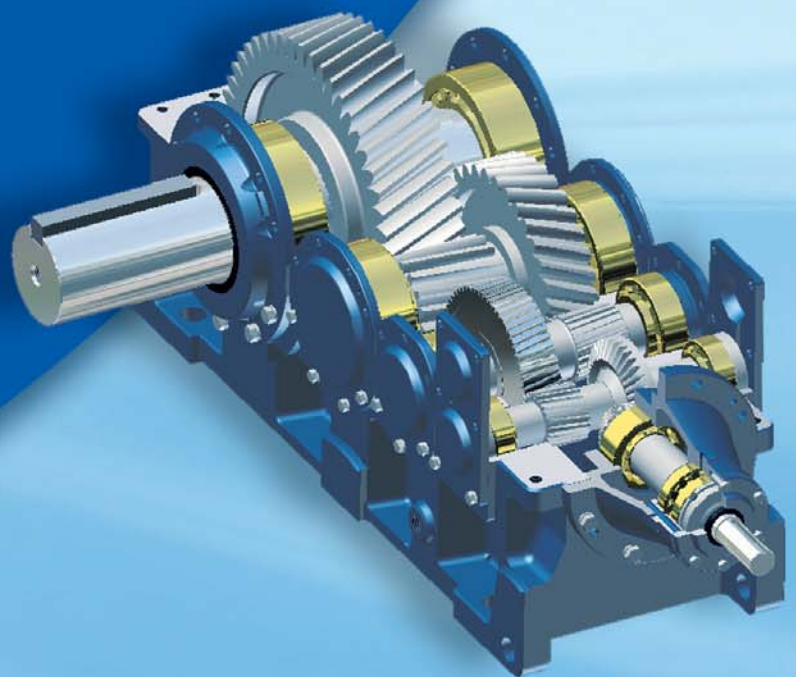


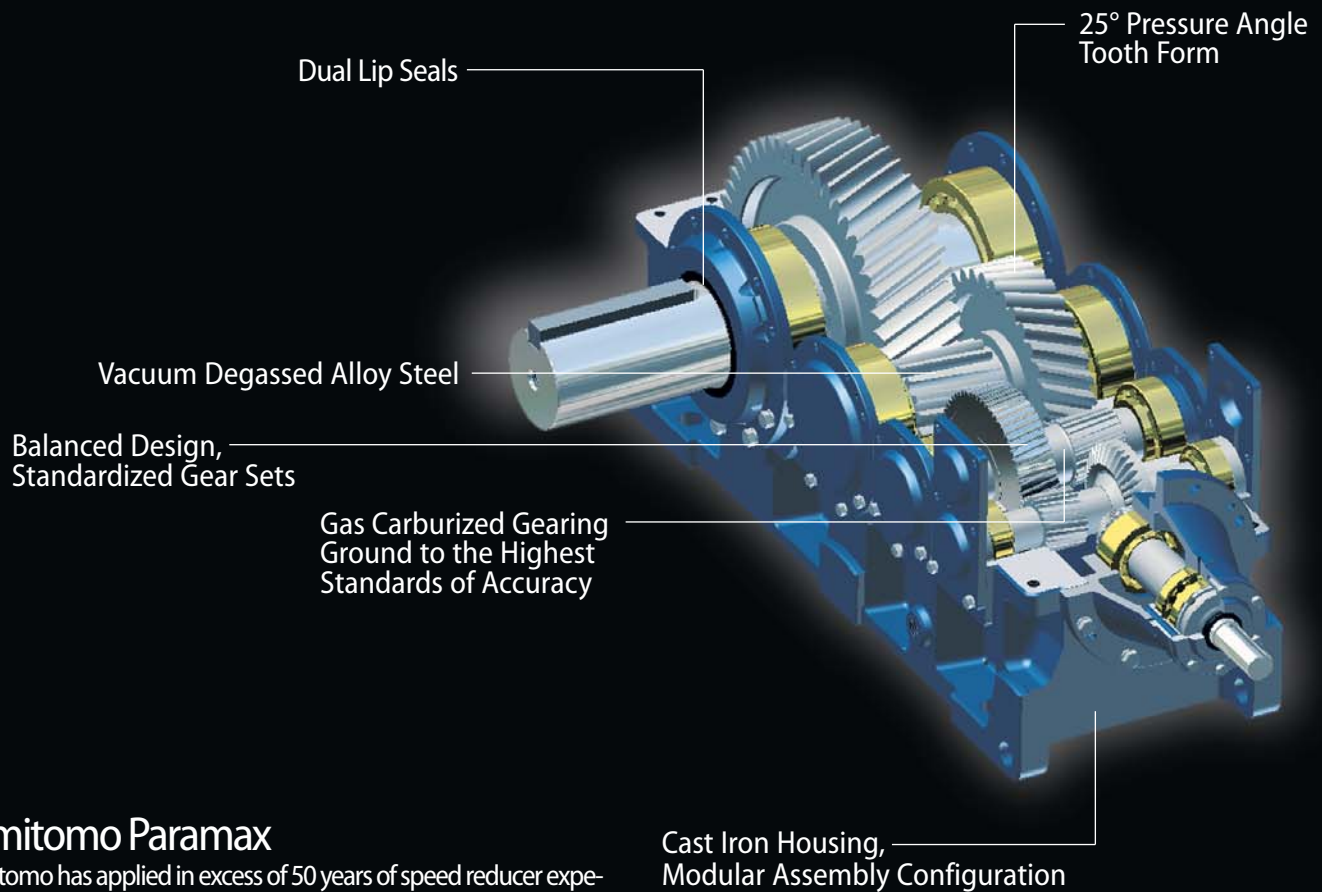
Sumitomo Drive Technologies
Always on the Move

Paramax

Parallel Shaft & Right Angle
Speed Reducers



CATALOG 07.701.50.007



Sumitomo Paramax

Sumitomo has applied in excess of 50 years of speed reducer experience to the design and manufacture of PARAMAX Parallel Shaft and Right Angle Speed Reducers. During this time we have designed and built some of the largest, most durable and trouble-free speed reducers in the world. Our fully integrated engineering and production facilities are equipped to provide prompt delivery of products manufactured to exacting standards at a competitive price. A worldwide network of regional offices, sales representatives, distributors and service technicians provides qualified, on-the-spot field service wherever and whenever you need it.

FEATURES

Economy, Standardization, Interchangeability

Featuring a concept of standardized gear set design and manufacture, PARAMAX offers the most economical and uniformly high-quality product available for demanding parallel shaft and right angle applications. Standardization also provides the added economy and value of interchangeability of gear sets from size to size.

Cast Iron Housing, Modular Assembly Configuration

Greater Capacity, Quiet, Trouble Free

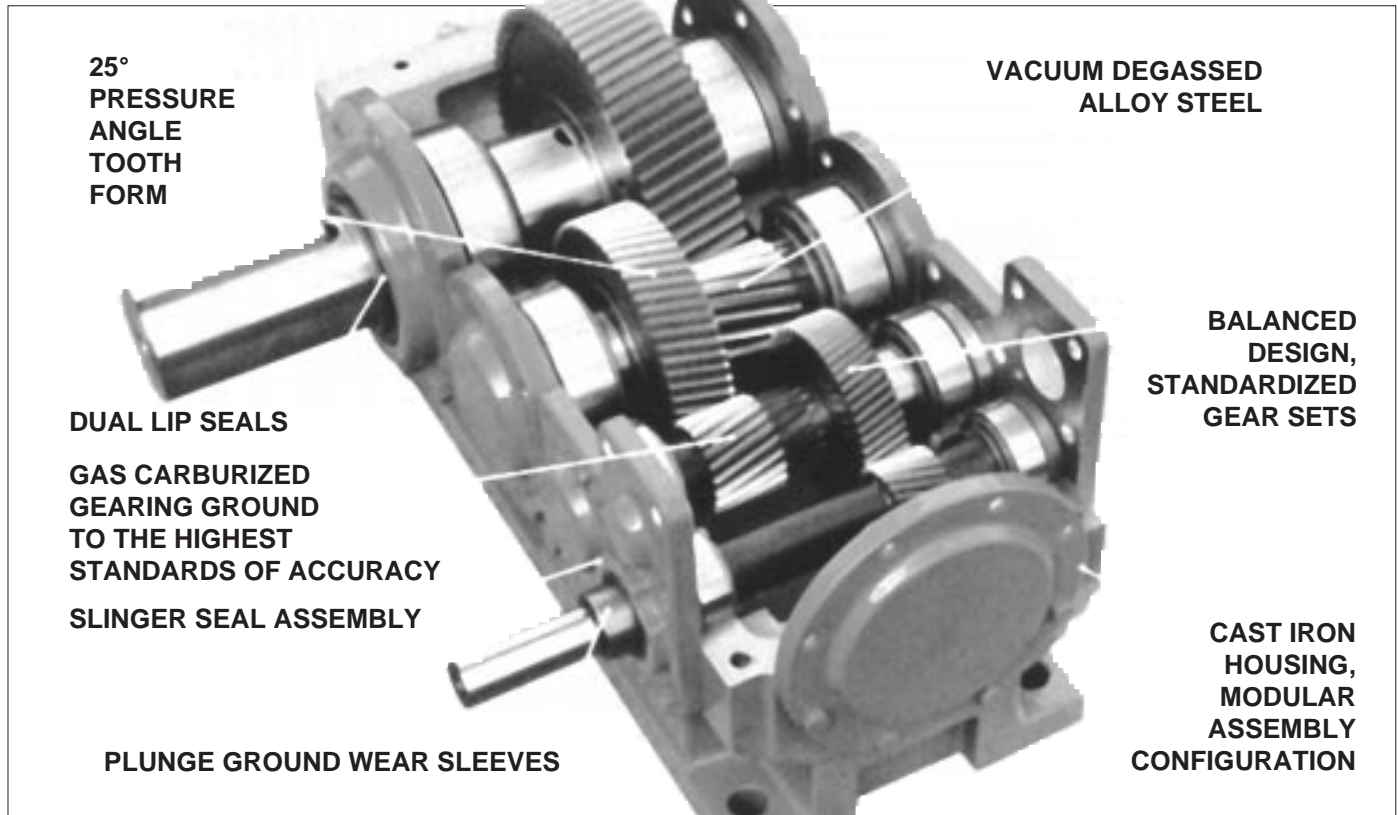
Produced with special Vacuum Degassed Alloy Steel, helical gearing in the PARAMAX series is machined using the protuberance hobbing method to generate a tooth having an increased helix angle and pressure angle. After machining, the teeth are gas carburized, heat treated and ground to the highest standards of accuracy. Spiral Bevel gearing is also carburized, heat treated and finished to the same standards. The result is greater capacity, smoother, quieter operation and longer trouble-free life than conventional hardened and ground gearing.

Computer-Aided Design, Maximum Efficiency

Ratios and dimensions of each stage of gearing are optimized through the latest computer-aided design technology.

PARAMAX

“The Available Solution, Worldwide.”



SUMITOMO PARAMAX

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ECONOMY, STANDARDIZATION, INTERCHANGEABILITY

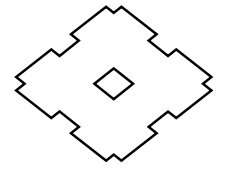
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DESIGN FEATURES

GEARING

Gear design is based on the latest AGMA standards with tooth modifications developed with computer technology. The resulting gearing has quieter operating characteristics, improved shock capacity, and longer life. Every Paramax series speed reducer is designed with precisely balanced gear combinations. All gearing is produced from vacuum degassed alloy steel.

Helical gears are produced by protuberance hobbing with 25° normal pressure angle hobs at increased helix angles. This produces stronger and quieter gearing. The gears are then heat treated using a gas carburizing process to a hardness of 58-62 Rockwell "C" scale. Then the gears are finish ground to the highest standards of accuracy. Pinion teeth are asymmetrically crowned, where applicable, to ensure optimal load distribution and maximum loadability.

Paramax gearing is inspected for accuracy of helix lead angle, involute profile, and pitch error.

Spiral bevel gearing is produced using similar processes. After heat treatment, spiral bevel gearing is "CBN" (CUBIC BORON NITRIDE) hard cut.

HOUSINGS

Housings are manufactured from high-quality cast iron and are designed not only to satisfy the most strict engineering and manufacturing requirements but also with a view toward functional appearance. The result is a housing with clean, efficient lines for easy maintenance yet built to withstand severe external loads. Standard features include oil level dipstick, inspection access holes, air breather, magnetic drainplug, and lifting lugs. Modular assembly configuration for P2 through P4 and R2 through R4.

DRIVE RATINGS

Standard Paramax Speed Reducers are designed and built for long, trouble-free, 10-hour daily service under conditions of uniform loads (equivalent to AGMA service factor 1.0 at 70°F ambient). When applications involve more severe conditions, catalog ratings (HP, torque) must be divided by the proper service factor, or the actual load must be multiplied by this factor.



Paramax triple reduction right angle speed reducer.

SHAFTS

Shafts are manufactured from high alloy steel and are heat treated under strict quality control conditions. Special care is exercised during design to prevent reduction in fatigue strength due to stress concentration.

BEARINGS

Shafts of Paramax Speed Reducers are mounted on tapered roller bearings or self-aligning spherical roller bearings. Sizes of these bearings are selected with an adequate safety margin in order to provide sufficient strength to absorb radial and thrust loads which could occur simultaneously.

SEALS

Standard Paramax gear units incorporate innovative seal designs which provide lower maintenance and greater reliability. Plunge ground wear sleeves are used wherever possible to eliminate abrasive wear damage to the shaft surface.

Horizontally mounted units are equipped with dual lip oil seals on both high speed and low speed shafts. In addition, the high speed shaft is equipped with an oil slinger assembly for improved oil retention.

Vertically mounted units are provided with a dual lip oil seal on the high speed shaft and double single lip seals on the low speed shaft.

LUBRICATION

For most applications, splash lubrication is standard for horizontal reducers. Reducer housings contain troughs in the inside of the housing to provide a flow of oil to the bearings. For some applications, forced lubrication may be required, typically for vertical type speed reducers, or variable input speed.

COOLING

Normally, heat from the drive is dissipated through the housing surface. Depending upon the application, an external oil pump may be required to accommodate a cooling system. The following cooling features are standard options on Paramax.

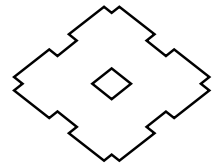
- Fan mounted on the high speed shaft.
- Water cooling coil in gearcase sump.
- Oil/water heat exchanger furnished on forced lubrication systems.
- Oil/air heat exchanger furnished on forced lubrication systems.

EXCESSIVE OVERLOADS

The Paramax Speed Reducers, when used at an AGMA application factor of 1.0, can withstand a momentary peak torque of 200% of the rated torque (100% overload based on 10 momentary peak loads per hour). Under certain conditions (i.e., fewer starts per day, light shock, shorter operating time, etc.), greater peak torques can often be tolerated. Please consult factory.

OPERATING

All Paramax Speed Reducers are designed to encounter up to 100°F (38°C) temperature rise over ambient, with oil sump temperature up to 200°F (93°C) and higher in localized areas, according to AGMA standards.



APPLICATION INFORMATION

SELECTION (See page 17) SERVICE FACTOR

A speed reducer is rated for a specific application by the use of service factors. All applications have their own conditions and operating requirements. These conditions and requirements are cataloged by AGMA. Tabulations of these service factors by industry and application appear on page 8. Refer all unlisted applications to the factory.

VARIABLE SPEED APPLICATION

When a Paramax Speed Reducer is driven by a variable speed motor, special care must be taken to select the correct frame size. That is, first determine whether the operating conditions are constant horsepower or constant torque. Select the desired frame size at minimum speed if horsepower is constant and at maximum speed if torque is constant. Variable speed applications require special attention to be sure to provide adequate lubrication at low speed, but without excessive heating or churning at high speed. It is important that all inquiries/orders indicate maximum and minimum speeds and the duration of cycles for the various speeds.

THERMAL RATINGS

Actual horsepower required for an application is to be checked against thermal ratings for a given unit shown in our catalog. In the event actual horsepower exceeds catalog thermal rating, cooling fans or circulating oil/cooler system may be required to increase thermal rating capacity. The service factor is **not** to be used in determining thermal capacity. Please consult the factory if an unusual ambient temperature or service condition exists.

INSTALLATION AND OPERATION

Before actual running of reducers, prime all troughs and fill the unit to the appropriate level. Use a lubricant that meets factory specifications. The first oil change should be after 1 month of operation or 500 hours, whichever comes first. Changes thereafter are recommended to be made every 6 months or 2,500 hours. More frequent changes may be necessary, depending on conditions. Please consult the Operation and Maintenance Manual or contact the factory.

Paramax Reducer used for aerator drive.



APPLICATION INFORMATION (Continued)

ALLOWABLE RADIAL AND THRUST LOADS

The loads imposed on the high speed and low speed shafts vary with the method of connecting the shafts. Frequently, in addition to torsional forces, radial and thrust loads are applied to the shaft at the same time.

For example, coupling connections normally involve torsional forces only. However, when power is transmitted through spur gears, belts, pulleys or chains, both torsional and radial forces may be applied to the shaft. When driving through helical or bevel gears, all three conditions (torsional, radial and thrust load) may be transmitted to the reducer shaft.

The shaft and its bearings must have sufficient strength to withstand these loads, and it is, therefore, necessary to determine the allowable limits for each condition. For combined radial and thrust loads, please contact the factory.

LOAD LOCATION

The radial and thrust load capacities are calculated with the load concentrated at one shaft diameter length from the shoulder of the shaft extension. Radial load capacities decrease if the center of the load is moved farther from the reducer and the values obtained from the charts must be adjusted accordingly. Please refer to the load location factor table on page 14.

SHAFT CONNECTIONS

Pulley, sprocket or sheave connection: Mount any of the above as close to the unit housing as possible, to avoid undue bearing load and shaft deflection. Never overtighten belts and, for trouble-free operation, before installation, the shafts should be checked to make sure they are parallel and level. Perfect alignment after mounting can be checked with a string or straight edge held against the sides of the sprocket or pulley.

Couplings should be properly aligned to the limits specified by the manufacturer.

MOUNTING TIPS

Horizontal and vertical units should be mounted in exact planes whenever possible. When they are mounted on inclined surfaces, minor modifications are necessary, since an inclined mounting could lower the oil to a level that will starve reduction parts and bearings. On the other hand, overfilling a unit with oil may cause leakage through the air vent, foaming and churning and, consequently, overheating. Any of the above could result in damage to the unit. In some cases, a forced lubrication system may be necessary.

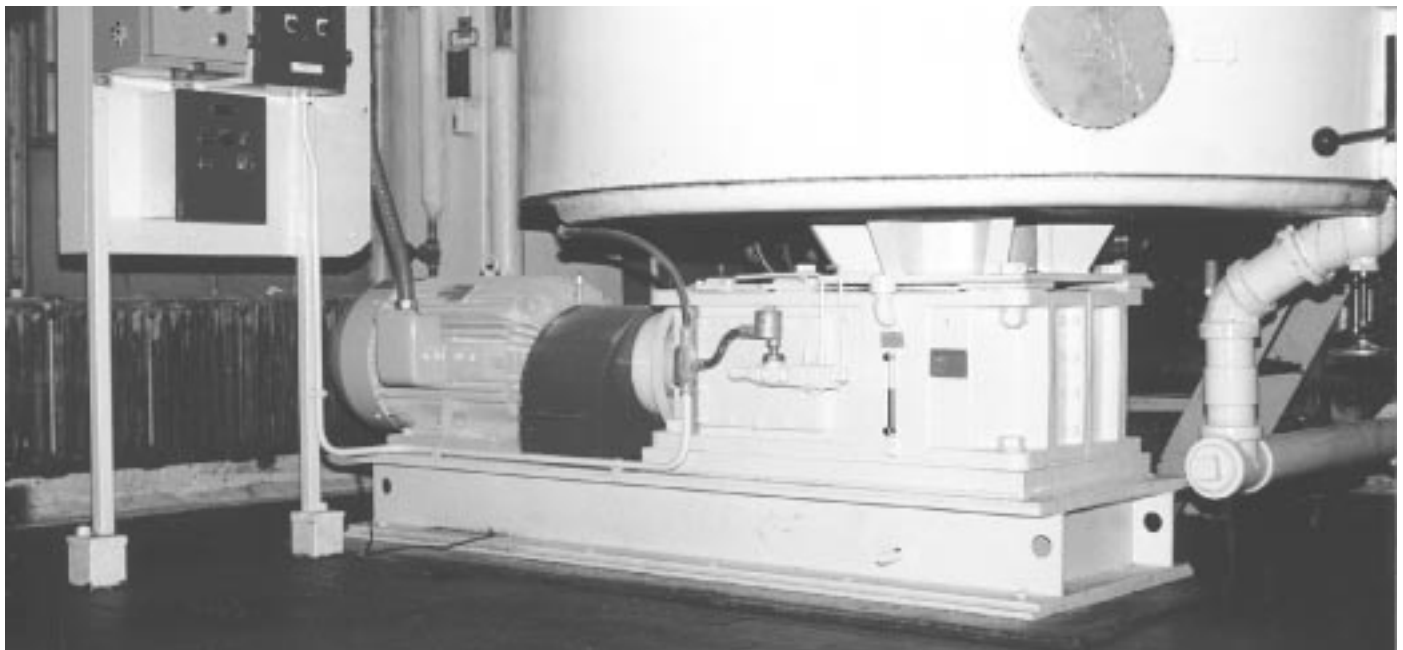
WARRANTY

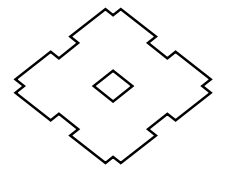
The company warrants that the Paramax Speed Reducer will deliver its rated capacity as indicated in this catalog provided it is properly installed, maintained and operated within the limits of speed, torque or other load conditions under which it was sold. The company further states that all apparatus sold is warranted to be free from defects in material and workmanship and to conform to any applicable drawings and specifications approved by the company for a period of 18 months from the date of shipment to the buyer (or 12 months from date of installation, whichever is the earlier).

For construction purposes, be sure to obtain certified dimension sheets or drawings. Although we take every precaution to include accurate data in our catalog, we cannot guarantee such accuracy. If performance guarantees are required, they should be obtained in writing from the factory. Full consideration will be given to such requests when complete details of the proposed installation are given.

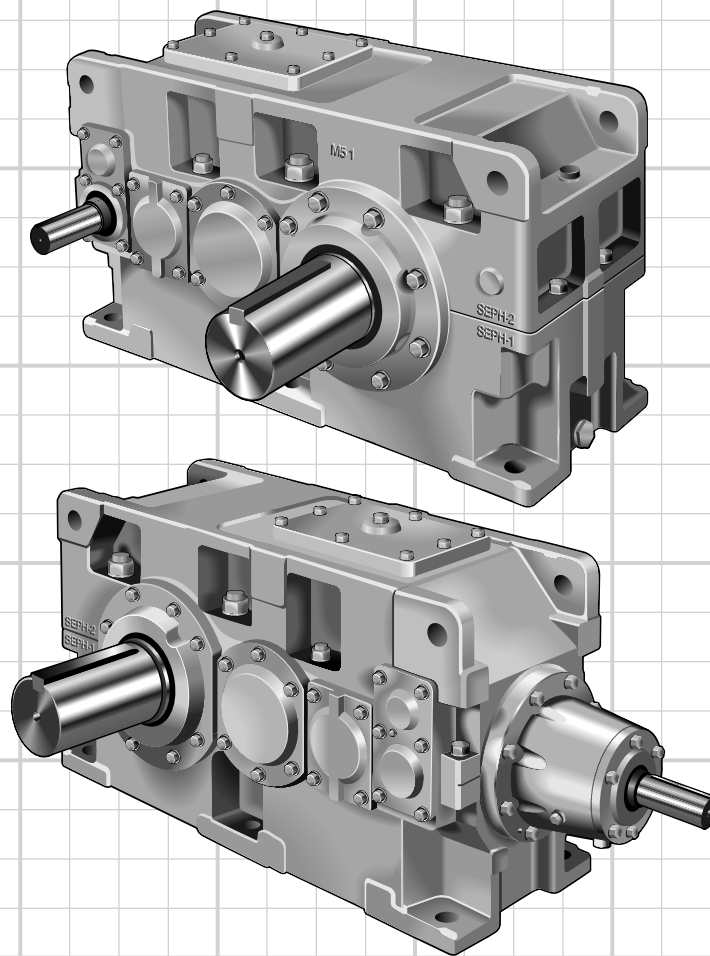
Be sure to install and operate reducers in compliance with applicable local and national safety codes. Appropriate guards for rotating shafts should be used and are available from local stocks.

Paramax Reducer used in chocolate mixer application.





PRODUCT APPLICATION and Selection



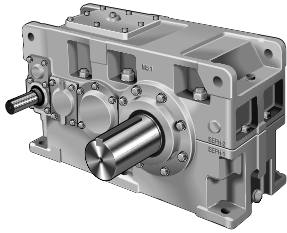
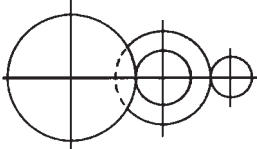
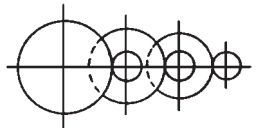
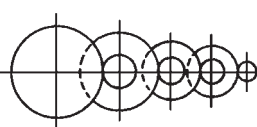
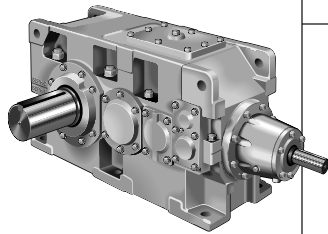
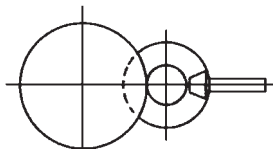
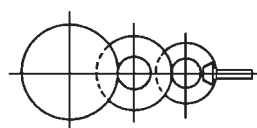
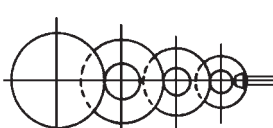
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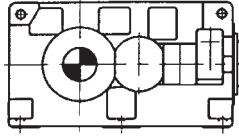



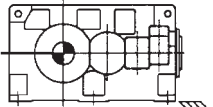



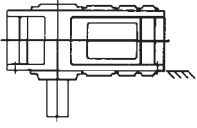



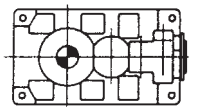



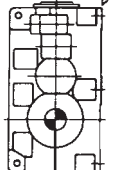



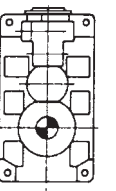



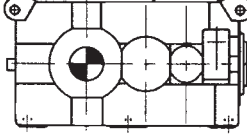












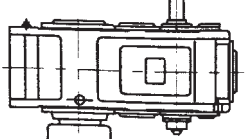












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SERIES	SIZE	TORQUE RATING		SHAFT CONFIGURATION	NUMBER OF STAGES					
		IN.LB. X1000	kNm							
PARAMAX®	015	24	2.6	PARALLEL 	 2					
	025	36	3.4		P	 3				
	035	58	6.5			 4				
	045	92	8.2				RIGHT ANGLE 	 2		
	055	142	15.6					R	 3	
	065	227	24.4						 4	
	075	336	38.2							
	085	522	58.5							
	090	733	85.9							
	095	831	101							
	100	1077	122							
	105	1226	144							
	110	1414	174							
	115	1603	207							
	120	2399	271							
	125	2847	323							
	130	3672	423							
	135	4414	512							

RL

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AVAILABLE RATIOS
 PARALLEL SHAFT
 6.3 - 450
 RIGHT ANGLE
 6.3 - 400

HOUSING TYPE	ASSEMBLY DESIGNATION			OUTPUT SHAFT	MOUNTING TYPE			
 <p>STANDARD CAST IRON</p>	HORIZONTAL	PARALLEL	P2 RL  RR  RB 	SOLID SHAFT	HORIZONTAL SHAFT WITH FEET 			
P3			LL  LR  LB 		VERTICAL SHAFT 			
P4			BL  BR  BB 		HORIZONTAL SHAFT WITHOUT FEET 			
RIGHT ANGLE		R2	LL  RR  RB 		M HORIZONTAL SHAFT WALL MOUNT WITH FEET 			
		R3	RL  LR  RB 		H HOLLOW SHAFT HORIZONTAL SHAFT WALL MOUNT WITHOUT FEET 			
		R4	LL  RR  RB 					
 <p>STEEL FABRICATED</p> <p>A</p>	VERTICAL	PARALLEL	P2		RLV 	RRV 	HOLLOW SHAFT	
P3			RLV 		RRV 			
P4			RLV 		RRV 			
RIGHT ANGLE		R2	RLV 		RRV 			
		R3	RLV 		RRV 			
		R4	LLV 		LRV 			
 <p>DROP BEARING</p> <p>D</p>	HOLLOW BORE (HORIZONTAL)	PARALLEL	P2	RL 	RR 	HOLLOW SHAFT		
P3			LR 	LL 				
P4			LR 	LL 				
RIGHT ANGLE		R2	RR 	LL 				
		R3	RL 	LR 				
		R4	RR 	LL 				

SERVICE FACTORS

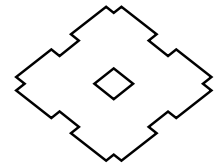
Service Factors for Enclosed Gear Drives, Motors (Hydraulic and Electric) and Turbines (Steam or Gas)

	Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day		Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day		Up to 3 Hrs. Day	3-10 Hrs. Day	Over 10 Hrs. Day
AGITATORS (Mixers)				Meal Grinders	1.25	1.25	1.50	Paper Rolls	1.25	1.25	1.25
Pure Liquids	1.00	1.00	1.25	Slicers	1.25	1.25	1.50	Platter	1.50	1.50	1.50
Liquids and Solids	1.00	1.25	1.50	GENERATORS AND EXCITERS -	1.00	1.00	1.25	Presses - Felt & Suction	1.25	1.25	1.25
Liquids - Variable Density	1.00	1.25	1.50	HAMMER MILLS	1.75	1.75	2.00	Pulper	2.00	2.00	2.00
BLOWERS				HOISTS				Pumps - Vacuum	1.50	1.50	1.50
Centrifugal	1.00	1.00	1.25	Heavy Duty	1.75	1.75	2.00	Reel (Surface Type)	1.25	1.25	1.25
Lobe	1.00	1.25	1.50	Medium Duty	1.25	1.25	1.50	Screens			
Vane	1.00	1.25	1.50	Skip Hoist	1.25	1.25	1.50	Chip	1.50	1.50	1.50
BREWING AND DISTILLING				LAUNDRY TUMBLERS	1.25	1.25	1.50	Rotary	1.50	1.50	1.50
Bottling Machinery	1.00	1.00	1.25	LAUNDRY WASHERS	1.50	1.50	2.00	Vibrating	2.00	2.00	2.00
Brew Kettles, Continuous Duty	1.25	1.25	1.25	LUMBER INDUSTRY				Size Press	1.25	1.25	1.25
Cookers - Continuous Duty	1.25	1.25	1.25	Barkers - Spindle Feed	1.25	1.25	1.50	Super Calender (See Note 1)	1.25	1.25	1.25
Mash Tubs - Continuous Duty	1.25	1.25	1.25	- Main Drive	1.75	1.75	1.75	Thicker (AC Motor)	1.50	1.50	1.50
Scale Hopper, Frequent Starts	1.25	1.25	1.50	Conveyors - Burner	1.25	1.25	1.50	(DC Motor)	1.25	1.25	1.25
CAN FILLING MACHINES	1.00	1.00	1.25	- Main or Heavy Duty	1.50	1.50	1.50	Washer (AC Motor)	1.50	1.50	1.50
CAR DUMPERS	1.50	1.75	2.00	- Main Log	1.75	1.75	2.00	(DC Motor)	1.25	1.25	1.25
CAR PULLERS	1.00	1.25	1.50	- Re-saw				Wind & Unwind Stand	1.00	1.00	1.25
CLARIFIERS	1.00	1.00	1.25	Merry-Go-Round	1.25	1.25	1.50	Winders (Surface Type)	1.25	1.25	1.25
CLASSIFIERS	1.00	1.25	1.50	- Slab	1.75	1.75	2.00	Yankee Dryers	1.25	1.25	1.25
CLAY WORKING MACHINERY				- Transfer	1.25	1.25	1.50	PLASTICS INDUSTRY - PRIMARY PROCESSING			
Brick Press	1.50	1.75	2.00	Chains - Floor	1.50	1.50	1.50	Intensive Internal Mixers			
Briquette Machine	1.50	1.75	2.00	- Green	1.50	1.50	1.75	(a) Batch Mixers	1.75	1.75	1.75
Pug Mill	1.00	1.25	1.50	Cut-Off Saws - Chain	1.50	1.50	1.75	(b) Continuous Mixers	1.50	1.50	1.50
COMPACTORS	2.00	2.00	2.00	- Drag	1.50	1.50	1.75	Batch Drop Mill - 2 smooth rolls	1.25	1.25	1.25
COMPRESSORS				Debarking Drums	1.75	1.75	2.00	Continuous Feed,			
Centrifugal	1.00	1.00	1.25	Feeds - Edgar	1.25	1.25	1.50	Holding & Blend Mill	1.25	1.25	1.25
Lobe	1.00	1.25	1.50	- Gang	1.75	1.75	1.75	Calenders	1.50	1.50	1.50
Reciprocating, Multi-Cylinder	1.50	1.50	1.75	- Trimmer	1.25	1.25	1.50	Blow Molders	1.50	1.50	1.50
Reciprocating, Single-Cylinder	1.75	1.75	2.00	Log Deck	1.75	1.75	1.75	Coating	1.25	1.25	1.25
CONVEYORS - GENERAL PURPOSE				Log Hauls - Incline - Well Type	1.75	1.75	1.75	Film	1.25	1.25	1.25
Uniformly loaded or fed	1.00	1.00	1.25	Log Turning Devices	1.75	1.75	1.75	Pipe	1.25	1.25	1.25
- Heavy Duty				Planer Feed	1.25	1.25	1.50	Pre-Plasticizers	1.50	1.50	1.50
Not uniformly fed	1.00	1.25	1.50	Planer Tilling Hoists	1.50	1.50	1.50	Rods	1.25	1.25	1.25
- Reciprocating or Shaker	1.50	1.75	2.00	Rolls - Live-off brg. - Rolls Cases	1.75	1.75	1.75	Sheet	1.25	1.25	1.25
*CRANES				Sorting Table	1.25	1.25	1.50	Tubing	1.25	1.25	1.50
Dry Dock				Tipple Hoist	1.25	1.25	1.50	PULLERS - BARGE HAUL	1.25	1.25	1.50
Main Hoist				Transfers - Chain	1.50	1.50	1.75	PUMPS			
Auxiliary Hoist				- Craneway	1.50	1.50	1.75	Centrifugal	1.00	1.00	1.25
Boom Hoist				Tray Drives	1.25	1.25	1.50	Proportioning	1.25	1.25	1.50
Slewing Drive				Veneer Lathe Drives	1.25	1.25	1.50	Reciprocating			
Traction Drive				METAL MILLS				Single Acting,			
Container				Draw Bench Carriage	1.25	1.25	1.50	3 or more cylinders	1.25	1.25	1.50
Main Hoist				and Main Drive				Double Acting,			
Boom Hoist				Runout Table				2 or more cylinders	1.25	1.25	1.50
Trolley Drive				Non-reversing				Rotary - Gear Type	1.00	1.00	1.25
(Gantry Drive)				Group Drives	1.50	1.50	1.50	- Lobe	1.00	1.00	1.25
(Traction Drive)				Individual Drives	2.00	2.00	2.00	- Vane	1.00	1.00	1.25
Mill Duty				Reversing	2.00	2.00	2.00	RUBBER INDUSTRY			
Main Hoist				Slab Pushers	1.50	1.50	1.50	Intensive Internal Mixers			
Auxiliary				Shears	2.00	2.00	2.00	(a) Batch Mixers	1.75	1.75	1.75
Bridge and				Wire Drawing	1.25	1.25	1.50	(b) Continuous Mixers	1.50	1.50	1.50
Trolley Travel				Wire Winding Machine	1.25	1.50	1.50	Mixing Mill - 2 smooth rolls - (if			
Industrial Duty				METAL STRIP PROCESSING MACHINERY				corrugated rolls are used then			
Main				Bridles	1.25	1.25	1.50	use the same service factors that			
Auxiliary				Coilers & Uncoilers	1.00	1.00	1.25	are used for a Cracker-Warmer)	1.50	1.50	1.50
Bridge and				Edge Trimmers	1.00	1.25	1.50	Batch Drop Mill - 2 smooth rolls	1.50	1.50	1.50
Trolley Travel				Flatteners	1.00	1.25	1.50	Cracker Warmer			
CRUSHER				Loopers (Accumulators)	1.00	1.00	1.25	2 roll; 1 corrugated roll	1.75	1.75	1.75
Stone or Ore	1.75	1.75	2.00	Pinch Rolls	1.25	1.25	1.50	Cracker - 2 corrugated rolls	2.00	2.00	2.00
DREDGES				Scrap Choppers	1.25	1.25	1.50	Holding, Feed & Blend Mill			
Cable Reels	1.25	1.25	1.50	Shears	2.00	2.00	2.00	2 rolls	1.25	1.25	1.25
Conveyors	1.25	1.25	1.50	Slitters	1.25	1.25	1.50	Refiner - 2 rolls	1.50	1.50	1.50
Cutter Head Drive	2.00	2.00	2.00	MILLS, ROTARY TYPE				Calenders	1.50	1.50	1.50
Pumps	2.00	2.00	2.00	Ball & Rod				SAND MULLER	1.25	1.25	1.50
Screen Drives	1.75	1.75	2.00	Spur Ring Gear	2.00	2.00	2.00	SEWAGE DISPOSAL EQUIPMENT			
Stackers	1.25	1.25	1.50	Helical Ring Gear	1.50	1.50	1.50	Bar Screens	1.25	1.25	1.25
Winches	1.25	1.25	1.50	Direct Connected	2.00	2.00	2.00	Chemical Feeders	1.25	1.25	1.25
ELEVATORS				Cement Kilns	1.50	1.50	1.50	Dewatering Screens	1.50	1.50	1.50
Bucket	1.00	1.25	1.50	Dryers & Coolers	1.50	1.50	1.50	Scum Breakers	1.50	1.50	1.50
Centrifugal Discharge	1.00	1.00	1.25	MIXERS, CONCRETE	1.25	1.25	1.50	Slow or Rapid Mixers	1.50	1.50	1.50
Escalators	1.00	1.00	1.25	PAPER MILLS				Sludge Collectors	1.25	1.25	1.25
Freight	1.00	1.25	1.50	Agitator (Mixer)	1.50	1.50	1.50	Thickeners	1.50	1.50	1.50
Gravity Discharge	1.00	1.00	1.25	Agitator for Pure Liquors	1.25	1.25	1.25	Vacuum Filters	1.50	1.50	1.50
EXTRUDERS				Barking Drums	2.00	2.00	2.00	SCREENS			
General	1.50	1.50	1.50	Barkers - Mechanical	2.00	2.00	2.00	Air Washing	1.00	1.00	1.25
Plastics				Beater	1.50	1.50	1.50	Rotary - Stone or Gravel	1.25	1.25	1.50
(a) Variable Speed Drive	1.50	1.50	1.50	Breaker Stack	1.25	1.25	1.25	Traveling Water Intake	1.00	1.00	1.25
(b) Fixed Speed Drive	1.75	1.75	1.75	Calenders	1.25	1.25	1.25	SUGAR INDUSTRY			
Rubber				Chipper	2.00	2.00	2.00	Beet Slicer	2.00	2.00	2.00
(a) Continuous Screw Operation	1.75	1.75	1.75	Chip Feeder	1.50	1.50	1.50	Cane Knives	1.50	1.50	1.50
(b) Intermittent Screw Operation	1.75	1.75	1.75	Coating Rolls	1.25	1.25	1.25	Crushers	1.50	1.50	1.50
FANS				Conveyors				Mills (low speed end)	1.75	1.75	1.75
Centrifugal	1.00	1.00	1.25	Chip, Bark, Chemical	1.25	1.25	1.25	TEXTILE INDUSTRY			
Cooling Towers	2.00	2.00	2.00	Log (including Slab)	2.00	2.00	2.00	Batchers	1.25	1.25	1.50
Forced Draft	1.25	1.25	1.25	Couch Rolls	1.25	1.25	1.25	Calenders	1.25	1.25	1.50
Induced Draft	1.50	1.50	1.50	Cutter	2.00	2.00	2.00	Cards	1.25	1.25	1.50
Industrial & Mine	1.50	1.50	1.50	Cylinder Molds	1.25	1.25	1.25	Dry Cans	1.25	1.25	1.50
FEEDERS				Dryers				Dyeing Machinery	1.25	1.25	1.50
Apron	1.00	1.25	1.50	Paper Machine	1.25	1.25	1.25	Looms	1.25	1.25	1.50
Belt	1.00	1.25	1.50	Conveyor Type	1.25	1.25	1.25	Mangles	1.25	1.25	1.50
Disc	1.00	1.00	1.25	Embosses	1.25	1.25	1.25	Nappers	1.25	1.25	1.50
Reciprocating	1.50	1.75	2.00	Extruder	1.50	1.50	1.50	Pads	1.25	1.25	1.50
Screw	1.00	1.25	1.50	Fourdrinier Rolls (Includes Lump-				Slashers	1.25	1.25	1.50
FOOD INDUSTRY				breaker, dandy roll, wire				Soapers	1.25	1.25	1.50
Cereal Cooker	1.00	1.00	1.25	turning, and return rolls)	1.25	1.25	1.25	Spinners	1.25	1.25	1.50
Dough Mixer	1.25	1.25	1.50	Jordan	1.50	1.50	1.50	Tenter Frames	1.25	1.25	1.50
				Kiln Drive	1.50	1.50	1.50	Washers	1.25	1.25	1.50
				Mt. Hpe Rolls	1.24	1.25	1.25	Winders	1.25	1.25	1.50

CONSULT
FACTORY

Note: When the prime mover is single or multi cylinder engine, consult factory.

*Crane drives are to be selected based on gear tooth bending strength. Consult factory for strength ratings.



LUBRICATION

LUBRICATION MAINTENANCE

1. Lubricant should be drained from a new gear unit after 500 hours of operation. Then the gear unit should be flushed with a flushing oil and refilled to the proper level.
2. Under normal operating conditions, the lubricant should be changed every 2,500 hours of operation or every six (6) months, whichever comes first. Under adverse operating conditions such as extreme temperature variation, high moisture or abrasive atmospheres, the lubricant should be changed more frequently. To determine the frequency,

have the lubricant checked periodically. SUMITOMO MACHINERY CORP. OF AMERICA should be consulted when adverse atmospheric conditions are encountered.

3. Every day visually inspect the Sumitomo gear units for oil leaks and listen for unusual sounds. Check any gauges if the drive is so equipped. If anything is amiss, shut down immediately and determine the cause.
4. Once a week, check the oil level and add oil as needed. If adding oil is recurrent, or excessive amounts of oil are required, check the gear unit for a leak.
5. When the lubricant in the gear unit is changed, inspect the lubricant for foreign matter. This will be a good indication of impending problems. Often during "run-in" very small pieces of metallic particles will be present in the oil. They will be removed with the first oil change and their presence will greatly diminish in time. If the gear unit is equipped with a pressure lubrication system, inspect the system completely when the lubricant is changed.
6. Some bearings and/or heavy duty seal systems are grease lubricated. Fittings are supplied for grease feed and relief. Replenish grease with NLGI No. 2 every 1500 hours of operation or every 3 months, whichever comes first.
7. Refer to specific manuals for specific equipment.

METHOD OF LUBRICATION

TYPE	SIZE	INPUT SPEED: n	
		n < 750 RPM	750 RPM ≤ n ≤ 1800 RPM
Horiz.	8015 to 8135	Oil bath Higher oil level than standard	Oil bath and splash Standard oil level
Vertical	8015 to 8085	Forced lubrication by motor driven pump	Forced lubrication by shaft driven pump
	8090 to 8135	Forced lubrication by motor driven pump (shaft driven – consult factory)	

RECOMMENDED LUBRICANT GRADES

Reducer Sizes	Output Speed	AGMA lubricant numbers ambient temperature C° (F°)			
		-40 to -10 (-40 to +14)	-10 to +10 (14 to 50)	10 to 35 (50 to 95)	35 to 55 (95 to 131)
8015 - 8035	To 400 RPM	3S	4	6	8
8015 - 8035	401-1100 RPM	3S	3	5	7
8045 - 8065	To 250 RPM	3S	4	6	8
8045 - 8065	251 - 750 RPM	3S	3	5	7
8075 - 8085	To 200 RPM	3S	4	6	8
8075 - 8085	201 - 550 RPM	3S	3	5	7
8090 - 8115	To 120 RPM	3S	4	6	8
8090 - 8115	121 - 350 RPM	3S	3	5	7
8120 - 8135	To 75 RPM	3S	4	6	8
8120 - 8135	76 - 225 RPM	3S	3	5	7

NOTES

1. Oil grade recommendations are taken from AGMA standard 9005-D94.
2. Ambient temperature refers to the air temperature surrounding the reducer (not necessarily the outside ambient temperature).
3. Grades with suffix 's' denote synthetic gear lubricant. Synthetic versions of other grades may be substituted where deemed necessary.
4. For output speeds in excess of those noted above and very low output speeds (< 1 RPM) – consult factory for oil recommendation.

TYPICAL PRODUCTS

MANUFACTURER	AGMA GRADE					
	3EP	4EP	5EP	6EP	7EP	8EP
AMOCO	Permagear EP LUB 100	Permagear EP LUB 150	Permagear EP LUB 220	Permagear EP LUB 320	Permagear EP 460	Permagear EP 680
MOBIL	Mobilgear 627	Mobilgear 629	Mobilgear 630	Mobilgear 632	Mobilgear 634	Mobilgear 636
EXXON	Spartan EP100	Spartan EP150	Spartan EP220	Spartan EP320	Spartan EP460	Spartan EP680
CHEVRON	Gear Compound EP 100	Gear Compound EP 150	Gear Compound EP 220	Gear Compound EP 320	Gear Compound EP 460	Gear Compound EP 680
SHELL	Omala 100	Omala 150	Omala 220	Omala 320	Omala 460	Omala 680
TEXACO	Meropa 100	Meropa 150	Meropa 220	Meropa 320	Meropa 460	Meropa 680
SUNOCO	—	Sunep 150	Sunep 220	Sunep 320	Sunep 460	Sunep 680

Lubricants above are typical products ONLY and should not be construed as exclusive recommendations. Synthetic alternatives available upon request.

OVERHUNG LOAD

LOW SPEED SHAFT

When overhung and/or thrust loads are applied to shaft extensions, it is required to verify whether these loads are permissible or not.

OVERHUNG LOAD

The overhung load results from the following formula:

$$F_r = \frac{63025 \times \text{HP}}{N} \times \frac{2}{D} \times C_f \times L_f$$

Fr: Calculated overhung load (LBS)

HP: Horsepower transmitted by shaft (HP)

N: Shaft speed (rpm)

D: Pitch dia of the drive component (inch)

Cf: Load connection factor (See Table)

Lf: Load location factor (See Table)

Verify that the calculated overhung load is equal to or less than the allowable overhung load shown on next page.

THRUST LOAD

Verify that the thrust load is equal to or less than the allowable thrust load shown on next page.

EXAMPLE

Application: Belt conveyor

Horsepower Transmitted: 40 HP

Output Speed: 69 RPM

Paramax Selected:

Model: SM8035P3-RL-25

Ratio: 25.374

Mechanical rating: 65 HP at 1800 rpm

Chain sprocket on the slow speed shaft:

Pitch dia: 17.2 inch

Center line of the load from the shoulder: 3 inch

Overhung Load

HP = 40 (HP), N = 69 (rpm), D = 17.2 (inch)

Cf = 1.0, Lf = 1.02

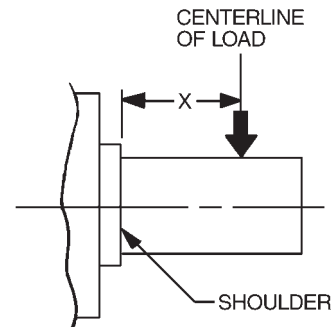
$$F_r = \frac{63025 \times 40}{69} \times \frac{2}{17.2} \times 1.0 \times 1.02 = 4333 \text{ (LBS)}$$

Allowable Overhung Load: 5000 LBS

Verification: 4333 LBS < 5000 LBS

Cf: LOAD CONNECTION FACTOR

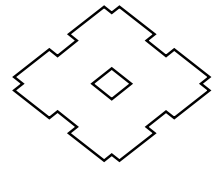
TYPE OF CONNECTION	Cf
General Purpose Chain	1.0
Machined Gear or Pinion	1.25
V-Belt	1.5
Flat Belt	2.5



Lf: LOAD LOCATION FACTOR AT SLOW SPEED SHAFT

X		SIZE													
mm	inch	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
50	2	0.98	0.93	0.94	0.90										
75	3	1.08	1.02	1.02	0.98	0.93	0.94	0.91							
100	4	1.19	1.11	1.10	1.05	0.99	0.99	0.95	0.92	0.93	0.90	0.91	0.91	0.92	
125	5		1.20	1.19	1.12	1.05	1.05	1.00	0.96	0.97	0.94	0.94	0.94	0.95	0.91
150	6		1.29	1.27	1.19	1.11	1.10	1.05	1.00	1.00	0.97	0.97	0.97	0.97	0.94
175	7				1.26	1.18	1.16	1.10	1.04	1.04	1.00	1.00	1.00	1.00	0.97
200	8					1.24	1.22	1.15	1.09	1.07	1.04	1.03	1.03	1.03	1.00
225	9							1.20	1.13	1.11	1.07	1.07	1.07	1.06	1.03
250	10							1.25	1.17	1.14	1.11	1.10	1.10	1.09	1.05
300	12								1.25	1.21	1.17	1.16	1.16	1.15	1.11
350	14										1.24	1.22	1.22	1.21	1.17
400	16													1.26	1.23

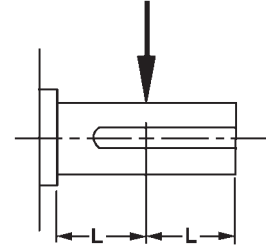
NOTES: 1. Consult factory for higher overhung and/or thrust load capacity requirements
2. Consult factory for sizes 8120 - 8135.



ALLOWABLE EXTERNAL LOADS

SELECTION KEY TABLE

SHAFT POSITION	REDUCTION	SELECTION KEY	
		①	②
Parallel Shaft	Double	RL, LR, BL	RR, LL, BR
	Triple		
	Quadruple		
Right Angle Shaft	Double	RR, LL	RL, LR
	Triple	RL, LR	RR, LL
	Quadruple	RR, LL	RL, LR



ALLOWABLE OVERHUNG LOAD AT SLOW SPEED SHAFT: Selection Key = ①

UNIT: LBS. X 100

Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	25	30	52	52	79	87	97	173	224	309	314	432	377	500	620			
	160	25	30	50	58	88	94	105	199	244	327	353	450	391	528	770	630	990	740
	100	25	27	50	69	101	106	123	222	274	331	373	413	415	552	900	770	1160	920
	63	25	27	50	83	116	132	149	295	282	323	371	400	428	681	1080	948	1430	1160
	40	25	27	50	83	115	159	181	316	281	309	370	390	437	721	1270	1146	1650	1430
Heavy Duty	25	25	27	50	82	115	183	221	313	275	304	367	375	415	711	1270	1270	1650	1650
	250				67	126	159	157	275	318	357	406	480	563	712	8500			
	160				73	125	175	174	308	297	340	392	450	482	751	1030	920	1410	1210
	100				87	120	183	207	336	285	331	374	413	438	766	1190	1080	1650	1450
	63				87	120	183	257	335	282	323	372	400	428	749	1270	1270	1650	1650
Heavy Duty	40				87	119	183	264	334	281	309	371	390	437	721	1270	1270	1650	1650
	25				85	117	183	264	330	275	304	368	375	415	711	1270	1270	1650	1650

The allowable overhung loads given above apply to loading in the middle of the slow speed shaft extension. Refer to the load location factor: L_f for other locations.

ALLOWABLE OVERHUNG LOAD AT SLOW SPEED SHAFT: Selection Key = ②

UNIT: LBS. X 100

Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	20	39	46	27	42	35	35	99	131	219	180	295	211	342				
	160	25	39	55	30	50	41	41	124	144	231	216	310	207	348				
	100	26	39	59	40	60	49	56	142	167	249	238	329	227	375				
	63	26	39	59	55	82	73	79	213	234	332	345	449	325	496				
	40	26	39	59	71	105	101	111	289	329	386	457	529	447	562				
Heavy Duty	25	26	39	59	91	123	134	151	374	384	384	483	683	612	793				
	250				41	101	103	90	201	257	350	338	479	429	558				
	160				47	116	116	102	232	281	370	383	501	444	587				
	100				61	123	135	133	260	316	395	421	532	472	616				
	63				87	123	183	179	342	391	420	491	678	601	768				
Heavy Duty	40				94	123	183	244	431	431	435	543	683	727	858				
	25				94	123	183	264	405	384	384	482	683	727	842				

The allowable overhung loads given above apply to loading in the middle of the slow speed shaft extension. Refer to the load location factor: L_f for other locations.

ALLOWABLE THRUST LOAD AT SLOW SPEED SHAFT

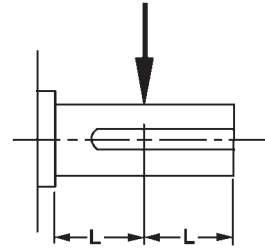
UNIT: LBS. X 100

Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	15	26	39	41	61	60	59	52	70	116	101	112	112	171	170			
	160	15	26	39	46	61	66	67	65	77	119	119	111	111	171	187	130		
	100	15	26	39	57	61	88	89	73	97	133	131	121	121	187	187	187		
	63	15	26	39	57	61	88	122	109	121	134	183	167	167	187	187	187		
	40	15	26	39	57	61	88	127	127	134	134	187	187	187	187	187	187		
Heavy Duty	25	15	26	39	57	61	88	127	127	134	134	187	187	187	187	187			
	250	8	11	5	19	61	51	41	127	134	134	187	187	187	187	187			
	160	11	13	8	22	61	56	47	127	134	134	187	187	187	187	187			
	100	15	17	12	33	61	66	61	127	134	134	187	187	187	187	187	187	280	280
	63	15	24	19	42	61	88	81	127	134	134	187	187	187	187	187	187	280	280
Heavy Duty	40	15	26	26	54	61	88	110	127	134	134	187	187	187	187	187	187	280	280
	25	15	26	37	57	61	88	127	127	134	134	187	187	187	187	187	187	280	280

ALLOWABLE EXTERNAL LOADS

SELECTION KEY TABLE

SHAFT POSITION	REDUCTION	SELECTION KEY	
		①	②
Parallel Shaft	Double	RL, LR, BL	RR, LL, BR
	Triple		
	Quadruple		
Right Angle Shaft	Double	RR, LL	RL, LR
	Triple	RL, LR	RR, LL
	Quadruple	RR, LL	RL, LR



ALLOWABLE OVERHUNG LOAD AT SLOW SPEED SHAFT: Selection Key = ①

UNIT: KGF X 100

Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	11.5	14	24	24	36	39	44	78	102	140	142	196	171	227	285			
	160	11.5	14	23	26.5	40	43	48	90	111	148	160	204	177	239	350	290	450	340
	100	11.5	12.5	23	31	46	48	56	101	124	150	169	187	188	250	410	350	530	420
	63	11.5	12.5	23	38	53	60	68	134	128	146	168	181	194	309	490	430	650	530
	40	11.5	12.5	23	38	52	72	82	143	127	140	168	177	198	327	580	520	750	650
	25	11.5	12.5	23	37	52	83	100	142	125	138	166	170	188	322	580	580	750	750
Heavy Duty	250				30	57	72	71	125	144	162	184	218	255	323	390			
	160				33	57	79	79	140	135	154	178	204	219	341	470	420	640	550
	100				39	54	83	94	152	129	150	170	187	199	347	540	490	750	660
	63				39	54	83	117	152	128	146	169	181	194	340	580	580	750	750
	40				39	54	83	120	151	127	140	168	177	198	327	580	580	750	750
	25				39	53	83	120	150	125	138	167	170	188	322	580	580	750	750

The allowable overhung loads given above apply to loading in the middle of the slow speed shaft extension. Refer to the load location factor: L_f for other locations.

ALLOWABLE OVERHUNG LOAD AT SLOW SPEED SHAFT: Selection Key = ②

UNIT: KGF X 100

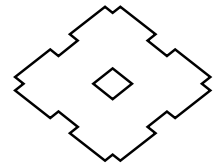
Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	9.5	18	21	12.5	19.5	16	16	45	59	99	82	134	96	155				
	160	11.5	18	25	14	23	19	19	56	65	105	98	141	94	158				
	100	12	18	27	18.5	27.5	22.5	25.5	64	76	113	108	149	103	170				
	63	12	18	27	25	37	33	36	97	106	151	156	204	147	225				
	40	12	18	27	32	48	46	50	131	149	175	207	240	203	255				
	25	12	18	27	41	56	61	68	170	174	174	219	310	278	360				
Heavy Duty	250				19	46	47	41	91	117	159	153	217	195	253				
	160				21	53	53	46	105	127	168	174	227	201	266				
	100				28	56	61	60	118	143	179	191	241	214	279				
	63				39	56	83	81	155	177	190	223	307	273	348				
	40				43	56	83	111	195	195	197	246	310	330	389				
	25				43	56	83	120	184	174	174	219	310	330	382				

The allowable overhung loads given above apply to loading in the middle of the slow speed shaft extension. Refer to the load location factor: L_f for other locations.

ALLOWABLE THRUST LOAD AT SLOW SPEED SHAFT

UNIT: KGF X 100

Bearings	S.S. SHAFT (RPM)	SIZE																	
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
Standard	250	7	12	18	19	28	27.5	27	24	32	53	46	51	51	78	79			
	160	7	12	18	21	28	30	30	29.5	35	54	54	50	50	78	85	63		
	100	7	12	18	26	28	40	40	33	44	60	59	55	55	85	85	85		
	63	7	12	18	26	28	40	55	49	55	61	83	76	76	85	85	85		
	40	7	12	18	26	28	40	58	58	61	61	85	85	85	85	85	85		
	25	7	12	18	26	28	40	58	58	61	61	85	85	85	85	85	85		
Heavy Duty	250	4	5	2	9	28	23.5	19	58	61	61	85	85	85	85	85			
	160	5	6	4	10	28	25.5	21.5	58	61	61	85	85	85	85	85			
	100	7	8	5	15	28	30	28	58	61	61	85	85	85	85	85	85	130	130
	63	7	11	9	19.5	28	40	37	58	61	61	85	85	85	85	85	85	130	130
	40	7	12	12	24.5	28	40	50	58	61	61	85	85	85	85	85	85	130	130
	25	7	12	17	26	28	40	58	58	61	61	85	85	85	85	85	85	130	130



ALLOWABLE EXTERNAL LOADS

PARALLEL SHAFT (U.S.)

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:LBS.

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
P2	6.3 - 8	1800	550	770	330	-	-	-	550	550	5950	5950	6610	6610	9810	9700
		1500	550	770	880	-	-	-	550	880	6280	6280	7050	7050	10360	10250
		1200	550	660	770	-	-	-	880	1980	6830	6830	8040	7490	11020	11020
		1000	550	660	770	-	-	-	880	4630	7490	7600	9260	8260	11900	11900
		900	550	660	770	-	-	-	880	5400	8040	7820	10030	8700	12560	12560
		750	550	660	770	-	-	-	990	5840	8590	8040	10690	9480	13340	13340
	9 - 10	1800	660	770	880	-	-	-	440	2860	6500	6390	7600	7050	10800	10580
		1500	660	770	880	770	-	1210	1320	5400	7160	6830	8700	7490	11790	11240
		1200	660	770	880	1540	550	2640	3630	6610	8260	7710	10140	8370	13110	12450
		1000	660	770	880	1870	1320	2860	5180	6610	9370	8480	11350	9370	14330	13560
		900	660	770	880	1870	1650	2860	5510	6500	9810	8820	12120	10140	14990	14330
		750	660	770	880	1870	2310	2860	5510	6500	10360	9040	12890	10910	16090	15100
	11.2 - 20	1800	660	880	990	1870	1980	1980	2420	5620	7380	6610	9040	7270	12230	10800
		1500	660	880	990	1980	2640	2970	4290	5620	8370	7160	10140	7930	13340	11680
		1200	660	880	990	1980	2640	2970	5620	5620	9480	8040	11570	9040	14770	13110
		1000	660	880	990	1980	2640	2970	5620	5620	10580	8820	12780	10250	15980	14220
		900	660	880	990	1980	2640	2970	5620	5620	11020	9150	13560	11020	16750	14990
		750	660	880	990	1980	2640	2970	5620	5620	11570	9590	14330	11790	18080	15760

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:LBS.

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
P3	20 - 25	1800	440	660	440	660	770	770	660	1430	3410	3410	3850	3740	2750	2750
		1500	440	660	440	660	770	880	660	1760	3410	3410	3850	3740	2640	2640
		1200	440	660	440	660	770	1100	1210	2200	3300	3300	3850	3630	2420	2420
		1000	440	660	440	660	770	1210	1320	2420	3300	3300	3850	3630	2310	2310
		900	440	660	440	660	770	1320	1430	2420	3300	3190	3850	3630	2310	2200
		750	440	660	440	660	770	1430	1650	2420	3300	3190	3850	3630	2200	2200
	28 - 50	1800	440	660	550	660	880	1210	1320	2200	3740	3630	4410	4180	2860	3300
		1500	440	660	550	660	880	1320	1540	2640	3740	3630	4410	4180	2750	3190
		1200	440	660	550	660	880	1540	1760	2750	3740	3630	4410	4180	2750	3080
		1000	440	660	550	660	880	1650	1980	2750	3740	3520	4410	4070	2750	2970
		900	440	660	550	660	880	1760	2090	2750	3740	3520	4410	4070	2750	2970
		750	440	660	550	660	880	1760	2200	2750	3740	3520	4410	4070	2750	2860
	56 - 90	1800			660	880	990	1980	2200	3190	3960	3850	4850	4630	3850	2640
		1500			660	880	990	2090	2420	3630	3960	3850	4850	4630	3850	2420
		1200			660	880	990	2090	2530	3630	3960	3850	4850	4630	3850	2420
		1000			660	880	990	2090	2530	3630	3960	3850	4850	4630	3850	2420
		900			660	880	990	2090	2530	3630	3960	3850	4850	4630	3850	2420
		750			660	880	990	2090	2530	3630	3960	3850	4850	4630	3740	2310
P4	80 - 450	1800			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740
		1500			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740
		1200			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740
		1000			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740
		900			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740
		750			440	660	550	770	880	1100	3410	3410	4740	4740	4740	4740

NOTE: The allowable overhung loads shown in these tables apply to loading in the middle of the high speed shaft extension. For other locations, consult factory.

