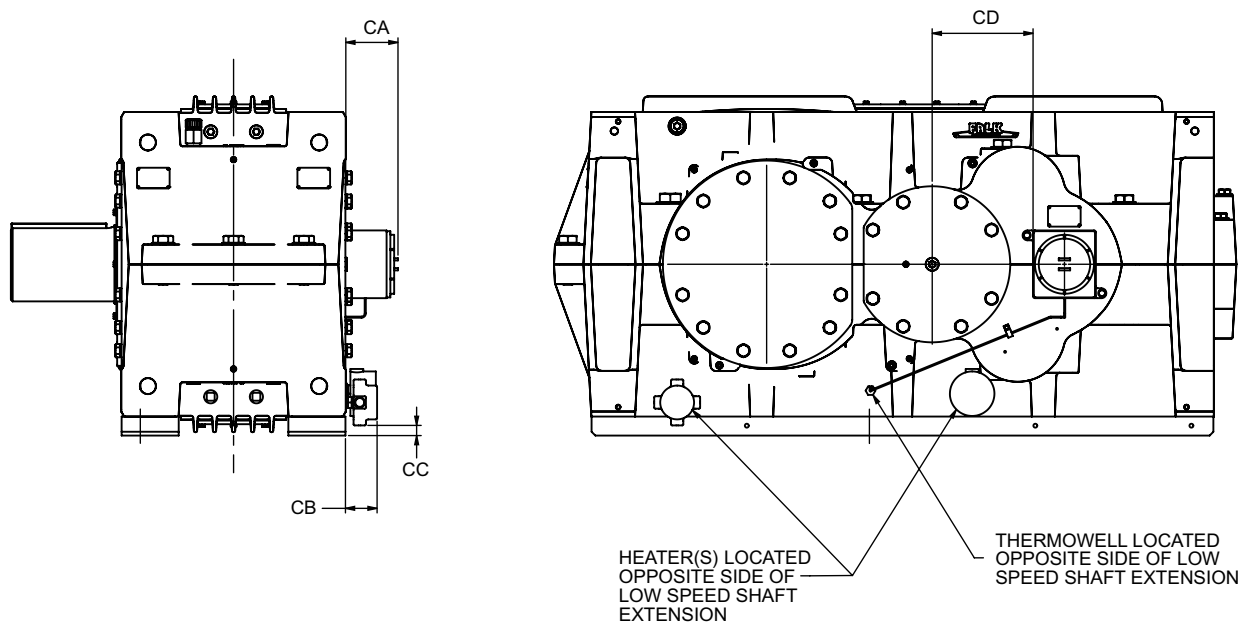


Single Reduction and Ratios

DRIVE SIZE	CA	CB	CC	CD	CE		CF
					120V/60HZ/1PH	240V/60HZ/3PH 480V/60HZ/3PH	
107	10.62	4.20	0.34	2.50	3.50	6.71	1.20
117	10.54	4.27	0.38	3.80	3.50	6.71	2.50
127	10.54	3.48	1.35	4.07	3.50	6.71	1.36
133, 137	10.56	6.78	0.77	4.58	3.50	6.71	2.82

Type VP1 Sizes 163-187

Immersion Heater Package/Dimensions — Inches

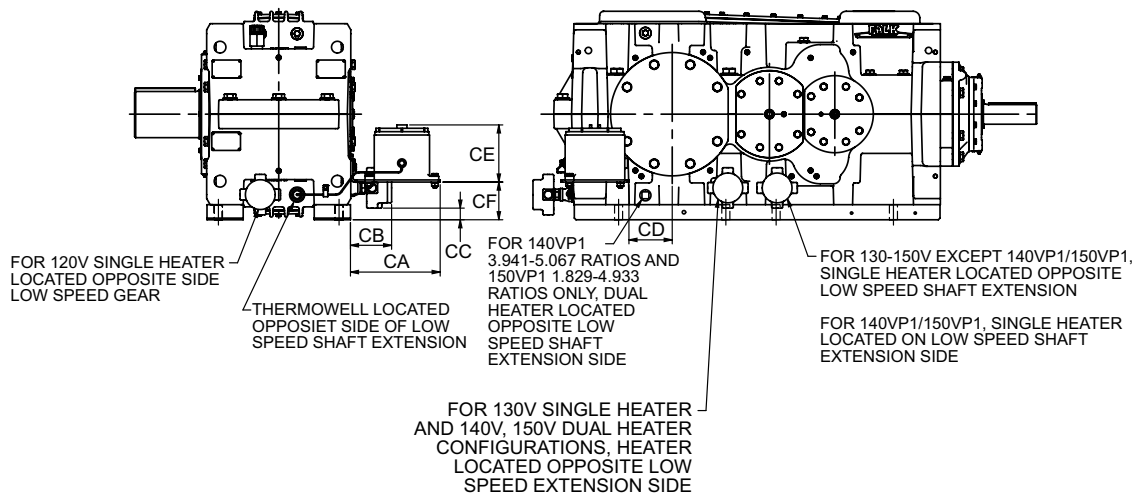


Single Reduction and Ratios

DRIVE SIZE	CA			CB			CC	CD		
	120V 60HZ 1PH	240V 60HZ 3PH	480V 60HZ 3PH	120V 60HZ 1PH	240V 60HZ 3PH	480V 60HZ 3PH		120V 60HZ 1PH	240V 60HZ 3PH	480V 60HZ 3PH
163 165 167	55.6	137.0	137.0	116.1	116.1	116.1	11.7	169.5	205.0	205.0
173 175 177	55.6	137.0	137.0	83.2	83.2	94.3	26.7	201.0	265.0	265.0
187	55.6	137.0	137.0	83.2	83.2	94.3	26.7	201.0	265.0	265.0

