HUBCITY

ENGINEERING MANUAL No. 6

GEAR DRIVES – MOTORS – BEARINGS



What's New in This Catalog



Universal Power Cube™ Worm Gear Drives (Section B)
- Increased capacity and efficiency
- Universal mounting
- New 2.38" CD models



Helical Ratio Multipliers (Sections B, F and O)
- Increased capacity and efficiency
- Universal mounting
- New 2.38" CD models



Stainless Steel Helical Inline Drives (Section O)
- High efficiency AND easy to clean
- Designed for food processing & washdown applications



Series GW 7-10" CD Worm Gear Drives (Section B)
- 7", 8", 10" center distance models
- Power ratings to 100HP



PowerTorque™ Shaft Mount Reducers (Section G)
- Two larger models
- Power ratings to 200HP



Spartan™ Aluminum Helical Inline Drives (section I)
- Four models in the most popular sizes
- High Efficiency, compact and lightweight



Model HB2103 (Section K)
- The newest and largest helical bevel drives
- Power ratings to 130HP

At The Heart Of What Drives Your World...

Since 1892, HUB CITY has a reputation for producing tough, dependable driveline components for industry and agriculture worldwide. As a world-class manufacturer, HUB CITY provides the technology, expertise and support to perfectly integrate our products into your application. Whether your application requires a standard, modified standard or custom product, HUB CITY will always be at the heart of what drives your world.



A multi-pallet machining center machines precisely and efficiently.

Leading Edge Engineering Team Brings You:

- Application engineers that provide advanced product designs and support to meet your exact requirement
- Advanced product design for diverse applications
- Custom designed prototypes for evaluation and testing
- Support from inception to completion of the product design through manufacturing

State-of-the-Art Manufacturing with Capabilities Including:

- Extensive computer numerically controlled (CNC) machines for milling, turning, drilling, boring, threading, grinding, hobbing and gear cutting of barstock, forgings and castings
- Equipment supported by Direct Numerical Control (DNC), Computer-Aided Design and Manufacturing (CAD/CAM), and computer-based systems for Enterprise Resource Planning (ERP)
- Microprocessor-controlled heat treating that carburizes and hardens, through-hardens, induction hardens, or tempers and anneals a variety of materials



State-of-the-art testing equipment and comprehensive product testing ensures quality.

World-Class Quality is Assured By:

- Design simplicity and structural integrity
- Comprehensive systems, procedures and work instructions in accordance with ISO-9000 standards
- State-of-the-art testing equipment and laboratory

Dedicated Customer Service Means Support From:

- Two manufacturing facilities in South Dakota
- Eight Assembly/Distribution Centers conveniently located throughout North America
- Skilled customer service professionals committed to excellence in providing product information and prompt order processing



Lean Six Sigma. The Way We Work and Think.

Hub City is proud to announce enhanced performance and improved lead times as a result of ongoing implementation of Lean Six Sigma Initiatives.

Many of our most sought after products are now available in 3 days or less!

CUSTOM PRODUCTS

HUB CITY provides technically advanced products to meet your custom application. Our engineering team offers complete support from design and prototypes to the manufactured unit.

HUB CITY Custom Products Are Unlimited:

Outdoor Power Equipment
- Used to power hand-held outdoor equipment such as: rubber paddle brooms, nylon bristle brushes & cultivator attachments

Food Processing Machinery
- Powers beverage and bottling equipment
- Drives fruit and vegetable processors
- Used in meat and poultry processing plants
- Operates vibratory conveyors for the confectionary and baking industries

Military Applications
- Used in military rocket launchers. It raises and lowers the canister, which contains the rockets, positioning them for firing.
- 1:1 spiral bevel gearing & 1.53:1 spiral bevel gearing
- Special paint & corrosion protection applied to all exposed surfaces

Boom Rotation Drives
- Used for rotating the main boom in small utility and electrical maintenance vehicles
- Spur gear mates with internal or external gear teeth, which are part of the main rotation bearing
- Manufactured in several sizes and output flange configurations

Packaging Equipment
- Suitable for production equipment and food processing
- Increases production in packaging machinery: shrink wrap & snack bagging applications, which crimp, seal and cut snack bags
- Manufactured with planetary gearing

Spraying Equipment
- Operates spray pumps in recreational and commercial vehicles. The spray pumps are run by the low speed output shaft, and the double extended high speed input shaft transmits power to the vehicle differential.
- Utilizes our standard Model 180, 5:1, gear design in a special housing

Monorail Drive
- Used in monorail and bottling conveyor application
- Ratios: 19.63:1 to 78.52:1
- Manufactured with or without disengage mechanisms

Utility Truck Applications
- Used for operating air compressors, pumps, generators, etc.
- Manufactured in sizes specific to application

Concrete Grinding and Finishing Equipment
- Powers the finishing tools for creating desired surface texture



Call us with your specific application.

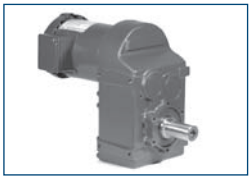
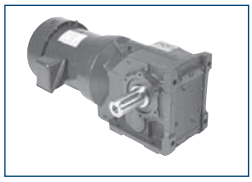
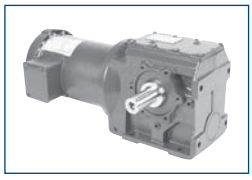
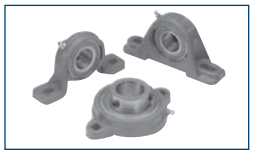
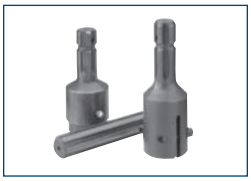
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	Product	Description	Ratios & Horsepower	Section
	**Service Factors & AGMA Load Classifications**	• Class of Service • Service Factors for Worm Gear Units • Load Classes for Gearmotors • Service Factors for All Drives	N/A N/A	**A**
	**Worm Gear Speed Reducers**	• Single, Double & Triple Reduction • Over 250 Standard Models • Recess Action Gearing • Alloy Bronze Gears	5:1 thru 216,000:1 .183 thru 100 HP	**B**
	**Spartan Aluminum Worm Gear Drives**	• Single & Double Reduction • Modular Design • Helical-Worm Configurations • Alloy Bronze Gears	5:1 thru 2,220:1 .183 thru 7.5 HP	**C**
	**Bevel Gear Drives**	• Spiral or Straight Bevel Gearing • Over 25 Models • Universal Mounting	1:1 thru 7.33:1 .016 thru 1250 HP	**D**
	**Cooling Tower Drives**	• Spiral Bevel Gearing • 3 Sizes Available • Rugged Cast Iron Housing	2.621 thru 7.33:1 12 thru 168 HP	**E**
	**Parallel Shaft Drives**	• Helical or Spur Gearing • Hydraulic, Electric or Shaft Input • Single or Double Reduction	1:1 thru 70:1 2.1 thru 530 HP	**F**
	**PowerTorque™ Shaft Mount Reducers**	• Precision Hardened and Ground Gearing • Ductile Iron Housing • Screw Conveyor Adaptors • Competitive Interchangeability	9:1 thru 25:1 .25 thru 200 HP	**G**
	**Electric Motors**	• Single or Three Phase • Brakemotors • Inverter Duty • Washdown Duty • PMDC	N/A .25 thru 30 HP	**H**
	**Poweratio® 4000 & Spartan High Efficiency Helical In-Line Drives**	• Double, Triple & Quad Reduction • Precision Crowned Gears • Foot Mount or Flange Mount	2.25:1 thru 3334:1 .014 thru 125 HP	**I**

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	Product	Description	Ratios & Horsepower	Section
	**Poweratio® 2000 High Efficiency Compact Helical Parallel Drives**	• Precision Carburized, Hardened and Crowned Helical Gearing • Competitive Interchangeability	3.42:1 thru 3,377:1 .25 thru 20 HP	J
	**Poweratio® 2000 High Efficiency Helical-Bevel Gear Drives**	• High Efficiency Helical & Spiral Bevel Gearing • Competitive Interchangeability	6.5:1 thru 3000:1 1/4 thru 130 HP	K
	**Poweratio® 2000 High Efficiency Helical-Worm Gear Drives**	• Precision Crowned Helical Gearing • Hardened and Ground Steel Worm Shaft, High Capacity Bronze Alloy Worm Gear	6:1 thru 3460:1 1/4 thru 23 HP	L
	**IndustriaLine™ Mounted Bearings**	• Ball Bearing Pillow Blocks, Flange Blocks & Take-Up Units • Narrow & Wide Inner Race	N/A Shaft Diameters 1/2" thru 3-1/2"	M
	**DuraLine® Mounted Bearings**	• Ball Bearing Pillow Blocks and Flange Blocks • Setscrew & Eccentric Locking • Narrow & Wide Inner Race	N/A Shaft Diameters 1/2" thru 3-1/2"	N
	**CleanLine™ Washdown Pharmaceutical and Food Processing Solutions**	• HUB³ Stainless Steel Gear Drives • CleanLine UltraPlus Stainless Steel Mounted Bearings • CleanLine Plus Thermoplastic Composite Bearings	1:1 thru 60:1 .25 thru 60 HP Bearing Shaft Dia. 1/2" thru 1-15/16"	O
	**Mina-Gear™ Gear Drives**	• Aluminum Housing • Helical Gearing	6:1 thru 206:1 .12 thru .75 HP	P
	**Farm Products & Accessories**	• Over-Running Couplers • Splined Couplings • Splined Shafts • P.TO. Drives & Adaptors	N/A Up to 125 HP	Q
	Warnings & Cautions Lubrication & Installation Instructions			R
	General Engineering Terms & Conditions Model Index			S

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MEDICAL

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TRANSPORTATION

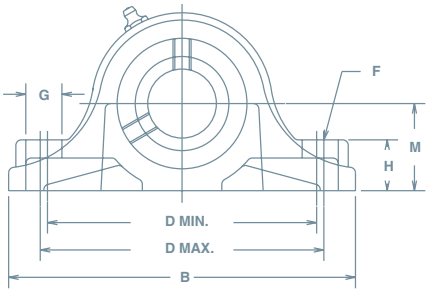
AEROSPACE

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MATERIAL HANDLING

RECREATION

AND MANY MORE...



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APPLICATION ORIENTED

Your application may be entirely different than the ones listed, but our customers have come from a multitude of industries over the past century we've been in business. Our products are used in material handling, packaging, medical equipment, food processing, transportation, construction, aer space and marine applications ...and it doesn't stop here. Over 50% of what we manufacture is either modified standard products or completely customized.

We know time is valuable, that's why you can count on HUB CITY for support, services and solutions to simplify your installation. Select from a complete line of standard or custom design products.



Standard, modified & custom units are built for countless applications.

SOLUTION DRIVEN

Does your application require CAD drawings? How about a configurator to aid your gear drive selection? Log on to www.hubcityinc.com where you may access our catalog tool for configurating and selecting a gear drive or mounted bearing. Then download our 2D or 3D CAD drawings, browse through the standard and custom product overviews, read what's new at the "HUB," and order product literature. Download all of our product literature in an easy to use PDF format. If a custom gear drive is what your are looking for, there are several examples of HUB CITY's custom capabilities featured here.

Do you need to speak to a HUB CITY field salesperson? Contact information is located on the site, as well as a HUB CITY Authorized Distributor directory searchable by zip code.

www.hubcityinc.com

Located to serve you!

24-Hour assembly and shipment, and on-the-shelf availability of our most sought after products

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ENGINEERING MANUAL No. 6

HUBGIFY

Spine

SERVICE FACTOR & A.G.M.A. LOAD CLASS INFORMATION

Classes of Service and Service Factors A-2
AGMA Service Factors for Worm Gear Reducers & Gearmotors A-3
AGMA Load Classifications for Spur, Helical & Bevel Gearmotors & Shaft Mount Reducers A-5
AGMA Service Factors for Spur, Helical & Bevel Gear Drives & Reducers A-7

CLASS OF SERVICE AND SERVICE FACTORS

The ratings for gear drives in this manual are based on a service factor of 1.00, for uniform load and uniform power source, up to 10 hours of operation per day. For other operating conditions, the application horsepower or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A gear drive should be selected with a rated capacity equal to or greater than the equivalent rating.
A condensed service factor chart is located in the selection information pages for each type of gear drive or reducer.

AGMA Service Factors for Worm and Helical Worm Gearmotors and Reducers are listed on pages A-3 to A-4.

AGMA Load Classification Numbers for Spur, Helical & Bevel Gearmotors and Shaft Mount Reducers are listed on pages A-5 to A-6.

AGMA Service Factors for Spur, Helical & Bevel Gear Drives and Reducers are listed on pages A-7 to A-8.

Table 1 indicates the relationship between service factors and load classification numbers.

The AGMA load classification numbers and service factors are based on a uniform power source. If other power sources are used, the service factors must be converted using Table 2. Determine the required service factor with uniform power source. Locate that service factor in the first column and read straight across to obtain required service factor with multi-cylinder or single cylinder engines.

Service factors do not need to be used with thermal ratings.

The Class Number and Service Factor charts are for general guidelines in determining required service factors. Past experience may indicate that different service factors are required. Consult the factory for unusual or severe applications, or when there are any safety considerations.

TABLE 1 – LOAD CLASSIFICATION NUMBERS

LOAD CLASS (S.F.)	*UP TO 3 HRS. TOTAL OPERATION PER DAY*	*3 TO 10 HRS. TOTAL OPERATION PER DAY*	*OVER 10 HRS. TOTAL OPERATION PER DAY*
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

TABLE 2 – SERVICE FACTOR CONVERSION BASED ON TYPE OF POWER SOURCE

STEAM OR GAS TURBINE HYDRAULIC OR ELECTRIC MOTOR	*MULTI-CYLINDER ENGINE*	*SINGLE CYLINDER ENGINE*
1.00	1.25	1.50
1.25	1.50	1.75
1.50	1.75	2.00
1.75	2.00	2.25
2.00	2.25	2.50
2.50	2.75	3.00
3.00	3.25	3.50

A.G.M.A. SERVICE FACTORS

WORM, HELICAL WORM GEARMOTORS & REDUCERS WITH UNIFORM POWER SOURCE

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Agitators (mixers)			
Pure liquids	*	1.00	1.25
Liquids and solids	1.00	1.25	1.50
Liquids - variable density	1.00	1.25	1.50
Blowers			
Centrifugal	*	1.00	1.25
Lobe	1.00	1.25	1.50
Vane	*	1.00	1.25
Brewing and distilling			
Bottling machinery	*	1.00	1.25
Brew kettles - continuous duty	*	1.00	1.25
Cookers - continuous duty	*	1.00	1.25
Mash tubs - continuous duty	*	1.00	1.25
Scale hopper - frequent starts	1.00	1.25	1.50
Can filling machines	*	1.00	1.25
Car dumpers	1.25	1.50	1.75
Car pullers	1.00	1.25	1.50
Clarifiers	*	1.00	1.25
Classifiers	1.00	1.25	1.50
Clay working machinery			
Brick press	1.25	1.50	1.75
Briquette machine	1.25	1.50	1.75
Pug mill	1.00	1.25	1.50
Compactors	1.50	1.75	2.00
Compressors			
Centrifugal	*	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, multi-cylinder	1.00	1.25	1.50
Reciprocating, single - cylinder	1.25	1.50	1.75
Conveyors - general purpose			
Uniformly loaded or fed	*	1.00	1.25
Not uniformly fed	1.00	1.25	1.50
Reciprocating or shaker	1.25	1.50	1.75
Cranes			
Dry dock			
Main hoist	1.25	1.50	1.75
Auxiliary hoist	1.25	1.50	1.75
Boom hoist	1.25	1.50	1.75
Slewing drive	1.25	1.50	1.75
Traction drive	1.50	1.50	1.50
Container			
Main hoist	Refer to Manufacturer		
Boom hoist	Refer to Manufacturer		
Trolley drive			
Gantry drive	Refer to Manufacturer		
Traction drive	Refer to Manufacturer		
Mill duty			
Main hoist	Refer to Manufacturer		
Auxiliary	Refer to Manufacturer		
Bridge	Refer to Manufacturer		
Trolley travel	Refer to Manufacturer		
Industrial duty			
Main	Refer to Manufacturer		
Auxiliary	Refer to Manufacturer		
Bridge	Refer to Manufacturer		
Trolley travel	Refer to Manufacturer		
Crusher			
Stone or ore	1.50	1.75	2.00
Dredges			
Cable reels	1.00	1.25	1.50
Conveyors	1.00	1.25	1.50
Cutter head drives	1.25	1.50	1.75
Pumps	1.00	1.25	1.50
Screen drives	1.25	1.50	1.75
Stackers	1.00	1.25	1.50
Winches	1.00	1.25	1.50
Elevators			
Bucket	1.00	1.25	1.50
Centrifugal discharge	*	1.00	1.25
Escalators	Refer to Manufacturer		
Freight	Refer to Manufacturer		
Gravity discharge	*	1.00	1.25
Extruders			
General	1.25	1.25	1.25
Plastics			
Variable speed drive	1.50	1.50	1.50
Fixed speed drive	1.75	1.75	1.75
Rubber			
Continuous screw operation	1.50	1.50	1.50
Intermittent screw operation	1.75	1.75	1.75

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Fans			
Centrifugal	*	1.00	1.25
Cooling towers	Refer to Manufacturer		
Forced draft	1.25	1.25	1.25
Induced draft	1.00	1.25	1.50
Industrial & mine	1.00	1.25	1.50
Feeders			
Apron	*	1.25	1.50
Belt	1.00	1.25	1.50
Disc	*	1.00	1.25
Reciprocating	1.25	1.50	1.75
Screw	1.00	1.25	1.50
Food industry			
Cereal cooker	*	1.00	1.25
Dough mixer	1.00	1.25	1.50
Meat grinders	1.00	1.25	1.50
Slicers	1.00	1.25	1.50
Generators and exciters	*	1.00	1.25
Hammer mills	1.50	1.50	1.75
Hoists			
Heavy duty	1.25	1.50	1.75
Medium duty	1.00	1.25	1.50
Skip hoist	1.00	1.25	1.50
Laundry			
Tumblers	1.00	1.25	1.50
Washers	1.25	1.25	1.50
Lumber industry			
Barkers - spindle feed	1.25	1.25	1.50
Main drive	1.50	1.50	1.50
Conveyors - burner	1.25	1.25	1.50
Main or heavy duty	1.50	1.50	1.50
Main log	1.50	1.50	1.75
Re-saw, merry-go-round	1.25	1.25	1.50
Conveyors			
Slab	1.50	1.50	1.75
Transfer	1.25	1.25	1.50
Chains			
Floor	1.50	1.50	1.50
Green	1.50	1.50	1.50
Cut-off saws			
Chain	1.50	1.50	1.50
Drag	1.50	1.50	1.50
Debarking drums	1.50	1.50	1.75
Feeds			
Edger	1.25	1.25	1.50
Gang	1.50	1.50	1.50
Trimmer	1.25	1.25	1.50
Log deck	1.50	1.50	1.50
Log hauls - incline - well type	1.50	1.50	1.50
Log turning devices	1.50	1.50	1.50
Planer feed	1.25	1.25	1.50
Planer tilting hoists	1.50	1.50	1.50
Rolls - live-off bearing - roll cases	1.50	1.50	1.50
Sorting table	1.25	1.50	1.50
Tipple hoist	1.25	1.25	1.50
Transfers			
Chain	1.50	1.50	1.50
Craneway	1.50	1.50	1.50
Tray drives	1.25	1.25	1.50
Veneer lathe drives	Refer to Manufacturer		
Metal mills			
Draw bench carriage and main drive	1.00	1.25	1.50
Runout table			
Non-reversing			
Group drives	1.00	1.25	1.50
Individual drives	1.50	1.50	1.75
Reversing	1.50	1.50	1.75
Slab pushers	1.25	1.25	1.50
Shears	1.50	1.50	1.75
Wire drawing	1.00	1.25	1.50
Wire winding machine	1.00	1.25	1.50
Metal strip processing machinery			
Bridles	1.25	1.25	1.50
Coilers & uncoilers	1.00	1.00	1.25
Edge trimmers	1.00	1.25	1.50
Flatteners	1.25	1.25	1.50

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.00 OR AS AGREED UPON BY USER AND MANUFACTURER.

A.G.M.A. SERVICE FACTORS

WORM, HELICAL WORM GEARMOTORS & REDUCERS WITH UNIFORM POWER SOURCE

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Metal strip processing machinery (continued)			
Loopers (accumulators)	1.00	1.00	1.00
Pinch rolls	1.25	1.25	1.50
Scrap choppers	1.00	1.25	1.50
Shears	1.50	1.50	1.75
Slitters	1.00	1.25	1.50
Mills, rotary type			
Ball & rod			
Spur ring gear	1.50	1.50	1.75
Helical ring gear	1.50	1.50	1.50
Direct connected	1.50	1.50	1.75
Cement kilns	1.50	1.50	1.50
Dryers & coolers	1.50	1.50	1.50
Mixers			
Concrete	1.00	1.25	1.50
Paper mills			
Agitator (mixer)	1.50	1.50	1.50
Agitator for pure liquors	1.25	1.25	1.25
Barking drums	1.75	1.75	1.75
Barkers - mechanical	1.75	1.75	1.75
Beater	1.50	1.50	1.50
Breaker stack	1.25	1.25	1.25
Calender 2)	1.25	1.25	1.25
Chipper	1.75	1.75	1.75
Chip feeder	1.50	1.50	1.50
Coating rolls	1.25	1.25	1.25
Conveyors			
Chip, bark, chemical	1.25	1.25	1.25
Log (including slab)	1.75	1.75	1.75
Couch rolls	1.25	1.25	1.25
Cutter	1.75	1.75	1.75
Cylinder molds	1.25	1.25	1.25
Dryers 2)			
Paper machine	1.25	1.25	1.25
Conveyor type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier rolls (includes lump breaker, dandy roll, wire turning,and return rolls)	1.25	1.25	1.25
Jordan	1.25	1.25	1.25
Kiln drive	1.50	1.50	1.50
Mt. Hope roll	1.25	1.25	1.25
Paper rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - felt & suction	1.25	1.25	1.25
Pulper	1.50	1.50	1.75
Pumps - vacuum	1.50	1.50	1.50
Reel (surface type)	1.25	1.25	1.50
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	1.75	1.75	1.75
Size press	1.25	1.25	1.25
Super calender 3)	1.25	1.25	1.25
Thickener (AC motor)	1.50	1.50	1.50
(DC motor)	1.25	1.25	1.25
Washer (AC motor)	1.50	1.50	1.50
(DC motor)	1.25	1.25	1.25
Wind and unwind stand	1.00	1.00	1.00
Winders (surface type)	1.25	1.25	1.25
Yankee dryers 2)	1.25	1.25	1.25
Plastics industry			
Primary processing			
Intensive internal mixers			
Batch mixers	1.75	1.75	1.75
Continuous mixers	1.50	1.50	1.50
Batch drop mill - 2 smooth rolls	1.25	1.25	1.25
Continuous feed, holding & blend mill	1.25	1.25	1.25
Compounding mill	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Secondary processing			
Blow molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - barge haul	1.00	1.50	1.75
Pumps			
Centrifugal	*	1.00	1.25
Proportioning	1.00	1.25	1.50
Reciprocating			
Single acting, 3 or more cylinders	1.00	1.25	1.50
Double acting, 2 or more cylinders	1.00	1.25	1.50
Rotary			
Gear type	*	1.00	1.50
Lobe	*	1.00	1.25
Vane	*	1.00	1.25
Rubber industry			
Intensive internal mixers			
Batch mixers	1.50	1.75	1.75
Continuous mixers	1.25	1.50	1.50
Mixing mill - 2 smooth rolls (if corrugated rolls are used, then use the same service factors that are used for a cracker warmer)	1.50	1.50	1.50
Batch drop mill - 2 smooth rolls	1.50	1.50	1.50
Cracker warmer - 2 rolls; 1 corrugated roll	1.75	1.75	1.75
Cracker - 2 corrugated rolls	1.75	1.75	1.75
Holding, feed & blend mill - 2 rolls	1.25	1.25	1.25
Refiner - 2 rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand muller	1.00	1.25	1.50
Sewage disposal equipment			
Bar screens	*	1.00	1.25
Chemical feeders	1.00	1.00	1.25
Dewatering screens	1.00	1.25	1.50
Scum breakers	1.00	1.25	1.50
Slow or rapid mixers	1.00	1.25	1.50
Sludge collectors	1.00	1.00	1.25
Thickeners	1.00	1.25	1.50
Vacuum filters	1.00	1.25	1.50
Screens			
Air washing	*	1.00	1.25
Rotary - stone or gravel	1.00	1.25	1.50
Traveling water intake	*	1.00	1.25
Sugar industry			
Beet slicer	1.50	1.50	1.75
Cane knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (low speed end)	1.50	1.50	1.50
Textile industry			
Batchers	1.00	1.25	1.50
Calenders	1.00	1.25	1.50
Cards	1.00	1.25	1.50
Dry cans	1.00	1.25	1.50
Dryers	1.00	1.25	1.50
Dyeing machinery	1.00	1.25	1.50
Looms	1.00	1.25	1.50
Mangles	1.00	1.25	1.50
Nappers	1.00	1.25	1.50
Pads	1.00	1.25	1.50
Slashers	1.00	1.25	1.50
Soapers	1.00	1.25	1.50
Spinners	1.00	1.25	1.50
Tenter frames	1.00	1.25	1.50
Washers	1.00	1.25	1.50
Winders	1.00	1.25	1.50

NOTES:
1) * UNSPECIFIED SERVICE FACTORS SHALL BE 1.00 OR AS AGREED UPON BETWEEN USER AND MANUFACTURER.
2) ANTI-FRICTION BEARINGS ONLY. USE 1.5 FOR SLEEVE BEARINGS.
4) A SERVICE FACTOR OF 1.00 MAY BE APPLIED AT BASE SPEED OF A SUPER CALENDER OPERATING OVER-SPEED RANGE OF PART RANGE CONSTANT HORSEPOWER, PART RANGE CONSTANT TORQUE WHERE THECONSTANT HORSEPOWER SPEED RANGE IS GREATER THAN 1.5 TO 1. A SERVICE FACTOR OF 1.25 IS APPLICABLE TO SUPER CALENDERS OPERATING OVER THE ENTIRE SPEED RANGE AT CONSTANT TORQUE OR WHERE THE CONSTANT HORSEPOWER SPEED RANGE IS LESS THAN 1.5 TO 1.