ALLOWABLE EXTERNAL LOADS

PARALLEL SHAFT (METRIC)

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:KGF

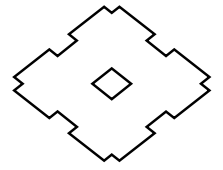
		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
P2	6.3 - 8	1800	250	350	150	-	-	-	250	250	2700	2700	3000	3000	4450	4400
		1500	250	350	400	-	-	-	250	400	2850	2850	3200	3200	4700	4650
		1200	250	300	350	-	-	-	400	900	3100	3100	3650	3400	5000	5000
		1000	250	300	350	-	-	-	400	2100	3400	3450	4200	3750	5400	5400
		900	250	300	350	-	-	-	400	2450	3650	3550	4550	3950	5700	5700
		750	250	300	350	-	-	-	450	2650	3900	3650	4850	4300	6050	6050
	9 - 10	1800	300	350	400	-	-	-	200	1300	2950	2900	3450	3200	4900	4800
		1500	300	350	400	350	-	550	600	2450	3250	3100	3950	3400	5350	5100
		1200	300	350	400	700	250	1200	1650	3000	3750	3500	4600	3800	5950	5650
		1000	300	350	400	850	600	1300	2350	3000	4250	3850	5150	4250	6500	6150
		900	300	350	400	850	750	1300	2500	2950	4450	4000	5500	4600	6800	6500
		750	300	350	400	850	1050	1300	2500	2950	4700	4100	5850	4950	7300	6850
	11.2 - 20	1800	300	400	450	850	900	900	1100	2550	3350	3000	4100	3300	5550	4900
		1500	300	400	450	900	1200	1350	1950	2550	3800	3250	4600	3600	6050	5300
		1200	300	400	450	900	1200	1350	2550	2550	4300	3650	5250	4100	6700	5950
		1000	300	400	450	900	1200	1350	2550	2550	4800	4000	5800	4650	7250	6450
		900	300	400	450	900	1200	1350	2550	2550	5000	4150	6150	5000	7600	6800
		750	300	400	450	900	1200	1350	2550	2550	5250	4350	6500	5350	8200	7150

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:KGF

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
P3	20 - 25	1800	200	300	200	300	350	350	300	650	1550	1550	1750	1700	1250	1250
		1500	200	300	200	300	350	400	300	800	1550	1550	1750	1700	1200	1200
		1200	200	300	200	300	350	500	550	1000	1500	1500	1750	1650	1100	1100
		1000	200	300	200	300	350	550	600	1100	1500	1500	1750	1650	1050	1050
		900	200	300	200	300	350	600	650	1100	1500	1450	1750	1650	1050	1000
		750	200	300	200	300	350	650	750	1100	1500	1450	1750	1650	1000	1000
	28 - 50	1800	200	300	250	300	400	550	600	1000	1700	1650	2000	1900	1300	1500
		1500	200	300	250	300	400	600	700	1200	1700	1650	2000	1900	1250	1450
		1200	200	300	250	300	400	700	800	1250	1700	1650	2000	1900	1250	1400
		1000	200	300	250	300	400	750	900	1250	1700	1600	2000	1850	1250	1350
		900	200	300	250	300	400	800	950	1250	1700	1600	2000	1850	1250	1350
		750	200	300	250	300	400	800	1000	1250	1700	1600	2000	1850	1250	1300
	56 - 90	1800			300	400	450	900	1000	1450	1800	1750	2200	2100	1750	1200
		1500			300	400	450	950	1100	1650	1800	1750	2200	2100	1750	1100
		1200			300	400	450	950	1150	1650	1800	1750	2200	2100	1750	1100
		1000			300	400	450	950	1150	1650	1800	1750	2200	2100	1750	1100
		900			300	400	450	950	1150	1650	1800	1750	2200	2100	1750	1100
		750			300	400	450	950	1150	1650	1800	1750	2200	2100	1700	1050
P4	80 - 450	1800			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150
		1500			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150
		1200			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150
		1000			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150
		900			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150
		750			200	300	250	350	400	500	1550	1550	2150	2150	2150	2150

NOTE: The allowable overhung loads shown in these tables apply to loading in the middle of the high speed shaft extension. For other locations, consult factory.



ALLOWABLE EXTERNAL LOADS

RIGHT ANGLE SHAFT (U.S.)

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:LBS.

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	
R2	6.3 - 8	1800	1210	1430	1650	2640	2310	2200	2640	2090							
		1500	1320	1540	1870	2970	2640	2640	3190	2200							
		1200	1320	1760	2090	3300	3190	3300	4070	3190							
		1000	1320	1870	2310	3630	3410	3740	4740	4290							
		900	1320	1980	2310	3740	3630	3960	4960	4850							
		750	1320	1980	2530	3960	3850	4180	5290	5290							
	9 - 10	1800	1430	1650	2090	3190	2860	3300	3410	2530		6390		--	--		
		1500	1430	1760	2310	3520	3190	3740	4070	3080		6830		--	--		
		1200	1430	1980	2530	3960	3630	4410	4850	4410		7600		--	--		
		1000	1430	1980	2640	4180	3960	4960	5510	5400		8370		--	--		
		900	1430	1980	2640	4290	4070	5180	5730	5840		8820		--	--		
		750	1430	1980	2640	4520	4290	5510	6170	6280		9370		--	--		
	11.2 - 20	1800	1540	1760	2310	3410	2970	3850	4070	4410		7160		--	--		
		1500	1540	1980	2530	3740	3410	4290	4630	5070		7820		--	--		
		1200	1540	2090	2750	4180	3850	4960	5510	5950		8700		--	--	1430	
		1000	1540	2090	2750	4410	4180	5510	6170	6830		9480		--	--	2860	
		900	1540	2090	2750	4520	4290	5620	6390	7270		9920		--	--	3740	
		750	1540	2090	2750	4740	4520	5950	6830	7710		10470		--	--	5400	

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:LBS.

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
R3	20 - 25	1800			1430	1980	2420	3300	3080	3190	2310	2310	2530	2530	2090	2090
		1500			1430	1980	2640	3630	3410	3740	3190	3190	3520	3520	3300	3300
		1200			1430	1980	2860	4070	3960	4290	4070	4070	4740	4740	4960	4960
		1000			1430	1980	2860	4290	4290	4850	4740	4740	5510	5510	6170	6170
		900			1430	1980	2860	4520	4410	4960	4850	4850	5840	5840	6720	6720
		750			1430	1980	2860	4740	4630	5290	5290	5290	6280	6280	7270	7270
	28 - 50	1800			1540	2090	2750	3740	3410	4520	4630	3960	4960	2860	6390	5290
		1500			1540	2090	2860	4180	3850	4960	5180	4290	5620	3630	7270	5840
		1200			1540	2090	2970	4520	4290	5620	5950	4850	6500	4740	8370	6610
		1000			1540	2090	2970	4850	4630	6170	6610	5400	7270	5620	9370	7270
		900			1540	2090	2970	4850	4740	6280	6830	5620	7600	5950	9920	7600
		750			1540	2090	2970	4850	4960	6610	7160	5950	8040	6390	10470	7930
	56 - 90	1800			1540	2090	3080	4290	4410	5510	6060	6060	6500	6500	7820	7490
		1500			1540	2090	3080	4630	4850	6060	6610	6610	7270	7160	8700	8260
		1200			1540	2090	3080	4960	5400	6720	7380	7380	8150	8150	9810	9480
		1000			1540	2090	3080	4960	5620	7160	8040	8040	8930	8930	10800	10470
		900			1540	2090	3080	4960	5840	7380	8260	8260	9370	9260	11350	11020
		750			1540	2090	3080	4960	6060	7710	8700	8700	9810	9810	11900	11680
R4	80 - 400	1800			1540	1540	2090	3080	4180	4630	4410	6060	5840	4850	4520	
		1500			1540	1540	2090	3080	4520	5070	4850	6500	6280	5290	5070	
		1200			1540	1540	2090	3080	4960	5510	5400	7270	6940	5950	5730	
		1000			1540	1540	2090	3080	4960	5840	5620	7710	7490	6500	6170	
		900			1540	1540	2090	3080	4960	5950	5840	7930	7600	6610	6390	
		750			1540	1540	2090	3080	4960	6170	6060	8260	7930	6940	6720	

NOTE: The allowable overhung loads shown in these tables apply to loading in the middle of the high speed shaft extension. For other locations, consult factory.

ALLOWABLE EXTERNAL LOADS

RIGHT ANGLE SHAFT (METRIC)

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:KGF

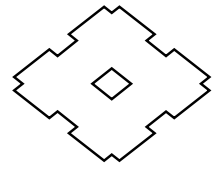
		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115		
R2	6.3 - 8	1800	550	650	750	1200	1050	1000	1200	950								
		1500	600	700	850	1350	1200	1200	1450	1000								
		1200	600	800	950	1500	1450	1500	1850	1450								
		1000	600	850	1050	1650	1550	1700	2150	1950								
		900	600	900	1050	1700	1650	1800	2250	2200								
		750	600	900	1150	1800	1750	1900	2400	2400								
	9 - 10	1800	650	750	950	1450	1300	1500	1550	1150		2900		-			-	
		1500	650	800	1050	1600	1450	1700	1850	1400		3100		-			-	
		1200	650	900	1150	1800	1650	2000	2200	2000		3450		-			-	
		1000	650	900	1200	1900	1800	2250	2500	2450		3800		-			-	
		900	650	900	1200	1950	1850	2350	2600	2650		4000		-			-	
		750	650	900	1200	2050	1950	2500	2800	2850		4250		-			-	
	11.2 - 20	1800	700	800	1050	1550	1350	1750	1850	2000		3250		-			-	
		1500	700	900	1150	1700	1550	1950	2100	2300		3550		-			-	
		1200	700	950	1250	1900	1750	2250	2500	2700		3950		-			650	
		1000	700	950	1250	2000	1900	2500	2800	3100		4300		-			1300	
		900	700	950	1250	2050	1950	2550	2900	3300		4500		-			1700	
		750	700	950	1250	2150	2050	2700	3100	3500		4750		-			2450	

ALLOWABLE OVERHUNG LOAD AT HIGH SPEED SHAFT

UNIT:KGF

		RPM	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
R3	20 - 25	1800			650	900	1100	1500	1400	1450	1050	1050	1150	1150	950	950
		1500			650	900	1200	1650	1550	1700	1450	1450	1600	1600	1500	1500
		1200			650	900	1300	1850	1800	1950	1850	1850	2150	2150	2250	2250
		1000			650	900	1300	1950	1950	2200	2150	2150	2500	2500	2800	2800
		900			650	900	1300	2050	2000	2250	2200	2200	2650	2650	3050	3050
		750			650	900	1300	2150	2100	2400	2400	2400	2850	2850	3300	3300
	28 - 50	1800			700	950	1250	1700	1550	2050	2100	1800	2250	1300	2900	2400
		1500			700	950	1300	1900	1750	2250	2350	1950	2550	1650	3300	2650
		1200			700	950	1350	2050	1950	2550	2700	2200	2950	2150	3800	3000
		1000			700	950	1350	2200	2100	2800	3000	2450	3300	2550	4250	3300
		900			700	950	1350	2200	2150	2850	3100	2550	3450	2700	4500	3450
		750			700	950	1350	2200	2250	3000	3250	2700	3650	2900	4750	3600
	56 - 90	1800			700	950	1400	1950	2000	2500	2750	2750	2950	2950	3550	3400
		1500			700	950	1400	2100	2200	2750	3000	3000	3300	3250	3950	3750
		1200			700	950	1400	2250	2450	3050	3350	3350	3700	3700	4450	4300
		1000			700	950	1400	2250	2550	3250	3650	3650	4050	4050	4900	4750
		900			700	950	1400	2250	2650	3350	3750	3750	4250	4200	5150	5000
		750			700	950	1400	2250	2750	3500	3950	3950	4450	4450	5400	5300
R4	80 - 400	1800			700	700	950	1400	1900	2100	2000	2750	2650	2200	2050	
		1500			700	700	950	1400	2050	2300	2200	2950	2850	2400	2300	
		1200			700	700	950	1400	2250	2500	2450	3300	3150	2700	2600	
		1000			700	700	950	1400	2250	2650	2550	3500	3400	2950	2800	
		900			700	700	950	1400	2250	2700	2650	3600	3450	3000	2900	
		750			700	700	950	1400	2250	2800	2750	3750	3600	3150	3050	

NOTE: The allowable overhung loads shown in these tables apply to loading in the middle of the high speed shaft extension. For other locations, consult factory.



SELECTION PROCEDURE

Selecting the correct reducer size requires the following steps:

1. MECHANICAL SELECTION

Check required service factor.

You need to know...

1. Type of load from driven machine.
2. Type of prime mover.
3. Average running time per day.



SERVICE FACTOR TABLE PAGE 8

Find Required Drive Capacity = RDC.

You need to know...

1. Input HP or KW
- or 2. Output (Demand) HP or KW
- or 3. Normal output torque



RDC = MAXIMUM OF 1, 2, OR 3 MULTIPLIED BY THE SERVICE FACTOR

Determine reducer size.

Mechanical rating must be greater than RDC.



Mech. Rating Tables P 19 thru P 54 (Parallel) P 55 thru P 88 (Rt. Angle)

Check for peak load.

Check for peak load at start and when running.

Maximum allowable peak load:

200% of mech. power rating up to 10 times per hour.

2. THERMAL CHECK

Determine temperature correction factor.

You need to know...

1. Ambient Temperature at the reducer
2. Altitude of the installation.



Temperature factors found in each section.

Calculate required thermal capacity = RTC.

$$RTC = \frac{\text{Transmitted Power (in HP or KW)}}{T_a \times T_h}$$

Check thermal rating of Reducer Thermal Rating > RTC.

(Otherwise the unit must be equipped with additional cooling)



Thermal Rating Tables found in each section.

3. OVERHUNG LOAD CHECK

A. Determine overhang factors.

1. Load connection factor Cf
2. Load location factor Lf



Tables for Cf and Lf Page 10

B. Determine equivalent radial load.

$$\text{Equiv. rad. load} = \text{Actual rad. load} \times C_f \times L_f$$



Overhung Load Tables P 13 thru P 16 (Input) P 11 thru P 12 (Output)

C. Check overhung load rating.

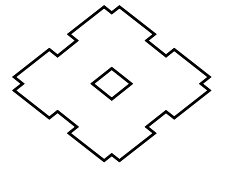
$$\text{Equiv. rad. load} < \text{Allowable rad. load.}$$



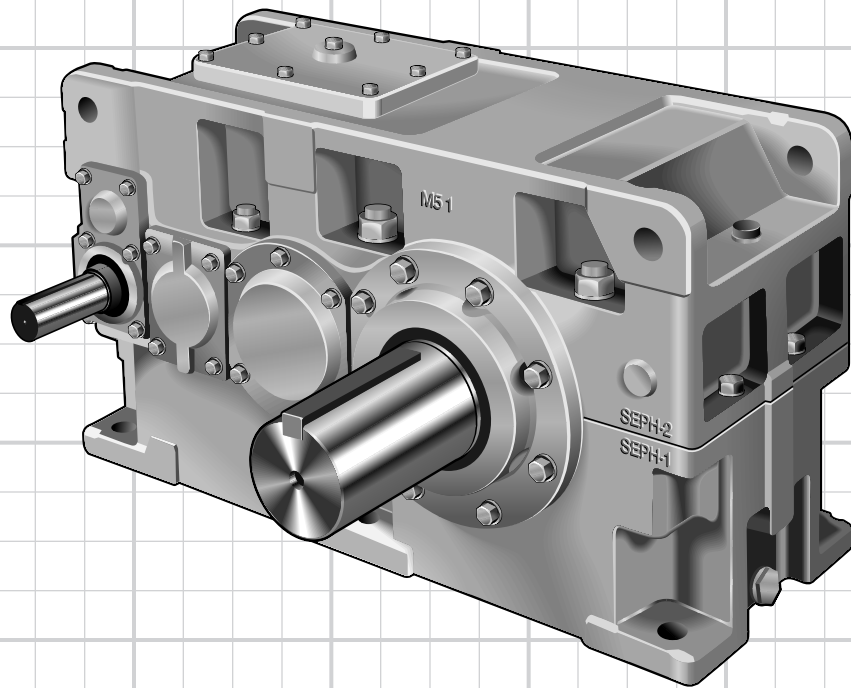
Thrust load table P 11 thru P 12 (Output)

D. Check Thrust load rating.

$$\text{Actual thrust} < \text{Allowable thrust.}$$



PARALLEL SHAFT Double Reduction



RATING TABLES

DOUBLE REDUCTION

PARALLEL SHAFT

EXACT RATIOS

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	6.257	6.193	6.314	6.049	6.470	6.187	6.246	6.429	6.609		6.460		6.203	
7.1	7.237	7.067	6.806	6.903	7.366	7.210	6.998	7.090	7.190	7.333	6.933	7.071	7.118	7.030
8	7.889	7.616	8.118	7.778	7.956	7.875	8.032	8.167	8.111	7.956	8.222	7.672	8.059	8.042
9	9.125	8.690	8.750	8.875	9.057	9.176	9.000	9.007	8.824	9.000	8.824	9.000	9.248	9.134
10	10.143	9.722	9.944	9.528	10.156	9.750	9.665	9.905	10.342	9.765	9.984	9.765	9.774	10.449
11.2	11.732	11.094	10.719	10.872	11.563	11.361	10.829	10.924	11.250	11.475	10.714	10.929	11.216	11.078
12.5	12.710	12.407	12.785	12.485	12.594	12.206	12.600	12.762	12.978	12.450	12.950	11.857	12.434	12.672
14	14.701	14.158	13.781	14.247	14.337	14.224	14.118	14.076	14.118	14.400	13.897	14.175	14.268	14.092
16	15.778	15.340	15.997	15.556	16.504	15.996	15.750	15.556	16.222	15.624	15.961	15.379	15.325	16.121
18	18.250	17.503	17.243	17.750	18.789	18.640	17.647	17.157	17.647	18.000	17.128	17.471	17.585	17.368
20										19.529		18.955		19.868

INERTIA - WR²

Units: lb-in²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	8.799	19.14	39.89	82.78	165.0	369.4	766.8	1514	2959		6076		11388	
7.1	8.030	17.34	38.19	74.92	151.2	332.4	701.4	1423	2873	3243	5858	6651	10610	12637
8	6.322	14.69	28.28	59.03	128.4	267.6	563.6	1104	2362	3135	4507	6439	8464	11636
9	5.809	13.50	27.17	54.25	119.3	244.7	524.1	1047	2305	2551	4373	4862	8003	9204
10	4.528	10.34	21.70	45.62	90.64	210.1	447.2	866.2	1671	2479	3470	4731	6510	8611
11.2	4.271	9.568	20.93	42.46	85.09	195.1	419.9	827.8	1636	1787	3379	3711	6197	7013
12.5	3.417	7.347	15.63	31.10	71.16	149.6	303.0	555.5	1106	1743	2245	3622	4405	6610
14	3.246	6.920	15.21	29.30	67.57	140.1	287.0	532.3	1083	1179	2191	2388	4212	4716
16	2.563	5.809	12.30	24.09	50.06	105.2	238.7	433.2	866.6	1151	1743	2336	3430	4467
18	2.477	5.467	12.05	22.98	48.01	99.61	228.4	417.6	852.4	913.8	1707	1837	3303	3635
20										895.7		1802		3471

INERTIA - mR²

Units: kg-m²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	0.0026	0.0056	0.012	0.024	0.048	0.108	0.224	0.443	0.866		1.778		3.333	
7.1	0.0024	0.0051	0.011	0.022	0.044	0.097	0.205	0.416	0.841	0.949	1.714	1.946	3.105	3.698
8	0.0019	0.0043	0.0083	0.017	0.038	0.078	0.165	0.323	0.691	0.917	1.319	1.884	2.477	3.405
9	0.0017	0.0040	0.0080	0.016	0.035	0.072	0.153	0.306	0.675	0.746	1.280	1.423	2.342	2.693
10	0.0013	0.0030	0.0064	0.013	0.027	0.061	0.131	0.254	0.489	0.725	1.015	1.385	1.905	2.520
11.2	0.0013	0.0028	0.0061	0.012	0.025	0.057	0.123	0.242	0.479	0.523	0.989	1.086	1.813	2.052
12.5	0.0010	0.0022	0.0046	0.0091	0.021	0.044	0.089	0.163	0.324	0.510	0.657	1.060	1.289	1.934
14	0.00095	0.0020	0.0045	0.0086	0.020	0.041	0.084	0.156	0.317	0.345	0.641	0.699	1.233	1.380
16	0.00075	0.0017	0.0036	0.0071	0.015	0.031	0.070	0.127	0.254	0.337	0.510	0.683	1.004	1.307
18	0.00073	0.0016	0.0035	0.0067	0.014	0.029	0.067	0.122	0.249	0.267	0.500	0.538	0.966	1.064
20										0.262		0.527		1.016

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$.

RATING TABLES

DOUBLE REDUCTION

PARALLEL SHAFT

MECHANICAL RATING - S.F. 1.0

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (hp)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1800	286	92	134	239	345	469	808	1200	1910	2610		3980		5240	
	1200	190	65	96	161	251	343	601	908	1410	1950		2890		3940	
	900	143	50	75	122	199	272	476	722	1070	1510		2190		3130	
7.1	1800	254	83	121	216	323	469	750	1200	1810	2450	2610	3740	3980	4640	5240
	1200	169	56	87	145	217	316	506	818	1220	1770	1940	2580	3000	3490	3940
	900	127	42	68	109	164	238	382	618	927	1330	1520	1950	2370	2710	3140
8	1800	225	76	114	187	294	417	693	1040	1650	2230	2450	3330	3740	4300	4650
	1200	150	54	81	126	207	305	507	766	1120	1620	1820	2290	2790	3160	3500
	900	113	41	63	95	156	237	383	579	848	1230	1420	1730	2110	2480	2780
9	1800	200	66	103	169	253	383	594	949	1440	2100	2230	3020	3330	3810	4300
	1200	133	45	73	113	170	258	400	640	972	1450	1620	2040	2440	2780	3160
	900	100	33	55	85	128	195	302	484	734	1090	1270	1540	1870	2100	2480
10	1800	180	62	94	154	253	347	606	925	1370	1850	2100	2810	3130	3730	3820
	1200	120	43	66	103	170	247	412	640	930	1290	1520	1900	2200	2670	2800
	900	90	32	52	78	128	186	311	483	702	977	1160	1430	1670	2090	2200
11.2	1800	161	52	85	138	207	302	482	793	1190	1690	1850	2500	2890	3310	3730
	1200	107	35	58	93	139	203	325	535	805	1140	1310	1690	2050	2310	2670
	900	80	26.4	43	70	105	153	245	404	608	866	1030	1280	1550	1740	2090
12.5	1800	144	51	77	120	194	297	491	734	1070	1490	1740	2180	2710	3010	3320
	1200	96	34	54	80	130	200	331	494	726	1030	1220	1470	1830	2140	2370
	900	72	26	41	61	98	151	249	373	548	783	922	1110	1380	1670	1840
14	1800	129	41	67	108	159	245	387	613	934	1360	1490	1940	2280	2680	3010
	1200	86	28.1	45	72	107	164	261	413	629	919	1060	1310	1590	1820	2140
	900	64	21.1	34	54	80	124	196	311	475	694	835	993	1200	1380	1680
16	1800	113	41	64	96	156	228	377	590	889	1230	1410	1780	2100	2510	2680
	1200	75	27.8	45	65	105	153	253	397	599	834	979	1200	1421	1780	1900
	900	56	21	34	48	79	115	191	299	452	629	739	909	1074	1360	1450
18	1800	100	33	55	87	128	188	297	493	770	1090	1230	1590	1914	2210	2510
	1200	67	22.7	37	58	86	126	200	332	518	739	877	1070	1302	1490	1790
	900	50	17.1	27.8	44	65	95	150	250	391	557	672	809	983	1120	1400
20	1800	90										1160		1720		2240
	1200	60										787		1159		1570
	900	45										594		875		1190

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (kW)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1500	238	59	86	149	223	305	530	792	1250	1710		2610		3440	
	1000	159	42	61	100	162	222	388	588	884	1240		1811		2550	
	750	119	31	48	76	125	174	302	462	668	943		1371		2000	
7.1	1500	211	52	78	135	201	293	469	757	1130	1612	1710	2380	2610	3050	3442
	1000	141	35	55	90	136	197	316	511	766	1100	1240	1610	1930	2240	2550
	750	106	26.6	42	68	102	149	238	386	579	836	978	1220	1481	1690	2000
8	1500	188	49	73	117	190	271	455	687	1030	1450	1611	2120	2450	2822	3052
	1000	125	34	52	78	129	195	316	478	701	1022	1170	1430	1740	2022	2260
	750	94	25.7	40	59	97	147	239	361	529	773	891	1080	1310	1580	1781
9	1500	167	41	66	105	158	239	371	593	900	1340	1450	1891	2190	2500	2820
	1000	111	28.1	46	71	106	161	250	400	607	907	1030	1270	1550	1741	2020
	750	83	21.1	34	53	80	121	188	302	458	685	813	965	1172	1310	1580
10	1500	150	40	60	96	158	226	382	593	861	1180	1370	1760	2040	2400	2500
	1000	100	26.9	42	64	106	154	257	399	580	807	966	1180	1380	1700	1790
	750	75	20.2	33	48	80	116	194	301	438	610	730	897	1040	1310	1390
11.2	1500	134	32	53	86	129	188	301	495	746	1062	1180	1560	1850	2130	2400
	1000	89	21.9	36	58	87	127	202	334	503	716	842	1050	1280	1440	171067
	750	67	16.5	27.3	43	65	95	153	252	379	540	651	799	970	1091	1340
12.5	1500	120	32	49	75	121	185	307	458	673	959	1110	1360	1690	1920	2130
	1000	80	21.5	34	50	81	125	206	308	453	647	762	922	1140	1360	1520
	750	60	16.2	26.2	38	61	94	155	232	342	488	576	696	864	1042	1152
14	1500	107	26.1	42	67	99	153	242	383	583	851	958	1210	1460	1690	1920
	1000	71	17.5	28.5	45	66	102	162	257	392	573	681	821	996	1142	1370
	750	54	13.2	21.4	34	50	77	122	194	296	433	521	619	752	862	1070
16	1500	94	25.9	41	60	97	142	235	368	555	773	902	1110	1310	1600	1710
	1000	63	17.4	28.2	40	65	95	158	248	373	520	611	752	887	1120	1200
	750	47	13.1	21.2	30	49	72	119	187	281	392	461	567	670	850	911
18	1500	83	21.1	34	54	80	117	185	308	481	685	789	994	1200	1380	1611
	1000	56	14.2	23.1	36	53	78	124	207	323	461	555	669	812	931	1140
	750	42	10.7	17.4	27.5	40	59	94	156	244	348	419	505	613	703	899
20	1500	75										730		1070		1430
	1000	50										491		723		983
	750	38										370		546		742

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
2. When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

DOUBLE REDUCTION

PARALLEL SHAFT

TORQUE RATING - S.F. 1.0

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1800	286	20.2	29.1	53	73	106	175	264	432	606		902		1138	
	1200	190	21.7	31	54	80	117	195	298	478	677		983		1286	
	900	143	22.3	33	54	85	124	207	316	482	699		993		1363	
7.1	1800	254	21.1	30	52	78	121	190	296	450	619	672	910	987	1158	1291
	1200	169	21.5	32	52	79	122	192	301	457	669	751	940	1115	1308	1458
	900	127	21.6	34	52	80	123	193	303	461	675	786	949	1174	1354	1546
8	1800	225	21.3	31	53	80	116	191	295	473	636	684	961	1006	1214	1310
	1200	150	22.7	33	54	85	128	210	323	481	691	765	991	1124	1338	1479
	900	113	22.8	34	54	85	132	212	326	485	703	795	1000	1135	1401	1568
9	1800	200	21.4	31	52	79	122	191	299	454	650	705	934	1052	1237	1377
	1200	133	21.6	34	52	79	123	193	303	460	673	766	947	1156	1353	1518
	900	100	21.7	34	53	80	124	194	305	464	679	802	956	1183	1365	1589
10	1800	180	22.3	32	54	84	124	207	313	478	671	719	984	1073	1278	1398
	1200	120	22.9	34	54	85	132	211	325	484	702	781	997	1133	1372	1542
	900	90	23.1	36	54	86	133	213	327	488	708	800	1005	1143	1436	1614
11.2	1800	161	21.5	33	52	79	123	192	301	457	669	744	941	1108	1304	1450
	1200	107	21.7	34	53	80	124	194	304	462	678	793	953	1180	1362	1556
	900	80	21.7	34	53	80	124	195	306	466	683	831	961	1189	1373	1629
12.5	1800	144	22.9	34	54	85	131	210	324	482	681	759	993	1126	1311	1474
	1200	96	23.1	36	54	86	133	212	327	487	707	799	1005	1140	1398	1582
	900	72	23.2	36	55	86	133	214	329	490	712	805	1012	1149	1454	1638
14	1800	129	21.6	34	52	80	123	193	303	461	674	756	949	1136	1339	1487
	1200	86	21.7	34	53	80	124	195	306	465	682	806	960	1188	1371	1586
	900	64	21.8	34	53	81	125	196	308	468	686	843	967	1197	1381	1660
16	1800	113	23.0	35	54	85	132	212	326	485	701	772	999	1135	1351	1514
	1200	75	23.1	36	55	86	133	213	329	489	711	803	1010	1148	1441	1615
	900	56	23.3	37	55	86	134	215	331	492	715	809	1017	1157	1462	1648
18	1800	100	21.7	34	53	80	124	194	305	463	679	778	955	1171	1363	1532
	1200	67	21.9	34	53	81	125	196	308	467	685	830	965	1195	1379	1634
	900	50	21.9	34	53	81	125	197	309	470	690	847	971	1203	1388	1711
20	1800	90										795		1142		1561
	1200	60										808		1155		1645
	900	45										813		1162		1656

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1500	238	2.4	3.4	6.0	8.6	12.6	20.9	32	52	72		108		136	
	1000	159	2.5	3.6	6.1	9.4	13.7	22.9	35	54	79		112		151	
	750	119	2.5	3.8	6.1	9.6	14.4	23.9	37	55	79		113		159	
7.1	1500	211	2.4	3.5	5.8	8.9	13.7	21.5	34	51	74	80	105	118	138	154
	1000	141	2.4	3.8	5.9	9.0	13.9	21.8	34	52	76	87	107	131	153	172
	750	106	2.5	3.8	5.9	9.0	14.0	21.9	34	52	77	91	108	133	154	180
8	1500	188	2.5	3.5	6.1	9.4	13.8	22.8	35	54	75	82	111	120	145	156
	1000	125	2.6	3.8	6.1	9.6	14.9	23.8	37	55	79	89	113	128	156	174
	750	94	2.6	4.0	6.2	9.7	15.0	24.0	37	55	80	90	114	129	163	182
9	1500	167	2.4	3.7	5.9	8.9	13.8	21.7	34	52	75	84	106	126	148	164
	1000	111	2.4	3.8	5.9	9.0	14.0	21.9	34	52	76	89	108	133	154	177
	750	83	2.5	3.8	6.0	9.1	14.0	22.0	35	53	77	93	109	134	155	185
10	1500	150	2.6	3.7	6.1	9.6	14.6	23.7	37	54	78	85	112	127	150	167
	1000	100	2.6	4.0	6.1	9.7	15.0	24.0	37	55	80	90	113	129	160	179
	750	75	2.6	4.1	6.2	9.7	15.1	24.1	37	55	80	91	114	130	164	185
11.2	1500	134	2.4	3.8	5.9	9.0	13.9	21.8	34	52	76	87	107	129	153	170
	1000	89	2.5	3.8	6.0	9.1	14.0	22.0	35	52	77	92	108	134	155	181
	750	67	2.5	3.9	6.0	9.1	14.1	22.1	35	53	77	95	109	135	156	189
12.5	1500	120	2.6	3.9	6.1	9.6	14.9	23.9	37	55	79	88	113	128	152	172
	1000	80	2.6	4.1	6.2	9.7	15.0	24.1	37	55	80	91	114	129	163	184
	750	60	2.6	4.1	6.2	9.8	15.1	24.2	37	56	81	91	115	130	165	186
14	1500	107	2.4	3.8	5.9	9.0	14.0	21.9	34	52	77	88	108	132	154	173
	1000	71	2.5	3.9	6.0	9.1	14.1	22.1	35	53	77	94	109	135	156	184
	750	54	2.5	3.9	6.0	9.1	14.1	22.2	35	53	78	96	110	136	157	193
16	1500	94	2.6	4.1	6.2	9.7	15.0	24.0	37	55	80	90	113	129	157	176
	1000	63	2.6	4.1	6.2	9.8	15.1	24.2	37	56	81	91	115	130	165	186
	750	47	2.6	4.1	6.2	9.8	15.2	24.3	38	56	81	92	115	131	166	187
18	1500	83	2.5	3.8	6.0	9.1	14.1	22.1	35	53	77	90	108	134	155	178
	1000	56	2.5	3.9	6.0	9.1	14.2	22.2	35	53	78	96	110	136	156	190
	750	42	2.5	3.9	6.0	9.2	14.2	22.3	35	53	78	96	110	136	157	199
20	1500	75										91		130		182
	1000	50										92		131		187
	750	38										92		132		188

RATING TABLES

DOUBLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - HORIZONTAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3 - 9	1800	-	53	69	84	106	144	179	250	314	459	500	573	632	697	770
		1	88	113	139	174	238	296	413	518	758	825	945	1042	1149	1271
		2	133	172	210	264	361	448	626	784	1149	1250	1432	1579	1742	1926
	1200	-	50	66	82	106	147	187	266	343	495	534	637	705	793	901
		1	82	109	136	175	242	308	439	566	816	881	1052	1163	1308	1486
		2	125	165	206	265	367	467	664	857	1237	1335	1593	1762	1981	2252
900	-	46	62	78	102	142	182	261	340	491	528	637	702	801	909	
	1	76	102	129	168	235	300	579	753	1087	1169	1409	1554	1772	2011	
	2	117	154	195	256	355	456	877	1141	1646	1771	2135	2354	2684	3047	
10 - 14	1800	-	45	62	77	97	135	169	237	309	444	482	568	629	688	767
		1	74	103	127	160	223	278	391	510	732	796	937	1037	1135	1265
		2	112	156	193	243	338	422	592	773	1109	1206	1420	1572	1720	1917
	1200	-	41	58	73	93	132	168	238	316	451	487	585	646	730	827
		1	67	96	120	154	217	277	393	522	744	803	965	1067	1204	1365
		2	102	145	182	234	329	419	596	791	1127	1216	1463	1616	1824	2068
900	-	37	53	68	88	125	160	229	307	437	470	571	629	720	818	
	1	62	88	112	145	206	265	378	506	722	776	942	1038	1188	1349	
	2	94	133	169	220	311	401	573	767	1093	1176	1427	1572	1801	2045	
16 - 20	1800	-	40	57	71	89	123	154	220	293	416	451	539	586	655	720
		1	67	94	116	147	203	255	364	484	686	744	889	967	1081	1189
		2	101	143	176	222	307	386	551	733	1039	1127	1347	1465	1638	1801
	1200	-	36	52	66	84	117	150	218	294	414	446	543	586	679	738
		1	60	86	108	139	193	247	359	485	683	735	896	967	1120	1219
		2	91	130	164	211	292	374	544	734	1036	1114	1358	1465	1697	1846
900	-	33	48	60	78	109	141	207	282	398	427	525	564	663	719	
	1	54	79	100	129	180	233	342	466	656	704	866	931	1095	1186	
	2	82	119	151	196	273	353	518	705	994	1067	1312	1411	1658	1797	

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3 - 9	1500	-	39	51	63	80	110	138	195	249	360	390	460	509	565	633
		1	64	83	103	132	181	228	322	411	594	644	759	840	932	1045
		2	97	127	157	200	275	345	487	623	900	975	1151	1272	1412	1584
	1000	-	36	47	59	77	108	138	197	255	369	397	477	527	598	679
		1	59	78	98	127	177	227	325	421	608	655	787	869	986	1120
		2	89	118	149	193	269	344	493	639	922	993	1193	1316	1494	1697
750	-	33	44	56	73	102	132	190	248	359	386	467	514	590	669	
	1	54	72	92	120	169	218	314	410	592	636	770	848	974	1104	
	2	82	110	139	182	256	330	475	621	897	964	1167	1285	1475	1673	
10 - 14	1500	-	32	45	56	72	100	127	179	236	337	365	435	482	535	602
		1	53	75	93	118	166	209	295	389	556	602	717	795	882	992
		2	81	113	141	180	251	317	448	590	843	912	1086	1204	1337	1504
	1000	-	29	41	52	67	95	122	174	232	331	356	431	475	542	616
		1	48	68	86	111	157	201	287	383	546	588	711	784	894	1016
		2	72	103	130	168	238	305	435	580	827	891	1078	1188	1354	1539
750	-	26	37	48	62	89	115	165	221	316	339	414	455	525	596	
	1	43	62	79	103	146	189	272	365	521	560	683	751	866	983	
	2	65	94	120	156	222	287	412	553	790	848	1034	1138	1313	1489	
16 - 20	1500	-	29	41	51	65	90	115	165	221	313	338	408	441	503	550
		1	48	68	84	108	149	189	272	365	516	557	673	728	830	907
		2	72	103	128	163	226	286	413	553	781	844	1019	1103	1257	1374
	1000	-	26	37	47	60	84	108	158	214	302	324	398	428	501	543
		1	42	61	77	99	138	178	260	353	498	535	656	706	826	896
		2	64	92	116	150	209	270	395	536	755	811	994	1070	1252	1358
750	-	23	33	42	55	77	100	148	203	286	306	378	406	481	521	
	1	38	55	70	91	128	166	245	334	472	505	624	671	794	859	
	2	57	83	106	138	193	251	371	506	715	766	946	1016	1203	1301	

NOTES: 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures see next page.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

RATING TABLES

DOUBLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (hp)													
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3 - 9	1800	52	66	81	101	137	162	225	271	307	344	323	376	289	346
	1200	49	65	80	103	143	178	265	333	426	463	526	580	624	690
	900	46	61	77	100	139	177	261	340	447	483	569	630	695	788
10 - 14	1800	45	62	77	99	135	169	237	309	349	371	409	437	435	457
	1200	41	58	73	94	132	168	238	316	406	440	513	571	614	685
	900	38	53	68	88	125	160	229	307	408	440	525	581	646	731
16 - 20	1800	41	58	71	90	125	160	229	313	347	381	430	477	476	537
	1200	36	53	66	85	118	153	222	304	377	408	485	527	583	641
	900	33	48	61	79	110	143	211	289	374	403	487	526	602	656

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (kW)													
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3 - 9	1500	38	49	61	77	106	129	186	229	284	311	326	367	360	407
	1000	35	47	58	76	105	133	197	255	330	357	417	463	505	567
	750	32	43	55	72	101	129	190	248	334	360	428	474	530	602
10 - 14	1500	33	45	56	73	100	127	179	236	289	316	354	388	403	441
	1000	29	41	52	68	95	122	174	232	305	330	391	433	476	537
	750	26	37	48	63	89	115	165	221	299	322	388	428	483	549
16 - 20	1500	29	42	52	66	91	118	170	232	274	298	346	380	402	447
	1000	26	37	47	61	84	110	161	220	281	303	364	395	447	488
	750	23	33	43	56	78	102	150	206	272	293	357	385	446	485

- NOTES:** 1. Given thermal ratings are based upon 70° F ambient temperature.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

$$\text{Adjusted Thermal HP} = \text{Rated Thermal HP} \times T_a$$

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

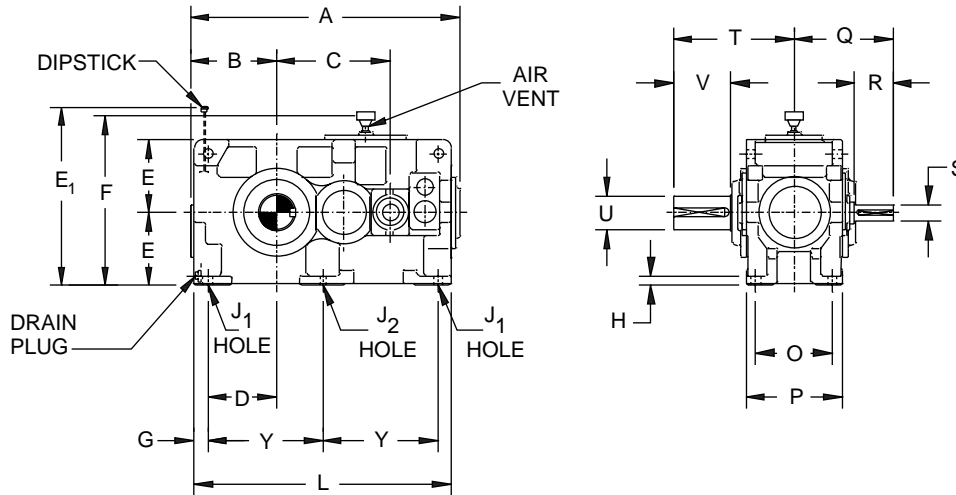
ALTITUDE	FACTOR	ALTITUDE	FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

DIMENSIONS

DOUBLE REDUCTION

PARALLEL SHAFT

SOLID SHAFT, HORIZONTAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	Y	2Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	7.638	5.51	5.51	15.91	14.53	0.98	0.87	0.59	-	20.08	5.91	7.28	8.29	3.13	1.125	9.67	2.250	4.35	-	18.11	210	1.3
8025	23.78	7.28	8.937	5.91	6.30	17.72	16.10	1.38	0.98	0.75	-	23.03	6.69	8.27	8.86	3.11	1.375	11.22	2.625	5.51	-	20.47	300	2.1
8035	25.35	8.07	10.394	6.50	7.09	19.92	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	10.65	4.39	1.500	11.83	3.000	5.53	-	21.65	420	2.9
8045	29.17	9.06	12.047	7.28	7.87	22.28	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	11.24	4.39	1.875	13.80	3.500	6.75	-	24.41	590	4.2
8055	33.78	10.63	14.094	8.86	8.86	24.84	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	12.01	4.41	2.000	16.16	4.125	8.25	14.57	29.13	882	6.3
8065	38.35	12.01	16.299	9.84	10.43	28.98	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	14.19	5.53	2.375	17.32	4.875	8.27	16.54	33.07	1350	9.8
8075	44.17	13.39	18.976	10.83	11.81	32.52	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	15.16	5.51	2.750	20.08	5.625	9.88	18.90	37.80	1940	14.5
8085	51.42	14.96	21.890	12.40	13.19	36.06	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	17.13	6.73	3.125	22.83	6.375	11.73	22.44	44.88	2760	20.9
8090	58.27	16.14	25.197	13.58	14.76	40.31	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	19.69	6.69	3.500	25.59	7.000	11.81	25.98	51.97	4520	32
8095	60.63	17.32	26.378	14.76	15.75	42.76	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	19.69	6.69	3.500	27.56	7.375	13.78	27.17	54.33	5070	37
8100	65.12	17.72	28.504	14.76	16.73	45.24	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	23.03	8.27	3.875	29.13	7.750	13.78	28.94	57.87	6020	45
8105	67.83	19.09	29.843	16.14	17.72	47.87	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	23.03	8.27	3.875	29.13	8.375	13.78	30.31	60.63	7260	54
8110	72.99	19.69	32.441	16.54	18.70	50.04	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	24.21	8.27	4.250	30.31	8.375	13.78	32.68	65.35	8730	63
8115	76.89	21.65	34.370	18.50	19.69	52.48	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	24.21	8.27	4.250	32.68	9.375	16.14	34.65	69.29	9730	77

METRIC DIMENSIONS

Units: mm

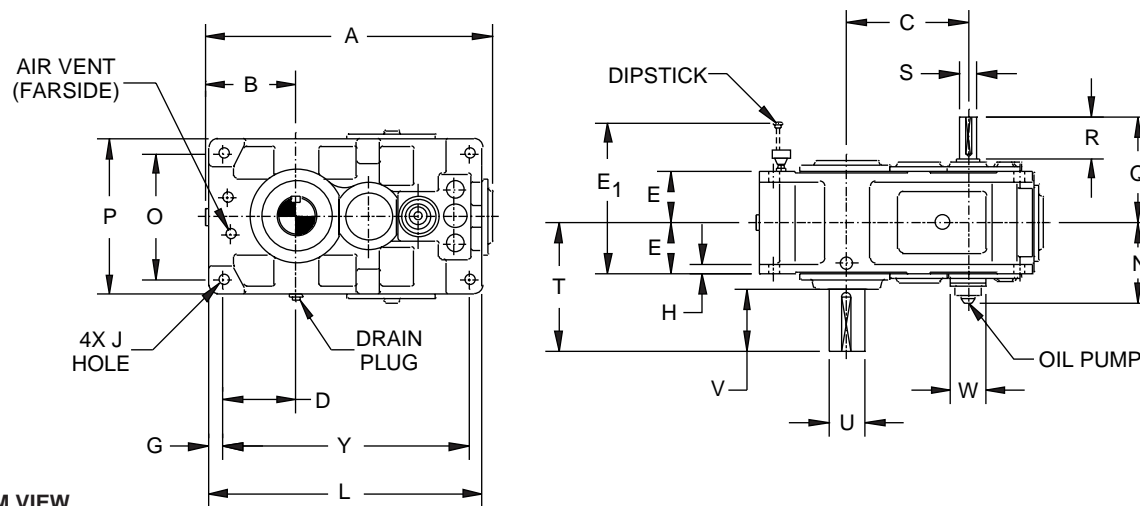
MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	Y	2Y	WT. kgf.	OIL QTY. LTR.
8015	505	165	194	140	140	404	369	25	22	15	-	510	150	185	211	80	30	245	58	110	-	460	95	5
8025	604	185	227	150	160	450	409	35	25	19	-	585	170	210	226	80	35	285	70	140	-	520	135	8
8035	644	205	264	165	180	506	449	35	28	24	-	615	190	235	269	110	40	300	78	140	-	550	190	11
8045	741	230	306	185	200	566	489	40	30	28	-	700	215	270	284	110	50	349	95	170	-	620	265	16
8055	858	270	358	225	225	631	539	40	32	28	24	820	255	310	303	110	55	411	110	210	370	740	400	24
8065	974	305	414	250	265	736	619	50	35	35	24	935	280	350	360	140	65	440	125	210	420	840	610	37
8075	1122	340	482	275	300	826	689	60	40	42	28	1075	320	400	385	140	75	509	145	250	480	960	880	55
8085	1306	380	556	315	335	916	759	60	45	42	35	1260	360	440	434	170	85	582	165	300	570	1140	1250	79
8090	1480	410	640	345	375	1024	839	60	50	42	42	1440	480	570	500	170	90	650	180	300	660	1320	2050	120
8095	1540	440	670	375	400	1086	889	60	50	42	42	1500	480	570	500	170	90	700	190	350	690	1380	2300	140
8100	1654	450	724	375	425	1149	939	70	55	48	48	1610	560	650	585	210	100	740	200	350	735	1470	2730	170
8105	1723	485	758	410	450	1216	989	70	55	48	48	1680	560	650	585	210	100	740	220	350	770	1540	3290	205
8110	1854	500	824	420	475	1271	1039	75	60	56	56	1810	610	710	615	210	110	770	220	350	830	1660	3960	240
8115	1953	550	873	470	500	1333	1089	75	60	56	56	1910	610	710	615	210	110	830	240	410	880	1760	4410	290

DIMENSIONS

DOUBLE REDUCTION

PARALLEL SHAFT

SOLID SHAFT, VERTICAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	7.638	5.51	3.64	12.99	0.79	0.87	0.59	19.69	7.20	9.45	11.02	8.29	3.13	1.125	9.65	2.250	4.35	3.94	18.11	180	1.1
8025	23.78	7.28	8.937	5.91	4.13	14.57	1.18	0.98	0.75	22.64	7.68	10.24	12.60	8.86	3.11	1.375	11.22	2.625	5.51	3.94	20.47	290	1.6
8035	25.35	8.07	10.394	6.50	4.63	16.14	1.38	1.10	0.94	24.21	8.19	11.42	14.17	10.65	4.39	1.500	11.83	3.000	5.53	3.94	21.65	400	2.4
8045	29.17	9.06	12.047	7.28	5.31	18.50	1.57	1.18	1.10	27.56	9.25	12.60	15.75	11.24	4.39	1.875	13.80	3.500	6.75	4.61	24.41	590	3.4
8055	33.78	10.63	14.094	8.86	6.10	21.26	1.57	1.26	1.10	32.28	10.04	14.57	17.72	12.01	4.41	2.000	16.16	4.125	8.25	4.61	29.13	800	4.8
8065	38.35	12.01	16.299	9.84	6.89	23.82	1.97	1.38	1.38	36.81	10.83	16.93	20.87	14.19	5.53	2.375	17.32	4.875	8.25	4.61	33.07	1240	7.4
8075	44.17	13.39	18.976	10.83	7.87	26.97	2.36	1.57	1.65	42.32	11.81	18.90	23.62	15.16	5.51	2.750	20.08	5.625	9.88	4.61	37.80	1860	11.6
8085	51.42	14.96	21.890	12.40	8.66	29.53	2.36	1.77	1.65	49.61	12.60	21.65	26.38	17.13	6.73	3.125	22.83	6.375	11.73	4.61	44.88	2630	16.4
8090	58.27	16.14	25.197	13.58	11.22	37.95	2.36	1.97	1.65	56.69	*	24.80	29.53	19.69	6.69	3.500	25.59	7.000	11.81	*	51.97	4570	23.8
8095	60.63	17.32	26.378	14.76	11.22	37.95	2.36	1.97	1.65	59.06	*	26.77	31.50	19.69	6.69	3.500	27.56	7.375	13.78	*	54.33	5140	32
8100	65.12	17.72	28.504	14.76	12.80	43.03	2.76	2.17	1.89	63.39	*	27.95	33.46	23.03	8.27	3.875	29.13	7.750	13.78	*	57.87	6220	37
8105	67.83	19.09	29.843	16.14	12.80	43.03	2.76	2.17	1.89	66.14	*	29.92	35.43	23.03	8.27	3.875	29.13	8.375	13.78	*	60.63	7280	46
8110	72.99	19.69	32.441	16.54	13.98	46.65	2.95	2.36	2.20	71.26	*	31.50	37.40	24.21	8.27	4.250	30.31	8.375	13.78	*	65.35	8710	53
8115	76.89	21.65	34.370	18.50	13.98	46.65	2.95	2.36	2.20	75.20	*	33.46	39.37	24.21	8.27	4.250	32.68	9.375	16.14	*	69.29	9860	67

METRIC DIMENSIONS

Units: mm

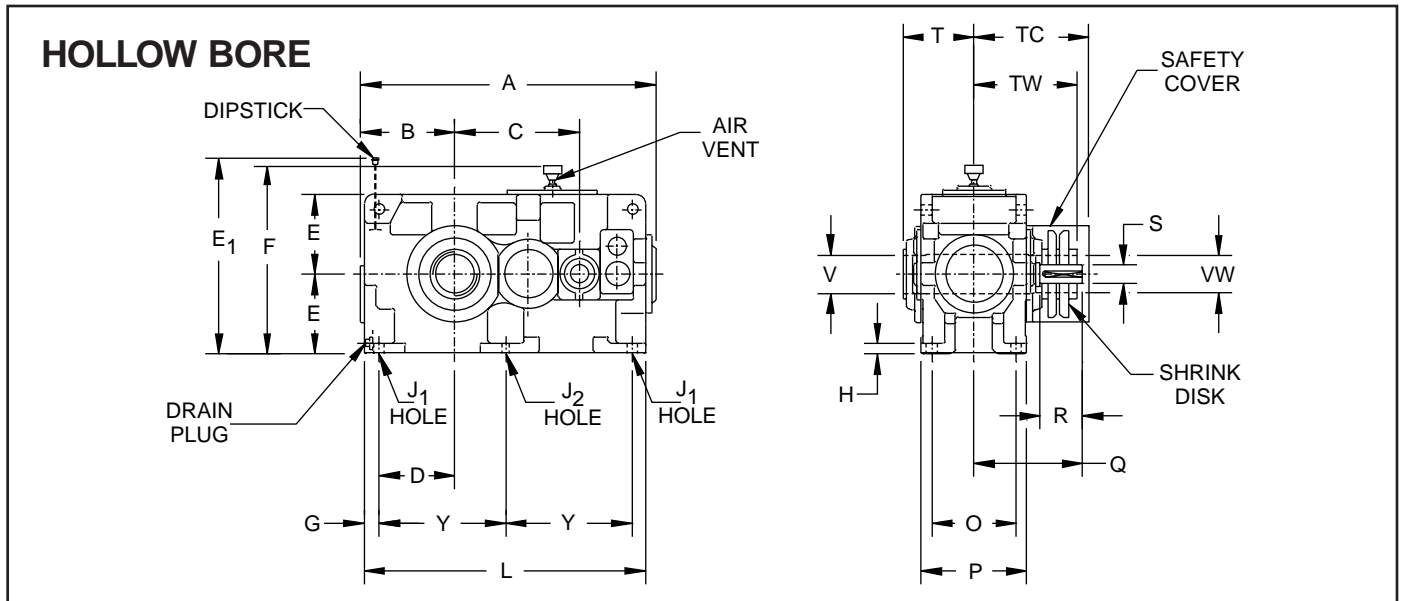
MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	Y	WT. kgf.	OIL QTY. LTR.
8015	505	165	194	140	92.5	330	20	22	15	500	183	240	280	211	80	30	245	58	110	100	460	80	4
8025	604	185	227	150	105	370	30	25	19	575	195	260	320	226	80	35	285	70	140	100	520	130	6
8035	644	205	264	165	117.5	410	35	28	24	615	208	290	360	269	110	40	300	78	140	100	550	180	9
8045	741	230	306	185	135	470	40	30	28	700	235	320	400	284	110	50	349	95	170	117	620	265	13
8055	858	270	358	225	155	540	40	32	28	820	255	370	450	303	110	55	411	110	210	117	740	360	18
8065	974	305	414	250	175	605	50	35	35	935	275	430	530	360	140	65	440	125	210	117	840	560	28
8075	1122	340	482	275	200	685	60	40	42	1075	300	480	600	385	140	75	509	145	250	117	960	840	44
8085	1306	380	556	315	220	750	60	45	42	1260	320	550	670	434	170	85	582	165	300	117	1140	1190	62
8090	1480	410	640	345	285	964	60	50	42	1440	*	630	750	500	170	90	650	180	300	*	1320	2070	90
8095	1540	440	670	375	285	964	60	50	42	1500	*	680	800	500	170	90	700	190	350	*	1380	2330	120
8100	1654	450	724	375	325	1093	70	55	48	1610	*	710	850	585	210	100	740	200	350	*	1470	2820	140
8105	1723	485	758	410	325	1093	70	55	48	1680	*	760	900	585	210	100	740	220	350	*	1540	3300	175
8110	1854	500	824	420	355	1185	75	60	56	1810	*	800	950	615	210	110	770	220	350	*	1660	3950	200
8115	1953	550	873	470	355	1185	75	60	56	1910	*	850	1000	615	210	110	830	240	410	*	1760	4470	255

*This unit is equipped with a motor driven pump.

DIMENSIONS

DOUBLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

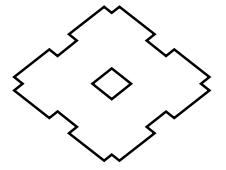
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	Y	2Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	7.638	5.51	5.51	15.91	14.53	0.98	0.87	0.59	-	20.08	5.91	7.28	8.29	3.13	1.125	5.31	8.19	7.60	2.500	2.375	-	18.11	210	1.3
8025	23.78	7.28	8.937	5.91	6.30	17.72	16.10	1.38	0.98	0.75	-	23.03	6.69	8.27	8.86	3.11	1.375	5.71	9.06	8.39	2.875	2.750	-	20.47	300	2.1
8035	25.35	8.07	10.394	6.50	7.09	19.92	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	10.65	4.39	1.500	6.30	9.96	9.17	3.250	3.125	-	21.65	420	2.9
8045	29.17	9.06	12.047	7.28	7.87	22.28	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	11.24	4.39	1.875	7.09	11.22	10.55	3.750	3.625	-	24.41	590	4.2
8055	33.78	10.63	14.094	8.86	8.86	24.84	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	12.01	4.41	2.000	7.87	12.60	11.93	4.375	4.250	14.57	29.13	880	6.3
8065	38.35	12.01	16.299	9.84	10.43	28.98	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	14.19	5.53	2.375	9.06	14.37	13.90	5.125	5.000	16.54	33.07	1350	9.8
8075	44.17	13.39	18.976	10.83	11.81	32.52	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	15.16	5.51	2.750	10.24	15.94	15.12	6.000	5.875	18.90	37.80	1940	14.5
8085	51.42	14.96	21.890	12.40	13.19	36.06	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	17.13	6.73	3.125	11.22	17.72	16.89	6.875	6.750	22.44	44.88	2760	20.9
8090	58.27	16.14	25.197	13.58	14.76	40.31	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	19.69	6.69	3.500	13.78	20.28	19.45	7.500	7.375	25.98	51.97	4520	32
8095	60.63	17.32	26.378	14.76	15.75	42.76	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	19.69	6.69	3.500	13.78	20.59	20.04	8.000	7.875	27.17	54.33	5070	37
8100	65.12	17.72	28.504	14.76	16.73	45.24	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	23.03	8.27	3.875	15.35	22.24	21.42	8.375	8.250	28.94	57.87	6020	45
8105	67.83	19.09	29.843	16.14	17.72	47.87	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	23.03	8.27	3.875	15.35	22.76	22.01	8.875	8.625	30.31	60.63	7260	54
8110	72.99	19.69	32.441	16.54	18.70	50.04	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	24.21	8.27	4.250	16.54	24.61	24.02	9.500	9.375	32.68	65.35	8730	63
8115	76.89	21.65	34.370	18.50	19.69	52.48	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	24.21	8.27	4.250	16.54	25.98	25.39	10.000	9.875	34.65	69.29	9730	77

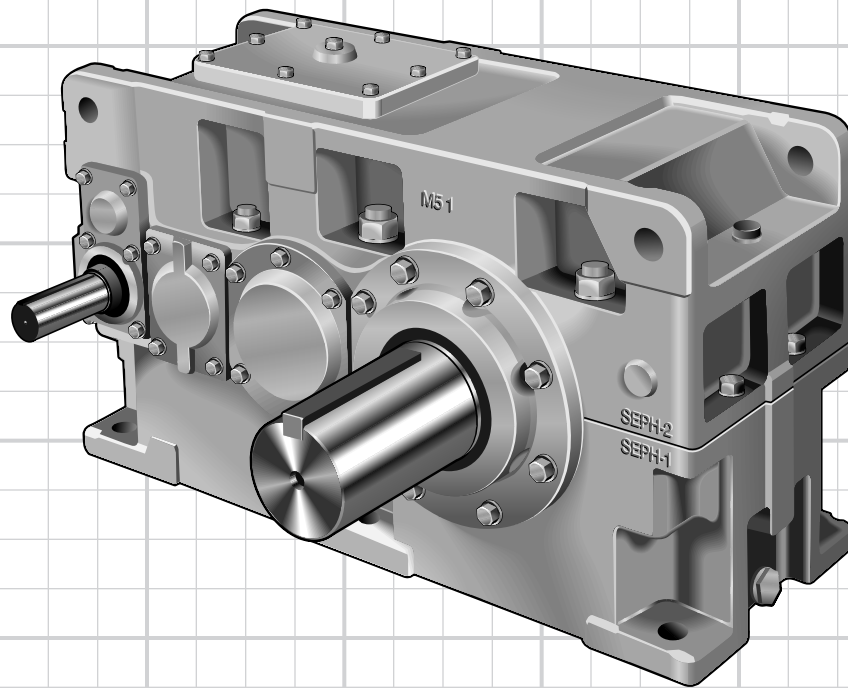
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	Y	2Y	WT. kgf.	OIL QTY. LIT.
8015	505	165	194	140	140	404	369	25	22	15	-	510	150	185	211	80	30	135	208	193	63	60	-	460	95	5
8025	604	185	227	150	160	450	409	35	25	19	-	585	170	210	226	80	35	145	230	213	73	70	-	520	135	8
8035	644	205	264	165	180	506	449	35	28	24	-	615	190	235	269	110	40	160	253	233	83	80	-	550	190	11
8045	741	230	306	185	200	566	489	40	30	28	-	700	215	270	284	110	50	180	285	268	98	95	-	620	265	16
8055	858	270	358	225	225	631	539	40	32	28	24	820	255	310	303	110	55	200	320	303	108	105	370	740	400	24
8065	974	305	414	250	265	736	619	50	35	35	24	935	280	350	360	140	65	230	365	353	128	125	420	840	610	37
8075	1122	340	482	275	300	826	689	60	40	42	28	1075	320	400	385	140	75	260	405	384	148	145	480	960	880	55
8085	1306	380	556	315	335	916	759	60	45	42	35	1260	360	440	434	170	85	285	450	429	173	170	570	1140	1250	79
8090	1480	410	640	345	375	1024	839	60	50	42	42	1440	480	570	500	170	90	350	515	494	193	190	660	1320	2050	120
8095	1540	440	670	375	400	1086	889	60	50	42	42	1500	480	570	500	170	90	350	523	509	203	200	690	1380	2300	140
8100	1654	450	724	375	425	1149	939	70	55	48	48	1610	560	650	585	210	100	390	565	544	213	210	735	1470	2730	170
8105	1723	485	758	410	450	1216	989	70	55	48	48	1680	560	650	585	210	100	390	578	559	223	220	770	1540	3290	205
8110	1854	500	824	420	475	1271	1039	75	60	56	56	1810	610	710	615	210	110	420	625	610	243	240	830	1660	3960	240
8115	1953	550	873	470	500	1333	1089	75	60	56	56	1910	610	710	615	210	110	420	660	645	253	250	880	1760	4410	290



PARALLEL SHAFT Triple Reduction



RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

EXACT RATIOS

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	19.894	19.681	20.280	19.884	19.590	18.987	20.067	20.054	20.585		20.812		19.984				19.673	
22.4	23.011	22.457	21.860	22.689	22.303	22.125	22.484	22.119	22.393	22.841	22.335	22.781	22.930	22.648			22.022	
25	24.696	24.332	25.374	24.774	25.673	24.883	25.083	24.444	25.732	24.782	25.651	24.717	24.630	25.908	26.068		25.560	24.386
28	28.565	27.764	27.350	28.269	29.227	28.995	28.105	26.961	27.992	28.552	27.527	28.078	28.261	27.914	28.501		28.612	27.298
31.5	31.401	31.905	32.876	31.213	30.855	29.905	31.500	31.601	31.855	30.978	32.067	30.463	30.789	31.932	31.993	32.599	30.999	31.683
35.5	36.321	36.406	35.437	35.617	35.127	34.848	35.294	34.854	34.652	35.345	34.412	35.100	35.329	34.895	34.978	35.641	34.701	35.466
40	38.980	39.444	41.134	38.889	40.435	39.190	39.375	38.518	39.818	38.349	39.522	38.082	37.948	39.918	40.791	40.008	39.435	38.426
45	45.088	45.009	44.338	44.375	46.033	45.667	44.118	42.484	43.315	44.182	42.412	43.260	43.543	43.007	44.597	43.741	44.144	43.015
50			51.141	49.248	49.634	48.825	51.187	51.845	51.911	47.936	50.361	46.936	48.355	49.198	51.189	51.011	48.603	48.883
56			55.125	56.195	56.507	56.894	57.353	57.182	56.471	57.600	54.044	55.125	55.485	54.803	55.965	55.770	54.407	54.720
63			63.986	61.358	65.045	63.984	63.984	63.194	64.889	62.494	62.070	59.809	59.597	62.691	63.986	64.013	64.299	60.248
71			68.971	70.014	74.051	74.559	71.691	69.700	70.588	72.000	66.609	67.941	68.385	67.544	69.956	69.986		67.442
80									77.090	78.118	75.299	73.714	80.819	77.266	76.399	80.017		79.704
90										85.313		83.331		91.315		87.482		
100															95.540			

INERTIA - WR²

Units: lb-in²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	2.905	7.176	10.08	20.76	48.69	102.9	200.3	411.1	817.4		1733		2460				20161	
22.4	2.819	7.005	9.910	19.99	47.16	98.93	194.0	401.7	808.5	846.7	1712	1788	2385	2580			18794	
25	2.477	6.493	8.799	17.94	39.89	84.49	175.0	361.5	722.4	835.4	1538	1768	2082	2484	5809		15035	18111
28	2.392	6.407	8.714	17.51	39.04	82.18	170.9	355.2	716.7	741.2	1525	1575	2033	2161	5126		14010	18111
31.5	1.623	3.930	5.211	11.36	25.88	55.36	107.6	234.1	475.7	734.0	1024	1561	1358	2098	4784	5433	11618	14694
35.5	1.538	3.844	5.126	11.11	25.29	53.73	105.0	230.3	472.0	488.0	1016	1048	1326	1408	4442	5057	10935	13668
40	1.452	3.673	4.699	10.25	22.38	47.93	97.30	214.2	436.0	483.3	942.5	1039	1199	1368	3178	4476	7859	11276
45	1.452	3.673	4.613	10.08	22.04	46.99	95.68	211.6	433.7	443.9	936.7	957.9	1178	1232	3007	4237	7518	10935
50			2.990	6.407	14.69	29.05	59.20	117.0	237.8	440.9	470.5	952.2	607.4	1205	2255	3075	5536	7791
56			2.990	6.322	14.44	28.45	58.18	115.6	236.5	242.4	466.9	479.9	594.6	628.0	2153	2939	5297	7415
63			2.819	5.980	13.33	26.23	55.27	109.5	222.9	240.7	437.2	476.4	542.9	611.5	1640	2221	5023	5467
71			2.734	5.895	13.16	25.88	54.67	108.6	222.0	225.9	434.9	443.5	534.5	556.5	1572	2119		5228
80									215.3	224.7	417.572	441.2	493.8	545.6	1333	1606		4955
90										217.6		422.4		501.7		1538		
100																1299		

INERTIA - mR²

Units: kg-m²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	0.00085	0.0021	0.0030	0.0061	0.014	0.030	0.059	0.120	0.239		0.507		0.720				5.900	
22.4	0.00083	0.0021	0.0029	0.0059	0.014	0.029	0.057	0.118	0.237	0.248	0.501	0.523	0.698	0.755			5.500	
25	0.00073	0.0019	0.0026	0.0053	0.012	0.025	0.051	0.106	0.211	0.244	0.450	0.517	0.609	0.727	1.700		4.400	5.300
28	0.00070	0.0019	0.0026	0.0051	0.011	0.024	0.050	0.104	0.210	0.217	0.446	0.461	0.595	0.633	1.500		4.100	5.300
31.5	0.00048	0.0012	0.0015	0.0033	0.0076	0.016	0.031	0.069	0.139	0.215	0.300	0.457	0.397	0.614	1.400	1.590	3.400	4.300
35.5	0.00045	0.0011	0.0015	0.0033	0.0074	0.016	0.031	0.067	0.138	0.143	0.297	0.307	0.388	0.412	1.300	1.480	3.200	4.000
40	0.00043	0.0011	0.0014	0.0030	0.0066	0.014	0.028	0.063	0.128	0.141	0.276	0.304	0.351	0.400	0.930	1.310	2.300	3.300
45	0.00043	0.0011	0.0014	0.0030	0.0065	0.014	0.028	0.062	0.127	0.130	0.274	0.280	0.345	0.361	0.880	1.240	2.200	3.200
50			0.00088	0.0019	0.0043	0.0085	0.017	0.034	0.070	0.129	0.138	0.279	0.178	0.353	0.660	0.900	1.620	2.280
56			0.00088	0.0019	0.0042	0.0083	0.017	0.034	0.069	0.071	0.137	0.140	0.174	0.184	0.630	0.860	1.550	2.170
63			0.00083	0.0018	0.0039	0.0077	0.016	0.032	0.065	0.070	0.128	0.139	0.159	0.179	0.480	0.650	1.470	1.600
71			0.00080	0.0017	0.0039	0.0076	0.016	0.032	0.065	0.066	0.127	0.130	0.156	0.163	0.460	0.620		1.530
80									0.063	0.066	0.122	0.129	0.145	0.160	0.390	0.470		1.450
90										0.064		0.124		0.147		0.450		
100															0.380			

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$.