Type VP1 (except 107, 117, 127, 133 & 137), VP2, VP3, VR2 & VR3 Sizes 107-157

Immersion Heater Package/Dimensions — Inches

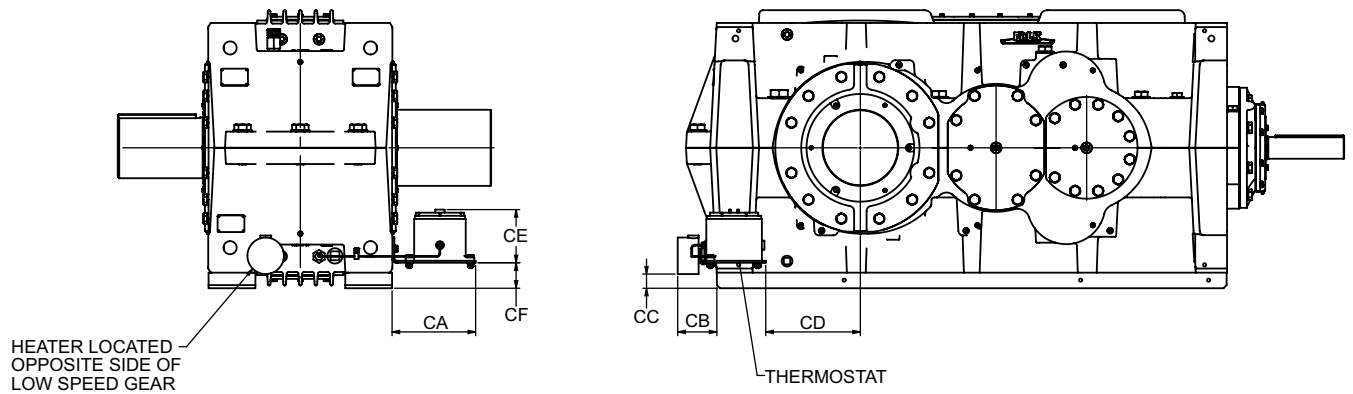


All Reductions and Ratios

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	3.50	6.71	1.20	
117	10.54	4.27	0.38	3.80	3.50	6.71	2.50	
127	10.54	4.24	0.18	3.87	3.50	6.71	1.20	
133 137	10.56	4.00	0.93	5.76	3.50	6.71	2.82	
143 145 147	10.54	4.83	1.37	5.08	3.50	6.71	4.43	
153 155 157	10.54	4.01	0.19	5.08	3.50	6.71	2.19	

Type VP2, VP3, VR2 & VR3 Sizes 163-187

Immersion Heater Package/Dimensions — Inches

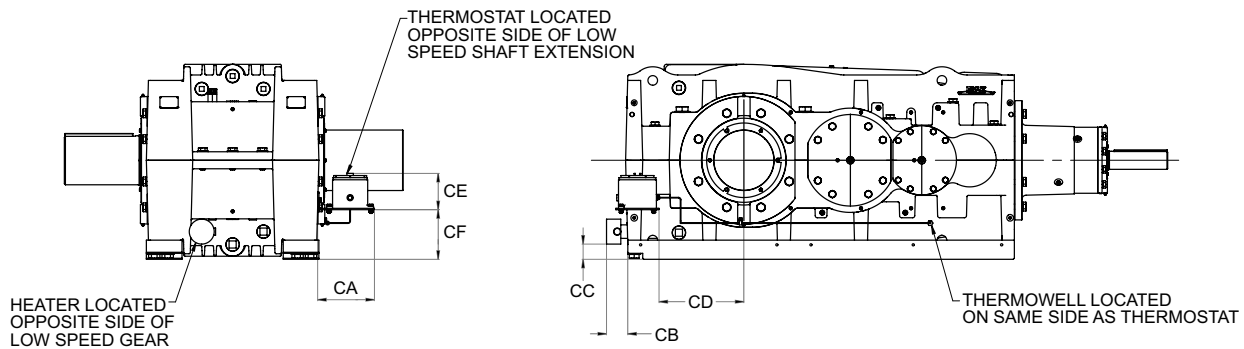


All Reductions and Ratios

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	3.50	6.71	2.32	
173 175 177	10.54	4.94	1.79	12.92	3.50	6.71	3.22	
187	10.54	4.94	1.79	11.94	3.50	6.71	3.22	