CALL: (605) 225-0360 • FAX: (605) 225-0567

A.G.M.A. LOAD CLASSIFICATION NUMBERS

SPUR, HELICAL & BEVEL GEARMOTORS & SHAFT MOUNT REDUCERS WITH UNIFORM POWER SOURCE

Application	Class Numbers		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Agitators (mixers)			
Pure liquids	I	I	II
Liquids and solids	I	II	II
Liquids - variable density	I	II	II
Blowers			
Centrifugal	I	I	II
Lobe	I	II	II
Vane	I	II	II
Brewing and distilling			
Bottling machinery	I	I	II
Brew kettles - continuous duty	II	II	II
Cookers - continuous duty	II	II	II
Mash tubs - continuous duty	II	II	II
Scale hopper - frequent starts	II	II	II
Can filling machines	I	I	II
Car dumpers	I	III	III
Car pullers	I	II	II
Clarifiers	I	I	II
Classifiers	I	II	II
Clay working machinery			
Brick press	II	III	III
Briquette machine	II	III	III
Pug mill	I	II	II
Compactors	III	III	III
Compressors			
Centrifugal	I	I	II
Lobe	I	II	II
Reciprocating, multi-cylinder	II	II	III
Reciprocating, single - cylinder	III	III	III
Cranes 1)			
Dry dock			
Main hoist	2.50	2.50	2.50
Auxiliary hoist	2.50	2.50	3.00
Boom hoist	2.50	2.50	3.00
Slewing drive	2.50	2.50	3.00
Traction drive	3.00	3.00	3.00
Container			
Main hoist	3.00	3.00	3.00
Boom hoist	2.00	2.00	2.00
Trolley drive			
Gantry drive	3.00	3.00	3.00
Traction drive	2.00	2.00	2.00
Mill duty			
Main hoist	3.50	3.50	3.50
Auxiliary	3.50	3.50	3.50
Bridge travel	2.50	3.00	3.00
Trolley travel	2.50	3.00	3.00
Industrial duty			
Main	2.50	2.50	3.00
Auxiliary	2.50	2.50	3.00
Bridge travel	2.50	3.00	3.00
Trolley travel	2.50	3.00	3.00
Crusher			
Stone or ore	III	III	III
Dredges			
Cable reels	II	II	II
Conveyors	II	II	II
Cutter head drives	III	III	III
Pumps	III	III	III
Screen drives	III	III	III
Stackers	II	II	II
Winches	II	II	II
Elevators			
Bucket	I	II	II
Centrifugal discharge	I	I	II
Escalators	I	I	II
Freight	I	II	II
Gravity discharge	I	I	II
Extruders			
General	II	II	II
Plastics			
Variable speed drive	III	III	III
Fixed speed drive	III	III	III
Rubber			
Continuous screw operation	III	III	III
Intermittent screw operation	III	III	III

Application	Class Numbers		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Fans			
Centrifugal	I	I	II
Cooling towers	III	III	III
Forced draft	II	II	II
Induced draft	II	II	II
Industrial & mine	II	II	II
Feeders			
Apron	I	II	II
Belt	I	II	II
Disc	I	I	II
Reciprocating	II	III	III
Screw	I	II	II
Food industry			
Cereal cooker	I	I	II
Dough mixer	II	II	II
Meat grinders	II	II	II
Slicers	I	II	II
Generators and exciters	II	II	II
Hammer mills	III	III	III
Hoists			
Heavy duty	III	III	III
Medium duty	II	II	II
Skip hoist	II	II	II
Laundry			
Tumblers	II	II	II
Washers	II	II	III
Lumber industry			
Barkers - spindle feed	II	II	II
Main drive	III	III	III
Conveyors - burner	II	II	II
Main or heavy duty	II	II	II
Main log	III	III	III
Re-saw, merry-go-round	II	II	II
Slab	III	III	III
Transfer	II	II	II
Chains			
Floor	II	II	II
Green	II	II	III
Cut-off saws			
Chain	II	II	III
Drag	II	II	III
Debarking drums	III	III	III
Feeds			
Edger	II	II	II
Gang	III	III	III
Trimmer	II	II	II
Log deck	III	III	III
Log hauls - incline - well type	III	III	III
Log turning devices	III	III	III
Planer feed	II	II	II
Planer tilting hoists	II	II	II
Rolls - live-off bearing - roll cases	III	III	III
Sorting table	II	II	II
Tipple hoist	II	II	II
Transfers			
Chain	II	II	III
Craneway	II	II	III
Tray drives	II	II	II
Veneer lathe drives	II	II	II
Metal mills			
Draw bench carriage and main drive	II	II	II
Runout table			
Non-reversing			
Group drives	II	II	II
Individual drives	III	III	III
Reversing	III	III	III
Slab pushers	II	II	II
Shears	III	III	III
Wire drawing	II	II	II
Wire winding machine	II	II	II
Metal strip processing machinery			
Bridles	II	II	II
Coilers & uncoilers	I	I	II
Edge trimmers	I	II	II
Flatteners	II	II	II
Loopers (accumulators)	I	I	I

A.G.M.A. LOAD CLASSIFICATION NUMBERS

SPUR, HELICAL & BEVEL GEARMOTORS & SHAFT MOUNT REDUCERS WITH UNIFORM POWER SOURCE

Application	Class Numbers		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Metal strip processing machinery (continued)			
Pinch rolls	II	II	II
Scrap choppers	II	II	II
Shears	III	III	III
Slitters	I	II	II
Mills, rotary type			
Ball & rod			
Spur ring gear	III	III	III
Helical ring gear	II	II	II
Direct connected	III	III	III
Cement kilns	II	II	II
Dryers & coolers	II	II	II
Mixers			
Concrete	II	II	II
Paper mills			
Agitator (mixer)	II	II	II
Agitator for pure liquors	II	II	II
Barking drums	III	III	III
Barkers - mechanical	III	III	III
Beater	II	II	II
Breaker stack	II	II	II
Calender 2)	II	II	II
Chipper	III	III	III
Chip feeder	II	II	II
Coating rolls	II	II	II
Conveyors			
Chip, bark, chemical	II	II	II
Log (including slab)	III	III	III
Couch rolls	II	II	II
Cutter	III	III	III
Cylinder molds	II	II	II
Dryers 2)			
Paper machine	II	II	II
Conveyor type	II	II	II
Embosser	II	II	II
Extruder	II	II	II
Fourdrinier rolls (includes lump breaker, dandy roll, wire turning,and return rolls)	II	II	II
Jordan	II	II	II
Kiln drive	II	II	II
Mt. Hope roll	II	II	II
Paper rolls	II	II	II
Platter	II	II	II
Presses - felt & suction	II	II	II
Pulper	III	III	III
Pumps - vacuum	II	II	II
Reel (surface type)	II	II	II
Screens			
Chip	II	II	II
Rotary	II	II	II
Vibrating	III	III	III
Size press	II	II	II
Super calender 3)	II	II	II
Thickener (AC motor)	II	II	II
(DC motor)	II	II	II
Washer (AC motor)	II	II	II
(DC motor)	II	II	II
Wind and unwind stand	I	I	I
Winders (surface type)	II	II	II
Yankee dryers 2)	II	II	II
Plastics industry			
Primary processing			
Intensive internal mixers			
Batch mixers	III	III	III
Continuous mixers	II	II	II
Batch drop mill - 2 smooth rolls	II	II	II
Continuous feed, holding & blend mill	II	II	II
Calenders	II	II	II

Application	Class Numbers		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Secondary processing			
Blow molders	II	II	II
Coating	II	II	II
Film	II	II	II
Pipe	II	II	II
Pre-plasticizers	II	II	II
Rods	II	II	II
Sheet	II	II	II
Tubing	II	II	II
Pullers - barge haul	II	II	II
Pumps			
Centrifugal	I	I	II
Proportioning	II	II	II
Reciprocating			
Single acting, 3 or more cylinders	II	II	II
Double acting, 2 or more cylinders	II	II	II
Rotary			
Gear type	I	I	II
Lobe	I	I	II
Vane	I	I	II
Rubber industry			
Intensive internal mixers			
Batch mixers	III	III	III
Continuous mixers	II	II	II
Mixing mill -			
2 smooth rolls	II	II	II
1 or 2 corrugated rolls	III	III	III
Batch drop mill - 2 smooth rolls	II	II	II
Cracker warmer - 2 rolls; 1 corrugated roll	III	III	III
Cracker - 2 corrugated rolls	III	III	III
Holding, feed & blend mill - 2 rolls	II	II	II
Refiner - 2 rolls	II	II	II
Calenders	II	II	II
Sand muller	II	II	II
Sewage disposal equipment			
Bar screens	II	II	II
Chemical feeders	II	II	II
Dewatering screens	II	II	II
Scum breakers	II	II	II
Slow or rapid mixers	II	II	II
Sludge collectors	II	II	II
Thickeners	II	II	II
Vacuum filters	II	II	II
Screens			
Air washing	I	I	II
Rotary - stone or gravel	II	II	II
Traveling water intake	I	I	I
Screw Conveyors			
Uniformly Loaded or Fed	I	I	II
Heavy Duty	I	II	II
Sugar industry			
Beet slicer	III	III	III
Cane knives	II	II	II
Crushers	II	II	II
Mills (low speed end)	III	III	III
Textile industry			
Batchers	II	II	II
Calenders	II	II	II
Cards	II	II	II
Dry cans	II	II	II
Dryers	II	II	II
Dyeing machinery	II	II	II
Looms	II	II	II
Mangles	II	II	II
Nappers	II	II	II
Pads	II	II	II
Slashers	II	II	II
Soapers	II	II	II
Spinners	II	II	II
Tenter frames	II	II	II
Washers	II	II	II
Winders	II	II	II

1) CRANE DRIVES ARE TO BE SELECTED BASED ON GEAR TOOTH BENDING STRENGTH, USING THE NUMERIC SERVICE FACTORS IN THIS TABLE. SERVICE FACTOR IN DURABILITY SHALL BE A MINIMUM OF 1.0.
2) ANTI-FRICTION BEARINGS ONLY.
3) A CLASS NUMBER OF I MAY BE APPLIED AT BASE SPEED OF A SUPER CALENDER OPERATING OVER-SPEED RANGE OF PART RANGE CONSTANT HORSEPOWER, PART RANGE CONSTANT TORQUE WHERE THE CONSTANT HORSEPOWER SPEED RANGE IS GREATER THAN 1.5 TO 1. A CLASS NUMBER OF II IS APPLICABLE TO SUPER CALENDERS OPERATING OVER THE ENTIRE SPEED RANGE AT CONSTANT TORQUE OR WHERE THE CONSTANT HORSEPOWER SPEED RANGE IS LESS THAN 1.5 TO 1.

CALL: (605) 225-0360 • FAX: (605) 225-0567

A.G.M.A. SERVICE FACTORS

SPUR, HELICAL & BEVEL GEAR DRIVES & REDUCERS WITH UNIFORM POWER SOURCE

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Agitators (mixers)			
Pure liquids	1.00	1.00	1.25
Liquids and solids	1.00	1.25	1.50
Liquids - variable density	1.00	1.25	1.50
Blowers			
Centrifugal	1.00	1.00	1.25
Lobe	1.00	1.25	1.50
Vane	1.00	1.25	1.50
Brewing and distilling			
Bottling machinery	1.00	1.00	1.25
Brew kettles - continuous duty	1.25	1.25	1.25
Cookers - continuous duty	1.25	1.25	1.25
Mash tubs - continuous duty	1.25	1.25	1.25
Scale hopper - frequent starts	1.25	1.25	1.50
Can filling machines	1.00	1.00	1.25
Car dumpers	1.50	1.75	2.00
Car pullers	1.00	1.25	1.50
Clarifiers	1.00	1.00	1.25
Classifiers	1.00	1.25	1.50
Clay working machinery			
Brick press	1.50	1.75	2.00
Briquette machine	1.50	1.75	2.00
Pug mill	1.00	1.25	1.50
Compactors	2.00	2.00	2.00
Compressors			
Centrifugal	1.00	1.00	1.25
Lobe	1.00	1.25	1.50
Reciprocating, multi-cylinder	1.50	1.50	1.75
Reciprocating, single - cylinder	1.75	1.75	2.00
Cranes 1)			
Dry dock			
Main hoist	2.50	2.50	2.50
Auxiliary hoist	2.50	2.50	3.00
Boom hoist	2.50	2.50	3.00
Slewing drive	2.50	2.50	3.00
Traction drive	3.00	3.00	3.00
Container			
Main hoist	3.00	3.00	3.00
Boom hoist	2.00	2.00	2.00
Trolley drive			
Gantry drive	3.00	3.00	3.00
Traction drive	2.00	2.00	2.00
Mill duty			
Main hoist	3.50	3.50	3.50
Auxiliary	3.50	3.50	3.50
Bridge	2.50	3.00	3.00
Trolley travel	2.50	3.00	3.00
Industrial duty			
Main	2.50	2.50	3.00
Auxiliary	2.50	2.50	3.00
Bridge	2.50	3.00	3.00
Trolley travel	2.50	3.00	3.00
Crusher			
Stone or ore	1.75	1.75	2.00
Dredges			
Cable reels	1.25	1.25	1.50
Conveyors	1.25	1.25	1.50
Cutter head drives	2.00	2.00	2.00
Pumps	2.00	2.00	2.00
Screen drives	1.75	1.75	2.00
Stackers	1.25	1.25	1.50
Winches	1.25	1.25	1.50
Elevators			
Bucket	1.00	1.25	1.50
Centrifugal discharge	1.00	1.00	1.25
Escalators	1.00	1.00	1.25
Freight	1.00	1.25	1.50
Gravity discharge	1.00	1.00	1.25
Extruders			
General	1.50	1.50	1.50
Plastics			
Variable speed drive	1.50	1.50	1.50
Fixed speed drive	1.75	1.75	1.75
Rubber			
Continuous screw operation	1.75	1.75	1.75
Intermittent screw operation	1.75	1.75	1.75

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Fans			
Centrifugal	1.00	1.00	1.25
Cooling towers	2.00	2.00	2.00
Forced draft	1.25	1.25	1.25
Induced draft	1.50	1.50	1.50
Industrial & mine	1.50	1.50	1.50
Feeders			
Apron	1.00	1.25	1.50
Belt	1.00	1.25	1.50
Disc	1.00	1.00	1.25
Reciprocating	1.50	1.75	2.00
Screw	1.00	1.25	1.50
Food industry			
Cereal cooker	1.00	1.00	1.25
Dough mixer	1.25	1.25	1.50
Meat grinders	1.25	1.25	1.50
Slicers	1.25	1.25	1.50
Generators and exciters	1.00	1.00	1.25
Hammer mills	1.75	1.75	2.00
Hoists			
Heavy duty	1.75	1.75	2.00
Medium duty	1.25	1.25	1.50
Skip hoist	1.25	1.25	1.50
Laundry			
Tumblers	1.25	1.25	1.50
Washers	1.50	1.50	2.00
Lumber industry			
Barkers - spindle feed	1.25	1.25	1.50
Main drive	1.75	1.75	1.75
Conveyors - burner	1.25	1.25	1.50
Main or heavy duty	1.50	1.50	1.50
Main log	1.75	1.75	2.00
Re-saw, merry-go-round	1.25	1.25	1.50
Conveyors			
Slab	1.75	1.75	2.00
Transfer	1.25	1.25	1.50
Chains			
Floor	1.50	1.50	1.50
Green	1.50	1.50	1.75
Cut-off saws			
Chain	1.50	1.50	1.75
Drag	1.50	1.50	1.75
Debarking drums	1.75	1.75	2.00
Feeds			
Edger	1.25	1.25	1.50
Gang	1.75	1.75	1.75
Trimmer	1.25	1.25	1.50
Log deck	1.75	1.75	1.75
Log hauls - incline - well type	1.75	1.75	1.75
Log turning devices	1.75	1.75	1.75
Planer feed	1.25	1.25	1.50
Planer tilting hoists	1.50	1.50	1.50
Rolls - live-off bearing - roll cases	1.75	1.75	1.75
Sorting table	1.25	1.25	1.50
Tipple hoist	1.25	1.25	1.50
Transfers			
Chain	1.50	1.50	1.75
Craneway	1.50	1.50	1.75
Tray drives	1.25	1.25	1.50
Veneer lathe drives	1.25	1.25	1.50
Metal mills			
Draw bench carriage and main drive	1.25	1.25	1.50
Runout table			
Non-reversing			
Group drives	1.50	1.50	1.50
Individual drives	2.00	2.00	2.00
Reversing	2.00	2.00	2.00
Slab pushers	1.50	1.50	1.50
Shears	2.00	2.00	2.00
Wire drawing	1.25	1.25	1.50
Wire winding machine	1.25	1.50	1.50
Metal strip processing machinery			
Bridles	1.25	1.25	1.50
Coilers & uncoilers	1.00	1.00	1.25
Edge trimmers	1.00	1.25	1.50
Flatteners	1.25	1.25	1.50

A.G.M.A. SERVICE FACTORS

SPUR, HELICAL & BEVEL GEAR DRIVES & REDUCERS WITH UNIFORM POWER SOURCE

Application	Total Operation		
	Up to 3 hrs. per day	3 to 10 hrs. per day	Over 10 hrs. per day
Metal strip processing machinery (continued)			
Loopers (accumulators)	1.00	1.00	1.25
Pinch rolls	1.25	1.25	1.50
Scrap choppers	1.25	1.25	1.50
Shears	2.00	2.00	2.00
Slitters	1.00	1.25	1.50
Mills, rotary type			
Ball & rod			
Spur ring gear	2.00	2.00	2.00
Helical ring gear	1.50	1.50	1.50
Direct connected	2.00	2.00	2.00
Cement kilns	1.50	1.50	1.50
Dryers & coolers	1.50	1.50	1.50
Mixers			
Concrete	1.25	1.25	1.50
Paper mills 2)			
Agitator (mixer)	1.50	1.50	1.50
Agitator for pure liquors	1.25	1.25	1.25
Barking drums	2.00	2.00	2.00
Barkers - mechanical	2.00	2.00	2.00
Beater	1.50	1.50	1.50
Breaker stack	1.25	1.25	1.25
Calender 3)	1.25	1.25	1.25
Chipper	2.00	2.00	2.00
Chip feeder	1.50	1.50	1.50
Coating rolls	1.25	1.25	1.25
Conveyors			
Chip, bark, chemical	1.25	1.25	1.25
Log (including slab)	2.00	2.00	2.00
Couch rolls	1.25	1.25	1.25
Cutter	2.00	2.00	2.00
Cylinder molds	1.25	1.25	1.25
Dryers 3)			
Paper machine	1.25	1.25	1.25
Conveyor type	1.25	1.25	1.25
Embosser	1.25	1.25	1.25
Extruder	1.50	1.50	1.50
Fourdrinier rolls (includes lump breaker, dandy roll, wire turning,and return rolls)	1.25	1.25	1.25
Jordan	1.50	1.50	1.50
Kiln drive	1.50	1.50	1.50
Mt. Hope roll	1.25	1.25	1.25
Paper rolls	1.25	1.25	1.25
Platter	1.50	1.50	1.50
Presses - felt & suction	1.25	1.25	1.25
Pulper	2.00	2.00	2.00
Pumps - vacuum	1.50	1.50	1.50
Reel (surface type)	1.25	1.25	1.25
Screens			
Chip	1.50	1.50	1.50
Rotary	1.50	1.50	1.50
Vibrating	2.00	2.00	2.00
Size press	1.25	1.25	1.25
Super calender 4)	1.25	1.25	1.25
Thickener (AC motor)	1.50	1.50	1.50
(DC motor)	1.25	1.25	1.25
Washer (AC motor)	1.50	1.50	1.50
(DC motor)	1.25	1.25	1.25
Wind and unwind stand	1.00	1.00	1.00
Winders (surface type)	1.25	1.25	1.25
Yankee dryers 3)	1.25	1.25	1.25
Plastics industry			
Primary processing			
Intensive internal mixers			
Batch mixers	1.75	1.75	1.75
Continuous mixers	1.50	1.50	1.50
Batch drop mill - 2 smooth rolls	1.25	1.25	1.25
Continuous feed, holding & blend mill	1.25	1.25	1.25
Compounding mill	1.25	1.25	1.25
Calenders	1.50	1.50	1.50
Secondary processing			
Blow molders	1.50	1.50	1.50
Coating	1.25	1.25	1.25
Film	1.25	1.25	1.25
Pipe	1.25	1.25	1.25
Pre-plasticizers	1.50	1.50	1.50
Rods	1.25	1.25	1.25
Sheet	1.25	1.25	1.25
Tubing	1.25	1.25	1.50
Pullers - barge haul	1.25	1.25	1.50
Pumps			
Centrifugal	1.00	1.00	1.25
Proportioning	1.25	1.25	1.50
Reciprocating			
Single acting, 3 or more cylinders	1.25	1.25	1.50
Double acting, 2 or more cylinders	1.25	1.25	1.50
Rotary			
Gear type	1.00	1.00	1.25
Lobe	1.00	1.00	1.25
Vane	1.00	1.00	1.25
Rubber industry			
Intensive internal mixers			
Batch mixers	1.75	1.75	1.75
Continuous mixers	1.50	1.50	1.50
Mixing mill - 2 smooth rolls (if corrugated rolls are used, then use the same service factors that are used for a cracker warmer)	1.50	1.50	1.50
Batch drop mill - 2 smooth rolls	1.50	1.50	1.50
Cracker warmer - 2 rolls; 1 corrugated roll	1.75	1.75	1.75
Cracker - 2 corrugated rolls	2.00	2.00	2.00
Holding, feed & blend mill - 2 rolls	1.25	1.25	1.25
Refiner - 2 rolls	1.50	1.50	1.50
Calenders	1.50	1.50	1.50
Sand muller	1.25	1.25	1.50
Sewage disposal equipment			
Bar screens	1.25	1.25	1.25
Chemical feeders	1.25	1.25	1.25
Dewatering screens	1.50	1.50	1.50
Scum breakers	1.50	1.50	1.50
Slow or rapid mixers	1.50	1.50	1.50
Sludge collectors	1.25	1.25	1.25
Thickeners	1.50	1.50	1.50
Vacuum filters	1.50	1.50	1.50
Screens			
Air washing	1.00	1.00	1.25
Rotary - stone or gravel	1.25	1.25	1.50
Traveling water intake	1.00	1.00	1.25
Sugar industry			
Beet slicer	2.00	2.00	2.00
Cane knives	1.50	1.50	1.50
Crushers	1.50	1.50	1.50
Mills (low speed end)	1.75	1.75	1.75
Textile industry			
Batchers	1.25	1.25	1.50
Calenders	1.25	1.25	1.50
Cards	1.25	1.25	1.50
Dry cans	1.25	1.25	1.50
Dryers	1.25	1.25	1.50
Dyeing machinery	1.25	1.25	1.50
Looms	1.25	1.25	1.50
Mangles	1.25	1.25	1.50
Nappers	1.25	1.25	1.50
Pads	1.25	1.25	1.50
Slashers	1.25	1.25	1.50
Soapers	1.25	1.25	1.50
Spinners	1.25	1.25	1.50
Tenter frames	1.25	1.25	1.50
Washers	1.25	1.25	1.50
Winders	1.25	1.25	1.50

NOTES:

1) CRANE DRIVES ARE TO BE SELECTED BASED ON GEAR TOOTH BENDING STRENGTH. CONTACT GEAR MANUFACTURER FOR STRENGTH RATINGS. SERVICE FACTOR IN DURABILITY SHALL BE A MINIMUM OF 1.0.
2) SERVICE FACTORS FOR PAPER MILL APPLICATIONS ARE APPLIED TO THE NAMEPLATE RATING OF THE ELECTRIC DRIVE MOTOR AT THE MOTOR RATED BASED SPEED.
3) ANTI-FRICTION BEARINGS ONLY. USE 1.5 FOR SLEEVE BEARINGS.
4) A SERVICE FACTOR OF 1.00 MAY BE APPLIED AT BASE SPEED OF A SUPER CALENDER OPERATING OVER-SPEED RANGE OF PART RANGE CONSTANT HORSEPOWER, PART RANGE CONSTANT TORQUE WHERE THE CONSTANT HORSEPOWER SPEED RANGE IS GREATER THAN 1.5 TO 1. A SERVICE FACTOR OF 1.25 IS APPLICABLE TO SUPER CALENDERS OPERATING OVER THE ENTIRE SPEED RANGE AT CONSTANT TORQUE OR WHERE THE CONSTANT HORSEPOWER SPEED RANGE IS LESS THAN 1.5 TO 1.