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

MECHANICAL RATING - S.F. 1.0

Units: hp

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (hp)																		
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135	
20	1800	90	33	52	82	131	206	341	477	743	1017		1470		2020					-	
	1200	60	22.6	36	55	88	139	229	335	500	707		995		1430					3550	
	900	45	17	27	41	66	104	173	253	377	533		750		1120					2680	
22.4	1800	80	28.8	46	73	108	170	269	416	643	931	1010	1310	1530	1790	2020					
	1200	54	19.3	30	49	72	114	181	280	432	626	723	885	1070	1230	1430					3170
	900	40	14.6	23.3	37	54	86	136	211	326	472	567	668	811	930	1120					2400
25	1800	72	27.7	44	65	106	158	262	401	612	837	957	1200	1420	1680	1800	2620				
	1200	48	18.5	29.5	44	71	106	176	269	411	568	667	811	957	1200	1280	1770				2720
	900	36	13.8	22.1	33	53	80	132	203	310	428	503	611	722	916	982	1320				2050
28	1800	64	23.3	37	59	87	130	206	334	530	749	837	1070	1280	1490	1690	2410				
	1200	43	15.6	25.2	39	58	87	138	225	356	503	595	721	876	1000	1200	1620				2440
	900	32	11.8	18.9	29.9	43	65	104	169	268	379	457	544	660	758	943	1220				1830
31.5	1800	57	21.5	33	51	84	132	218	320	476	685	788	969	1160	1400	1500	2140	2490			
	1200	38	14.3	22.2	34	56	88	146	215	319	460	536	651	780	976	1060	1430	1670	2180		2640
	900	29	10.7	16.6	25.7	42	66	110	162	241	347	404	491	588	736	800	1080	1260	1640		1990
35.5	1800	51	18.3	28.6	45	69	109	172	267	412	608	704	862	1040	1200	1400	1950	2290			
	1200	34	12.3	19.3	30	46	73	115	179	276	408	492	579	704	807	999	1310	1540	1950		2370
	900	25	9.2	14.4	23.1	35	55	87	135	208	307	370	437	530	608	779	992	1150	1470		1780
40	1800	45	17.5	27.2	40	68	101	167	257	392	551	647	789	932	1170	1250	1670	2030			
	1200	30	11.6	18.2	27.3	45	68	112	172	263	370	435	530	626	795	852	1120	1360	1740		2130
	900	23	8.7	13.6	20.6	34	51	84	130	198	278	327	399	472	599	642	844	1030	1310		1600
45	1800	40	14.8	23.3	36	55	83	132	215	339	488	580	703	853	978	1170	1540	1860			
	1200	27	9.9	15.5	24.6	37	56	88	144	227	328	395	472	573	657	835	1030	1240	1550		1900
	900	20	7.5	11.6	18.5	28.1	42	66	108	171	247	297	355	432	495	634	777	938	1160		1430
50	1800	36			32	54	83	135	199	293	424	520	622	760	933	1030	1320	1590			
	1200	24			22.1	36	55	90	133	196	285	349	418	510	626	694	885	1070	1390		1680
	900	18			16.6	27.2	41	68	100	147	214	263	314	384	472	523	670	804	1040		1270
56	1800	32			29.6	44	68	106	166	253	376	453	554	673	771	961	1220	1460			
	1200	21			19.8	29.6	45	71	111	170	252	304	371	451	518	663	818	979	1240		1510
	900	16			14.8	22.2	34	53	83	127	190	229	280	340	390	499	617	738	939		1140
63	1800	29			26.4	43	63	103	159	241	341	400	507	599	760	815	1080	1260			
	1200	19			17.7	29	42	69	107	161	228	269	340	402	510	547	724	845	1150		1340
	900	14			13.2	21.8	32	52	80	121	172	202	256	302	384	412	550	630	858		1000
71	1800	25			23.7	35	52	81	133	208	302	364	451	548	628	804	992	1150			
	1200	17			15.9	23.8	35	54	89	139	202	244	302	367	421	540	671	778			1200
	900	13			11.9	17.9	26.2	41	67	105	152	183	227	276	317	406	496	577			898
80	1800	23										277	321	400	487	533	663	858	1030		
	1200	15										185	215	268	327	357	445	577	697		1200
	900	11										139	162	201	246	269	335	429	523		831
90	1800	20											295		432		563		952		
	1200	13											197		289		377		630		
	900	10											148		218		284		469		
100	1800	18																	818		
	1200	12																	536		
	900	9																	402		

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 900 RPM, find the mechanical rating by the following method:

$$P_N = P_{900} \times \frac{n}{900}$$

Where P_N is the mechanical rating, P_{900} is the mechanical rating at 900 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

MECHANICAL RATING - S.F. 1.0

Units: kW

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (kW)																	
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1500	75	21.1	33	51	82	129	213	310	463	650		922		1292				3290	
	1000	50	14.1	22.4	34	55	86	143	209	311	441		620		919				2210	
	750	38	10.6	16.8	25.8	41	65	107	157	235	332		468		701				1670	
22.4	1500	67	18	28.8	46	67	106	168	260	401	581	650	821	982	1143	1293			2950	
	1000	45	12.1	19.3	30	45	71	112	174	269	391	462	552	670	769	919			1980	
	750	33	9.1	14.5	23.3	34	53	85	131	203	294	355	416	506	580	708			1500	
25	1500	60	17.2	27.5	41	66	99	163	250	382	527	612	752	888	1080	1151	1640		2520	3200
	1000	40	11.5	18.3	27.5	44	66	109	168	256	354	416	505	597	757	812	1100		1700	2150
	750	30	8.6	13.7	20.7	33	50	82	126	193	267	313	381	450	571	612	830		1280	1620
28	1500	54	14.5	23.4	37	54	81	129	208	330	467	535	669	813	932	1081	1500		2260	2860
	1000	36	9.7	15.7	24.8	36	54	86	140	222	314	378	450	546	626	768	1010		1520	1930
	750	27	7.3	11.8	18.6	27.4	41	65	105	167	236	285	339	412	472	603	760		1150	1450
31.5	1500	48	13.4	20.7	31	52	82	136	200	297	427	497	604	724	898	963	1340	1560	2030	2450
	1000	32	8.9	13.8	21.3	35	55	91	134	199	287	334	406	486	608	661	900	1050	1370	1650
	750	24	6.7	10.4	16	26.6	41	69	101	150	216	252	306	366	458	499	680	790	1030	1240
35.5	1500	42	11.5	17.9	28.6	43	68	107	167	257	379	450	538	653	749	899	1220	1430	1820	2200
	1000	28	7.7	12	19.2	29	45	72	112	172	254	306	361	439	503	639	820	960	1220	1480
	750	21	5.8	9	14.4	21.8	34	54	84	130	191	231	272	330	379	485	620	720	920	1110
40	1500	38	10.9	16.9	25.5	42	63	104	160	244	343	403	492	581	738	791	1050	1270	1610	1970
	1000	25	7.3	11.3	17.1	28.5	42	70	107	164	230	271	330	390	495	531	700	850	1080	1330
	750	19	5.5	8.5	12.8	21.4	31	52	81	123	173	204	249	294	373	400	530	640	810	1000
45	1500	33	9.3	14.5	22.9	34	52	82	134	211	304	366	438	532	610	751	960	1160	1440	1770
	1000	22	6.2	9.7	15.4	23.3	34	55	89	142	204	246	294	357	410	524	640	780	970	1190
	750	17	4.7	7.3	11.5	17.5	26.2	41	67	106	153	185	221	269	308	395	480	590	730	890
50	1500	30			20.5	33	51	84	124	182	264	324	388	474	581	644	830	990	1290	1570
	1000	20			13.8	22.5	34	56	83	122	177	217	260	318	390	432	550	670	860	1050
	750	15			10.3	16.9	26	42	62	92	133	163	196	239	294	326	420	500	650	790
56	1500	27			18.5	27.6	42	66	103	158	234	282	345	419	481	615	760	910	1150	1400
	1000	18			12.4	18.5	28.5	44	69	105	157	189	231	281	322	413	510	610	770	940
	750	13			9.3	13.9	21.4	33	52	79	118	142	174	212	243	311	380	460	580	710
63	1500	24			16.5	27.1	39	64	99	150	212	249	316	373	473	508	680	790	1070	1250
	1000	16			11	18.1	26.5	43	66	100	142	167	212	250	317	340	450	530	710	840
	750	12			8.3	13.6	19.9	32	50	75	107	126	159	188	239	256	340	390	540	630
71	1500	21			14.8	22.2	32	50	83	130	188	226	281	341	391	501	620	720		1120
	1000	14			9.9	14.8	21.8	34	55	87	126	152	188	229	262	336	420	480		750
	750	11			7.4	11.2	16.4	25.6	41	65	95	114	141	172	197	253	310	360		560
80	1500	19									172	200	249	304	332	413	530	640		1040
	1000	13									115	134	167	203	222	277	360	430		690
	750	9									87	101	125	153	167	208	271	320		520
90	1500	17										183		269		351		590		
	1000	11										123		180		235		390		
	750	8										92		135		177		300		
100	1500	15																510		
	1000	10																340		
	750	7.5																257		

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

TORQUE RATING - S.F. 1.0

Units: 1000 in.-lbs.

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)																	
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1800	90	23.6	36	58	92	142	227	336	522	733		1077		1414				-	
	1200	60	23.7	37	59	93	143	229	354	527	765		1088		1508				3672	
	900	45	23.7	37	59	93	144	230	356	530	769		1094		1574				3695	
22.4	1800	80	23.2	36	57	86	133	209	328	499	730	813	1029	1226	1444	1603			-	
	1200	54	23.3	37	57	86	134	211	331	503	737	867	1039	1287	1485	1710			3676	
	900	40	23.6	37	57	87	135	212	333	506	742	908	1045	1295	1494	1791			3702	
25	1800	72	24.0	38	59	92	143	229	352	524	755	831	1083	1231	1456	1633	2399		-	-
	1200	48	24.0	38	59	93	144	230	355	529	768	869	1093	1243	1554	1742	2424		3655	4414
	900	36	23.9	38	59	93	144	231	357	531	772	874	1099	1250	1581	1783	2424		3673	4443
28	1800	64	23.3	37	57	86	134	210	330	501	734	837	1074	1263	1478	1652	2409		-	-
	1200	43	23.5	37	57	87	135	211	332	505	741	893	1044	1293	1492	1762	2429		3668	4422
	900	32	23.6	37	57	87	135	212	334	507	745	915	1049	1300	1500	1845	2436		3681	4461
31.5	1800	57	23.7	37	59	93	143	229	354	527	765	856	1088	1238	1514	1684	2404	2847	-	-
	1200	38	23.7	37	59	93	144	231	357	531	771	873	1098	1249	1579	1780	2411	2870	3559	4396
	900	29	23.6	37	59	94	145	232	358	534	775	877	1103	1255	1587	1790	2434	2878	3581	4434
35.5	1800	51	23.4	37	57	87	134	211	331	503	738	872	1040	1288	1486	1718	2398	2862	-	-
	1200	34	23.5	37	57	87	135	212	333	507	743	913	1048	1298	1499	1832	2414	2887	3569	4422
	900	25	23.5	37	58	87	136	213	335	509	747	918	1053	1305	1506	1905	2431	2879	3585	4430
40	1800	45	24.0	38	59	93	144	230	355	529	769	870	1093	1244	1560	1750	2394	2856	-	-
	1200	30	23.9	38	59	93	145	232	358	533	774	876	1102	1254	1585	1788	2413	2874	3611	4304
	900	23	23.8	38	59	93	145	233	359	535	777	880	1107	1260	1593	1797	2413	2893	3629	4331
45	1800	40	23.5	37	57	87	135	212	333	505	741	898	1044	1293	1493	1770	2408	2855	-	-
	1200	27	23.5	37	57	87	136	213	334	509	746	917	1052	1303	1504	1888	2419	2865	3607	4302
	900	20	23.7	37	57	88	136	214	336	511	749	921	1057	1309	1511	1911	2429	2876	3607	4323
50	1800	36			59	93	144	231	357	532	772	873	1098	1249	1580	1780	2380	2850	-	-
	1200	24			59	94	145	232	359	535	777	880	1106	1259	1592	1794	2380	2874	3560	4338
	900	18			60	94	145	233	360	537	781	883	1111	1264	1599	1803	2404	2874	3560	4361
56	1800	32			57	87	135	212	334	508	745	915	1049	1299	1500	1846	2391	2855	-	-
	1200	21			57	87	136	214	336	511	749	921	1056	1308	1510	1910	2405	2868	3564	4355
	900	16			57	88	136	214	337	512	752	924	1060	1314	1517	1919	2418	2881	3577	4368
63	1800	29			59	93	145	232	358	534	775	877	1102	1255	1586	1789	2434	2826	-	-
	1200	19			59	94	145	233	360	536	780	883	1109	1263	1597	1802	2434	2841	3895	4244
	900	14			59	94	146	234	361	538	782	886	1113	1268	1604	1809	2464	2826	3865	4244
71	1800	25			57	87	136	213	335	509	747	918	1053	1304	1505	1902	2431	2826	-	-
	1200	17			58	88	136	214	336	512	751	924	1059	1312	1515	1916	2464	2859		4275
	900	13			58	88	136	214	337	514	754	927	1063	1318	1521	1924	2431	2826		4244
80	1800	23									748	881	1055	1260	1510	1796	2296	2893	-	-
	1200	15									752	885	1061	1267	1519	1807	2314	2931		4660
	900	11									754	888	1065	1272	1524	1814	2296	2931		4641
90	1800	20										882		1262		1801		2917		
	1200	13										886		1269		1811		2896		
	900	10										889		1274		1818		2876		
100	1800	18																2737		
	1200	12																2692		
	900	9																2692		

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

TORQUE RATING - S.F. 1.0

Units: kNm

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)																	
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1500	75	2.7	4.2	6.6	10.4	16.1	25.8	40	59	85		122		164				412	
	1000	50	2.7	4.2	6.6	10.5	16.2	26.0	40	60	87		123		175				415	
	750	38	2.7	4.2	6.7	10.5	16.3	26.1	40	60	87		124		179				418	
22.4	1500	67	2.6	4.1	6.4	9.7	15.1	23.7	37	57	83	95	117	143	167	186			414	
	1000	45	2.7	4.1	6.5	9.8	15.2	23.9	38	57	84	101	118	146	168	199			416	
	750	33	2.7	4.1	6.5	9.9	15.3	24.0	38	57	84	103	119	147	169	204			421	
25	1500	60	2.7	4.3	6.6	10.5	16.2	25.9	40	59	86	97	123	140	169	190	272		410	497
	1000	40	2.7	4.3	6.7	10.5	16.3	26.1	40	60	87	99	124	141	178	201	274		415	501
	750	30	2.7	4.2	6.7	10.5	16.3	26.2	40	60	88	99	125	142	179	202	276		417	503
28	1500	54	2.6	4.1	6.4	9.8	15.1	23.8	37	57	83	97	117	145	168	192	272		412	497
	1000	36	2.6	4.2	6.5	9.8	15.2	24.0	38	57	84	103	118	147	169	205	275		415	503
	750	27	2.7	4.2	6.5	9.9	15.3	24.0	38	57	84	104	119	147	170	215	276		419	504
31.5	1500	48	2.7	4.2	6.7	10.5	16.2	26.0	40	60	87	98	123	140	176	196	273	324	401	494
	1000	32	2.7	4.2	6.7	10.6	16.3	26.2	40	60	87	99	124	142	179	202	275	327	406	499
	750	24	2.7	4.2	6.7	10.6	16.4	26.3	41	60	88	99	125	142	180	203	277	328	407	500
35.5	1500	42	2.7	4.1	6.5	9.8	15.2	23.9	38	57	84	101	118	146	169	200	272	324	402	497
	1000	28	2.7	4.2	6.5	9.9	15.3	24.0	38	57	84	104	119	147	170	213	274	327	404	501
	750	21	2.7	4.2	6.5	9.9	15.3	24.1	38	58	85	104	119	148	171	216	276	327	407	501
40	1500	38	2.7	4.2	6.7	10.5	16.3	26.1	40	60	87	99	124	141	178	201	273	323	404	482
	1000	25	2.7	4.3	6.7	10.6	16.4	26.2	41	60	88	99	125	142	180	203	273	325	407	488
	750	19	2.7	4.3	6.7	10.6	16.4	26.3	41	61	88	100	125	143	180	204	275	326	407	489
45	1500	33	2.7	4.2	6.5	9.8	15.3	24.0	38	57	84	103	118	147	169	206	273	323	405	485
	1000	22	2.7	4.2	6.5	9.9	15.3	24.1	38	58	85	104	119	148	170	216	273	326	409	489
	750	17	2.7	4.2	6.5	9.9	15.4	24.2	38	58	85	104	120	148	171	217	273	329	410	487
50	1500	30			6.7	10.5	16.3	26.2	40	60	88	99	125	142	179	202	270	322	399	489
	1000	20			6.7	10.6	16.4	26.3	41	61	88	100	125	143	180	203	269	326	399	490
	750	15			6.7	10.6	16.4	26.4	41	61	88	100	126	143	181	204	274	325	402	492
56	1500	27			6.5	9.9	15.3	24.1	38	58	84	104	119	147	170	215	271	323	398	488
	1000	18			6.5	9.9	15.4	24.2	38	58	85	104	120	148	171	216	273	325	400	491
	750	13			6.5	9.9	15.4	24.2	38	58	85	105	120	149	172	217	271	327	402	495
63	1500	24			6.7	10.6	16.4	26.3	41	60	88	99	125	142	180	203	277	322	438	479
	1000	16			6.7	10.6	16.5	26.4	41	61	88	100	126	143	181	204	275	324	436	483
	750	12			6.8	10.6	16.5	26.5	41	61	89	100	126	144	182	205	277	318	442	483
71	1500	21			6.5	9.9	15.3	24.1	38	58	85	104	119	148	171	216	276	321		481
	1000	14			6.5	9.9	15.4	24.2	38	58	85	105	120	149	172	217	281	321		483
	750	11			6.5	10.0	15.5	24.3	38	58	85	105	120	149	172	218	276	321		481
80	1500	19									85	100	120	143	171	204	258	326		528
	1000	13									85	100	120	144	172	205	263	329		525
	750	9									85	101	121	144	173	205	264	326		528
90	1500	17										100		143		204		329		
	1000	11										100		144		205		326		
	750	8										101		144		206		334		
100	1500	15																310		
	1000	10																310		
	750	7.5															313			

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - HORIZONTAL

Units: hp

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)																		
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135	
20 - 28	1800	-	30	44	54	69	94	115	169	222	311	340	397	441	510	576	-				
		1	50	72	89	114	155	190	279	366	514	560	655	727	841	950	912				
		2	75	109	135	172	235	287	422	554	778	849	992	1101	1275	1440	1408				
	1200	-	28	41	51	66	91	114	167	224	314	340	404	445	515	579	536		738	738	
		1	46	68	84	108	150	188	276	369	519	561	667	734	850	956	818		1073	1073	
		2	70	104	127	164	227	285	419	559	786	850	1010	1112	1287	1448	1153		1475	1475	
900	-	26	39	48	62	86	109	161	216	305	329	394	432	500	561	483		684	684		
	1	43	64	79	102	142	180	265	357	503	542	649	713	825	925	697		925	925		
	2	65	97	119	154	215	273	402	541	762	822	984	1080	1249	1402	952		1220	1220		
31.5 - 45	1800	-	27	39	48	63	86	108	158	209	294	319	379	418	487	550	-	-			
		1	44	64	80	104	143	177	260	345	485	527	625	690	804	907	912	912			
		2	67	97	121	157	216	269	395	523	735	798	947	1046	1219	1374	1408	1408			
	1200	-	24	36	44	58	81	102	151	202	286	309	371	408	473	531	536	536	738	738	
		1	40	59	73	96	133	169	249	334	472	509	612	672	781	876	818	818	1073	1073	
		2	61	90	110	145	202	256	377	506	715	772	928	1019	1183	1327	1153	1153	1475	1475	
	900	-	22	33	40	54	75	96	142	192	273	294	355	389	451	505	483	483	684	684	
		1	37	54	67	89	124	159	234	317	450	485	586	642	744	833	697	697	925	925	
		2	55	82	101	134	188	241	355	480	682	734	888	973	1128	1263	952	952	1220	1220	
50 - 71	1800	-			41	56	77	95	141	187	266	287	351	387	451	507	523	523			
		1			68	92	127	158	233	309	438	474	579	638	745	837	858	858			
		2			103	140	192	239	352	468	664	718	878	967	1128	1268	1247	1247			
	1200	-			37	50	70	88	131	176	250	270	334	366	426	477	429	429	617	617	
		1			61	83	115	146	216	290	413	445	552	605	703	787	644	644	885	885	
		2			92	126	175	221	327	439	626	675	836	916	1064	1192	925	925	1220	1220	
900	-			33	46	64	82	121	164	235	253	315	345	400	447	362	362	523	523		
	1			55	76	106	135	200	270	387	417	520	569	660	737	536	536	738	738		
	2			83	115	160	204	303	409	587	631	788	862	1000	1117	738	738	979	979		
80 - 100	1800	-										270	287	355	380	447	486	523	523		
		1										446	473	585	627	737	801	858	858		
		2										676	717	887	950	1117	1214	1247	1247		
	1200	-											255	270	338	361	421	456	429	429	617
		1											421	444	557	594	695	752	644	644	885
		2											638	673	845	901	1053	1140	925	925	1220
900	-											239	252	318	339	396	428	362	362	523	
	1											395	416	525	559	653	705	536	536	738	
	2											598	630	796	847	989	1069	738	738	979	

- NOTES:** 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

Adjusted Thermal HP = Rated Thermal HP x Ta

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - HORIZONTAL

Units: kW

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)																	
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20 - 28	1500	-	22	32	40	51	70	86	127	168	235	256	301	333	386	435	400		560	560
		1	36	53	65	83	115	142	209	277	388	422	497	550	636	718	660		860	860
		2	55	80	99	127	174	215	316	419	589	639	754	833	964	1088	970		1250	1250
	1000	-	20	30	37	47	66	83	122	164	231	249	297	327	378	424	380		530	530
		1	33	49	60	78	108	137	201	270	380	410	490	539	623	700	550		730	730
		2	50	74	91	118	164	207	305	409	576	622	743	816	945	1061	760		980	980
750	-	18	28	34	44	61	78	116	156	221	237	285	313	362	406	330		460	460	
	1	30	45	55	72	101	129	191	258	364	392	471	516	597	669	460		620	620	
	2	46	69	84	110	153	196	289	391	551	594	714	782	905	1014	620		810	810	
31.5 - 45	1500	-	19	28	35	45	63	79	116	155	218	236	282	310	361	406	400	400	560	560
		1	32	46	57	75	104	130	191	255	360	389	465	512	596	670	660	660	860	860
		2	48	70	87	114	157	198	290	387	545	590	705	776	903	1015	970	970	1250	1250
	1000	-	17	25	31	41	58	74	109	146	207	224	270	296	343	384	380	380	530	530
		1	28	42	51	68	95	121	179	242	342	369	445	488	566	634	550	550	730	730
		2	43	64	78	103	144	184	271	366	519	559	675	740	858	961	760	760	980	980
	750	-	15	23	28	38	53	68	101	137	196	210	255	279	324	362	330	330	460	460
		1	25	38	47	62	88	113	167	227	323	347	421	461	534	597	460	460	620	620
		2	39	58	71	94	133	171	253	343	489	526	638	699	809	905	620	620	810	810
50 - 71	1500	-			29	40	55	69	102	136	194	209	258	283	330	370	360	360	520	520
		1			49	66	91	114	169	225	320	346	425	467	544	610	560	560	770	770
	1000	-			26	36	49	63	93	126	180	193	241	264	306	342	290	290	410	410
		1			42	59	82	103	154	207	296	319	397	435	504	564	420	420	590	590
	750	-			23	32	45	57	85	116	167	179	225	246	284	318	240	240	350	350
		1			38	53	74	95	141	191	275	296	370	405	469	524	350	350	480	480
80 - 100	1500	-											198	209	260	278	326	354	360	520
		1											326	345	429	459	538	584	560	770
		2											494	523	651	695	815	884	810	1050
	1000	-											183	193	243	259	302	327	290	410
		1											302	318	401	427	499	540	420	590
	750	-											458	482	608	647	756	818	600	790
		1											170	179	227	241	281	304	240	350
		1											280	295	374	398	464	501	350	480
		2											425	447	567	603	703	760	480	640

- NOTES:** 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:
 Adjusted Thermal HP = Rated Thermal HP x Ta

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

RATING TABLES

TRIPLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (hp)													
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
20 - 28	1800	29	41	51	64	87	104	154	200	281	309	355	398	461	518
	1200	27	40	49	63	87	108	159	212	298	324	382	422	488	551
	900	25	38	47	60	84	105	156	209	294	318	379	417	483	543
31.5 - 45	1800	26	37	46	60	82	101	148	195	274	299	351	390	456	509
	1200	24	35	43	56	79	99	146	195	275	298	356	392	456	513
	900	22	32	40	53	74	94	139	187	266	287	346	379	440	493
50 - 71	1800			40	54	74	91	135	178	252	274	332	368	430	485
	1200			36	49	68	86	127	170	243	263	324	356	415	465
	900			33	45	63	80	119	160	230	248	309	338	393	439
80 - 100	1800									257	274	336	361	427	466
	1200									248	262	328	350	411	445
	900									235	247	312	332	389	421

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (kW)													
		8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
20 - 28	1500	21	30	38	48	66	80	118	155	219	239	278	309	358	404
	1000	20	29	36	46	64	80	118	157	221	240	285	314	363	408
	750	18	27	33	43	60	76	113	152	215	231	277	305	352	395
31.5 - 45	1500	19	27	34	44	61	75	111	147	207	225	266	295	343	387
	1000	17	25	31	40	56	72	106	142	201	217	261	287	333	374
	750	15	23	28	37	52	67	99	135	192	206	250	274	317	355
50 - 71	1500			29	39	54	67	99	131	187	202	247	272	318	357
	1000			25	35	49	61	91	123	176	189	235	258	299	335
	750			23	32	44	56	84	114	164	176	221	242	280	313
80 - 100	1500									190	202	250	268	315	343
	1000									179	187	237	253	296	321
	750									167	176	223	238	277	300

- NOTES:** 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

$$\text{Adjusted Thermal HP} = \text{Rated Thermal HP} \times \text{Ta}$$

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

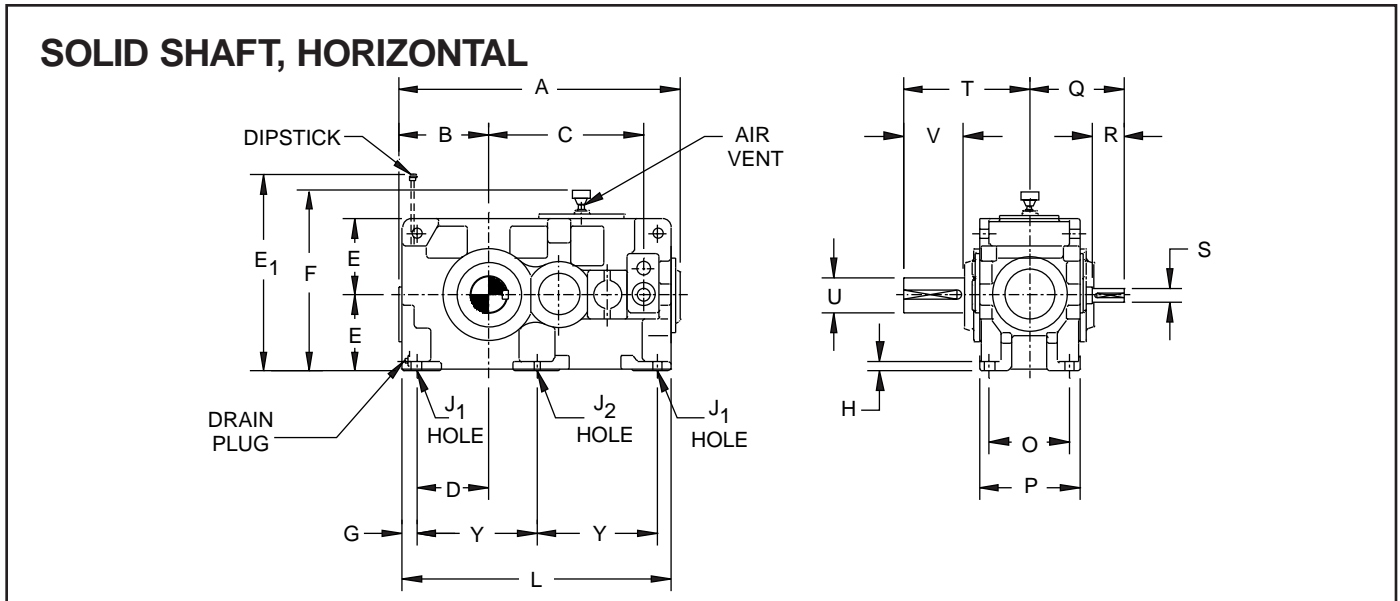
Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

DIMENSIONS

TRIPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	Y	2Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	10.118	5.51	5.51	15.31	14.53	0.98	0.87	0.59	-	20.08	5.91	7.28	7.48	2.36	0.875	9.67	2.250	4.35	-	18.11	220	1.6
8025	23.78	7.28	12.047	5.91	6.30	17.20	16.10	1.38	0.98	0.75	-	23.03	6.69	8.27	8.07	2.40	1.000	11.22	2.625	5.51	-	20.47	310	2.1
8035	25.35	8.07	13.504	6.50	7.09	19.33	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	9.47	3.13	1.125	11.83	3.000	5.53	-	21.65	430	3.2
8045	29.17	9.06	15.669	7.28	7.87	21.57	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	10.04	3.11	1.250	13.80	3.500	6.75	-	24.41	610	4.5
8055	33.78	10.63	18.386	8.86	8.86	24.06	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	12.01	4.37	1.500	16.16	4.125	8.25	14.57	29.13	910	6.9
8065	38.35	12.01	21.260	9.84	10.43	27.87	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	13.01	4.39	1.750	17.32	4.875	8.27	16.54	33.07	1390	11.1
8075	44.17	13.39	24.803	10.83	11.81	31.26	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	13.98	4.37	2.000	20.08	5.625	9.88	18.90	37.80	1990	15.9
8085	51.42	14.96	28.543	12.40	13.19	34.96	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	15.94	5.51	2.375	22.83	6.375	11.73	22.44	44.88	2850	22.7
8090	58.27	16.14	32.953	13.58	14.76	39.33	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	18.50	5.51	2.500	25.59	7.000	11.81	25.98	51.97	4630	32
8095	60.63	17.32	34.134	14.76	15.75	41.50	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	18.50	5.51	2.500	27.56	7.375	13.78	27.17	54.33	5190	41
8100	65.12	17.72	37.402	14.76	16.73	44.21	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	20.28	5.51	2.875	29.13	7.750	13.78	28.94	57.87	6130	48
8105	67.83	19.09	38.740	16.14	17.72	46.38	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	20.28	5.51	2.875	29.13	8.375	13.78	30.31	60.63	7370	59
8110	72.99	19.69	41.339	16.54	18.70	48.54	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	22.64	6.69	3.125	30.31	8.375	13.78	32.68	65.35	8850	69
8115	76.89	21.65	43.268	18.50	19.69	50.63	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	22.64	6.69	3.125	32.68	9.375	16.14	34.65	69.29	9840	86

METRIC DIMENSIONS

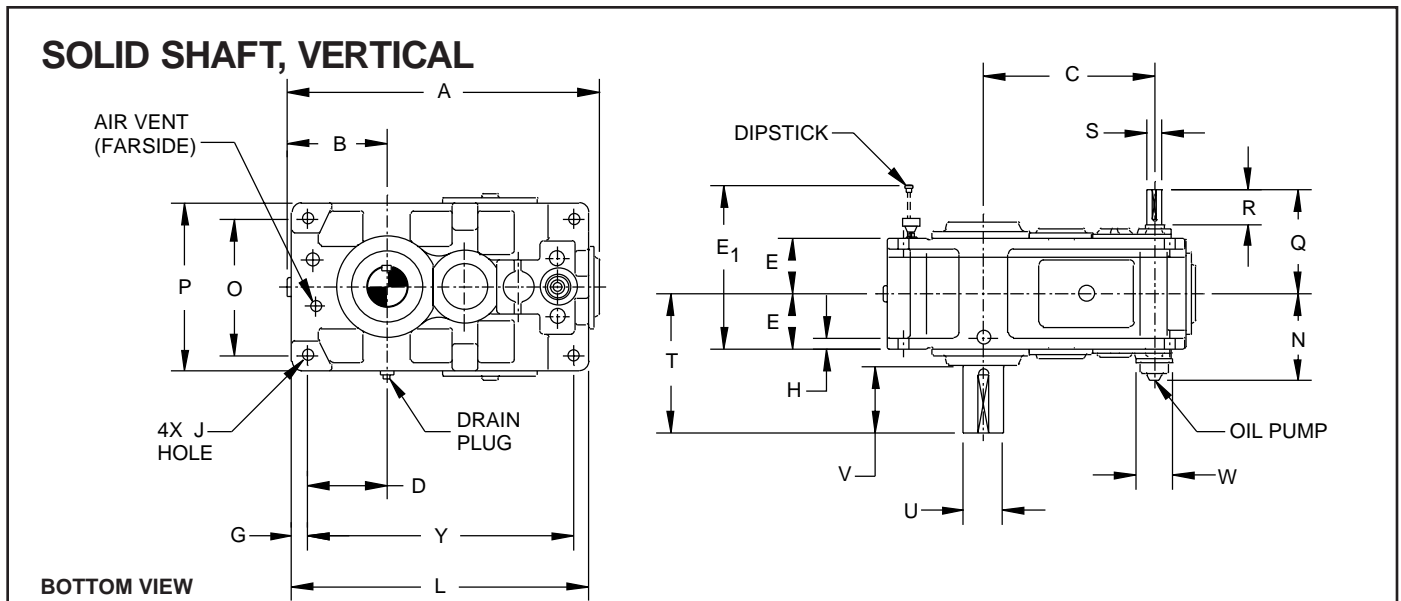
Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	Y	2Y	WT. kgf.	OIL QTY. LTR.
8015	505	165	257	140	140	389	369	25	22	15	-	510	150	185	190	60	25	245	58	110	-	460	100	6
8025	604	185	306	150	160	437	409	35	25	19	-	585	170	210	204	60	28	285	70	140	-	520	140	8
8035	644	205	343	165	180	491	449	35	28	24	-	615	190	235	241	80	30	300	78	140	-	550	195	12
8045	741	230	398	185	200	548	489	40	30	28	-	700	215	270	256	80	35	349	95	170	-	620	275	17
8055	858	270	467	225	225	611	539	40	32	28	24	820	255	310	304	110	40	411	110	210	370	740	410	26
8065	974	305	540	250	265	708	619	50	35	35	24	935	280	350	329	110	50	440	125	210	420	840	630	42
8075	1122	340	630	275	300	794	689	60	40	42	28	1075	320	400	354	110	55	509	145	250	480	960	900	60
8085	1306	380	725	315	335	888	759	60	45	42	35	1260	360	440	405	140	65	582	165	300	570	1140	1290	86
8090	1480	410	837	345	375	999	839	60	50	42	42	1440	480	570	470	140	65	650	180	300	660	1320	2100	120
8095	1540	440	867	375	400	1054	889	60	50	42	42	1500	480	570	470	140	65	700	190	350	690	1380	2350	155
8100	1654	450	950	375	425	1123	939	70	55	48	48	1610	560	650	515	140	75	740	200	350	735	1470	2780	180
8105	1723	485	984	410	450	1178	989	70	55	48	48	1680	560	650	515	140	75	740	220	350	770	1540	3340	225
8110	1854	500	1050	420	475	1233	1039	75	60	56	56	1810	610	710	575	170	80	770	220	350	830	1660	4010	260
8115	1953	550	1099	470	500	1286	1089	75	60	56	56	1910	610	710	575	170	80	830	240	410	880	1760	4460	325

DIMENSIONS

TRIPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	10.118	5.51	3.64	12.99	0.79	0.87	0.59	19.69	7.20	9.45	11.02	7.48	2.36	0.875	9.67	2.250	4.35	3.94	18.11	190	1.1
8025	23.78	7.28	12.047	5.91	4.13	14.57	1.18	0.98	0.75	22.64	7.68	10.24	12.60	8.07	2.40	1.000	11.22	2.625	5.51	3.94	20.47	300	1.6
8035	25.35	8.07	13.504	6.50	4.63	16.14	1.38	1.10	0.94	24.21	8.19	11.42	14.17	9.47	3.13	1.125	11.83	3.000	5.53	3.94	21.65	410	2.4
8045	29.17	9.06	15.669	7.28	5.31	18.50	1.57	1.18	1.10	27.56	8.86	12.60	15.75	10.04	3.11	1.250	13.80	3.500	6.75	3.94	24.41	610	3.4
8055	33.78	10.63	18.386	8.86	6.10	21.26	1.57	1.26	1.10	32.28	9.65	14.57	17.72	12.07	4.37	1.500	16.16	4.125	8.25	3.94	29.13	820	4.8
8065	38.35	12.01	21.260	9.84	6.89	23.82	1.97	1.38	1.38	36.81	10.83	16.93	20.87	13.01	4.39	1.750	17.32	4.875	8.27	4.61	33.07	1280	7.4
8075	44.17	13.39	24.803	10.83	7.87	26.97	2.36	1.57	1.65	42.32	11.81	18.90	23.62	13.98	4.37	2.000	20.08	5.625	9.88	4.61	37.80	1900	11.6
8085	51.42	14.96	28.543	12.40	8.66	29.53	2.36	1.77	1.65	49.61	12.60	21.65	26.38	15.94	5.51	2.375	22.83	6.375	11.73	4.61	44.88	2710	16.1
8090	58.27	16.14	32.953	13.58	11.22	37.95	2.36	1.97	1.65	56.69	*	24.80	29.53	18.50	5.51	2.500	25.59	7.000	11.81	*	51.97	4680	23.8
8095	60.63	17.32	34.134	14.76	11.22	37.95	2.36	1.97	1.65	59.06	*	26.77	31.50	18.50	5.51	2.500	27.56	7.375	13.78	*	54.33	5250	32
8100	65.12	17.72	37.402	14.76	12.80	43.03	2.76	2.17	1.89	63.39	*	27.95	33.46	20.28	5.51	2.875	29.13	7.750	13.78	*	57.87	6330	37
8105	67.83	19.09	38.740	16.14	12.80	43.03	2.76	2.17	1.89	66.14	*	29.92	35.43	20.28	5.51	2.875	29.13	8.375	13.78	*	60.63	7390	46
8110	72.99	19.69	41.339	16.54	13.98	46.65	2.95	2.36	2.20	71.26	*	31.50	37.40	22.64	6.69	3.125	30.31	8.375	13.78	*	65.35	8820	53
8115	76.89	21.65	43.268	18.50	13.98	46.65	2.95	2.36	2.20	75.20	*	33.46	39.37	22.64	6.69	3.125	32.68	9.375	16.14	*	69.29	9970	67

METRIC DIMENSIONS

Units: mm

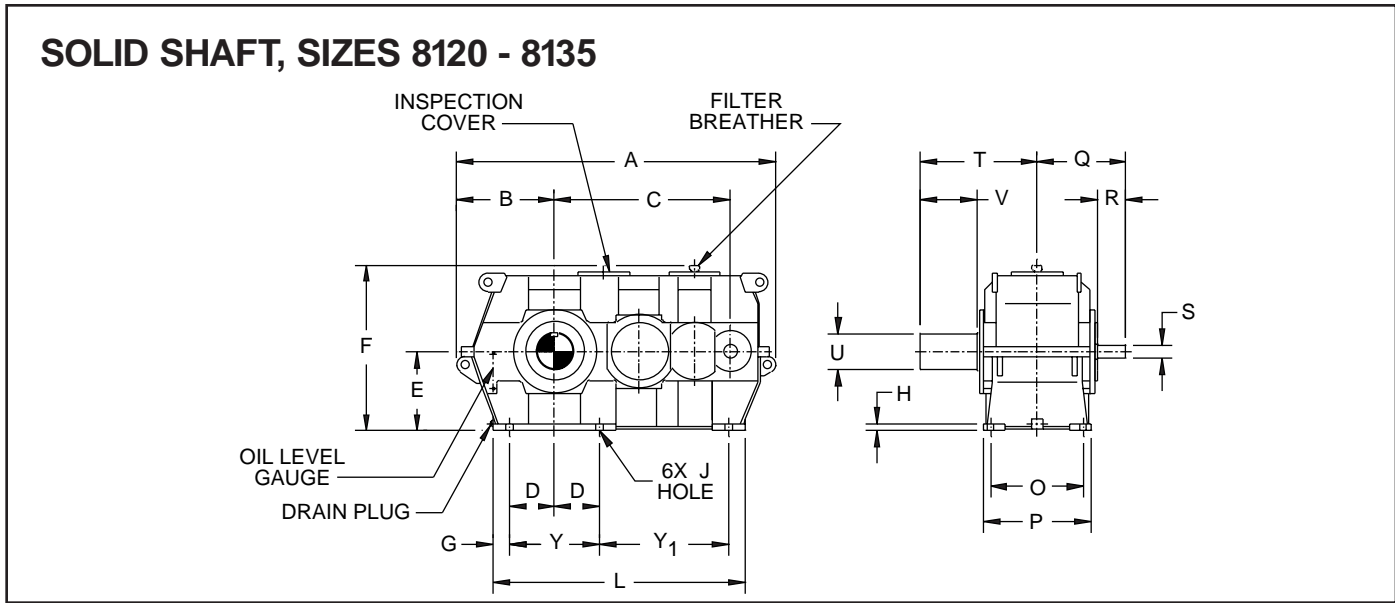
MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	Y	WT. kgf.	OIL QTY. LTR.
8015	505	165	257	140	92.5	330	20	22	15	500	183	240	280	190	60	25	245	58	110	100	460	85	4
8025	604	185	306	150	105	370	30	25	19	575	195	260	320	204	60	28	285	70	140	100	520	135	6
8035	644	205	343	165	117.5	410	35	28	24	615	208	290	360	241	80	30	300	78	140	100	550	185	9
8045	741	230	398	185	135	470	40	30	28	700	225	320	400	256	80	35	349	95	170	100	620	275	13
8055	858	270	467	225	155	540	40	32	28	820	245	370	450	304	110	40	411	110	210	100	740	370	18
8065	974	305	540	250	175	605	50	35	35	935	275	430	530	329	110	50	440	125	210	117	840	580	28
8075	1122	340	630	275	200	685	60	40	42	1075	300	480	600	354	110	55	509	145	250	117	960	860	44
8085	1306	380	725	315	220	750	60	45	42	1260	320	550	670	405	140	65	582	165	300	117	1140	1230	61
8090	1480	410	837	345	285	964	60	50	42	1440	*	630	750	470	140	65	650	180	300	*	1320	2120	90
8095	1540	440	867	375	285	964	60	50	42	1500	*	680	800	470	140	65	700	190	350	*	1380	2380	120
8100	1654	450	950	375	325	1093	70	55	48	1610	*	710	850	515	140	75	740	200	350	*	1470	2870	140
8105	1723	485	984	410	325	1093	70	55	48	1680	*	760	900	515	140	75	740	220	350	*	1540	3350	175
8110	1854	500	1050	420	355	1185	75	60	56	1810	*	800	950	575	170	80	770	220	350	*	1660	4000	200
8115	1953	550	1099	470	355	1185	75	60	56	1910	*	850	1000	575	170	80	830	240	410	*	1760	4520	255

*This unit is equipped with a motor driven pump.

DIMENSIONS

TRIPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	F	G	H	J	L	O	P	Q	R	S	T	U	V	Y	Y ₁	WT. lbf.	OIL QTY. GAL.
8120	92.13	28.35	50.787	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	25.59	8.27	3.875	34.06	10.000	16.14	25.98	37.40	13300	103
8125	92.13	28.35	50.787	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	25.59	8.27	3.875	36.42	11.000	18.50	25.98	37.40	13300	103
8130	109.45	31.50	61.024	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	31.10	9.84	5.000	40.35	11.750	18.50	25.98	48.43	21700	148
8135	109.45	31.50	61.024	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	31.10	9.84	5.000	40.35	12.500	18.50	25.98	48.43	21700	148

METRIC DIMENSIONS

Units: mm

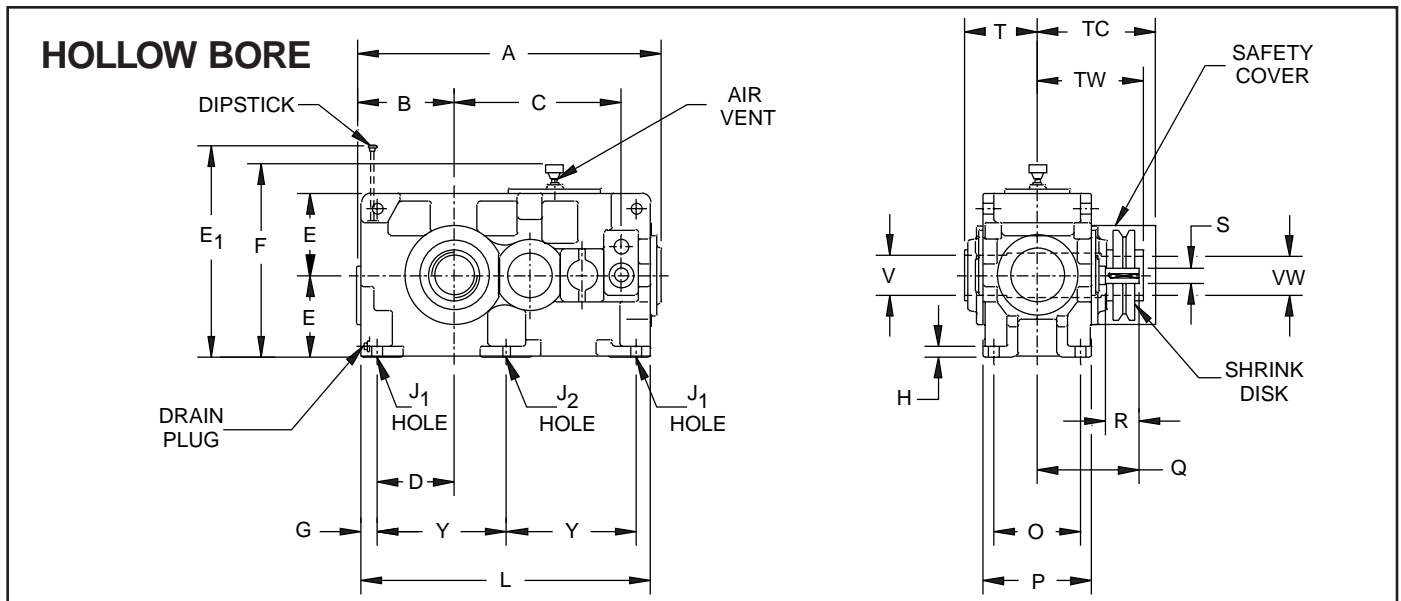
MODEL	A	B	C	D	E	F	G	H	J	L	O	P	Q	R	S	T	U	V	Y	Y ₁	WT. kgf.	OIL QTY. LTR.
8120	2340	720	1290	330	580	1200	120	50	48	1850	680	790	650	210	100	865	260	410	660	950	6000	390
8125	2340	720	1290	330	580	1200	120	50	48	1850	680	790	650	210	100	925	280	470	660	950	6000	390
8130	2780	800	1550	330	630	1300	140	60	56	2170	850	980	790	250	130	1025	300	470	660	1230	9800	560
8135	2780	800	1550	330	630	1300	140	60	56	2170	850	980	790	250	130	1025	320	470	660	1230	9800	560

NOTE: Housings in fabricated steel.

DIMENSIONS

TRIPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

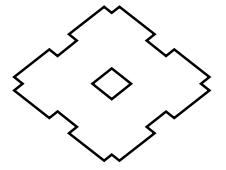
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	Y	2Y	WT. lbf.	OIL QTY. GAL.
8015	19.88	6.50	10.118	5.51	5.51	15.31	14.53	0.98	0.87	0.59	-	20.08	5.91	7.28	7.48	2.36	0.875	5.31	8.19	7.60	2.500	2.375	-	18.11	220	1.6
8025	23.78	7.28	12.047	5.91	6.30	17.20	16.10	1.38	0.98	0.75	-	23.03	6.69	8.27	8.07	2.40	1.000	5.71	9.06	8.39	2.875	2.750	-	20.47	310	2.1
8035	25.35	8.07	13.504	6.50	7.09	19.33	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	9.47	3.13	1.125	6.30	9.96	9.17	3.250	3.125	-	21.65	430	3.2
8045	29.17	9.06	15.669	7.28	7.87	21.57	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	10.04	3.11	1.250	7.09	11.22	10.55	3.750	3.625	-	24.41	610	4.5
8055	33.78	10.63	18.386	8.86	8.86	24.06	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	12.01	4.37	1.500	7.87	12.60	11.93	4.375	4.250	14.57	29.13	910	6.9
8065	38.35	12.01	21.260	9.84	10.43	27.87	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	13.01	4.39	1.750	9.06	14.37	13.90	5.125	5.000	16.54	33.07	1390	11.1
8075	44.17	13.39	24.803	10.83	11.81	31.26	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	13.98	4.37	2.000	10.24	15.94	15.12	6.000	5.875	18.90	37.80	1990	15.9
8085	51.42	14.96	28.543	12.40	13.19	34.96	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	15.94	5.51	2.375	11.22	17.72	16.89	6.875	6.750	22.44	44.88	2850	22.7
8090	58.27	16.14	32.953	13.58	14.76	37.76	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	18.50	5.51	2.500	13.78	20.28	19.45	7.500	7.375	25.98	51.97	4630	32
8095	60.63	17.32	34.134	14.76	15.75	39.92	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	18.50	5.51	2.500	13.78	20.59	20.04	8.000	7.875	27.17	54.33	5190	41
8100	65.12	17.72	37.402	14.76	16.73	42.09	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	20.28	5.51	2.875	15.35	22.24	21.42	8.375	8.250	28.94	57.87	6130	48
8105	67.83	19.09	38.740	16.14	17.72	44.25	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	20.28	5.51	2.875	15.35	22.76	22.01	8.875	8.625	30.31	60.63	7370	59
8110	72.99	19.69	41.339	16.54	18.70	46.77	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	22.64	6.69	3.125	16.54	24.61	24.02	9.500	9.375	32.68	65.35	8850	69
8115	76.89	21.65	43.268	18.50	19.69	48.70	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	22.64	6.69	3.125	16.54	25.98	25.39	10.000	9.875	34.65	69.29	9840	86

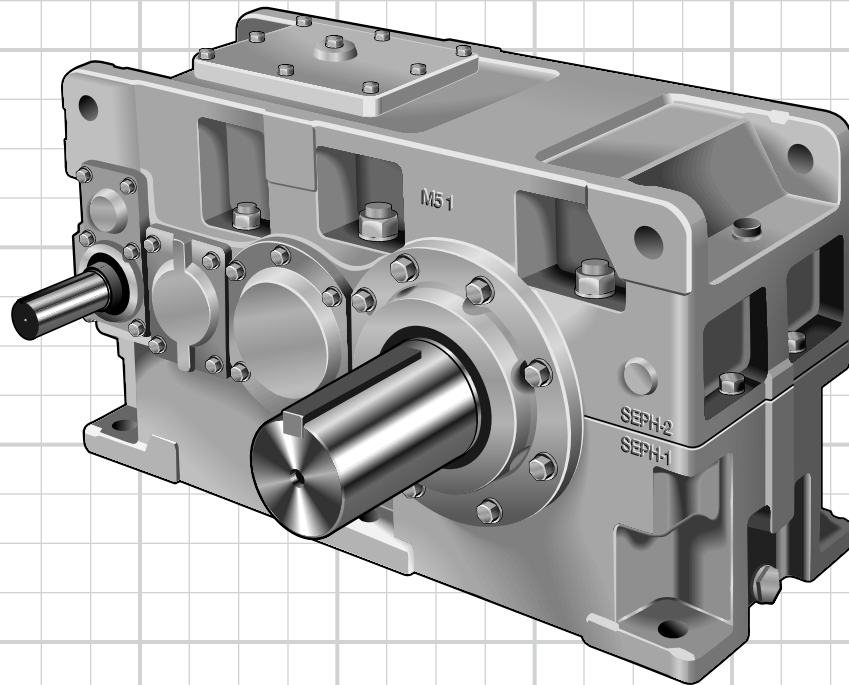
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	Y	2Y	WT. kgf.	OIL QTY. LIT.
8015	505	165	257	140	140	389	369	25	22	15	-	510	150	185	190	60	25	135	208	193	63	60	-	460	100	6
8025	604	185	306	150	160	437	409	35	25	19	-	585	170	210	204	60	28	145	230	213	73	70	-	520	140	8
8035	644	205	343	165	180	491	449	35	28	24	-	615	190	235	241	80	30	160	253	233	83	80	-	550	195	12
8045	741	230	398	185	200	507	489	40	30	28	-	700	215	270	256	80	35	180	285	268	98	95	-	620	275	17
8055	858	270	467	225	225	611	539	40	32	28	24	820	255	310	304	110	40	200	320	303	108	105	370	740	410	26
8065	974	305	540	250	265	708	619	50	35	35	24	935	280	350	329	110	50	230	365	353	128	125	420	840	630	42
8075	1122	340	630	275	300	794	689	60	40	42	28	1075	320	400	354	110	55	260	405	384	148	145	480	960	900	60
8085	1306	380	725	315	335	888	759	60	45	42	35	1260	360	440	405	140	65	285	450	429	173	170	570	1140	1290	86
8090	1480	410	837	345	375	999	839	60	50	42	42	1440	480	570	470	140	65	350	515	494	193	190	660	1320	2100	120
8095	1540	440	867	375	400	1054	889	60	50	42	42	1500	480	570	470	140	65	350	523	509	203	200	690	1380	2350	155
8100	1654	450	950	375	425	1123	939	70	55	48	48	1610	560	650	515	140	75	390	565	544	213	210	735	1470	2780	180
8105	1723	485	984	410	450	1178	989	70	55	48	48	1680	560	650	515	140	75	390	578	559	223	220	770	1540	3340	225
8110	1854	500	1050	420	475	1233	1039	75	60	56	56	1810	610	710	575	170	80	420	625	610	243	240	830	1660	4010	260
8115	1953	550	1099	470	500	1286	1089	75	60	56	56	1910	610	710	575	170	80	420	660	645	253	250	880	1760	4460	325



PARALLEL SHAFT Quadruple Reduction



RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

EXACT RATIOS

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71															73.118	
80	82.394	79.669	79.341	76.744	78.120	79.124									82.693	
90	88.812	90.907	90.326	89.427	87.529	87.269	88.470		88.676		91.041		89.194		92.567	90.636
100	103.089	99.259	103.975	100.572	97.650	96.444	101.659	97.907	101.845	98.135	97.789	102.865	103.657		103.836	102.505
112	111.119	113.262	118.371	117.193	109.412	106.372	110.588	112.800	109.293	111.479	112.208	110.827	113.328	111.540	112.463	114.744
125	127.972	122.716	130.090	125.303	127.969	126.389	127.074	122.384	124.139	120.951	119.195	126.780	126.692	129.627	125.935	128.714
140	137.941	140.028	148.102	146.011	143.382	139.399	138.235	141.000	133.218	135.882	136.770	135.088	147.936	141.721	136.398	139.407
160	165.485	159.918	158.681	154.577	153.942	158.247	168.711	152.980	167.849	147.428	151.572	154.533	152.438	158.433	162.263	156.107
180	178.376	182.477	180.652	180.123	172.484	174.538	183.529	187.200	180.124	183.726	173.922	171.782	177.998	184.999	175.743	169.076
200	205.429	197.709	207.949	202.570	192.428	192.889	210.889	203.106	206.873	199.337	198.633	196.509	198.733	190.628	197.783	201.138
224	221.432	225.600	236.742	236.048	215.605	212.745	229.412	234.000	222.002	226.442	227.922	225.117	232.056	222.592	214.214	217.848
250			260.179	252.383	252.174	252.778	263.611	253.882	252.158	245.682	242.115	257.522	248.417	248.523	239.792	245.169
280			296.204	294.093	282.547	278.799	286.765	292.500	270.599	276.011	277.815	274.397	290.070	290.194	274.048	265.536
315			315.951	327.894	324.098	318.627	313.177	317.353	305.904	299.463	328.327	313.895	317.133	310.653	303.633	297.242
355			367.079	364.326	345.705	355.248	359.232	346.583	349.604	338.534	375.230	370.966	363.770	362.742		339.705
400			400.888	421.413	401.648	394.719	383.181	397.550	389.785	386.896	418.356	423.961		396.585		
450								424.054		431.363		472.688		454.907		

INERTIA - WR²

Units: lb-in²

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71															3109.579	
80	2.648	6.834	9.483	21.015	42.031	84.232									2597.011	
90	2.648	6.749	9.397	20.759	41.689	83.634	230.570		368.793		421.416		1059.307		2494.498	3007.066
100	2.563	6.663	8.885	19.905	40.407	81.071	225.017	232.279	357.772	372.381	402.280	427.738	956.794		2186.957	2528.669
112	2.563	6.578	8.885	19.734	40.151	80.644	224.676	226.213	356.918	360.164	399.120	407.321	922.622	1230.163	2050.272	2426.155
125	2.307	6.236	8.116	18.111	34.940	70.478	209.555	225.786	329.069	359.310	363.240	403.220	854.280	1059.307	1708.560	1776.902
140	2.307	6.236	8.116	18.025	34.769	70.307	209.384	210.324	328.471	330.692	361.104	366.572	785.938	1016.593	1606.046	1981.930
160	1.452	3.759	3.503	7.432	16.488	29.814	65.865	210.067	135.660	330.094	231.083	363.923	683.424	905.537	1127.650	1606.046
180	1.452	3.759	3.417	7.347	16.402	29.644	65.780	66.378	135.318	136.514	229.801	233.218	649.253	837.194	1093.478	1537.704
200	1.281	3.588	3.332	7.091	16.060	29.046	64.498	66.207	132.670	136.172	144.971	231.510	444.226	727.847	751.766	1093.478
224	1.281	3.588	3.332	7.091	16.060	28.960	64.413	64.754	132.413	133.268	144.202	146.253	410.054	683.424	683.424	1059.307
250			3.161	6.663	14.694	26.397	60.910	64.669	125.665	133.011	135.574	145.228	321.209	471.563	615.082	721.012
280			3.161	6.663	14.694	26.312	60.825	61.081	125.579	126.092	135.062	136.343	304.124	444.226		693.675
315			3.161	6.663	14.523	26.056	60.398	60.996	124.469	125.921	132.584	135.745	300.707	334.878		683.424
355			2.990	6.493	14.352	25.458	58.091	60.568	120.710	124.810	127.971	133.011	242.616	317.792		597.996
400			2.563	5.467	11.704	22.980	53.136	58.176	100.890	120.966	106.785	128.313		310.958		
450								53.222		101.147		107.041		252.867		

INERTIA - mR²

Units: kg-m²

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71															0.910	
80	0.00078	0.0020	0.0028	0.0062	0.012	0.025									0.760	
90	0.00078	0.0020	0.0028	0.0061	0.012	0.024	0.067		0.108		0.123		0.310		0.730	0.880
100	0.00075	0.0020	0.0026	0.0058	0.012	0.024	0.066	0.068	0.105	0.109	0.118	0.125	0.280		0.640	0.740
112	0.00075	0.0019	0.0026	0.0058	0.012	0.024	0.066	0.066	0.104	0.105	0.117	0.119	0.270	0.360	0.600	0.710
125	0.00068	0.0018	0.0024	0.0053	0.010	0.021	0.061	0.066	0.096	0.105	0.106	0.118	0.250	0.310	0.500	0.520
140	0.00068	0.0018	0.0024	0.0053	0.010	0.021	0.061	0.062	0.096	0.097	0.106	0.107	0.230	0.298	0.470	0.580
160	0.00043	0.0011	0.0010	0.0022	0.0048	0.0087	0.019	0.061	0.040	0.097	0.068	0.107	0.200	0.265	0.330	0.470
180	0.00043	0.0011	0.0010	0.0022	0.0048	0.0087	0.019	0.019	0.040	0.040	0.067	0.068	0.190	0.245	0.320	0.450
200	0.00038	0.0011	0.00098	0.0021	0.0047	0.0085	0.019	0.019	0.039	0.040	0.042	0.068	0.130	0.213	0.220	0.320
224	0.00038	0.0011	0.00098	0.0021	0.0047	0.0085	0.019	0.019	0.039	0.039	0.042	0.043	0.120	0.200	0.200	0.310
250			0.00093	0.0020	0.0043	0.0077	0.018	0.019	0.037	0.039	0.040	0.043	0.094	0.138	0.180	0.211
280			0.00093	0.0020	0.0043	0.0077	0.018	0.018	0.037	0.037	0.040	0.040	0.089	0.130		0.203
315			0.00093	0.0020	0.0043	0.0076	0.018	0.018	0.036	0.037	0.039	0.040	0.088	0.098		0.200
355			0.00088	0.0019	0.0042	0.0075	0.017	0.018	0.035	0.037	0.037	0.039	0.071	0.093		0.175
400			0.00075	0.0016	0.0034	0.0067	0.016	0.017	0.030	0.035	0.031	0.038		0.091		
450								0.016		0.030		0.031		0.074		

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$.