Type VP1, VP2, VP3, & VR3 Sizes 193-227

Immersion Heater Package/Dimensions — Inches

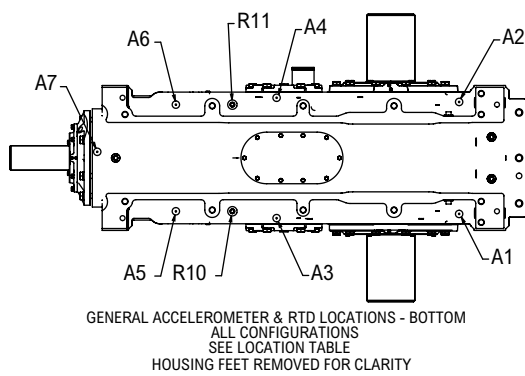
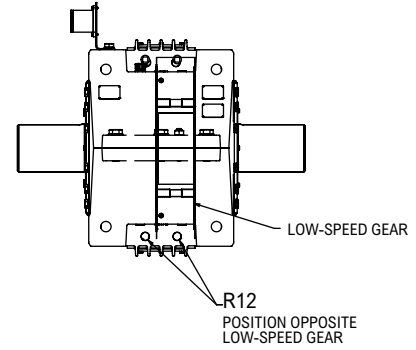
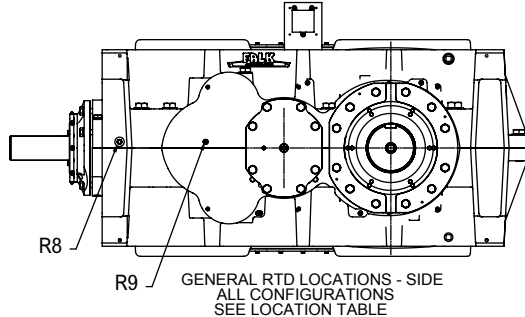
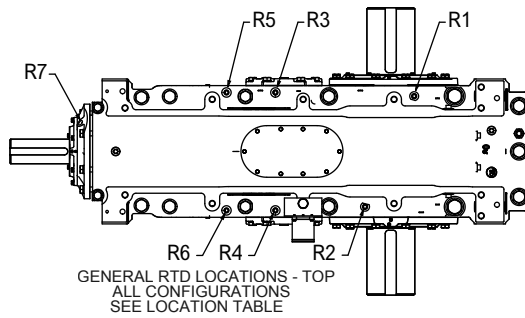


All Reductions and Ratios

DRIVE SIZE	CA	CB	CC	CD	CE		CF
					120V	240V 480V	
193, 195, 197	8.25	5.94	2.81	13.42	3.63	6.83	9.18
203, 207	8.25	5.94	2.81	14.99	3.63	6.83	9.18
213, 215, 217	8.25	3.57	2.81	16.39	3.63	6.83	11.34
223, 225, 227	8.25	3.57	2.81	18.36	3.63	6.83	11.34

Type VP & VR Sizes 107-127

Condition Monitoring Package/Dimensions — Inches

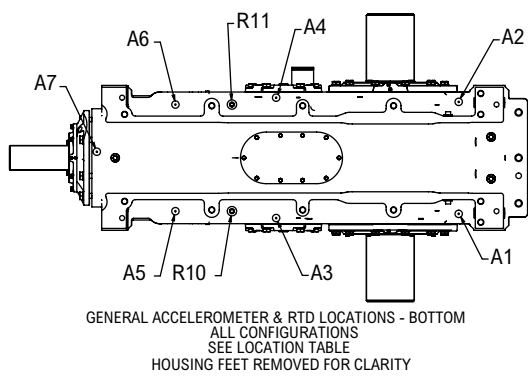
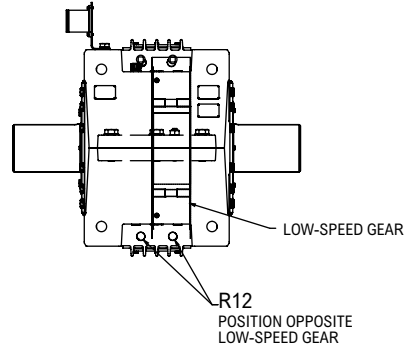
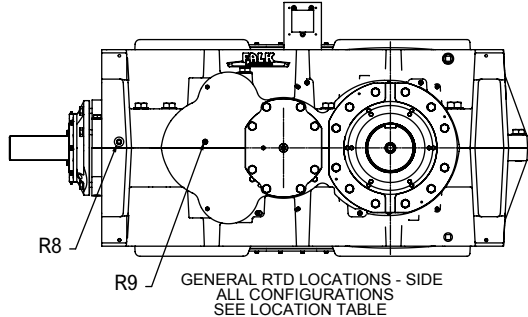
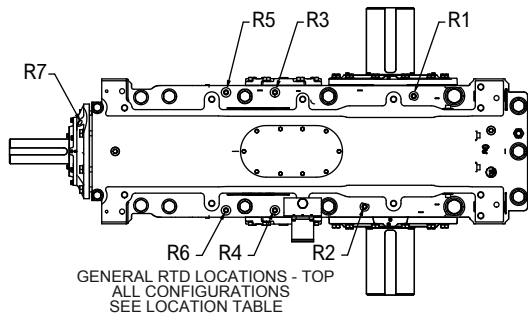