CALL: (605) 225-0360 • FAX: (605) 225-0567

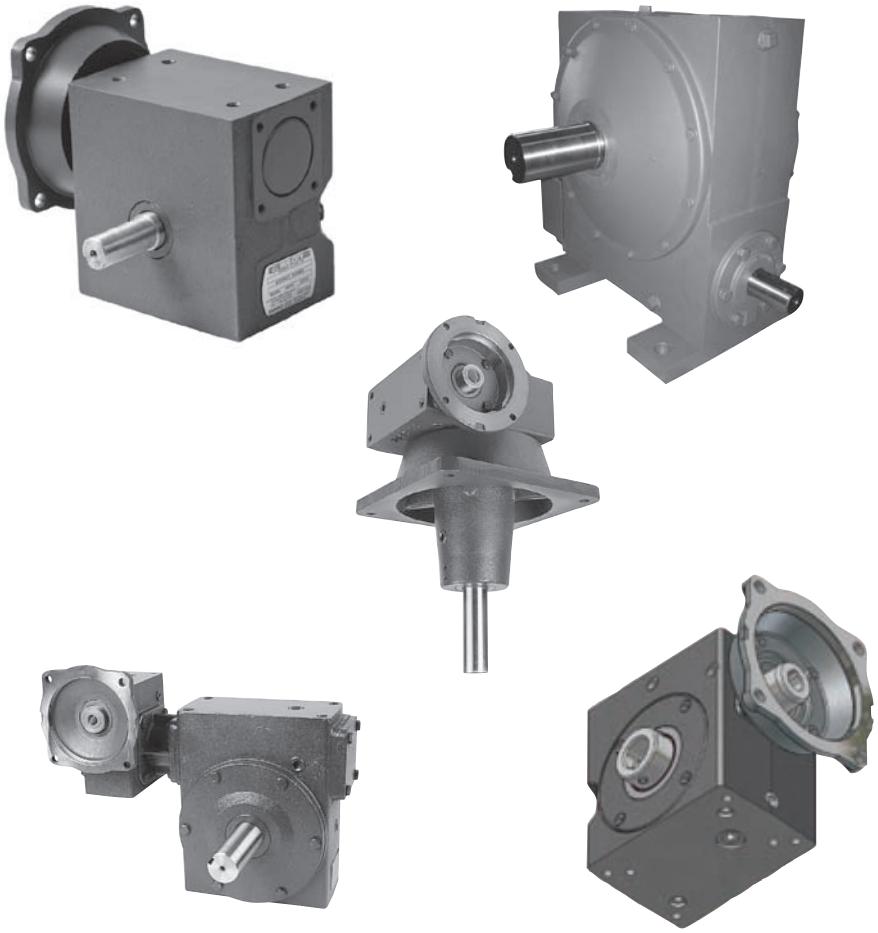
WORM GEAR DRIVES

B

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Rating Parameters B-8
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WORM GEAR DRIVES

Single, Double and Triple Reduction



BASIC SPECIFICATIONS

- Power Ratings from 1/4 to 104 hp
- Output Torque to 80,000 inch/lbs
- Ratios from 5:1 through 216,000:1
- Output Speeds .0081 rpm to 350 rpm

STANDARD FEATURES

- Over 30 series and 250 standard models available.
- Recess action gear design provides for more efficient operation and greater durability.
- Cast iron housing designed for superior thermal conductivity provides rigid gear and bearing support.
- Alloy shafting for greater strength.
- Hardened and ground worm and alloy bronze gear for greater wear life.
- 20° - 25° - 30° pressure angle design provides for more efficient operation and greater durability.

OPTIONAL FEATURES

- Modified Standard and Custom Designs
- Metric, Servo or Hydraulic input flanges
- CleanLine Washdown and BISSC Configurations
- Unique or Harsh Environment Adaptations
- Three lube options: 600W, synthetic, polyglycol, (130-380 Series only)

MOTORIZED WORM GEAR DRIVES

- Motors produced by Marathon Electric for High Efficiency, Reliability and Durability
- General or Definite Purpose Motors
- Brake or Inverter Duty Motors, DC or Washdown Motors
- Motor/Gear Drive Package Incentives Available, Consult Factory

For Available Electric Motors
Sections H

For Stainless Steel Worm Gear Drives
See HUB³
Section O

For Compact Light Weight Aluminum Worm Gear Drives
See Spartan Worm Gear Drives
Section C

For Sub-Fractional Worm Gearmotors See Mina-Gear Gearmotors
Section P

For High Efficiency Right Angle Gear Drives
See Poweratio® 2000 Helical Bevel and Helical Worm Units
Sections K & L

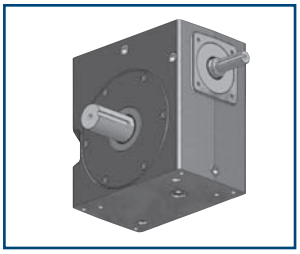
CALL: (605) 225-0360 • FAX: (605) 225-0567

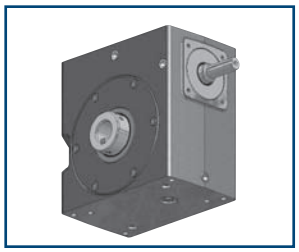
DESIGN FEATURES
NEW UNIVERSAL POWER CUBE™ WORM GEAR REDUCERS
SERIES 130 TO 380 (1.33" TO 3.75" CENTER DISTANCE) MODELS

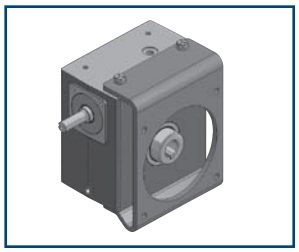
FEATURES

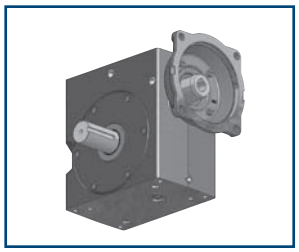
- Addition of 240 series (2-3/8" CD)
- Up to 30% increase in mechanical power ratings. Meets or exceeds new industry ratings
- Increased thermal capacity and Increased efficiency
- Offers Hub City and "generic" bolt mounting patterns on bottom surface, and Hub City mounting pattern on top mounting surface
- Eliminates need for generic base plates
- Smooth design for enhanced washdown characteristics
- Three lube options: 600W, synthetic, polyglycol, NO thermal limitations when specified with premium polyglycol lubricant
- Cast iron housing designed for superior thermal conductivity provides maximum surface area for increased heat dissipation and higher thermal ratings.
- Alloy shafting for greater strength.
- Worms have improved heat treat for higher capacity, and polished threads for increased efficiency and higher thermal ratings.
- Worm gears have been upgraded to nickel-tin bronze for increased mechanical and thermal capacity, and have optimized face widths for higher horsepower ratings.
- 20° - 25° - 30° pressure angle design provides for more efficient operation and greater durability.
- Ball bearings on all high speed shafts 130 thru 380.
- Tapered roller bearings on the low speed shaft (Except series130 is ball bearings)
- Seals are Viton or HNBR to allow higher operating temperatures and provide longer life.
- Accessory kits such as Side Mount Flange Bracket Kit (shown), Vertical Mt Bracket & Shaft Kit (shown), Base Kits and and Torque Arm Kits are available for Universal Power Cube models (see pages B-87-97)

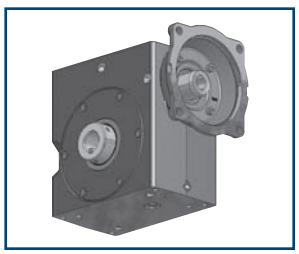
All the above features and upgrades are REAL improvements that justify the increased mechanical and thermal ratings of the new Power Cube gear drives. These increased ratings will allow downsizing for a lower cost unit in some applications, or increased performance and life in existing applications.

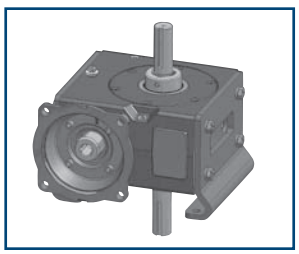






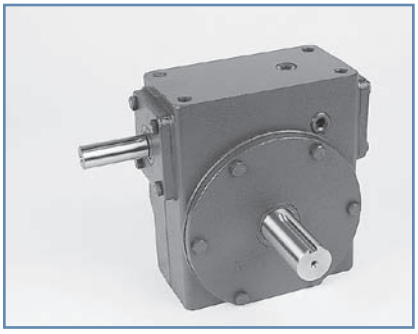


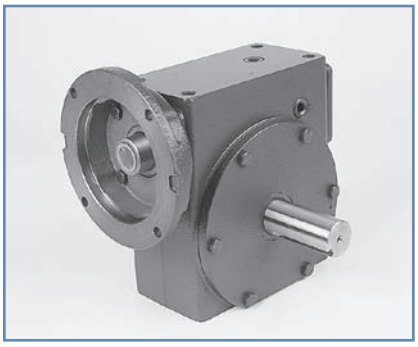


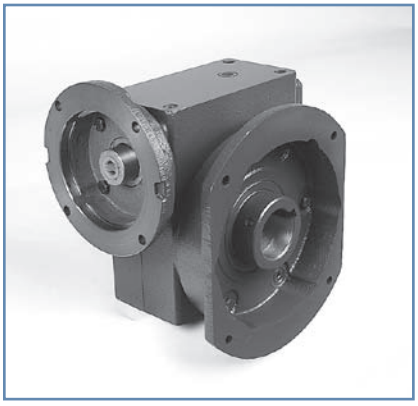


See Page B-5 for lubricant features

DESIGN FEATURES
CENTURY SERIES WORM GEAR REDUCERS
SERIES 450 TO 520 (4.50" TO 5.16" CENTER DISTANCE) MODELS









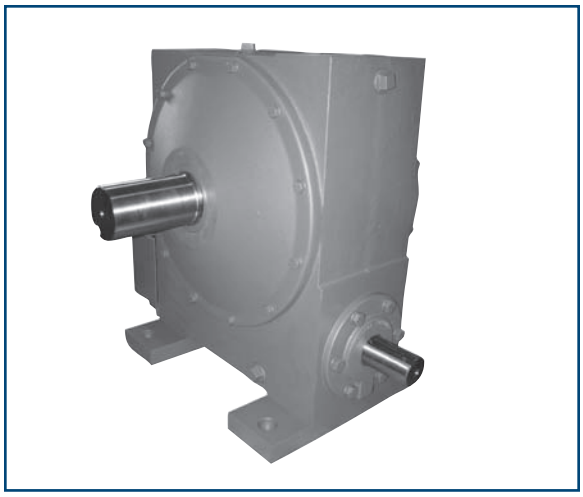
FEATURES

- Cast iron housing provides rigid gear and bearing support.
- Alloy shafting for greater strength.
- Hardened and ground worm and alloy bronze gear for greater wear life.
- 20° - 25° - 30° pressure angle design provides for more efficient operation and greater durability.
- High speed shaft bearings are double tapered roller bearings on C-face quill type models
- Tapered roller bearings on high speed shaft on shaft input models
- Tapered roller bearings on the low speed shaft
- The 450 and 520 series have no dimension changes in the housing or other components, but they benefit from gearing improvements and synthetic oils as described below.
- Worms have improved heat treat for higher capacity, and polished threads for increased efficiency and higher thermal ratings.
- Worm gears have been upgraded to nickel-tin-bronze for increased mechanical and thermal capacity, and have optimized face widths for higher horsepower ratings.
- Shaft mounted models designed for direct mounting on drive shaft of equipment to be driven. Provides a positive and permanent alignment of reducer to the driven machine.
- NEMA "C" Flange Adaptor kits available for direct mounting to electric motor. (page B-91)
- Torque arm kits available see page B-95.
- *"QD"® Bushings provide widest possible range of bore size, ease of installation and removal. Available in shaft mounted models in series 450 and 520.
- Thermal Block, Fan kits and Synthetic lubricants are available to increase thermal capacity
- Drop bearing design models provide overhung load support for trolleys, conveyors, agitators, mixers and other similar applications. Grease retainer at out board bearing for mounting output shaft vertically up. Large outboard bearing for long bearing life. Tandem Seals (Taconite) on output shaft with grease and purge holes provided.

CALL: (605) 225-0360 • FAX: (605) 225-0567
See Page B-5 for lubricant features

DESIGN FEATURES
GW SERIES WORM GEAR REDUCERS
SERIES GW60 TO GW100 (6" TO 10" CENTER DISTANCE) MODELS

FEATURES

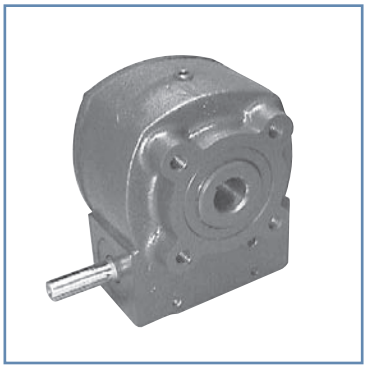


- Rugged iron housings, covers, and flanges provide superior strength and rigidity.
- Two separate housings in the double reduction design insures long trouble free life of all components.
- The worm shaft is cut integral with the input shaft then hardened, ground, and polished to provide maximum efficiency with minimum gear noise.
- The bronze worm gear is chill cast from the highest quality bronze to provide superior wear and lubricity characteristics for longer life and higher efficiency.
- Premium tapered roller bearings on output shafts provide greater life, overhung load and thrust capacity.
- Oversized steel output shafts provide superior overhung load and torque characteristics.
- Large oil capacity provides positive splash lubrication and superior cooling capability.
- Metal nameplate drive screwed to housing insures easy field identification for repair parts and replacement.
- All units are 100% run and leak tested at the factory to insure that you receive the highest quality product.

LUBRICANT OPTIONS FOR ALL HUB CITY WORM GEAR DRIVES

- Hub City has done extensive testing on different oil types, to compare wear resistance, efficiency, and thermal ratings. Hub City publishes three sets of catalog ratings, with different oil types, so the customer can choose the ideal oil for each application. Ratings are provided for conventional mineral oil, such as Mobil 600W Cylinder Oil, traditional "PAO" (polyalphaolephin) synthetic oil, such as Mobil SHC-634, and the newer "PAG" (polyalkaline glycol) synthetic oil, such as Klubersynth UH1 6-460 and Mobil Glygoyle 460.
- The traditional "PAO" synthetic oil has broader temperature range, both high and low, increased efficiency for higher thermal ratings, and longer life for fewer oil changes, and needs no replacement in many applications.
- The newer "PAG" synthetic oil also has broader high and low temperature range, and has the highest efficiency for the maximum thermal ratings. THE PAG SYNTHETIC OIL ALLOWS ALL POWER CUBE UNITS FROM 130 SERIES THROUGH 380 SERIES TO RUN CONTINUOUSLY AT CATALOG MECHANICAL RATINGS, WITH NO THERMAL DERATING. This oil meets the FDA H1 approval for use in food plants where there is the possibility of incidental contact with food. The PAG synthetic oils also provide longer life for fewer oil changes, and need no replacement in many applications.
- **NOTE:** The PAG synthetic oils are NOT COMPATIBLE with any other types of oil, and oils must not be mixed. If changing a unit to or from PAG oil, the unit must be thoroughly flushed out with the new oil. Water can mix with the PAG synthetic oil, and does not separate, so this must be taken into consideration by protecting units from moisture ingestion, and in severe applications, oil changes may be required.
- Because PAG synthetic oils are not readily available in many locations, Hub City can provide units that are filled at the factory with PAG oil. These units have unique part numbers for permanent identification. The model numbers use an "L" suffix, such as 214L. Mounting position must be specified and included in the reducer description so the correct amount of oil is installed. (See pages B-10 and B-13)

DESIGN FEATURES (cont'd)



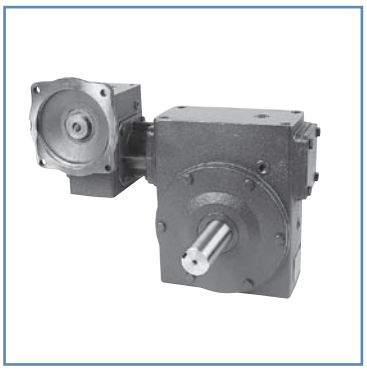
W-SERIES STANDARD FEATURES

- Constructed with all cast iron alloy housings.
- Tapered roller bearings
- Heavy-duty industrial seals
- Shaft mounted for direct mounting on drive shafts.
- W300 also available with light weight aluminum housing.



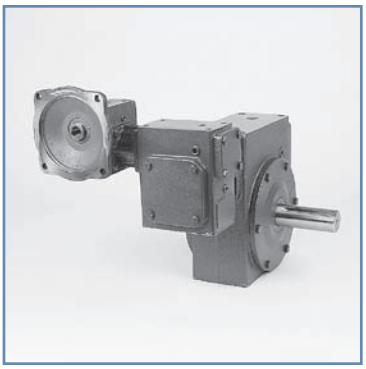
TORQUE PLUS HELICAL RATIO MULTIPLIER STANDARD FEATURES

- Three Cast Iron Models, Two Aluminum Models, One Stainless Steel Model (See Section O)
- Ratios available from 2:1 to 7.5:1
- Can be used as reducer or increaser.
- Provides additional reduction capability when mounted onto Helical Gear Reducer or Worm Gear Reducer
- C-flange or solid input shaft.
- Helical gearing.
- Double lip seals.
- Base mounting available.
- Permanently lubricated at factory.



DOUBLE REDUCTION FEATURES

- Provides all the same basic features as the single reduction unit with two Hub City gearboxes connected.
- Available in ratios from 50:1 to 3600:1
- 90 different models to choose from.
- See Model Index page B-56 for series and model page number.

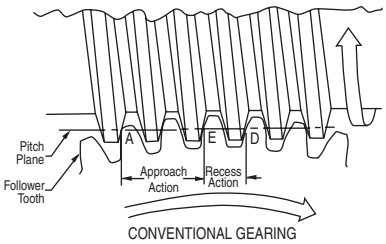


TRIPLE REDUCTION FEATURES

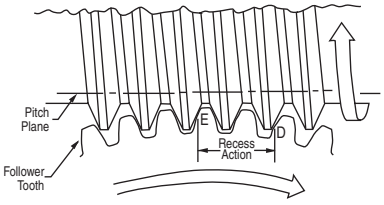
- Provides all the same basic features as the single and double reduction units with three Hub City gearboxes connected.
- Available in ratios from 1000:1 to 216,000:1
- Different models to choose from. Not shown in this catalog. See www.hubcityinc.com

RECESS ACTION WORM GEARING

With the introduction of High Efficiency motors and the rising cost of energy machine designers and equipment builders are demanding equipment and components that operate at higher efficiency levels. HUB CITY has designed their own worm gear speed reducers around a system of gearing that substantially increases the efficiency. This system is called "RECESS ACTION WORM GEARING". Recess action worm gearing is a venerable and well proven gear system. The greatest enemy of worm gearing is heat, heat generated by friction resulting from the rubbing action between the worm and worm gear. By reducing friction an entire series of benefits are gained, such as a substantial increase in efficiency, increased wear life, lower starting and running torque, and smoother conjugate tooth action.



CONVENTIONAL GEARING
FIG 1



RECESS ACTION GEARING
FIG 2

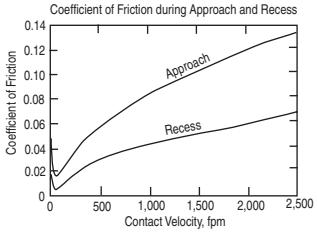


FIG 3

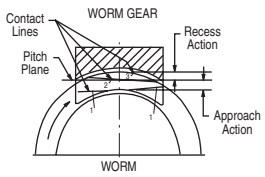
Fig. 1 shows a conventional gear system with the pitch plane at one-half the working depth. Initial contact takes place at point A (note the direction of rotation) where the follower tooth begins to dig into the tip of the driver tooth. As contact progresses from point A to point E there is approach action. Approach action is a sliding in. It has a detrimental scraping action which tends to wear away the surface of the gears. The friction is very high (note Fig. 3) causing scuffing and the direction of the friction vector in approach action opposes the direction of rotation. From point E to point D there is recess action. Recess action is a sliding out with the follower gear tooth moving away from the driver. The friction forces in recess action are lower than those in approach action, and are in the direction that aids rotation. In addition recess action tends to cold work the gear surfaces improving the contact and load capacity.

Fig. 2 shows the same gear set in recess action. Slight modification of the tooth profile moves the pitch plane from its normal center location to the outside diameter of the follower member. The initial point of contact now occurs at point E which is on the line of centers of the gear system. This contact then progresses to point D which is completely recess action. The recess action gear system therefore offers all the advantages that occur in the recess action portion of a conventional gearing system and avoids the problem conditions that occur in the approach action.

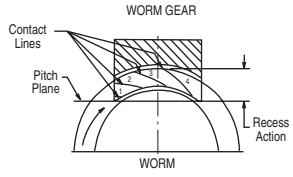
A good example of recess action can be illustrated by a water wheel. If the water spout is behind the vertical center line of the water wheel, the buckets will be filed before they reach the high point of the wheel. Some energy of the water will be expended in lifting the full buckets to the high point of the wheel and therefore there will be a power loss. This is the same as approach action. If, however, the buckets are filled at the vertical center point of the wheel, then all of the energy of the water will be used in the rotation of the wheel and the amount of power delivered by the wheel will be much greater.

In addition to full recess action gearing, the Hub City gearing system also employs the use of larger pressure angles than are normally found in conventional worm gear sets. The pressure angles utilized in these gear sets are 20°, 25° and 30°. The use of larger pressure angles enables the gear sets to have a wider face width and still maintain conjugate action of the tooth forms. The combination of larger pressure angles, wider face widths, and the use of high alloy bronze materials, results in worm gear teeth that are capable of substantially higher bending loads and surface wear loads.

Fig. 4 shows the contact lines of a conventional worm gear set projected on the end view of the worm. The contact starts at the outside diameter of the worm gear and travels up to the outside diameter of the worm. Fig. 5 shows the contact lines of a recess action worm gear set projected on the end view of the worm. Here the contact lines progress across the face of the worm gear. The total length of the contact lines in Fig. 5 is less than that in Fig. 4, but the position of the contact lines are more favorable relative curvatural conditions so that the unit loading in regard to surface stresses can be nearly double those of the lines shown in Fig. 4. The actual wear load capacity in Fig. 5 is about 150% of that shown in Fig. 4. The loading of the worm thread as a cantilever beam is substantially that of concentrated loads in Fig. 4 while it approaches that of uniformly applied loads in Fig. 5.



CONVENTIONAL GEARSET
FIG 4



RECESS ACTION GEAR SET
FIG 5

In a worm gear set the lubrication that does the most good is carried on the face of the worm gear teeth. The lubricant on the worm thread surface tends to be scraped off by the lines of contact. The lubricant on a worm gear tooth is pushed ahead of the contact lines. Through the period of engagement the same thread on the worm is in continuous contact with the same tooth on the gear.

In Fig. 4 the lubricant on the worm thread is practically exhausted by the left part of the contact lines so that the right part of the contact lines see virtually none of the lubricant. The lubricant on the worm gear tooth of the conventional worm gear set is pushed ahead of the contact lines toward the outside diameter of the worm. In Fig. 5 the lubricant on the gear tooth and worm thread is continually swept ahead of the contact, resulting in more adequate lubrication of both the worm thread and the worm gear tooth.

A continuing test program in the Hub City test facility has proven that recess action worm gears are capable of carrying higher gear loads with less gear wear. The increased efficiency of the gear sets results in less energy loss of the Hub City worm gear speed reducers.

RATING PARAMETERS

MECHANICAL RATINGS

The mechanical capacity of a worm gear reducer is generally based on the surface endurance limit of the bronze gear material, and the hardness and surface finish of the steel worm. In some low speed, high torque applications, the shear strength of the gear material may be the limiting factor.

Hub City mechanical catalog ratings are calculated to be used with a service factor of 1.0. This is for intermittent or continuous service free from shock loading, and a total duration of up to 10 hours per day. Applications outside these conditions require appropriate service factors to modify the allowable unit ratings. Table 1 defines the service factors for various operating conditions. Section A lists the AGMA service factors for various applications.

THERMAL RATINGS

The thermal capacity of a HUB CITY worm gear reducer is the actual horsepower (without service factor), which the reducer will transmit continuously for 2 hours or more without the oil temperature exceeding 200 deg F. The housing and gearing improvements in PowerCube allow continuous operation at higher horsepower. In addition, the standard high temperature seals and optional synthetic oils allow Hub City reducers to operate in excess of 225 deg F continuously, to maximize the thermal capacity.

Thermal ratings may be ignored when the continuous operating period does not exceed 2 hours and the shutdown period equals or exceeds the operating period. However, when the operating period exceeds 2 hours, or the operating period exceeds the shutdown period, thermal ratings must be considered.

A reducer should be selected with a thermal rating that meets or exceeds the ACTUAL horsepower to be transmitted. Synthetic oils increase the thermal rating, and may allow a smaller unit to be selected. The larger housings and improved gearing, with the appropriate synthetic oil, make cooling fans unnecessary on the 380 series and smaller. Cooling fans are still available on the 450 series and larger.

Note that thermal ratings assume an ambient temperature of approximately 75 deg F. With higher ambient temperatures, the thermal ratings will be approximately 1% less, per degree above 75 deg F.

Worm gear units have a run-in period of about 50 hours. The polished worms improve the initial efficiency, but the units may run hotter during the run-in period. Abnormal heating does not necessarily mean that the unit is beyond the thermal capacity, unless heating is excessive or continues beyond the run-in period.

THERMAL DESIGN OPTIONS

The improvements to the new HUB CITY worm gear reducers reduce the need for some of the thermal design options that were offered in the past. The customer can use the comparative ratings with the 3 oil types to choose the ideal reducer for his application. (Cooling fans are still available as an option on the 450 series and larger.)

HUB CITY SYNTHETIC OIL is the traditional PAO (polyalphaolephin) type. It is available in quart containers and is normally stocked by our authorized distributors. The HUB CITY synthetic oil is recommended for all reducers to increase efficiency, reduce power consumption, extend or completely eliminate the need for periodic oil changes, and to increase the thermal capacity, potentially allowing the use of a smaller reducer for a given application.

The newer PAG (polyalkaline glycol) SYNTHETIC OIL provides the highest efficiency and thermal capacity, which exceed those obtained with the PAO Synthetic Oils. Since these oils are not readily available, HUB CITY offers a standard option of reducers filled at the factory with the PAG Synthetic Oil. This oil is not compatible with any other type of oil, and does not separate from water, so these factors must be taken into consideration in the unit selection, which may be affected by the environment the reducer is exposed to. It is available in quart bottles.

COOLING FANS are available as a factory installed option for all units from 450 through 60 series. Cooling fans are standard on GW70 through GW100 series reducers.

Cooling fans and synthetic oils may be used in combination and will provide compound effects to obtain the maximum thermal capacity for a reducer. The rating tables illustrate this.

Any continuous air circulation provided by the customer will increase the thermal capacity of all non-fan reducers, and potentially eliminate the need for thermal upgrades.

PRE-SELECTION INFORMATION

HUB CITY worm gear speed reducers are designed to permit many assembly variations.

Worm gear speed reducers are selected on the basis of gear ratio, speed, torque (or horsepower) and mounting required. Factory engineers and customer service personnel are always willing to assist with unit selection, in order to provide the most economical drive component.

The drive selection tables have been arranged so that once the gear ratio, speed, torque (or horsepower) and mounting are known, the HUB CITY model number can be easily obtained or determined. Service factors for various loads and power sources are also provided to effectively accommodate loading and power source fluctuations. The use of the tables require only a minimum effort to select the service factors.

PRE-SELECTION INFORMATION

ROTATION — Input (High Speed Shaft) to the Hub City "Worm Gear Reducer" can be either clockwise or counter-clockwise.