RATING TABLES QUADRUPLE REDUCTION PARALLEL SHAFT

MECHANICAL RATING - S.F. 1.0

Units: hp

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (hp)														
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130
71	1800	25															1470
	1200	17															992
	900	13															738
80	1800	23	20.5	33	43	67	110	179									1310
	1200	15	13.8	22.3	29	44	73	120									872
	900	11	10.3	16.8	21.8	33	55	89									657
90	1800	20	18.5	27.4	42	67	109	167	241		340			474		778	1160
	1200	13	12.3	18.3	28.6	44	73	111	162		228			318		523	778
	900	10	9.2	13.8	21.5	33	54	84	122		171			239		396	590
100	1800	18	16.4	26.9	39	66	105	158	219	257	311	368	466	500	671		1040
	1200	12	10.9	18.1	26.6	44	70	106	146	172	208	246	312	335	443		697
	900	9	8.3	13.5	20.1	33	52	80	110	129	157	185	235	252	341		523
112	1800	16	14.8	22.1	32	52	87	137	194	234	277	336	386	494	617	738	966
	1200	11	9.9	14.7	21.9	34	58	92	130	156	185	225	258	331	402	496	644
	900	8	7.5	11.1	16.4	26.2	44	69	97	117	139	169	194	249	312	374	483
125	1800	14	13.2	21.8	32	53	80	121	175	206	256	299	384	407	550	630	831
	1200	10	8.8	14.6	21.4	35	53	81	117	138	171	200	257	273	371	429	550
	900	7	6.7	10.9	16	26.8	40	61	88	104	129	150	193	205	279	323	416
140	1800	13	11.9	17.9	26.2	41	67	105	155	187	227	276	317	406	469	577	764
	1200	9	8	11.9	17.5	28	44	70	104	125	152	185	212	272	319	393	510
	900	6	6	8.9	13.2	21	33	52	78	94	114	139	159	205	240	295	389
160	1800	11	10.3	16.8	23.3	35	60	95	132	165	190	246	303	335	443	523	657
	1200	8	6.8	11.2	15.5	23.8	40	63	88	111	127	164	202	224	298	351	443
	900	6	5.2	8.4	11.6	17.8	30	47	66	83	95	124	152	168	224	264	335
180	1800	10	9.2	13.8	21.5	34	55	84	117	141	169	205	250	320	382	443	603
	1200	7	6.1	9.2	14.4	22.7	37	56	78	94	113	137	167	214	255	302	402
	900	5	4.6	6.9	10.8	17.1	28.1	42	59	71	85	103	126	161	192	227	310
200	1800	9	8.3	13.6	20.1	33	53	80	106	125	154	182	231	264	353	416	523
	1200	6	5.4	9.1	13.4	22.1	35	53	71	83	103	122	155	177	236	282	350
	900	5	4.1	6.8	10	16.6	27	40	53	63	77	91	116	133	177	212	263
224	1800	8	7.5	11.1	16.4	26	44	69	94	113	137	167	191	245	302	362	483
	1200	5	4.9	7.5	10.9	17.4	30	46	63	76	91	111	128	164	202	241	323
	900	4	3.7	5.6	8.3	13.1	22.5	34	47	57	69	84	96	123	152	181	243
250	1800	7			16	26.5	41	61	85	100	127	148	190	202	283	334	429
	1200	5			10.7	17.8	27.4	40	57	67	85	99	127	135	189	223	288
	900	4			8	13.4	20.6	30	42	50	63	74	95	101	142	168	217
280	1800	6			13.2	20.9	34	52	75	91	113	137	157	201	243	286	401
	1200	4			8.8	13.9	22.9	35	50	60	75	91	105	135	162	192	268
	900	3			6.5	10.4	17.1	26.5	37	45	56	69	79	101	122	143	201
315	1800	6			12.3	18.7	29.9	46	69	80	100	122	133	166	223	268	362
	1200	4			8.3	12.6	19.9	30	46	53	66	81	89	111	149	180	243
	900	3			6.1	9.3	15	23.3	34	40	50	61	67	83	111	134	182
355	1800	5			10.7	16.8	28	41	60	73	87	108	116	140	194	231	382
	1200	3			7.1	11.2	18.7	27.7	40	49	58	72	78	94	130	154	255
	900	3			5.3	8.4	14	20.9	30	37	43	54	58	70	97	115	190
400	1800	5			9.7	14.6	24.1	37	56	64	78	94	105	123		211	
	1200	3			6.5	9.7	16.2	25	37	43	52	63	70	82		141	
	900	2			4.9	7.3	12.2	18.7	28.4	32	39	47	52	62		106	
450	1800	4								60		85		110		184	
	1200	3								40		56		74		122	
	900	2								30		42		55		93	

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 900 RPM, find the mechanical rating by the following method:

$$P_N = P_{900} \times \frac{n}{900}$$

Where P_N is the mechanical rating, P_{900} is the mechanical rating at 900 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

MECHANICAL RATING - S.F. 1.0

Units: kW

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATING (kW)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71	1500	21															920	
	1000	14															620	
	750	11															460	
80	1500	19	12.8	20.9	27.2	41	68	111									810	
	1000	13	8.6	13.9	18.1	27.9	45	74									540	
	750	9	6.4	10.5	13.6	20.9	34	55									410	
90	1500	17	11.5	17.1	26.7	41	68	104	150		212		295			480	730	890
	1000	11	7.7	11.5	17.9	27.9	45	69	101		142		198			320	490	600
	750	8	5.8	8.6	13.4	20.9	34	52	75		106		149			246	370	450
100	1500	15	10.3	16.8	24.9	41	65	99	136	160	194	229	290	312	420		650	790
	1000	10	6.9	11.2	16.6	27.6	43	66	91	107	129	153	194	209	282		430	530
	750	8	5.2	8.4	12.5	20.7	33	49	68	80	97	115	146	157	212		330	390
112	1500	13	9.2	13.8	20.4	32	54	85	120	145	172	209	240	308	380	460	600	710
	1000	9	6.2	9.2	13.7	21.7	36	57	80	97	115	140	161	206	258	310	400	470
	750	7	4.6	6.9	10.3	16.3	27.5	43	60	73	86	105	121	155	194	233	300	350
125	1500	12	8.3	13.6	19.9	33	50	75	109	128	159	186	239	253	340	390	510	630
	1000	8	5.5	9.1	13.3	22.2	33	50	73	86	106	124	160	170	231	267	340	420
	750	6	4.2	6.8	10	16.7	25.2	38	55	64	80	94	120	127	174	201	262	310
140	1500	11	7.4	11.2	16.4	26.1	41	65	97	116	141	172	197	253	296	360	480	580
	1000	7	5	7.5	10.9	17.5	28	43	64	78	95	115	132	169	198	245	320	390
	750	5	3.7	5.6	8.2	13.1	21	32	48	58	71	86	99	127	149	184	242	290
160	1500	9	6.4	10.5	14.5	22.2	37	59	82	103	118	153	188	208	277	320	410	500
	1000	6	4.3	7	9.7	14.8	24.9	39	55	69	79	102	126	139	185	219	278	330
	750	5	3.2	5.3	7.2	11.1	18.7	29.7	41	51	59	77	95	105	139	165	209	249
180	1500	8	5.8	8.6	13.4	21.2	34	52	73	88	105	127	155	199	238	281	380	460
	1000	6	3.9	5.7	9	14.2	23.3	35	49	59	70	85	104	133	159	188	256	310
	750	4	2.9	4.3	6.7	10.7	17.5	26.4	36	44	53	64	78	100	119	141	193	230
200	1500	8	5.2	8.5	12.5	20.6	33	49	66	78	96	113	144	164	219	262	320	400
	1000	5	3.5	5.7	8.4	13.8	22.4	33	44	52	64	76	96	110	147	176	218	264
	750	4	2.6	4.3	6.3	10.3	16.8	25	33	39	48	57	72	82	110	132	164	198
224	1500	7	4.7	6.9	10.3	16.2	27.9	43	58	70	85	104	119	152	188	225	300	370
	1000	4	3.1	4.6	6.9	10.8	18.7	28.8	39	47	57	69	79	102	126	150	201	244
	750	3	2.3	3.5	5.2	8.1	14	21.6	29.5	35	43	52	60	76	94	113	151	183
250	1500	6			10	16.6	25.6	38	53	62	79	92	118	126	176	208	269	310
	1000	4			6.7	11.1	17.1	25.5	35	41	52	61	79	84	118	139	180	207
	750	3			5	8.3	12.8	19.1	26.7	31	39	46	59	63	89	104	135	155
280	1500	5			8.2	13	21.3	32	47	56	70	85	98	125	151	178	250	286
	1000	4			5.5	8.7	14.3	22	31	37	47	57	65	84	101	119	167	191
	750	3			4.1	6.5	10.7	16.5	23.6	28.5	35	42	49	63	78	89	125	143
315	1500	5			7.7	11.7	18.6	28.9	43	50	62	76	83	103	138	167	225	256
	1000	3			5.2	7.8	12.4	19.3	28.8	33	41	50	55	69	92	112	151	170
	750	2			3.9	5.9	9.3	14.5	21.6	25.2	31	38	41	52	69	84	113	128
355	1500	4			6.6	10.5	17.5	25.9	37	45	54	67	72	87	121	143		237
	1000	3			4.4	7	11.7	17.3	25.1	30	36	45	48	58	80	96		158
	750	2			3.3	5.3	8.8	13	18.9	23	27.4	33	36	44	60	72		119
400	1500	4			6.1	9.1	15	23.3	35	40	49	59	65	76		131		
	1000	3			4.1	6.1	10.1	15.6	23.6	26.8	32	39	43	51		87		
	750	2			3.1	4.6	7.5	11.7	17.7	20.1	24.6	29.6	32	38		66		
450	1500	3								37		52		69		114		
	1000	2								25.1		35		46		76		
	750	2								18.9		26.6		34		57		

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

TORQUE RATING TABLES - S.F. 1.0

Units: 1000 in.-lbs.

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71	1800	25															3777	
	1200	17															3811	
	900	13															3777	
80	1800	23	59	94	121	181	301	499									3805	
	1200	15	60	94	121	181	301	499									3786	
	900	11	60	94	121	181	302	499									3805	
90	1800	20	58	88	136	210	336	511	749		1058			1513		2429	3782	4554
	1200	13	58	88	136	210	337	513	753		1063			1521		2450	3782	4533
	900	10	58	88	137	211	337	515	756		1067			1526		2471	3825	4597
100	1800	18	60	94	145	233	360	537	780	884	1111	1265	1599	1804	2434		3803	4573
	1200	12	60	94	146	234	362	539	784	888	1116	1272	1608	1814	2409		3803	4549
	900	9	60	94	146	235	362	541	786	891	1120	1276	1613	1820	2473		3803	4525
112	1800	16	58	88	136	214	337	512	752	924	1060	1314	1517	1919	2448	2881	3802	4580
	1200	11	58	88	137	215	338	515	756	929	1065	1321	1525	1929	2395	2907	3802	4526
	900	8	58	88	137	216	339	515	757	931	1069	1324	1529	1936	2480	2923	3802	4526
125	1800	14	59	94	146	234	361	538	782	886	1113	1269	1604	1810	2439	2861	3666	4533
	1200	10	59	94	147	235	362	540	786	890	1118	1275	1611	1819	2472	2922	3637	4533
	900	7	60	95	147	235	363	542	788	893	1122	1279	1616	1824	2475	2934	3666	4594
140	1800	13	58	88	136	215	337	514	754	926	1063	1318	1521	1924	2431	2862	3651	4582
	1200	9	58	88	137	215	338	515	757	931	1068	1324	1528	1933	2480	2925	3651	4517
	900	6	58	88	138	215	339	517	759	934	1071	1327	1532	1940	2487	2928	3715	4582
160	1800	11	60	95	130	193	325	530	784	889	1118	1272	1609	1814	2362	2901	3734	4398
	1200	8	59	95	130	194	324	531	788	892	1122	1277	1615	1823	2384	2924	3772	4398
	900	6	61	95	130	193	324	531	789	894	1124	1281	1620	1829	2391	2931	3810	4369
180	1800	10	58	88	137	215	338	515	756	929	1067	1322	1526	1930	2382	2867	3714	4367
	1200	7	58	89	137	216	339	516	759	934	1071	1328	1531	1938	2382	2932	3714	4406
	900	5	59	89	137	217	340	518	760	935	1074	1330	1535	1944	2391	2936	3813	4383
200	1800	9	60	95	146	235	362	541	786	891	1120	1276	1614	1820	2454	2775	3622	4534
	1200	6	59	95	146	235	363	542	789	894	1123	1281	1620	1827	2464	2820	3636	4534
	900	5	60	95	146	236	365	543	790	897	1127	1284	1623	1833	2464	2829	3641	4496
224	1800	8	58	88	137	215	339	515	757	932	1070	1325	1529	1936	2452	2822	3621	4501
	1200	5	58	89	137	216	340	517	759	935	1073	1330	1535	1944	2468	2822	3636	4496
	900	4	58	89	138	217	340	517	763	936	1076	1333	1539	1947	2463	2822	3641	4481
250	1800	7			147	235	364	542	789	893	1123	1279	1617	1825	2461	2906	3603	4260
	1200	5			147	236	364	543	791	896	1126	1284	1622	1832	2467	2906	3631	4283
	900	4			147	237	365	544	792	897	1127	1285	1626	1836	2473	2918	3648	4283
280	1800	6			138	215	340	517	759	933	1071	1327	1533	1939	2465	2903	3848	4239
	1200	4			138	215	340	518	761	935	1075	1332	1538	1946	2472	2923	3861	4283
	900	3			136	215	340	518	762	937	1078	1335	1542	1951	2479	2916	3861	4289
315	1800	6			136	216	339	518	760	894	1072	1281	1536	1828	2472	2918	3850	4327
	1200	4			138	217	340	518	761	896	1075	1285	1540	1835	2480	2932	3871	4292
	900	3			136	216	341	521	762	900	1077	1288	1542	1840	2472	2918	3878	4271
355	1800	5			138	216	339	517	761	895	1074	1283	1536	1831	2477	2930		4546
	1200	3			137	216	341	518	762	898	1076	1285	1541	1837	2485	2938		4546
	900	3			138	216	341	520	762	898	1077	1288	1544	1840	2460	2930		4530
400	1800	5			137	216	339	519	761	896	1074	1284	1538	1834		2924		
	1200	3			138	217	342	520	764	899	1076	1286	1541	1840		2933		
	900	2			139	218	343	519	763	900	1080	1290	1544	1844		2942		
450	1800	4								896		1284		1833		2927		
	1200	3								899		1288		1841		2916		
	900	2								900		1292		1842		2948		

RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

TORQUE RATING TABLES - S.F. 1.0
Units: kNm

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)																
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135	
71	1500	21															428		
	1000	14															433		
	750	11															428		
80	1500	19	6.7	10.6	13.7	20.4	34	56									426		
	1000	13	6.8	10.6	13.7	20.4	34	56									426		
	750	9	6.7	10.7	13.7	20.4	34	56									432		
90	1500	17	6.5	9.9	15.4	23.8	38	58	85		120			171		273		430	514
	1000	11	6.5	10.0	15.4	23.8	38	58	85		120			172		273		433	5198
	750	8	6.6	10.0	15.4	23.8	38	58	86		121			173		279		436	519
100	1500	15	6.8	10.6	16.5	26.4	41	61	88	100	126	143	181	204	277		430	516	
	1000	10	6.8	10.6	16.5	26.5	41	61	89	101	126	144	182	205	279		426	519	
	750	8	6.8	10.6	16.5	26.5	41	61	89	101	127	144	183	206	280		436	509	
112	1500	13	6.5	10.0	15.4	24.2	38	58	85	105	120	149	172	217	274	327	430	519	
	1000	9	6.6	10.0	15.5	24.3	38	58	85	105	121	149	173	218	279	330	430	515	
	750	7	6.5	10.0	15.5	24.3	38	58	86	105	121	150	173	219	280	331	430	511	
125	1500	12	6.8	10.6	16.5	26.5	41	61	89	100	126	144	182	205	274	322	409	516	
	1000	8	6.7	10.7	16.5	26.6	41	61	89	101	127	144	182	206	279	331	409	516	
	750	6	6.8	10.6	16.6	26.6	41	61	89	101	127	145	183	206	281	332	420	508	
140	1500	11	6.5	10.0	15.5	24.3	38	58	85	105	120	149	172	218	279	325	417	515	
	1000	7	6.6	10.0	15.4	24.4	38	58	86	105	121	150	173	219	280	330	417	519	
	750	5	6.5	10.0	15.5	24.4	38	58	86	106	121	150	173	219	281	332	420	515	
160	1500	9	6.7	10.7	14.6	21.8	37	60	89	101	127	144	182	205	269	323	424	497	
	1000	6	6.8	10.7	14.7	21.8	37	60	89	101	127	145	183	206	269	331	431	492	
	750	5	6.7	10.8	14.5	21.8	37	60	89	101	127	145	183	207	270	333	432	495	
180	1500	8	6.6	10.0	15.4	24.3	38	58	86	105	121	150	173	219	270	331	425	495	
	1000	6	6.6	9.9	15.5	24.4	38	59	86	105	121	150	173	219	270	332	430	501	
	750	4	6.6	10.0	15.4	24.5	38	59	86	106	122	150	174	220	270	332	432	495	
200	1500	8	6.8	10.7	16.5	26.6	41	61	89	101	127	144	183	206	277	318	403	512	
	1000	5	6.9	10.8	16.7	26.7	41	61	89	101	127	145	183	207	279	320	412	507	
	750	4	6.8	10.8	16.7	26.6	41	61	89	101	127	145	184	207	278	320	413	507	
224	1500	7	6.6	9.9	15.5	24.3	38	58	86	105	121	150	173	219	278	319	409	513	
	1000	4	6.6	9.9	15.6	24.3	39	59	86	106	121	151	174	220	279	319	411	508	
	750	3	6.5	10.1	15.7	24.3	38	59	86	106	122	151	174	220	278	320	412	508	
250	1500	6			16.6	26.7	41	61	89	101	127	145	183	207	278	329	411	484	
	1000	4			16.6	26.8	41	62	89	101	127	145	184	207	280	330	412	485	
	750	3			16.6	26.7	41	61	90	102	127	145	184	208	282	329	412	484	
280	1500	5			15.5	24.3	38	58	86	106	121	150	174	220	279	329	436	484	
	1000	4			15.6	24.4	39	59	86	106	121	151	174	220	280	330	437	484	
	750	3			15.5	24.3	38	59	86	106	122	151	174	221	281	329	436	484	
315	1500	5			15.5	24.4	38	59	86	101	121	145	174	207	279	330	435	484	
	1000	3			15.7	24.4	38	59	86	102	122	145	174	207	279	332	438	483	
	750	2			15.7	24.6	38	59	86	102	122	146	174	208	279	332	437	484	
355	1500	4			15.4	24.4	39	59	86	101	122	145	174	207	280	330		513	
	1000	3			15.4	24.4	39	59	86	102	122	145	174	208	278	333		513	
	750	2			15.4	24.6	39	59	86	102	122	146	174	208	278	333		515	
400	1500	4			15.6	24.4	38	59	86	101	122	145	174	207		331			
	1000	3			15.7	24.5	39	59	86	102	122	146	175	208		330			
	750	2			15.8	24.7	38	59	86	102	122	146	175	208		333			
450	1500	3								102		145		208		330			
	1000	2								102		146		208		330			
	750	2								102		146		208		330			

RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - HORIZONTAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71 - 100	1800	-	35	49	65	82	121	160	211	237	273	308	364	401	355		483	483
		1	58	81	107	135	199	265	348	391	450	508	601	661	496		657	657
	1200	-	32	45	59	76		150	204	228	266	299	350	384	308		429	429
		1	52	74	98	125	185	247	337	377	439	494	578	634	416		550	550
900	-	-	29	42	55	70	104	140	194	217	254	285	332	364	268		375	375
		1	48	69	90	116	171	231	320	357	420	471	548	601	349		469	469
	1800	-	32	43	55	73	106	141	193	220	251	288	342	374	355	355	483	483
		1	52	71	91	120	176	232	319	362	414	475	564	617	496	496	657	657
112 - 160	1200	-	28	38	49	65	96	127	178	210	233	278	319	356	308	308	429	429
		1	46	64	81	107	158	210	293	347	384	458	526	588	416	416	550	550
	900	-	25	35	44	59	87	116	164	199	216	264	298	337	268	268	375	375
		1	41	58	72	97	144	192	271	328	357	436	491	556	349	349	469	469
180 - 224	1800	-	30	40	53	69	102	136	184	199	241	264	309	344	355	355	483	483
		1	49	66	87	114	168	224	304	328	398	436	509	567	496	496	657	657
	1200	-	26	36	46	62	92	123	169	182	224	245	284	316	308	308	429	429
		1	43	60	76	102	151	203	279	301	370	404	469	521	416	416	550	550
900	-	-	23	33	42	56	83	112	156	168	208	227	263	292	268	268	375	375
		1	39	54	69	92	138	185	258	278	343	375	434	482	349	349	469	469
	1800	-			50	66	97	129	177	191	233	252	296	323	355	355	483	483
		1			83	109	160	213	292	314	385	415	488	533	496	496	657	657
250 - 315	1200	-			44	59	87	117	162	175	216	233	272	296	308	308	429	429
		1			73	97	143	192	268	288	356	384	449	489	416	416	550	550
	900	-			40	53	79	107	150	161	201	216	252	274	268	268	375	375
		1			66	88	131	176	248	266	331	356	415	452	349	349	469	469
355 - 450	1800	-			51	65	96	128	178	192	230	247	288	312	355	355		483
		1			85	106	159	212	294	317	379	408	476	516	496	496		657
	1200	-			45	57	86	116	163	176	212	227	264	285	308	308		429
		1			75	94	142	191	270	290	350	375	436	471	416	416		550
900	-	-			41	51	78	106	151	162	197	210	244	263	268	268		375
		1			67	85	129	174	249	267	324	347	402	435	349	349		469

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
71 - 100	1500	-	25	35	47	59	87	117	156	175	203	228	268	295	250		350	350
		1	41	58	77	98	144	192	257	289	334	377	443	487	340		460	460
	1000	-	22	32	42	54	80	107	148	165	193	217	253	277	210		295	295
		1	37	53	69	89	132	177	244	272	319	358	417	458	275		370	370
750	-	-	20	29	38	49	73	99	139	155	182	205	238	260	180		225	225
		1	33	48	63	81	121	164	229	255	301	337	392	429	235		320	320
	1500	-	22	31	39	52	76	101	139	161	182	213	248	274	250	250	350	350
		1	37	50	65	85	125	166	230	266	300	351	409	453	340	340	460	460
112 - 160	1000	-	19	27	34	45	67	90	126	152	166	201	228	257	210	210	295	295
		1	32	45	56	75	111	148	208	250	274	332	376	424	275	275	370	370
	750	-	17	24	30	41	61	82	116	142	153	189	211	241	180	180	225	225
		1	28	40	50	67	100	134	191	234	252	312	348	397	235	235	320	320
180 - 224	1500	-	21	29	37	49	73	97	133	143	175	191	223	248	250	250	350	350
		1	35	47	61	81	120	160	219	236	288	315	367	409	340	340	460	460
	1000	-	18	25	32	43	65	87	120	130	160	174	202	224	210	210	295	295
		1	30	42	53	71	106	143	198	214	264	288	333	370	275	275	370	370
750	-	-	16	23	29	39	58	79	110	118	147	160	186	206	180	180	225	225
		1	27	38	47	64	96	130	182	195	243	264	306	340	235	235	320	320
	1500	-			36	47	69	92	128	137	169	182	213	233	250	250	350	350
		1			59	77	114	152	210	226	278	300	352	384	340	340	460	460
250 - 315	1000	-			31	41	61	82	115	124	154	166	193	211	210	210	295	295
		1			51	68	101	136	190	205	254	273	319	347	275	275	370	370
	750	-			28	37	55	75	106	113	142	152	178	193	180	180	225	225
		1			46	61	91	123	174	187	234	251	293	319	235	235	320	320
355 - 450	1500	-			37	46	69	92	128	138	166	178	207	225	250	250		350
		1			60	75	113	151	212	228	274	294	342	370	340	340		460
	1000	-			32	40	61	82	116	125	151	162	188	203	210	210		295
		1			52	66	100	135	191	206	249	267	309	334	275	275		370
750	-	-			28	36	54	74	106	114	139	148	172	185	180	180		225
		1			47	59	90	122	175	188	229	245	283	306	235	235		320

NOTES: 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures see next page .
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

RATING TABLES

QUADRUPLE REDUCTION

PARALLEL SHAFT

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (hp)											
		8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
71 - 100	1800	37	52	68	86	127	170	231	259	301	338	395	433
	1200	33	47	61	78	115	155	215	240	281	316	367	401
	900	30	43	56	71	106	143	201	224	264	296	343	375
112 - 160	1800	33	45	57	75	110	146	203	237	265	313	361	400
	1200	28	40	50	66	98	130	183	220	241	291	329	371
	900	25	36	44	60	88	118	168	205	222	273	305	346
180 - 224	1800	31	42	54	71	106	141	193	208	255	278	323	358
	1200	27	37	47	63	94	126	174	187	231	252	292	323
	900	24	33	42	56	85	114	160	172	213	232	268	297
250 - 315	1800			52	68	100	133	185	199	246	264	308	336
	1200			45	60	89	119	167	179	223	239	279	303
	900			40	54	80	108	153	164	205	220	256	278
355 - 450	1800			53	66	99	132	186	200	241	258	300	324
	1200			46	58	88	118	168	180	218	233	270	292
	900			41	52	79	107	154	165	200	214	248	267

NOMINAL RATIO	INPUT RPM	THERMAL RATINGS (kW)											
		8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
71 - 100	1500	26	37	49	62	91	122	167	187	219	245	286	313
	1000	23	33	43	55	82	110	154	172	202	226	262	287
	750	21	30	39	50	75	101	143	159	188	211	244	267
112 - 160	1500	23	32	40	53	78	104	145	171	190	227	259	289
	1000	20	28	35	46	68	92	129	157	171	209	234	265
	750	18	25	31	41	62	83	118	146	156	194	215	246
180 - 224	1500	22	30	38	50	75	100	138	148	183	199	231	256
	1000	19	26	33	44	66	88	123	132	164	179	206	229
	750	16	23	29	39	59	80	112	120	150	163	188	209
250 - 315	1500			37	48	71	95	132	142	176	189	220	240
	1000			31	42	62	84	118	127	158	170	197	214
	750			28	37	56	76	107	115	144	155	180	196
355 - 450	1500			37	47	70	94	133	143	173	184	214	231
	1000			32	41	61	83	119	127	155	165	191	206
	900			29	36	55	75	108	115	141	151	174	188

- NOTES:** 1. Given thermal ratings are based upon 70° F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

$$\text{Adjusted Thermal HP} = \text{Rated Thermal HP} \times T_a$$

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

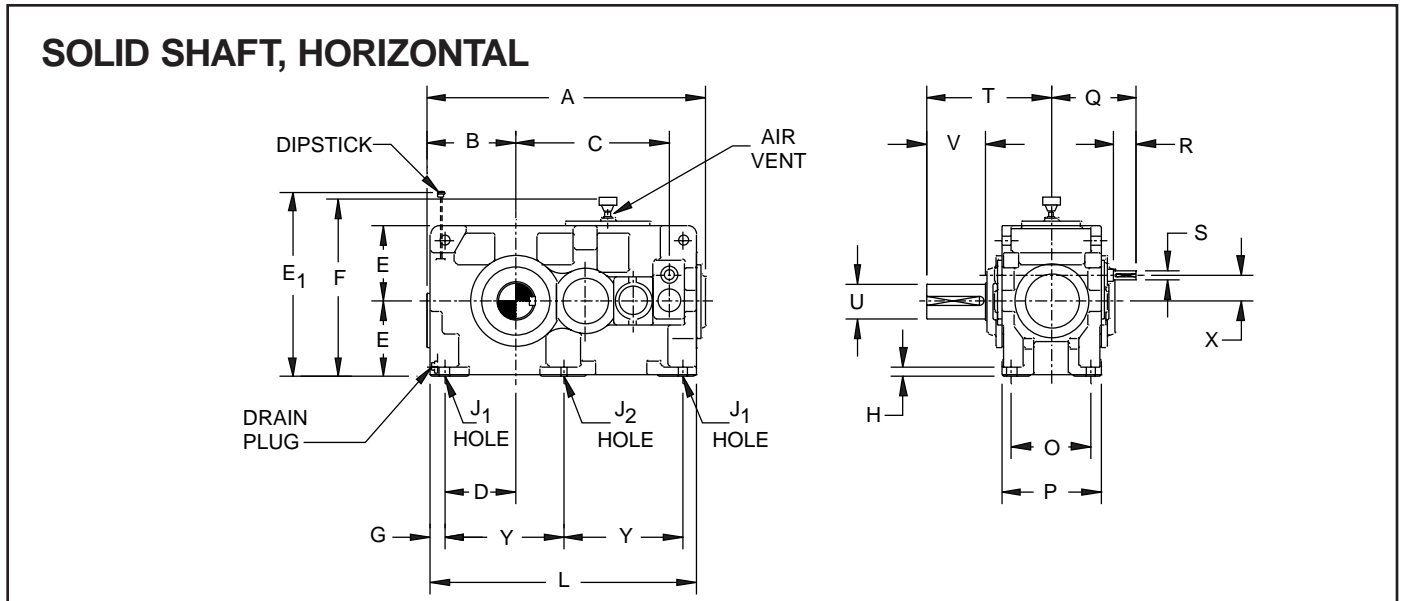
Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

DIMENSIONS

QUADRUPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	X	Y	2Y	WT. lbf.	OIL QTY. GAL.
8035	25.35	8.07	13.504	6.50	7.09	18.94	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	8.64	2.38	0.875	11.83	3.000	5.53	2.480	-	21.65	450	3.2
8045	29.17	9.06	15.669	7.28	7.87	21.10	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	9.25	2.36	1.000	13.80	3.500	6.75	3.110	-	24.41	620	4.8
8055	33.78	10.63	18.386	8.86	8.86	23.39	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	10.81	3.13	1.125	16.16	4.125	8.25	3.110	14.57	29.13	920	7.4
8065	38.35	12.01	21.260	9.84	10.43	27.24	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	11.81	3.11	1.250	17.32	4.875	8.27	3.622	16.54	33.07	1390	11.4
8075	44.17	13.39	24.803	10.83	11.81	30.55	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	13.98	4.37	1.375	20.08	5.625	9.88	4.291	18.90	37.80	2010	16.4
8085	51.42	14.96	28.543	12.40	13.19	34.21	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	14.76	4.37	1.625	22.83	6.375	11.73	4.961	22.44	44.88	2870	23.8
8090	58.27	16.14	31.299	13.58	14.76	37.17	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	17.32	4.33	1.875	25.59	7.000	11.81	5.591	25.98	51.97	4740	40
8095	60.63	17.32	32.480	14.76	15.75	39.33	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	17.32	4.33	1.875	27.56	7.375	13.78	5.591	27.17	54.33	5300	48
8100	65.12	17.72	35.472	14.76	16.73	41.65	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	20.28	5.51	2.250	29.13	7.750	13.78	6.378	28.94	57.87	6240	58
8105	67.83	19.09	36.811	16.14	17.72	43.82	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	20.28	5.51	2.250	29.13	8.375	13.78	6.378	30.31	60.63	7480	69
8110	72.99	19.69	39.409	16.54	18.70	45.98	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	21.46	5.51	2.250	30.31	8.375	13.78	6.378	32.68	65.35	8960	79
8115	76.89	21.65	41.339	18.50	19.69	47.91	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	21.46	5.51	2.250	32.68	9.375	16.14	6.378	34.65	69.29	9950	96

METRIC DIMENSIONS

Units: mm

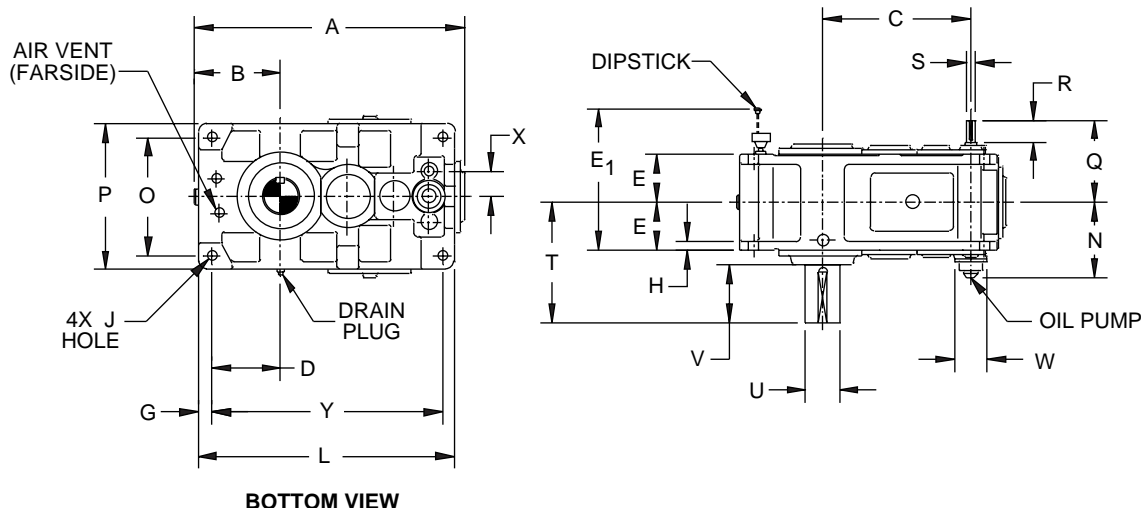
MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	U	V	X	Y	2Y	WT. kgf.	OIL QTY. LTR.
8035	644	205	343	165	180	481	449	35	28	24	-	615	190	235	219	60	25	300	78	140	63	-	550	200	12
8045	741	230	398	185	200	536	489	40	30	28	-	700	215	270	235	60	28	349	95	170	79	-	620	280	18
8055	858	270	467	225	225	594	539	40	32	28	24	820	255	310	275	80	30	411	110	210	79	370	740	415	28
8065	974	305	540	250	265	692	619	50	35	35	24	935	280	350	301	80	35	440	125	210	92	420	840	630	43
8075	1122	340	630	275	300	776	689	60	40	42	28	1075	320	400	354	110	40	509	145	250	109	480	960	910	62
8085	1306	380	725	315	335	869	759	60	45	42	35	1260	360	440	374	110	45	582	165	300	126	570	1140	1300	90
8090	1480	410	795	345	375	944	839	60	50	42	42	1440	480	570	440	110	50	650	180	300	142	660	1320	2150	150
8095	1540	440	825	375	400	999	889	60	50	42	42	1500	480	570	440	110	50	700	190	350	142	690	1380	2400	180
8100	1654	450	901	375	425	1058	939	70	55	48	48	1610	560	650	515	140	60	740	200	350	162	735	1470	2830	220
8105	1723	485	935	410	450	1113	989	70	55	48	48	1680	560	650	515	140	60	740	220	350	162	770	1540	3390	260
8110	1854	500	1001	420	475	1168	1039	75	60	56	56	1810	610	710	545	140	60	770	220	350	162	830	1660	4060	300
8115	1953	550	1050	470	500	1217	1089	75	60	56	56	1910	610	710	545	140	60	830	240	410	162	880	1760	4510	365

DIMENSIONS

QUADRUPLE REDUCTION

PARALLEL SHAFT

SOLID SHAFT, VERTICAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	X	Y	WT. lb.	OIL QTY. GAL.
8035	25.35	8.07	13.504	6.50	4.63	16.14	1.38	1.10	0.94	24.21	8.19	11.42	14.17	8.64	2.38	0.875	11.83	3.000	5.53	3.94	2.480	21.65	420	2.4
8045	29.17	9.06	15.669	7.28	5.31	18.50	1.57	1.18	1.10	27.56	8.86	12.60	15.75	9.25	2.36	1.000	13.80	3.500	6.75	3.94	3.110	24.41	620	3.2
8055	33.78	10.63	18.386	8.86	6.10	20.87	1.57	1.26	1.10	32.28	9.65	14.57	17.72	10.81	3.13	1.125	16.16	4.125	8.25	3.94	3.110	29.13	830	5
8065	38.35	12.01	21.260	9.84	6.89	23.43	1.97	1.38	1.38	36.81	10.83	16.93	20.87	11.81	3.11	1.250	17.32	4.875	8.27	4.61	3.622	33.07	1280	8.2
8075	44.17	13.39	24.803	10.83	7.87	26.18	2.36	1.57	1.65	42.32	11.81	18.90	23.62	13.98	4.37	1.375	20.08	5.625	9.88	4.61	4.291	37.80	1920	13.7
8085	51.42	14.96	28.543	12.40	8.66	28.94	2.36	1.77	1.65	49.61	12.60	21.65	26.38	14.76	4.37	1.625	22.83	6.375	11.73	4.61	4.961	44.88	2740	18
8090	58.27	16.14	31.299	13.58	11.22	36.89	2.36	1.97	1.65	56.69	15.28	24.80	29.53	17.32	4.33	1.875	25.59	7.000	11.81	5.39	5.591	51.97	4790	29.1
8095	60.63	17.32	32.480	14.76	11.22	36.89	2.36	1.97	1.65	59.06	15.28	26.77	31.50	17.32	4.33	1.875	27.56	7.375	13.78	5.39	5.591	54.33	5360	37
8100	65.12	17.72	35.472	14.76	12.80	41.69	2.76	2.17	1.89	63.39	16.85	27.95	33.46	20.28	5.51	2.250	29.13	7.750	13.78	5.39	6.378	57.87	6440	45
8105	67.83	19.09	36.811	16.14	12.80	41.69	2.76	2.17	1.89	66.14	16.85	29.92	35.43	20.28	5.51	2.250	29.13	8.375	13.78	5.39	6.378	60.63	7500	55
8110	72.99	19.69	39.409	16.54	13.98	45.35	2.95	2.36	2.20	71.26	*	31.50	37.40	21.46	5.51	2.250	30.31	8.375	13.78	*	6.378	65.35	8930	63
8115	76.89	21.65	41.339	18.50	13.98	45.35	2.95	2.36	2.20	75.20	*	33.46	39.37	21.46	5.51	2.250	32.68	9.375	16.14	*	6.378	69.29	10080	78

METRIC DIMENSIONS

Units: mm

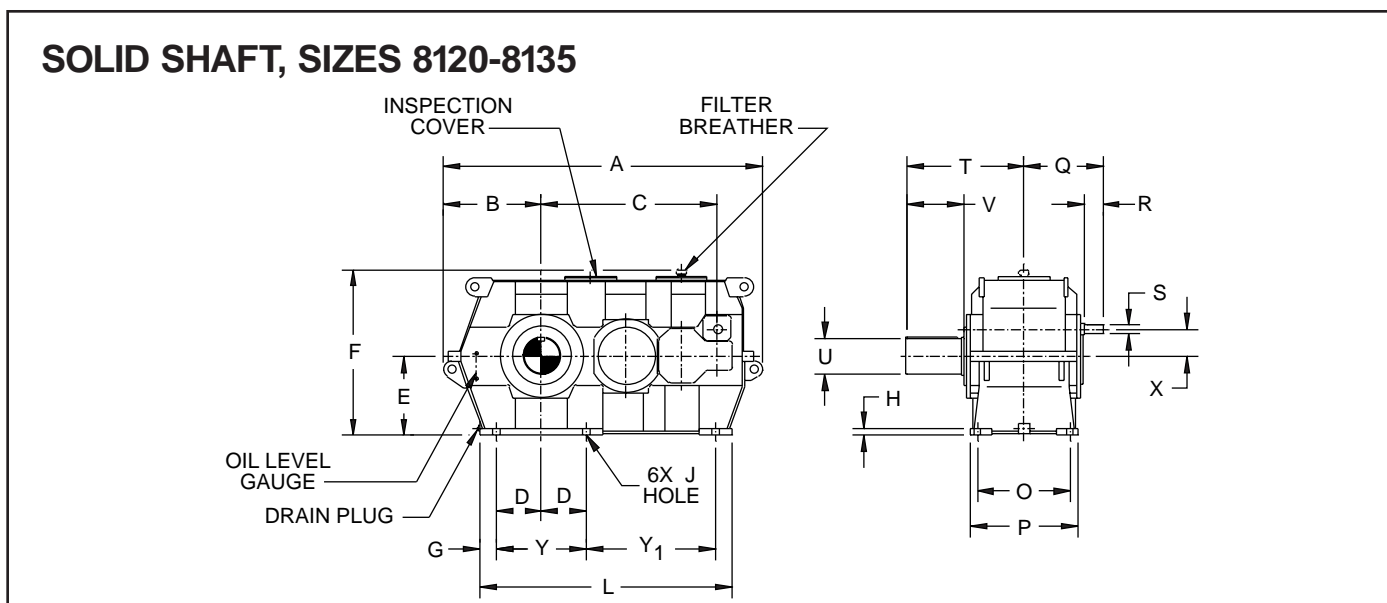
MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	Q	R	S	T	U	V	W	X	Y	WT. kgf.	OIL QTY. LTR.
8035	644	205	343	165	117.5	410	35	28	24	615	208	290	360	219	60	25	300	78	140	100	63	550	190	9
8045	741	230	398	185	135	470	40	30	28	700	225	320	400	235	60	28	349	95	170	100	79	620	280	12
8055	858	270	467	225	155	530	40	32	28	820	245	370	450	275	80	30	411	110	210	100	79	740	375	19
8065	974	305	540	250	175	595	50	35	35	935	275	430	530	301	80	35	440	125	210	117	92	840	580	31
8075	1122	340	630	275	200	665	60	40	42	1075	300	480	600	354	110	40	509	145	250	117	109	960	870	52
8085	1306	380	725	315	220	735	60	45	42	1260	320	550	670	374	110	45	582	165	300	117	126	1140	1240	68
8090	1480	410	795	345	285	937	60	50	42	1440	388	630	750	440	110	50	650	180	300	137	142	1320	2170	110
8095	1540	440	825	375	285	937	60	50	42	1500	388	680	800	440	110	50	700	190	350	137	142	1380	2430	140
8100	1654	450	901	375	325	1059	70	55	48	1610	428	710	850	515	140	60	740	200	350	137	162	1470	2920	170
8105	1723	485	935	410	325	1059	70	55	48	1680	428	760	900	515	140	60	740	220	350	137	162	1540	3400	210
8110	1854	500	1001	420	355	1152	75	60	56	1810	*	800	950	545	140	60	770	220	350	*	162	1660	4050	240
8115	1953	550	1050	470	355	1152	75	60	56	1910	*	850	1000	545	140	60	830	240	410	*	162	1760	4570	295

*This unit is equipped with a motor driven pump.

DIMENSIONS

QUADRUPLE REDUCTION

PARALLEL SHAFT



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	F	G	H	J	L	O	P	Q	R	S	T	U	V	X	Y	Y ₁	WT. lbf.	OIL QTY. GAL.
8120	92.13	28.35	50.787	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	22.83	5.51	2.500	34.06	10.000	16.14	7.76	25.98	37.40	13500	106
8125	92.13	28.35	50.787	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	22.83	5.51	2.500	36.42	11.000	18.50	7.76	25.98	37.40	13500	106
8130	109.45	31.50	61.024	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	26.77	5.51	2.875	40.35	11.750	18.50	8.90	25.98	48.43	21700	166
8135	109.45	31.50	61.024	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	26.77	5.51	2.875	40.35	12.500	18.50	8.90	25.98	48.43	21700	166

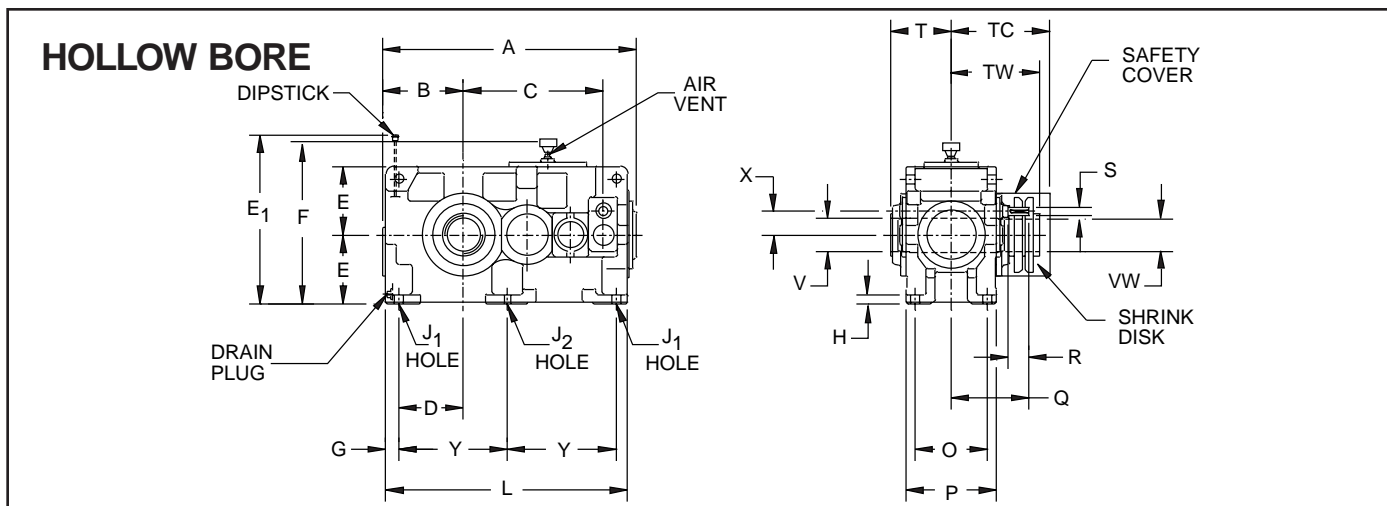
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	F	G	H	J	L	O	P	Q	R	S	T	U	V	X	Y	Y ₁	WT. kgf.	OIL QTY. LTR.
8120	2340	720	1290	330	580	1200	120	50	48	1850	680	790	580	140	65	865	260	410	197	660	950	6100	400
8125	2340	720	1290	330	580	1200	120	50	48	1850	680	790	580	140	65	925	280	470	197	660	950	6100	400
8130	2780	800	1550	330	630	1300	140	60	56	2170	850	980	680	140	75	1025	300	470	226	660	1230	9800	630
8135	2780	800	1550	330	630	1300	140	60	56	2170	850	980	680	140	75	1025	320	470	226	660	1230	9800	630

NOTE: Housings in fabricated steel.

DIMENSIONS QUADRUPLE REDUCTION PARALLEL SHAFT



INCH DIMENSIONS

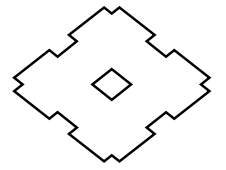
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	X	Y	2Y	WT. lbf.	OIL QTY. GAL.
8035	25.35	8.07	13.504	6.50	7.09	18.94	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	8.64	2.38	0.875	6.30	9.96	9.17	3.250	3.125	2.480	-	21.65	450	3.2
8045	29.17	9.06	15.669	7.28	7.87	21.10	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	9.25	2.36	1.000	7.09	11.22	10.55	3.750	3.625	3.110	-	24.41	620	4.8
8055	33.78	10.63	18.386	8.86	8.86	23.39	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	10.81	3.13	1.125	7.87	12.60	11.93	4.375	4.250	3.110	14.57	29.13	920	7.4
8065	38.35	12.01	21.260	9.84	10.43	27.24	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	11.81	3.11	1.250	9.06	14.37	13.90	5.125	5.000	3.622	16.54	33.07	1390	11.4
8075	44.17	13.39	24.803	10.83	11.81	30.55	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	13.98	4.37	1.375	10.24	15.94	15.12	6.000	5.875	4.291	18.90	37.80	2010	16.4
8085	51.42	14.96	28.543	12.40	13.19	34.21	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	14.76	4.37	1.625	11.22	17.72	16.89	6.875	6.750	4.961	22.44	44.88	2870	23.8
8090	58.27	16.14	31.299	13.58	14.76	37.17	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	17.32	4.33	1.875	13.78	20.28	19.45	7.500	7.375	5.591	25.98	51.97	4750	40
8095	60.63	17.32	32.480	14.76	15.75	39.33	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	17.32	4.33	1.875	13.78	20.59	20.04	8.000	7.875	5.591	27.17	54.33	5300	48
8100	65.12	17.72	35.472	14.76	16.73	41.65	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	20.28	5.51	2.250	15.35	22.24	21.42	8.375	8.250	6.378	28.94	57.87	6250	58
8105	67.83	19.09	36.811	16.14	17.72	43.82	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	20.28	5.51	2.250	15.35	22.76	22.01	8.875	8.625	6.378	30.31	60.63	7480	69
8110	72.99	19.69	39.409	16.54	18.70	45.98	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	21.46	5.51	2.250	16.54	24.61	24.02	9.500	9.375	6.378	32.68	65.35	8960	79
8115	76.89	21.65	41.339	18.50	19.69	47.91	42.87	2.95	2.36	2.20	2.20	75.70	24.02	27.95	21.46	5.51	2.250	16.54	25.98	25.39	10.000	9.875	6.378	34.65	69.29	9950	96

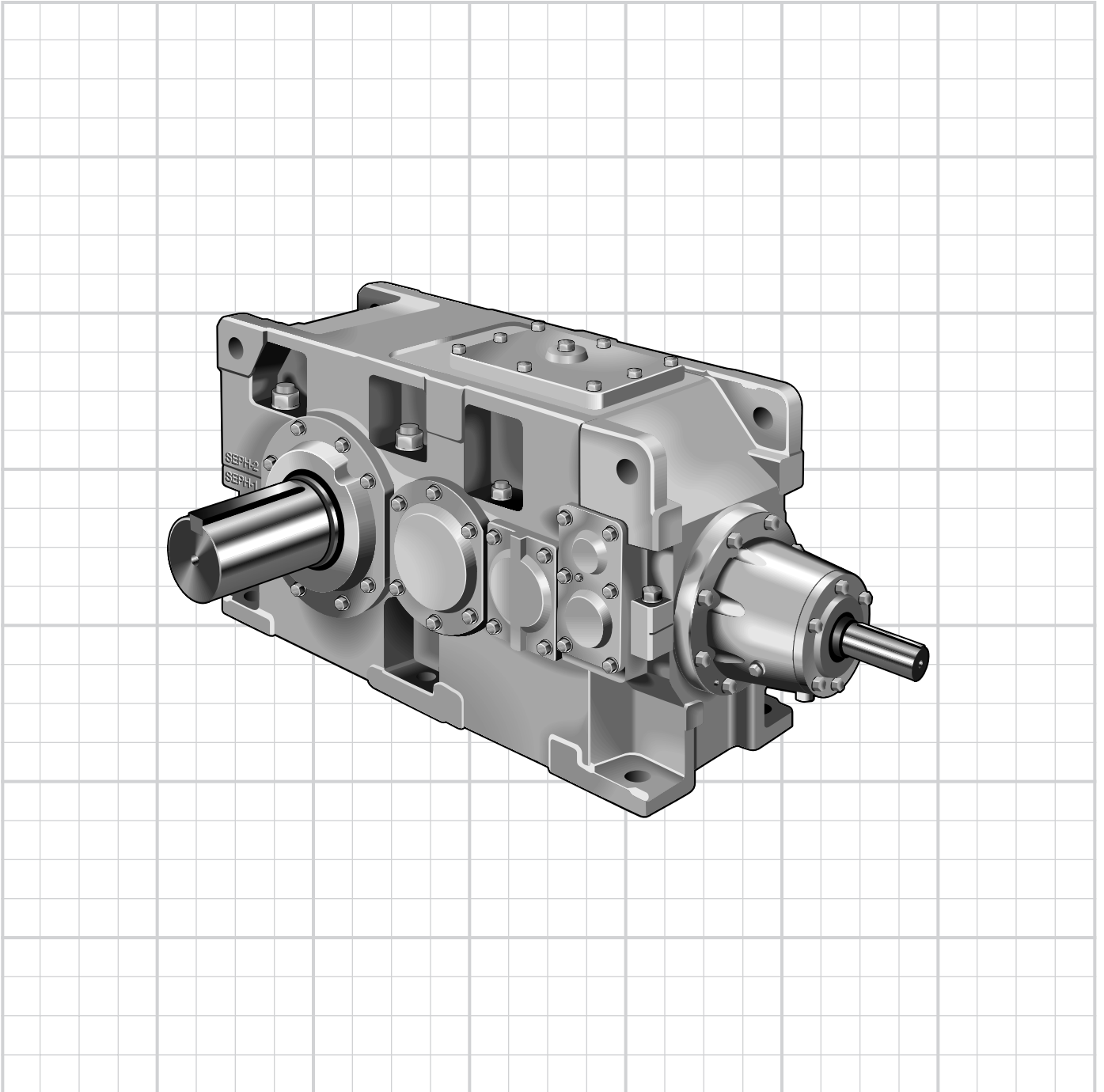
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	Q	R	S	T	TC	TW	V	VW	X	Y	2Y	WT. kgf.	OIL QTY. LIT.
8035	644	205	343	165	180	481	449	35	28	24	-	615	190	235	219	60	25	160	253	233	83	80	63	-	550	200	12
8045	741	230	398	185	200	536	489	40	30	28	-	700	215	270	235	60	28	180	285	268	98	95	79	-	620	280	18
8055	858	270	467	225	225	594	539	40	32	28	24	820	255	310	275	80	30	200	320	303	108	105	79	370	740	415	28
8065	974	305	540	250	265	692	619	50	35	35	24	935	280	350	301	80	35	230	365	353	128	125	92	420	840	630	43
8075	1122	340	630	275	300	776	689	60	40	42	28	1075	320	400	354	110	40	260	405	384	148	145	109	480	960	910	62
8085	1306	380	725	315	335	869	759	60	45	42	35	1260	360	440	374	110	45	285	450	429	173	170	126	570	1140	1300	90
8090	1480	410	795	345	375	944	839	60	50	42	42	1440	480	570	440	110	50	350	515	494	193	190	142	660	1320	2150	150
8095	1540	440	825	375	400	999	889	60	50	42	42	1500	480	570	440	110	50	350	523	509	203	200	142	690	1380	2400	180
8100	1654	450	901	375	425	1058	939	70	55	48	48	1610	560	650	515	140	60	390	565	544	213	210	162	735	1470	2830	220
8105	1723	485	935	410	450	1113	989	70	55	48	48	1680	560	650	515	140	60	390	578	559	223	220	162	770	1540	3390	260
8110	1854	500	1001	420	475	1168	1039	75	60	56	56	1810	610	710	545	140	60	420	625	610	243	240	162	830	1660	4060	300
8115	1953	550	1050	470	500	1217	1089	75	60	56	56	1910	610	710	545	140	60	420	660	645	253	250	162	880	1760	4510	365



RIGHT ANGLE Double Reduction



RATING TABLES

DOUBLE REDUCTION

RIGHT ANGLE
SPIRAL BEVEL

EXACT RATIOS

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	6.265	6.049	6.539	6.405	6.384	6.187	6.187	6.286						
7.1	7.246	6.903	7.049	7.309	7.268	7.210	6.933	6.933						
8	7.889	8.056	8.118	7.778	8.125	7.875	8.082	8.190						
9	9.125	9.192	8.750	8.875	9.250	9.176	9.056	9.034		9.000		9.000		8.947
10	10.040	9.899	10.303	10.171	10.000	9.995	10.125	9.882		9.765		9.765		10.235
11.2	11.614	11.295	11.106	11.606	11.385	11.647	11.345	10.900		11.382		11.382		11.302
12.5	12.162	12.020	12.545	12.727	12.188	12.469	12.797	12.923		12.349		12.349		12.929
14	14.068	13.716	13.523	14.523	13.875	14.529	14.338	14.253		14.143		14.344		14.260
16	15.778	15.988	16.235	15.556	15.881	15.392	15.750	16.000		15.345		15.562		16.312
18	18.250	18.243	17.500	17.750	18.080	17.936	17.647	17.647		18.000		18.000		17.895
20										19.529		19.529		20.471

INERTIA - WR²Units: lb-in²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	14.4	27.6	53.5	114	226	499	1029	1718						
7.1	13.7	25.6	51.9	107	212	462	963	1623						
8	9.82	17.3	46.6	96.5	206	446	866	1642						
9	9.40	16.2	45.6	91.7	197	423	828	1586		4031		7634		14204
10	7.52	16.7	37.8	68.7	168	335	694	1361		3959		7503		13586
11.2	7.18	16.0	37.2	65.9	162	321	669	1322		2976		5725		10605
12.5	6.41	13.3	28.7	47.2	122	236	475	915		2931		5643		10217
14	6.24	12.8	28.3	45.4	118	227	460	892		2182		4166		7807
16	4.61	8.80	19.8	36.5	83.1	176	348	664		2153		4115		7563
18	4.44	8.54	19.6	35.3	80.8	170	337	649		1586		3054		5732
20										1568		3021		5578

INERTIA - mR²Units: kg-m²

NOMINAL RATIO	8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	0.0042	0.0081	0.016	0.033	0.066	0.146	0.301	0.503						
7.1	0.0040	0.0075	0.015	0.031	0.062	0.135	0.282	0.475						
8	0.0029	0.0051	0.014	0.028	0.060	0.130	0.254	0.481						
9	0.0028	0.0048	0.013	0.027	0.058	0.124	0.242	0.464		1.180		2.234		4.157
10	0.0022	0.0049	0.011	0.020	0.049	0.098	0.203	0.398		1.159		2.196		3.976
11.2	0.0021	0.0047	0.011	0.019	0.048	0.094	0.196	0.387		0.871		1.675		3.103
12.5	0.0019	0.0039	0.0084	0.014	0.036	0.069	0.139	0.268		0.858		1.651		2.990
14	0.0018	0.0038	0.0083	0.013	0.035	0.066	0.135	0.261		0.639		1.219		2.285
16	0.0014	0.0026	0.0058	0.011	0.024	0.051	0.102	0.194		0.630		1.204		2.213
18	0.0013	0.0025	0.0057	0.010	0.024	0.050	0.099	0.190		0.464		0.894		1.678
20										0.459		0.884		1.632

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$.