LOCATION TABLE

Description	Item Number Location	Drive Size and Type														
		107					117					127				
		VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3
Nominal Ratios		All	All	All	All	All	All	All	All	All	All	All	All	All	All	All
RTD	R1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R5	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X
RTD	R6	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X
RTD	R7	...	...	...	X	X	...	...	...	X	X	...	...	...	-	X
RTD	R8	...	...	...	-	X	...	...	...	...	X	...	...	...	X	X
RTD	R9	...	...	...	X	...	...	...	...	X	...	...	...	...	X	...
RTD	R10	...	...	X	...	...	...	...	X	...	...	...	...	X	...	...
RTD	R11	...	...	X	...	...	...	...	X	...	...	...	...	X	...	...
Sump RTD	R12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A5	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X
Accelerometer	A6	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X
Accelerometer	A7	...	...	...	X	X	...	...	...	X	X	...	...	...	X	X

Type VP & VR Sizes 133-157

Condition Monitoring Package/Dimensions — Inches

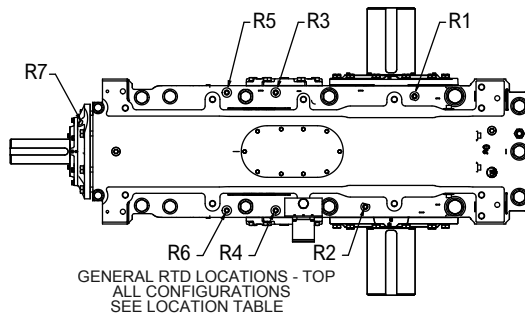


LOCATION TABLE

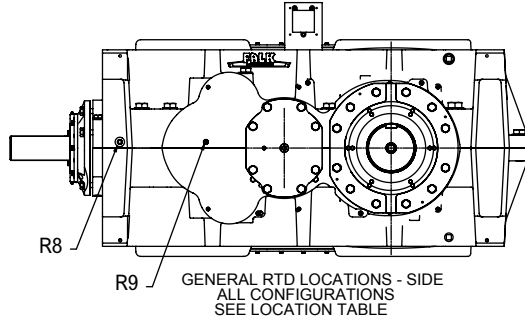
Description	Item Number Location	Drive Size and Type															
		133, 137					143, 145, 147					153, 155, 157					
		VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3	
Nominal Ratios		All	All	All	All	All	All	All	All	All	All	All	All	31.5-112	All	14.0-71.0	80.0-125
RTD	R1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R5	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X	X
RTD	R6	...	X	X	...	X	...	X	X	...	X	...	X	X	...	X	X
RTD	R7	...	...	...	...	X	...	...	...	X	X	...	...	...	...	X	X
RTD	R8	...	...	...	X	X	...	...	...	X	...	...	...	...	X	X	X
RTD	R9	...	...	...	X	...	...	...	X	...	...	...	...	...	X	...	...
RTD	R10	...	...	X	...	...	...	...	X	...	...	...	...	X	...	...	...
RTD	R11	...	...	X	...	...	...	...	X	...	...	...	...	X	...	...	...
Sump RTD	R12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Type VP & VR Sizes 163-187

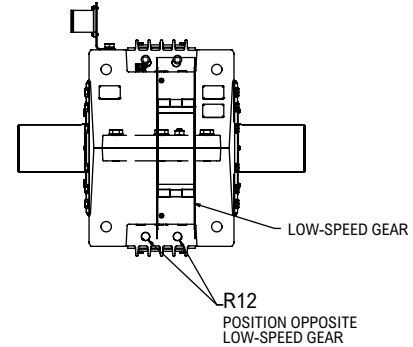
Condition Monitoring Package/Dimensions — Inches