OPERATING CHARACTERISTICS
VELOCITY LIMITS — Worm gear speed reducers are limited in speed by the rubbing velocity of the gear set. Gear sets using a steel worm with a cast iron gear are limited to a rubbing velocity 500 feet per minute. Gear sets with a steel, heat treated ground worm and bronze gear are limited to a maximum rubbing velocity of 1,500 feet per minute.

Consult factory for ratings at speeds higher than shown in the standard rating tables.

MAXIMUM TORQUE — The minimum speed of 100 RPM DOES NOT illustrate the lowest recommended speed of the worm gear speed reducers. This minimum speed illustrates the maximum running torque of the gear box. The unit will efficiently run at speeds below 100 RPM. When it is necessary to know horsepower values at these lower speeds simply convert the torque shown at 100 RPM to horsepower using the actual operating speed. Maximum momentary or starting torque is limited to 300% of rated capacity for worm gear speed reducers

SERVICE FACTORS

The ratings for gear drives in this manual are based on a service factor of 1.00, for uniform load and uniform power source, up to 10 hours of operation per day. For other operating conditions, the application horsepower or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A gear drive should be selected with a rated capacity equal to or greater than the equivalent rating.

Table 1 designates recommended service factors for various conditions of load, power source, and duration of service.

AGMA Service Factors for Worm and Helical Worm Gearmotors and Reducers are listed in Section A.

Refer to page A-2 for further information and cautions on the selection of proper service factors.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.00
	Intermittent 3 hrs.	*	1.00	1.25
	3 - 10 hours	1.00	1.25	1.50
	Over 10 hours	1.25	1.50	1.75
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.50
	Intermittent 3 hrs.	1.25	1.50	1.75
	3 - 10 hours	1.50	1.75	2.00
	Over 10 hours	1.75	2.00	2.25
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

EXPLANATORY NOTES

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

HOW TO SELECT AND ORDER STANDARD MODELS

When ordering a worm gear reducer, it is necessary to select reducer size (series), gear ratio, model, and assembly style. If accessories are required, they must be ordered separately and in addition to the reducer.

SELECTION EXAMPLE. A belt conveyor, uniformly loaded, requires a direct coupled worm gear speed reducer to drive a light continuous belt. A 2 HP 1750 RPM electric motor is to be the prime move. Reducer output shaft must drive conveyor at approximately 115 RPM. The machine is expected to operate 24 hours per day.

STEP No. 1. Table 1 (page B-9) indicates service factor requirement of 1.25 for an electric motor drive under required 24 hour uniform load conditions.

STEP No. 2. Decide whether the application will require the reducer to be selected based on mechanical rating or thermal rating. Units may be selected based on mechanical rating only if the continuous operating period does not exceed two hours and shutdown period equals or exceeds operating period. Since our example requires 24 hours per day service the unit must be selected based on thermal capacity.

STEP No. 3. Calculate ratio required. Divide 1750 RPM input speed by 115 RPM required output speed. A 15:1 ratio is needed.

STEP No. 4. Refer to the Thermal Quick Selection Chart on (page B-14). Down the left side find the 15:1 ratio selection. Trail across this section on the 1.25 service factor line to the 2 HP column. The proper selection for this application is a No. 240PL Series standard unit. Thermal design options allow maximum flexibility in unit selection and application.

Additional rating information can be obtained by referring to the detailed rating data for each individual series. Rating data for each thermal design option is listed.

STEP No. 5. Refer to Model Selection Chart (page B-12) and select the applicable model. In the above example, it states a direct coupled reducer is required with output shaft extensions is the proper selection.

After the selection process has shown the correct series worm gear speed reducer required, then the specific data listed below is needed to properly place an order for each of the models within a series.

To order motorized reducers, specify the reducer as shown, indicate the motor description as shown and specify "motorized assembly."

Model Ratio Style Gear Type Frame Size Output Bore Motor

32 5 (L) 30/1 B WR 143TC 1.437 C322 (B3)

UNIT SERIES

	SERIES	CENTER DISTANCE
13	130	1.33"
18	180	1.75"
21	210	2.06"
24	W240	2.38"
26	260	2.63"
32	320	3.25"
38	380	3.75"
45	450	4.50"
52	520	5.25"
GW60	60	6"
GW70	70	7"
GW80	80	8"
GW100	100	10"

MODEL CONFIGURATION
Refer to Features pages B-3 to B-6 or Model Index pages B-12, B-48 and B-78 for model configurations available in each series

Note:
For Double reduction models a zero (0) is inserted ahead of this number
For Triple reduction models a five (5) is inserted ahead of this number
(a six (6) for models ending in zero (0))

LUBRICATION
(Optional) Indicates unit is pre-lubricated with polyglycol lubrication. Mounting postion must be specified (See Page B-13)

MOUNTING POSITION
Pre-lubrication units only (See Page B-13)

MOTOR
See Section H for available motors

OUTPUT BORE
(Applies to model numbers ending in 2,3,5 or 6 only)
Refer to dimensional pages for output bore sizes available in each model

FRAME SIZE
(Applies to model numbers ending in 4,5,6,8 or 0 only)
Refer to dimensional pages for frame sizes available in each model

GEAR TYPE
WR : Worm Right (standard)
WL : Worm Left (mfg to order - consult factory)

OUTPUT STYLE
Refer to dimensional pages for styles available in each model

RATIO
Refer to ratings pages at the beginning of the single, double and triple reduction sections for ratios available in each model

SINGLE REDUCTION

B

For Compact Light Weight Aluminum Worm Gear Drives

See Spartan™ Worm Gear Drives

Section C

For High Efficiency

Right Angle Gear Drives

See Poweratio® 2000

Helical Bevel and Helical Worm Units

Sections K & L

For Available Electric Motors

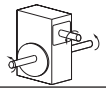
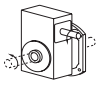
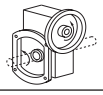
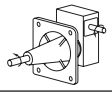
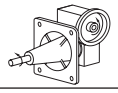
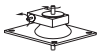
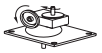
Section H

For Stainless Steel Worm Gear Drives

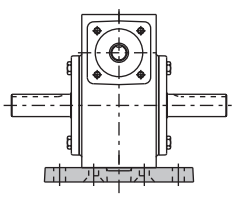
See HUB³™

Section O

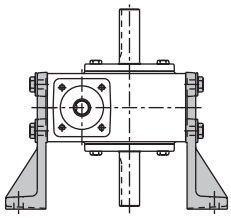
MODEL INDEX

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GW80	GW801 **PAGE B-24,B-25**	GW802 **PAGE B-26,B-27**					GW807 **PAGE B-40,B-41**			
GW100	GW1001 **PAGE B-24,B-25**	GW1002 **PAGE B-26,B-27**					GW1007 **PAGE B-40,B-41**			

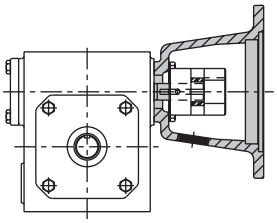
FOR ACCESSORIES REFER TO PAGE B-87 TO B-97



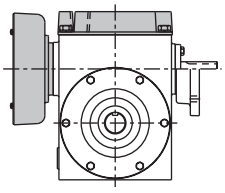
Universal Base Kits



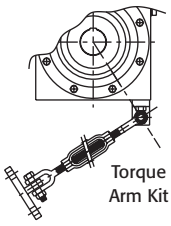
Side Mounting Kits



NEMA "C" Flange Adaptor Kits



Fan Kits & Thermal Block Kits

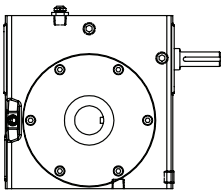


Torque Arm Kit

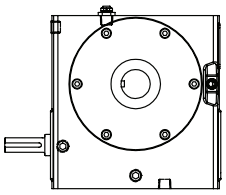
MOUNTING POSITIONS

FOR POWERCUBE AND POWERCUBE LUBE FILLED UNITS
SERIES 130 - 380

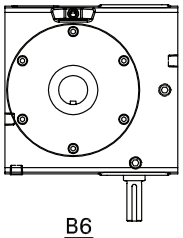
NOTE: MOUNTING POSITION MUST BE SPECIFIED AND INDICATED IN REDUCER DESCRIPTION WHEN ORDERING PRE-LUBRICATED UNITS, SO THE CORRECT AMOUNT OF OIL IS INSTALLED AT THE FACTORY.
(**REFER TO SECTION R FOR LUBRICATION INFORMATION.**)



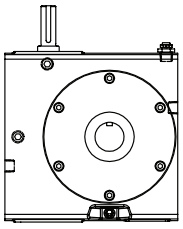
B3
-WORM TOP-
ALL SHAFTS HORIZONTAL



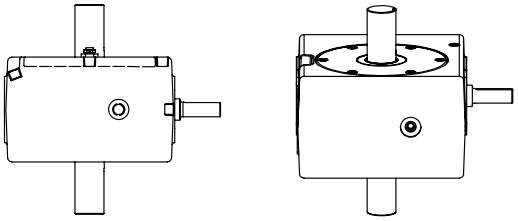
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-WORM BOTTOM-
ALL SHAFTS HORIZONTAL



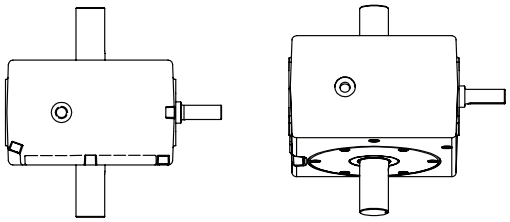
B6
-INPUT VERTICAL/DOWN-
OUTPUT HORIZONTAL
(FACTORY MODIFICATIONS REQUIRED)



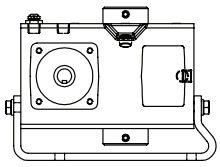
B6II
-INPUT VERTICAL/UP-
OUTPUT HORIZONTAL
(FACTORY MODIFICATIONS REQUIRED
UNLESS QUILL C-FLANGE INPUT)



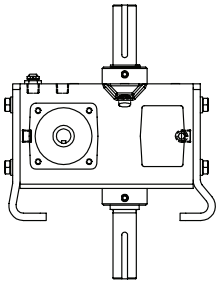
V5*
-OUTPUT VERTICAL, COVER SIDE UP-
INPUT HORIZONTAL
(FACTORY MODIFICATIONS REQUIRED)



V6
-OUTPUT VERTICAL, COVER SIDE DOWN-
INPUT HORIZONTAL
(FACTORY MODIFICATIONS REQUIRED)



V5*
REFERENCE MODEL XX3 & XX6
SIDE MOUNT



V5*
REFERENCE MODEL XX2 & XX5
WITH VERTICAL MOUNTING KIT

* V5 IS THE PREFERRED MOUNTING POSITION FOR VERTICAL OUTPUT FACTORY MODIFICATIONS NOT REQUIRED WITH HIGH OIL LEVEL.

QUICK SELECTION CHART

CONTINUOUS DUTY RATING

SERIES TO NEAREST STANDARD MOTOR HP
BASED ON BOTH MECHANICAL AND THERMAL CRITERIA

RATIO	OUTPUT RPM	SERVICE FACTOR	INPUT HORSEPOWER AT 1750 RPM												
			1/6 HP	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 1/2 HP	2 HP	3 HP	5 HP	7 1/2 HP	10 HP	15 HP
5	350.0	1.00	130	130	130	130	130	130	180	180	240	260SL	320SL	320PL	380PL
		1.25	130	130	130	130	130	130	180	180PL	240SL	260PL	320PL	320PL	380PL
		1.50	130	130	130	130	130	180	180SL	210SL	240SL	320SL	320PL	380PL	GW60
		1.75	130	130	130	130	130	180	210	240	260PL	380	320PL	380PL	GW60
7.5	233.3	1.00	180	180	180	180	180	180	180	180PL	240SL			GW60	GW60
		1.25	180	180	180	180	180	180	180SL	240	240PL			GW60	GW60
		1.50	180	180	180	180	180	180	180SL	240PL				GW60	GW60
		1.75	180	180	180	180	180	180SL	240	240PL					GW60
10	175.0	1.00	130	130	130	130	130	180	210	240	260	380	450	520	520PL
		1.25	130	130	130	130	180	180SL	210SL	240	260SL	380SL	450SL	520SL	GW60
		1.50	130	130	130	130	180	180PL	210PL	240SL	260PL	380SL	450PL	520PL	GW60
		1.75	130	130	130	130SL	180SL	180PL	240	240PL	320PL	380PL	520SL	GW60	GW70
15	116.7	1.00	130	130	130	130	180	210	240	240SL	320	380SL	380PL	520PL	GW60
		1.25	130	130	130	130SL	180SL	210	240SL	240PL	320PL	380PL	520SL	GW60	GW60
		1.50	130	130	130	180	210	240	240PL	260PL	320PL	450PL	520PL	GW60	GW70
		1.75	130	130	130	180	210SL	240SL	240PL	260PL	320PL	450PL	GW60	GW60	GW80
20	87.5	1.00	130	130	130	130	180	210	240	260	380	450	520SL	GW60	GW60
		1.25	130	130	130	180	180SL	210SL	240	260SL	380SL	450PL	520PL	GW60	GW70
		1.50	130	130	130	180	210	210SL	260SL	320PL	380PL	520SL	GW60	GW60	GW80
		1.75	130	130	180	180SL	210SL	240	260PL	320PL	450SL	520PL	GW60	GW70	GW100
25	70.0	1.00	130	130	130	180	180SL	210	240	320	320PL	GW60	GW60	GW60	GW70
		1.25	130	130	130	180	180PL	210PL	260	320SL	320PL	GW60	GW60	GW60	GW80
		1.50	130	130	180	180SL	210SL	240	260SL	320PL		GW60	GW60	GW70	GW100
		1.75	130	130	180	180PL	210PL	260	320PL	320PL		GW60	GW70	GW70	GW100
30	58.3	1.00	130	130	130	180	240	260	320	380	450	520SL	GW60	GW60	GW80
		1.25	130	130	130SL	180SL	240	260SL	320SL	380SL	450PL	520PL	GW60	GW70	GW100
		1.50	130	130	180	180PL	240PL	260PL	320PL	380PL	450PL	GW60	GW70	GW80	GW100
		1.75	130	180	180SL	210SL	240PL	260PL	320PL	380PL	520PL	GW60	GW70	GW80	GW100
40	43.8	1.00	130	130	130	180	210SL	260	320SL	380	450SL	GW60	GW60	GW70	GW100
		1.25	130	130	180	180PL	240	260SL	320PL	380PL	450PL	GW60	GW70	GW80	GW100
		1.50	130	180	180	210SL	240SL	260PL	380SL	450SL	520PL	GW60	GW80	GW100	
		1.75	130	180	180SL	210PL	260SL	320PL	380PL	450PL	520PL	GW70	GW80	GW100	
50	35.0	1.00	130	130	180	210	240	260	380	380SL	520	GW60	GW70	GW80	GW100
		1.25	130	180	180	210	240	260SL	380SL	380PL	520SL	GW60	GW80	GW100	
		1.50	130	180	180SL	210PL	260SL	320PL	380PL	380PL	520PL	GW70	GW80	GW100	
		1.75	130	180	210	240	260PL	380	380PL	450PL	GW60	GW70	GW100	GW100	
60	29.2	1.00	130	180	180	210	260SL	320	380	450	520	GW60	GW80	GW100	
		1.25	130	180	180SL	210PL	260PL	320SL	380SL	450PL	520PL	GW60PL	GW100	GW100	
		1.50		180	210	240PL	260PL	320PL	380PL	450PL	520PL	GW80	GW100		
		1.75		180SL	210SL	260SL	320PL	380	450PL	520SL	GW60	GW80	GW100		
70	25.0	1.00									GW70	GW70	GW100	GW100	
		1.25									GW70	GW80	GW100		
		1.50									GW70	GW100	GW100		
		1.75									GW70	GW100			

PL: PAG (POLYALKALINE GLYCOL, ALSO KNOWN AS POLYGLYCOL LUBRICANT) INSTALLED
SL: PAO (POLYALPHAOLEPHIN STANDARD SYNTHETHIC LUBRICANT) INSTALLED

CONTINUED ON NEXT PAGE

QUICK SELECTION CHART

CONTINUOUS DUTY RATING (cont'd)

SERIES TO NEAREST STANDARD MOTOR HP
BASED ON BOTH MECHANICAL AND THERMAL CRITERIA

RATIO	OUTPUT RPM	SERVICE FACTOR	INPUT HORSEPOWER AT 1750 RPM				
			20 HP	25 HP	30 HP	40 HP	50 HP
5	350.0	1.00	GW60	GW60	GW60	GW70	GW70
		1.25	GW60	GW60	GW60	GW70	GW70
		1.50	GW60	GW70	GW70	GW80	GW100
		1.75	GW60	GW70	GW80	GW100	
7.5	233.3	1.00	GW60	GW60	GW60	GW70	GW80
		1.25	GW60	GW70	GW70	GW80	GW100
		1.50	GW60	GW70	GW80	GW100	GW100
		1.75	GW70	GW80	GW80	GW100	
10	175.0	1.00	GW60	GW60	GW70	GW80	GW100
		1.25	GW60	GW70	GW80	GW100	GW100
		1.50	GW70	GW80	GW100	GW100	
		1.75	GW70	GW100	GW100		
15	116.7	1.00	GW70	GW70	GW80	GW100	GW100
		1.25	GW70	GW80	GW100	GW100	
		1.50	GW70	GW80	GW100	GW100	
		1.75	GW100	GW100	GW100		
20	87.5	1.00	GW80	GW80	GW100	GW100	
		1.25	GW80	GW100	GW100		
		1.50	GW100	GW100			
		1.75	GW100				
25	70.0	1.00	GW80	GW100	GW100		
		1.25	GW100	GW100			
		1.50	GW100				
		1.75					
30	58.3	1.00	GW100	GW100			
		1.25	GW100				
		1.50					
		1.75					
40	43.8	1.00	GW100				

PL: PAG (POLYGLYCOL LUBRICANT INSTALLED)
SL: PAO (SYNTHETHIC LUBRICANT INSTALLED)

FOR RATIOS HIGHER THAN SHOWN, CONTACT FACTORY

HUB CITY SERIES BY MECHANICAL OUTPUT TORQUE

1.00 SERVICE FACTOR AT 1750 RPM INPUT
FOR SERVICE FREE FROM SHOCK LOADING AND A TOTAL DURATION OF UP TO 10 HOURS PER DAY

RATIO	OUTPUT RPM	SERIES												
		130	180	210	240	260	320	380	450	520	GW60	GW70	GW80	GW100
5	350.0	220	450	597	801	1103	2200	3105			6068	9062	11866	18619
7.5	233.3		513	723	1026						7704	10572	13867	21413
10	175.0	266	550	770	1096	1551	2524	3757	5636	7991	8467	11893	14447	22466
15	116.7	294	576	820	1180	1601	2676	3839	6047	8607	9515	12827	16766	26308
20	87.5	295	607	828	1207	1707	2773	4204	6441	8800	10127	13431	17575	27597
25	70.0	291	625	870	1213	1714	2844				10245	13462	17578	27618
30	58.3	300	589	834	1209	1633	2708	3907	6176	8814	10249	13356	17166	27433
40	43.8	291	599	816	1195	1688	2780	4237	6372	8721	10203	13399	17507	27471
50	35.0	277	595	827	1152	1635	2832	6107	4052	8329	10079	13011	17028	26703
60	29.2	258	542	787	1069	1414	2841	3814	5708	7773	9808	12220	15982	25107
70	25.0											11300	14743	23235

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 130 & 180

	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	CONVENTIONAL OIL EFF. %	CONVENTIONAL OIL MECH. OUTPUT TORQUE	CONVENTIONAL OIL THERMAL INPUT HP	CONVENTIONAL OIL THERMAL OUTPUT TORQUE	PAO SYNTHETIC OIL EFF. %	PAO SYNTHETIC OIL MECH. OUTPUT TORQUE	PAO SYNTHETIC OIL THERMAL INPUT HP	PAO SYNTHETIC OIL THERMAL OUTPUT TORQUE	PAG SYNTHETIC OIL EFF. %	PAG SYNTHETIC OIL INPUT HP	PAG SYNTHETIC OIL OUTPUT TORQUE
SERIES 130 RATINGS	1750	5	350.0	1.40	86.9	220	1.29	202	89.6	227	1.40	227	92.4	1.40	234
		10	175.0	.907	81.4	266	.819	240	84.4	276	.907	276	87.5	.907	286
		15	116.7	.707	77.0	294	.616	256	79.9	305	.707	305	83.2	.707	318
		20	87.5	.551	74.4	295	.551	295	77.2	306	.551	306	80.4	.551	319
		25	70.0	.459	70.3	291	.459	291	73.0	302	.459	302	76.0	.459	314
		30	58.3	.423	65.5	300	.386	273	68.7	314	.423	314	71.6	.423	327
		40	43.8	.327	61.8	291	.307	273	64.8	305	.327	305	67.5	.327	318
		50	35.0	.273	56.3	277	.273	277	59.0	290	.273	290	61.5	.273	303
		60	29.2	.232	51.4	258	.232	258	54.0	271	.232	271	56.5	.232	284
	1150	5	230.0	1.09	85.5	255	1.09	255	88.3	264	1.09	264	91.0	1.09	272
		10	115.0	.700	79.4	305	.593	258	82.4	316	.700	316	85.4	.700	327
		15	76.7	.549	74.5	336	.549	336	77.3	349	.549	349	80.5	.549	363
		20	57.5	.425	71.6	334	.425	334	74.3	346	.425	346	77.4	.425	361
		25	46.0	.359	67.2	330	.359	330	69.8	343	.359	343	72.7	.359	357
		30	38.3	.335	62.0	342	.335	342	65.1	359	.335	359	67.8	.335	374
		40	28.8	.258	58.1	329	.258	329	61.0	345	.258	345	63.5	.258	360
		50	23.0	.219	52.3	314	.219	314	54.9	329	.219	329	57.2	.219	343
		60	19.2	.170	47.4	266	.170	266	49.8	279	.170	279	52.1	.170	292
	100	5	20.0	.135	78.4	333	.135	333	80.9	344	.135	344	83.4	.135	355
		10	10.0	.089	69.6	388	.089	388	72.2	403	.089	403	74.8	.089	418
		15	6.7	.071	62.9	424	.071	424	65.3	440	.071	440	68.0	.071	458
		20	5.0	.055	59.4	414	.055	414	61.6	429	.055	429	64.2	.055	447
		25	4.0	.039	53.7	331	.039	331	55.7	344	.039	344	58.0	.039	358
		30	3.3	.048	47.7	430	.048	430	50.0	451	.048	451	52.1	.048	470
		40	2.5	.037	43.6	406	.037	406	45.8	426	.037	426	47.7	.037	444
		50	2.0	.028	37.6	330	.028	330	39.5	346	.028	346	41.1	.028	360
		60	1.7	.021	32.9	266	.021	266	34.5	279	.021	279	36.1	.021	292
SERIES 180 RATINGS	1750	5	350.0	2.85	87.6	450	2.04	322	90.4	464	2.40	390	93.2	2.85	478
		7.5	233.3	2.23	85.1	513	1.53	351	88.3	532	1.88	448	91.0	2.23	548
		10	175.0	1.85	82.6	550	1.22	364	85.7	571	1.50	464	88.8	1.85	591
		15	116.7	1.36	78.4	576	.916	388	81.4	598	1.13	495	84.8	1.36	623
		20	87.5	1.11	76.0	607	.822	450	78.9	630	1.01	573	82.2	1.11	656
		25	70.0	.960	72.3	625	.686	447	75.1	649	.818	553	78.2	.960	676
		30	58.3	.804	67.8	589	.556	407	71.1	618	.674	518	74.1	.804	644
		40	43.8	.649	64.1	599	.509	470	67.3	629	.618	599	70.1	.649	655
		50	35.0	.560	58.9	595	.455	483	61.8	624	.524	583	64.4	.560	650
		60	29.2	.462	54.2	542	.384	450	56.9	568	.462	568	59.6	.462	595
	1150	5	230.0	2.32	86.4	548	1.84	435	89.1	566	2.27	554	91.9	2.32	583
		7.5	153.3	1.80	83.5	618	1.15	394	86.6	642	1.78	633	89.3	1.80	661
		10	115.0	1.49	80.7	659	1.17	518	83.8	683	1.49	683	86.8	1.49	708
		15	76.7	1.10	76.0	685	.886	554	78.9	711	1.10	711	82.2	1.10	741
		20	57.5	.887	73.4	713	.796	640	76.1	740	.887	740	79.3	.887	771
		25	46.0	.777	69.2	737	.658	624	71.8	765	.777	765	74.8	.777	797
		30	38.3	.661	64.3	699	.555	587	67.5	733	.661	733	70.3	.661	764
		40	28.8	.531	60.5	703	.504	668	63.5	738	.531	738	66.1	.531	769
		50	23.0	.466	54.9	700	.437	658	57.6	735	.466	735	60.0	.466	765
		60	19.2	.390	50.0	641	.390	641	52.4	673	.390	673	54.9	.390	704
	100	5	20.0	.312	79.0	777	.312	777	81.5	802	.312	802	84.0	.312	826
		7.5	13.3	.242	74.7	855	.242	855	77.5	887	.242	887	79.9	.242	915
		10	10.0	.204	70.4	904	.204	904	73.1	938	.204	938	75.7	.204	972
		15	6.7	.156	62.9	930	.156	930	65.3	965	.156	965	68.0	.156	1005
		20	5.0	.124	60.4	947	.124	947	62.7	982	.124	982	65.3	.124	1023
		25	4.0	.096	54.7	823	.096	823	56.7	854	.096	854	59.1	.096	889
		30	3.3	.102	48.8	944	.102	944	51.2	991	.102	991	53.3	.102	1032
		40	2.5	.083	44.7	931	.083	931	46.9	977	.083	977	48.9	.083	1017
		50	2.0	.067	38.6	819	.067	819	40.5	859	.067	859	42.2	.067	895
		60	1.7	.052	33.8	659	.052	659	35.4	692	.052	692	37.1	.052	725

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM
OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 131 AND 134 225 LBS. AT CENTER POINT OF SHAFT EXTENSION.
MODELS 181 AND 184 550 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 182 AND 185 NOT APPLICABLE.
THRUST‡ UP OR DOWN 600 LBS.
‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY.
REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 210 & W240