RATING TABLES

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

MECHANICAL RATINGS - S.F. 1.0

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (hp)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1800	286	100	131	203	317	448	762	1070	1360						
	1200	190	68	87	136	212	300	511	718	923						
	900	143	51	66	102	160	226	385	541	695						
7.1	1800	254	83	131	203	305	448	750	1070	1360						
	1200	169	56	87	136	205	300	506	718	923						
	900	127	42	66	102	155	226	382	541	695						
8	1800	225	77	102	187	291	456	730	1080	1540						
	1200	150	51	68	126	194	307	502	762	1110						
	900	113	39	51	95	145	232	376	575	846						
9	1800	200	66	102	169	253	376	594	944	1430		2070				
	1200	133	45	68	113	170	253	400	636	969		1500		1900		2820
	900	100	33	51	85	128	191	302	481	732		1180		1550		2300
10	1800	180	60	98	148	216	372	582	907	1340		1950				
	1200	120	40	65	99	144	251	388	612	932		1420		1900		2760
	900	90	30	49	74	107	189	291	462	704		1110		1550		2170
11.2	1800	161	52	84	134	194	307	471	758	1190		1640		2110		3270
	1200	107	35	56	90	131	206	317	511	807		1170		1580		2380
	900	80	26.6	42	67	98	155	239	386	610		923		1300		1860
12.5	1800	144	51	79	119	164	302	433	687	982		1580		2110		3090
	1200	96	34	53	79	110	201	290	460	658		1120		1580		2190
	900	72	25.8	39	59	82	151	218	346	495		885		1300		1720
14	1800	129	43	70	110	156	253	380	604	922		1330		1720		2650
	1200	86	29.3	47	74	105	170	255	406	621		947		1290		1890
	900	64	22.1	35	56	78	128	192	306	469		743		1050		1480
16	1800	113	37	57	90	129	227	350	500	731		1270		1720		2470
	1200	75	25.3	38	60	86	151	234	335	490		909		1290		1750
	900	56	19	28.8	45	65	113	176	252	368		713		1050		1360
18	1800	100	33	52	85	127	195	309	493	731		1050		1390		2140
	1200	67	22.7	35	57	85	131	207	332	490		750		1050		1510
	900	50	17.1	26.8	43	63	99	156	250	368		589		861		1190
20	1800	90										1010		1390		1990
	1200	60										721		1050		1400
	900	45										566		850		1110

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (kW)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1500	238	63	81	127	197	279	475	667	857						
	1000	159	42	54	85	132	187	318	447	575						
	750	119	31	41	64	99	141	240	337	433						
7.1	1500	211	52	81	127	191	279	469	667	857						
	1000	141	35	54	85	128	187	316	447	575						
	750	106	26.5	41	64	97	141	238	337	433						
8	1500	188	48	63	117	181	285	467	705	1010						
	1000	125	32	42	78	120	191	312	476	699						
	750	94	24.2	31	59	90	144	234	359	528						
9	1500	167	41	63	105	158	234	371	590	897		1350		1660		1850
	1000	111	28.1	42	71	106	158	250	397	605		964		1250		1500
	750	83	21.1	31	53	80	119	188	300	457		756		998		1180
10	1500	150	37	61	92	134	232	362	567	863		1280		1660		2460
	1000	100	25	40	62	89	156	241	382	582		911		1250		1771
	750	75	18.8	30	46	67	118	181	288	439		716		998		1391
11.2	1500	134	33	52	83	121	191	294	473	748		1050		1380		2140
	1000	89	22.1	35	56	81	129	198	319	504		752		1040		1520
	750	67	16.7	26.8	42	61	97	149	240	380		590		833		1200
12.5	1500	120	32	49	74	102	188	269	428	612		1010		1380		1980
	1000	80	21.4	33	49	68	125	180	286	410		721		1040		1410
	750	60	16.1	24.8	37	51	94	136	215	308		566		830		1110
14	1500	107	27.3	43	69	97	158	237	377	576		852		1130		1700
	1000	71	18.3	29.4	46	65	106	159	253	388		605		850		1210
	750	54	13.8	22.1	34	49	80	120	191	292		475		678		952
16	1500	94	23.6	35	56	80	141	218	311	455		817		1130		1580
	1000	63	15.8	23.9	37	54	94	146	208	305		581		850		1125
	750	47	11.9	17.9	28.2	40	70	109	157	229		456		662		883
18	1500	83	21.1	33	53	79	122	193	308	455		675		918		1370
	1000	56	14.2	22.2	36	53	81	129	207	305		480		691		975
	750	42	10.7	16.7	27.1	39	61	97	156	229		376		551		765
20	1500	75										648		918		1270
	1000	50										461		691		905
	750	38										362		530		711

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
2. When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

TORQUE RATINGS - S.F. 1.0

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1800	286	22.0	27.9	47	71	100	165	232	303						
	1200	190	22.4	28.0	47	72	101	166	233	305						
	900	143	22.5	28.0	47	72	101	167	235	306						
7.1	1800	254	21.3	32	50	78	114	190	260	334						
	1200	169	21.5	32	51	79	115	192	262	336						
	900	127	21.6	32	51	80	115	193	263	338						
8	1800	225	21.4	28.8	53	80	130	201	307	444						
	1200	150	21.5	28.9	54	79	131	208	324	481						
	900	113	21.6	29.0	54	79	132	208	326	485						
9	1800	200	21.4	33	52	79	122	191	299	454		656		799		1178
	1200	133	21.6	33	52	79	123	193	303	460		712		902		1330
	900	100	21.7	33	53	80	124	194	305	464		746		983		1450
10	1800	180	21.3	34	54	77	131	204	322	467		673		866		1346
	1200	120	21.2	34	54	77	132	204	326	484		731		978		1489
	900	90	21.2	34	54	77	133	204	328	488		765		1067		1559
11.2	1800	161	21.5	34	52	79	122	192	301	457		659		843		1295
	1200	107	21.7	34	53	80	124	194	305	462		703		953		1419
	900	80	21.7	34	53	80	124	195	307	466		736		1038		1485
12.5	1800	144	21.9	34	53	73	129	189	308	444		686		915		1403
	1200	96	22.0	34	53	74	129	190	310	447		731		1033		1501
	900	72	22.0	34	53	74	129	191	311	449		766		1127		1571
14	1800	129	21.6	34	52	80	123	193	303	461		660		865		1328
	1200	86	21.7	34	53	80	124	195	306	465		704		977		1421
	900	64	21.8	34	53	80	125	196	308	469		737		1065		1487
16	1800	113	21.0	32	52	71	127	189	276	410		687		938		1412
	1200	75	21.0	32	52	71	127	190	278	412		733		1060		1507
	900	56	21.0	32	52	71	127	190	278	413		767		1155		1577
18	1800	100	21.7	34	53	79	124	194	305	452		665		882		1343
	1200	67	21.9	34	53	80	125	196	308	454		709		996		1433
	900	50	21.9	34	53	80	125	197	309	456		743		1086		1500
20	1800	90										693		957		1427
	1200	60										740		1081		1523
	900	45										774		1163		1594

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)													
			8015	8025	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115
6.3	1500	238	2.5	3.2	5.3	8.1	11.4	18.7	26.3	34						
	1000	159	2.5	3.2	5.3	8.1	11.4	18.8	26.5	35						
	750	119	2.5	3.2	5.3	8.1	11.5	18.9	26.6	35						
7.1	1500	211	2.4	3.6	5.7	8.9	12.9	21.5	29.5	38						
	1000	141	2.4	3.6	5.7	9.0	13.0	21.8	29.6	38						
	750	106	2.4	3.6	5.8	9.0	13.0	21.9	29.8	38						
8	1500	188	2.4	3.3	6.1	9.0	14.7	23.4	36	53						
	1000	125	2.4	3.3	6.1	9.0	14.9	23.5	37	55						
	750	94	2.4	3.3	6.2	9.0	15.0	23.5	37	55						
9	1500	167	2.4	3.7	5.9	8.9	13.8	21.7	34	52		78		95		141
	1000	111	2.4	3.7	5.9	9.0	14.0	21.9	34	52		83		108		159
	750	83	2.5	3.7	6.0	9.1	14.1	22.0	35	53		87		114		171
10	1500	150	2.4	3.9	6.1	8.7	14.8	23.0	37	54		80		103		161
	1000	100	2.4	3.9	6.1	8.7	15.0	23.0	37	55		85		117		173
	750	75	2.4	3.9	6.1	8.7	15.1	23.0	37	55		89		124		181
11.2	1500	134	2.4	3.8	5.9	9.0	13.9	21.8	34	52		77		101		155
	1000	89	2.5	3.8	6.0	9.1	14.0	22.0	35	52		82		114		165
	750	67	2.5	3.9	6.0	9.1	14.1	22.2	35	53		86		121		173
12.5	1500	120	2.5	3.8	5.9	8.3	14.6	21.4	35	50		80		109		164
	1000	80	2.5	3.8	5.9	8.3	14.6	21.5	35	51		85		123		175
	750	60	2.5	3.8	5.9	8.3	14.6	21.6	35	51		89		131		183
14	1500	107	2.4	3.8	5.9	9.0	14.0	21.9	34	52		77		103		155
	1000	71	2.5	3.9	6.0	9.1	14.1	22.1	35	53		82		117		165
	750	54	2.5	3.9	6.0	9.1	14.2	22.2	35	53		86		124		173
16	1500	94	2.4	3.6	5.8	8.0	14.3	21.4	31	46		80		112		164
	1000	63	2.4	3.6	5.8	8.0	14.3	21.5	31	47		85		126		175
	750	47	2.4	3.6	5.8	8.0	14.3	21.5	32	47		89		131		183
18	1500	83	2.5	3.8	6.0	9.0	14.0	22.0	35	51		77		105		156
	1000	56	2.5	3.9	6.0	9.0	14.1	22.0	35	51		83		119		167
	750	42	2.5	3.9	6.0	9.0	14.2	22.3	35	52		86		126		174
20	1500	75										81		114		166
	1000	50										86		129		177
	750	38										90		132		185

RATING TABLES

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - HORIZONTAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)										
			8015	8025	8035	8045	8055	8065	8075	8085	8095	8105	8115
6.3 - 9	1800	-	38	47	59	74	96	119	151	178			
		1	62	78	97	122	159	196	249	293			
	1200	-	38	48	64	82	112	145	191	236	•	•	
		1	63	79	105	136	184	240	315	389	410	460	
10 - 14	1800	-	32	44	56	71	95	123	160	189	•		
		1	54	72	93	118	157	203	264	312	490		
	1200	-	32	43	57	73	102	135	179	232	295	362	
		1	52	71	94	120	169	223	295	382	440	540	590
16 - 20	1800	-	29	40	52	66	90	117	158	203	•		
		1	48	65	86	109	149	193	260	335	490		
	1200	-	27	38	51	65	91	121	165	216	295	362	
		1	45	62	84	108	150	199	272	356	440	540	590
16 - 20	900	-	25	35	48	62	88	117	161	213	282	362	443
		1	42	58	80	103	144	194	266	351	370	470	550

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)										
			8015	8025	8035	8045	8055	8065	8075	8085	8095	8105	8115
6.3 - 9	1500	-	29	36	46	59	79	100	130	157	•		
		1	47	59	76	97	130	165	214	260	370		
	1000	-	28	35	47	62	84	111	147	184	200	•	•
		1	46	58	78	102	139	184	243	304	420	490	490
10 - 14	750	-	26	33	46	60	83	112	149	188	210	270	310
		1	43	55	76	99	137	184	245	310	360	450	530
	1500	-	24	33	43	54	75	98	130	160	200	•	•
		1	40	54	71	90	124	162	214	263	480	560	570
16 - 20	1000	-	23	31	42	53	76	100	133	174	210	280	320
		1	37	52	69	88	125	165	220	287	400	500	570
	750	-	21	29	40	51	73	97	130	170	190	250	320
		1	35	48	65	83	120	160	214	281	330	420	500
16 - 20	1500	-	21	29	39	50	69	90	122	158	200	•	•
		1	35	48	64	82	113	148	201	261	480	560	570
	1000	-	19	27	37	47	67	89	122	160	210	280	320
		1	32	45	61	78	110	147	201	264	400	500	570
16 - 20	750	-	18	25	34	44	63	85	117	155	190	250	320
		1	29	41	57	73	104	140	192	255	330	420	500

- NOTES:**
- Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 - For input speeds between the given values, obtain the thermal rating by interpolation.
 - Auxiliary cooling device required.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

$$\text{Adjusted Thermal HP} = \text{Rated Thermal HP} \times T_a$$

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

RATING TABLES

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)							
			8015	8025	8035	8045	8055	8065	8075	8085
6.3 - 9	1800	-	38	47	59	74	96	119	151	178
		1	63	78	97	122	159	196	249	293
	1200	-	38	48	64	82	112	145	191	236
		1	63	79	105	136	184	240	315	389
	900	-	36	46	63	82	113	150	199	250
		1	60	77	104	136	186	248	329	413
10 - 14	1800	-	32	44	56	71	95	123	160	189
		1	54	72	93	118	157	203	264	312
	1200	-	32	43	57	73	102	135	179	232
		1	52	71	94	120	169	223	295	382
	900	-	30	41	55	70	100	133	178	232
		1	49	68	91	116	166	220	293	383
16 - 20	1800	-	29	40	52	66	90	117	158	203
		1	48	65	86	109	149	193	260	335
	1200	-	27	38	51	65	91	121	165	216
		1	45	62	84	108	150	199	272	356
	900	-	25	35	48	62	88	117	161	213
		1	42	58	80	103	144	194	266	351

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)							
			8015	8025	8035	8045	8055	8065	8075	8085
6.3 - 9	1500	-	29	36	46	59	79	100	130	157
		1	47	59	76	97	130	165	214	260
	1000	-	28	35	47	62	84	111	147	184
		1	46	58	78	102	139	184	243	304
	750	-	26	33	46	60	83	112	149	188
		1	43	55	76	99	137	184	245	310
10 - 14	1500	-	24	33	43	54	75	98	130	160
		1	40	54	71	90	124	162	214	263
	1000	-	23	31	42	53	76	100	133	174
		1	37	52	69	88	125	165	220	287
	750	-	21	29	40	51	73	97	130	170
		1	35	48	65	83	120	160	214	281
16 - 20	1500	-	21	29	39	50	69	90	122	158
		1	35	48	64	82	113	148	201	261
	1000	-	19	27	37	47	67	89	122	160
		1	32	45	61	78	110	147	201	264
	750	-	18	25	34	44	63	85	117	155
		1	29	41	57	73	104	140	192	255

NOTES: 1. Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR below.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

AMBIENT TEMPERATURE FACTOR FOR THERMAL HP RATINGS: Ta

Thermal horsepower ratings cataloged in the rating tables are based on a 70°F ambient temperature. For other ambient temperatures, an adjusted thermal horsepower rating should be calculated as follows:

$$\text{Adjusted Thermal HP} = \text{Rated Thermal HP} \times T_a$$

AMBIENT TEMPERATURE	FACTOR Ta	
	WITHOUT FAN	WITH FAN
Below 70°F (20°C)	1.00	1.00
85°F (30°C)	0.85	0.87
105°F (40°C)	0.70	0.73
120°F (50°C)	0.55	0.60

ALTITUDE FACTOR Th

Thermal ratings are valid for installations from sea level to 2500 ft. A.S.L. For other altitudes adjust thermal ratings per factor Th.

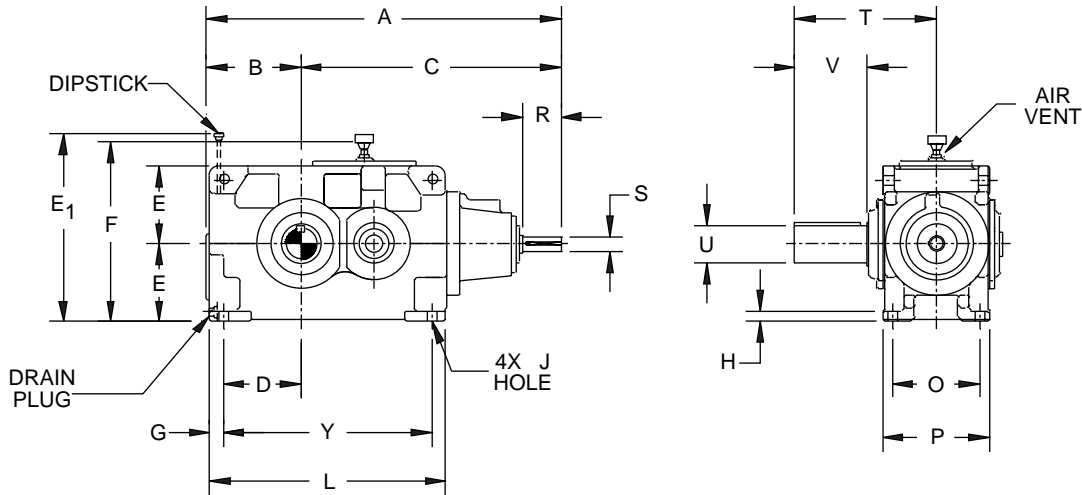
ALTITUDE	FACTOR Th	ALTITUDE	Th FACTOR
0-2500	1.0	10000-12500	.81
2500-5000	.95	12500-15000	.76
5000-7500	.90	15000-17500	.72
7500-10000	.85	17500-20000	.68

DIMENSIONS

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, HORIZONTAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J	L	O	P	R	S	T	U	V	Y	WT. lbf.	OIL QTY. GAL.
8015	25.67	6.50	19.17	5.51	5.51	15.91	14.53	0.98	0.87	0.59	15.75	5.91	7.28	2.36	1.125	9.67	2.250	4.35	13.78	200	1.3
8025	28.74	7.28	21.46	5.91	6.30	17.72	16.10	1.38	0.98	0.75	17.72	6.69	8.27	3.15	1.375	11.22	2.625	5.51	15.16	290	1.8
8035	33.46	8.07	25.39	6.50	7.09	19.92	17.68	1.38	1.10	0.94	19.88	7.48	9.25	4.33	1.500	11.83	3.000	5.53	17.32	400	2.4
8045	36.81	9.06	27.76	7.28	7.87	22.32	19.25	1.57	1.18	1.10	22.64	8.46	10.63	4.33	1.750	13.80	3.500	6.75	19.49	600	3.2
8055	40.35	10.63	29.72	8.86	8.86	24.96	21.22	1.57	1.26	1.10	26.97	10.04	12.20	4.33	2.000	16.16	4.125	8.25	23.82	840	5.3
8065	46.06	12.01	34.06	9.84	10.43	28.98	24.37	1.97	1.38	1.38	30.12	11.02	13.78	5.51	2.375	17.32	4.875	8.27	26.38	1300	7.4
8075	51.38	13.39	37.99	10.83	11.81	32.52	27.13	2.36	1.57	1.65	34.65	12.60	15.75	5.51	2.500	20.08	5.625	9.88	29.92	2010	11.1
8085	57.48	14.96	42.52	12.40	13.19	36.18	29.88	2.36	1.77	1.65	39.76	14.17	17.32	5.51	2.875	22.83	6.375	11.73	35.04	2780	16.1

METRIC DIMENSIONS

Units: mm

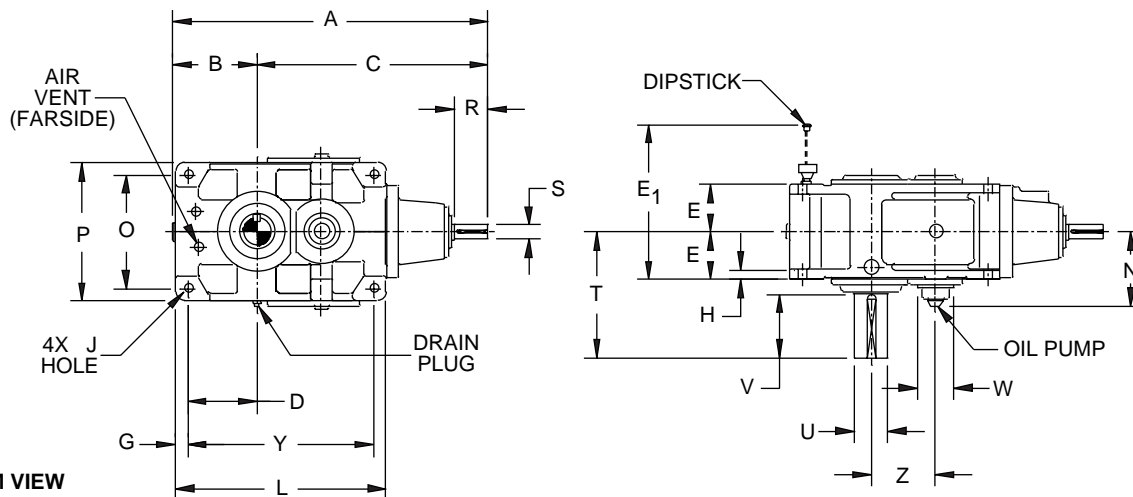
MODEL	A	B	C	D	E	E ₁	F	G	H	J	L	O	P	R	S	T	U	V	Y	WT. kgf.	OIL QTY. LTR.
8015	652	165	487	140	140	404	369	25	22	15	400	150	185	60	28	245	58	110	350	90	5
8025	730	185	545	150	160	450	409	35	25	19	450	170	210	80	35	285	70	140	385	130	7
8035	850	205	645	165	180	506	449	35	28	24	505	190	235	110	40	300	78	140	440	180	9
8045	935	230	705	185	200	567	489	40	30	28	575	215	270	110	45	349	95	170	495	270	12
8055	1025	270	755	225	225	634	539	40	32	28	685	255	310	110	50	411	110	210	605	380	20
8065	1170	305	865	250	265	736	619	50	35	35	765	280	350	140	60	440	125	210	670	590	28
8075	1305	340	965	275	300	826	689	60	40	42	880	320	400	140	65	509	145	250	760	910	42
8085	1460	380	1080	315	335	919	759	60	45	42	1010	360	440	140	75	582	165	300	890	1260	61

DIMENSIONS

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, VERTICAL



BOTTOM VIEW

INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. lbf.	OIL QTY. GAL.
8015	25.67	6.50	19.17	5.51	3.64	13.23	0.79	0.87	0.59	15.35	7.32	9.45	11.02	2.36	1.125	9.67	2.250	4.35	3.94	13.78	4.53	220	0.8
8025	28.74	7.28	21.46	5.91	4.13	14.88	1.18	0.98	0.75	17.52	7.80	10.24	12.60	3.15	1.375	11.22	2.625	5.51	3.94	15.16	5.31	310	1.1
8035	33.46	8.07	25.39	6.50	4.63	16.50	1.38	1.10	0.94	19.88	8.70	11.42	14.17	4.33	1.500	11.83	3.000	5.53	4.61	17.32	6.10	440	1.3
8045	36.81	9.06	27.76	7.28	5.31	18.86	1.57	1.18	1.10	22.64	9.41	12.60	15.75	4.33	1.750	13.80	3.500	6.75	4.61	19.49	7.09	640	1.8
8055	40.35	10.63	29.72	8.86	6.10	21.42	1.57	1.26	1.10	26.97	10.20	14.57	17.72	4.33	2.000	16.16	4.125	8.25	5.39	23.82	8.27	900	2.9
8065	46.06	12.01	34.06	9.84	6.89	24.06	1.97	1.38	1.38	30.12	10.98	16.93	20.87	5.51	2.375	17.32	4.875	8.27	5.39	26.38	9.65	1390	4.5
8075	51.38	13.39	37.99	10.83	7.87	27.32	2.36	1.57	1.65	34.65	12.20	18.90	23.62	5.51	2.500	20.08	5.625	9.88	5.39	29.92	11.22	2140	6.1
8085	57.48	14.96	42.52	12.40	8.66	30.00	2.36	1.77	1.65	39.76	12.99	21.65	26.38	5.51	2.875	22.83	6.375	11.73	5.39	35.04	12.99	2980	7.4

METRIC DIMENSIONS

Units: mm

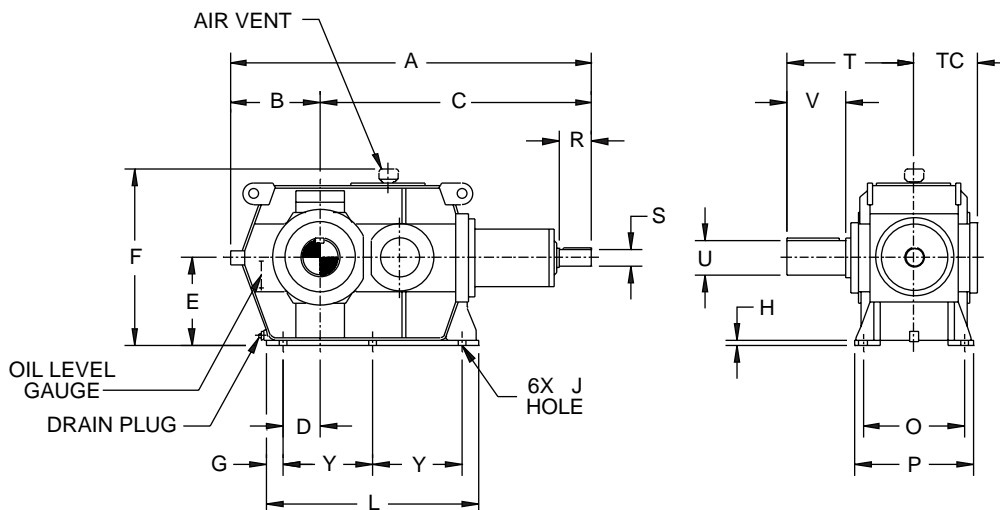
MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. kgf.	OIL QTY. LTR.
8015	652	165	487	140	92.5	336	20	22	15	390	186	240	280	60	28	245	58	110	100	350	115	100	3
8025	730	185	545	150	105	378	30	25	19	445	198	260	320	80	35	285	70	140	100	385	135	140	4
8035	850	205	645	165	117.5	419	35	28	24	505	221	290	360	110	40	300	78	140	117	440	155	200	5
8045	935	230	705	185	135	479	40	30	28	575	239	320	400	110	45	349	95	170	117	495	180	290	7
8055	1025	270	755	225	155	544	40	32	28	685	259	370	450	110	50	411	110	210	137	605	210	410	11
8065	1170	305	865	250	175	611	50	35	35	765	279	430	530	140	60	440	125	210	137	670	245	630	17
8075	1305	340	965	275	200	694	60	40	42	880	310	480	600	140	65	509	145	250	137	760	285	970	23
8085	1460	380	1080	315	220	762	60	45	42	1010	330	550	670	140	75	582	165	300	137	890	330	1350	28

DIMENSIONS

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, SIZES 8095-8115



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	TC	U	V	Y	WT. lb.	OIL QTY. GAL.
8095	72.95	18.11	54.84	7.48	17.72	35.24	3.35	1.06	1.65	42.91	20.47	24.02	6.69	3.500	27.56	20.51	7.375	13.78	18.11	4520	26.4
8105	82.24	19.69	62.56	8.27	19.69	39.17	3.54	1.06	1.65	48.03	22.44	25.98	8.27	3.875	29.13	22.74	8.375	13.78	20.47	6170	40
8115	92.99	22.05	70.94	9.45	22.05	44.09	3.94	1.34	1.89	54.72	24.80	28.74	8.27	4.250	32.68	26.06	9.375	16.14	23.43	8380	53

METRIC DIMENSIONS

Units: mm

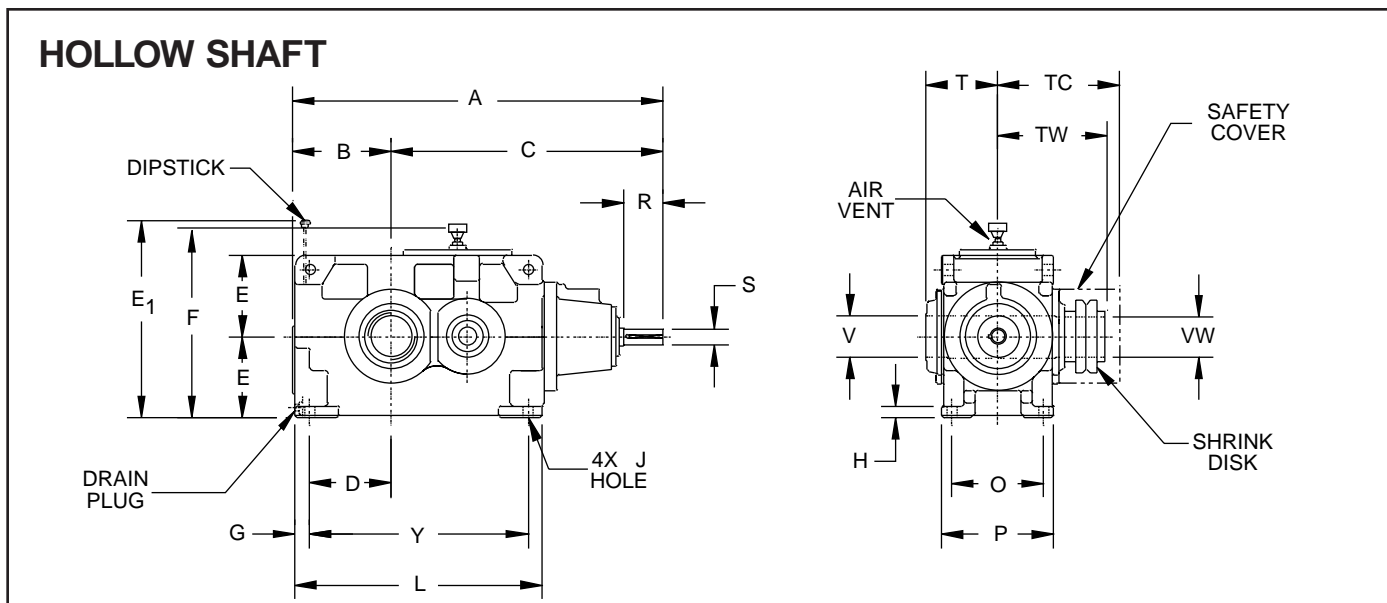
MODEL	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	TC	U	V	Y	WT. kgf.	OIL QTY. LTR.
8095	1853	460	1393	190	450	895	85	27	42	1090	520	610	170	90	700	521	190	350	460	2050	100
8105	2089	500	1589	210	500	995	90	27	42	1220	570	660	210	100	740	578	220	350	520	2800	150
8115	2362	560	1802	240	560	1120	100	34	48	1390	630	730	210	110	830	662	240	410	595	3800	200

NOTE: Housings in fabricated steel.

DIMENSIONS

DOUBLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL



INCH DIMENSIONS

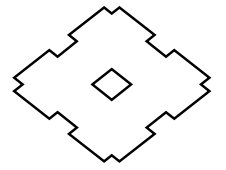
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J	L	O	P	R	S	T	TC	TW	V	VW	Y	WT. lbf.	OIL QTY. GAL.
8015	25.67	6.50	19.17	5.51	5.51	15.91	14.53	0.98	0.87	0.59	15.75	5.91	7.28	2.36	1.125	5.31	8.19	7.60	2.500	2.375	13.78	200	1.3
8025	28.74	7.28	21.46	5.91	6.30	17.72	16.10	1.38	0.98	0.75	17.72	6.69	8.27	3.15	1.375	5.71	9.06	8.39	2.875	2.750	15.16	290	1.8
8035	33.46	8.07	25.39	6.50	7.09	19.92	17.68	1.38	1.10	0.94	19.88	7.48	9.25	4.33	1.500	6.30	9.96	9.17	3.250	3.125	17.32	400	2.4
8045	36.81	9.06	27.76	7.28	7.87	22.32	19.25	1.57	1.18	1.10	22.64	8.46	10.63	4.33	1.750	7.09	11.22	10.55	3.750	3.625	19.49	600	3.2
8055	40.35	10.63	29.72	8.86	8.86	24.96	21.22	1.57	1.26	1.10	26.97	10.04	12.20	4.33	2.000	7.87	12.60	11.93	4.375	4.250	23.82	840	5.3
8065	46.06	12.01	34.06	9.84	10.43	28.98	24.37	1.97	1.38	1.38	30.12	11.02	13.78	5.51	2.375	9.06	14.37	13.90	5.125	5.000	26.38	1300	7.4
8075	51.38	13.39	37.99	10.83	11.81	32.52	27.13	2.36	1.57	1.65	34.65	12.60	15.75	5.51	2.500	10.24	15.94	15.12	6.000	5.875	29.92	2010	11.1
8085	57.48	14.96	42.52	12.40	13.19	36.18	29.88	2.36	1.77	1.65	39.76	14.17	17.32	5.51	2.875	11.22	17.72	16.89	6.875	6.750	35.04	2780	16.1

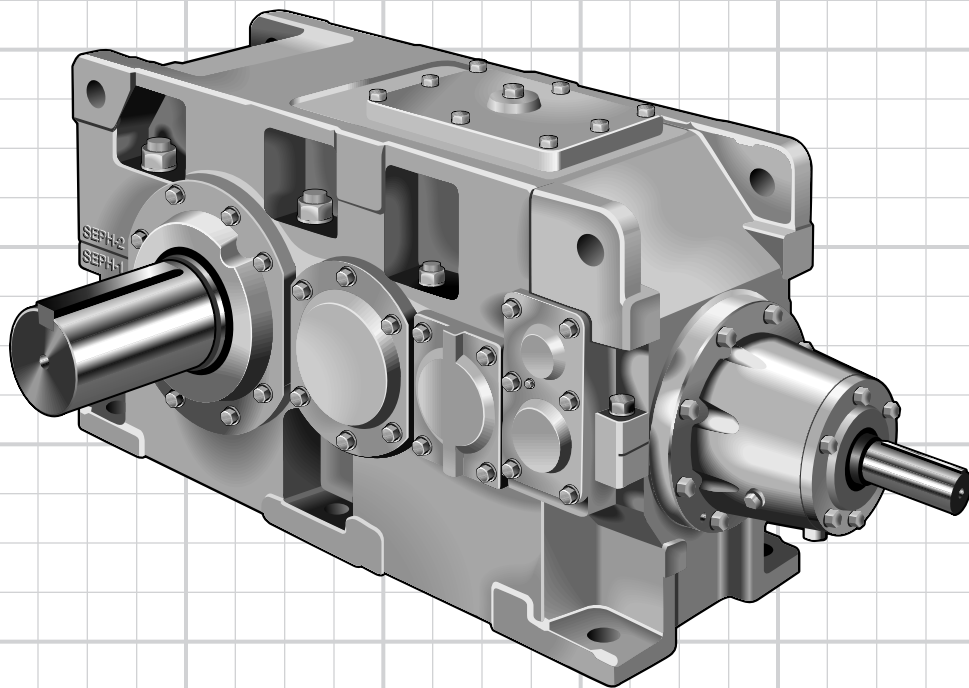
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J	L	O	P	R	S	T	TC	TW	V	VW	Y	WT. kgf.	OIL QTY. LTR.
8015	652	165	487	140	140	404	369	25	22	15	400	150	185	60	28	135	208	193	63	60	350	90	5
8025	730	185	545	150	160	450	409	35	25	19	450	170	210	80	35	145	230	213	73	70	385	130	7
8035	850	205	645	165	180	506	449	35	28	24	505	190	235	110	40	160	253	233	83	80	440	180	9
8045	935	230	705	185	200	567	489	40	30	28	575	215	270	110	45	180	285	268	98	95	495	270	12
8055	1025	270	755	225	225	634	539	40	32	28	685	255	310	110	50	200	320	303	108	105	605	380	20
8065	1170	305	865	250	265	736	619	50	35	35	765	280	350	140	60	230	365	353	128	125	670	590	28
8075	1305	340	965	275	300	826	689	60	40	42	880	320	400	140	65	260	405	384	148	145	760	910	42
8085	1460	380	1080	315	335	919	759	60	45	42	1010	360	440	140	75	285	450	429	173	170	890	1260	61



RIGHT ANGLE Triple Reduction



RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

EXACT RATIOS

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	20.091	19.620	19.790	19.181	19.950	20.206	20.548		20.504		19.608		19.858			
22.4	21.656	22.388	22.530	22.351	22.353	22.286	22.353	22.800	22.004	22.444	22.499	22.222	21.710			
25	25.137	24.444	25.935	25.137	24.937	24.630	25.685	24.737	25.271	24.351	24.166	25.421	25.328	24.833	25.038	
28	27.096	27.893	29.526	29.291	27.941	27.165	27.941	28.500	27.119	27.662	27.730	27.389	27.691	27.150	28.028	
31.5	32.455	31.694	31.969	30.157	31.129	32.280	32.063	30.922	32.716	30.012	31.413	31.331	31.993	31.673	31.627	31.037
35.5	34.983	36.165	36.395	35.140	34.879	35.603	34.879	35.576	35.108	35.811	36.045	35.601	34.978	34.628	35.403	34.743
40	40.607	39.487	41.895	39.520	38.912	39.346	40.078	38.599	40.322	38.853	38.716	40.726	40.462	40.008	39.904	39.204
45	43.770	45.058	47.695	46.051	43.599	43.397	43.599	44.471	43.271	44.136	44.425	43.878	44.237	43.741	44.669	43.885
50	51.141	49.941	51.869	50.273	49.500	48.889	50.984	48.249	50.875	47.886	48.680	50.194	50.275	50.599	50.076	49.465
56	55.125	56.987	59.051	58.582	55.462	53.922	55.462	56.571	54.596	55.687	55.857	55.170	54.965	55.320	56.055	55.371
63	63.986	62.222	64.640	63.984	63.000	62.222	64.889	61.378	63.843	60.419	61.300	63.112	63.986	62.870		62.074
71	68.971	71.000	73.590	74.559	70.588	68.627	70.588	72.000	68.512	69.882	70.339	69.474	69.956	68.736		69.485
80							77.090	78.118	77.451	75.820	83.128	79.474		80.017		
90								85.313		85.712		93.924		87.482		

INERTIA - WR²

Units: lb-in²

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	12.7	23.6	47.8	98.9	201	412	818		1568		3041		14708			
22.4	12.6	22.9	46.3	95.0	195	402	809	849	1546	1626	2962	3167	14024			
25	11.5	20.8	39.2	80.9	176	363	723	837	1368	1605	2647	3065	9235	14708	18470	
28	11.3	20.3	38.4	78.6	172	357	718	743	1354	1407	2596	2730	8893	13682	17102	
31.5	6.58	14.8	28.6	62.5	123	239	481	736	902	1393	1553	2665	5575	9492	13682	18813
35.5	6.50	14.5	28.0	60.9	120	235	477	493	893	925	1522	1601	5302	8722	12997	17102
40	5.99	13.8	25.2	55.2	112	220	442	489	823	917	1399	1560	4105	5644	9919	14024
45	5.99	13.5	25.0	54.3	110	217	439	450	818	839	1378	1430	3762	5165	9577	12998
50	3.93	7.95	19.0	41.0	81.7	165	242	447	464	833	1064	1406	3078	4105	8038	10056
56	3.93	7.87	18.8	40.4	80.7	164	240	246	461	608	1050	1084	2976	3831	7730	9372
63	3.76	7.52	14.5	30.5	58.9	119	227	245	433	605	770	1067	2223	3113		8140
71	3.76	7.44	14.3	30.2	58.3	118	226	230	431	437	763	783	2155	2907		7662
80							219	229	415	437	722	773		2223		
90								221		419		732		2121		

INERTIA - mR²

Units: kg-m²

NOMINAL RATIO	8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	0.0037	0.0069	0.014	0.029	0.059	0.120	0.239		0.458		0.889		4.300			
22.4	0.0037	0.0067	0.014	0.028	0.057	0.118	0.237	0.248	0.452	0.476	0.866	0.926	4.100			
25	0.0034	0.0061	0.011	0.024	0.051	0.106	0.212	0.245	0.400	0.469	0.774	0.896	2.700	4.300	5.40	
28	0.0033	0.0059	0.011	0.023	0.050	0.104	0.210	0.217	0.396	0.411	0.759	0.798	2.600	4.000	5.00	
31.5	0.0019	0.0043	0.0084	0.018	0.036	0.070	0.141	0.215	0.264	0.407	0.454	0.779	1.630	2.775	4.00	5.50
35.5	0.0019	0.0043	0.0082	0.018	0.035	0.069	0.139	0.144	0.261	0.270	0.445	0.468	1.550	2.550	3.80	5.00
40	0.0018	0.0040	0.0074	0.016	0.033	0.064	0.129	0.143	0.241	0.268	0.409	0.456	1.200	1.650	2.90	4.10
45	0.0018	0.0040	0.0073	0.016	0.032	0.064	0.128	0.131	0.239	0.245	0.403	0.418	1.100	1.510	2.80	3.80
50	0.0012	0.0023	0.0056	0.012	0.024	0.048	0.071	0.131	0.136	0.244	0.311	0.411	0.900	1.200	2.35	2.94
56	0.0012	0.0023	0.0055	0.012	0.024	0.048	0.070	0.072	0.135	0.178	0.307	0.317	0.870	1.120	2.26	2.74
63	0.0011	0.0022	0.0042	0.0089	0.017	0.035	0.066	0.072	0.127	0.177	0.225	0.312	0.650	0.910		2.38
71	0.0011	0.0022	0.0042	0.0088	0.017	0.035	0.066	0.067	0.126	0.129	0.223	0.229	0.630	0.850		2.24
80							0.064	0.067	0.121	0.128	0.211	0.226		0.650		
90								0.065		0.123		0.214		0.620		

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$.

RATING TABLES

TRIPLE REDUCTION

MECHANICAL RATINGS - S.F. 1.0

Units: hp

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (hp)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1800	90	82	108	166	260	395	692	985		1330		2030		-			
	1200	60	55	72	111	174	265	464	664		893		1360		2230			
	900	45	41	54	83	131	199	350	500		673		1030		1680			
22.4	1800	80	74	108	166	260	395	638	933	985	1330	1330	1820	2030	-			
	1200	54	50	72	111	174	265	429	627	664	893	893	1250	1360	2050			
	900	40	37	54	83	131	199	323	473	500	673	673	947	1030	1550			
25	1800	72	66	107	157	259	395	608	839	958	1220	1330	1700	1820	-	-	-	
	1200	48	44	72	105	174	265	408	569	664	822	893	1220	1300	1770	2130	2780	
	900	36	33	54	79	131	199	308	429	500	620	673	933	1000	1320	1600	2100	
28	1800	64	59	88	129	204	336	526	750	838	1080	1300	1510	1710	-	-	-	
	1200	43	40	59	86	137	226	353	504	596	732	889	1020	1220	1620	1950	2490	
	900	32	30	44	65	103	170	266	380	458	552	670	772	958	1220	1470	1870	
31.5	1800	57	43	77	123	188	302	444	681	789	950	1170	1320	1520	1950	-	-	-
	1200	38	28.8	51	85	126	204	301	457	537	638	791	883	1080	1400	1670	2210	2700
	900	29	21.7	38	64	94	153	226	345	405	481	597	662	815	1050	1260	1670	2030
35.5	1800	51	43	68	105	171	271	403	604	700	846	1020	1170	1320	1910	-	-	-
	1200	34	28.8	45	70	114	181	271	405	488	568	690	791	883	1280	1540	1980	2420
	900	25	21.7	34	53	86	137	204	305	368	428	520	596	662	965	1150	1480	1820
40	1800	45	41	67	98	166	260	384	547	643	774	914	1150	1230	1640	1950	-	-
	1200	30	27.7	45	65	111	175	257	367	432	520	614	779	835	1110	1320	1750	2140
	900	23	20.9	33	49	84	131	194	277	325	391	463	587	630	844	1000	1320	1620
45	1800	40	37	55	80	131	217	332	485	577	689	837	959	1150	1520	1820	-	-
	1200	27	24.9	36	54	87	146	223	325	392	463	562	644	818	1010	1220	1580	1930
	900	20	18.7	27.7	40	66	109	168	245	295	348	423	485	614	764	925	1190	1440
50	1800	36	25.8	41	79	130	205	310	432	516	616	745	927	1010	1340	1580	-	-
	1200	24	17.2	28	53	87	137	208	290	347	413	500	622	680	898	1050	1400	1710
	900	18	13	21	40	65	103	156	218	261	311	377	469	513	670	791	1050	1280
56	1800	32	25.8	41	65	103	171	268	383	461	548	666	766	946	1230	1440	-	-
	1200	21	17.2	28	43	69	115	180	257	309	368	447	514	631	818	965	1260	1520
	900	16	13	21	32	52	86	135	193	233	277	336	387	473	616	724	952	1150
63	1800	29	25.8	41	63	101	148	230	341	408	493	593	735	809	1050	1270		-
	1200	19	17.2	28	42	67	99	154	228	273	330	398	490	543	710	858		1360
	900	14	13	21	32	50	74	116	172	206	249	299	367	409	536	643		1030
71	1800	25	23.7	35	52	81	135	211	302	364	439	533	611	735	965	1160		-
	1200	17	15.9	23.4	35	54	90	142	202	244	294	357	410	490	643	777		1220
	900	13	11.9	17.7	26.4	41	68	106	152	183	221	269	308	367	482	590		925
80	1800	23								321	389	474	518	645		1000		
	1200	15								215	260	318	347	433		670		
	900	11								162	196	239	261	326		509		
90	1800	20								295		420		547		925		
	1200	13								197		282		367		616		
	900	10								148		212		276		455		

- NOTES:** 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 900 RPM, find the mechanical rating by the following method:

$$P_N = P_{900} \times \frac{n}{900}$$

Where P_N is the mechanical rating, P₉₀₀ is the mechanical rating at 900 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

MECHANICAL RATINGS - S.F. 1.0

Units: kW

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (kW)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1500	75	51	67	103	162	246	431	616		829		1270					
	1000	50	34	45	69	108	165	289	413		556		856		1400			
	750	38	26.1	34	52	81	124	218	311		419		645		1060			
22.4	1500	67	46	67	103	162	246	398	582	616	829	829	1160	1270				
	1000	45	31	45	69	108	165	268	391	413	556	556	783	856	1280			
	750	33	23.5	34	52	81	124	202	295	311	419	419	591	645	970			
25	1500	60	41	67	98	162	246	379	528	613	763	829	1090	1170	1640			
	1000	40	27.8	45	65	108	165	254	355	413	513	556	771	827	1100	1330	1740	
	750	30	20.9	33	49	81	124	192	267	311	386	419	582	624	830	1000	1310	
28	1500	54	37	55	80	127	210	328	468	536	679	825	949	1090	1500			
	1000	36	25	36	54	85	141	220	314	379	456	554	638	781	1010	1220	1500	
	750	27	18.8	27.8	40	64	106	166	237	285	344	418	481	612	760	920	1170	
31.5	1500	48	26.9	48	79	117	190	280	425	498	593	734	823	978	1280	1560	2050	
	1000	32	18	32	53	78	127	187	285	335	398	493	548	674	880	1050	1380	1690
	750	24	13.5	24.1	40	59	95	141	215	252	300	372	411	508	660	790	1040	1270
35.5	1500	42	26.9	42	65	106	169	251	376	448	527	640	734	823	1200	1430	1840	
	1000	28	18	28.6	44	71	113	169	253	304	354	430	493	548	800	960	1240	1510
	750	21	13.5	21.5	33	53	85	127	190	229	267	324	372	411	600	720	930	1140
40	1500	38	25.8	41	61	103	162	239	341	401	483	570	723	775	1040	1240	1640	2000
	1000	25	17.3	28	40	69	109	160	229	269	324	383	486	521	690	830	1100	1340
	750	19	13	21.1	30	52	82	121	172	202	244	288	366	392	520	630	830	1010
45	1500	33	23.2	34	50	81	135	207	302	364	429	522	598	739	950	1130	1470	1790
	1000	22	15.6	23	33	54	91	139	203	244	288	350	402	508	640	760	980	1200
	750	17	11.7	17.3	25.3	41	68	104	152	184	217	264	302	381	480	570	740	900
50	1500	30	16.1	26.1	49	81	128	193	269	322	384	464	578	632	840	980	1310	1590
	1000	20	10.8	17.5	33	54	86	129	180	216	257	312	388	424	560	660	880	1070
	750	15	8.1	13.1	24.9	41	64	97	136	162	194	234	292	319	420	500	660	800
56	1500	27	16.1	26.1	40	64	107	167	238	287	342	415	478	588	770	900	1170	1420
	1000	18	10.8	17.5	27.3	43	71	112	160	193	229	278	320	392	510	600	790	950
	750	13	8.1	13.1	20.5	32	54	84	120	145	172	209	241	294	390	450	590	720
63	1500	24	16.1	26.1	39	63	92	143	212	254	307	369	456	504	660	790		1270
	1000	16	10.8	17.5	26.6	42	62	96	142	170	206	248	304	338	440	530		850
	750	12	8.1	13.1	20	31	46	72	107	128	155	186	228	255	330	400		640
71	1500	21	14.8	21.9	32	50	84	132	188	226	273	332	381	456	600	730		1140
	1000	14	9.9	14.6	21.9	34	56	88	126	152	183	222	255	304	400	490		760
	750	11	7.4	11	16.5	25.6	42	66	95	114	138	167	192	228	300	360		570
80	1500	19								200	242	295	323	402		630		
	1000	13								134	162	198	216	269		420		
	750	9								101	122	149	163	203		310		
90	1500	17								183		262		341		570		
	1000	11								123		175		228		380		
	750	8								92		132		172		291		

- NOTES:**
- When no rating is given for the required input speed, the value must be found by interpolation.
 - When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

- For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE
SPIRAL BEVEL

TORQUE RATINGS - S.F. 1.0

Units: 1000 in.-lbs.

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)														
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130
20	1800	90	58	75	115	175	277	490	709		956		1405		-		
	1200	60	59	75	116	176	278	493	717		962		1415		2336		
	900	45	59	75	116	176	279	495	720		966		1422		2350		
22.4	1800	80	57	85	131	204	310	499	731	787	1026	1046	1440	1592	-		
	1200	54	57	85	132	205	312	503	737	795	1033	1053	1484	1604	2340		
	900	40	57	86	132	205	313	506	741	799	1037	1058	1494	1611	2365		
25	1800	72	59	92	143	229	346	525	755	830	1082	1135	1452	1628	-	-	-
	1200	48	59	93	144	230	348	529	768	863	1092	1143	1549	1737	2355	2781	3668
	900	36	59	93	144	231	349	532	772	867	1098	1148	1580	1782	2355	2799	3692
28	1800	64	57	86	134	210	330	501	734	837	1034	1260	1477	1647	-	-	-
	1200	43	57	87	135	211	332	505	741	893	1043	1292	1491	1757	2360	2792	3672
	900	32	57	87	135	212	334	507	744	915	1049	1299	1500	1839	2367	2805	3685
31.5	1800	57	49	86	139	199	330	503	765	855	1089	1237	1458	1679	2193	-	-
	1200	38	49	86	144	200	334	511	771	873	1098	1248	1457	1779	2366	2789	3676
	900	29	49	86	145	200	335	513	775	877	1103	1255	1458	1789	2374	2796	3713
35.5	1800	51	53	87	134	211	331	504	738	873	1040	1288	1487	1652	2349	-	-
	1200	34	53	87	135	212	333	507	744	914	1049	1299	1499	1652	2365	2805	3691
	900	25	53	87	135	213	335	510	747	918	1054	1305	1507	1652	2365	2797	3691
40	1800	45	59	93	144	232	355	530	769	870	1102	1244	1565	1755	2337	2743	-
	1200	30	59	93	145	232	358	533	774	876	1094	1254	1585	1788	2366	2790	3682
	900	23	59	94	145	233	359	535	778	881	1107	1261	1593	1798	2394	2818	3710
45	1800	40	57	87	135	212	332	505	741	899	1045	1294	1493	1775	2368	2793	-
	1200	27	57	87	135	213	334	509	746	917	1052	1304	1505	1887	2368	2804	3713
	900	20	58	88	136	214	336	511	749	921	1057	1309	1512	1887	2368	2834	3734
50	1800	36	46	73	144	230	357	531	772	873	1099	1250	1580	1781	2361	2804	-
	1200	24	46	74	145	231	359	535	777	880	1106	1259	1592	1795	2373	2816	3704
	900	18	47	74	146	232	360	537	780	883	1111	1265	1599	1804	2361	2804	3715
56	1800	32	50	84	135	212	334	507	744	915	1049	1300	1500	1829	2375	2806	-
	1200	21	50	84	136	213	336	510	749	920	1056	1309	1510	1829	2362	2806	3711
	900	16	50	84	136	214	336	512	752	924	1060	1314	1517	1829	2375	2806	3738
63	1800	29	58	91	145	227	328	503	775	877	1103	1255	1578	1789	2374	2805	-
	1200	19	58	92	145	228	330	506	780	883	1110	1264	1578	1802	2389	2834	4460
	900	14	58	92	146	228	331	507	782	886	1114	1269	1578	1810	2404	2834	4489
71	1800	25	57	87	135	213	335	509	747	918	1053	1305	1506	1788	2365	2808	-
	1200	17	58	88	136	214	337	512	751	924	1060	1313	1516	1788	2365	2808	4454
	900	13	58	88	136	214	337	514	754	927	1064	1318	1521	1788	2365	2840	4503
80	1800	23							748	881	1055	1260	1510	1797		2818	
	1200	15							752	885	1062	1268	1519	1808		2818	
	900	11							754	888	1065	1272	1525	1815		2856	
90	1800	20								882		1263		1802		2834	
	1200	13								886		1270		1819		2834	
	900	10								889		1274		1819		2793	

RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

TORQUE RATINGS - S.F. 1.0

Units: kNm

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20	1500	75	6.6	8.4	13.1	19.8	31	56	81		108		159		263			
	1000	50	6.6	8.5	13.1	19.9	32	56	81		109		160		266			
	750	38	6.7	8.5	13.1	19.9	32	56	82		109		161		268			
22.4	1500	67	6.4	9.6	14.9	23.1	35	57	83	90	116	119	167	181	264			
	1000	45	6.5	9.7	14.9	23.2	35	57	84	90	117	119	168	182	265			
	750	33	6.5	9.7	14.9	23.2	35	57	84	90	117	120	169	183	268			
25	1500	60	6.6	10.4	16.2	25.9	39	59	86	97	123	129	169	189	264	311	411	
	1000	40	6.7	10.5	16.3	26.0	39	60	87	98	124	129	178	201	266	315	316	
	750	30	6.7	10.6	16.3	26.1	40	60	88	98	124	130	179	202	268	316	418	
28	1500	54	6.4	9.8	15.2	23.8	37	57	83	97	117	145	168	192	264	313	412	
	1000	36	6.5	9.8	15.3	24.0	38	57	84	103	118	147	169	204	267	316	402	
	750	27	6.5	9.9	15.3	24.1	38	57	84	104	119	147	170	214	268	318	418	
31.5	1500	48	5.6	9.7	16.1	22.5	38	58	87	98	124	140	165	195	261	315	413	496
	1000	32	5.6	9.7	16.1	22.6	38	58	87	99	124	142	165	202	269	318	417	501
	750	24	5.6	9.7	16.4	22.7	38	58	88	99	125	142	165	203	269	319	419	502
35.5	1500	42	6.0	9.8	15.2	23.9	38	57	84	102	118	146	169	187	267	315	415	498
	1000	28	6.0	9.9	15.3	24.0	38	57	84	104	119	147	170	187	267	317	419	501
	750	21	6.0	9.9	15.3	24.1	38	58	85	104	119	148	171	187	267	317	419	504
40	1500	38	6.7	10.5	16.3	26.1	40	60	87	99	124	141	178	201	268	316	417	499
	1000	25	6.7	10.6	16.4	26.3	41	60	88	99	125	142	180	203	267	317	419	502
	750	19	6.7	10.6	16.4	26.4	41	61	88	100	125	143	181	204	268	321	422	504
45	1500	33	6.5	9.8	15.3	24.0	38	57	84	103	118	147	169	207	268	315	418	500
	1000	22	6.5	9.9	15.3	24.1	38	58	85	104	119	148	171	213	270	317	418	503
	750	17	6.5	9.9	15.4	24.2	38	58	85	104	120	148	171	213	270	317	421	503
50	1500	30	5.2	8.3	16.3	26.1	40	60	88	99	125	142	179	202	269	316	418	501
	1000	20	5.3	8.3	16.4	26.2	41	61	88	100	125	143	180	203	269	319	421	505
	750	15	5.3	8.3	16.4	26.2	41	61	88	100	126	143	181	204	269	322	421	504
56	1500	27	5.7	9.5	15.3	24.1	38	57	84	104	119	147	170	207	269	317	418	501
	1000	18	5.7	9.5	15.4	24.2	38	58	85	104	120	148	171	207	268	317	423	502
	750	13	5.7	9.5	15.4	24.2	38	58	85	105	120	149	172	207	273	317	421	508
63	1500	24	6.6	10.3	16.4	25.7	37	57	88	99	125	142	178	203	269	316		502
	1000	16	6.6	10.4	16.4	25.8	37	57	88	100	126	143	178	204	269	318		504
	750	12	6.6	10.4	16.5	25.8	37	57	89	100	126	144	178	205	269	320		506
71	1500	21	6.5	9.9	15.3	24.1	38	58	85	104	119	148	171	202	267	319		504
	1000	14	6.5	9.9	15.4	24.2	38	58	85	105	120	149	172	202	267	322		504
	750	11	6.5	9.9	15.5	24.3	38	58	85	105	120	149	172	202	267	315		504
80	1500	19							85	100	120	143	171	204		321		
	1000	13							85	100	120	144	172	205		321		
	750	9							85	101	121	144	173	206		316		
90	1500	17								100		143		204		317		
	1000	11								100		144		205		317		
	750	8								101		144		206		324		

RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - HORIZONTAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20 - 28	1800	- 1	50 82	64 105	87 143	115 190	153 252	196 323	284 469	311 513	366 604	406 681	456 753	516 851				
	1200	- 1	49 81	62 103	85 141	115 191	156 257	205 339	296 488	320 528	383 632	421 695	487 803	548 904	657 740	657 740	885 950	885 950
	900	- 1	47 77	59 98	82 135	111 184	152 250	202 333	291 479	313 517	377 623	413 682	484 798	542 894	617 660	617 660	845 850	845 850
31.5 - 45	1800	- 1	44 72	58 95	79 130	106 175	142 235	187 308	270 446	294 486	352 581	389 641	443 730	500 825	550 700	550 700		
	1200	- 1	41 68	55 90	76 125	103 170	140 231	185 306	270 446	292 481	352 581	386 637	447 738	501 827	496 570	496 570	697 750	697 750
	900	- 1	38 63	51 85	71 118	98 162	134 221	178 294	261 431	281 464	340 562	372 614	434 717	486 801	443 480	443 480	630 640	630 640
50 - 63	1800	- 1	37 62	52 85	70 115	92 152	126 208	166 273	246 406	282 466	326 538	374 617	423 699	476 785	540 938	540 938	• •	• •
	1200	- 1	34 56	47 78	65 106	86 142	119 196	158 260	235 387	273 451	312 515	363 599	408 674	465 768	496 764	496 764	697 1005	697 1005
	900	- 1	31 51	43 71	60 98	80 132	111 183	148 245	221 365	260 429	295 487	346 572	388 650	446 735	442 643	442 643	630 858	630 858
71 - 90	1800	- 1	37 61	50 83	69 115	93 154	128 210	167 276	244 403	264 436	327 540	352 581	407 672	443 731	550 700	550 700		
	1200	- 1	33 55	46 76	64 106	87 144	120 198	160 263	233 385	251 414	314 518	336 554	392 647	425 701	496 570	496 570		697 750
	900	- 1	30 50	42 70	59 98	81 134	112 185	150 248	220 362	236 389	297 489	317 523	371 615	402 664	443 480	443 480		630 640

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)															
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
20 - 28	1500	- 1	37 61	47 78	65 107	87 143	116 192	151 249	218 360	238 392	282 465	311 514	355 586	402 663	490 800			
	1000	- 1	35 58	45 74	62 102	84 139	115 189	152 251	219 361	236 390	284 468	311 513	363 598	407 672	480 690	480 690	640 890	
	750	- 1	33 55	42 70	59 97	80 132	110 181	147 243	212 349	228 376	275 454	301 497	354 584	396 654	440 600	440 600	600 780	
31.5 - 45	1500	- 1	32 53	42 70	58 96	79 130	106 175	140 231	203 336	220 364	265 437	291 481	335 552	377 622	400 650	400 650	540 830	540 830
	1000	- 1	29 48	39 65	55 90	75 123	102 168	135 223	198 326	213 351	258 425	282 465	328 542	367 606	340 510	340 510	490 680	490 680
	750	- 1	27 44	36 60	51 84	70 116	96 158	128 212	188 311	203 334	246 406	269 443	315 519	351 580	300 420	300 420	420 570	420 570
50 - 63	1500	- 1	27 44	37 61	50 83	67 111	92 152	122 201	181 298	209 345	240 396	277 457	313 516	354 584	400 650	400 650	540 830	540 830
	1000	- 1	24 39	34 55	46 76	62 102	85 140	113 187	169 279	198 326	225 372	263 435	295 487	338 558	340 510	340 510	490 680	490 680
	750	- 1	22 35	30 50	42 69	57 93	78 129	105 174	158 260	186 307	211 348	249 410	278 458	321 529	300 420	300 420	420 570	420 570
71 - 90	1500	- 1	27 44	36 60	50 83	68 112	93 154	123 203	180 296	194 319	241 397	259 427	300 496	326 538	400 650	400 650	540 830	540 830
	1000	- 1	24 39	33 54	46 75	62 103	86 142	115 189	168 277	180 297	226 373	242 399	284 468	307 506	340 510	340 510	490 680	490 680
	750	- 1	21 35	30 49	42 69	57 94	79 131	107 176	156 258	168 277	212 349	226 373	267 440	288 475	300 420	300 420	420 570	420 570

- NOTES:** 1. Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR in the APPLICATIONS section.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.
 3. • Auxiliary cooling device required.

RATING TABLES

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)													
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125
20 - 28	1800	-	47	60	82	108	142	180	241	268	308	345	375	424		
		1	78	100	135	178	235	297	398	442	508	570	619	699		
	1200	-	47	61	83	112	150	196	272	297	352	389	443	501	•	•
1		78	100	137	184	248	324	450	489	580	642	731	826	560	560	
900	-	46	58	80	109	148	196	276	298	357	393	455	512	496	496	
	1	75	96	132	180	244	324	455	492	589	648	751	845	570	570	
31.5 - 45	1800	-	42	55	75	101	135	176	241	264	313	342	390	422	510	510
		1	70	91	125	166	223	291	397	436	516	565	643	697	690	690
	1200	-	40	53	74	100	136	180	254	276	331	364	419	471	496	496
1		66	88	122	166	224	297	419	455	546	601	691	778	580	580	
900	-	37	50	70	96	131	175	250	270	327	358	416	466	443	443	
	1	62	83	116	159	216	288	413	446	539	591	686	769	500	500	
50 - 63	1800	-	36	50	67	89	122	159	229	260	302	343	390	432	510	510
		1	60	83	111	147	201	263	377	429	499	567	644	712	690	690
	1200	-	33	47	63	85	116	154	225	261	299	347	391	443	496	496
1		55	77	104	140	192	255	372	431	494	572	645	731	580	580	
900	-	31	43	59	79	109	146	215	252	287	336	376	431	443	443	
	1	50	71	97	131	180	241	355	416	473	554	621	712	500	500	
71 - 90	1800	-	36	49	67	90	123	161	227	247	304	329	377	413	510	510
		1	59	80	111	149	203	266	375	407	501	542	622	681	690	690
	1200	-	33	45	63	85	118	156	224	241	301	323	376	408	496	496
1		54	75	104	141	194	258	369	398	496	533	620	674	580	580	
900	-	30	42	59	80	111	148	213	230	288	309	362	392	443	443	
	1	50	69	97	132	183	244	352	379	476	509	597	646	500	500	

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)													
			8035	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125
20 - 28	1500	-	36	46	62	83	110	142	194	213	249	278	310	350	•	•
		1	59	75	102	137	182	234	320	352	412	459	511	577	510	510
	1000	-	35	44	61	82	111	147	206	223	266	293	338	381	340	340
1		57	73	100	136	184	243	339	368	439	484	558	629	570	570	
750	-	33	42	58	79	108	144	203	219	264	289	338	380	380	380	
	1	54	69	95	130	178	237	335	362	436	478	558	626	550	550	
31.5 - 45	1500	-	31	41	56	76	102	134	187	204	243	269	305	343	380	380
		1	51	67	93	125	168	221	308	336	400	444	503	567	650	650
	1000	-	29	39	54	73	99	132	188	204	246	270	312	350	350	350
1		47	64	88	121	164	218	311	336	405	445	515	578	530	530	
750	-	26	36	50	69	94	126	182	197	238	261	304	340	310	310	
	1	44	59	83	114	156	208	301	324	393	430	502	562	440	440	
50 - 63	1500	-	26	36	49	65	90	118	171	196	226	260	294	330	380	380
		1	43	60	81	108	148	195	282	324	374	429	485	645	650	650
	1000	-	24	33	45	61	84	111	164	191	218	254	285	326	350	350
1		39	54	74	100	138	184	270	315	360	419	471	538	530	530	
750	-	21	30	41	56	78	104	154	182	206	242	271	312	310	310	
	1	35	50	68	92	128	172	254	300	340	400	447	515	440	440	
71 - 90	1500	-	26	35	49	66	91	119	170	184	228	245	283	309	380	380
		1	43	58	81	109	150	197	280	303	375	405	467	510	650	650
	1000	-	23	32	45	61	85	113	162	175	219	235	274	297	350	350
1		38	53	74	101	140	186	268	288	361	387	453	491	530	530	
750	-	21	29	41	57	79	105	153	164	207	221	261	282	310	310	
	1	35	48	68	93	130	174	252	271	341	365	430	465	440	440	

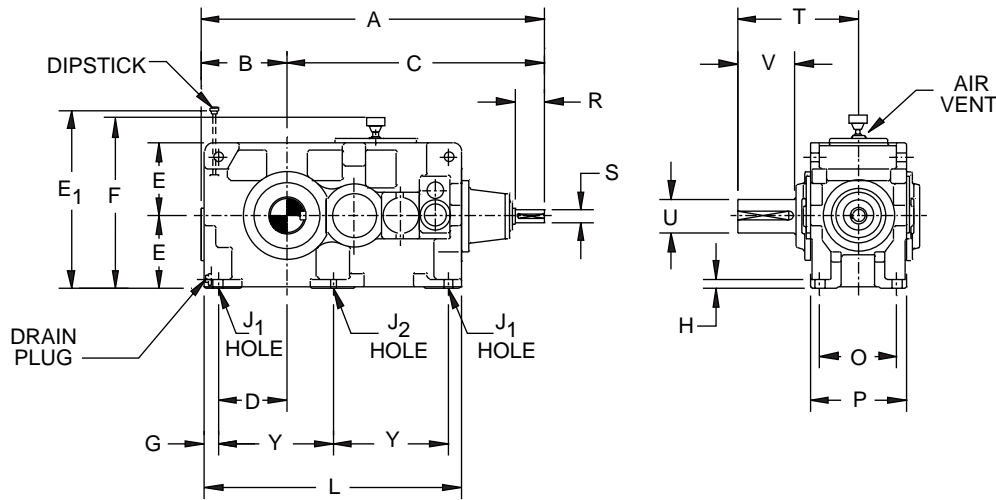
- NOTES:**
- Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR in the APPLICATIONS section.
 - For input speeds between the given values, obtain the thermal rating by interpolation.
 - Auxiliary cooling device required.