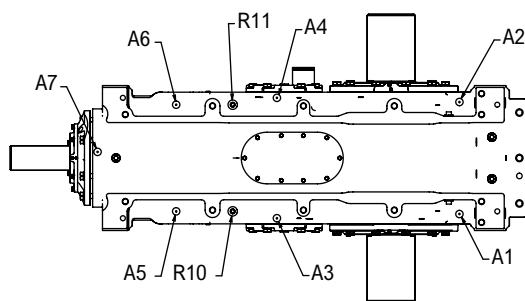
GENERAL RTD LOCATIONS - TOP
ALL CONFIGURATIONS
SEE LOCATION TABLE



GENERAL RTD LOCATIONS - SIDE
ALL CONFIGURATIONS
SEE LOCATION TABLE



LOW-SPEED GEAR
R12
POSITION OPPOSITE
LOW-SPEED GEAR



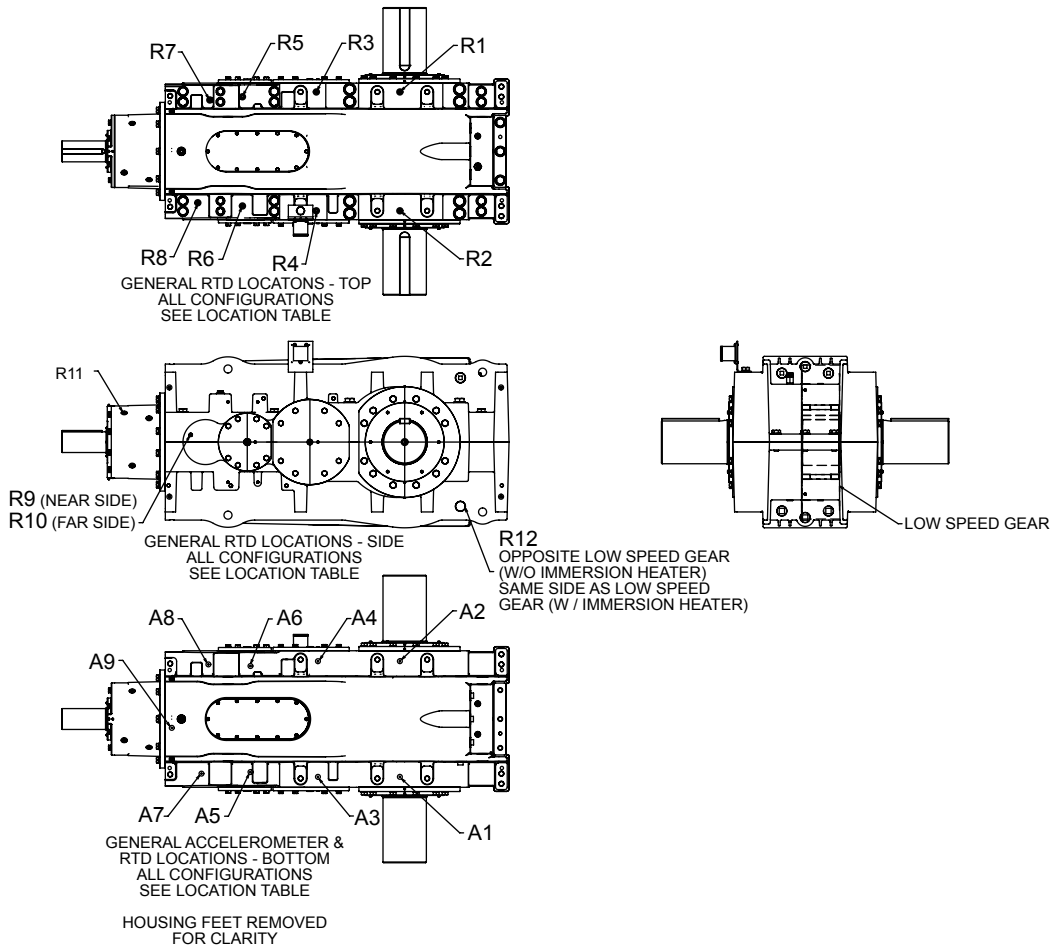
GENERAL ACCELEROMETER & RTD LOCATIONS - BOTTOM
ALL CONFIGURATIONS
SEE LOCATION TABLE
HOUSING FEET REMOVED FOR CLARITY

LOCATION TABLE

Description	Item Number Location	Drive Size and Type																				
		163, 165, 167					173, 175, 177					187										
		VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3	VP1	VP2	VP3	VR2	VR3						
Nominal Ratios		All	All	All	All	14.0 71.0	80.0 125	All	All	28.0 100	112 140	All	12.5 63.0	71.0 112	All	All	31.5- 112	125- 160	All	14.0- 71.0	80.0 125	
RTD	R1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R5	...	X	X	...	X	X	...	X	X	X	...	X	X	...	X	X	X	...	X	X	X
RTD	R6	...	X	X	...	X	X	...	X	X	X	...	X	X	...	X	X	X	...	X	X	X
RTD	R7	...	...	...	...	X	X	...	...	...	...	...	X	X	...	...	...	...	...	X	X	X
RTD	R8	...	...	...	X	X	X	...	...	...	...	...	X	X	X	...	...	...	X	X	X	X
RTD	R9	...	...	...	X	...	...	...	...	...	...	...	X	...	...	...	...	...	X	...	...	...
RTD	R10	...	...	X	...	...	...	...	...	X	X	...	...	...	...	...	X	X	...	...	...	...
RTD	R11	...	...	X	...	...	...	...	...	X	X	...	...	...	...	...	X	X	...	...	...	...
Sump RTD	R12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A5	...	X	X	...	X	X	...	X	X	X	...	X	X	...	X	X	X	...	X	X	X
Accelerometer	A6	...	X	X	...	X	X	...	X	X	X	...	X	X	...	X	X	X	...	X	X	X
Accelerometer	A7	...	...	...	X	X	X	...	...	...	...	...	X	X	...	...	...	...	...	X	X	X