					CONVENTIONAL OIL				PAO SYNTHETIC OIL				PAG SYNTHETIC OIL		
	INPUT RPM	RATIO^	OUTPUT RPM	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	INPUT HP	OUTPUT TORQUE
SERIES 210 RATINGS*	1750	5	350.0	3.77	88.0	597	2.80	443	90.8	616	3.32	543	93.6	3.77	635
		7.5	233.3	3.13	85.7	723	2.07	480	88.9	750	2.42	580	91.6	3.13	773
		10	175.0	2.57	83.1	770	1.74	520	86.3	799	2.05	637	89.4	2.57	828
		15	116.7	1.93	78.8	820	1.25	534	81.8	851	1.48	655	85.2	1.93	886
		20	87.5	1.50	76.7	828	1.14	629	79.6	859	1.35	772	82.9	1.50	895
		25	70.0	1.30	74.3	870	1.02	679	77.1	903	1.20	833	80.3	1.30	941
		30	58.3	1.13	68.2	834	.622	458	71.5	875	.874	675	74.5	1.13	912
		40	43.8	.872	65.0	816	.691	647	68.2	857	.808	793	71.0	.872	892
		50	35.0	.747	61.5	827	.632	700	64.5	868	.740	860	67.2	.747	904
		60	29.2	.656	55.5	787	.524	629	58.3	826	.613	772	61.0	.656	865
	1150	5	230.0	3.25	86.8	772	2.55	607	89.5	797	3.04	745	92.3	3.25	821
		7.5	153.3	2.64	84.1	912	1.62	560	87.2	946	1.93	690	89.9	2.64	975
		10	115.0	2.17	81.3	966	1.64	732	84.3	1003	1.98	916	87.4	2.17	1039
		15	76.7	1.64	76.3	1026	1.21	762	79.2	1065	1.43	934	82.5	1.64	1110
		20	57.5	1.25	73.9	1014	1.10	895	76.7	1052	1.25	1052	79.9	1.25	1096
		25	46.0	1.02	71.2	993	1.02	993	73.9	1030	1.02	1030	77.0	1.02	1073
		30	38.3	.983	64.5	1042	.752	798	67.7	1093	.880	979	70.5	.983	1139
		40	28.8	.746	61.1	1000	.702	940	64.1	1049	.746	1049	66.8	.746	1093
		50	23.0	.627	57.5	987	.627	987	60.3	1035	.627	1035	62.8	.627	1078
		60	19.2	.532	51.2	896	.532	896	53.8	941	.532	941	56.3	.532	985
	100	5	20.0	.488	78.9	1212	.488	1212	81.4	1250	.488	1250	83.9	.488	1289
		7.5	13.3	.387	74.8	1369	.387	1369	77.6	1420	.387	1420	80	.387	1464
		10	10.0	.325	70.3	1439	.325	1439	73.0	1493	.325	1493	75.6	.325	1547
		15	6.7	.256	62.9	1519	.256	1519	65.3	1577	.256	1577	68.0	.256	1642
		20	5.0	.168	59.8	1270	.168	1270	62.1	1318	.168	1318	64.7	.168	1373
		25	4.0	.111	56.6	993	.111	993	58.8	1030	.111	1030	61.2	.111	1073
		30	3.3	.171	47.5	1537	.171	1537	49.8	1613	.171	1613	51.9	.171	1680
		40	2.5	.128	44.1	1424	.128	1424	46.3	1494	.128	1494	48.2	.128	1557
		50	2.0	.077	40.5	987	.077	987	42.5	1035	.077	1035	44.3	.077	1078
		60	1.7	.070	33.9	896	.070	896	35.5	941	.070	941	37.2	.070	985
SERIES W240 RATINGS**	1750	5	350	5.01	88.7	801	3.70	591	91.6	826	4.50	742	94.4	5.01	852
		7.5	233	4.36	87.2	1026	2.65	624	90.5	1065	3.08	754	93.3	4.36	1098
		10	175	3.54	85.8	1096	2.85	880	89.1	1137	3.43	1100	92.3	3.54	1178
		15	117	2.64	82.8	1180	1.73	775	85.9	1224	2.09	968	89.5	2.64	1275
		20	87.5	2.09	80.3	1207	1.89	1093	83.3	1253	2.09	1253	86.8	2.09	1305
		25	70.0	1.72	78.3	1213	1.70	1201	81.2	1259	1.72	1259	84.6	1.72	1311
		30	58.3	1.50	74.7	1209	.94	756	78.3	1269	1.12	945	81.6	1.50	1322
		40	43.8	1.18	70.5	1195	.99	1010	74.0	1254	1.18	1254	77.1	1.18	1306
		50	35.0	.95	67.3	1152	.95	1152	70.7	1209	.95	1209	73.6	.95	1259
		60	29.2	.76	65.3	1069	.58	814	68.6	1122	.69	1017	71.8	.76	1175
	1150	5	230	4.26	87.7	1025	3.35	804	90.5	1058	4.00	993	93.3	4.26	1090
		7.5	153	3.57	86.0	1262	2.06	728	89.2	1310	2.45	897	92.0	3.57	1350
		10	115	2.83	84.4	1309	2.68	1240	87.6	1358	3.67	1761	90.8	2.83	1407
		15	76.7	2.10	81.0	1399	1.66	1109	84.1	1452	2.10	1452	87.6	2.10	1513
		20	57.5	1.66	78.2	1426	1.66	1426	81.1	1480	1.66	1480	84.5	1.66	1541
		25	46.0	1.37	75.9	1420	1.37	1420	78.7	1474	1.37	1474	82.0	1.37	1535
		30	38.3	1.21	71.9	1428	.92	1089	75.5	1498	1.10	1362	78.6	1.21	1560
		40	28.8	.95	67.3	1407	.95	1407	70.7	1476	.95	1476	73.6	.95	1538
		50	23.0	.77	63.9	1347	.77	1347	67.0	1414	.77	1414	69.8	.77	1472
		60	19.2	.58	61.9	1171	.58	1171	64.9	1229	.58	1229	68.0	.58	1287
	100	5	20	.62	80.7	1577	.62	1577	83.3	1627	.62	1627	85.9	.62	1678
		7.5	13	.49	78.6	1812	.49	1812	81.6	1879	.49	1879	84.1	.49	1938
		10	10.0	.37	76.8	1784	.37	1784	79.7	1851	.37	1851	82.6	.37	1919
		15	6.7	.28	71.5	1886	.28	1886	74.2	1957	.28	1957	77.3	.28	2038
		20	5.0	.225	67.2	1905	.225	1905	69.7	1977	.225	1977	72.6	.225	2060
		25	4.0	.148	63.9	1493	.148	1493	66.3	1549	.148	1549	69.1	.148	1614
		30	3.3	.172	58.7	1909	.172	1909	61.5	2002	.172	2002	64.1	.172	2086
		40	2.5	.141	52.8	1873	.141	1873	55.4	1965	.141	1965	57.7	.141	2047
		50	2.0	.097	48.8	1487	.097	1487	51.2	1560	.097	1560	53.3	.097	1626
		60	1.7	.066	47.2	1171	.066	1171	49.6	1229	.066	1229	51.9	.066	1287

^7.5/1 RATIO IS MANUFACTURED TO ORDER. CONSULT FACTORY FOR PRICE AND AVAILABILITY

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 211 AND 214 550 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 212 AND 215 NOT APPLICABLE. THRUST‡ UP OR DOWN 600 LBS.

**OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 241 AND 244 1150 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 242 AND 245 NOT APPLICABLE. THRUST‡ UP OR DOWN 1000 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 260 & 320

	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	CONVENTIONAL OIL EFF. %	CONVENTIONAL OIL MECH. OUTPUT TORQUE	CONVENTIONAL OIL THERMAL INPUT HP	CONVENTIONAL OIL THERMAL OUTPUT TORQUE	PAO SYNTHETIC OIL EFF. %	PAO SYNTHETIC OIL MECH. OUTPUT TORQUE	PAO SYNTHETIC OIL THERMAL INPUT HP	PAO SYNTHETIC OIL THERMAL OUTPUT TORQUE	PAG SYNTHETIC OIL EFF. %	PAG SYNTHETIC OIL INPUT HP	PAG SYNTHETIC OIL OUTPUT TORQUE
SERIES 260 RATINGS*	1750	5	350.0	6.91	88.6	1103	4.21	672	91.5	1139	5.12	843	94.3	6.91	1174
		10	175.0	5.04	85.47	1551	3.25	1000	88.7	1609	3.91	1250	91.9	5.04	1668
		15	116.7	3.67	80.8	1601	2.01	880	83.9	1661	2.43	1100	87.4	3.67	1731
		20	87.5	2.97	79.7	1707	2.16	1242	82.8	1772	2.60	1553	86.2	2.97	1846
		25	70.0	2.43	78.4	1714	1.93	1365	81.4	1779	2.33	1706	84.8	2.43	1853
		30	58.3	2.12	71.3	1633	1.12	859	74.8	1713	1.33	1074	77.9	2.12	1784
		40	43.8	1.68	69.6	1688	1.14	1148	73.1	1771	1.36	1435	76.1	1.68	1844
		50	35.0	1.34	67.6	1635	1.11	1352	70.9	1715	1.32	1690	73.9	1.34	1787
		60	29.2	1.12	58.4	1414	.733	925	61.3	1484	.873	1156	64.2	1.12	1554
	1150	5	230.0	5.79	87.5	1389	3.81	914	90.3	1433	4.56	1129	93.1	5.79	1478
		10	115.0	4.23	84.0	1948	3.06	1409	87.1	2021	3.69	1761	90.3	4.23	2094
		15	76.7	3.22	78.6	2082	1.95	1260	81.6	2161	2.35	1575	85.0	3.22	2251
		20	57.5	2.50	77.4	2125	2.06	1752	80.4	2206	2.49	2190	83.7	2.50	2298
		25	46.0	1.81	76.0	1883	1.81	1883	78.9	1955	1.81	1955	82.2	1.81	2036
		30	38.3	1.89	68.0	2118	1.11	1238	71.3	2222	1.32	1548	74.3	1.89	2314
		40	28.8	1.45	66.2	2096	1.14	1658	69.4	2199	1.36	2073	72.3	1.45	2291
		50	23.0	1.07	64.1	1887	1.07	1887	67.3	1980	1.07	1980	70.1	1.07	2062
		60	19.2	1.03	54.1	1833	.769	1370	56.8	1923	.917	1713	59.5	1.03	2014
	100	5	20.0	.986	79.5	2470	.986	2470	82.1	2549	.986	2549	84.6	.986	2628
		10	10.0	.613	75.1	2901	.613	2901	77.9	3010	.613	3010	80.7	.613	3119
		15	6.7	.531	65.8	3301	.531	3301	68.3	3426	.531	3426	71.1	.531	3569
		20	5.0	.382	64.8	3119	.382	3119	67.2	3237	.382	3237	70.0	.382	3371
		25	4.0	.189	63.3	1883	.189	1883	65.7	1955	.189	1955	68.4	.189	2036
		30	3.3	.347	50.9	3338	.347	3338	53.4	3502	.347	3502	55.6	.347	3648
		40	2.5	.225	49.7	2823	.225	2823	52.1	2962	.225	2962	54.3	.225	3085
		50	2.0	.125	48.0	1887	.125	1887	50.4	1980	.125	1980	52.5	.125	2062
		60	1.7	.157	35.4	2102	.157	2102	37.1	2206	.157	2206	38.9	.157	2310
SERIES 320 RATINGS**	1750	5	350.0	13.7	89.5	2200	6.99	1127	92.3	2270	8.27	1375	95.2	13.7	2340
		10	175.0	8.19	85.6	2524	3.99	1229	88.8	2619	4.69	1499	92.0	8.19	2714
		15	116.7	6.01	82.4	2676	3.05	1357	85.5	2778	3.58	1656	89.1	6.01	2893
		20	87.5	4.82	79.9	2773	2.49	1433	82.9	2878	2.93	1748	86.4	4.82	2998
		25	70.0	4.07	77.6	2844	2.13	1489	80.5	2951	2.50	1817	83.9	4.07	3074
		30	58.3	3.39	73.8	2708	1.69	1349	77.5	2842	1.97	1646	80.7	3.39	2960
		40	43.8	2.76	69.8	2780	1.41	1421	73.2	2917	1.64	1734	76.3	2.76	3039
		50	35.0	2.37	66.2	2832	1.23	1470	69.5	2971	1.43	1793	72.4	2.37	3095
		60	29.2	2.10	62.6	2841	1.10	1494	65.7	2982	1.28	1823	68.8	2.10	3122
	1150	5	230.0	11.3	88.5	2741	6.22	1510	91.4	2828	7.36	1842	94.2	11.3	2916
		10	115.0	6.83	84.1	3145	3.75	1729	87.2	3263	4.41	2109	90.4	6.83	3381
		15	76.7	5.04	80.5	3334	2.94	1944	83.5	3460	3.45	2372	87.0	5.04	3605
		20	57.5	4.07	77.6	3462	2.33	1986	80.5	3593	2.74	2423	83.9	4.07	3742
		25	46.0	3.43	74.8	3517	2.07	2118	77.7	3650	2.43	2584	80.9	3.43	3802
		30	38.3	2.89	70.7	3356	1.65	1922	74.2	3522	1.92	2345	77.3	2.89	3668
		40	28.8	2.37	66.2	3447	1.41	2045	69.5	3617	1.64	2495	72.4	2.37	3768
		50	23.0	2.05	62.3	3507	1.27	2170	65.4	3679	1.48	2647	68.1	2.05	3833
		60	19.2	1.84	58.5	3531	1.15	2204	61.4	3706	1.33	2689	64.3	1.84	3880
	100	5	20.0	2.11	81.5	5409	2.11	5409	84.1	5582	2.11	5582	86.7	2.11	5754
		10	10.0	1.33	73.8	6199	1.33	6199	76.6	6432	1.33	6432	79.4	1.33	6665
		15	6.7	1.02	67.9	6551	1.02	6551	70.5	6799	1.02	6799	73.4	1.02	7082
		20	5.0	.701	63.3	5591	.701	5591	65.7	5802	.701	5802	68.4	.701	6044
		25	4.0	.460	59.2	4292	.460	4292	61.4	4454	.460	4454	64.0	.460	4640
		30	3.3	.655	53.5	6627	.655	6627	56.2	6952	.655	6952	58.5	.655	7242
		40	2.5	.463	47.9	5584	.463	5584	50.2	5858	.463	5858	52.3	.463	6103
		50	2.0	.313	43.3	4273	.313	4273	45.4	4484	.313	4484	47.3	.313	4670
		60	1.7	.232	39.3	3445	.232	3445	41.3	3615	.232	3615	43.2	.232	3785

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 261 AND 264 1150 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 262 AND 265 NOT APPLICABLE.
THRUST‡ UP OR DOWN 1000 LBS.

**OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 321 AND 324 1,100 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 322 AND 325 NOT APPLICABLE.
MODELS 327 AND 328 — ‡OHL 1,280 LBS., TO‡ THRUST OUT 1,790 LBS. AND TI‡ THRUST IN 1,210 LBS.
THRUST‡ UP OR DOWN 1,200 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 380

					CONVENTIONAL OIL				PAO SYNTHETIC OIL				PAG SYNTHETIC OIL		
	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	INPUT HP	OUTPUT TORQUE
SERIES 380 RATINGS	1750	5	350.0	19.2	89.9	3105	10.1	1631	92.7	3204	12.2	2039	95.6	19.2	3303
		10	175.0	12.1	86.5	3757	6.20	1931	89.7	3898	7.47	2414	93.0	12.1	4039
		15	116.7	8.53	83.3	3839	4.30	1937	86.5	3984	5.18	2422	90.1	8.53	4151
		20	87.5	7.15	81.6	4204	3.66	2153	84.7	4363	4.41	2691	88.2	7.15	4545
		30	58.3	4.80	75.4	3907	2.39	1943	79.1	4099	2.84	2429	82.4	4.80	4270
		40	43.8	4.06	72.5	4237	2.06	2153	76.0	4445	2.46	2691	79.2	4.06	4631
		50	35.0	3.24	69.4	4052	1.82	2278	72.9	4251	2.17	2847	75.9	3.24	4428
		60	29.2	2.66	66.2	3814	1.74	2493	69.5	4002	2.07	3117	72.8	2.66	4191
	1150	5	230.0	15.9	89.0	3885	8.58	2093	91.9	4009	8.23	2617	94.7	15.9	4133
		10	115.0	9.93	85.1	4632	5.39	2512	88.3	4806	6.49	3140	91.5	9.93	4980
		15	76.7	7.15	81.6	4798	3.91	2622	84.7	4980	4.71	3278	88.2	7.15	5187
		20	57.5	6.03	79.55	5258	3.41	2975	82.6	5457	4.11	3719	86	6.03	5684
		30	38.3	4.08	72.6	4865	2.26	2694	76.1	5105	2.69	3367	79.3	4.08	5317
		40	28.8	3.47	69.3	5275	2.02	3060	72.7	5535	2.40	3825	75.7	3.47	5765
		50	23.0	2.79	65.9	5035	1.91	3444	69.1	5282	2.27	4305	72.0	2.79	5502
		60	19.2	2.29	62.4	4702	1.66	3408	65.5	4935	1.98	4260	68.6	2.29	5167
	100	5	20.0	2.99	82.3	7755	2.99	7755	85.0	8002	2.99	8002	87.6	2.99	8250
		10	10.0	1.87	75.6	8904	1.87	8904	78.5	9239	1.87	9239	81.3	1.87	9574
		15	6.7	1.43	69.6	9412	1.43	9412	72.2	9768	1.43	9768	75.2	1.43	10175
		20	5.0	.916	66.3	7656	.916	7656	68.8	7946	.916	7946	71.7	.916	8277
		30	3.3	.903	55.8	9524	.903	9524	58.6	9993	.903	9993	61.0	.903	10409
		40	2.5	.591	51.6	7684	.591	7684	54.1	8062	.591	8062	56.4	.591	8398
		50	2.0	.391	47.6	5866	.391	5866	49.9	6155	.391	6155	52.0	.391	6411
		60	1.7	.284	43.8	4702	.284	4702	45.9	4935	.284	4935	48.1	.284	5167

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM

OVERHUNG LOAD - LOW SPEED SHAFT —
MODELS 381 AND 384 1,600 LBS. AT CENTER POINT OF SHAFT EXTENSION.
MODELS 382 AND 385 NOT APPLICABLE.
MODELS 387 AND 388 — OHL* 1,970 LBS., TO* THRUST OUT 1,950 LBS. AND TI* THRUST IN 1,500 LBS.
THRUST* UP OR DOWN 1,500 LBS.

*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY.
REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

CENTURY SERIES CATALOG RATINGS

SERIES 450 & 520

	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	CONVENTIONAL OIL EFF. %	CONVENTIONAL OIL MECH. OUTPUT TORQUE	CONVENTIONAL OIL THERMAL INPUT HP	CONVENTIONAL OIL THERMAL OUTPUT TORQUE	PAO SYNTHETIC OIL EFF. %	PAO SYNTHETIC OIL MECH. OUTPUT TORQUE	PAO SYNTHETIC OIL THERMAL INPUT HP	PAO SYNTHETIC OIL THERMAL OUTPUT TORQUE	PAG SYNTHETIC OIL EFF. %	PAG SYNTHETIC OIL MECH OUTPUT TORQUE	PAG SYNTHETIC OIL THERMAL INPUT HP	PAG SYNTHETIC OIL THERMAL OUTPUT TORQUE
SERIES 450 RATINGS*	1750	10	175.0	18.0	87.1	5636	8.71	2732	90.4	5849	9.65	3142	93.7	6061	12.5	4207
		15	116.7	13.3	84.4	6047	6.01	2739	87.6	6276	6.66	3150	91.2	6538	8.93	4397
		20	87.5	10.8	82.8	6441	5.09	3034	85.9	6685	5.64	3489	89.5	6964	7.48	4822
		30	58.3	7.42	77.0	6176	3.20	2663	80.8	6480	3.51	3063	84.2	6750	4.97	4522
		40	43.8	5.95	74.4	6372	2.82	3018	78.0	6685	3.09	3470	81.3	6964	4.20	4919
		50	35.0	4.74	71.6	6107	1.77	2278	75.1	6407	1.94	2620	78.2	6674	3.60	5073
		60	29.2	3.85	68.6	5708	2.18	3230	72.0	5991	2.39	3715	75.4	6273	3.19	5202
	1150	10	115.0	14.7	85.9	6933	7.32	3445	89.2	7194	8.11	3962	92.4	7455	10.3	5233
		15	76.7	11.0	82.7	7476	5.27	3583	85.8	7759	5.84	4121	89.4	8082	7.41	5445
		20	57.5	9.08	80.9	8057	4.60	4080	84.0	8362	5.10	4692	87.5	8710	6.28	6026
		30	38.3	6.26	74.4	7658	3.02	3696	78.0	8035	3.31	4251	81.3	8370	4.20	5614
		40	28.8	5.10	71.4	7981	2.67	4181	74.9	8373	2.93	4809	78.0	8722	3.57	6104
		50	23.0	4.11	68.3	7680	1.84	3444	71.6	8058	2.02	3961	74.6	8393	3.09	6321
		60	19.2	3.36	65.1	7195	2.18	4666	68.3	7551	2.39	5365	71.5	7907	2.76	6479
	100	10	10.0	2.87	76.8	13897	2.87	13897	79.7	14420	2.87	14420	82.6	14943	2.87	14943
		15	6.7	2.19	71.1	14697	2.19	14697	73.8	15253	2.19	15253	76.9	15888	2.19	15888
		20	5.0	1.50	68.2	12924	1.50	12924	70.8	13307	1.50	13307	73.7	13972	1.50	13972
		30	3.3	1.36	57.8	14876	1.36	14876	60.7	15607	1.36	15607	63.2	16257	1.36	16257
		40	2.5	.957	53.9	13008	.957	13008	56.5	13647	.957	13647	58.9	14216	.957	14216
		50	2.0	.631	49.9	9919	.631	9919	52.3	10407	.631	10407	54.5	10840	.631	10840
		60	1.7	.454	46.1	7915	.454	7915	48.4	8307	.454	8307	50.7	8698	.454	8698
SERIES 520 RATINGS**	1750	10	175.0	25.3	87.7	7991	12.5	3941	91.0	8292	13.8	4532	94.3	8593	17.6	5987
		15	116.7	18.7	85.3	8607	8.80	4055	88.5	8932	9.75	4663	92.2	9305	12.9	6417
		20	87.5	14.6	83.9	8800	7.41	4476	87.1	9133	8.21	5147	90.7	9513	10.8	7059
		30	58.3	10.4	78.6	8814	4.73	4018	82.5	9248	5.19	4621	85.9	9633	7.13	6614
		40	43.8	7.93	76.3	8721	4.04	4446	80.1	9150	4.43	5113	83.4	9531	6.05	7273
		50	35.0	6.27	73.7	8329	3.47	4606	77.4	8739	3.80	5297	80.6	9103	5.18	7518
		60	29.2	5.06	71.0	7773	3.20	4905	74.5	8157	3.50	5640	78.1	8542	4.58	7721
	1150	10	115.0	21.4	86.7	10156	11.0	5205	89.9	10538	12.1	5986	93.2	10921	14.8	7548
		15	76.7	15.9	83.8	10939	7.51	5176	87.0	11353	8.33	5953	90.6	11826	10.7	7962
		20	57.5	12.1	82.2	10945	6.50	5857	85.3	11360	7.20	6735	88.9	11833	9.05	8821
		30	38.3	8.64	76.2	10833	4.25	5329	80.0	11365	4.66	6128	83.3	11839	6.02	8241
		40	28.8	6.74	73.6	10872	3.79	6105	77.2	11406	4.15	7021	80.4	11882	5.13	9036
		50	23.0	5.40	70.6	10443	3.49	6753	74.1	10956	3.82	7766	77.2	11413	4.41	9323
		60	19.2	4.40	67.6	9778	3.05	6786	71.0	10261	3.34	7804	74.3	10745	3.91	9553
	100	10	10.0	4.12	78.2	20328	4.12	20328	81.2	21093	4.12	21093	84.1	21858	4.12	21858
		15	6.7	3.11	73.1	21509	3.11	21509	75.8	22323	3.11	22323	79.0	23253	3.11	23253
		20	5.0	2.14	70.4	19019	2.14	19019	73.1	19739	2.14	19739	76.1	20561	2.14	20561
		30	3.3	1.90	60.5	21779	1.90	21779	63.5	22850	1.90	22850	66.1	23802	1.90	23802
		40	2.5	1.34	56.8	19261	1.34	19261	59.6	20208	1.34	20208	62.1	21050	1.34	21050
		50	2.0	.875	52.9	14588	.875	14588	55.5	15305	.875	15305	57.8	15943	.875	15943
		60	1.7	.621	49.3	11584	.621	11584	51.8	12157	.621	12157	54.2	12730	.621	12730

CENTURY SERIES CONTINUED ON NEXT PAGE

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 451 AND 454 2,200 LBS. AT CENTER POINT OF SHAFT EXTENSION.
MODELS 452, 453, 455, AND 456 NOT APPLICABLE. MODELS 457 AND 458 — OHL‡ 2,370 LBS., TO‡ THRUST OUT 3,330 LBS. AND TI‡ THRUST IN 3,140 LBS.
MODELS 459V AND 450V 2,000 LBS. AT CENTER POINT OF SHAFT EXTENSION. THRUST‡ UP OR DOWN 2,500 LBS.

**OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 521 AND 524 2,600 LBS. AT CENTER POINT OF SHAFT EXTENSION.
MODELS 522, 523, 525, AND 526 NOT APPLICABLE. MODELS 527 AND 528 — OHL‡ 3,550 LBS., TO‡ THRUST OUT 4,530 LBS. AND TI‡ THRUST IN 3,360 LBS.
MODELS 529V AND 520V 2,300 LBS. AT CENTER POINT OF SHAFT EXTENSION. THRUST‡ UP OR DOWN 3,000 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

+ THERMAL RATINGS MAY BE INCREASED BY USING A THERMAL BLOCK KIT (PAGE B-94). CONSULT FACTORY FOR RATINGS.