DIMENSIONS

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, HORIZONTAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	U	V	Y	2Y	WT. lbf.	OIL QTY. GAL.
8035	33.11	8.07	25.04	6.50	7.09	19.33	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	2.38	1.125	11.83	3.000	5.53	-	21.65	460	2.9
8045	37.24	9.06	28.19	7.28	7.87	21.69	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	3.13	1.375	13.80	3.500	6.75	-	24.41	650	4.2
8055	42.44	10.63	31.81	8.86	8.86	24.06	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	3.13	1.500	16.16	4.125	8.25	14.57	29.13	960	6.6
8065	48.98	12.01	36.97	9.84	10.43	27.99	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	4.25	1.750	17.32	4.875	8.27	16.54	33.07	14.60	10.6
8075	53.82	13.39	40.43	10.83	11.81	31.34	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	4.25	2.000	20.08	5.625	9.88	18.90	37.80	2070	15.1
8085	61.26	14.96	46.30	12.40	13.19	35.08	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	5.50	2.375	22.83	6.375	11.73	22.44	44.88	2950	21.9
8090	68.11	16.14	51.97	13.58	14.76	39.49	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	5.51	2.500	25.59	7.000	11.81	25.98	51.97	4740	32
8095	70.47	17.32	53.15	14.76	15.75	41.65	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	5.51	2.500	27.56	7.375	13.78	27.17	54.33	5290	41
8100	75.75	17.72	58.03	14.76	16.73	44.57	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	5.51	2.875	29.13	7.750	13.78	28.94	57.87	6350	48
8105	78.46	19.09	59.37	16.14	17.72	46.73	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	5.51	2.875	29.13	8.375	13.78	30.31	60.63	7590	58
8110	85.98	19.69	66.30	16.54	18.70	49.33	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	6.69	3.250	30.31	8.375	13.78	32.68	65.35	9170	66
8115	89.88	21.65	68.23	18.50	19.69	51.26	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	6.69	3.250	32.68	9.375	16.14	34.65	69.29	10160	82

METRIC DIMENSIONS

Units: mm

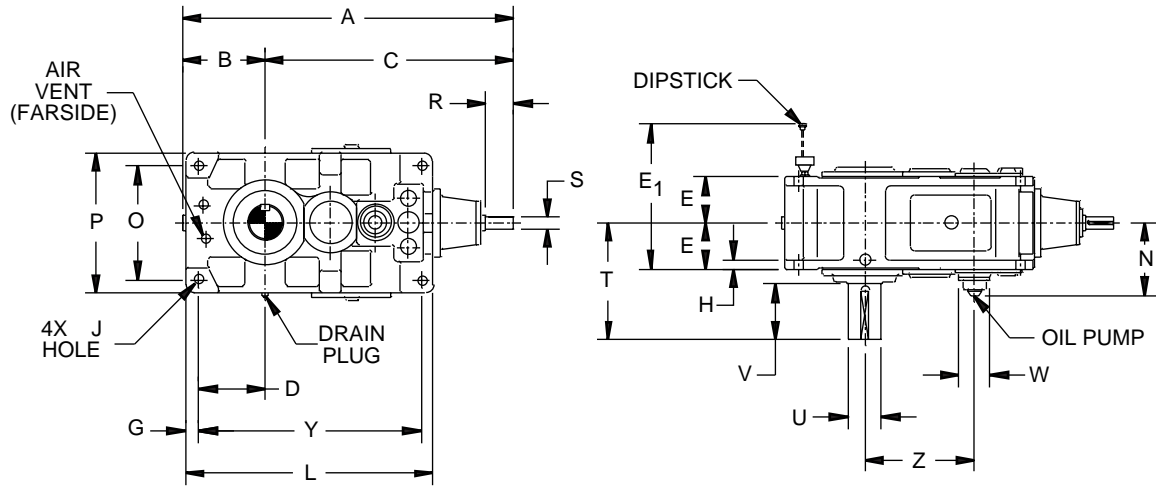
MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	U	V	Y	2Y	WT. kgf.	OIL QTY. LTR.
8035	841	205	636	165	180	491	449	35	28	24	-	615	190	235	60	28	300	78	140	-	550	210	11
8045	946	230	716	185	200	551	489	40	30	28	-	700	215	270	80	30	349	95	170	-	620	295	16
8055	1078	270	808	225	225	611	539	40	32	28	24	820	255	310	80	35	411	110	210	370	740	435	25
8065	1244	305	939	250	265	711	619	50	35	35	24	935	280	350	110	45	440	125	210	420	840	660	40
8075	1367	340	1027	275	300	796	689	60	40	42	28	1075	320	400	110	50	509	145	250	480	960	940	57
8085	1556	380	1176	315	335	891	759	60	45	42	35	1260	360	440	140	60	582	165	300	570	1140	1340	83
8090	1730	410	1320	345	375	1003	839	60	50	42	42	1440	480	570	140	65	650	180	300	660	1320	2150	120
8095	1790	440	1350	375	400	1058	889	60	50	42	42	1500	480	570	140	65	700	190	350	690	1380	2400	155
8100	1924	450	1474	375	425	1132	939	70	55	48	48	1610	560	650	140	75	740	200	350	735	1470	2880	180
8105	1993	485	1508	410	450	1187	989	70	55	48	48	1680	560	650	140	75	740	220	350	770	1540	3440	220
8110	2184	500	1684	420	475	1253	1039	75	60	56	56	1810	610	710	170	85	770	220	350	830	1660	4160	250
8115	2283	550	1733	470	500	1302	1089	75	60	56	56	1910	610	710	170	85	830	240	410	880	1760	4610	310

DIMENSIONS

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, VERTICAL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. lbf.	OIL QTY. GAL.
8035	33.11	8.07	25.04	6.50	4.63	16.14	1.38	1.10	0.94	24.21	8.19	11.42	14.17	2.38	1.125	11.83	3.000	5.53	3.94	21.65	10.39	440	2.4
8045	37.24	9.06	28.19	7.28	5.31	18.31	1.57	1.18	1.10	27.56	9.25	12.60	15.75	3.13	1.375	13.80	3.500	6.75	4.61	24.41	12.05	650	3.7
8055	42.44	10.63	31.81	8.86	6.10	20.87	1.57	1.26	1.10	32.28	10.04	14.57	17.72	3.13	1.500	16.16	4.125	8.25	4.61	29.13	14.09	870	5.3
8065	48.98	12.01	36.97	9.84	6.89	23.43	1.97	1.38	1.38	36.81	10.83	16.93	20.87	4.25	1.750	17.32	4.875	8.27	4.61	33.07	16.30	1350	8.2
8075	53.82	13.39	40.43	10.83	7.87	26.18	2.36	1.57	1.65	42.32	11.81	18.90	23.62	4.25	2.000	20.08	5.625	9.88	4.61	37.80	18.98	1990	14.0
8085	61.26	14.96	46.30	12.40	8.66	28.94	2.36	1.77	1.65	49.61	12.60	21.65	26.38	5.50	2.375	22.83	6.375	11.73	4.61	44.88	21.89	2820	18.2
8090	68.11	16.14	51.97	13.58	11.22	36.73	2.36	1.97	1.65	56.69	15.28	24.80	29.53	5.51	2.500	25.59	7.000	11.81	5.39	51.97	25.20	4790	32
8095	70.47	17.32	53.15	14.76	11.22	36.73	2.36	1.97	1.65	59.06	15.28	26.77	31.50	5.51	2.500	27.56	7.375	13.78	5.39	54.33	26.38	5360	38
8100	75.75	17.72	58.03	14.76	12.80	41.77	2.76	2.17	1.89	63.39	*	27.95	33.46	5.51	2.875	29.13	7.750	13.78	*	57.87	28.50	6550	45
8105	78.46	19.09	59.37	16.14	12.80	41.77	2.76	2.17	1.89	66.14	*	29.92	35.43	5.51	2.875	29.13	8.375	13.78	*	60.63	29.84	7610	55
8110	85.98	19.69	66.30	16.54	13.98	45.51	2.95	2.36	2.20	71.26	*	31.50	37.40	6.69	3.250	30.31	8.375	13.78	*	65.35	32.44	9150	61
8115	89.88	21.65	68.23	18.50	13.98	45.51	2.95	2.36	2.20	75.20	*	33.46	39.37	6.69	3.250	32.68	9.375	16.14	*	69.29	34.37	10300	77

METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. kgf.	OIL QTY. LTR.
8035	841	205	636	165	117.5	410	35	28	24	615	208	290	360	60	28	300	78	140	100	550	264	200	9
8045	946	230	716	185	135	465	40	30	28	700	235	320	400	80	30	349	95	170	117	620	306	295	14
8055	1078	270	808	225	155	530	40	32	28	820	255	370	450	80	35	411	110	210	117	740	358	395	20
8065	1244	305	939	250	175	595	50	35	35	935	275	430	530	110	45	440	125	210	117	840	414	610	31
8075	1367	340	1027	275	200	665	60	40	42	1075	300	480	600	110	50	509	145	250	117	960	482	900	53
8085	1556	380	1176	315	220	735	60	45	42	1260	320	550	670	140	60	582	165	300	117	1140	556	1280	69
8090	1730	410	1320	345	285	933	60	50	42	1440	388	630	750	140	65	650	180	300	137	1320	640	2170	120
8095	1790	440	1350	375	285	933	60	50	42	1500	388	680	800	140	65	700	190	350	137	1380	670	2430	145
8100	1924	450	1474	375	325	1061	70	55	48	1610	*	710	850	140	75	740	200	350	*	1470	*	2970	170
8105	1993	485	1508	410	325	1061	70	55	48	1680	*	760	900	140	75	740	220	350	*	1540	*	3450	210
8110	2184	500	1684	420	355	1156	75	60	56	1810	*	800	950	170	85	770	220	350	*	1660	*	4150	230
8115	2283	550	1733	470	355	1156	75	60	56	1910	*	850	1000	170	85	830	240	410	*	1760	*	4670	290

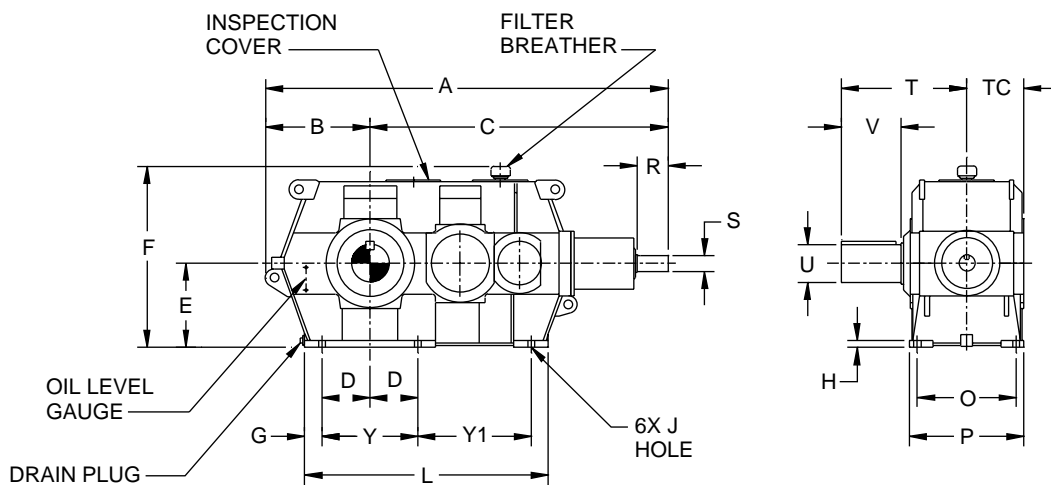
*This unit is equipped with a motor driven pump.

DIMENSIONS

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, SIZES 8120-8135



INCH DIMENSIONS

Units: inches

MODEL	Ratio	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	U	V	Y	Y ₁	WT. lbf.	OIL QTY. GAL.
8120	≤28	109.17	28.35	80.83	12.99	22.83	47.24	4.72	1.97	1.89	66.14	26.77	31.10	8.27	4.250	34.06	10.000	16.14	25.98	30.71	13010	87
	≥31.5	107.60		79.25										6.69	3.500							
8125	≤35.5	109.17	28.35	80.83	12.99	22.83	47.24	4.72	1.97	1.89	66.14	26.77	31.10	8.27	4.250	36.42	11.000	18.50	25.98	30.71	13010	87
	≥4.0	107.60		79.25										6.69	3.500							
8130	≤22.4	130.67	31.50	99.17	12.99	24.80	51.18	5.51	2.36	2.20	77.95	33.46	38.58	9.84	4.875	40.35	11.750	18.50	25.98	40.94	21830	124
	≥25	129.09		97.60										8.27	4.250							
8135	≤28	130.67	31.50	99.17	12.99	24.80	51.18	5.51	2.36	2.20	77.95	33.46	38.58	9.84	4.875	40.35	12.500	18.50	25.98	40.94	21830	124
	≥31.5	129.09		97.60										8.27	4.250							

METRIC DIMENSIONS

Units: mm

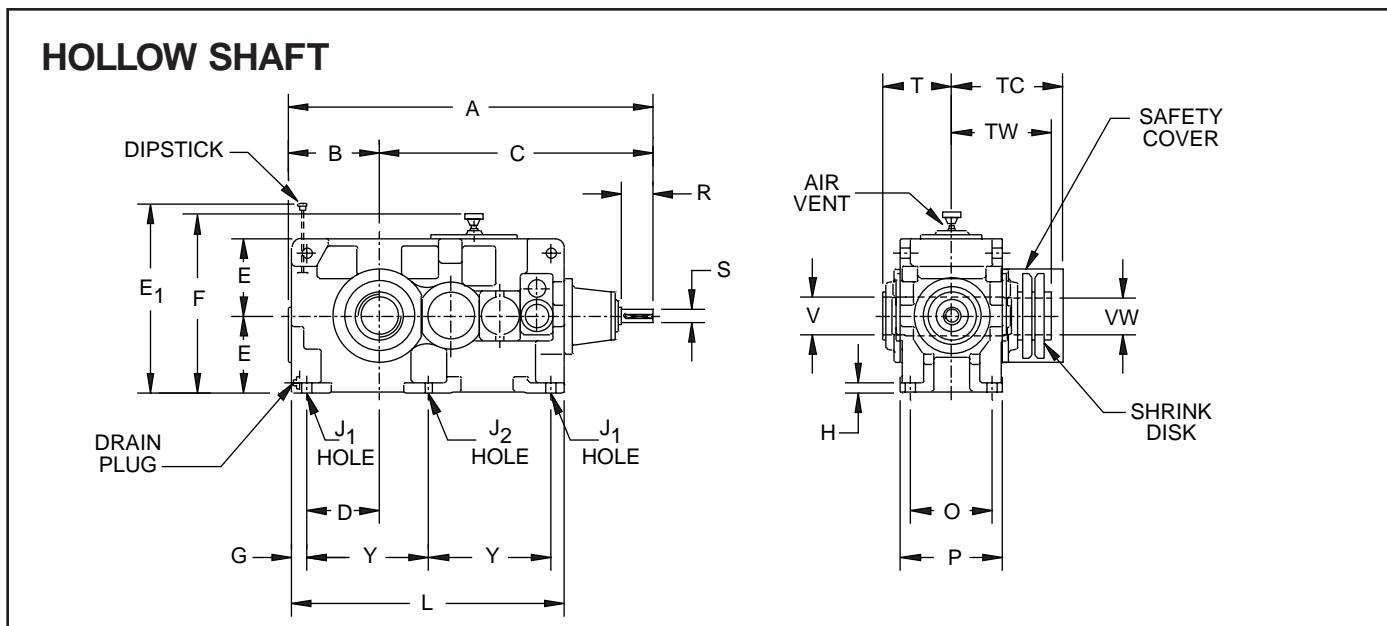
MODEL	Ratio	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	U	V	Y	Y ₁	WT. kgf.	OIL QTY. GAL.
8120	≤28	2773	720	2053	330	580	1200	120	50	48	1680	680	790	210	110	865	260	410	660	780	5900	330
	≥31.5	2733		2013										170	90							
8125	≤35.5	2773	720	2053	330	580	1200	120	50	48	1680	680	790	210	110	925	280	470	660	780	5900	330
	≥4.0	2733		2013										170	90							
8130	≤22.4	3319	800	2519	330	630	1300	140	60	56	1980	850	980	250	130	1025	300	470	660	1040	9900	470
	≥25	3279		2479										210	110							
8135	≤28	3319	800	2519	330	630	1300	140	60	56	1980	850	980	250	130	1025	320	470	660	1040	9900	470
	≥31.5	3279		2479										210	110							

NOTE: Housings in fabricated steel.

DIMENSIONS

TRIPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL



INCH DIMENSIONS

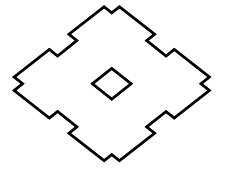
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	TC	TW	V	VW	Y	2Y	WT. lbf.	OIL QTY. GAL.
8035	33.11	8.07	25.04	6.50	7.09	19.33	17.68	1.38	1.10	0.94	-	24.21	7.48	9.25	2.38	1.125	6.30	9.96	9.17	3.250	3.125	-	21.65	460	2.9
8045	37.24	9.06	28.19	7.28	7.87	21.69	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	3.13	1.375	7.09	11.22	10.55	3.750	3.625	-	24.41	650	4.2
8055	42.44	10.63	31.81	8.86	8.86	24.06	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	3.13	1.500	7.87	12.60	11.93	4.375	4.250	14.57	29.13	960	6.6
8065	48.98	12.01	36.97	9.84	10.43	27.99	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	4.25	1.750	9.06	14.37	13.90	5.125	5.000	16.54	33.07	1460	10.6
8075	53.82	13.39	40.43	10.83	11.81	31.34	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	4.25	2.000	10.24	15.94	15.12	6.000	5.875	18.90	37.80	2070	15.1
8085	61.26	14.96	46.30	12.40	13.19	35.08	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	5.50	2.375	11.22	17.72	16.89	6.875	6.750	22.44	44.88	2950	21.9
8090	68.11	16.14	51.97	13.58	14.76	39.49	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	5.51	2.500	13.78	20.28	19.45	7.500	7.375	25.98	51.97	4740	32
8095	70.47	17.32	53.15	14.76	15.75	41.65	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	5.51	2.500	13.78	20.59	20.04	8.000	7.875	27.17	54.33	5290	41
8100	75.75	17.72	58.03	14.76	16.73	44.57	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	5.51	2.875	15.35	22.24	21.42	8.375	8.250	28.94	57.87	6350	48
8105	78.46	19.09	59.37	16.14	17.72	46.73	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	5.51	2.875	15.35	22.76	22.01	8.875	8.625	30.31	60.63	7590	58
8110	85.98	19.69	66.30	16.54	18.70	49.33	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	6.69	3.250	16.54	24.61	24.02	9.500	9.375	32.68	65.35	9170	66
8115	89.88	21.65	68.23	18.50	19.69	51.26	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	6.69	3.250	16.54	25.98	25.39	10.000	9.875	34.65	69.29	10160	82

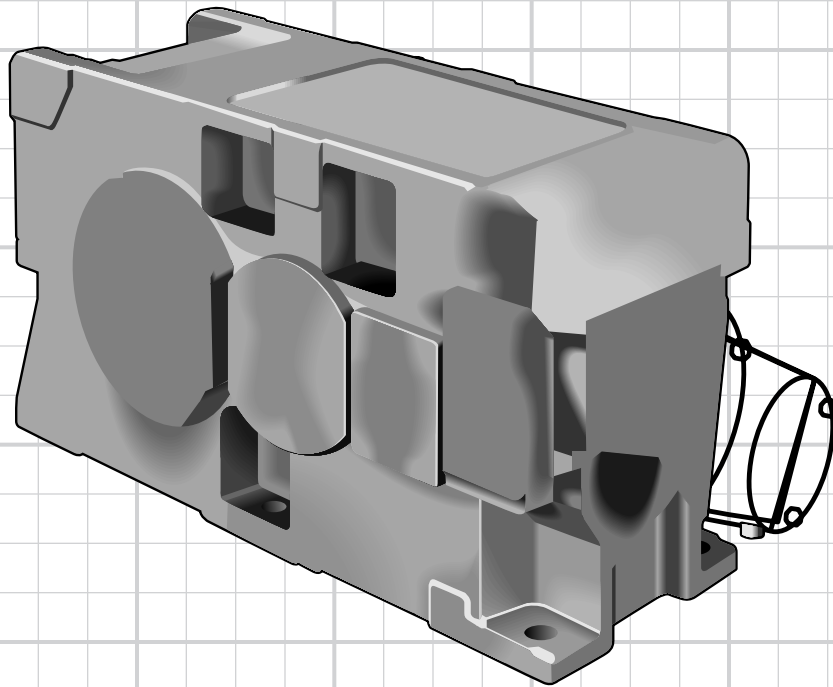
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	TC	TW	V	VW	Y	2Y	WT. kgf.	OIL QTY. LIT.
8035	841	205	636	165	180	491	449	35	28	24	-	615	190	235	60	28	160	253	233	83	80	-	550	210	11
8045	946	230	716	185	200	551	489	40	30	28	-	700	215	270	80	30	180	285	268	98	95	-	620	295	16
8055	1078	270	808	225	225	611	539	40	32	28	24	820	255	310	80	35	200	320	303	108	105	370	740	435	25
8065	1244	305	939	250	265	711	619	50	35	35	24	935	280	350	110	45	230	365	353	128	125	420	840	660	40
8075	1367	340	1027	275	300	796	689	60	40	42	28	1075	320	400	110	50	260	405	384	148	145	480	960	940	57
8085	1556	380	1176	315	335	891	759	60	45	42	35	1260	360	440	140	60	285	450	429	173	170	570	1140	1340	83
8090	1730	410	1320	345	375	1003	839	60	50	42	42	1440	480	570	140	65	350	515	494	193	190	660	1320	2150	120
8095	1790	440	1350	375	400	1058	889	60	50	42	42	1500	480	570	140	65	350	523	509	203	200	690	1380	2400	155
8100	1924	450	1474	375	425	1132	939	70	55	48	48	1610	560	650	140	75	390	565	544	213	210	735	1470	2880	180
8105	1993	485	1508	410	450	1187	989	70	55	48	48	1680	560	650	140	75	390	578	559	223	220	770	1540	3440	220
8110	2184	500	1684	420	475	1253	1039	75	60	56	56	1810	610	710	170	85	420	625	610	243	240	830	1660	4160	250
8115	2283	550	1733	470	500	1302	1089	75	60	56	56	1910	610	710	170	85	420	660	645	253	250	880	1760	4610	310



RIGHT ANGLE Quadruple Reduction



RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

EXACT RATIOS

NOMINAL RATIO	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63														63.870	
71														71.496	
80	77.989	79.341	78.377	78.120	79.124							80.453		80.200	79.172
90	88.991	90.326	91.330	87.529	87.269	90.353		88.676		91.041		87.959		86.863	88.625
100	99.259	103.975	102.712	97.650	96.444	103.822	99.991	101.845	98.135	97.789	102.865	98.332	100.609	101.717	99.415
112	113.262	118.371	119.686	109.412	106.372	112.941	115.200	109.293	111.479	112.208	110.827	114.820	109.996	110.167	107.674
125	122.716	130.090	127.969	127.969	126.389	129.778	124.988	124.139	120.951	119.195	126.780	124.208	122.967	128.485	126.087
140	140.028	148.102	149.118	143.382	139.399	141.176	144.000	133.218	135.882	136.770	135.088	145.035	143.586	139.159	136.562
160		158.681	156.754	152.985	158.247	163.149	156.235	158.278	147.428	151.974	154.533	153.434	155.327	161.551	159.268
180		180.652	182.660	171.412	174.538	177.479	181.029	169.853	173.250	174.382	172.237	179.161	181.371	174.972	172.499
200		207.949	205.423	191.231	192.889	207.644	196.410	203.690	187.970	195.577	197.029	195.185	191.874	203.434	200.255
224		236.742	239.373	214.265	212.745	225.882	230.400	218.586	222.958	224.415	221.654	227.912	224.047	220.335	216.892
250		260.179	255.937	250.605	252.778	259.555	249.976	248.279	241.902	238.390	253.560	248.417	244.085	246.643	252.174
280		296.204	298.235	280.790	278.799	282.353	288.000	266.436	271.764	273.541	270.175	290.070	285.012	273.270	273.123
315		315.951	332.512	322.083	318.627	308.359	312.470	301.198	294.856	323.275	309.065	317.133	310.653		305.735
355		367.079	369.458	343.555	355.248	353.706	341.250	344.226	333.326	369.458	365.259		362.742		
400							391.434		380.944		417.439		396.585		

INERTIA - WR²

Units: lb-in²

NOMINAL RATIO	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63														6493	
71														6151	
80	10.08	9.654	18.88	38.61	78.08							1777		3417	6903
90	10.00	9.568	18.71	38.19	77.48	159		328		368		1606		3383	6663
100	7.3469	9.141	17.85	36.99	74.92	154	161	317	332	349	375	991	1914	2529	3861
112	7.3469	9.056	17.68	36.65	74.49	154	155	317	320	346	354	888	1743	2426	3725
125	6.9198	8.287	16.15	31.52	64.33	140	155	289	319	310	350	718	1093	1914	2734
140	6.9198	8.287	16.06	31.35	64.16	139	140	288	290	308	314	649	1000	1845	2665
160		4.101	8.287	16.40	33.92	63.82	140	129	290	140	311	547	765	1367	2734
180		4.101	8.201	16.32	33.83	63.73	64.33	129	130	139	142	513	697	1333	1982
200		4.015	8.030	15.98	33.15	62.36	64.16	126	130	134	141	444	598	1025	1469
224		4.015	7.945	15.89	33.06	62.28	62.71	126	127	133	135	410	557	988	1435
250		3.759	7.603	14.61	30.50	58.69	62.62	119	127	124	134	287	454	974	1059
280		3.759	7.518	14.52	30.50	58.60	58.86	119	120	124	125	270	427	923	1059
315		3.759	7.518	14.35	30.24	58.26	58.78	118	119	121	125	267	301		1025
355		3.673	7.347	14.27	29.64	55.79	58.35	114	118	117	122		284		
400							55.87		114		117		280		

INERTIA - mR²

Units: kg-m²

NOMINAL RATIO	8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63														1.90	
71														1.80	
80	0.0030	0.0028	0.0055	0.011	0.023							0.520		1.00	2.02
90	0.0029	0.0028	0.0055	0.011	0.023	0.047		0.096		0.108		0.470		0.990	1.95
100	0.0022	0.0027	0.0052	0.011	0.022	0.045	0.047	0.093	0.097	0.102	0.110	0.290	0.560	0.740	1.13
112	0.0022	0.0027	0.0052	0.011	0.022	0.045	0.046	0.093	0.094	0.101	0.104	0.260	0.510	0.710	1.09
125	0.0020	0.0024	0.0047	0.0092	0.019	0.041	0.045	0.085	0.093	0.091	0.102	0.210	0.320	0.560	0.800
140	0.0020	0.0024	0.0047	0.0092	0.019	0.041	0.041	0.084	0.085	0.090	0.092	0.190	0.293	0.540	0.780
160		0.0012	0.0024	0.0048	0.0099	0.024	0.041	0.049	0.085	0.053	0.091	0.160	0.224	0.400	0.800
180		0.0012	0.0024	0.0048	0.0099	0.024	0.024	0.049	0.050	0.052	0.053	0.150	0.204	0.390	0.580
200		0.0012	0.0024	0.0048	0.0097	0.018	0.024	0.037	0.050	0.039	0.053	0.130	0.175	0.300	0.430
224		0.0012	0.0023	0.0047	0.0097	0.018	0.018	0.037	0.037	0.039	0.040	0.120	0.163	0.289	0.420
250		0.0011	0.0022	0.0043	0.0089	0.017	0.018	0.035	0.037	0.036	0.039	0.084	0.133	0.285	0.310
280		0.0011	0.0022	0.0043	0.0089	0.017	0.017	0.035	0.035	0.036	0.037	0.079	0.125	0.270	0.310
315		0.0011	0.0022	0.0042	0.0089	0.017	0.017	0.035	0.035	0.036	0.036	0.078	0.088		0.300
355		0.0011	0.0022	0.0042	0.0087	0.016	0.017	0.033	0.035	0.034	0.036		0.083		
400							0.016		0.033		0.034		0.082		

NOTES: Inertia values are referenced to the high speed shaft.
 $Inertia_{LSS} = Inertia_{HSS} \times RATIO^2$

RATING TABLES

QUADRUPLE REDUCTION

MECHANICAL RATINGS - S.F. 1.0

Units: hp

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (hp)															
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135	
63	1800	29															1636	
	1200	19															1099	
	900	14															831	
71	1800	25															1510	
	1200	17															1010	
	900	13															764	
80	1800	23	34	40	60	107	170							764		1320	1580	
	1200	15	22.9	27.2	40	71	113							576		885	1050	
	900	11	17.2	20.3	30	53	85							429		670	804	
90	1800	20	28.1	40	60	107	167	236		340			474		737		1220	1470
	1200	13	18.7	27.2	40	71	111	158		228			318		496		818	978
	900	10	14	20.3	30	53	84	119		171			239		379		616	737
100	1800	18	26.9	39	60	105	158	214	252	311	368	466	500	643	764	1040	1280	
	1200	12	18.1	26.6	40	70	106	143	169	208	246	312	335	455	549	697	858	
	900	9	13.5	20.1	30	52	80	108	127	157	185	235	252	352	415	522	643	
112	1800	16	22.1	32	51	87	137	190	229	277	336	386	494	590	710	965	1180	
	1200	11	14.7	21.9	34	58	92	127	153	185	225	258	331	400	469	643	791	
	900	8	11.1	16.4	25.7	44	69	95	115	139	169	194	249	301	359	482	590	
125	1800	14	21.8	32	52	80	121	172	202	256	299	384	407	549	657	831	1000	
	1200	10	14.6	21.4	34	53	81	115	135	171	200	257	273	371	442	549	670	
	900	7	10.9	16	26.2	40	61	86	102	129	150	193	205	278	333	415	509	
140	1800	13	17.9	26.2	41	67	105	152	183	227	276	317	406	469	563	764	938	
	1200	9	11.9	17.5	27.4	44	70	102	123	152	185	212	272	319	380	509	616	
	900	6	8.9	13.2	20.6	33	52	76	92	114	139	159	205	240	285	388	469	
160	1800	11		22.9	34	53	92	137	162	201	246	302	335	442	522	657	804	
	1200	8		15.2	22.9	35	61	91	108	134	164	202	224	301	351	442	536	
	900	6		11.5	17.1	26.6	46	69	81	101	124	152	168	226	264	335	400	
180	1800	10		21.5	33	53	84	121	146	179	217	249	319	386	442	603	737	
	1200	7		14.4	22.5	35	56	81	98	120	145	167	214	258	301	402	496	
	900	5		10.8	16.8	26.6	42	61	73	90	109	125	161	194	226	309	370	
200	1800	9		20.1	32	53	80	108	129	157	193	230	263	355	415	522	643	
	1200	6		13.4	21.8	35	53	72	86	105	129	154	176	237	285	355	429	
	900	5		10	16.3	26.6	40	54	65	78	97	116	132	178	214	266	319	
224	1800	8		16.4	25.7	45	69	95	115	139	169	194	230	304	366	482	590	
	1200	5		10.9	17.1	30	46	64	77	93	113	130	154	203	244	327	392	
	900	4		8.3	12.8	22.6	34	48	58	70	85	97	116	152	183	246	293	
250	1800	7		16	26.2	41	61	86	102	129	150	193	205	278	336	429	509	
	1200	5		10.7	17.5	27.6	40	57	68	86	100	129	137	186	225	293	337	
	900	4		8	13.1	20.7	30	43	51	64	75	97	103	140	168	219	253	
280	1800	6		13.2	20.6	34	52	76	92	114	139	159	205	240	288	395	469	
	1200	4		8.8	13.8	23	35	51	61	76	93	107	137	159	193	264	311	
	900	3		6.5	10.3	17.2	26.5	38	46	57	70	80	103	120	144	198	233	
315	1800	6		12.3	18.5	30	46	70	81	101	124	135	168	219	264		415	
	1200	4		8.3	12.3	20.1	30	47	54	67	83	90	113	146	177		278	
	900	3		6.1	9.2	15.1	23.3	35	41	51	62	68	84	109	132		209	
355	1800	5		10.7	16.7	28.2	41	61	74	89	109	118	143		226			
	1200	3		7.1	11.1	18.9	27.7	41	50	59	73	79	95		151			
	900	3		5.3	8.3	14.2	20.9	30	37	44	55	59	71		113			
400	1800	5							65		96		125		207			
	1200	3							43		64		83		138			
	900	2							32		48		63		104			

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 900 RPM, find the mechanical rating by the following method:

$$P_N = P_{900} \times \frac{n}{900}$$

Where P_N is the mechanical rating, P₉₀₀ is the mechanical rating at 900 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

MECHANICAL RATINGS - S.F. 1.0

Units: kW

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	MECHANICAL RATINGS (kW)														
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63	1500	24															1020
	1000	16															680
	750	12															510
71	1500	21															940
	1000	14															630
	750	11															470
80	1500	19	21.4	25.3	37	66	106							500		820	990
	1000	13	14.3	16.9	25	44	70						360		550	660	
	750	9	10.7	12.7	18.8	33	53						275		410	500	
90	1500	17	17.5	25.3	37	66	104	147		212		295		460		760	910
	1000	11	11.7	16.9	25	44	69	98		142		198		310		510	610
	750	8	8.8	12.7	18.8	33	52	74		106		149		236		380	460
100	1500	15	16.8	24.9	37	65	99	133	157	194	229	290	312	430	500	650	800
	1000	10	11.2	16.6	25	43	66	89	105	129	153	194	209	291	340	430	530
	750	8	8.4	12.5	18.8	33	49	67	79	97	115	146	157	219	260	330	400
112	1500	13	13.8	20.4	31	54	85	118	142	172	209	240	308	370	440	600	740
	1000	9	9.2	13.7	21.3	36	57	79	95	115	140	161	206	250	297	400	490
	750	7	6.9	10.3	16	27.5	43	59	71	86	105	121	155	188	223	300	370
125	1500	12	13.6	19.9	32	50	75	107	126	159	186	239	253	340	410	520	630
	1000	8	9.1	13.3	21.7	33	50	71	84	106	124	160	170	231	276	340	420
	750	6	6.8	10	16.3	25.2	38	53	63	80	94	120	127	174	208	262	310
140	1500	11	11.2	16.4	25.6	41	65	95	114	141	172	197	253	296	350	480	580
	1000	7	7.5	10.9	17.1	28	43	63	76	95	115	132	169	198	237	320	390
	750	5	5.6	8.2	12.9	21	32	47	57	71	86	99	127	149	178	242	290
160	1500	9		14.3	21.4	33	57	85	101	125	153	188	208	280	320	410	500
	1000	6		9.5	14.3	22.2	38	57	67	84	102	126	139	188	219	278	330
	750	5		7.1	10.7	16.6	28.7	43	50	63	77	94	105	141	165	209	249
180	1500	8		13.4	20.9	33	52	75	91	111	135	155	199	240	281	380	460
	1000	6		9	14	22.1	35	50	61	74	90	104	133	161	188	256	310
	750	4		6.7	10.5	16.6	26.4	38	45	56	68	78	100	121	141	193	230
200	1500	8		12.5	20.3	33	49	67	80	97	120	143	164	221	266	330	400
	1000	5		8.4	13.6	22.1	33	45	53	65	80	96	109	148	178	221	264
	750	4		6.3	10.2	16.6	25	33	40	49	60	72	82	111	133	166	198
224	1500	7		10.3	16	28.1	43	59	71	86	105	121	143	189	228	300	370
	1000	4		6.9	10.7	18.8	28.8	39	48	58	70	81	96	127	152	204	244
	750	3		5.2	8	14.1	21.6	30	36	43	53	60	72	95	114	153	183
250	1500	6		10	16.3	25.8	38	53	63	80	94	120	127	174	209	273	310
	1000	4		6.7	10.9	17.2	25.5	36	42	53	62	80	85	116	140	182	210
	750	3		5	8.2	12.9	19.1	27.1	31	40	47	60	64	87	105	137	157
280	1500	5		8.2	12.9	21.5	32	47	57	71	86	99	127	149	179	246	290
	1000	4		5.5	8.6	14.4	22	31	38	47	58	66	85	100	120	165	194
	750	3		4.1	6.4	10.8	16.5	24	28.9	35	43	50	64	75	90	124	145
315	1500	5		7.7	11.5	18.7	28.9	43	50	63	77	84	105	136	165		259
	1000	3		5.2	7.7	12.5	19.3	29.3	34	42	51	56	70	91	110		173
	750	2		3.9	5.8	9.4	14.5	22	25.5	31	38	42	52	68	83		130
355	1500	4		6.6	10.4	17.6	25.9	38	46	55	68	73	89		141		
	1000	3		4.4	6.9	11.7	17.3	25.5	31	37	45	49	59		94		
	750	2		3.3	5.2	8.8	13	19.2	23.4	27.8	34	37	44		71		
400	1500	4							40		59		78		129		
	1000	3							27.2		40		52		86		
	750	2							20.4		30		39		65		

- NOTES: 1. When no rating is given for the required input speed, the value must be found by interpolation.
 2. When the input speed is less than 750 RPM, find the mechanical rating by the following method:

$$P_N = P_{750} \times \frac{n}{750}$$

Where P_N is the mechanical rating, P_{750} is the mechanical rating at 750 RPM, and N is the required input speed.

3. For ratings at input speeds higher than 1800 RPM and for variable speed applications, consult the factory.

RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE
SPIRAL BEVEL

TORQUE RATINGS - S.F. 1.0

Units: 1000 in.-lbs.

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (1000 in.-lbs.)														
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63	1800	29															3659
	1200	19															3689
	900	14															3719
71	1800	25															3794
	1200	17															3827
	900	13															3827
80	1800	23	94	113	166	294	473							2153		3728	4387
	1200	15	94	113	166	294	473							2437		3728	4406
	900	11	94	113	166	294	473							2418		3766	4461
90	1800	20	88	129	193	330	511	750		1058		1513		2272		3712	4578
	1200	13	88	129	193	330	513	754		1063		1521		2292		3732	4557
	900	10	88	129	193	330	515	756		1067		1526		2338		3753	4578
100	1800	18	94	145	217	360	537	781	884	1111	1265	1599	1804	2216	2693	3726	4482
	1200	12	94	146	217	362	539	784	888	1116	1272	1608	1814	2355	2905	3726	4482
	900	9	94	146	217	362	541	786	891	1120	1276	1613	1820	2429	2929	3726	4482
112	1800	16	88	136	214	337	512	752	924	1060	1314	1517	1919	2372	2738	3725	4449
	1200	11	88	137	215	338	515	756	928	1065	1321	1525	1929	2418	2712	3725	4475
	900	8	88	137	216	339	515	757	932	1069	1324	1529	1936	2426	2769	3725	4449
125	1800	14	94	146	234	361	538	782	886	1113	1269	1604	1810	2391	2829	3741	4441
	1200	10	94	147	234	362	540	786	890	1118	1275	1611	1819	2423	2858	3711	4441
	900	7	95	147	236	363	542	787	893	1122	1279	1616	1824	2426	2876	3741	4500
140	1800	13	88	136	214	337	514	754	927	1063	1318	1521	1924	2384	2832	3725	4489
	1200	9	88	137	215	338	515	757	931	1068	1324	1528	1933	2431	2872	3725	4425
	900	6	88	138	216	339	517	758	933	1071	1327	1532	1940	2438	2872	3790	4489
160	1800	11		127	189	287	512	784	888	1117	1272	1609	1814	2378	2845	3717	4487
	1200	8		127	189	287	513	787	892	1122	1277	1615	1823	2432	2666	3755	4487
	900	6		128	188	286	513	789	895	1124	1281	1620	1829	2435	2874	3793	4472
180	1800	10		137	215	321	515	756	929	1066	1321	1526	1930	2423	2811	3697	4455
	1200	7		137	216	321	516	759	932	1071	1326	1532	1939	2436	2874	3697	4496
	900	5		137	216	320	518	760	835	1074	1329	1536	1944	2440	2879	3796	4471
200	1800	9		146	234	358	541	786	891	1120	1275	1581	1820	2429	2793	3726	4514
	1200	6		146	236	358	542	788	894	1123	1280	1590	1828	2433	2879	3797	4514
	900	5		146	235	357	543	790	896	1127	1283	1594	1832	2438	2883	3802	4476
224	1800	8		137	216	339	515	757	932	1069	1324	1529	1792	2429	2872	3725	4481
	1200	5		137	216	340	517	761	935	1073	1330	1535	1802	2440	2872	3787	4476
	900	4		138	216	340	517	762	937	1076	1332	1539	1807	2440	2883	3807	4461
250	1800	7		147	236	364	542	787	893	1122	1279	1616	1824	2426	2877	3706	4500
	1200	5		147	236	364	543	790	896	1126	1283	1622	1831	2432	2888	3805	4476
	900	4		147	236	365	544	792	897	1129	1286	1625	1836	2450	2888	3799	4476
280	1800	6		138	216	339	517	758	933	1071	1327	1532	1940	2438	2877	3785	4489
	1200	4		138	216	340	518	762	935	1073	1332	1538	1947	2431	2891	3792	4463
	900	3		136	216	340	518	764	939	1076	1355	1541	1951	2452	2891	3798	4463
315	1800	6		136	215	340	518	760	895	1072	1281	1535	1829	2442	2874		4451
	1200	4		138	215	340	518	762	898	1076	1286	1539	1835	2435	2888		4479
	900	3		136	215	342	521	762	898	1078	1288	1542	1837	2442	2888		4479
355	1800	5		138	217	340	517	761	896	1073	1282	1537	1830		2879		
	1200	3		137	215	340	519	762	900	1077	1288	1543	1840		2882		
	900	3		138	215	342	520	764	901	1077	1290	1544	1839		2896		
400	1800	5							895		1284		1833		2887		
	1200	3							899		1288		1838		2877		
	900	2							901		1288		1843		2905		

RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

TORQUE RATINGS - S.F. 1.0

Units: kNm

NOMINAL RATIO	INPUT RPM	APPROX. OUTPUT RPM	TORQUE RATINGS (kNm)															
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135	
63	1500	24															415	
	1000	16															415	
	750	12															415	
71	1500	21															428	
	1000	14															430	
	750	11															428	
80	1500	19	10.6	12.8	18.7	33	53								256		419	499
	1000	13	10.7	12.8	18.7	33	53								277		421	499
	750	9	10.6	12.8	18.8	33	53								282		419	504
90	1500	17	9.9	14.5	21.8	37	58	85			120				258		420	513
	1000	11	9.9	14.6	21.8	37	58	85			120				260		423	516
	750	8	10.0	14.6	21.9	37	58	86			121				264		420	519
100	1500	15	10.6	16.5	24.5	41	61	88	100	126	143	181	204	269	320	421	506	
	1000	10	10.6	16.5	24.5	41	61	89	101	126	144	182	205	273	327	418	503	
	750	8	10.6	16.5	24.6	41	61	89	101	127	144	183	206	274	333	427	506	
112	1500	13	10.0	15.4	24.2	38	58	85	105	120	149	172	217	270	308	421	507	
	1000	9	10.0	15.5	24.3	38	58	86	105	121	149	173	218	274	312	421	504	
	750	7	10.0	15.5	24.4	38	58	86	105	121	150	173	219	275	312	421	507	
125	1500	12	10.6	16.5	26.5	41	61	89	100	126	144	182	205	269	321	425	506	
	1000	8	10.7	16.5	26.5	41	61	89	101	127	144	182	206	274	324	417	506	
	750	6	10.6	16.6	26.6	41	61	89	101	127	145	183	206	275	326	429	498	
140	1500	11	10.0	15.5	24.3	38	58	85	105	120	149	172	218	273	320	425	504	
	1000	7	10.0	15.4	24.4	38	58	86	105	121	150	173	219	274	325	425	509	
	750	5	10.0	15.5	24.5	38	58	86	106	121	150	173	219	275	325	429	504	
160	1500	9		14.4	21.4	32	58	89	101	126	144	182	205	274	316	422	507	
	1000	6		14.4	21.4	32	58	89	101	127	145	183	206	275	325	429	502	
	750	5		14.3	21.4	32	58	89	101	127	145	183	207	275	326	430	505	
180	1500	8		15.4	24.3	36	58	86	105	121	150	173	219	274	324	423	505	
	1000	6		15.5	24.4	36	59	86	105	121	150	173	219	275	326	428	511	
	750	4		15.4	24.4	36	59	86	106	121	150	174	220	276	326	430	505	
200	1500	8		16.5	26.5	40	61	89	101	127	144	179	206	275	325	427	510	
	1000	5		16.7	26.7	40	61	89	101	127	145	180	207	276	326	429	505	
	750	4		16.7	26.7	40	61	89	101	127	145	180	207	276	325	430	505	
224	1500	7		15.5	24.4	38	58	86	105	121	150	173	203	274	325	421	511	
	1000	4		15.6	24.5	38	59	86	106	121	150	174	204	276	325	429	505	
	750	3		15.7	24.4	38	59	86	106	122	151	174	204	276	325	429	505	
250	1500	6		16.6	26.6	41	61	89	101	127	145	183	206	275	325	429	498	
	1000	4		16.6	26.6	41	62	89	101	127	145	183	207	275	325	429	506	
	750	3		16.6	26.7	41	61	90	102	128	145	184	208	275	326	430	504	
280	1500	5		15.5	24.5	38	58	86	106	121	150	173	219	275	325	428	504	
	1000	4		15.6	24.5	39	59	86	106	122	151	174	220	277	327	431	506	
	750	3		15.5	24.3	39	59	86	106	122	151	174	221	277	327	431	504	
315	1500	5		15.5	24.3	38	59	86	101	121	145	174	207	275	326		504	
	1000	3		15.7	24.5	38	59	86	101	122	145	174	207	276	326		505	
	750	2		15.7	24.6	39	59	86	101	122	146	175	208	275	328		506	
355	1500	4		15.4	24.5	38	59	86	101	121	145	174	207		326			
	1000	3		15.4	24.3	38	59	86	102	122	145	174	208		326			
	750	2		15.4	24.5	38	59	86	102	122	146	175	208		328			
400	1500	4								101		145		207				
	1000	3								102		146		208				
	750	2								102		146		208				

RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - HORIZONTAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)														
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125	8130	8135
63 - 90	1800	-	46	64	86	115	149	211		271		350		283		365	365
		1	56	78	105	142	184	259		334		431		342		456	456
	1200	-	45	60	81	111	145	208		271		344		254		336	336
		1	56	74	100	137	179	256		334		423		335		469	469
100 - 140	900	-	43	56	76	105	138	199		262		330		216		298	298
		1	53	69	94	130	170	245		323		406		302		429	429
	1800	-	43	59	79	107	139	196	213	254	279	329	368	283	283	365	365
		1	53	72	97	132	171	241	262	313	344	404	452	342	342	456	456
160 - 200	1200	-	41	55	74	102	134	192	207	252	276	321	357	254	254	336	336
		1	51	68	91	126	165	236	255	310	339	395	439	335	335	469	469
	900	-	39	51	70	96	127	184	198	243	265	307	341	216	216	298	298
		1	48	63	86	119	157	226	243	299	326	378	419	302	302	429	429
224 - 280	1800	-	49	69	96	124	178	207	231	272	300	347	283	283	365	365	
		1	60	85	118	153	218	255	284	334	370	427	342	342	456	456	
	1200	-	44	62	87	114	164	194	215	256	278	324	254	254	336	336	
		1	54	77	108	141	202	238	265	315	342	399	335	335	469	469	
315 - 400	900	-	40	57	80	106	152	181	201	241	258	303	216	216	298	298	
		1	49	70	99	130	187	223	247	296	317	373	302	302	429	429	
	1800	-	47	66	92	119	170	183	224	244	284	315	283	283	365	365	
		1	58	82	113	146	209	226	275	301	349	387	342	342	456	456	
63 - 90	1500	-	34	47	63	85	111	157	•	204	•	261	•	255		350	350
		1	57	77	103	141	183	260	•	337	•	430	•	370		480	480
	1000	-	33	43	58	80	105	151	•	199	•	250	•	235		330	330
		1	54	71	96	133	174	250	•	328	•	413	•	310		420	420
100 - 140	750	-	31	40	54	75	99	143	•	190	•	238	•	205		300	300
		1	51	66	89	124	164	237	•	313	•	392	•	265		370	370
	1500	-	32	43	58	79	103	146	158	190	209	244	272	255	255	350	350
		1	52	71	95	130	169	241	260	314	344	402	449	370	370	480	480
160 - 200	1000	-	30	40	53	74	97	140	150	184	201	233	259	235	235	330	330
		1	49	65	88	121	160	230	248	304	332	385	427	310	310	420	420
	750	-	28	36	49	69	91	132	142	176	191	221	245	205	205	300	300
		1	45	60	82	114	150	218	234	290	315	365	404	265	265	370	370
224 - 280	1500	-	35	49	69	90	128	151	168	198	217	252	255	255	350	350	
		1	58	81	114	148	212	249	277	327	358	416	370	370	480	480	
	1000	-	31	44	62	81	117	139	154	184	198	232	235	235	330	330	
		1	51	72	102	134	193	229	254	303	327	383	310	310	420	420	
315 - 400	750	-	28	40	56	74	107	129	142	171	182	216	205	205	300	300	
		1	46	65	93	122	177	212	234	282	301	356	265	265	370	370	
	1500	-	34	47	66	86	123	132	162	177	205	227	255	255	350	350	
		1	56	78	109	141	203	218	268	292	338	375	370	370	480	480	
63 - 90	1000	-	30	42	59	77	112	120	149	162	187	206	235	235	330	330	
		1	49	69	97	128	184	198	246	267	308	341	310	310	420	420	
	750	-	27	38	54	71	103	110	137	149	172	190	205	205	300	300	
		1	44	63	88	117	169	182	227	246	284	313	265	265	370	370	
100 - 140	1500	-	34	48	66	86	124	132	162	174	202	218	255	255	350	350	
		1	56	79	109	142	204	218	268	287	333	360	370	370	480	480	
	1000	-	30	43	60	78	113	120	149	159	184	198	235	235	330	330	
		1	50	70	98	129	186	198	246	263	303	327	310	310	420	420	
160 - 200	750	-	27	39	54	71	104	110	138	147	169	183	205	205	300	300	
		1	45	64	89	117	171	182	227	242	280	301	265	265	370	370	

NOTES: 1. Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR in the APPLICATIONS section.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.
 3. • Auxiliary cooling device required.

RATING TABLES

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

THERMAL RATINGS - VERTICAL

NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (hp)												
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125
63 - 90	1800	-	52	69	93	127	165	235		306		387		443	443
		1	85	114	153	209	272	387		505		638		609	609
	1200	-	49	63	85	117	154	221		290		364		416	416
		1	80	104	141	194	254	364		479		600		531	531
	900	-	45	58	79	109	144	208		275		343		369	369
		1	75	96	130	181	237	343		453		566		463	463
100 - 140	1800	-	47	63	85	116	152	216	233	283	309	359	399	443	443
		1	78	104	140	191	250	357	384	468	510	593	659	609	609
	1200	-	43	58	78	107	141	203	218	268	292	337	374	416	416
		1	72	95	128	177	233	335	359	442	481	557	617	531	531
	900	-	40	53	72	100	132	191	205	253	276	318	352	369	369
		1	66	87	118	164	218	315	338	418	455	525	581	463	463
160 - 200	1800	-		51	72	101	131	187	219	244	288	314	364	443	443
		1		85	119	166	216	308	361	403	476	519	601	609	609
	1200	-		45	64	90	118	169	200	222	265	285	334	416	416
		1		74	106	148	195	279	330	367	437	471	551	531	531
	900	-		40	58	82	108	156	185	205	247	263	310	369	369
		1		67	95	135	178	257	306	339	407	434	511	463	463
224 - 280	1800	-		49	69	96	125	179	192	236	257	296	328	443	443
		1		81	114	158	206	295	316	389	423	489	541	609	609
	1200	-		43	61	86	112	162	173	215	233	269	297	416	416
		1		71	101	141	185	267	286	355	385	444	490	531	531
	900	-		39	56	78	103	149	159	198	215	248	273	369	369
		1		64	92	129	169	245	263	327	355	409	451	463	463
315 - 400	1800	-		50	70	97	126	180	191	236	252	291	314	443	443
		1		83	116	159	207	296	316	389	416	480	518	609	609
	1200	-		44	62	86	113	163	173	215	229	264	285	416	416
		1		73	103	142	187	268	286	354	378	436	470	531	531
	900	-		40	56	79	103	150	159	198	212	244	263	369	369
		1		65	93	130	171	247	262	327	349	402	433	463	463

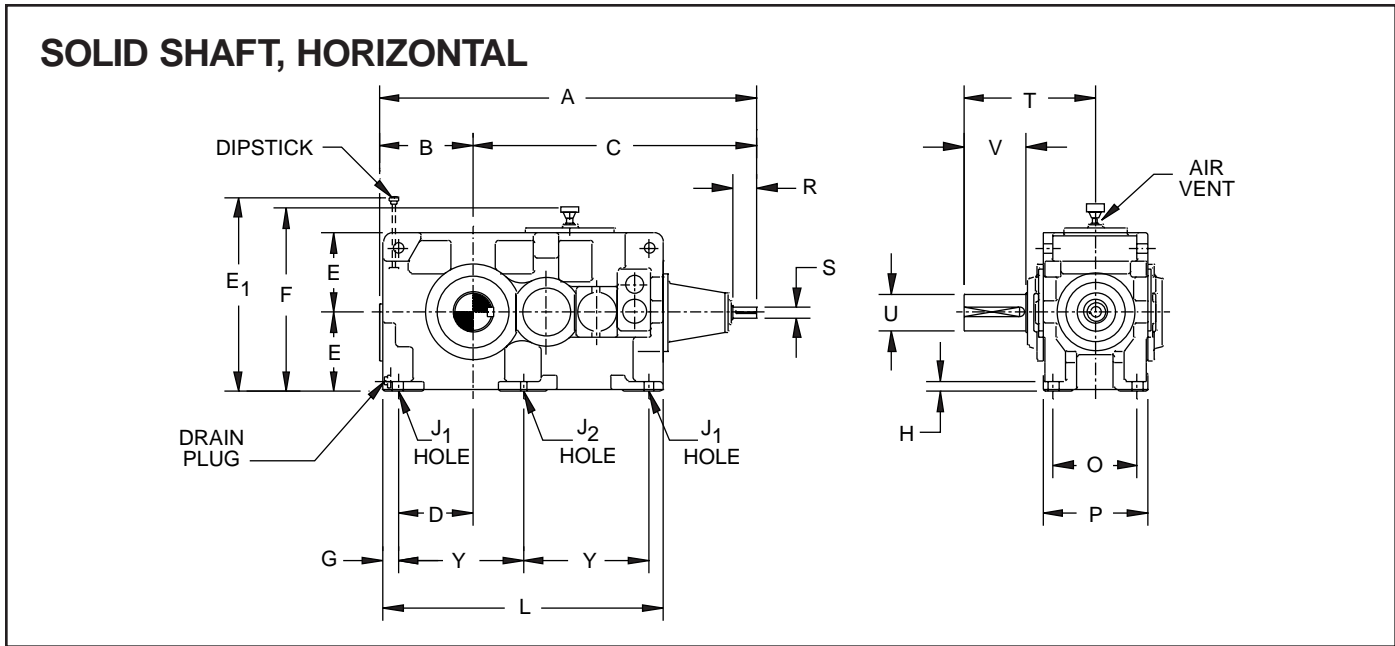
NOMINAL RATIO	INPUT RPM	NO. OF FANS	THERMAL RATINGS (kW)												
			8045	8055	8065	8075	8085	8090	8095	8100	8105	8110	8115	8120	8125
63 - 90	1500	-	38	50	67	92	120	171		224		282		320	320
		1	62	82	110	151	198	282		369		464		440	440
	1000	-	35	45	61	84	110	159		209		262		290	290
		1	57	74	100	138	182	262		345		432		370	370
	750	-	32	41	56	78	102	148		197		245		255	255
		1	53	67	92	128	169	245		324		404		320	320
100 - 140	1500	-	34	45	61	84	110	157	169	207	226	261	290	320	320
		1	56	75	100	138	181	259	279	341	372	431	478	440	440
	1000	-	31	41	55	76	101	145	156	193	210	243	269	290	290
		1	51	67	91	126	167	241	258	319	347	400	443	370	370
	750	-	28	37	51	71	94	136	146	181	197	227	251	255	255
		1	47	62	83	116	155	225	241	299	325	375	415	320	320
160 - 200	1500	-		36	51	72	94	134	157	175	208	225	262	320	320
		1		60	84	118	154	221	259	289	343	371	432	440	440
	1000	-		32	45	63	83	120	142	158	189	202	238	290	290
		1		52	74	104	137	198	235	261	312	334	392	370	370
	750	-		28	40	57	76	109	131	145	175	185	219	255	255
		1		46	66	94	125	180	216	239	288	305	362	320	320
224 - 280	1500	-		35	49	68	89	128	137	169	184	212	234	320	320
		1		57	81	113	147	211	226	279	303	350	387	440	440
	1000	-		30	43	60	79	114	123	153	166	191	210	290	290
		1		50	71	99	131	189	202	252	273	314	347	370	370
	750	-		27	39	54	72	104	112	140	152	175	193	255	255
		1		44	64	90	119	172	184	231	250	288	318	320	320
315 - 400	1500	-		35	50	69	90	129	137	169	181	208	225	320	320
		1		58	82	113	148	212	226	279	298	344	371	440	440
	1000	-		31	44	61	80	115	123	153	163	188	202	290	290
		1		51	72	100	132	190	202	252	269	309	333	370	370
	750	-		27	39	55	72	105	112	140	149	172	185	255	255
		1		45	65	91	119	174	184	231	246	283	305	320	320

NOTES: 1. Given thermal ratings are based upon 70°F ambient temperature. For other ambient temperatures refer to the AMBIENT TEMPERATURE FACTOR in the **APPLICATIONS** section.
 2. For input speeds between the given values, obtain the thermal rating by interpolation.