Type VP & VR Sizes 193-227

Condition Monitoring Package/Dimensions — Inches



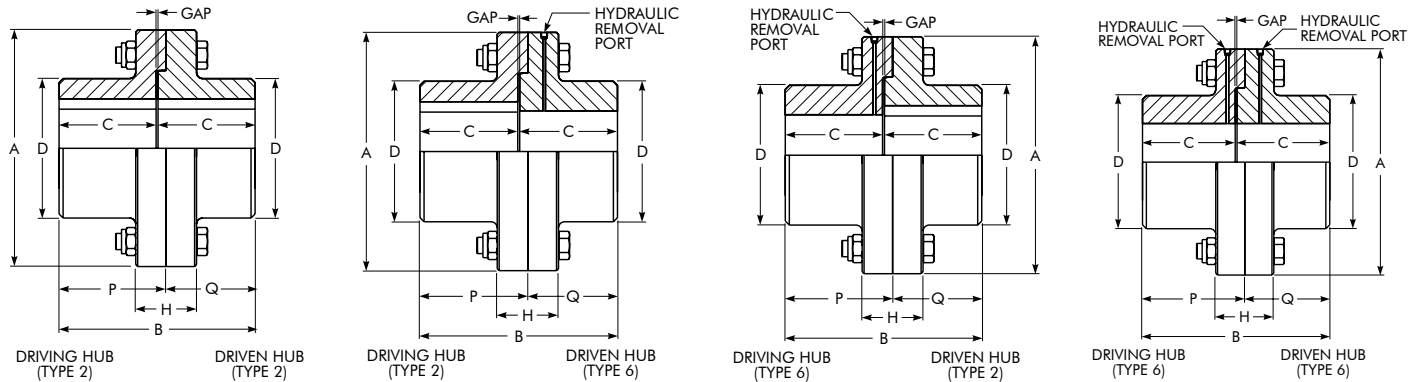
LOCATION TABLE

Description	Item Number Location	Drive Size and Type															
		193, 195, 197				203, 207				213, 215, 217				223, 225, 227			
		VP1	VP2	VP3	VR3	VP1	VP2	VP3	VR3	VP1	VP2	VP3	VR3	VP1	VP2	VP3	VR3
Nominal Ratios		All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All
RTD	R1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RTD	R5	...	X	X	X	...	X	X	X	...	X	X	X	...	X	X	X
RTD	R6	...	X	X	X	...	X	X	X	...	X	X	X	...	X	X	X
RTD	R7	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X	...
RTD	R8	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X	...
RTD	R9	...	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X
RTD	R10	...	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X
RTD	R11	...	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X
Sump RTD	R12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Accelerometer	A5	...	X	X	X	...	X	X	X	...	X	X	X	...	X	X	X
Accelerometer	A6	...	X	X	X	...	X	X	X	...	X	X	X	...	X	X	X
Accelerometer	A7	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X	...
Accelerometer	A8	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X	...
Accelerometer	A9	...	...	...	X	...	...	...	X	...	...	...	X	...	...	...	X

Type 2000 MCF Couplings

Flange Connection/Dimensions — Inches

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.



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

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

‡ Coupling weights are for hubs with rough bores.

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

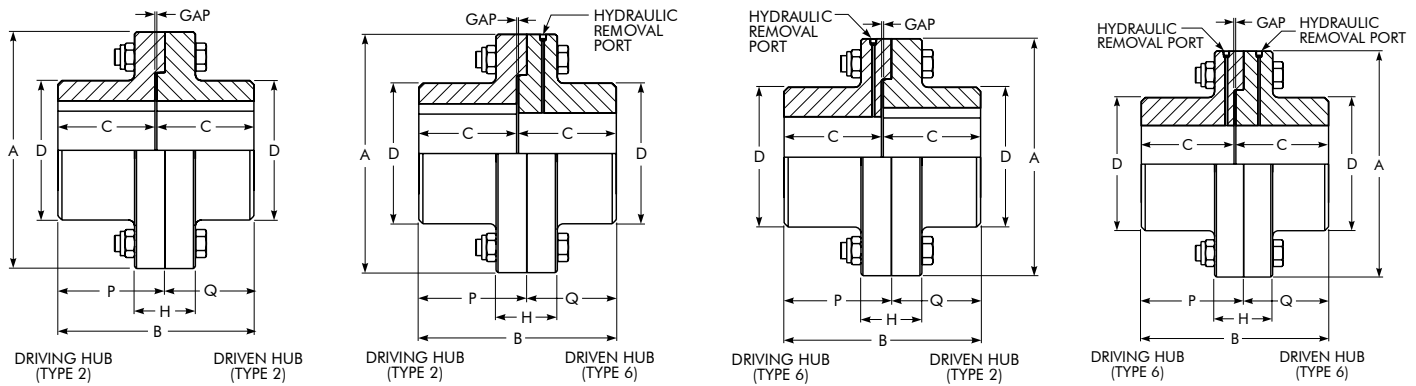
Type 2 and Type 6 hubs are interference fit. Driven shaft tolerance is expected to be: +0,000/-0,001 inches for inch shafts, or M6 for metric shafts.

Continued on next page.

Type 2000 MCF Couplings

Flange Connection/Dimensions — Inches

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.