GW SERIES CATALOG RATINGS

SERIES GW60

SERIES GW60 RATINGS***	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	CONVENTIONAL OIL EFF. %	CONVENTIONAL OIL MECH. OUTPUT TORQUE	PAO SYNTHETIC OIL EFF. %	PAO SYNTHETIC OIL MECH. OUTPUT TORQUE	PAG SYNTHETIC OIL EFF. %	PAG SYNTHETIC OIL MECH OUTPUT TORQUE
	1750	5	341.5	35.1	96.0	6068	96.9	6129	97.9	6189
		7.5	236.5	29.9	95.1	7704	96.5	7820	97.5	7897
		10	179.5	24.9	94.0	8467	96.4	8679	97.3	8763
		15	119.3	19.2	91.5	9515	93.8	9753	95.2	9896
		20	85.4	15.7	89.5	10127	91.7	10380	93.5	10583
		25	71.4	13.0	87.1	10245	89.3	10501	91.0	10706
		30	59.3	11.1	84.8	10249	86.9	10505	88.6	10710
		40	43.8	8.72	81.2	10203	83.2	10458	84.8	10662
		50	35	7.24	77.2	10079	79.2	10331	80.7	10533
		60	29.2	6.15	73.7	9808	75.6	10053	77.1	10249
		80	21.9	3.70	68.1	7264	69.8	7446	71.1	7591
		100	17.5	2.57	63.5	5886	65.1	6033	66.4	6151
	1170	5	228.3	29.9	95.8	7726	96.7	7803	97.7	7881
		7.5	158.1	25.4	94.8	9740	96.3	9886	97.2	9984
		10	120	21.1	93.7	10687	96.0	10954	97.0	11061
		15	79.8	16.3	91.1	11996	93.3	12296	94.7	12476
		20	57.1	13.3	88.8	12758	91.1	13077	92.8	13332
		25	47.8	11.0	86.3	12903	88.5	13226	90.2	13484
		30	39.7	9.50	84.0	12911	86.1	13234	87.8	13492
		40	29.3	7.43	80.2	12848	82.2	13169	83.8	13426
		50	23.4	6.18	76.1	12691	78.0	13008	79.5	13262
		60	19.5	5.26	72.5	12352	74.3	12661	75.8	12908
		80.0	14.6	3.31	64.0	9142	65.6	9371	66.8	9553
		100	11.7	2.32	59.2	7408	60.7	7593	61.9	7741
	100	5	19.5	6.20	89.9	17587	90.8	17763	91.7	17939
		7.5	13.5	5.01	87.1	20662	88.4	20972	89.2	21179
		10	10.3	4.19	84.3	22324	86.4	22882	87.3	23105
		15	6.8	3.33	78.6	24797	80.5	25417	81.7	25789
		20	4.9	2.80	74.0	26194	75.9	26849	77.4	27373
		25	4.1	2.41	69.4	26436	71.1	27097	72.5	27626
		30	3.4	2.14	65.3	26480	66.9	27142	68.2	27672
		40	2.5	1.76	59.1	26260	60.6	26917	61.8	27442
		50	2	1.54	53.3	25925	54.6	26573	55.7	27092
		60	1.7	1.37	48.6	25283	49.8	25915	50.8	26421
		80	1.3	0.95	40.2	19249	41.2	19730	42.0	20115
		100	1	0.68	35.5	15389	36.4	15774	37.1	16082

NOTE: ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD VALUES LISTED IN POUNDS. THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEAR CASE HOUSING. AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT INPUT HP TO 1750 RPM CATALOG RATING.

Thrust and Overhung Load Ratings (Lbs.)	*GW60*
Thrust Load Ratings (Low Speed Shaft, All Ratios)	3990
Overhung Load Capacity* (High Speed Shaft, All Ratios)	450
Overhung Load Capacity* (Low Speed Shaft, All Ratios)	3723
Overhung Load Capacity** (Extended Brg Design Output Shaft, All Ratios)	2245

*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.
*THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEARCASE HOUSING.
**LOAD LOCATED AT END OF OUTPUT SHAFT.
ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT WWW.HUBCITYINC.COM

GW SERIES CATALOG RATINGS

SERIES GW70 & GW80

					CONVENTIONAL OIL		PAO SYNTHETIC OIL		PAG SYNTHETIC OIL	
	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE
SERIES GW70 RATINGS	1750	5	341.5	51.2	96.0	9062	96.9	9153	97.9	9243
		7.5	236.5	41.5	95.5	10572	97.0	10731	97.9	10836
		10	179.5	35.7	94.8	11893	97.2	12190	98.1	12309
		15	119.3	26.0	93.5	12827	95.9	13148	97.3	13340
		20	85.4	19.9	91.4	13431	93.7	13767	95.5	14035
		25	71.4	16.9	90.3	13462	92.5	13799	94.3	14068
		30	59.3	14.1	89.1	13356	91.3	13690	93.1	13957
		40	43.8	10.9	85.5	13399	87.7	13734	89.4	14002
		50	35.0	8.74	82.7	13011	84.8	13336	86.4	13596
		60	29.2	7.00	80.8	12220	82.8	12526	84.4	12770
		70	25.0	5.74	78.1	11300	80.1	11583	81.6	11809
	1170	5	228.3	43.4	95.3	11404	96.3	11518	97.2	11632
		7.5	158.1	35.2	94.7	13304	96.1	13504	97.1	13637
		10	120.0	30.4	93.9	14967	96.2	15341	97.2	15491
		15	79.8	22.1	92.3	16143	94.7	16547	96.0	16789
		20	57.1	17.0	89.8	16903	92.1	17326	93.9	17664
		25	47.8	14.1	88.5	16417	90.7	16827	92.5	17156
		30	39.7	11.9	87.2	16491	89.4	16903	91.1	17233
		40	29.3	9.18	83.0	16416	85.1	16826	86.8	17155
		50	23.4	7.43	79.9	15966	81.9	16365	83.4	16684
		60	19.5	6.03	77.7	15143	79.6	15522	81.2	15824
		70	16.7	4.96	74.7	13979	76.6	14328	78.1	14608
	100	5	19.5	9.25	88.4	26416	89.3	26680	90.2	26944
		7.5	13.5	6.97	87.4	28388	88.7	28814	89.6	29098
		10	10.3	6.15	85.4	32282	87.6	33089	88.4	33412
		15	6.8	4.16	82.7	31744	84.7	32538	86.0	33014
		20	4.9	3.35	77.6	33520	79.5	34358	81.1	35028
		25	4.1	2.82	75.3	32790	77.2	33610	78.7	34266
		30	3.4	2.30	73.2	31233	75.1	32014	76.5	32638
		40	2.5	1.94	66.0	32194	67.7	32999	69.0	33643
		50	2.0	1.62	61.2	31109	62.7	31887	63.9	32509
		60	1.7	1.27	58.4	28131	59.9	28834	61.1	29397
		70	1.4	1.09	54.4	26222	55.7	26878	56.8	27402
SERIES GW80 RATINGS	1750	5	341.5	66.9	96.2	11866	97.1	11985	98.1	12103
		7.5	236.5	54.4	95.7	13867	97.2	14075	98.1	14214
		10	179.5	43.3	95.0	14447	97.4	14808	98.3	14953
		15	119.3	33.8	93.9	16766	96.2	17185	97.6	17437
		20	85.4	25.9	91.8	17575	94.1	18014	96.0	18366
		25	71.4	21.9	90.9	17578	93.1	18017	94.9	18369
		30	59.3	17.9	90.2	17166	92.4	17595	94.2	17938
		40	43.8	14.1	86.4	17507	88.5	17945	90.2	18295
		50	35.0	11.3	83.6	17028	85.7	17454	87.4	17794
		60	29.2	9.05	81.8	15982	83.8	16382	85.5	16701
		70	25.0	7.37	79.4	14743	81.4	15112	82.9	15406
	1170	5	228.3	56.6	95.6	14932	96.5	15081	97.5	15231
		7.5	158.1	46.1	95.0	17451	96.4	17713	97.4	17887
		10	120.0	36.8	94.2	18181	96.5	18636	97.5	18817
		15	79.8	28.8	92.8	21099	95.1	21626	96.5	21943
		20	57.1	22.2	90.4	22118	92.7	22671	94.5	23113
		25	47.8	18.8	89.2	22122	91.5	22675	93.3	23117
		30	39.7	15.0	88.4	21058	90.6	21584	92.4	22006
		40	29.3	12.2	84.1	22032	86.2	22583	87.8	23023
		50	23.4	9.84	80.9	21429	82.9	21965	84.5	22393
		60	19.5	7.63	78.8	19430	80.8	19916	82.4	20304
		70	16.7	6.24	76.2	17921	78.1	18369	79.6	18727

NOTE: ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD VALUES LISTED IN POUNDS. THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEAR CASE HOUSING. AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT INPUT HP TO 1750 RPM CATALOG RATING.

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

CONTINUED ON NEXT PAGE

GW SERIES CATALOG RATINGS

SERIES GW80 & GW100

					CONVENTIONAL OIL		PAO SYNTHETIC OIL		PAG SYNTHETIC OIL	
	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE
SERIES GW80 RATINGS (cont'd)	100	5	19.5	13.9	89.1	36447	90.0	36811	90.9	37176
		7.5	13.5	9.72	87.8	39793	89.1	40390	90.0	40788
		10	10.3	7.96	85.8	41958	88.0	43007	88.8	43427
		15	6.8	6.82	84.3	44195	86.4	45300	87.6	45963
		20	4.9	4.63	78.3	46792	80.2	47962	81.8	48898
		25	4.1	3.86	76.2	45421	78.1	46557	79.6	47465
		30	3.4	2.94	75.3	41088	77.2	42115	78.7	42937
		40	2.5	2.64	67.1	44687	68.7	45804	70.1	46698
		50	2.0	2.22	62.1	43469	63.6	44556	64.8	45425
		60	1.7	1.75	59.4	39244	60.9	40225	62.1	41010
		70	1.4	1.48	55.6	36215	57.0	37120	58.1	37845
SERIES GW100 RATINGS	1750	5	341.5	104.7	96.4	18619	97.4	18805	98.4	18991
		7.5	236.5	84.4	96.1	21413	97.5	21734	98.5	21948
		10	179.5	67.1	95.4	22466	97.7	23028	98.7	23252
		15	119.3	52.8	94.4	26308	96.7	26966	98.2	27360
		20	85.4	40.4	92.5	27597	94.8	28287	96.6	28839
		25	71.4	34.2	91.6	27618	93.9	28308	95.7	28861
		30	59.3	28.5	90.5	27433	92.8	28119	94.6	28667
		40	43.8	21.8	87.4	27471	89.6	28158	91.4	28707
		50	35.0	17.5	84.9	26703	87.0	27371	88.7	27905
		60	29.2	14.0	83.1	25107	85.2	25735	86.9	26237
		70	25.0	11.4	80.7	23235	82.7	23816	84.3	24281
	1170	5	228.3	88.5	95.9	23431	96.9	23665	97.9	23900
		7.5	158.1	71.5	95.5	26947	96.9	27351	97.9	27621
		10	120.0	56.9	94.7	28273	97.0	28980	98.0	29263
		15	79.8	44.9	93.4	33107	95.8	33935	97.2	34431
		20	57.1	34.5	91.2	34730	93.5	35598	95.4	36293
		25	47.8	29.2	90.2	34756	92.4	35625	94.2	36320
		30	39.7	24.4	88.9	34523	91.2	35386	92.9	36077
		40	29.3	18.8	85.4	34571	87.5	35435	89.2	36127
		50	23.4	15.1	82.5	33605	84.6	34445	86.2	35117
		60	19.5	12.2	80.5	31597	82.5	32387	84.1	33019
		70	16.7	9.98	77.7	29240	79.7	29971	81.2	30556
	100	5	19.5	22.1	89.5	63935	90.4	64574	91.3	65214
		7.5	13.5	16.5	88.6	67727	89.9	68743	90.8	69420
		10	10.3	13.7	86.5	72712	88.7	74530	89.6	75257
		15	6.8	9.95	84.1	77295	86.2	79227	87.4	80387
		20	4.9	8.01	79.3	82011	81.2	84061	82.8	85701
		25	4.1	6.70	77.2	79871	79.1	81868	80.7	83465
		30	3.4	5.49	75.1	76598	77.0	78513	78.5	80045
		40	2.5	4.54	68.4	78246	70.1	80202	71.5	81767
		50	2.0	3.79	63.6	75935	65.2	77833	66.4	79352
		60	1.7	3.01	60.7	69119	62.2	70847	63.4	72229
		70	1.4	2.59	56.5	64584	58.0	66199	59.1	67490

NOTE: ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD VALUES LISTED IN POUNDS. THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEAR CASE HOUSING. AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT INPUT HP TO 1750 RPM CATALOG RATING.

THRUST AND OVERHUNG LOAD RATINGS (LBS.)	GW70	GW80	GW100
Thrust Load Ratings (Low Speed Shaft, All Ratios)	4009	4777	6808
Overhung Load Capacity* (High Speed Shaft, All Ratios)	450	450	50
Overhung Load Capacity* (Low Speed Shaft, All Ratios)	6209	7761	11028
Overhung Load Capacity** (Extended Brg Design Output Shaft, All Ratios)	3791	4850	8500

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

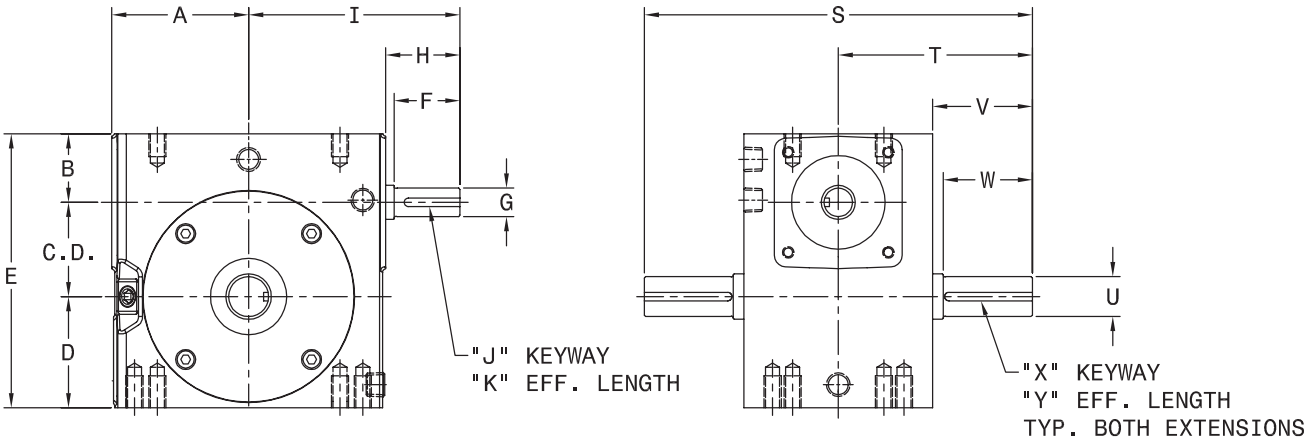
*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

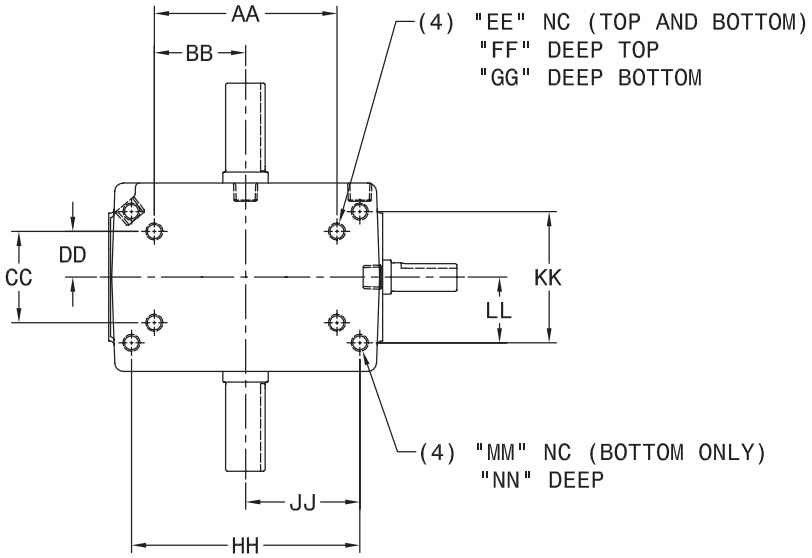
*THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEARCASE HOUSING.

**LOAD LOCATED AT END OF OUTPUT SHAFT.

MODELS

131, 181, 211, 241, 261, 321, 381, 451, 521, GW601, GW701, GW801, GW1001



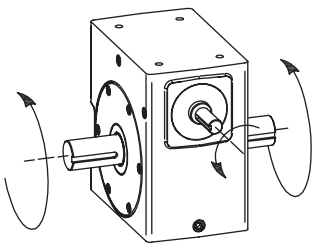


REFER TO FAN DETAILS ON NEXT PAGE FOR GW MODELS.

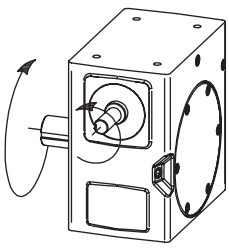
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

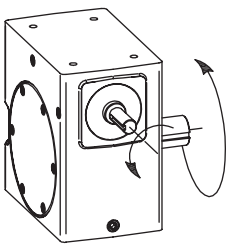
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



STYLE "A"



STYLE "B"



STYLE "C"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

131, 181, 211, 241, 261, 321, 381, 451, 521, GW601, GW701, GW801, GW1001

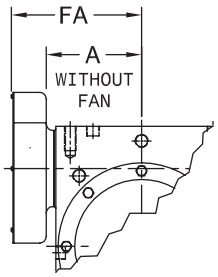
MODEL	C.D.	A	B	D	E	F	G	H	I	J	K
131	1.334	2.28	1.186	1.562	4.082	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16
181	1.751	2.65	1.374	1.875	5.000	1.35	.500/.499	1.54	4.19	1/8 X 1/16	1.16
211	2.064	3.00	1.500	2.437	6.000	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13
241	2.376	3.38	2.062	2.500	6.938	1.43	.625/.624	1.63	5.00	3/16 X 3/32	1.21
261	2.626	3.66	1.874	2.938	7.438	1.73	.625/.624	1.97	5.63	3/16 X 3/32	1.49
321	3.251	4.40	2.124	3.250	8.625	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91
381	3.751	4.90	2.374	3.937	10.062	2.20	1.000/.999	2.48	7.38	1/4 X 1/8	1.91
451	4.501	5.23	2.499	4.625	11.625	2.98	1.125/1.124	3.21	8.44	1/4 X 1/8	2.50
521	5.168	5.98	2.624	5.375	13.167	N/A	1.250/1.249	3.27	9.25	1/4 X 1/8	2.63
GW601	6.000	N/A	4.000	6.50	16.50	N/A	1.500	3.41	11.78	3/8 X 3/16	3.00
GW701	7.000	N/A	4.320	7.59	18.91	N/A	1.625	2.97	11.50	3/8 X 3/16	2.87
GW801	8.000	N/A	4.100	8.86	20.96	N/A	1.875	2.84	12.50	1/2 X 1/4	2.81
GW1001	10.000	N/A	5.110	10.36	25.47	N/A	2.250	3.76	15.50	1/2 X 1/4	3.69

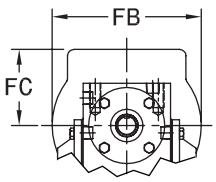
MODEL	S	T	U	V	W	X	Y	AA	BB	CC	DD
131	6.50	3.25	.625/.624	1.69	N/A	3/16 X 3/32	1.38	2.250	1.125	1.625	0.812
181	7.00	3.50	.750/.749	1.78	1.54	3/16 X 3/32	1.41	3.125	1.562	1.625	0.812
211	8.50	4.25	.875/.874	2.19	1.95	3/16 X 3/32	1.83	4.000	2.000	2.000	1.000
241	9.00	4.50	1.125/1.124	2.31	2.06	1/4 X 1/8	1.74	5.000	2.500	2.875	1.438
261	9.00	4.50	1.250/1.249	2.25	N/A	1/4 X 1/8	1.85	4.875	2.437	2.688	1.344
321	10.88	5.44	1.375/1.374	2.84	N/A	5/16 X 5/32	2.31	6.250	3.125	2.750	1.375
381	13.38	6.69	1.500/1.499	3.88	N/A	3/8 X 3/16	3.16	6.875	3.438	3.000	1.500
451*	14.50	7.25	1.625/1.624	4.18	3.9	3/8 X 3/16	3.28	8.125	4.063	3.250	1.625
521**	15.62	7.81	1.750/1.749	4.47	4.17	3/8 X 3/16	3.50	9.500	4.750	3.750	1.875
GW601	20.00	10.00	2.500	4.65	N/A	5/8 X 5/16	4.00	12.75	6.380	6.380	3.190
GW701	23.52	11.76	2.750	5.65	N/A	5/8 X 5/16	4.00	12.50	6.250	5.500	2.750
GW801	25.00	12.25	3.000	5.98	5.26	3/4 X 3/8	4.50	14.25	7.125	6.500	3.250
GW1001	29.50	14.75	3.750	6.76	N/A	7/8 X 7/16	5.00	17.75	8.875	6.875	3.438

* ALSO AVAILABLE WITH 1.750/1.749 (M) DIAMETER OUTPUT SHAFT. CONSULT FACTORY.
** ALSO AVAILABLE WITH 2.000/1.999 (M) DIAMETER OUTPUT SHAFT. CONSULT FACTORY.

MODEL	EE	FF	GG	HH	JJ	KK	LL	MM	NN	Wt. Lbs.
131	1/4 UNC	0.50	0.50	3.250	1.625	2.000	1.000	5/16 NC	0.75	10
181	1/4 UNC	0.50	0.50	4.188	2.094	2.750	1.375	5/16 NC	0.75	15
211	3/8 UNC	0.50	0.70	5.000	2.500	2.875	1.438	3/8 NC	0.70	23
241	3/8 UNC	0.70	0.70	N/A	N/A	N/A	N/A	N/A	N/A	31
261	3/8 UNC	0.70	0.70	6.375	3.188	3.375	1.688	3/8 NC	0.70	37
321	1/2 UNC	0.75	0.90	7.500	3.750	4.000	2.000	7/16 NC	0.88	60
381	1/2 UNC	0.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	85
451	5/8 UNC	0.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	102
521	5/8 UNC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	128
GW601	5/8 UNC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	321
GW701	1 UNC	1.56	1.56	N/A	N/A	N/A	N/A	N/A	N/A	399
GW801	1 UNC	1.66	1.66	N/A	N/A	N/A	N/A	N/A	N/A	582
GW1001	1-1/4 UNC	2.04	2.04	N/A	N/A	N/A	N/A	N/A	N/A	905

ADDITIONAL DETAIL FOR MODELS GW601 THROUGH GW1001



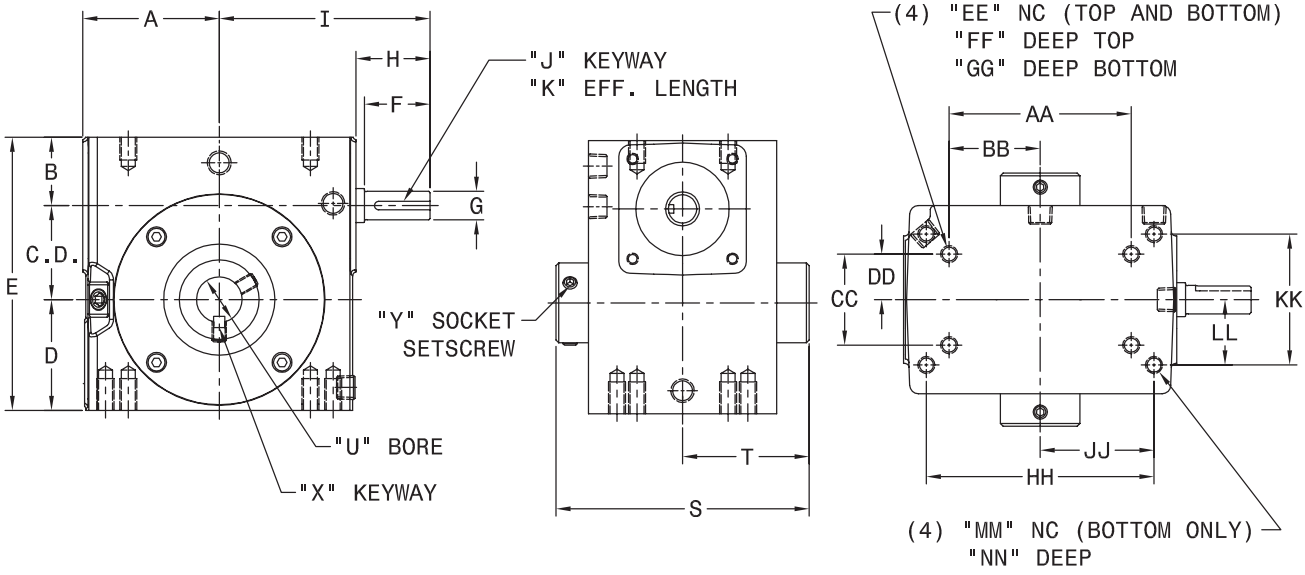


MODEL	A	FA	FB	FC
GW601	N/A	11.13	9.50	4.00
GW701	N/A	11.37	9.65	4.83
GW801	N/A	12.52	9.65	4.83
GW1001	N/A	14.69	11.28	5.62

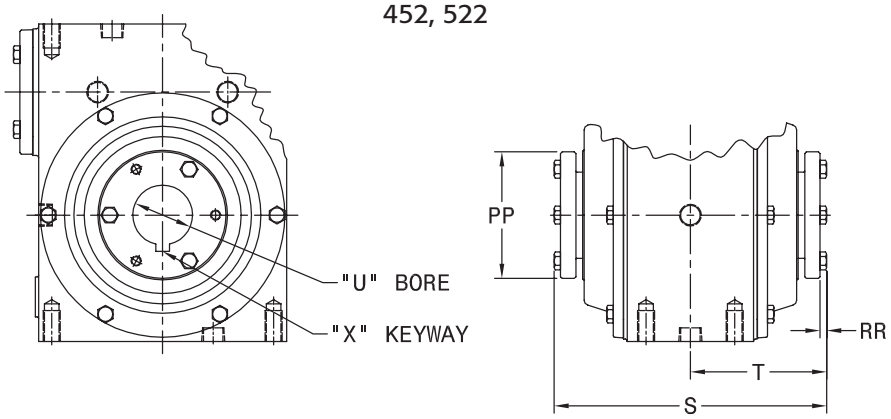
ALL GW MODELS ARE FAN COOLED.