DIMENSIONS

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	U	V	Y	2Y	WT. lbf.	OIL QTY. GAL.
8045	39.37	9.06	30.31	7.28	7.87	20.67	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	2.38	1.125	13.80	3.500	6.75	-	24.41	650	5.0
8055	43.66	10.63	33.03	8.86	8.86	22.83	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	2.38	1.125	16.16	4.125	8.25	14.57	29.13	950	7.9
8065	49.41	12.01	37.40	9.84	10.43	26.54	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	3.13	1.375	17.32	4.875	8.27	16.54	33.07	1430	12.2
8075	55.91	13.39	42.52	10.83	11.81	29.65	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	3.13	1.500	20.08	5.625	9.88	18.90	37.80	2050	17.7
8085	64.17	14.96	49.21	12.40	13.19	33.27	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	4.25	1.750	22.83	6.375	11.73	22.44	44.88	2930	25.6
8090	70.55	16.14	54.41	13.58	14.76	37.32	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	4.25	2.000	25.59	7.000	11.81	25.98	51.97	4740	40
8095	72.91	17.32	55.59	14.76	15.75	39.49	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	4.25	2.000	27.56	7.375	13.78	27.17	54.33	5290	48
8100	79.53	17.72	61.81	14.76	16.73	41.93	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	5.50	2.375	29.13	7.750	13.78	28.94	57.87	6350	55
8105	82.24	19.09	63.15	16.14	17.72	44.09	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	5.50	2.375	29.13	8.375	13.78	30.31	60.63	7590	67
8110	85.43	19.69	65.75	16.54	18.70	46.26	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	5.50	2.375	30.31	8.375	13.78	32.68	65.35	8950	79
8115	89.33	21.65	67.68	18.50	19.69	48.19	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	5.50	2.375	32.68	9.375	16.14	34.65	69.29	9940	95

METRIC DIMENSIONS

Units: mm

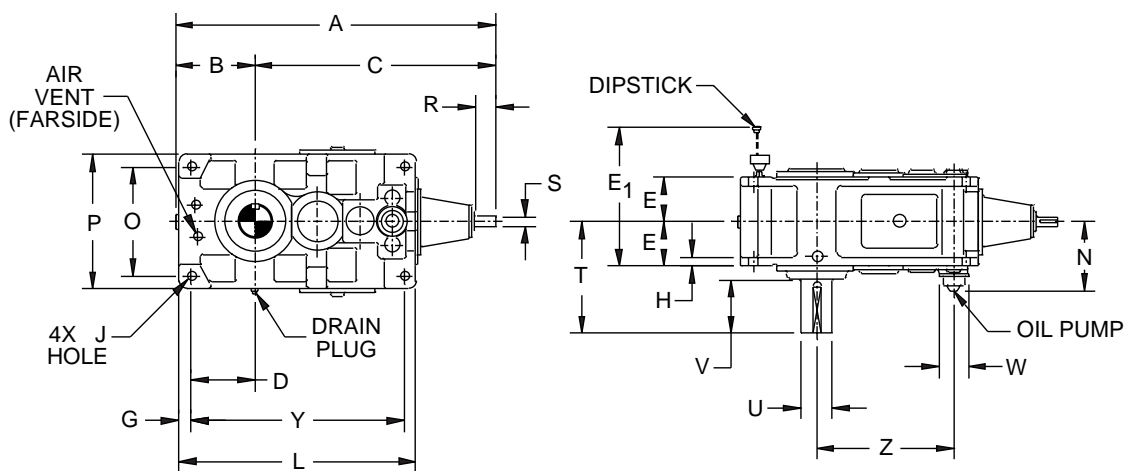
MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	U	V	Y	2Y	WT. kgf.	OIL QTY. LIT.
8045	1000	230	770	185	200	525	489	40	30	28	-	700	215	270	60	28	349	95	170	-	620	295	19
8055	1109	270	839	225	225	580	539	40	32	28	24	820	255	310	60	28	411	110	210	370	740	430	30
8065	1255	305	950	250	265	674	619	50	35	35	24	935	280	350	80	30	440	125	210	420	840	650	46
8075	1420	340	1080	275	300	753	689	60	40	42	28	1075	320	400	80	35	509	145	250	480	960	930	67
8085	1630	380	1250	315	335	845	759	60	45	42	35	1260	360	440	110	45	582	165	300	570	1140	1330	97
8090	1792	410	1382	345	375	948	839	60	50	42	42	1440	480	570	110	50	650	180	300	660	1320	2150	150
8095	1852	440	1412	375	400	1003	889	60	50	42	42	1500	480	570	110	50	700	190	350	690	1380	2400	180
8100	2020	450	1570	375	425	1065	939	70	55	48	48	1610	560	650	140	60	740	200	350	735	1470	2880	210
8105	2089	485	1604	410	450	1120	989	70	55	48	48	1680	560	650	140	60	740	220	350	770	1540	3440	255
8110	2170	500	1670	420	475	1175	1039	75	60	56	56	1810	610	710	140	60	770	220	350	830	1660	4060	300
8115	2269	550	1719	470	500	1224	1089	75	60	56	56	1910	610	710	140	60	830	240	410	880	1760	4510	360

DIMENSIONS

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, VERTICAL



BOTTOM VIEW

INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. lbf.	OIL QTY. GAL.
8045	39.37	9.06	30.31	7.28	5.31	18.11	1.57	1.18	1.10	27.56	8.86	12.60	15.75	2.38	1.125	13.80	3.500	6.75	3.94	24.41	15.67	650	4.0
8055	43.66	10.63	33.03	8.86	6.10	20.47	1.57	1.26	1.10	32.28	9.65	14.57	17.72	2.38	1.125	16.16	4.125	8.25	3.94	29.13	18.39	860	6.1
8065	49.41	12.01	37.40	9.84	6.89	23.03	1.97	1.38	1.38	36.81	10.83	16.93	20.87	3.13	1.375	17.32	4.875	8.27	4.61	33.07	21.26	1320	9.2
8075	55.91	13.39	42.52	10.83	7.87	26.18	2.36	1.57	1.65	42.32	11.81	18.90	23.62	3.13	1.500	20.08	5.625	9.88	4.61	37.80	24.80	1960	14.0
8085	64.17	14.96	49.21	12.40	8.66	28.74	2.36	1.77	1.65	49.61	12.60	21.65	26.38	4.25	1.750	22.83	6.375	11.73	4.61	44.88	28.54	2820	19.0
8090	70.55	16.14	54.41	13.58	11.22	36.38	2.36	1.97	1.65	56.69	15.28	24.80	29.53	4.25	2.000	25.59	7.000	11.81	5.39	51.97	32.95	4790	32
8095	72.91	17.32	55.59	14.76	11.22	36.38	2.36	1.97	1.65	59.06	15.28	26.77	31.50	4.25	2.000	27.56	7.375	13.78	5.39	54.33	34.13	5360	41
8100	79.53	17.72	61.81	14.76	12.80	41.30	2.76	2.17	1.89	63.39	16.85	27.95	33.46	5.50	2.375	29.13	7.750	13.78	5.39	57.87	37.40	6550	48
8105	82.24	19.09	63.15	16.14	12.80	41.30	2.76	2.17	1.89	66.14	16.85	29.92	35.43	5.50	2.375	29.13	8.375	13.78	5.39	60.63	38.74	7610	58
8110	85.43	19.69	65.75	16.54	13.98	44.84	2.95	2.36	2.20	71.26	18.03	31.50	37.40	5.50	2.375	30.31	8.375	13.78	5.39	65.35	41.34	9040	66
8115	89.33	21.65	67.68	18.50	13.98	44.84	2.95	2.36	2.20	75.20	18.03	33.46	39.37	5.50	2.375	32.68	9.375	16.14	5.39	69.29	43.27	10190	83

METRIC DIMENSIONS

Units: mm

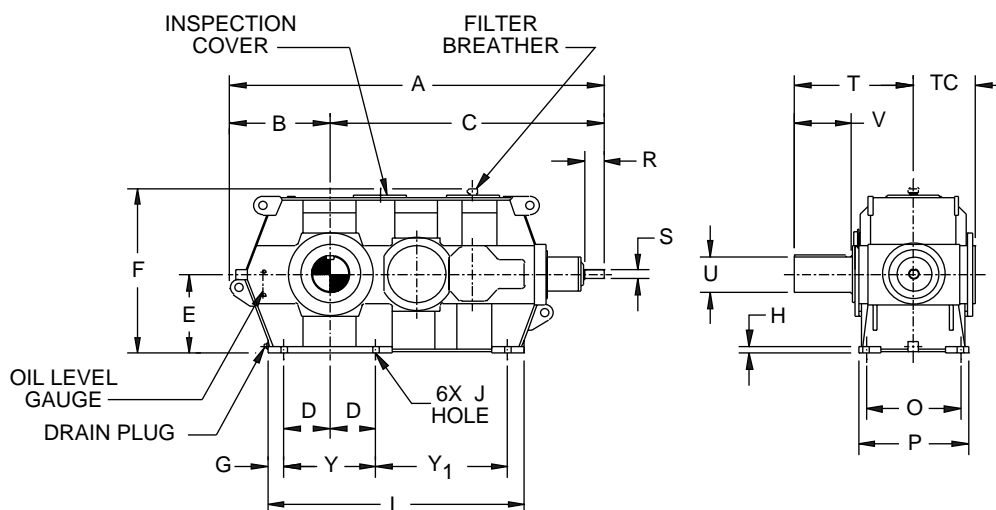
MODEL	A	B	C	D	E	E ₁	G	H	J	L	N	O	P	R	S	T	U	V	W	Y	Z	WT. kgf.	OIL QTY. LTR.
8045	1000	230	770	185	135	460	40	30	28	700	225	320	400	60	28	349	95	170	100	620	398	295	15
8055	1109	270	839	225	155	520	40	32	28	820	245	370	450	60	28	411	110	210	100	740	467	390	23
8065	1255	305	950	250	175	585	50	35	35	935	275	430	530	80	30	440	125	210	117	840	540	600	35
8075	1420	340	1080	275	200	665	60	40	42	1075	300	480	600	80	35	509	145	250	117	960	630	890	53
8085	1630	380	1250	315	220	730	60	45	42	1260	320	550	670	110	45	582	165	300	117	1140	725	1250	72
8090	1792	410	1382	345	285	924	60	50	42	1440	388	630	750	110	50	650	180	300	137	1320	837	2170	120
8095	1852	440	1412	375	285	924	60	50	42	1500	388	680	800	110	50	700	190	350	137	1380	867	2430	155
8100	2020	450	1570	375	325	1049	70	55	48	1610	428	710	850	140	60	740	200	350	137	1470	950	2970	180
8105	2089	485	1604	410	325	1049	70	55	48	1680	428	760	900	140	60	740	220	350	137	1540	984	3450	220
8110	2170	500	1670	420	355	1139	75	60	56	1810	458	800	950	140	60	770	220	350	137	1660	1050	4100	250
8115	2269	550	1719	470	355	1139	75	60	56	1910	458	850	1000	140	60	830	240	410	137	1760	1099	4620	315

DIMENSIONS

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL

SOLID SHAFT, SIZES 8120-8135



INCH DIMENSIONS

Units: inches

MODEL	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	TC	U	V	Y	Y ₁	WT. lbf.	OIL QTY. GAL.
8120	105.91	28.35	77.56	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	5.51	2.500	34.06	17.13	10.000	16.14	25.98	37.40	13671	106
8125	105.91	28.35	77.56	12.99	22.83	47.24	4.72	1.97	1.89	72.83	26.77	31.10	5.51	2.500	36.42	17.13	11.000	18.50	25.98	37.40	13671	106
8130	126.38	31.50	94.88	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	6.69	3.250	40.35	21.06	11.750	18.50	25.98	48.43	22050	159
8135	126.38	31.50	94.88	12.99	24.80	51.18	5.51	2.36	2.20	85.43	33.46	38.58	6.69	3.250	40.35	21.06	12.500	18.50	25.98	48.43	22050	159

METRIC DIMENSIONS

Units: mm

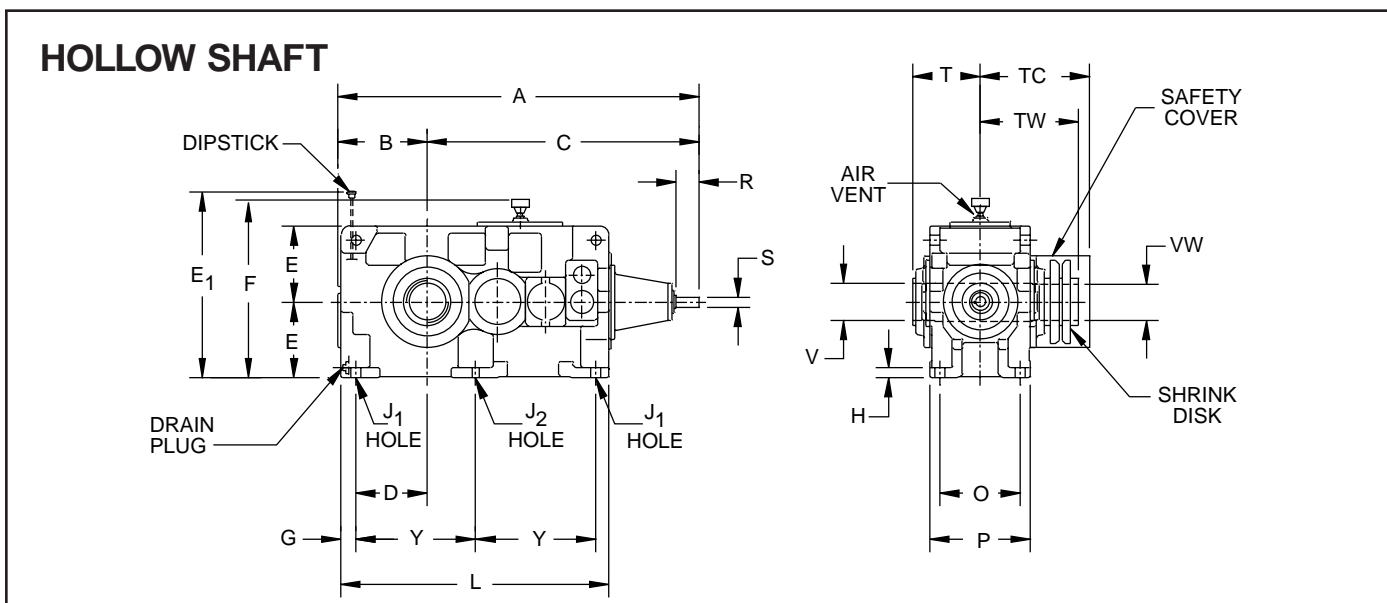
MODEL	A	B	C	D	E	F	G	H	J	L	O	P	R	S	T	TC	U	V	Y	Y ₁	WT. kgf.	OIL QTY. LIT.
8120	2690	720	1970	330	580	1200	120	50	48	1850	680	790	140	65	865	435	260	410	660	950	6200	400
8125	2690	720	1970	330	580	1200	120	50	48	1850	680	790	140	65	925	435	280	470	660	950	6200	400
8130	3210	800	2410	330	630	1300	140	60	56	2170	850	980	170	85	1025	535	300	470	660	1230	10000	600
8135	3210	800	2410	330	630	1300	140	60	56	2170	850	980	170	85	1025	535	320	470	660	1230	10000	600

NOTE: Housings in fabricated steel.

DIMENSIONS

QUADRUPLE REDUCTION

RIGHT ANGLE SPIRAL BEVEL



INCH DIMENSIONS

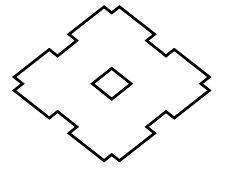
Units: inches

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	TC	TW	V	VW	Y	2Y	WT. lbf.	OIL QTY. GAL.
8045	39.37	9.06	30.31	7.28	7.87	20.67	19.25	1.57	1.18	1.10	-	27.56	8.46	10.63	2.38	1.125	7.09	11.22	10.55	3.750	3.625	-	24.41	650	5.0
8055	43.66	10.63	33.03	8.86	8.86	22.83	21.22	1.57	1.26	1.10	0.94	32.28	10.04	12.20	2.38	1.125	7.87	12.60	11.93	4.375	4.250	14.57	29.13	950	7.9
8065	49.41	12.01	37.40	9.84	10.43	26.54	24.37	1.97	1.38	1.38	0.94	36.81	11.02	13.78	3.13	1.375	9.06	14.37	13.90	5.125	5.000	16.54	33.07	1430	12.1
8075	55.91	13.39	42.52	10.83	11.81	29.65	27.13	2.36	1.57	1.65	1.10	42.32	12.60	15.75	3.13	1.500	10.24	15.94	15.12	6.000	5.875	18.90	37.80	2050	17.7
8085	64.17	14.96	49.21	12.40	13.19	33.27	29.88	2.36	1.77	1.65	1.38	49.61	14.17	17.32	4.25	1.750	11.22	17.72	16.89	6.875	6.750	22.44	44.88	2930	25.6
8090	70.55	16.14	54.41	13.58	14.76	37.32	33.03	2.36	1.97	1.65	1.65	56.69	18.90	22.44	4.25	2.000	13.78	20.28	19.45	7.500	7.375	25.98	51.97	4740	40
8095	72.91	17.32	55.59	14.76	15.75	39.49	35.00	2.36	1.97	1.65	1.65	59.06	18.90	22.44	4.25	2.000	13.78	20.59	20.04	8.000	7.875	27.17	54.33	5290	48
8100	79.53	17.72	61.81	14.76	16.73	41.93	36.97	2.76	2.17	1.89	1.89	63.39	22.05	25.59	5.50	2.375	15.35	22.24	21.42	8.375	8.250	28.94	57.87	6350	55
8105	82.24	19.09	63.15	16.14	17.72	44.09	38.94	2.76	2.17	1.89	1.89	66.14	22.05	25.59	5.50	2.375	15.35	22.76	22.01	8.875	8.625	30.31	60.63	7590	67
8110	85.43	19.69	65.75	16.54	18.70	46.26	40.90	2.95	2.36	2.20	2.20	71.26	24.02	27.95	5.50	2.375	16.54	24.61	24.02	9.500	9.375	32.68	65.35	8950	79
8115	89.33	21.65	67.68	18.50	19.69	48.19	42.87	2.95	2.36	2.20	2.20	75.20	24.02	27.95	5.50	2.375	16.54	25.98	25.39	10.000	9.875	34.65	69.29	9940	95

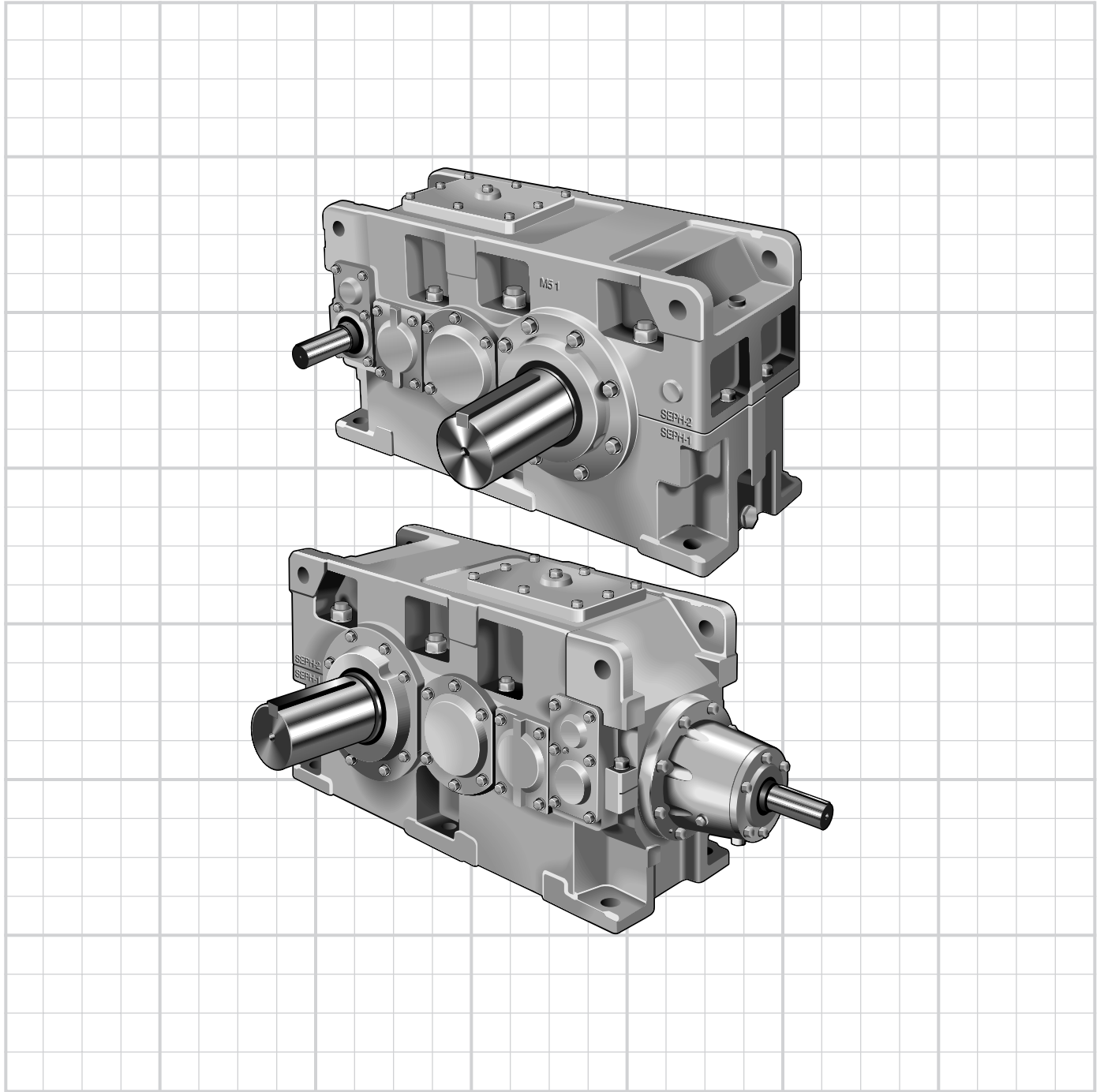
METRIC DIMENSIONS

Units: mm

MODEL	A	B	C	D	E	E ₁	F	G	H	J ₁	J ₂	L	O	P	R	S	T	TC	TW	V	VW	Y	2Y	WT. kgf.	OIL QTY. LIT.
8045	1000	230	770	185	200	525	489	40	30	28	-	700	215	270	60	28	180	285	268	98	95	-	620	295	19
8055	1109	270	839	225	225	580	539	40	32	28	24	820	255	310	60	28	200	320	303	108	105	370	740	430	30
8065	1255	305	950	250	265	674	619	50	35	35	24	935	280	350	80	30	230	365	353	128	125	420	840	650	46
8075	1420	340	1080	275	300	753	689	60	40	42	28	1075	320	400	80	35	260	405	384	148	145	480	960	930	67
8085	1630	380	1250	315	335	845	759	60	45	42	35	1260	360	440	110	45	285	450	429	173	170	570	1140	1330	97
8090	1792	410	1382	345	375	948	839	60	50	42	42	1440	480	570	110	50	350	515	494	193	190	660	1320	2150	150
8095	1852	440	1412	375	400	1003	889	60	50	42	42	1500	480	570	110	50	350	523	509	203	200	690	1380	2400	180
8100	2020	450	1570	375	425	1065	939	70	55	48	48	1610	560	650	140	60	390	565	544	213	210	735	1470	2880	210
8105	2089	485	1604	410	450	1120	989	70	60	48	48	1680	560	650	140	60	390	578	559	223	220	770	1540	3440	255
8110	2170	500	1670	420	475	1175	1039	75	60	56	56	1810	610	710	140	60	420	625	610	243	240	830	1660	4060	300
8115	2269	550	1719	470	500	1224	1089	75	60	56	56	1910	610	710	140	60	420	660	645	253	250	880	1760	4510	360



SUPPLEMENTARY DIMENSIONS



KEY DIMENSIONS - WIDTH x HEIGHT x LENGTH

SIZES 8015-8085

SIZE	INCH MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT					
	P2			P3			P4								
8015	0.250	x	0.250	x	2.87	0.1875	x	0.1875	x	2.17	0.500	x	0.500	x	3.94
8025	0.3125	x	0.3125	x	2.83	0.250	x	0.250	x	2.13	0.625	x	0.625	x	5.00
8035	0.375	x	0.375	x	4.02	0.250	x	0.250	x	2.87	0.1875	x	0.1875	x	2.17
8045	0.500	x	0.500	x	3.94	0.250	x	0.250	x	2.87	0.250	x	0.250	x	2.13
8055	0.500	x	0.500	x	3.94	0.375	x	0.375	x	4.02	0.250	x	0.250	x	2.87
8065	0.625	x	0.625	x	5.00	0.375	x	0.375	x	4.02	0.250	x	0.250	x	2.87
8075	0.625	x	0.625	x	5.00	0.500	x	0.500	x	3.94	0.3125	x	0.3125	x	4.09
8085	0.750	x	0.750	x	6.06	0.625	x	0.625	x	5.00	0.375	x	0.375	x	4.02

SIZE	INCH MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT					
	R2			R3			R4								
8015	0.250	x	0.250	x	1.97						0.500	x	0.500	x	3.94
8025	0.3125	x	0.3125	x	2.83						0.625	x	0.625	x	5.00
8035	0.375	x	0.375	x	3.86	0.250	x	0.250	x	2.13	0.750	x	0.750	x	4.88
8045	0.375	x	0.375	x	3.86	0.3125	x	0.3125	x	2.83	0.250	x	0.250	x	2.13
8055	0.500	x	0.500	x	3.78	0.375	x	0.375	x	2.76	0.250	x	0.250	x	2.13
8065	0.625	x	0.625	x	5.00	0.375	x	0.375	x	3.86	0.3125	x	0.3125	x	2.83
8075	0.625	x	0.625	x	5.00	0.500	x	0.500	x	3.78	0.375	x	0.375	x	2.76
8085	0.750	x	0.750	x	4.88	0.625	x	0.625	x	5.00	0.375	x	0.375	x	3.86

SIZE	METRIC MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT					
	P2			P3			P4								
8015	8	x	7	x	70	8	x	7	x	50	18	x	11	x	95
8025	10	x	8	x	70	8	x	7	x	50	20	x	12	x	125
8035	12	x	8	x	95	8	x	7	x	70	8	x	7	x	50
8045	14	x	9	x	95	10	x	8	x	70	8	x	7	x	50
8055	16	x	10	x	95	12	x	8	x	95	8	x	7	x	70
8065	18	x	11	x	125	14	x	9	x	95	10	x	8	x	70
8075	20	x	12	x	125	16	x	10	x	95	12	x	8	x	95
8085	22	x	14	x	150	18	x	11	x	125	14	x	9	x	95

SIZE	METRIC MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT					
	R2			R3			R4								
8015	8	x	7	x	50						18	x	11	x	95
8025	10	x	8	x	70						20	x	12	x	125
8035	14	x	9	x	95	8	x	7	x	50	22	x	14	x	120
8045	14	x	9	x	95	8	x	7	x	70	8	x	7	x	50
8055	14	x	9	x	95	10	x	8	x	70	8	x	7	x	50
8065	18	x	11	x	125	14	x	9	x	95	8	x	7	x	70
8075	18	x	11	x	125	14	x	9	x	95	10	x	8	x	70
8085	20	x	12	x	125	18	x	11	x	125	15	x	9	x	95

SHAFT END TAPPED HOLES - TAP X THREAD DEPTH (mm)

Note that these holes are the same for metric and inch shaft models.

SIZE	P2	P3	P4	R2	R3	R4	LSS
8015	M10 x 22	M10 x 22		M12 x 28			M20 x 42
8025	M12 x 28	M10 x 22		M12 x 28			M20 x 42
8035	M16 x 36	M10 x 22	M10 x 22	M16 x 36	M10 x 22		M20 x 42
8045	M16 x 36	M12 x 28	M10 x 22	M16 x 36	M10 x 22	M10 x 22	M24 x 50
8055	M20 x 42	M12 x 28	M10 x 22	M16 x 36	M12 x 28	M10 x 22	M24 x 50
8065	M20 x 42	M12 x 28	M12 x 28	M20 x 42	M16 x 36	M10 x 22	M24 x 50
8075	M20 x 42	M20 x 42	M16 x 36	M20 x 42	M16 x 36	M12 x 28	M30 x 60
8085	M20 x 42	M20 x 42	M16 x 36	M20 x 42	M20 x 42	M16 x 36	M30 x 60

KEY DIMENSIONS - WIDTH x HEIGHT x LENGTH

SIZES 8090-8135

SIZE	INCH MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT										
	P2			P3			P4													
8090	0.875	x	0.875	x	5.98	0.625	x	0.625	x	5.00	0.500	x	0.500	x	3.78	1.750	x	1.500	x	10.51
8095	0.875	x	0.875	x	5.98	0.625	x	0.625	x	5.00	0.500	x	0.500	x	3.78	1.750	x	1.500	x	12.60
8100	1.000	x	1.000	x	7.44	0.750	x	0.750	x	4.88	0.500	x	0.500	x	5.00	2.000	x	1.500	x	12.60
8105	1.000	x	1.000	x	7.44	0.750	x	0.750	x	4.88	0.500	x	0.500	x	5.00	2.000	x	1.500	x	12.60
8110	1.000	x	1.000	x	7.44	0.750	x	0.750	x	6.06	0.500	x	0.500	x	5.00	2.000	x	1.500	x	12.60
8115	1.000	x	1.000	x	7.44	0.750	x	0.750	x	6.06	0.500	x	0.500	x	5.00	2.500	x	1.750	x	14.69
8120	1.250	x	1.250	x	7.24	1.000	x	1.000	x	7.44	0.625	x	0.625	x	5.00	2.500	x	1.750	x	14.57
8125	1.250	x	1.250	x	7.24	1.000	x	1.000	x	7.44	0.625	x	0.625	x	5.00	2.500	x	1.750	x	16.93
8130	1.500	x	1.500	x	8.66	1.250	x	1.250	x	8.66	0.750	x	0.750	x	4.88	3.000	x	2.000	x	16.54
8135	1.500	x	1.500	x	8.66	1.250	x	1.250	x	8.66	0.750	x	0.750	x	4.88	3.000	x	2.000	x	16.54

SIZE	INCH MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT										
	R2			R3			R4													
8090				0.625 x 0.625 x 5.00			0.500 x 0.500 x 3.78			1.750 x 1.500 x 10.51										
8095	0.875	x	0.875	x	5.98	0.625	x	0.625	x	5.00	0.500	x	0.500	x	3.78	1.750	x	1.500	x	12.60
8100				0.750 x 0.750 x 4.88			0.625 x 0.625 x 5.00			2.000 x 1.500 x 12.60										
8105	1.000	x	1.000	x	7.44	0.750	x	0.750	x	4.88	0.625	x	0.625	x	5.00	2.000	x	1.500	x	12.60
8110				0.750 x 0.750 x 6.06			0.625 x 0.625 x 5.00			2.000 x 1.500 x 12.60										
8115	1.000	x	1.000	x	7.44	0.750	x	0.750	x	6.06	0.625	x	0.625	x	5.00	2.500	x	1.750	x	14.69
8120				RATIO ≤ 28 1.000 x 1.000 x 7.44			0.625 x 0.625 x 5.00			2.500 x 1.750 x 14.57										
				RATIO ≥ 31.5 0.875 x 0.875 x 5.98																
8125				RATIO ≤ 35.5 1.000 x 1.000 x 7.44			0.625 x 0.625 x 5.00			2.500 x 1.750 x 16.93										
				RATIO ≥ 40 0.875 x 0.875 x 5.98																
8130				RATIO ≤ 22.4 1.250 x 1.250 x 8.46			0.750 x 0.750 x 6.06			3.000 x 2.000 x 16.54										
				RATIO ≥ 25 1.000 x 1.000 x 7.44																
8135				RATIO ≤ 28 1.250 x 1.250 x 8.46			0.750 x 0.750 x 6.06			3.000 x 2.000 x 16.54										
				RATIO ≥ 31.5 1.000 x 1.000 x 7.44																

SIZE	METRIC MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT										
	P2			P3			P4													
8090	25	x	14	x	150	18	x	11	x	125	14	x	9	x	95	45	x	25	x	270
8095	25	x	14	x	150	18	x	11	x	125	14	x	9	x	95	45	x	25	x	320
8100	28	x	16	x	190	20	x	12	x	125	18	x	11	x	125	45	x	25	x	320
8105	28	x	16	x	190	20	x	12	x	125	18	x	11	x	125	50	x	28	x	320
8110	28	x	16	x	190	22	x	14	x	150	18	x	11	x	125	50	x	28	x	320
8115	28	x	16	x	190	22	x	14	x	150	18	x	11	x	125	56	x	32	x	375
8120				28 x 16 x 190			18 x 11 x 125			56 x 32 x 375										
8125				28 x 16 x 190			18 x 11 x 125			63 x 32 x 430										
8130				32 x 18 x 225			20 x 12 x 125			70 x 36 x 425										
8135				32 x 18 x 225			20 x 12 x 125			70 x 36 x 425										

SIZE	METRIC MODELS - HIGH SPEED SHAFT									LOW SPEED SHAFT										
	R2			R3			R4													
8090				18 x 11 x 125			14 x 9 x 95			45 x 25 x 270										
8095	25	x	14	x	150	18	x	11	x	125	14	x	9	x	95	45	x	25	x	320
8100				20 x 12 x 125			18 x 11 x 125			45 x 25 x 320										
8105	28	x	16	x	190	20	x	12	x	125	18	x	11	x	125	50	x	28	x	320
8110				22 x 14 x 150			18 x 11 x 125			50 x 28 x 320										
8115	28	x	16	x	190	22	x	14	x	150	18	x	11	x	125	56	x	32	x	375
8120				RATIO ≤ 28 28 x 16 x 190			18 x 11 x 125			56 x 32 x 375										
				RATIO ≥ 31.5 25 x 14 x 150																
8125				RATIO ≤ 35.5 28 x 16 x 190			18 x 11 x 125			63 x 32 x 430										
				RATIO ≥ 40 25 x 14 x 150																
8130				RATIO ≤ 22.4 32 x 18 x 225			22 x 14 x 150			70 x 36 x 425										
				RATIO ≥ 25 28 x 16 x 190																
8135				RATIO ≤ 28 32 x 18 x 225			22 x 14 x 150			70 x 36 x 425										
				RATIO ≥ 31.5 28 x 16 x 190																

SIZE	P2	P3	P4	R2	R3	R4	LSS
8090	M24 x 50	M20 x 42	M16 x 36		M20 x 42	M16 x 36	M30 x 60
8095	M24 x 50	M20 x 42	M16 x 36	M24 x 50	M20 x 42	M16 x 36	M30 x 60
8100	M24 x 50	M20 x 42	M20 x 42		M20 x 42	M20 x 42	M30 x 60
8105	M24 x 50	M20 x 42	M20 x 42	M24 x 50	M20 x 42	M20 x 42	M30 x 60
8110	M24 x 50	M20 x 42	M20 x 42		M20 x 42	M20 x 42	M30 x 60
8115	M24 x 50	M20 x 42	M20 x 42	M24 x 50	M20 x 42	M20 x 42	M30 x 60
8120		M24 x 50	M20 x 42	RATIO ≤ 28 M24 x 50		M20 x 42	M36 x 70
				RATIO ≥ 31.5 M24 x 50			
8125		M24 x 50	M20 x 42	RATIO ≤ 35.5 M24 x 50		M20 x 42	M36 x 70
				RATIO ≥ 40 M24 x 50			
8130		M24 x 50	M20 x 42	RATIO ≤ 22.4 M24 x 50		M20 x 42	M36 x 70
				RATIO ≥ 25 M24 x 50			
8135		M24 x 50	M20 x 42	RATIO ≤ 28 M24 x 50		M20 x 42	M36 x 70
				RATIO ≥ 31.5 M24 x 50			

SHAFT END TAPPED HOLES - TAP X THREAD DEPTH (mm)

Note that these holes are the same for metric and inch shaft models.

PARAMAX HOLLOW SHAFT DESIGN

Features

PARAMAX 8 'H' Type reducers have a number of outstanding features compared to conventional solid shaft reducers.

1. There is no need for a large output coupling, thus permitting space saving and a substantial cost reduction overall.
2. The reducer can be mounted directly onto the driven machine shaft, eliminating the need for extensive foundations for the speed reducer, or accurate drive alignment.
3. For normal installations with horizontal output shafts, standard components are utilized, ensuring ready availability of parts.

How to install the reducer

A. Torque Arm (option)

The hollow shaft type Paramax 8 is secured with a torque arm to prevent rotation of the gearcase under load.

The torque arm is subjected to a compressive or tensile load, depending on the direction of rotation of the low speed shaft, and it must be of sufficient strength to withstand shock loading at start and during operation. The optional standard torque arm is designed with such loading conditions in mind.

Please specify on your order if our standard torque arm should be supplied.

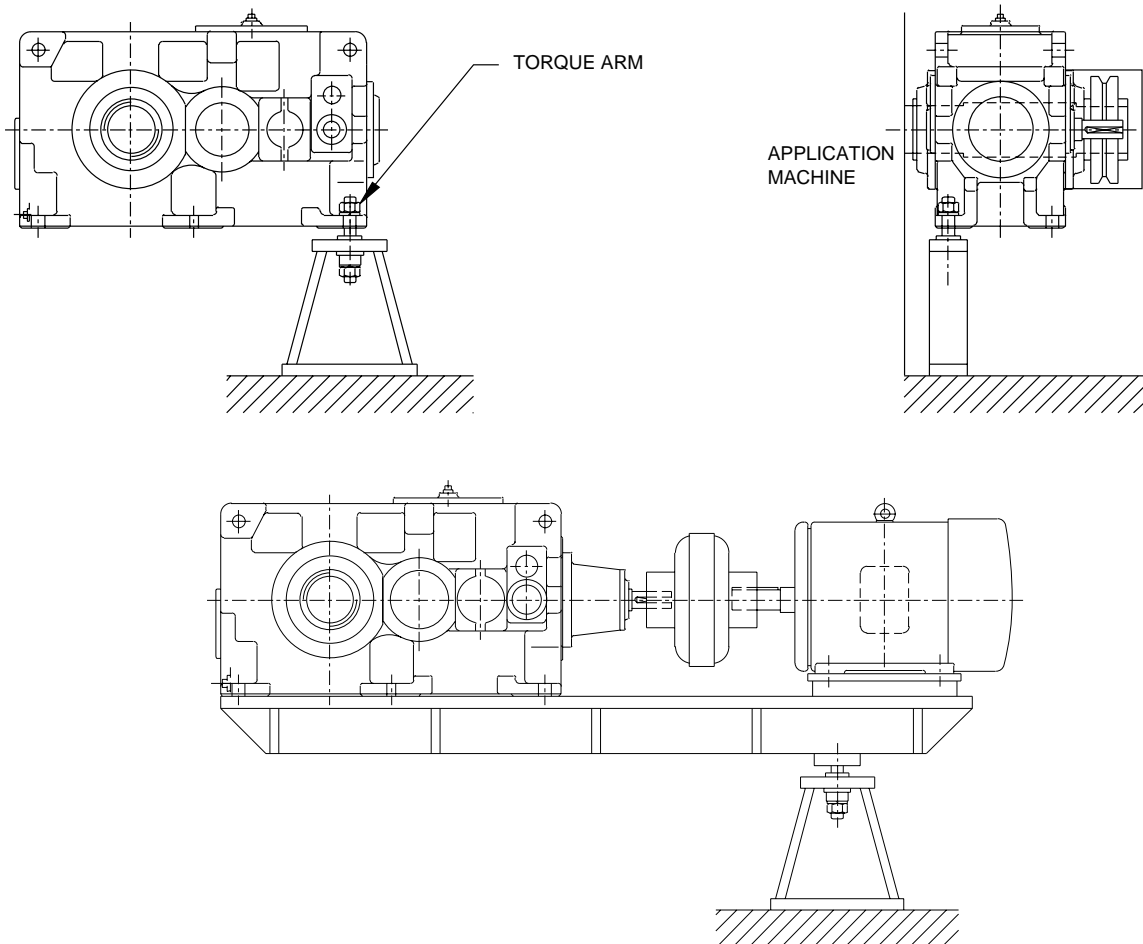
Note that the construction and strength of the torque arm support (by customer) must take into account the effect of impact loads.

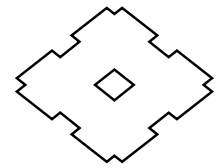
B. How to use the torque arm.

1. When the torque arm is used directly with the speed reducer housing:

The torque arm must be fitted to an installation hole close to the driven machine (in the end view), and furthest away from the low speed shaft (in the side view).

2. When the torque arm is used with a common baseplate, it must be mounted in a position as far from the low speed shaft as possible.





SIZES 8015 TO 8115

SHRINK DISK COUPLING

1. Procedure for connection (Fig. A)

- (1) Fully degrease the contacting portions (a) and (c).
- (2) Apply "Molycoat 321" grease or equivalent to the portion (c). Never grease portion (a).
- (3) Fit O-ring (b) to driven shaft.
- (4) Fit hollow shaft to driven shaft. Then, tighten nut (e) to bring the surface (g) into contact with surface (h).
- (5) Position shrink disk K to set the distance LV at the value given in table. **Tighten locking bolt ZS to the specified torque TA.** (Use a torque wrench.)

2. Procedure for disconnection (Fig. B)

- (1) Loosen locking bolt ZS, and remove shrink disk.
- (2) Install hex. head screw (n) and thrust washer (f). Turn bolt (m) to disconnect hollow shaft from driven shaft.

PX-8 MODEL	Shrink Disk					Hollow Shaft						Machine Shaft									
	MODEL	d	Ds	H	Screws ZS TA in-lbs	J	LZ	LR	LV	N-ZY	DZ	dw	d1	D h7	D1 min	L1	L2	L3	L4	R	Z (DEPTH)
8015	HSD-81x80	3.15	5.43	1.22	M8 260	5.31	12.91	0.12	0.55	4 - M6	2.76	2.375 h6	2.40	2.500	3.125	12.80	9.45	3.15	0.12	0.10	M20 (1.18)
8025	HSD-81x90	3.54	6.10	1.50	M8 260	5.71	14.09	0.12	0.55	4 - M6	3.15	2.750 h6	2.80	2.875	3.500	13.98	10.63	3.15	0.12	0.10	M20 (1.18)
8035	HSD-81x100	3.94	6.69	1.69	M8 260	6.30	15.47	0.12	0.55	4 - M6	3.54	3.125 h6	3.15	3.250	3.875	15.35	11.61	3.54	0.12	0.10	M20 (1.18)
8045	125PSV5004	4.92	8.46	2.56	M12 885	7.09	17.64	0.12	0.79	4 - M8	4.33	3.625 h6	3.65	3.750	4.375	17.52	13.19	4.33	0.12	0.10	M24 (1.38)
8055	140PSV5004	5.51	9.06	2.91	M12 885	7.87	19.80	0.12	0.87	4 - M10	4.88	4.250 h6	4.30	4.375	5.000	19.69	14.96	4.33	0.12	0.10	M24 (1.38)
8065	165PSV5004	6.50	11.42	3.46	M16 2213	9.06	22.95	0.12	1.06	4 - M12	5.75	5.000 h6	5.05	5.125	5.768	22.83	17.13	5.12	0.12	0.10	M24 (1.38)
8075	185PSV5003	7.28	12.99	3.39	M16 2213	10.24	25.35	0.22	1.02	4 - M12	6.57	5.875 h6	5.90	6.000	6.861	25.20	18.70	6.30	0.20	0.10	M30 (1.77)
8085	220PSV5003	8.66	14.57	4.09	M16 2213	11.22	28.11	0.22	1.02	4 - M12	7.68	6.750 g6	6.80	6.875	7.750	27.95	20.47	7.48	0.20	0.18	M30 (1.77)
8090	240PSV5003	9.45	15.94	4.29	M20 4337	13.78	33.23	0.24	1.06	6 - M12	8.46	7.375 g6	7.40	7.500	8.375	33.07	25.00	7.87	0.20	0.18	M36 (2.17)
8095	260PSV5003	10.24	16.93	4.72	M20 4337	13.78	33.82	0.24	1.06	6 - M12	9.06	7.875 g6	7.90	8.000	8.750	33.66	25.20	8.07	0.20	0.18	M36 (2.17)
8100	TAS3081.1-260	10.24	17.32	4.72	M20 4779	15.35	36.77	0.24	1.06	6 - M12	9.25	8.250 g6	8.30	8.375	9.250	36.61	27.76	8.46	0.20	0.18	M36 (2.17)
8105	TAS3081.1-280	11.02	18.11	5.28	M20 4779	15.35	37.36	0.24	1.06	6 - M12	9.84	8.625 g6	8.65	8.875	9.625	37.20	28.15	8.86	0.20	0.18	M36 (2.17)
8110	TAS3081.1-300	11.81	19.09	5.59	M20 4779	16.54	40.55	0.24	1.26	6 - M16	10.63	9.375 g6	9.40	9.500	10.375	40.35	30.31	9.65	0.20	0.18	M36 (2.17)
8115	TAS3091-320	12.60	20.47	7.24	M20 4337	16.54	41.93	0.24	1.26	6 - M16	11.22	9.875 g6	9.90	10.000	10.750	41.73	30.91	9.65	0.20	0.18	M36 (2.17)

PX-8 MODEL	Shrink Disk					Hollow Shaft						Machine Shaft									
	MODEL	d	Ds	H	Screws ZS TA N-m	J	LZ	LR	LV	N-ZY	DZ	dw	d1	D h7	D1 min	L1	L2	L3	L4	R	Z (DEPTH)
8015	HSD-81x80	80	138	31	M8 29	135	328	3	14	4 - M6	70	60 h6	61	63	79	325	240	80	3	2.5	M20 (30)
8025	HSD-81x90	90	155	38	M8 29	145	358	3	14	4 - M6	80	70 h6	71	73	89	355	270	80	3	2.5	M20 (30)
8035	HSD-81x100	100	170	43	M8 29	160	393	3	14	4 - M6	90	80 h6	81	83	98	390	295	90	3	2.5	M20 (30)
8045	125PSV5004	125	215	65	M12 100	180	448	3	20	4 - M8	110	95 h6	96	98	111	445	335	110	3	2.5	M24 (35)
8055	140PSV5004	140	230	74	M12 100	200	503	3	22	4 - M10	124	105 h6	106	108	127	500	380	110	3	2.5	M24 (35)
8065	165PSV5004	165	290	88	M16 250	230	583	3	27	4 - M12	146	125 h6	126	128	147	580	435	130	3	2.5	M24 (35)
8075	185PSV5003	185	330	86	M16 250	260	644	5.5	26	4 - M12	167	145 h6	146	148	174	640	475	160	5	2.5	M30 (45)
8085	220PSV5003	220	370	104	M16 250	285	714	5.5	26	4 - M12	195	170 g6	171	173	197	710	520	190	5	4.5	M30 (45)
8090	240PSV5003	240	405	109	M20 490	350	844	6	27	6 - M12	215	190 g6	191	193	212	840	635	200	5	4.5	M36 (55)
8095	260PSV5003	260	430	120	M20 490	350	859	6	27	6 - M12	230	200 g6	201	203	222	855	640	205	5	4.5	M36 (55)
8100	TAS3081.1-260	260	440	120	M20 540	390	934	6	27	6 - M12	235	210 g6	211	213	234	930	705	215	5	4.5	M36 (55)
8105	TAS3081.1-280	280	460	134	M20 540	390	949	6	27	6 - M12	250	220 g6	221	223	244	945	715	225	5	4.5	M36 (55)
8110	TAS3081.1-300	300	485	142	M20 540	420	1030	6	32	6 - M16	270	240 g6	241	243	263	1025	770	245	5	4.5	M36 (55)
8115	TAS3091-320	320	520	184	M20 490	420	1065	6	32	6 - M16	285	250 g6	251	253	273	1060	785	245	5	4.5	M36 (55)

3. Driven shaft dimensions (Fig. C)

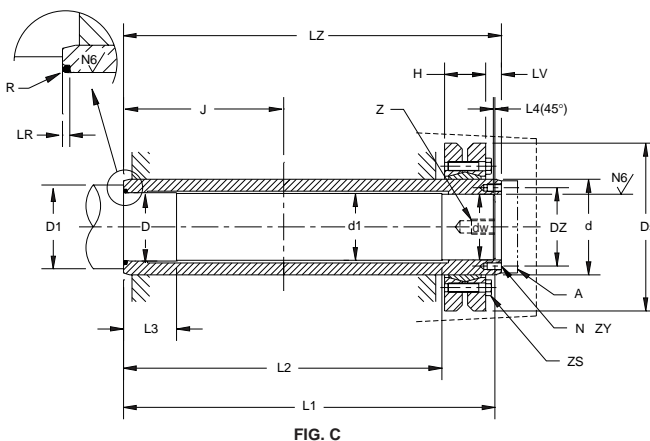


FIG. C

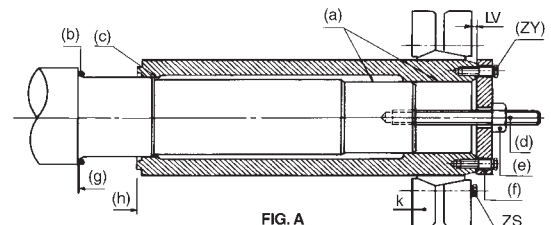


FIG. A

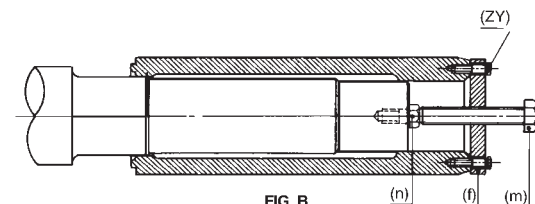
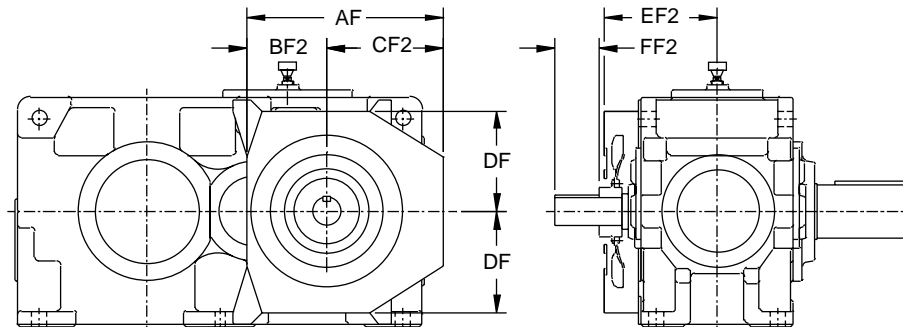


FIG. B

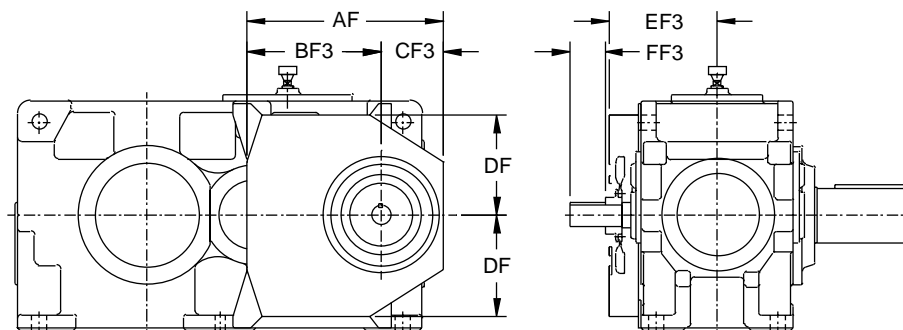
COOLING FAN

PARALLEL SHAFT

DOUBLE REDUCTION



TRIPLE REDUCTION



FAN DIMENSIONS - P2 (inch)

inch	AF	BF2	CF2	DF	EF2	FF2
8015	9.92	3.78	6.14	4.53	6.14	1.97
8025	10.87	3.98	6.89	5.31	6.69	1.97
8035	12.60	5.71	6.89	6.10	7.32	3.15
8045	15.04	5.79	9.25	6.65	7.91	3.15
8055	15.87	5.83	10.04	7.17	8.62	3.15
8065	17.91	7.24	10.67	9.17	9.92	4.13
8075	19.37	7.76	11.61	10.16	10.87	4.13
8085	22.52	8.58	13.94	11.02	11.65	5.31
8090	27.83	10.91	16.93	13.58	14.45	5.12
8095	27.83	10.91	16.93	13.58	14.45	5.12
8100	31.26	12.36	18.90	15.55	16.22	6.69
8105	31.26	12.36	18.90	15.55	16.22	6.69
8110	34.88	14.02	20.87	17.52	17.40	6.69
8115	34.88	14.02	20.87	17.52	17.40	6.69

FAN DIMENSIONS - P2 (mm)

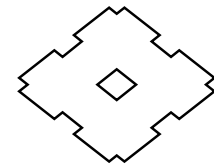
mm	AF	BF2	CF2	DF	EF2	FF2
8015	252	96	156	115	156	50
8025	276	101	175	135	170	50
8035	320	145	175	155	186	80
8045	382	147	235	169	201	80
8055	403	148	255	182	219	80
8065	455	184	271	233	252	105
8075	492	197	295	258	276	105
8085	572	218	354	280	296	135
8090	707	277	430	345	367	130
8095	707	277	430	345	367	130
8100	794	314	480	395	412	170
8105	794	314	480	395	412	170
8110	886	356	530	445	442	170
8115	886	356	530	445	442	170

FAN DIMENSIONS - P3 (inch)

inch	AF	BF3	CF3	DF	EF3	FF3
8015	9.92	6.26	3.66	4.53	6.14	1.18
8025	10.87	7.09	3.78	5.31	6.69	1.18
8035	12.60	8.82	3.78	6.10	7.32	1.97
8045	15.04	9.41	5.63	6.65	7.91	1.97
8055	15.87	10.12	5.75	7.17	8.62	3.15
8065	17.91	12.20	5.71	9.17	9.61	3.15
8075	19.37	13.58	5.79	10.16	10.59	3.15
8085	22.52	15.24	7.28	11.02	11.65	4.13
8090	27.83	18.66	9.17	13.58	14.25	4.13
8095	27.83	18.66	9.17	13.58	14.25	4.13
8100	31.26	21.26	10.00	15.55	16.02	4.13
8105	31.26	21.26	10.00	15.55	16.02	4.13
8110	34.88	22.91	11.97	17.52	17.20	5.31
8115	34.88	22.91	11.97	17.52	17.20	5.31

FAN DIMENSIONS - P3 (mm)

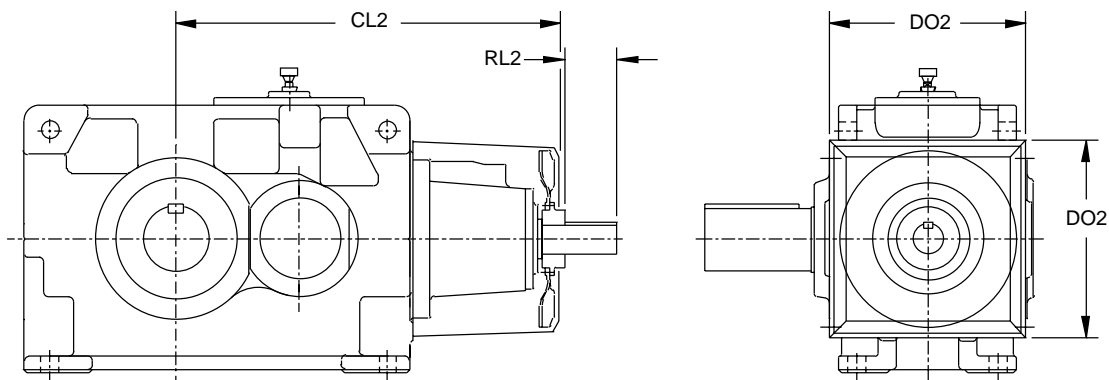
mm	AF	BF3	CF3	DF	EF3	FF3
8015	252	159	93	115	156	30
8025	276	180	96	135	170	30
8035	320	224	96	155	186	50
8045	382	239	143	169	201	50
8055	403	257	146	182	219	80
8065	455	310	145	233	244	80
8075	492	345	147	258	269	80
8085	572	387	185	280	296	105
8090	707	474	233	345	362	105
8095	707	474	233	345	362	105
8100	794	540	254	395	407	105
8105	794	540	254	395	407	105
8110	886	582	304	445	437	135
8115	886	582	304	445	437	135



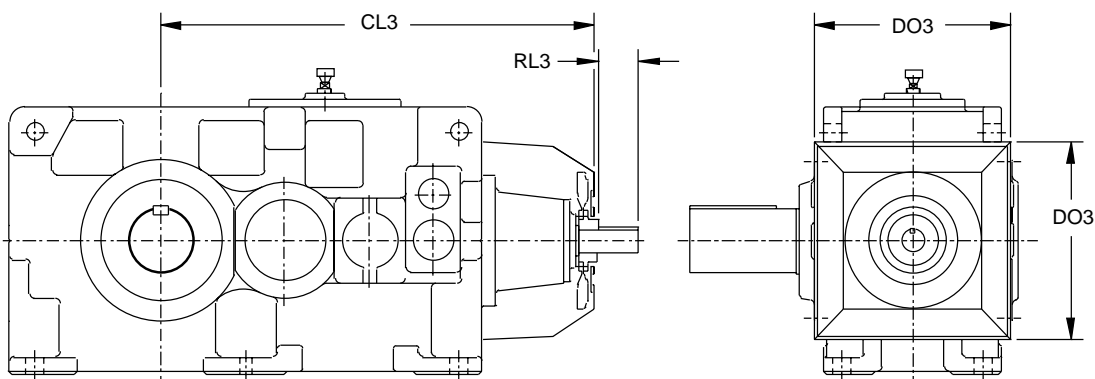
COOLING FAN

RIGHT ANGLE SHAFT

DOUBLE REDUCTION



TRIPLE REDUCTION



FAN DIMENSIONS - R2 (inch)

inch	CL2	RL2	DO2
8015	17.80	1.18	8.39
8025	19.29	1.97	9.61
8035	22.05	3.15	10.43
8045	24.41	3.15	12.20
8055	26.38	3.15	13.78
8065	29.76	4.13	15.35
8075	33.70	4.13	17.52
8085	38.23	4.13	19.49
8095	49.61	5.12	24.02
8105	55.71	6.69	27.17
8115	64.09	6.69	29.92

FAN DIMENSIONS - R2 (mm)

mm	CL2	RL2	DO2
8015	452	30	213
8025	490	50	244
8035	560	80	265
8045	620	80	310
8055	670	80	350
8065	756	105	390
8075	856	105	445
8085	971	105	495
8095	1260	130	610
8105	1415	170	690
8115	1628	170	760

FAN DIMENSIONS - R3 (inch)

inch	CL3	RL3	DO3
8035	23.62	1.18	10.43
8045	25.98	1.97	12.20
8055	29.57	1.97	13.78
8065	33.54	3.15	15.35
8075	37.17	3.15	17.52
8085	42.05	4.13	19.49
8090	47.68	4.13	24.41
8095	48.86	4.13	24.41
8100	53.74	4.13	27.56
8105	55.08	4.13	27.56
8110	60.98	5.12	29.92
8115	62.91	5.12	29.92

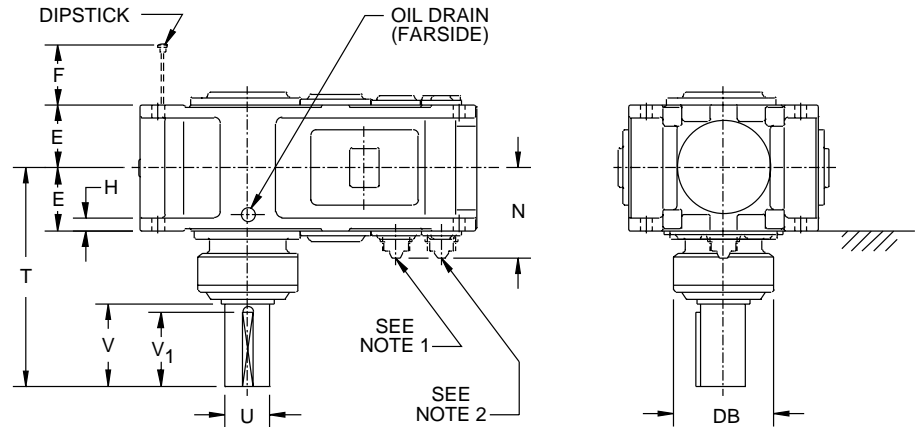
FAN DIMENSIONS - R3 (mm)

mm	CL3	RL3	DO3
8035	600	30	265
8045	660	50	310
8055	751	50	350
8065	852	80	390
8075	944	80	445
8085	1068	105	495
8090	1211	105	620
8095	1241	105	620
8100	1365	105	700
8105	1399	105	700
8110	1459	130	760
8115	1598	130	760

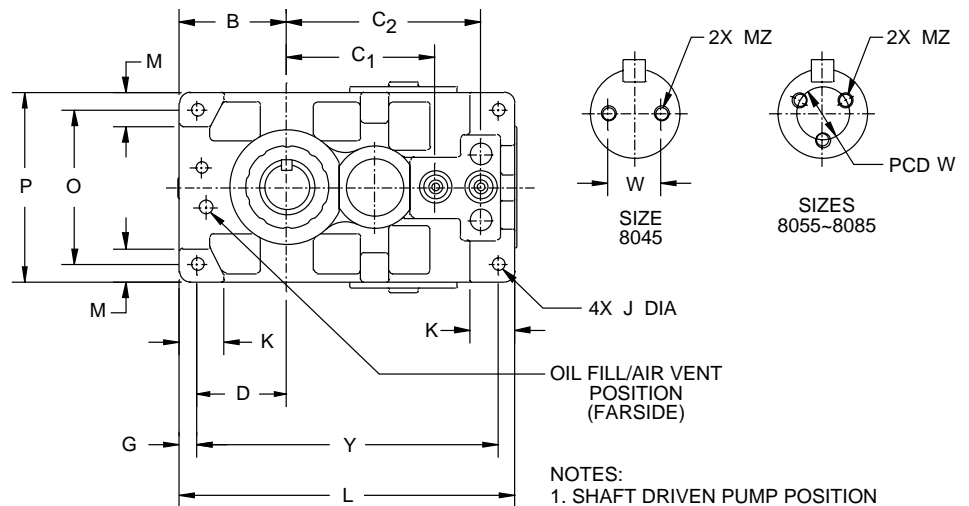
DROP BEARING DESIGN

FOR HIGH EXTERNAL LOADS

FOR P2 AND R3 MODELS						
Model	metric			in./lb		
	C1	N	MAX. WT. (kgf)	C1	N	MAX. WT. (lbs.)
8045	306	235	340	12.05	9.25	750
8055	358	255	480	14.09	10.04	1060
8065	414	275	790	16.30	10.83	1750
8075	482	300	1120	18.98	11.81	2470
8085	556	320	1580	21.89	12.60	3500



FOR P3, P4, AND R4 MODELS						
Model	metric			in./lb.		
	C2	N	MAX. WT. (kgf)	C2	N	MAX. WT. (lbs.)
8045	398	225	340	15.67	8.86	750
8055	467	245	470	18.39	9.65	1050
8065	540	275	780	21.26	10.83	1720
8075	630	300	1110	24.80	11.81	2450
8085	725	320	1560	28.54	12.60	3440



- NOTES:
 1. SHAFT DRIVEN PUMP POSITION FOR P2 & R3 MODELS.
 2. SHAFT DRIVEN PUMP POSITION FOR P3, P4 & R4 MODELS.

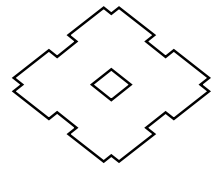
METRIC

Model	B	D	E	F	G	H	J	K	L	M	O	P	T	U	V	V ₁	W	DB	Y	Z
8045	230	185	135	200	40	30	28	100	700	70	320	400	505	95	170	150	60	240	620	M20
8055	270	225	155	230	40	32	28	110	820	80	370	450	570	110	210	190	70	260	740	M20
8065	305	250	175	255	50	35	35	125	935	95	430	530	620	125	210	185	85	310	840	M20
8075	340	275	200	285	60	40	42	145	1075	110	480	600	700	145	250	225	95	350	960	M24
8085	380	315	220	310	60	45	42	165	1260	120	550	670	785	165	300	275	110	360	1140	M24

INCH

Model	B	D	E	F	G	H	J	K	L	M	O	P	T	U	V	V ₁	W	DB	Y	Z
8045	9.06	7.28	5.31	7.87	1.57	1.18	1.10	3.94	27.56	2.76	12.60	15.75	19.94	3.750	6.72	5.98	2.36	9.45	24.41	M20
8055	10.63	8.86	6.10	9.06	1.57	1.26	1.10	4.33	32.28	3.15	14.57	17.72	22.40	4.125	8.28	7.44	2.76	10.24	29.13	M20
8065	12.01	9.84	6.89	10.04	1.97	1.38	1.38	4.92	36.81	3.74	16.93	20.87	24.39	4.875	8.27	7.24	3.35	12.20	33.07	M20
8075	13.39	10.83	7.87	11.22	2.36	1.57	1.65	5.71	42.32	4.33	18.90	23.62	27.64	5.625	9.88	8.66	3.74	13.78	37.80	M24
8085	14.96	12.40	8.66	12.20	2.36	1.77	1.65	6.50	49.61	4.72	21.65	26.38	30.81	6.375	11.73	10.51	4.33	14.17	44.88	M24

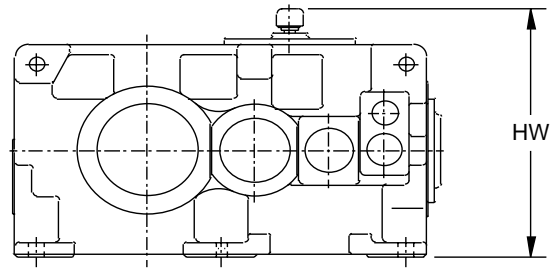
When requesting drop bearing design, please specify magnitude of radial load and distance from reducer mounting face to point of application of load. If thrust load is also present, please specify direction of thrust.