DRIVE SIZE	Coupling Size †	Hub Type				Minimum/Maximum Bore				Cplg Wt lb ‡	A	B	C	D	H	P	Q	Gap	
		Driving Hub		Driven Hub		Driving Hub		Driven Hub											
		Type ★	Hydraulic Removal Port Size BSPP	Type ★	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										Keyed
		6	0.250-19	2	...		Keyless		Keyless										Keyless
		6	0.250-19	2	0.250-19		Keyless		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										Keyed
		6	0.250-19	2	...		Keyless		Keyless										Keyless
		6	0.250-19	6	0.250-19		Keyless		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										Keyed
		6	0.250-19	2	...		Keyless		Keyless										Keyless
		6	0.250-19	6	0.250-19		Keyless		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										Keyed
		6	0.750-14	2	...		Keyless		Keyless										Keyless
		6	0.750-14	6	0.750-14		Keyless		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										Keyed
		6	0.750-14	2	...		Keyless		Keyless										Keyless
		6	0.750-14	6	0.750-14		Keyless		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										Keyed
		6	0.750-14	2	...		Keyless		Keyless										Keyless
		6	0.750-14	6	0.750-14		Keyless		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										Keyed
		6	0.750-14	2	...		Keyless		Keyless										Keyless
		6	0.750-14	6	0.750-14		Keyless		Keyless										Keyless

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

‡ Coupling weights are for hubs with rough bores.

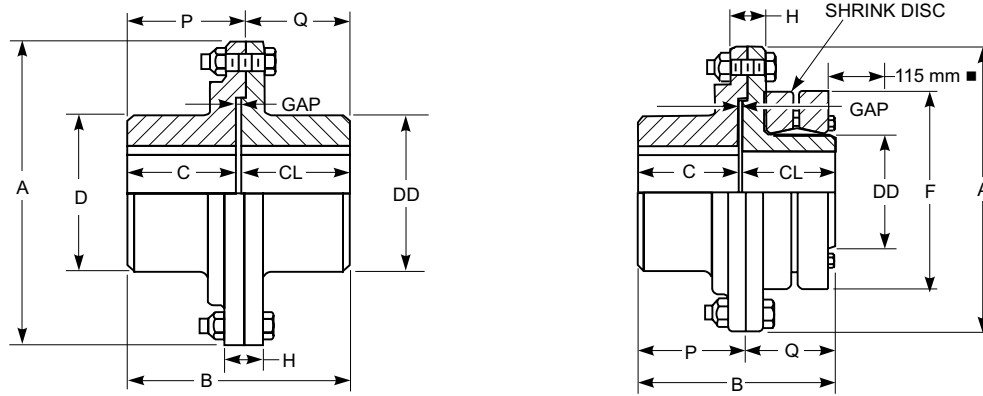
★ Type 2 hub is straight bored with keyed hub; Type 6 hub is straight bored KEYLESS hub with hydraulic removal.

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.

Type 1000 MCF Couplings

Flange Connection/Dimensions — Inches

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.



DRIVING HUB
(Type 2)

DRIVEN HUB
(Type 2)

DRIVING HUB
(Type 2)

DRIVEN HUB
WITH SHRINK DISC
(Type 4)