MODELS

182, 212, 242, 262, 322, 382, 452, 522, GW602, GW702, GW802, GW1002



QD BUSHING DETAIL FOR MODELS 452, 522



THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE. SEE PAGE B- 95

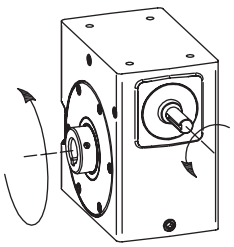
REFER TO FAN DETAIL ON NEXT PAGE FOR GW MODELS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

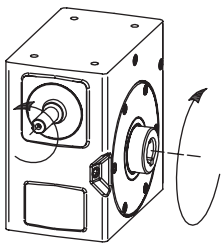
STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

STYLE SPECIFICATION REQUIRED ON POWERCUBE MODELS 182 THROUGH 382 ONLY.



STYLE "A"



STYLE "B"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

182, 212, 242, 262, 322, 382, 452, 522, GW602, GW702, GW802, GW1002

MODEL	C.D.	A	B	D	E	F	G	H	I	J	K	S	T
182	1.751	2.65	1.374	1.875	5.000	1.35	.500/.499	1.54	4.19	1/8 X 1/16	1.16	4.81	2.41
212	2.064	3.00	1.500	2.437	6.000	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13	5.56	2.78
242	2.376	3.38	2.062	2.5	6.938	1.43	.625/.624	1.63	5.00	3/16 X 3/32	1.21	5.93	2.97
262	2.626	3.66	1.874	2.938	7.438	1.73	.625/.624	1.97	5.63	3/16 X 3/32	1.49	5.93	2.97
322	3.251	4.40	2.124	3.25	8.625	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	7.56	3.78
382	3.751	4.90	2.374	3.937	10.062	2.20	1.000/.999	2.48	7.38	1/4 X 1/8	1.91	7.56	3.78
452	4.501	5.23	2.499	4.625	11.625	2.98	1.125/1.124	3.21	8.44	1/4 X 1/8	2.5	10.00	5.00
522	5.168	5.98	2.624	5.375	13.167	N/A	1.250/1.249	3.27	9.25	1/4 X 1/8	2.63	11.13	5.56
GW602	6.000	N/A	4.000	6.50	16.50	N/A	1.500	3.41	11.78	3/8 X 3/16	3.00	11.50	5.75
GW702	7.000	N/A	4.320	7.59	18.91	N/A	1.625	2.97	11.50	3/8 X 3/16	2.87	13.50	6.75
GW802	8.000	N/A	4.100	8.86	20.96	N/A	1.875	2.84	12.50	1/2 X 1/4	2.81	14.50	7.25
GW1002	10.000	N/A	5.110	10.36	25.47	N/A	2.250	3.76	15.50	1/2 X 1/4	3.69	18.50	9.25

MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
182	3.125	1.562	1.625	0.812	1/4 NC	0.50	0.50	4.188	2.094	2.750	1.375	5/16 NC	0.75	15
212	4.000	2.000	2.000	1.000	3/8 NC	0.50	0.70	5.000	2.500	2.875	1.438	3/8 NC	0.70	24
242	5.000	2.500	2.875	1.438	3/8 NC	0.70	0.70	N/A	N/A	N/A	N/A	N/A	N/A	33
262	4.875	2.437	2.688	1.344	3/8 NC	0.70	0.70	6.375	3.188	3.375	1.688	3/8 NC	0.70	37
322	6.250	3.125	2.750	1.375	1/2 NC	0.75	0.90	7.500	3.750	4.000	2.000	7/16 NC	0.88	66
382	6.875	3.438	3.000	1.500	1/2 NC	0.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	82
452	8.125	4.063	3.250	1.625	5/8 NC	0.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	107
522	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	135
GW602	12.75	6.380	6.380	3.190	5/8 UNC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	321
GW702	12.500	6.250	5.500	2.750	1 NC	1.56	1.56	N/A	N/A	N/A	N/A	N/A	N/A	399
GW802	14.250	7.125	6.500	3.250	1 NC	1.66	1.66	N/A	N/A	N/A	N/A	N/A	N/A	582
GW1002	17.750	8.875	6.875	3.438	1-1/4 NC	2.04	2.04	N/A	N/A	N/A	N/A	N/A	N/A	905

STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
182	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
212	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
242 & 262	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
322 & 382	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG
GW602	2	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-3/16	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-1/4	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-7/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-1/2	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-11/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-15/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-3/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-7/16	7/8 x 7/16	NO	1/2 NC X 3/4 LG
GW702	2-7/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-1/2	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-11/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-15/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-7/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-15/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW802	3-7/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	3-15/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	4-3/16	1 X 1/2	N0	1/2 NC X 1/2 LG
	4-7/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW1002	3-7/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	3-15/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	4-7/16	1 X 1/2	NO	5/8 NC X 5/8 LG
	4-15/16	1-1/4 X 5/8	NO	5/8 NC X 5/8 LG
	5-7/16 (Max.)	1-1/4 X 5/16	1-1/4 X 15/16	5/8 NC X 5/8 LG

BORE TOLERANCE NOMINAL + .002 (MODELS 182 THRU 602)
BORE TOLERANCE NOMINAL + .0025 (MODELS GW602 THRU GW1002)

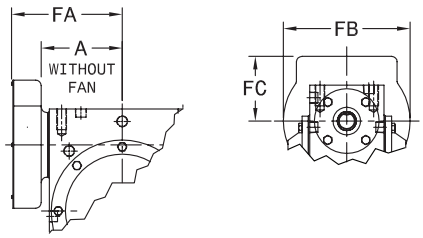
QD BUSHING BORES

MODEL	U	X	Y	PP	RR	KEY	TYPE	KIT*
452	1-15/16	1/2 X 1/4	-	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2		-					0229-02684
	2-3/16		-					0229-02685
	2-7/16	5/8 X 3/16	-			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32	-			3/4 x 13/32		0229-02687
522	2-3/16	1/2 X 1/4	-	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16	-			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8	-			3/4 X 1/2		0229-02690
	3		-					0229-02691
	3-3/16		-					0229-02692
	3-7/16	7/8 X 1/16	-			7/8 X 1/2		0229-02693

* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

ADDITIONAL DETAIL FOR MODELS GW602 THROUGH GW1002

ALL GW MODELS ARE FAN COOLED.

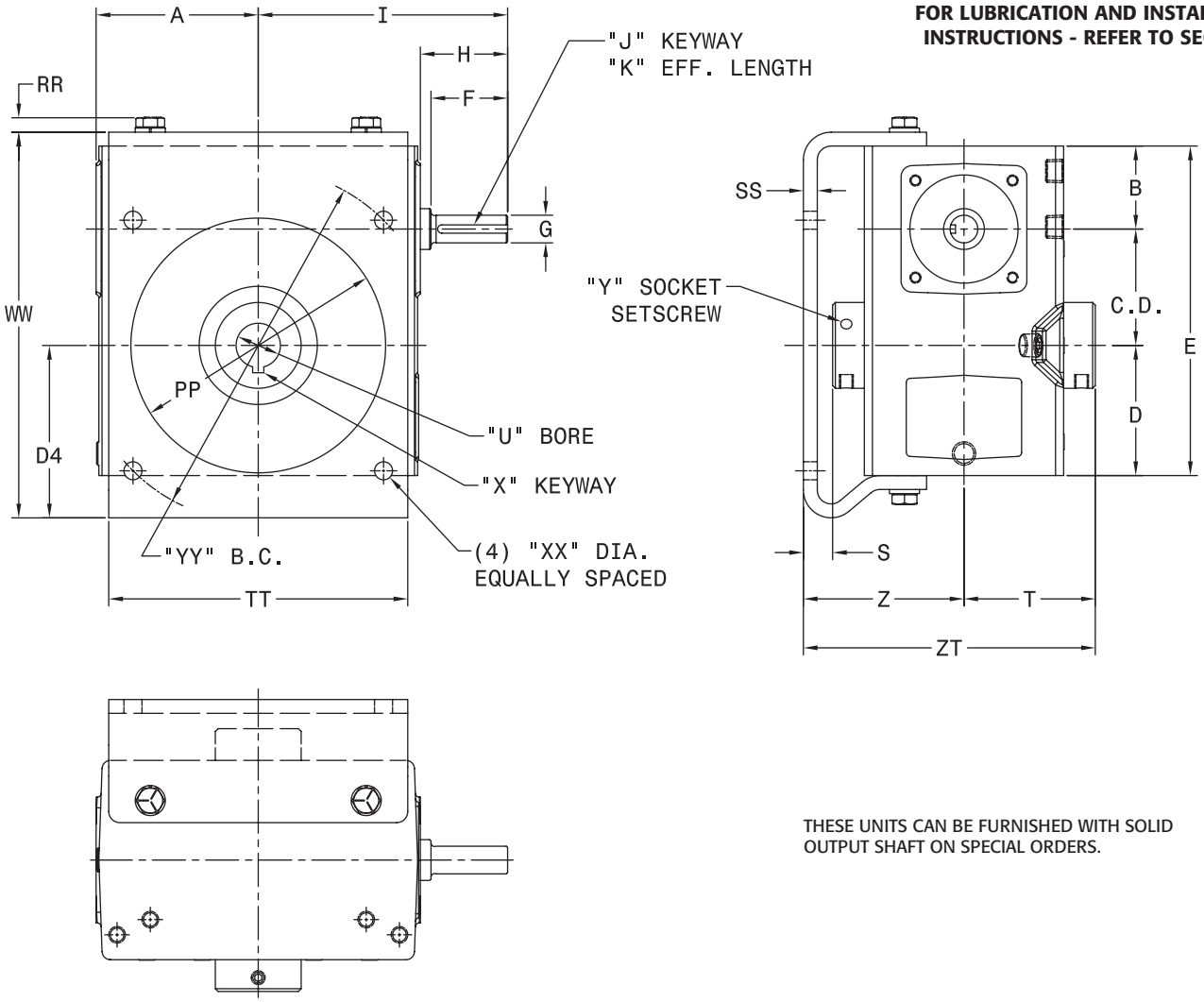


MODEL	A	FA	FB	FC
GW602	N/A	11.13	9.50	4.00
GW702	N/A	11.37	9.65	4.83
GW802	N/A	12.52	9.65	4.83
GW1002	N/A	14.69	11.28	5.62

MODELS

183, 213, 243, 263, 323, 383

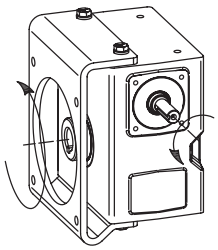
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R



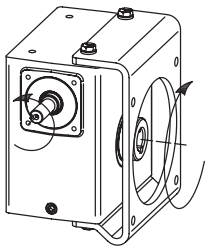
THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



STYLE "L"



STYLE "R"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

183, 213, 243, 263, 323, 383

MODEL	C.D.	A	B	D	E	F	G	H	I	J	K
183	1.751	2.65	1.374	1.875	5.000	1.35	.500/.499	1.54	4.19	1/8 X 1/16	1.16
213	2.064	3.00	1.500	2.437	6.000	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13
243	2.376	3.38	2.062	2.500	6.938	1.43	.625/.624	1.63	5.00	3/16 X 3/32	1.21
263	2.626	3.66	1.874	2.938	7.438	1.73	.625/.624	1.97	5.63	3/16 X 3/32	1.49
323	3.251	4.40	2.124	3.250	8.625	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91
383	3.751	4.90	2.374	3.937	10.062	2.20	1.000/.999	2.48	7.38	1/4 X 1/8	1.91

MODEL	D4	S	T	Z	PP	RR	SS	TT	WW	XX	YY	ZT	WT. LBS.
183	3.13	.91	2.41	3.31	4.25	.22	.25	4.88	6.50	11/32	5.875	5.71	18
213	3.75	.85	2.78	3.63	4.75	.33	.31	5.75	7.63	13/32	7.000	6.41	29
243	3.61	.75	2.97	3.72	5.00	.33	.25	6.00	8.30	13/32	7.500	6.69	38
263	3.89	.66	2.97	3.63	5.75	.33	.31	6.75	8.70	13/32	8.000	6.60	43
323	4.45	.22	3.78	4.00	6.88	.44	.31	7.50	10.14	13/32	9.000	7.78	74
383	5.09	.72	3.78	4.50	7.50	.44	.31	8.25	11.53	9/16	10.000	8.28	92

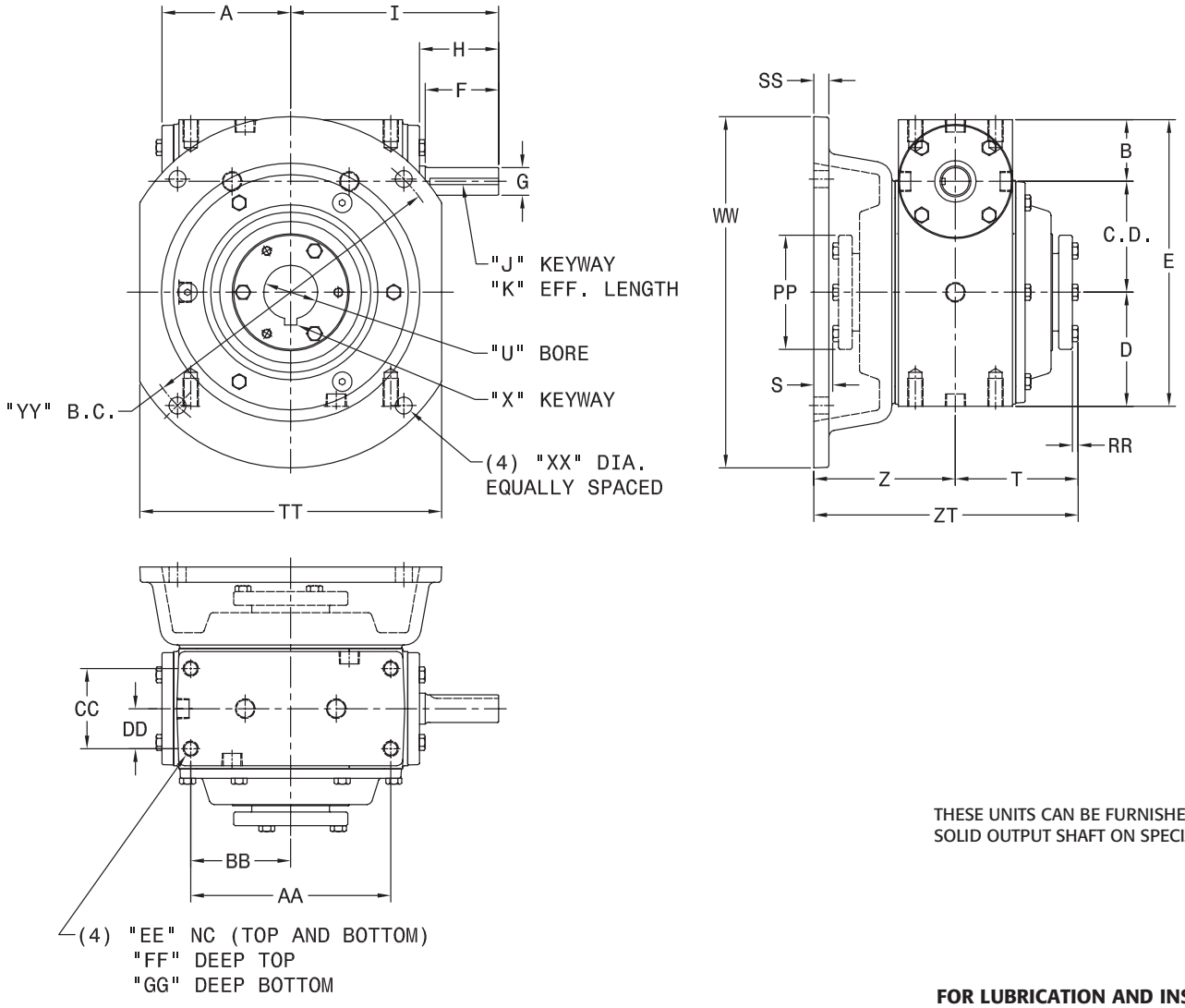
STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
183	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
213	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
243 & 263	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
323 & 383	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG

BORE TOLERANCE NOMINAL + .002

MODELS

453, 523

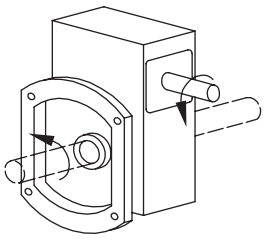


THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDER.

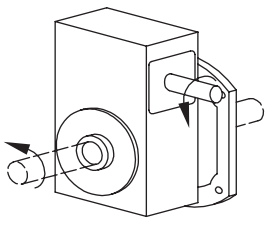
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE



STYLE "L"



STYLE "R"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
453, 523

MODEL	C.D.	A	B	D	E	F	G	H	I	J	K	S	T
453	4.501	5.23	2.499	4.625	11.625	2.98	1.125/1.124	3.21	8.44	1/4 X 1/8	2.5	0.75	5.00
523	5.168	5.98	2.624	5.375	13.167	N/A	1.250/1.249	3.27	9.25	1/4 X 1/8	2.63	1.44	5.56

MODEL	Z	AA	BB	CC	DD	EE	FF	GG	SS	TT	WW	XX	YY	ZT	WT. LBS.
453	5.75	8.125	4.063	3.250	1.625	5/8 NC	0.88	1.13	0.63	12.25	14.25	11/16	13.00	10.75	115
523	7.00	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	0.75	12.50	15.50	11/16	14.00	12.56	144

QD BUSHING BORES

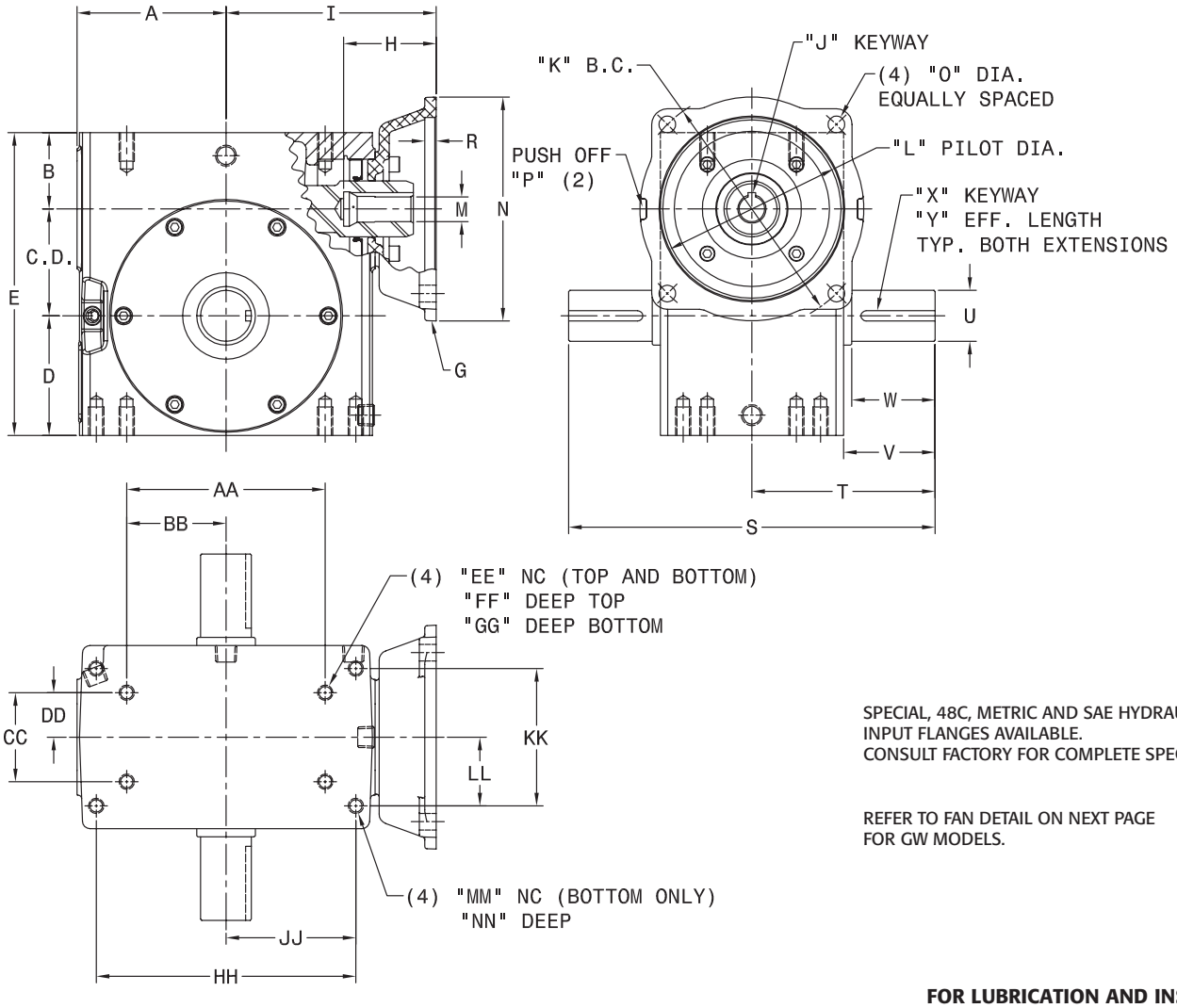
MODEL	U	X	PP	RR	KEY	TYPE	KIT*
453	1-15/16	1/2 X 1/4	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2						0229-02684
	2-3/16						0229-02685
	2-7/16	5/8 X 3/16			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32			3/4 x 13/32		0229-02687
523	2-3/16	1/2 X 1/4	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8			3/4 X 1/2		0229-02690
	3						0229-02691
	3-3/16						0229-02692
	3-7/16	7/8 X 1/16			7/8 X 1/2		0229-02693

* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

BORE TOLERANCE NOMINAL + .002

MODELS

134, 184, 214, 244, 264, 324, 384, 454, 524, GW604



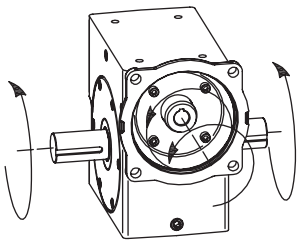
SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE.
CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

REFER TO FAN DETAIL ON NEXT PAGE FOR GW MODELS.

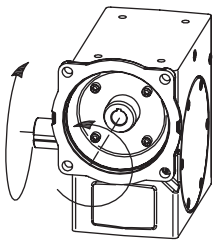
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

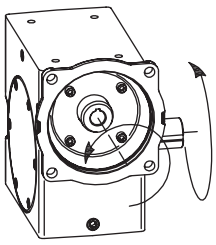
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



STYLE "A"



STYLE "B"



STYLE "C"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

134, 184, 214, 244, 264, 324, 384, 454, 524, GW604

MODEL	C.D.	A	B	D	E	G	H	I	J	K	L	M	N	O	P	R
134	1.334	2.28	1.186	1.562	4.082	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
184	1.751	2.65	1.374	1.875	5.000	56C	2.27	4.00	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
214	2.064	3.00	1.500	2.437	6.000	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
						143TC	2.38					0.875				
244	2.376	3.38	2.062	2.500	6.938	56C	2.27	4.88	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
						143TC	2.38					0.875				
						182TC	3.19	5.72	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
264	2.626	3.66	1.874	2.938	7.438	56C	2.27	5.16	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
						143TC	2.38					0.875				
						182TC	3.19	6.00	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
324	3.251	4.40	2.124	3.250	8.625	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
						143TC	2.38					0.875				
						182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
384	3.751	4.90	2.374	3.937	10.062	56C	2.27	6.50	3/16 X 3/32	5.875	4.501/4.503	0.625	5.50	13/32	SLOTS	.19
						143TC	2.38					0.875				
						182TC	3.19	6.88	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
454	4.501	5.67	2.499	4.625	11.625	56C	2.25	6.75	3/16 X 3/32	5.875	4.501/4.503	0.625	6.50	13/32	SLOTS	.44
						143TC	2.25					0.875				
						182TC	3.19		1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
						213TC	3.50		5/16 X 5/32			1.375				
524*	5.168	6.42	2.624	5.375	13.167	182TC	3.19	7.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
						213TC	3.50		5/16 X 5/32			1.375				
GW604	6.000	N/A	4.000	6.500	16.500	56C	4.42	10.45	3/16 x 3/32	5.875	4.501/4.503	0.625	6.50	13/32	HOLES	.38
						143TC	4.42	10.45	3/16 x 3/32	5.875	4.501/4.503	0.875	6.50	13/32	HOLES	.38
						182TC	3.30	9.33	1/4 x 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.50
						213TC	3.30	9.33	5/16 x 5/32	7.250	8.501/8.504	1.375	9.00	17/32	HOLES	.50
						254TC	3.91	9.94	3/8 x 3/16	7.250	8.501/8.504	1.625	9.00	17/32	HOLES	.50

* 56C & 143TC FLANGES AVAILABLE AS MODIFIED STANDARDS

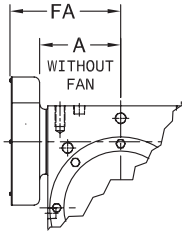
MODEL	S	T	U	V	W	X	Y	AA	BB	CC	DD
134	6.50	3.25	.625/.624	1.69	N/A	3/16 X 3/32	1.38	2.250	1.125	1.625	.812
184	7.00	3.50	.750/.749	1.78	1.54	3/16 X 3/32	1.41	3.125	1.562	1.625	.812
214	8.50	4.25	.875/.874	2.19	1.95	3/16 X 3/32	1.83	4.000	2.000	2.000	1.000
244	9.00	4.50	1.125/1.124	2.31	2.06	1/4 X 1/8	1.74	5.000	2.500	2.875	1.438
264	9.00	4.50	1.250/1.249	2.25	N/A	1/4 X 1/8	1.85	4.875	2.437	2.688	1.344
324	10.88	5.44	1.375/1.374	2.84	N/A	5/16 X 5/32	2.31	6.250	3.125	2.750	1.375
384	13.38	6.69	1.500/1.499	3.88	N/A	3/8 X 3/16	3.16	6.875	3.438	3.000	1.500
454**	14.50	7.25	1.625/1.624	4.18	3.90	3/8 X 3/16	3.28	8.125	4.063	3.250	1.625
524***	15.62	7.81	1.750/1.749	4.47	4.17	3/8 X 3/16	3.50	9.500	4.750	3.750	1.875
GW604	20.00	10.00	2.500	4.65	N/A	5/8 X 5/16	4.00	12.750	6.380	6.380	3.190

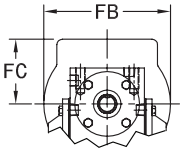
** ALSO AVAILABLE WITH 1.750/1.749 (M) DIAMETER OUTPUT SHAFT. CONSULT FACTORY.