OPTIONS

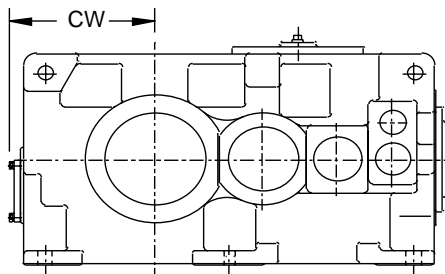
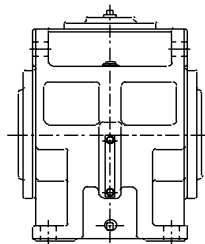
HORIZONTAL UNITS

FILTER BREATHER



8015 - 8115

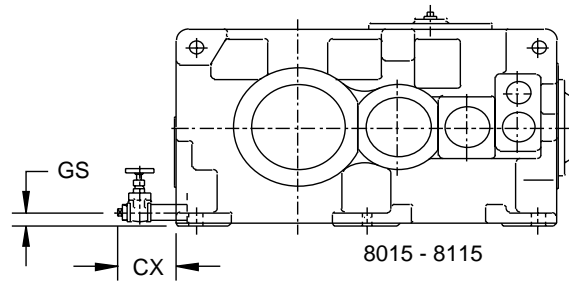
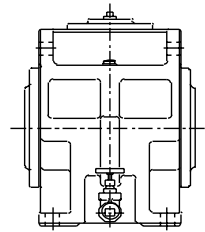
SIGHT GAUGE



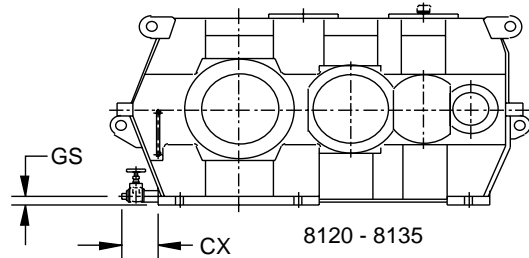
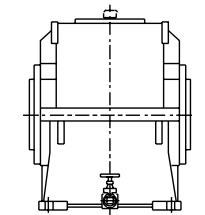
8015 - 8115

DRAIN VALVE

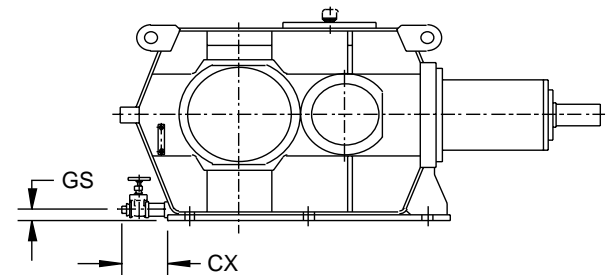
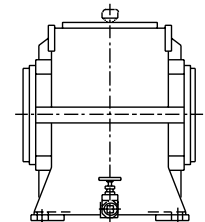
	HW	CW	HW	CW
	(inch)		(mm)	
8015	14.53	7.48	369	190
8025	16.10	8.27	409	210
8035	17.68	9.06	449	230
8045	19.25	10.04	489	255
8055	21.22	11.61	539	295
8065	24.37	12.99	619	330
8075	27.13	14.37	689	365
8085	29.88	15.94	759	405
8090	33.03	17.13	839	435
8095	35.00	18.31	889	465
8100	36.97	18.70	939	475
8105	36.97	20.08	939	510
8110	40.91	20.67	1039	525
8115	42.87	22.64	1089	575



8015 - 8115



8120 - 8135



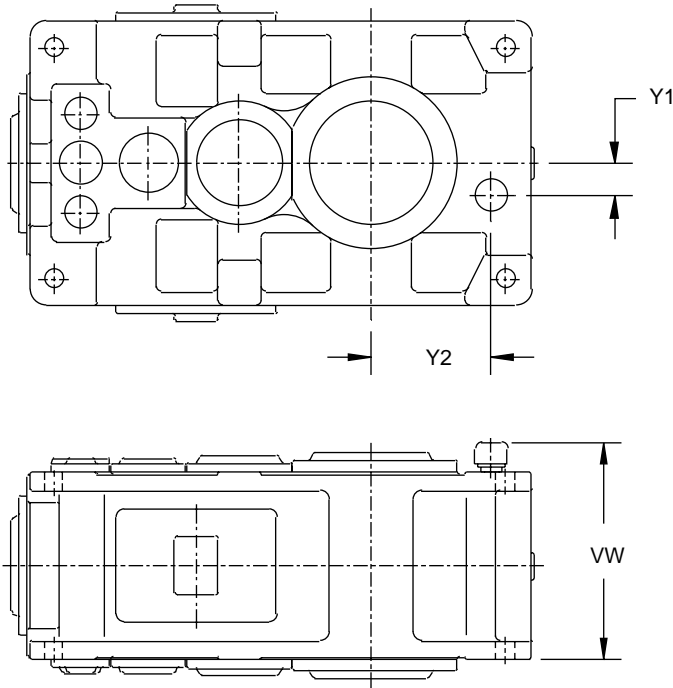
8095 - 8115 R2

	CX	GS	CX	GS
	(inch)		(mm)	
8015	4.96	0.91	126	23
8025	4.88	0.94	124	24
8035	5.79	1.06	147	27
8045	5.71	1.10	145	28
8055	5.59	1.18	142	30
8065	6.14	1.42	156	36
8075	6.02	1.50	153	38
8085	5.91	1.54	150	39
8090	6.38	1.77	162	45
8095	6.38	1.77	162	45
8100	6.38	1.81	162	46
8105	6.38	1.81	162	46
8110	6.38	1.89	162	48
8115	6.38	1.89	162	48
8120	6.97	2.09	177	53
8125	6.97	2.09	177	53
8130	6.97	2.09	177	53
8135	6.97	2.09	177	53
8095R2	6.77	2.44	172	62
8105R2	6.77	2.44	172	62
8115R2	6.77	2.72	172	69

OPTIONS

VERTICAL UNITS

FILTER BREATHER

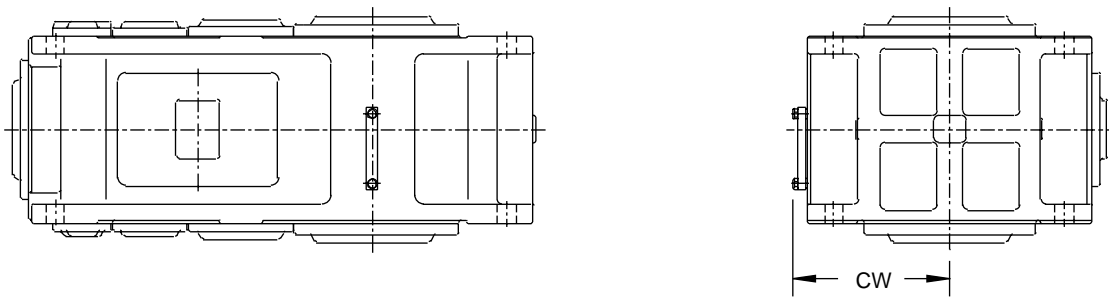


	WW	Y1	Y2	VW	Y1	Y2
	(inch)			(mm)		
8015	9.09	1.38	4.41	231	35	112
8025	10.08	1.57	4.92	256	40	125
8035	11.46	1.77	5.71	291	45	145
8045	12.83	1.97	6.69	326	50	170
8055	14.41	1.97	7.48	366	50	190
8065	15.98	2.36	8.86	406	60	225
8075	17.95	2.56	10.04	456	65	255
8085	19.53	2.76	11.02	496	70	280
8090	24.65	3.54	12.40	626	90	315
8095	24.65	3.54	13.58	626	90	345
8100	27.80	3.94	13.98	706	100	355
8105	27.80	3.94	15.35	706	100	390
8110	30.16	3.94	15.94	766	100	405
8115	30.16	3.94	17.32	766	100	440

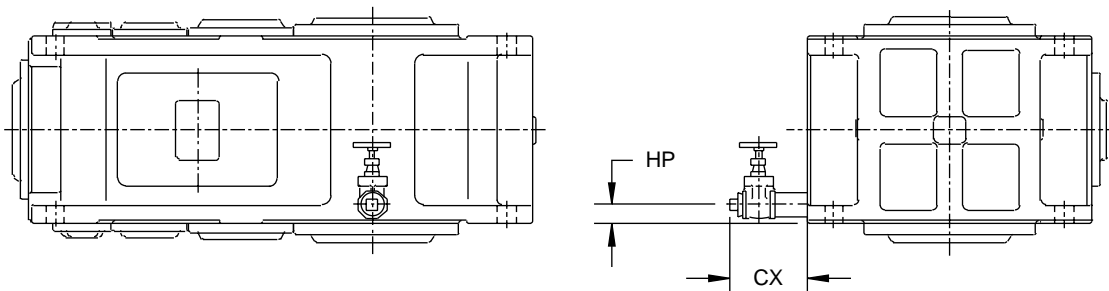
	CW	
	(inch)	(mm)
8015	6.69	170
8025	7.48	190
8035	8.27	210
8045	9.06	230
8055	10.04	255
8065	11.61	295
8075	12.99	330
8085	14.37	365
8090	15.94	405
8095	16.93	430
8100	17.91	455
8105	18.90	480
8110	19.88	505
8115	20.87	530

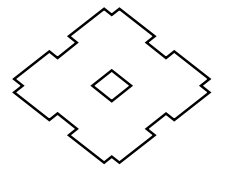
	CX	HP	CX	HP
	(inch)		(mm)	
8015	5.35	0.98	136	25
8025	5.35	1.02	136	26
8035	5.55	1.14	141	29
8045	5.55	1.18	141	30
8055	5.55	1.22	141	31
8065	5.83	1.42	148	36
8075	5.83	1.46	148	37
8085	5.83	1.50	148	38
8090	6.38	1.65	162	42
8095	6.38	1.65	162	42
8100	6.38	1.69	162	43
8105	6.38	1.69	162	43
8110	6.38	1.73	162	44
8115	6.38	1.73	162	44

SIGHT GAUGE



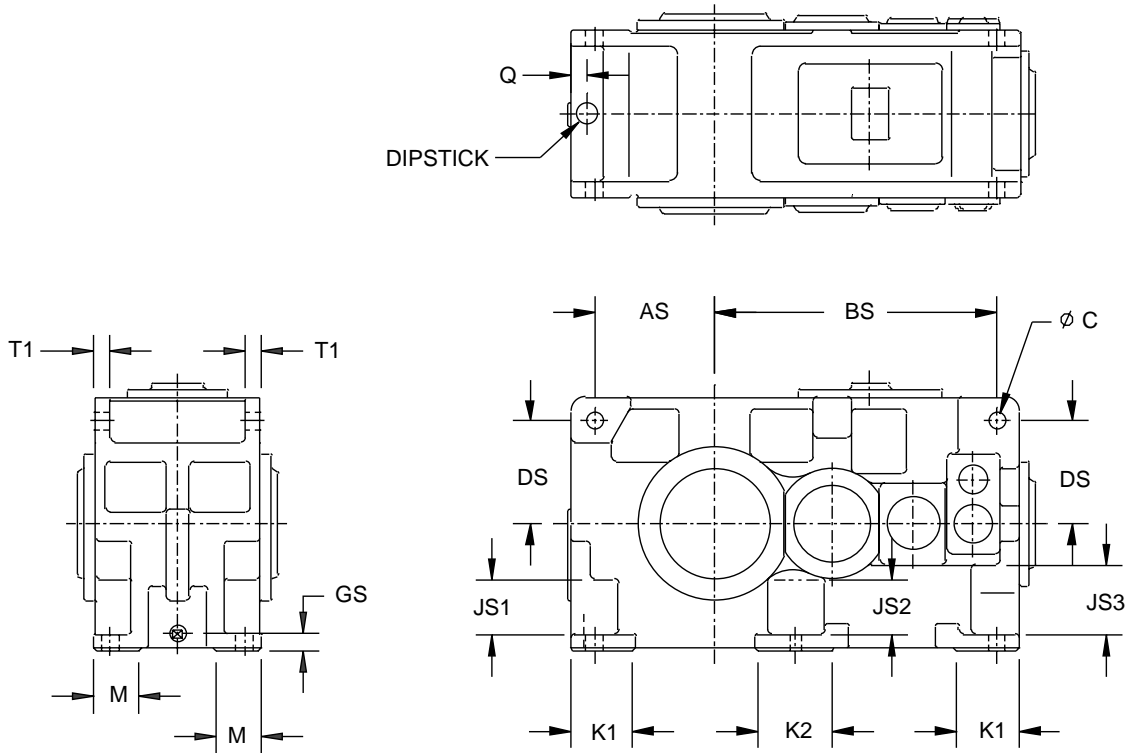
DRAIN VALVE





SUPPLEMENTARY DIMENSIONS

HORIZONTAL UNITS

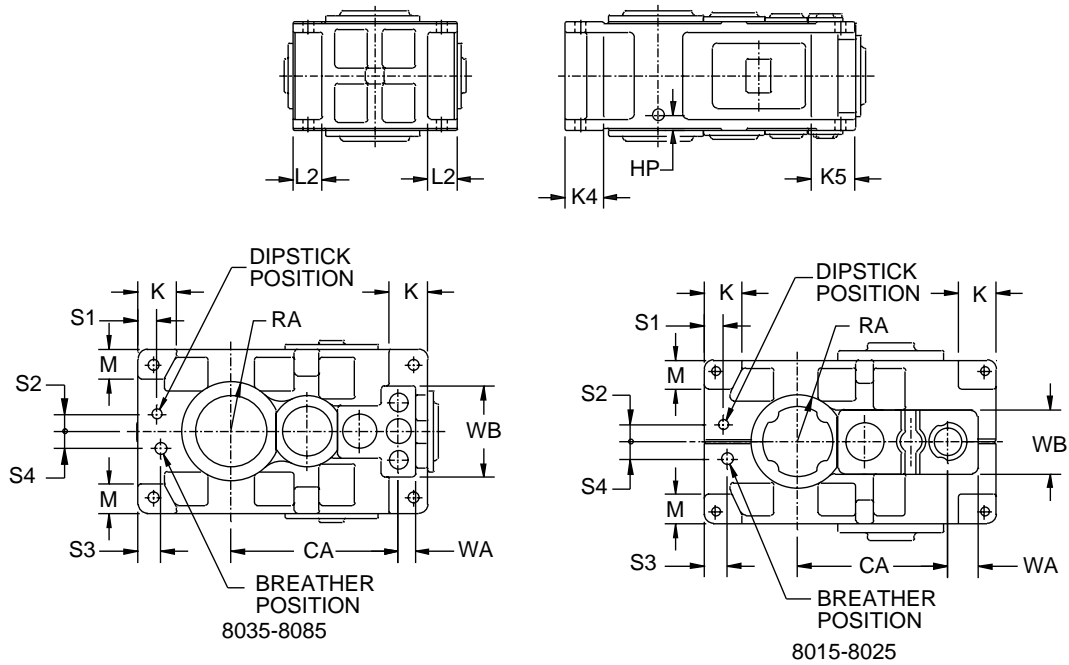


inch	AS	BS	C	DS	GS	JS1	JS2	JS3	K1	K2	K3	M	L2	P	Q	T1
8015	5.51	12.60	0.59	4.72	0.91	2.48	-	2.48	3.15	-	3.15	2.17	-	0.59	0.79	0.87
8025	5.91	14.57	0.75	5.12	0.94	2.76	-	2.76	3.54	-	3.54	2.36	-	0.67	0.98	0.98
8035	6.50	15.16	0.94	5.71	1.06	3.03	-	3.62	3.74	-	3.74	2.56	-	0.75	1.06	1.10
8045	7.28	17.13	1.10	6.30	1.10	3.35	-	3.94	4.13	-	4.13	3.15	-	0.83	1.18	1.18
8055	8.86	20.28	1.10	7.28	1.18	3.86	3.46	4.65	4.53	5.12	4.53	3.15	2.13	0.94	1.38	1.26
8065	9.84	23.23	1.38	8.46	1.42	4.53	4.53	5.71	5.12	6.10	5.12	3.74	2.40	1.06	1.46	1.38
8075	10.83	26.97	1.65	9.45	1.50	5.12	5.12	6.50	5.91	7.09	5.91	4.33	2.83	1.18	1.57	1.57
8085	12.40	32.48	1.65	10.83	1.54	5.71	5.59	7.09	6.89	8.07	6.89	4.53	3.07	1.30	1.77	1.77

mm	AS	BS	C	DS	GS	JS1	JS2	JS3	K1	K2	K3	M	L2	P	Q	T1
8015	140	320	15	120	23	63	-	63	80	-	80	55	-	15	20	22
8025	150	370	19	130	24	70	-	70	90	-	90	60	-	17	25	25
8035	165	385	24	145	27	77	-	92	95	-	95	65	-	19	27	28
8045	185	435	28	160	28	85	-	100	105	-	105	80	-	21	30	30
8055	225	515	28	185	30	98	88	118	115	130	115	80	54	24	35	32
8065	250	590	35	215	36	115	115	145	130	155	130	95	61	27	37	35
8075	275	685	42	240	38	130	130	165	150	180	150	110	72	30	40	40
8085	315	825	42	275	39	145	142	180	175	205	175	115	78	33	45	45

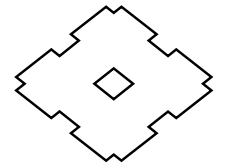
SUPPLEMENTARY DIMENSIONS

VERTICAL UNITS



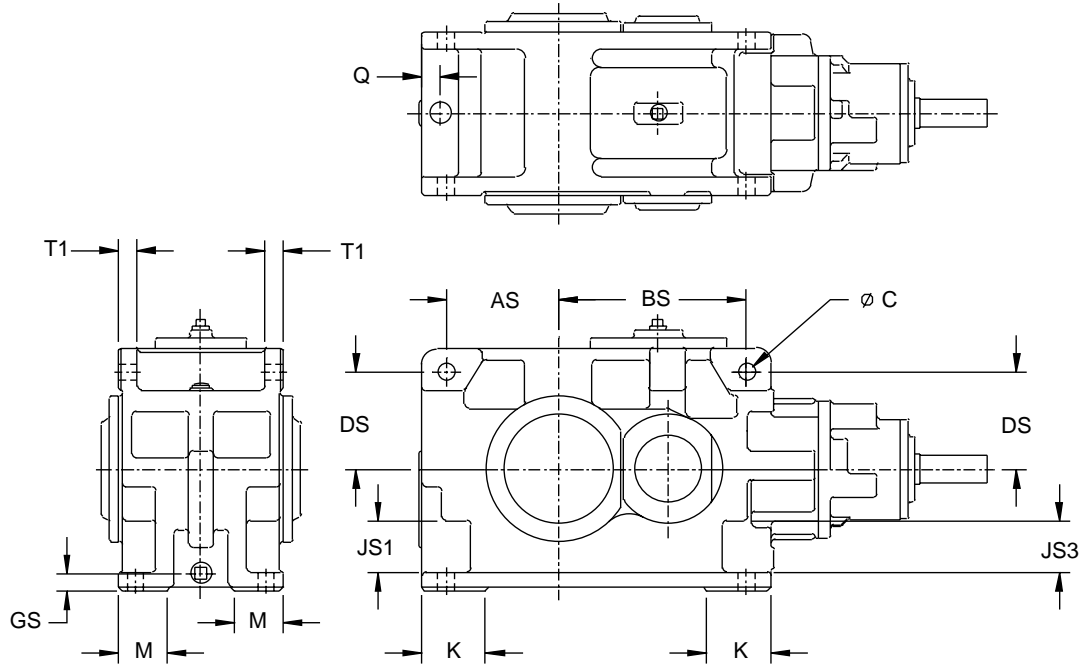
inch	CA	HP	K	K4	K5	L2	M	RA	S1	S2	S3	S4	WA	WB
8015	10.12	0.98	2.56	2.40	2.56	1.97	1.97	3.15	1.89	1.77	1.89	1.38	2.09	4.33
8025	12.05	1.02	3.15	2.95	3.15	2.36	2.36	3.46	2.05	2.20	2.17	1.57	2.24	5.12
8035	13.50	1.14	3.54	3.39	3.78	2.56	2.56	4.13	2.17	2.56	2.17	1.77	1.57	8.66
8045	15.67	1.18	3.94	3.70	4.45	2.76	2.76	4.72	2.17	2.56	2.17	1.97	1.77	10.24
8055	18.39	1.22	4.33	4.13	4.80	3.15	3.15	5.12	2.56	2.56	2.95	1.97	1.89	10.00
8065	21.26	1.42	4.92	4.69	5.55	3.74	3.74	6.30	2.36	2.56	2.95	2.36	2.17	11.57
8075	24.80	1.46	5.71	5.43	6.57	4.33	4.33	6.89	2.56	3.74	3.15	2.56	2.36	13.54
8085	28.54	1.50	6.50	6.22	7.13	4.72	4.72	7.60	3.15	3.74	3.74	2.76	2.87	15.35

mm	CA	HP	K	K4	K5	L2	M	RA	S1	S2	S3	S4	WA	WB
8015	257	25	65	61	65	50	50	80	48	45	48	35	53	110
8025	306	26	80	75	80	60	60	88	52	56	55	40	57	130
8035	343	29	90	86	96	65	65	105	55	65	55	45	40	220
8045	398	30	100	94	113	70	70	120	55	65	55	50	45	260
8055	467	31	110	105	122	80	80	130	65	65	75	50	48	254
8065	540	36	125	119	141	95	95	160	60	65	75	60	55	294
8075	630	37	145	138	167	110	110	175	65	95	80	65	60	344
8085	725	38	165	158	181	120	120	193	80	95	95	70	73	390



SUPPLEMENTARY DIMENSIONS

R2 HORIZONTAL

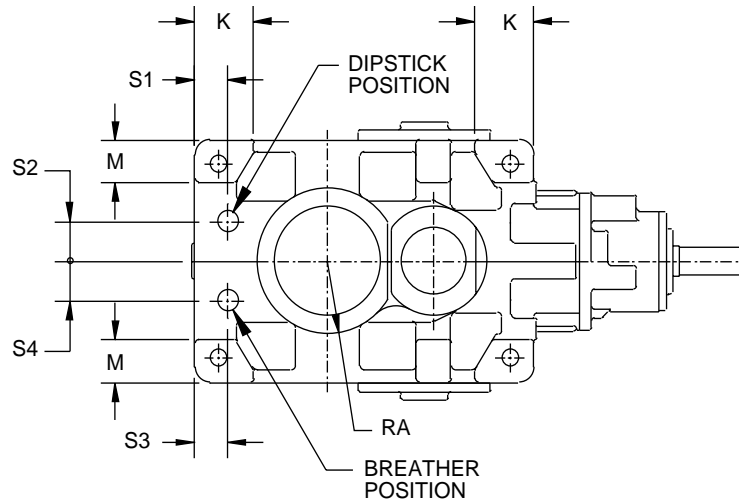
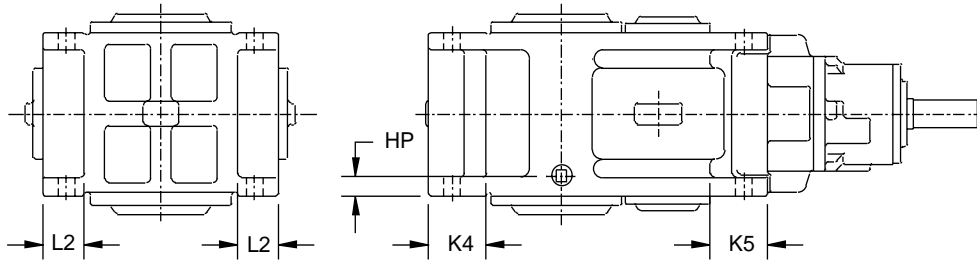


inch	AS	BS	C	DS	GS	JS1	JS3	K	L1	M	P	Q	T1
8015	5.51	8.27	0.59	4.72	0.91	2.48	2.48	3.15	1.50	2.17	0.59	0.79	0.87
8025	5.91	9.25	0.75	5.12	0.94	2.76	2.76	3.54	1.69	2.36	0.67	0.98	0.98
8035	6.50	10.83	0.94	5.71	1.06	3.03	3.03	3.74	1.93	2.56	0.75	1.06	1.10
8045	7.28	12.20	1.10	6.30	1.10	3.35	3.35	4.13	2.36	3.15	0.83	1.18	1.18
8055	8.86	14.96	1.10	7.28	1.18	3.86	3.86	4.53	2.36	3.15	0.94	1.38	1.26
8065	9.84	16.54	1.38	8.46	1.42	4.53	4.53	5.12	3.07	3.74	1.06	1.46	1.38
8075	10.83	19.09	1.65	9.45	1.50	5.12	5.12	5.91	3.58	4.33	1.18	1.57	1.57
8085	12.40	22.64	1.65	10.83	1.54	5.71	5.71	6.89	3.58	4.53	1.30	1.77	1.77

mm	AS	BS	C	DS	GS	JS1	JS3	K	L1	M	P	Q	T1
8015	140	210	15	120	23	63	63	80	38	55	15	20	22
8025	150	235	19	130	24	70	70	90	43	60	17	25	25
8035	165	275	24	145	27	77	77	95	49	65	19	27	28
8045	185	310	28	160	28	85	85	105	60	80	21	30	30
8055	225	380	28	185	30	98	98	115	60	80	24	35	32
8065	250	420	35	215	36	115	115	130	78	95	27	37	35
8075	275	485	42	240	38	130	130	150	91	110	30	40	40
8085	315	575	42	275	39	145	145	175	91	115	33	45	45

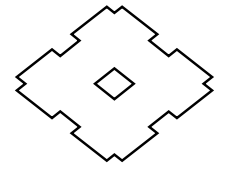
SUPPLEMENTARY DIMENSIONS

R2 VERTICAL



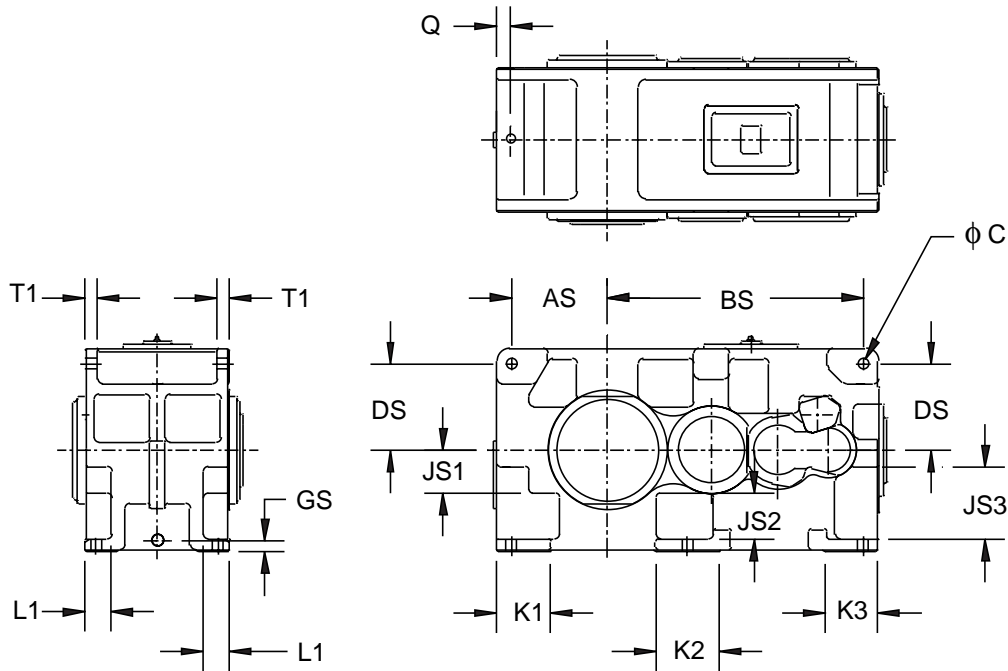
inch	HP	K	K4	K5	L2	M	RA	S1	S2	S3	S4
8015	0.98	2.56	2.40	2.40	1.97	1.97	3.15	1.89	1.93	1.89	1.38
8025	1.02	3.15	2.95	2.95	2.36	2.36	3.46	2.05	2.20	2.17	1.57
8035	1.14	3.54	3.39	3.39	2.56	2.56	4.13	2.17	2.56	2.17	1.77
8045	1.18	3.94	3.82	3.82	2.76	2.76	4.72	2.17	2.56	2.17	1.97
8055	1.22	4.33	4.13	4.21	3.15	3.15	5.12	2.56	2.56	2.95	1.97
8065	1.42	4.92	4.69	4.69	3.74	3.54	6.30	2.36	2.56	2.95	2.36
8075	1.46	5.71	5.43	5.43	4.33	4.33	6.89	2.56	3.74	3.15	2.56
8085	1.50	6.50	6.22	6.22	4.72	4.72	7.60	3.15	3.74	3.74	2.76

mm	HP	K	K4	K5	L2	M	RA	S1	S2	S3	S4
8015	25	65	61	61	50	50	80	48	49	48	35
8025	26	80	75	75	60	60	88	52	56	55	40
8035	29	90	86	86	65	65	105	55	65	55	45
8045	30	100	97	97	70	70	120	55	65	55	50
8055	31	110	105	107	80	80	130	65	65	75	50
8065	36	125	119	119	95	90	160	60	65	75	60
8075	37	145	138	138	110	110	175	65	95	80	65
8085	38	165	158	158	120	120	193	80	95	95	70



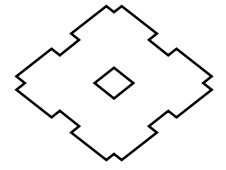
SUPPLEMENTARY DIMENSIONS

8090 – 8115 HORIZONTAL



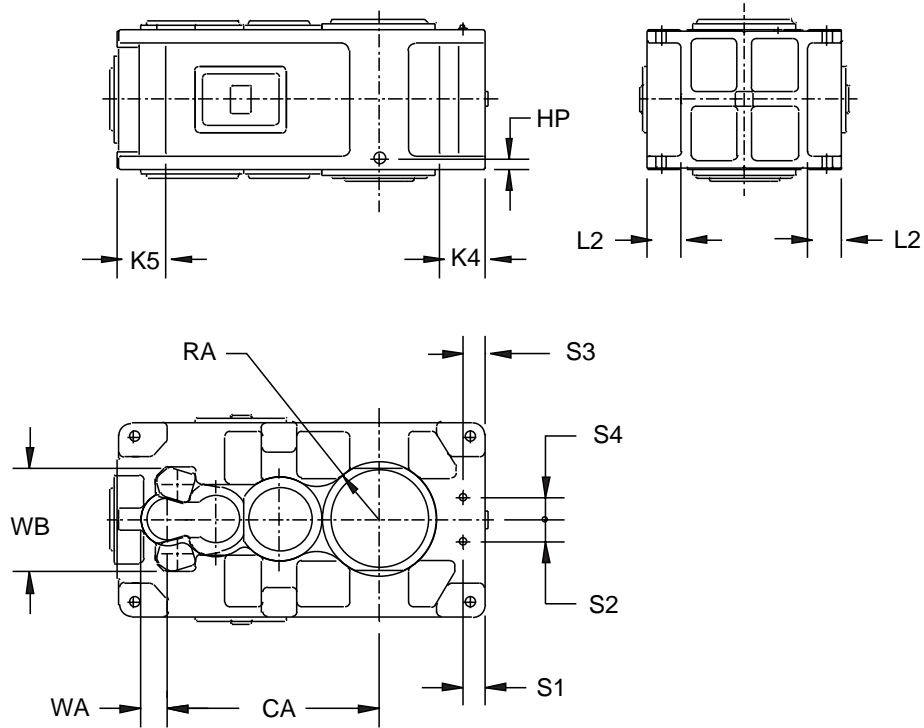
inch	AS	BS	C	DS	GS	JS1	JS2	JS3	K1	K2	K3	L1	Q	T1
8090	13.58	38.39	1.65	12.40	1.77	6.10	5.98	10.24	10.63	9.84	8.27	3.78	1.77	1.97
8095	14.76	39.57	1.65	13.39	1.77	7.09	6.97	11.22	11.42	9.84	8.27	4.17	1.77	1.97
8100	14.76	43.11	1.89	13.98	1.81	7.28	6.69	12.01	11.81	11.02	9.45	4.33	1.77	2.17
8105	16.14	44.49	1.89	14.96	1.81	8.27	7.68	12.99	12.60	11.02	9.45	4.72	1.77	2.17
8110	16.54	48.82	2.20	15.75	1.89	9.06	7.95	13.78	13.39	12.21	10.24	4.69	1.77	2.36
8115	18.50	50.79	2.20	16.73	1.89	10.04	8.94	14.76	13.78	12.21	10.24	5.08	1.77	2.36

mm	AS	BS	C	DS	GS	JS1	JS2	JS3	K1	K2	K3	L1	Q	T1
8090	345	975	42	315	45	155	152	260	270	250	210	96	45	50
8095	375	1005	42	340	45	180	177	285	290	250	210	106	45	50
8100	375	1095	48	355	46	185	170	305	300	280	240	110	45	55
8105	410	1130	48	380	46	210	195	330	320	280	240	120	45	55
8110	420	1240	56	400	48	230	202	350	340	310	260	119	45	60
8115	470	1290	56	425	48	255	227	375	350	310	260	129	45	60



SUPPLEMENTARY DIMENSIONS

8090 – 8115 VERTICAL



inch	CA	HP	K4	K5	L2	RA	S1	S2	S3	S4	WA	WB
8090	32.95	1.65	6.69	7.48	5.12	8.46	3.54	5.12	3.54	3.54	4.33	16.93
8095	34.13	1.65	7.28	8.46	5.51	9.25	3.15	5.51	3.54	3.54	4.33	16.93
8100	37.40	1.69	7.48	8.66	5.91	9.25	3.35	5.71	3.54	3.94	4.92	19.69
8105	38.74	1.69	8.46	9.45	6.30	10.24	3.15	6.10	3.54	3.94	4.92	19.69
8110	41.34	1.73	8.27	9.45	6.69	10.43	3.54	5.91	4.13	3.94	4.92	19.69
8115	43.27	1.73	9.25	10.63	7.09	11.02	3.35	5.91	4.13	3.94	4.92	19.69

mm	CA	HP	K4	K5	L2	RA	S1	S2	S3	S4	WA	WB
8090	837	42	170	190	130	215	90	130	90	90	110	430
8095	867	42	185	215	140	235	80	140	90	90	110	430
8100	950	43	190	220	150	235	85	145	90	100	125	500
8105	984	43	215	240	160	260	80	155	90	100	125	500
8110	1050	44	210	240	170	265	90	150	105	100	125	500
8115	1099	44	235	270	180	280	85	150	105	100	125	500

BASE UNITS

PRIMARY UNITS

Quantity	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Mass	lb	Pound	kg	Kilogram
Time	s	Second	s	Second
Length	ft	Foot	m	Meter
Temperature	°F	Fahrenheit	°C	Celsius
Electric Current	A	Ampere	A	Ampere

UNITS FOR GEOMETRIC PROPERTIES

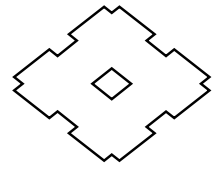
Quantity	Primary Symbol	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Area	A	ft ²	Square Foot	m ²	Square Meter
Depth	b	ft	Foot	m	Meter
Diameter	d	ft	Foot	m	Meter
Height	h	ft	Foot	m	Meter
Length	l	ft	Foot	m	Meter
Radius	r	ft	Foot	m	Meter
Displacement	s	ft	Foot	m	Meter
Volume	V	ft ³	Cubic Foot	m ³	Cubic Meter

UNITS FOR TIME & PERIODIC PHENOMENA

Quantity	Primary Symbol	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Acceleration	a	ft/s ²	Feet per Second ²	m/s ²	Meters per Second ²
Angular Acceleration	∞ (alpha)	rad/s ²	Radians per Second ²	rad/s ²	Radians per Second ²
Frequency	f	Hz	Hertz	Hz	Hertz
Rotational Velocity	n	RPM	Revolutions per Minute	RPM	Revolutions per Minute
Angular Velocity	ω (omega)	rad/s	Radians per Second	rad/s	Radians per Second
Time	t	s	Second	s	Second
Velocity	v	ft/s	Feet per Second	m/s	Meters per Second

UNITS FOR ENERGY & POWER

Quantity	Primary Symbol	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Energy (Work)	E (W)	lb ft	Pound Feet	Nm	Newton Meter
Thermodynamic		Btu	British Thermal Unit	kcal	Kilocalorie
Power	P	hp	Horsepower	kW	Kilowatt



UNITS FOR MECHANICAL MEASUREMENTS

Quantity	Primary Symbol	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Force	F	lbf	Pound Force (lb x a)	N	Newton (kg x a)
Moment of Inertia	u	Wr ²	Pound Feet ²	kgm ²	Kilogram Meter ²
Torque	T	lb•ft	Pound Foot	Nm	Newton Meter
Mass	m	lb	Pound	kg	Kilogram
Pressure	P	lb/in ²	Pound Per Square Inch	Pa	Pascal
Efficiency	η (Eta)	η		η	
Friction	μ (Mu)	μ	Coefficient of Friction	μ	Coefficient of Friction

UNITS FOR ELECTRICAL MEASUREMENT

Quantity	Primary Symbol	Imperial Sys. Units Symbol	Name	Metric Sys. Units Symbol	Name
Electric Current	I	A	Ampere	A	Ampere
Power	P	kw	Kilowatt	kw	Kilowatt
Resistance	R	Ω (Omega)	Ohm	Ω (Omega)	Ohm
Voltage	V	V	Volt	V	Volt

EQUATIONS FOR POWER TRANSMISSION

EQUATIONS FOR RATES & DISPLACEMENT

Linear Motion

$$\text{Velocity (v)} = \frac{\text{Displacement(s)}}{\text{Time (t)}} \quad \text{Time (t)} = \frac{\text{Displacement(s)}}{\text{Velocity (v)}}$$

$$\text{Displacement(s)} = \text{Velocity (v)} \times \text{Time (t)}$$

Rotary Motion

$$\text{Angular Velocity } (\omega \text{ (omega)}) = 2 \times \pi \text{ (pi)} \times \text{Rotational Velocity (n = (RPM))}$$

$$\text{Velocity (v)} = \text{Angular Velocity } (\omega \text{ (omega)}) \times \text{Radius (r)}$$

$$\text{Time (t)} = \frac{\text{Displacement (s)}}{\text{Velocity (v}^2 \text{ (} \omega \times r \text{))}}$$

$$\text{Displacement (s)} = \text{Velocity (v}^2 \text{ (} \omega \times r \text{))} \times \text{Time (t)}$$

EQUATIONS FOR TORQUE & WORK

$$\text{Work (w) or Energy (E)} = \text{Force (F)} \times \text{Displacement(s)}$$

$$\text{Torque (T)} = \text{Force (F)} \times \text{Radius (r)}$$

$$\begin{array}{l} \text{Torque (T)} \\ \text{Imperial Sys.} = \frac{5252 \times \text{hp}}{n} = \text{lb}\cdot\text{ft} \\ \text{Units} \end{array}$$

Note: for lb·in substitute 63025 for 5252

$$\begin{array}{l} \text{Torque (T)} \\ \text{Metric Sys.} = \frac{9550 \times \text{kw}}{n} = \text{Nm} \\ \text{Units} \end{array}$$

EQUATIONS FOR POWER

$$\text{Power (P)} = \frac{\text{Work (w)}}{\text{Time (t)}} = \frac{\text{Torque (T)}}{\text{Time (t)}}$$

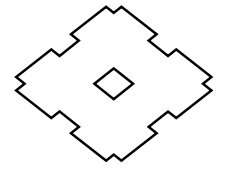
$$\begin{array}{l} \text{Power (P)} \\ \text{Imperial Sys.} = \text{hp} = \frac{33,000 \text{ lb}\cdot\text{ft}}{\text{minute}} = \frac{550 \text{ lb}\cdot\text{ft}}{\text{second}} \\ \text{Units} \end{array}$$

$$\text{hp} = \frac{\text{*Torque (T)} \times n}{\text{*5252}}$$

*Note: For torque in lb·in substitute 63025 for 5252

$$\begin{array}{l} \text{Power (P)} \\ \text{Metric Sys.} = \text{kw} = \frac{60,000 \text{ Nm}}{\text{minute}} = \frac{1000 \text{ Nm}}{\text{second}} \\ \text{Units} \end{array}$$

$$\text{kW} = \frac{\text{Torque (T)} \times n}{9550}$$



CONVERSION FACTORS

Length

	m	dm	cm	mm
1 m	= 1	10	100	1000
1 dm	= 0.1	1	10	100
1 cm	= 0.01	0.1	1	10
1 mm	= 0.001	0.01	0.1	1
1 yd	= 0.9144	9.144	91.44	914.4
1 ft	= 0.3048	3.048	30.48	304.8
1 in.	= 25.4X10 ⁻³	0.2540	2.540	25.40
1 mil	= 25.4X10 ⁻⁶	254X10 ⁻⁶	25.4X10 ⁻³	25.4X10 ⁻³

	yd	ft	in	mil
1 m	= 1.094	3.281	39.370	39.4X10 ³
1 dm	= 0.1094	0.3281	3.937	3937
1 cm	= 10.9X10 ⁻³	32.8X10 ⁻³	0.3937	393.7
1 mm	= 1.09X10 ⁻³	3.28X10 ⁻³	39.4X10 ⁻³	39.37
1 yd	= 1	3	36	36X10 ³
1 ft	= 0.3333	1	12	12X10 ³
1 in.	= 27.8X10 ⁻³	83.3X10 ⁻³	1	1000
1 mil	= 27.8X10 ⁻⁶	83.3X10 ⁻⁶	1X10 ⁻³	1

1 mile (statute or British mile) = 1760 yd = 5280 ft = 1609.344 m
 1 n mile (nautical mile) = 6080 ft = 1.853 km
 1 km = 39370 in = 3281 ft = 1093.6 yd = 0.6214 mile
 = 0.5396 n mile
 1 fathom = 6 ft = 1.8288 m

Area

	m ²	dm ²	cm ²	mm ²
1 m ²	= 1	100	10X10 ³	1X10 ⁶
1 dm ²	= 0.01	1	100	10X10 ³
1 cm ²	= 0.1X10 ⁻³	0.01	1	100
1 mm ²	= 1X10 ⁻⁶	0.1X10 ⁻³	0.01	1
1 yd ²	= 0.8361	83.61	8361	836X10 ³
1 ft ²	= 92.9X10 ⁻³	9.290	929.03	92.9X10 ³
1 in ²	= 0.645X10 ⁻³	64.5X10 ⁻³	6.4516	645.16
1 CM	= -	-	5.07X10 ⁶	0.507X10 ³

	yd ²	ft ²	in ²	CM
1 m ²	= 1.196	10.764	1550	-
1 dm ²	= 12X10 ⁻³	0.1076	15.50	-
1 cm ²	= 0.12X10 ⁻³	1.08X10 ⁻³	0.1550	197X10 ³
1 mm ²	= 1.2X10 ⁻⁶	10.8X10 ⁻⁶	1.55X10 ⁻³	1.97X10 ³
1 yd ²	= 1	9	1296	-
1 ft ²	= 0.1111	1	144	183X10 ⁶
1 in ²	= 772X10 ⁻⁶	6.94X10 ⁻³	1	1.27X10 ⁶
1 CM	= -	5.45X10 ⁹	0.785X10 ⁶	1

1 square mile = 640 acres = 2.590 km² = 259 ha
 1 acre = 4840 yd² = 0.405 ha = 4047 m²
 1 km² = 0.386 m² = 100 ha = 10000 a
 1 ha = 100 a = 2.471 acres = 11959.6 yd²
 1 a = 100 m² = 119.6 yd² = 1076.4 ft²

Volume

	m ³	dm ³	cm ³	yd ³
1 m ³	= 1	1000	1X10 ⁶	1.3079
1 dm ³	= 1X10 ⁻³	1	1000	1.3X10 ⁻³
1 cm ³	= 1X10 ⁻⁶	1X10 ⁻³	1	1.3X10 ⁻⁶
1 yd ³	= 0.765	764.6	765X10 ³	1
1 ft ³	= 28.3X10 ⁻³	28.32	28.3X10 ³	37X10 ⁻³
1 in ³	= 16.4X10 ⁻⁶	16.4X10 ⁻³	16.39	21.4X10 ⁻⁶
1 gal (UK)	= 4.55X10 ⁻³	4.546	4546	5.95X10 ⁻³
1 gal (US)	= 3.79X10 ⁻³	3.785	3785	4.95X10 ⁻³

	yd ³	in ³	gal (UK)	gal (US)
1 m ³	= 35.32	61.02X10 ³	220	264.2
1 dm ³	= 35.3X10 ⁻³	61.02	0.22	0.2642
1 cm ³	= 35.3X10 ⁻⁶	61X10 ⁻³	0.22X10 ⁻³	0.26X10 ⁻³
1 yd ³	= 27	46.7X10 ³	168.2	202
1 ft ³	= 1	1728	6.229	7.481
1 in ³	= 579X10 ⁻⁶	1	3.6X10 ⁻³	4.3X10 ⁻³
1 gal (UK)	= 0.1605	277	1	1.201
1 gal (US)	= 0.1337	231	0.8327	1

1 bushel (UK) = 8 gal (UK) = 64 pt (UK) = 36.371
 1 bushel (US) = 0.969 bu (UK) = 35.24 l
 1 pint (UK) = 1/8 gal (UK) = 0.5682 l
 1 liq. pt. (US) = 1/8 gal (US) = 0.4732 l
 1 l = 1.76 pt (UK) = 2.113 liq. pt (US)

Force and Weight

	N	kP	P
1 N	= 1	0.1020	102.0
1 kp	= 9.807	1	1000
1 p	= 9.81X10 ⁻³	1X10 ⁻³	1
1 dyn	= 1X10 ⁻⁵	1.02X10 ⁻⁶	1.02X10 ⁻³
1 tonf (UK)	= 9964	1016	1.02X10 ⁶
1 lbf	= 4.448	0.4536	453.6
1 ozf	=	28.4X10 ⁻³	28.35

	dyn	tonf (UK)	lbf	ozf
1 N	= 1X10 ⁵	100.4X10 ⁻⁶	0.2248	3.597
1 kP	= 981x10 ³	0.984X10 ⁻³	2.205	35.27
1 P	= 980.7	0.984X10 ⁻⁶	2.2X10 ⁻³	35.3X10 ⁻³
1 dyn	= 1	1X10 ⁻⁹	2.25X10 ⁻⁶	36X10 ⁻⁶
1 tonf (UK)	= 996X10 ⁶	1	2240	35.8X10 ³
1 lbf	= 445X10 ³	446X10 ⁻⁶	1	16
1 ozf	= 27.8X10 ³	27.9X10 ⁻⁶	62.5X10 ⁻³	1

1 (long) ton (UK) = 160 stones = 2240 lb = 1.016 t
 1 (short) ton (US) = 142.9 stones = 2000 lb = 0.907 t
 1 stone = 14 lb = 224 oz = 6.35 kg
 1 ton = 20 cwt
 1 cwt (UK) = 4 quarters = 8 stones = 112 lb
 1 cwt (US) = 100 lb = 45.36 kg
 1 t = 1000 kg = 0.984 ton (UK) = 1.101 ton (US)

CONVERSION FACTORS

Velocity

		km/h	m/min	m/s
1 km/h	=	1	16.667	0.2778
1 m/min	=	0.06	1	16.7X10 ⁻³
1 m/s	=	3.6	60	1
1 mile/h	=	1.609	26.82	0.4470
1 ft/min	=	18.3X10 ⁻³	0.3048	5.08X10 ⁻³
1 ft/s	=	1.097	18.288	0.3048
1 in/s	=	91X10 ⁻³	1.524	25.4X10 ⁻³

		mile/h	ft/min	ft/s	in/s
1 km/h	=	0.6214	54.68	0.9113	10.936
1 m/min	=	37.3X10 ⁻³	3.281	54.7x10 ⁻³	0.656
1 m/s	=	2.237	196.85	3.281	39.37
1 mile/h	=	1	88	1.467	17.6
1 ft/min	=	11.4X10 ⁻³	1	16.7X10 ⁻³	0.2
1 ft/s	=	0.6818	60	1	12
1 in/s	=	56.8X10 ⁻³	5	83.3X10 ⁻³	1

Torque

		Nm	cNm	kgfm
1 Nm	=	1	100	0.10197
1 cNm	=	0.01	1	1.02X10 ⁻³
1 kgfm	=	9.8067	980.67	1
1 cpm	=	98.1X10 ⁻⁶	9.81X10 ⁻³	10X10 ⁻⁶
1 lbf•ft	=	1.356	135.6	0.1383
1 lbf•in	=	0.1129	11.29	11.5X10 ⁻³
1 ozf•in	=	7.062X10 ⁻³	0.7062	0.72X10 ⁻³

		cpm	lbf•ft	lbf•in	ozf•in
1 Nm	=	10.2X10 ³	0.73756	8.8507	141.61
1 cNm	=	101.97	7.376X10 ⁻³	88.5X10 ⁻³	1.4161
1 kgfm	=	100X10 ³	7.233	86.796	1389
1 cpm	=	1	72.3X10 ⁻⁶	868X10 ⁻⁶	13.9X10 ⁻³
1 lbf•ft	=	13.8X10 ³	1	12	192
1 lbf•in	=	1152	83.3X10 ⁻³	1	16
1 ozf•in	=	72.01	5.21X10 ⁻³	62.5X10 ⁻³	1

Power

		kW	PS	hp
1 kW	=	1	1.360	1.341
1 PS	=	0.7355	1	0.9863
1 hp	=	0.7457	1.014	1
1 kgfm/s	=	9.81X10 ⁻³	13.33X10 ⁻³	13.15X10 ⁻³
1 ft•lbf/s	=	1.36X10 ⁻³	1.84X10 ⁻³	1.82X10 ⁻³
1 kcal/s	=	4.1868	5.692	5.615
1 Btu/s	=	1.055	1.435	1.415

		kgfm/s	ft•lbf/s	kcal/s	Btu/s
1 kW	=	102.0	737.6	0.2388	0.9478
1 PS	=	75	542.5	0.1757	0.6971
1 hp	=	76.04	550	0.1781	0.7068
1 kgfm/s	=	1	7.233	2.342X10 ⁻³	9.295X10 ⁻³
1 ft•lbf/s	=	0.1383	1	0.324X10 ⁻³	1.285X10 ⁻³
1 kcal/s	=	426.9	3088	1	3.968
1 Btu/s	=	107.6	778.2	0.2520	1

Moment of Inertia and Other Flywheel Effects

		kgm ² (<i>mr</i> ²)	kgfm ² (<i>GD</i> ²)
1 kgm ² (<i>mr</i> ²)	≅	1	4
1 kgfm ² (<i>GD</i> ²)	≅	0.25	1
1 lbf•ft ² (<i>Wr</i> ²)	≅	42.1X10 ⁻³	0.1686
1 kpms ²	≅	9.807	39.23
1 ft•lbf•s ²	≅	1.356	5.423

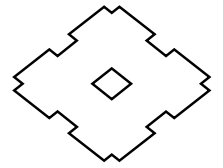
		lbf•ft ² (<i>Wr</i> ²)	kpms ²	ft•lbf•s ²
1 kgm ² (<i>mr</i> ²)	≅	23.73	0.102	0.7376
1 kgfm ² (<i>GD</i> ²)	≅	5.933	25.5X10 ⁻³	0.1844
1 lbf•ft ² (<i>Wr</i> ²)	≅	1	4.30X10 ⁻³	31.1X10 ⁻³
1 kpms ²	≅	232.7	1	7.233
1 ft•lbf•s ²	≅	32.17	0.1383	1

Pressure and Stress

		N/m ²	bar	kgf/m ²
1 N/m ²	=	1	1X10 ⁻⁵	0.102
1 bar	=	1X10 ⁵	1	10.2X10 ³
1 kgf/m ²	=	9.81	98.1X10 ⁻⁶	1
1 kgf/cm ²	=	98.1X10 ³	0.981	10X10 ³
1 kgf/mm ²	=	9.81X10 ⁶	98.1	1X10 ⁶
1 lbf/yd ²	=	5.32	53.2X10 ⁻⁶	0.543
1 lbf/ft ²	=	47.88	479X10 ⁻⁶	4.882
1 lbf/in ²	=	6.89X10 ³	68.9X10 ⁻³	703
1 tonf/in ²	=	15.4X10 ³	154	1.58X10 ⁶

		kgf/cm ²	kgf/mm ²	lbf/yd ²
1 N/m ²	=	10.2x10 ⁻⁶	0.102x10 ⁻⁶	0.188
1 bar	=	1.02	10.2X10 ⁻³	18.8X10 ³
1 kgf/m ²	=	0.1X10 ⁻³	1X10 ⁻⁶	1.843
1 kgf/cm ²	=	1	0.01	18.4X10 ³
1 kgf/mm ²	=	100	1	1.84X10 ⁶
1 lbf/yd ²	=	54X10 ⁻⁶	0.54X10 ⁻⁶	1
1 lbf/ft ²	=	0.488X10 ⁻³	4.88X10 ⁻⁶	9
1 lbf/in ²	=	70.3X10 ⁻³	0.703X10 ⁻³	1296
1 tonf/in ²	=	157.5	1.575	2.9X10 ⁶

		lbf/ft ²	lbf/in ²	tonf/in ²
1 N/m ²	=	20.88X10 ⁻³	145X10 ⁻⁶	64.75X10 ⁻⁹
1 bar	=	2.088X10 ³	14.5	6.475X10 ⁻³
1 kgf/m ²	=	0.2048	1.42X10 ⁻³	0.64X10 ⁻⁶
1 kgf/cm ²	=	2.05X10 ³	14.223	6.4X10 ⁻³
1 kgf/mm ²	=	205X10 ³	1.422X10 ³	0.6349
1 lbf/yd ²	=	0.1111	772X10 ⁻⁶	0.345X10 ⁻⁶
1 lbf/ft ²	=	1	6.94X10 ⁻³	3.1X10 ⁻⁶
1 lbf/in ²	=	144	1	0.446X10 ⁻³
1 tonf/in ²	=	0.323X10 ⁶	2240	1



TABLES

Temperature

	°F	°C
v °F ≅	V	$\frac{5}{9}(v - 32)$
w °C ≅	$\frac{9}{5}w + 32$	w
x K ≅	$\frac{9}{5}x - 460$	x - 273
y °Réau ≅	$\frac{9}{5}y + 32$	$\frac{5}{9}y$
z °R ≅	z - 460	$\frac{5}{9}z - 273$

	K	°Réau	°R
v °F ≅	$\frac{5}{9}(v - 32) + 273$	$\frac{5}{9}(v - 32)$	v + 460
w °C ≅	w + 273	$\frac{5}{9}w$	$\frac{5}{9}w + 492$
x K ≅	x	$\frac{5}{9}(x - 273)$	$\frac{5}{9}x$
y °Réau ≅	$\frac{5}{9}y + 273$	y	$\frac{5}{9}y + 492$
z °R ≅	$\frac{5}{9}z$	$\frac{5}{9}z - 219$	z

Reference points of temperature:

Boiling point of water:
 212°F 100°C 373.15K 80°Réau 671.67°R

Freezing point of water:
 32°F 0°C 273.15K 0°Réau 491.67°R

Absolute zero:
 -459.67°F -273.15°C 0°K 0°R

°C	← °F → °C	°F	°C	← °F → °C	°F
-17.8	0	32.0	-3.9	25	77.0
-17.2	1	33.8	-3.3	26	78.8
-16.7	2	35.6	-2.8	27	80.6
-16.1	3	37.4	-2.2	28	82.4
-15.6	4	39.2	-1.7	29	84.2
-15.0	5	41.0	-1.1	30	86.0
-14.4	6	42.8	-0.6	31	87.8
-13.9	7	44.6	0.0	32	89.6
-13.3	8	46.4	0.6	33	91.4
-12.8	9	48.2	1.1	34	93.2
-12.2	10	50.0	1.7	35	95.0
-11.7	11	51.8	2.2	36	96.8
-11.1	12	53.6	2.8	37	98.6
-10.6	13	55.4	3.3	38	100.4
-10.0	14	57.2	3.9	39	102.2
-9.4	15	59.0	4.4	40	104.0
-8.9	16	60.8	5.0	41	105.8
-8.3	17	62.6	5.6	42	107.6
-7.8	18	64.4	6.1	43	109.4
-7.2	19	66.2	6.7	44	111.2
-6.7	20	68.0	7.2	45	113.0
-6.1	21	69.8	7.8	46	114.8
-5.6	22	71.6	8.3	47	116.6
-5.0	23	73.4	8.9	48	118.4
-4.4	24	75.2	9.4	49	120.2

Temperature Conversion

Degree Fahrenheit to degree Celsius
 Degree Celsius to degree Fahrenheit

°C	← °F → °C	°F	°C	← °F → °C	°F
-45.6	-50	-58.0	-31.7	-25	-13.0
-45.0	-49	-56.2	-31.1	-24	-11.2
-44.4	-48	-54.4	-30.6	-23	-9.4
-43.9	-47	-52.6	-30.0	-22	-7.6
-43.3	-46	-50.8	-29.4	-21	-5.8
-42.8	-45	-49.0	-28.9	-20	-4.0
-42.2	-44	-47.2	-28.3	-19	-2.2
-41.7	-43	-45.4	-27.8	-18	-0.4
-41.1	-42	-43.6	-27.2	-17	1.4
-40.6	-41	-41.8	-26.7	-16	3.2
-40.0	-40	-40.0	-26.1	-15	5.0
-39.4	-39	-38.2	-25.6	-14	6.8
-38.9	-38	-36.4	-25.0	-13	8.6
-38.3	-37	-34.6	-24.4	-12	10.4
-37.8	-36	-32.8	-23.9	-11	12.2
-37.2	-35	-31.0	-23.3	-10	14.0
-36.7	-34	-29.2	-22.8	-9	15.8
-36.1	-33	-27.4	-22.2	-8	17.6
-35.6	-32	-25.6	-21.7	-7	19.4
-35.0	-31	-23.8	-21.1	-6	21.2
-34.4	-30	-22.0	-20.6	-5	23.0
-33.9	-29	-20.2	-20.0	-4	24.8
-33.3	-28	-18.4	-19.4	-3	26.6
-32.8	-27	-16.6	-18.9	-2	28.4
-32.2	-26	-14.8	-18.3	-1	30.2

°C	← °F → °C	°F	°C	← °F → °C	°F
10.0	50	122.0	23.9	75	167.0
10.6	51	123.8	24.4	76	168.8
11.1	52	125.6	25.0	77	170.6
11.7	53	127.4	25.6	78	172.4
12.2	54	129.2	26.1	79	174.2
12.8	55	131.0	26.7	80	176.0
13.3	56	132.8	27.2	81	177.8
13.9	57	134.6	27.8	82	179.6
14.4	58	136.4	28.3	83	181.4
15.0	59	138.2	28.9	84	183.2
15.6	60	140.0	29.4	85	185.0
16.1	61	141.8	30.0	86	186.8
16.7	62	143.6	30.6	87	188.6
17.2	63	145.4	31.1	88	190.4
17.8	64	147.2	31.7	89	192.2
18.3	65	149.0	32.2	90	194.0
18.9	66	150.8	32.8	91	195.8
19.4	67	152.6	33.3	92	197.6
20.0	68	154.4	33.9	93	199.4
20.6	69	156.2	34.4	94	201.2
21.1	70	158.0	35.0	95	203.0
21.7	71	159.8	35.6	96	204.8
22.2	72	161.6	36.1	97	206.6
22.8	73	163.4	36.7	98	208.4
23.3	74	165.2	37.2	99	210.2



PARAMAX APPLICATION DATA QUESTIONNAIRE

Quotation #: _____ Customer: _____ PO#: _____ Date: _____

Factory Order #: _____ Quoted Delivery: _____ Requested Delivery: _____

ADDITIONAL FEATURES: Please *circle* required items:

1 Fan	2 Fans	Cooling Coil	Oil / Water Cooler (Std.)	Oil / Air Cooler	Immersion Heater	Shaft Pump	Motorized Pump	Backstop	Epoxy Paint	Special Paint
Hollow LSS	Shrink Disc	Export Packaging	Severe Duty Seals	Taconite Seals	Oil Flow Sight Glass	Oil Temp Gauge	Oil Temp Switch	Oil Level Switch	Oil Level Sight Glass	Long Term Storage
Oil Filter	Flow Switch	Pressure Gauge	Pressure Switch	Fab. Steel Housing	Baseplate	C-Face Adaptor	Top Mount Adaptor	Drop Bearing	Special Gear Ratio	Cooling Tower Mod.
Input Cplg.*	Input Cplg. Guard*	Fluid Cplg.*	Fluid* Cplg. Guard	Output Cplg.*	Output* Cplg. Guard	V-belt, Sprocket, etc.* Input / Output Assembly		Motor*	Filter Breather	Drain Valve

*Items MUST be explained in greater detail below.

Items supplied and mounted by **CUSTOMER**: _____

Items supplied by **CUSTOMER and mounted by SUMITOMO**: _____

Sumitomo will require Certified drawings of any Customer supplied items used in conjunction with the drive assembly.

Input Cplg. / Fluid Cplg. info: Manuf. _____ Size: _____ Max. bore size: _____

additional input cplg. info: _____

Output Cplg. Info: Manuf. _____ Size: _____ Max. bore size: _____

additional input cplg. info: _____

INPUT V-belt / sprocket / pinion info: pitch dia: _____ face width: _____ ratio: _____

OUTPUT V-belt / sprocket / pinion info: pitch dia: _____ face width: _____ ratio: _____

MOTOR INFO: HP _____ frame size: _____ rpm(range): _____ Constant HP Constant Torque

ADDITIONAL REQUIREMENTS: _____

APPLICATION INFORMATION (please provide details, assembly sketches, etc. on a separate sheet if necessary)

Min. Service Factor: _____ Application: _____ Power Req'd: HP: _____ Torque: _____

Shock Loads: Heavy Moderate Uniform **Service:** Hours / day: _____ Continuous Intermittent

Ambient temp. range: _____ **Atmosphere:** Dusty Washdown High humidity (if > 60%)

Altitude (if > 2500 ft above sea level): _____ **Enclosure:** Small Indoor Outdoor (direct sun exposure? Yes No)

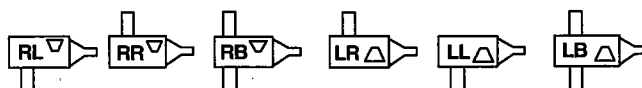
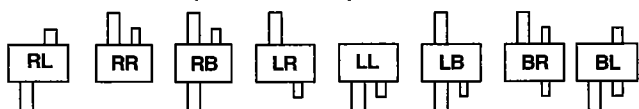
Input Shaft External Loads: Radial: _____ Thrust: _____ (direction: Out In)

Output Shaft External Loads: Radial: _____ Thrust: _____ (direction: Out In)

Rotation of HSS (when facing HSS end): CCW CW **Rotation of LSS (when facing LSS end):** CCW CW

PARALLEL SHAFT (Horizontal – top view Vertical – side view)

RIGHT ANGLE SHAFT (Horizontal – top view Vertical – side view)



Bottling/Baking



Steel hypoid gear technology, maintenance-free grease lubrication and a compact modular housing makes the Hyponic® an efficient performer in the food industry.



A 15-hp Beier mechanical variable speed drive with electric remote control provides an adjustable, steady speed range for this 350-ft. oven band conveyor.

Water Treatment



Each of these Sumitomo Paramax® speed reducers helps pump up to 13 million gallons a day at this state-of-the-art wastewater treatment facility in the City of Clearwater, Florida.



Cyclo® mixer drives are a key component of this award-winning water treatment facility in Hillsborough County, Florida.

Material Handling



Sumitomo Paramax® reducers provide quiet, reliable operation for both the hoist and trolley drive systems in this 35-ton capacity DC Trolley Hoist used for heavy-duty coil handling service.



Custom Designs



In less than 20 minutes, 96 Sumitomo Cyclo® Bevel Buddybox gearmotors help retract the 13,000-ton roof on Seattle's new Safeco Field.



The Sumitomo gearmotors, on eight travel truck assemblies, turn 128 36" wheels.

Wood Products

Sumitomo Cyclo® drives are an integral part of this manufacturing plant which produces 150,000 board feet of unfinished strip and plank hardwood flooring each week.



Once flooring is side-matched, it is inspected for defects. This conveyor, driven by Sumitomo Cyclo® drives, carries defective material to the hammer mill.

Steel



After molten steel is formed in the five-strand continuous caster at this steel mill, it is conveyed by Sumitomo Cyclo® drives on the auto-torch conveyors where the steel is cut into billets.

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