Drive Size	Cplg Size ★	Hub Type				Min/Max Bore †		Cplg • Wt-lb	A	B	C	CL	D	DD	H	P	Q	Gap
		Driving Hub	No. †	Driven Hub	No. †	Driving Hub	Driven Hub											
133 137	1045MCF	RSB	2	RSB	2	5.1181	3.000-7.000	510	19.68	14.12	7.00	7.00	10.00	10.00	2.50	7.62	6.50	.12
		RSB	2	175SD	4		4.921-5.315	500	19.68	12.74	7.00	5.62	10.00	6.89	2.50	7.62	5.12	.12
		RSB	2	185SD	4		5.315-5.709	560	19.68	13.68	7.00	6.56	10.00	7.28	2.50	7.62	6.06	.12
		RSB	2	200SD	4		5.709-6.102	570	19.68	13.68	7.00	6.56	10.00	7.87	2.50	7.62	6.06	.12
143 145 147	1045MCF	RSB	2	RSB	2	5.1181	3.000-7.000	510	19.68	14.12	7.00	7.00	10.00	10.00	2.50	7.62	6.50	.12
		RSB	2	175SD	4		4.921-5.315	500	19.68	12.74	7.00	5.62	10.00	6.89	2.50	7.62	5.12	.12
		RSB	2	185SD	4		5.315-5.709	560	19.68	13.68	7.00	6.56	10.00	7.28	2.50	7.62	6.06	.12
		RSB	2	200SD	4		5.709-6.102	570	19.68	13.68	7.00	6.56	10.00	7.87	2.50	7.62	6.06	.12
153 155 157	1055MCF	RSB	2	RSB	2	6.2992	3.500-8.000	720	21.84	16.12	8.00	8.00	11.50	11.50	2.50	8.62	7.50	.12
		RSB	2	200SD	4		5.709-6.102	710	21.84	14.68	8.00	6.56	11.50	7.87	2.50	8.62	6.06d	.12
		RSB	2	220SD	4		6.299-6.693	770	21.84	15.56	8.00	7.44	11.50	8.66	2.50	8.62	6.94	.12
		RSB	2	240SD	4		6.693-7.480	840	21.84	16.12	8.00	8.00	11.50	9.45	2.50	8.62	7.50	.12
163 165 167	1060MCF	RSB	2	RSB	2	7.0866	4.000-9.000	990	23.25	18.12	9.00	9.00	13.00	13.00	3.00	9.62	8.50	.12
		RSB	2	220SD	4		6.299-6.693	960	23.25	16.81	9.00	7.69	13.00	8.66	3.00	9.62	7.19	.12
		RSB	2	240SD	4		6.693-7.480	1040	23.25	17.31	9.00	8.19	13.00	9.45	3.00	9.62	7.69	.12
		RSB	2	260SD	4		7.480-8.268	1110	23.25	18.12	9.00	9.00	13.00	10.24	3.00	9.62	8.50	.12
173 175 177 187	1065MCF	RSB	2	RSB	2	7.6722	5.000-10.000	1260	24.50	20.12	10.00	10.00	14.00	14.00	3.50	10.62	9.50	.12
		RSB	2	240SD	4		6.693-7.480	1230	24.50	18.56	10.00	8.44	14.00	9.45	3.50	10.62	7.94	.12
		RSB	2	260SD	4		7.480-8.268	1300	24.50	19.18	10.00	9.06	14.00	10.24	3.50	10.62	8.56	.12
		RSB	2	280SD	4		8.268-9.055	1410	24.50	19.65	10.00	9.53	14.00	11.02	3.50	10.62	9.03	.12
		RSB	2	300SD	4		9.055-9.646	1460	24.50	19.81	10.00	9.69	14.00	11.81	3.50	10.62	9.19	.12
193 195 197	1075MCF	RSB	2	RSB	2	9.0551	6.000-11.500	1801	27.50	23.12	11.50	11.50	16.00	16.00	4.00	12.12	11.00	0.12
		RSB	2	280SD	4		8.268-9.055	1744	27.50	21.41	11.50	9.78	16.00	11.024	4.00	12.12	9.28	0.12
		RSB	2	300SD	4		9.055-9.646	1796	27.50	21.56	11.50	9.94	16.00	11.811	4.00	12.12	9.44	0.12
		RSB	2	320SD	4		9.449-10.236	1893	27.50	21.87	11.50	10.25	16.00	12.598	4.00	12.12	9.75	0.12
203 207	1080MCF	RSB	2	RSB	2	9.0551	7.500-12.500	2069	30.00	25.12	12.50	12.50	17.50	17.50	5.00	13.12	12.00	0.12
		RSB	2	300SD	4		9.055-9.646	2100	30.00	23.06	12.50	10.44	17.50	11.811	5.00	13.12	9.94	0.12
		RSB	2	320SD	4		9.449-10.250	2174	30.00	23.37	12.50	10.75	17.50	12.598	5.00	13.12	10.25	0.12
		RSB	2	340SD	4		9.843-10.630	2344	30.00	24.12	12.50	11.50	17.50	13.386	5.00	13.12	11.00	0.12
213 215 217	1090MCF	RSB	2	RSB	2	10.6299	8.500-14.000	3962	35.00	28.12	14.00	14.00	22.00	22.00	5.50	14.63	13.50	0.12
		RSB	2	340SD	4		9.843-10.630	3672	35.00	25.88	14.00	11.75	22.00	13.386	5.50	14.63	11.25	0.12
		RSB	2	360SD	4		10.630-11.614	3741	35.00	26.02	14.00	11.89	22.00	14.173	5.50	14.63	11.39	0.12
		RSB	2	380SD	4		11.417-12.205	3940	35.00	26.02	14.00	11.89	22.00	14.961	5.50	14.63	11.39	0.12
		RSB	2	400SD	4		12.205-13.000	4115	35.00	26.33	14.00	12.21	22.00	15.748	5.50	14.63	11.71	0.12
223 225 227	1095MCF	RSB	2	RSB	2	10.6299	9.000-15.000	4613	38.00	30.12	15.00	15.00	24.00	24.00	6.00	15.62	14.5	0.12
		RSB	2	360SD	4		10.630-11.614	4100	38.00	27.26	15.00	12.14	24.00	14.173	6.00	15.62	11.64	0.12
		RSB	2	380SD	4		11.417-12.205	4298	38.00	27.26	15.00	12.14	24.00	14.961	6.00	15.62	11.64	0.12
		RSB	2	400SD	4		12.205-13.000	4469	38.00	27.58	15.00	12.46	24.00	15.748	6.00	15.62	11.96	0.12
		RSB	2	420SD	4		12.992-13.750	4655	38.00	28.60	15.00	13.48	24.00	16.535	6.00	15.62	12.98	0.12

★ Refer to the Factory all applications above 100 rpm. Dimensions are for reference only and are subject to change without notice unless certified.
 ■ Distance required for torque wrench clearance to tighten the shrink disc fasteners. Consult Factory for alternatives if axial space is not available.
 † Driven shaft tolerance is expected to be: +0.000/-0.001 inches for inch shafts, or M6 for metric shafts.
 ● Coupling weights are for hubs with no bore and include shrink disc(s).
 † Number 2 hub is straight bored without shrink disc; Number 4 hub is straight bored with shrink disc.
 ■ Refer to factory when selecting these MCF hubs with shrink disc.



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