*** ALSO AVAILABLE WITH 2.000/1.999 (M) DIAMETER OUTPUT SHAFT. CONSULT FACTORY.

MODEL	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
134	1/4 UNC	.50	.50	3.250	1.625	2.000	1.000	5/16 NC	.75	11
184	1/4 UNC	.50	.50	4.188	2.094	2.750	1.375	5/16 NC	.75	16
214	3/8 UNC	.50	.75	5.000	2.500	2.875	1.438	3/8 NC	.70	25
244	3/8 UNC	.70	.70	N/A	N/A	N/A	N/A	N/A	N/A	33
264	3/8 UNC	.70	.70	6.375	3.188	3.375	1.688	3/8 NC	.70	38
324	1/2 UNC	.75	.90	7.500	3.750	4.000	2.000	7/16 NC	.88	64
384	1/2 UNC	.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	90
454	5/8 UNC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	112
524	5/8 UNC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	138
GW604	5/8 UNC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	331

ADDITIONAL DETAIL FOR MODELS GW604

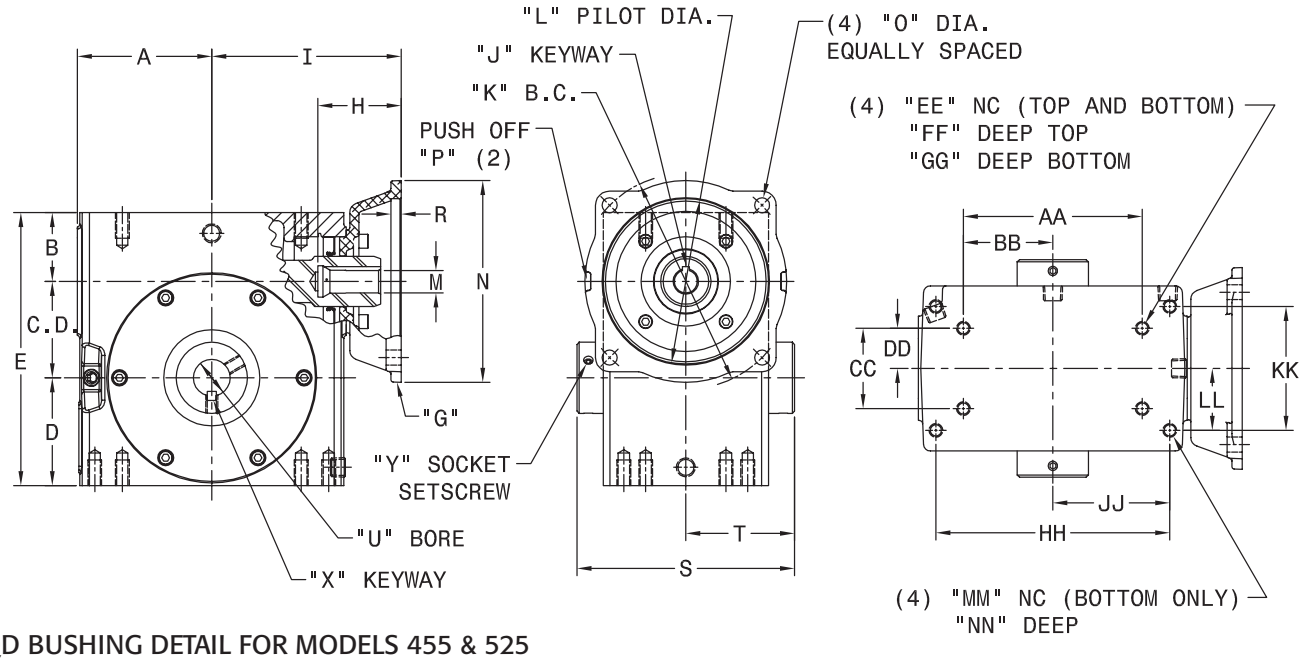




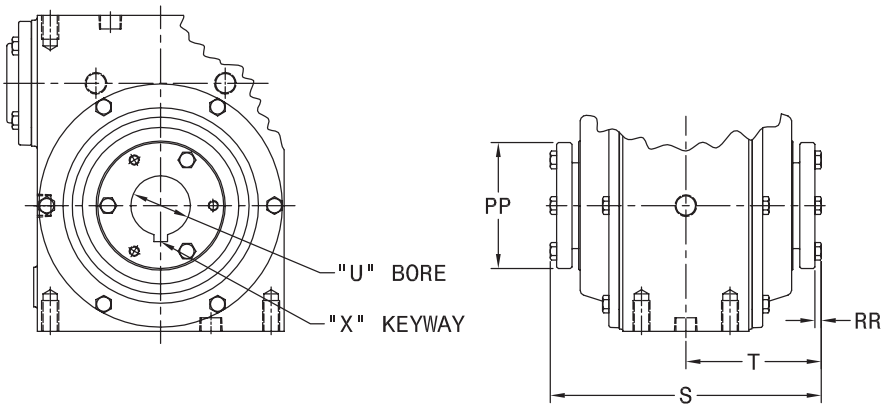
MODEL	A	FA	FB	FC
GW604	N/A	11.13	9.50	4.00

MODELS

185, 215, 245, 265, 325, 385, 455, 525, GW605



QD BUSHING DETAIL FOR MODELS 455 & 525



SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE.
CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS.
TORQUE ARM KITS ARE AVAILABLE.
SEE PAGE B- 95

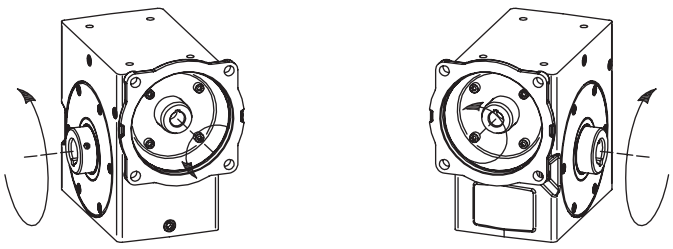
REFER TO FAN DETAIL ON NEXT PAGE FOR GW MODELS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE

STYLE SPECIFICATION REQUIRED ON POWERCUBE MODELS 185 THROUGH 385 ONLY.



STYLE "A" STYLE "B"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

185, 215, 245, 265, 325, 385, 455, 525, GW605

MODEL	C.D.	A	B	D	E	G	H	I	J	K	L	M	N	O	P	R
185	1.751	2.65	1.374	1.875	5.000	56C	2.27	4.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
215	2.064	3.00	1.500	2.437	6.000	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
245	2.376	3.38	2.062	2.500	6.938	56C	2.27	4.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	5.72	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
265	2.626	3.66	1.874	2.938	7.438	56C	2.27	5.16	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.00	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
325	3.251	4.40	2.124	3.250	8.625	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
385	3.751	4.90	2.374	3.937	10.062	56C	2.27	6.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.88	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
455	4.501	5.67	2.499	4.625	11.625	56C	2.25	6.75	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	SLOTS	.44
						143TC	2.25					.875				
						182TC	3.19		1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
						213TC	3.50		5/16 X 5/32			1.375				
525*	5.168	6.42	2.624	5.375	13.167	182TC	3.19	7.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
						213TC	3.50		5/16 X 5/32			1.375				
GW605	6.000	N/A	4.000	6.500	16.500	56C	4.42	10.45	3/16 x 3/32	5.875	4.501/4.503	0.625	6.50	13/32	HOLES	.38
						143TC						0.875				
						182TC	3.30	9.33	1/4 x 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.50
						213TC			5/16 x 5/32			1.375				
						254TC	3.91	9.94	3/8 x 3/16			1.625				

* 56C & 143TC FLANGES AVAILABLE AS MODIFIED STANDARDS

MODEL	S	T	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	Wt. Lbs.
185	4.81	2.41	3.125	1.562	1.625	.812	1/4 NC	.50	.50	4.188	2.094	2.750	1.375	5/16 NC	.75	16
215	5.56	2.78	4.000	2.000	2.000	1.000	3/8 NC	.50	.70	5.000	2.500	2.875	1.438	3/8 NC	.70	25
245	5.93	2.97	5.000	2.500	2.875	1.438	3/8 NC	.70	.70	N/A	N/A	N/A	N/A	N/A	N/A	34
265	5.93	2.97	4.875	2.437	2.688	1.344	3/8 NC	.70	.70	6.375	3.188	3.375	1.688	3/8 NC	.70	38
325	7.56	3.78	6.250	3.125	2.750	1.375	1/2 NC	.75	.90	7.500	3.750	4.000	2.000	7/16 NC	.88	70
385	7.56	3.78	6.875	3.438	3.000	1.500	1/2 NC	.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	86
455	10.00	5.00	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	117
525	11.13	5.56	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	145
GW605	11.50	5.75	12.750	6.380	6.380	3.190	5/8 NC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	331

STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
185	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
215	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
245 & 265	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
325 & 385	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG.
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG.
GW605	2	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-3/16	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-1/4	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-7/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-1/2	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-11/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-15/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-3/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-7/16	7/8 x 7/16	NO	1/2 NC X 3/4 LG

BORE TOLERANCE NOMINAL +.002

QD BUSHING BORES

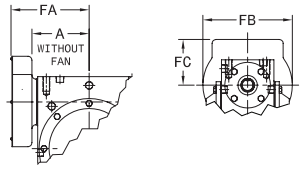
MODEL	U	X	Y	PP	RR	Key	TYPE	KIT**
455	1-15/16	1/2 X 1/4	-	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2		-					0229-02684
	2-3/16		-					0229-02685
	2-7/16	5/8 X 3/16	-			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32	-			3/4 x 13/32		0229-02687
525	2-3/16	1/2 X 1/4	-	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16	-			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8	-			3/4 X 1/2		0229-02690
	3		-					0229-02691
	3-3/16		-					0229-02692
	3-7/16	7/8 X 1/16	-			7/8 X 1/2		0229-02693

**ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE.

KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY

ADDITIONAL DETAIL FOR MODELS GW605

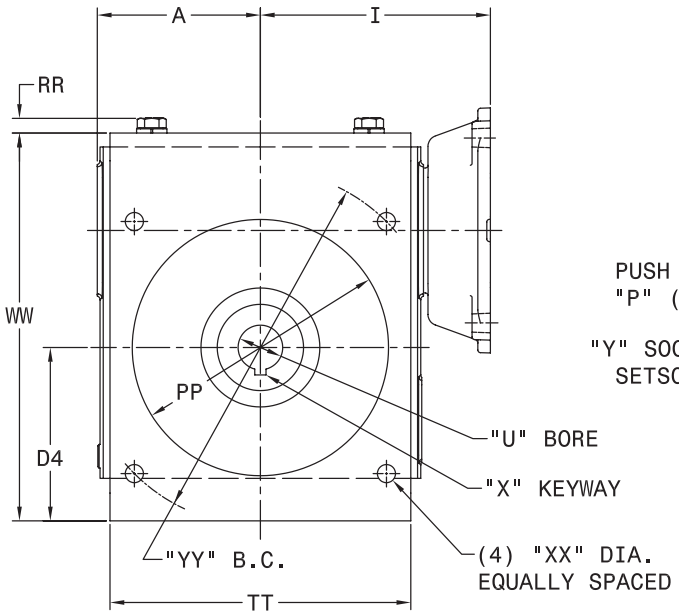
MODEL	A	FA	FB	FC
GW605	N/A	11.13	9.50	4.00

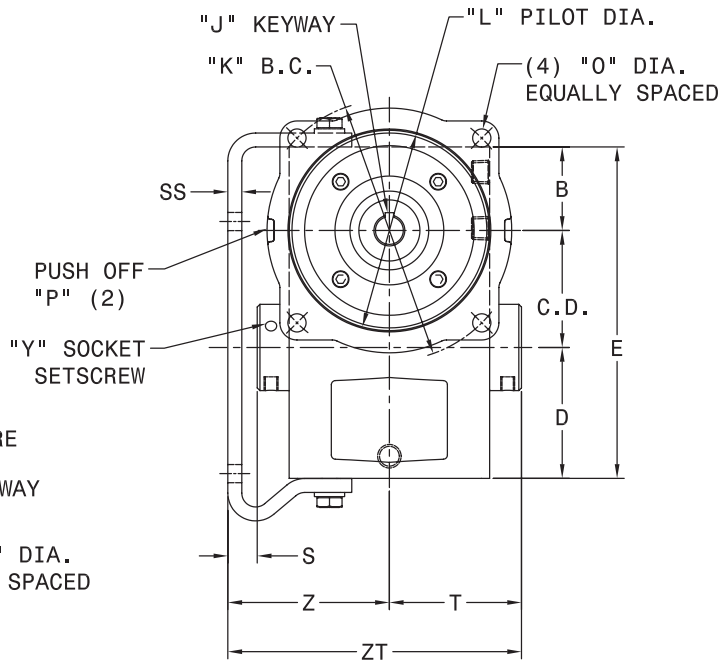


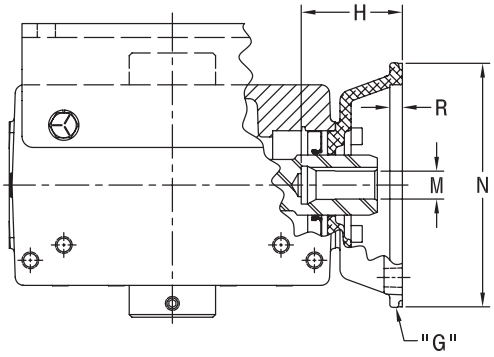
MODELS

186, 216, 246, 266, 326, 386

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R





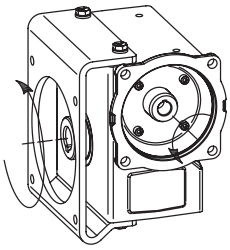


SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE.
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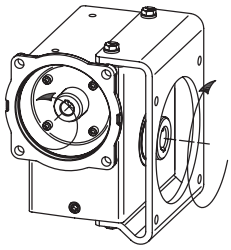
THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

STANDARD STYLES AVAILABLE

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STYLE "L"



STYLE "R"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

186, 216, 246, 266, 326, 386

MODEL	C.D.	A	B	D	E	G	H	I	J	K	L	M	N	O	P	R
186	1.751	2.65	1.374	1.875	5.000	56C	2.27	4.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
216	2.064	3.00	1.500	2.437	6.000	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
246	2.376	3.38	2.062	2.500	6.938	56C	2.27	4.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	5.72	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
266	2.626	3.66	1.874	2.938	7.438	56C	2.27	5.16	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.00	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
326	3.251	4.40	2.124	3.250	8.625	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
386	3.751	4.90	2.374	3.937	10.062	56C	2.27	6.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
						143TC	2.38					.875				
						182TC	3.19	6.88	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44

MODEL	D4	S	T	Z	PP	RR	SS	TT	WW	XX	YY	ZT	WT. LBS.
186	3.13	.91	2.41	3.31	4.25	.22	.25	4.88	6.50	11/32	5.875	5.71	19
216	3.75	.85	2.78	3.63	4.75	.33	.31	5.75	7.63	13/32	7.000	6.41	30
246	3.61	.75	2.97	3.72	5.00	.33	.25	6.00	8.30	13/32	7.500	6.69	39
266 (56C-143TC)	3.89	.66	2.97	3.63	5.75	.33	.31	6.75	8.70	13/32	8.000	6.60	44
266 (182TC)	4.07	1.66	2.97	4.63	5.75	.33	.31	6.75	8.88	13/32	8.000	7.60	53
326	4.45	.22	3.78	4.00	6.88	.44	.31	7.50	10.14	13/32	9.000	7.78	78
386	5.09	.72	3.78	4.50	7.50	.44	.31	8.25	11.53	9/16	10.000	8.28	96

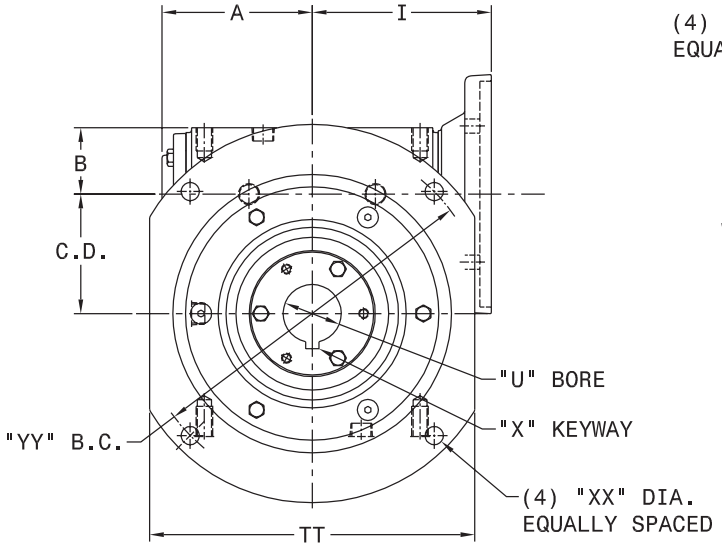
STOCK BORES

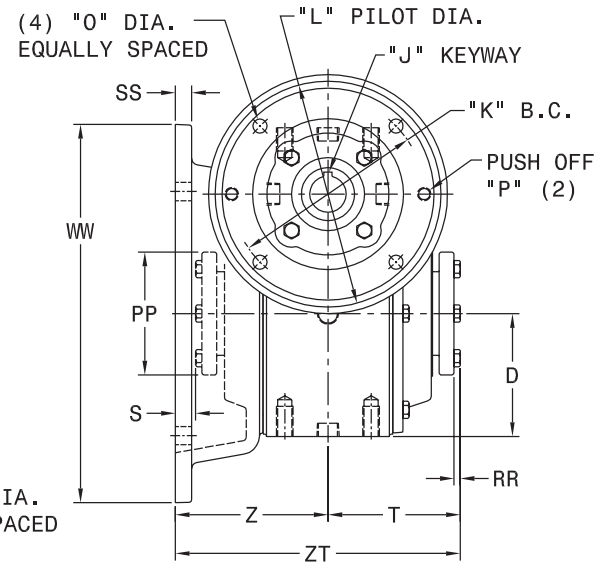
MODEL	U	X	KEY FURNISHED	Y
186	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
216	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
246 & 266	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
326 & 386	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG

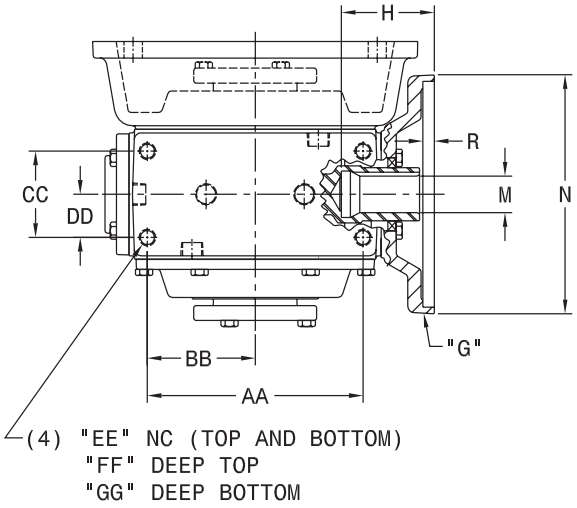
BORE TOLERANCE NOMINAL +.002

MODELS

456, 526







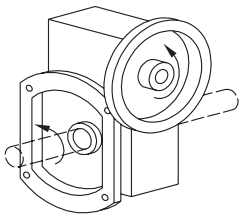
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THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

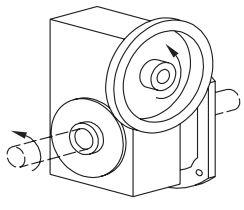
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STANDARD STYLES AVAILABLE

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STYLE "L"



STYLE "R"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
456, 526

MODEL	C.D.	A	B	D	G	H	I	J	K	L	M	N	O	P	R
456	4.501	5.67	2.499	4.625	56C	2.25	6.75	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	SLOTS	.44
					143TC	2.25					.875				
					182TC	3.19		1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
					213TC	3.50		5/16 X 5/32			1.375				
526*	5.168	6.42	2.624	5.375	182TC	3.19	7.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
					213TC	3.50		5/16 X 5/32			1.375				

MODEL	S	T	Z	AA	BB	CC	DD	EE	FF	GG	SS	TT	WW	XX	YY	ZT	WT. LBS.
456	.75	5.00	5.75	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	.63	12.25	14.25	11/16	13.00	10.75	125
526	1.44	5.56	7.00	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	.75	12.50	15.50	11/16	14.00	12.56	154

* 56C & 143TC FLANGES AVAILABLE AS MODIFIED STANDARDS

QD BUSHING BORES

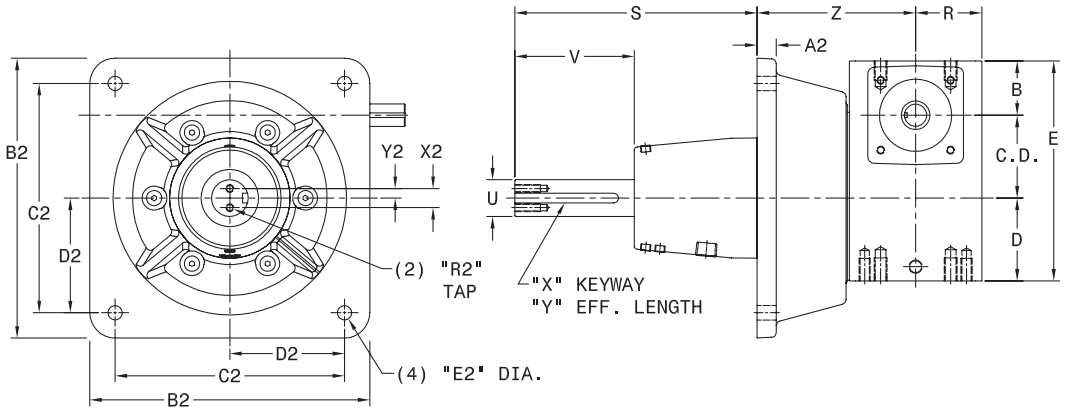
MODEL	U	X	PP	RR	Key	TYPE	KIT**
456	1-15/16	1/2 X 1/4	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2						0229-02684
	2-3/16						0229-02685
	2-7/16	5/8 X 3/16			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32			3/4 x 13/32		0229-02687
526	2-3/16	1/2 X 1/4	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8			3/4 X 1/2		0229-02690
	3						0229-02691
	3-3/16						0229-02692
	3-7/16	7/8 X 1/16			7/8 X 1/2		0229-02693

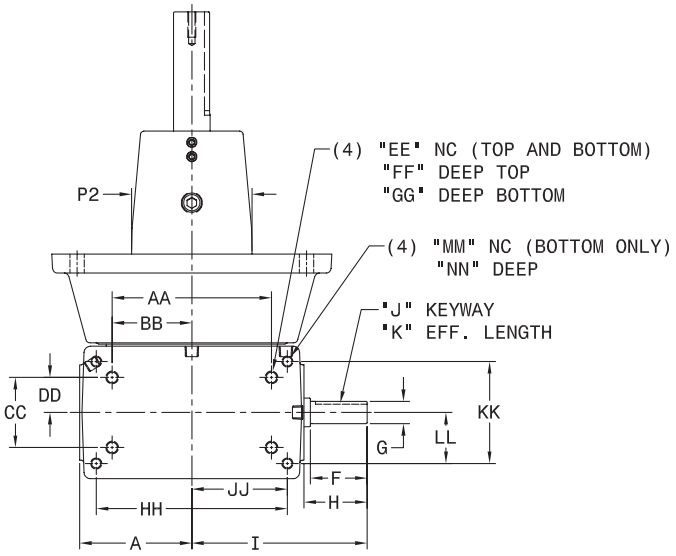
**ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE.

KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY

MODELS

327, 387, 457, 527, GW607, GW707, GW807, GW1007



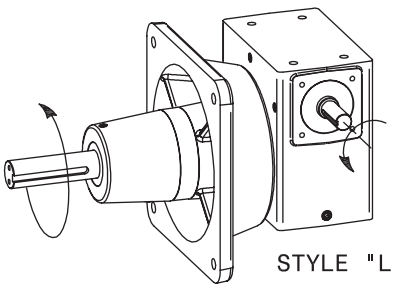


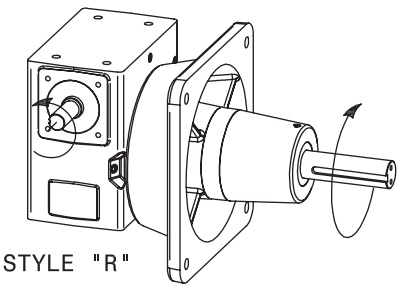
REFER TO FAN DETAIL ON NEXT PAGE FOR GW MODELS.

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STYLE "L"


STYLE "R"

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

327, 387, 457, 527, GW607, GW707, GW807, GW1007

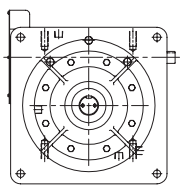
MODEL	C.D.	A	B	D	E	F	G	H	I	J	K	R
327	3.251	4.40	2.124	3.250	8.625	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	2.60
387	3.751	4.90	2.374	3.937	10.062	N/A	1.000/.999	2.48	7.38	1/4 X 1/8	1.91	2.81
457	4.501	5.23	2.499	4.625	11.625	2.98	1.125/1.124	3.21	8.44	1/4 X 1/8	2.50	3.06
527	5.168	5.98	2.624	5.375	13.167	N/A	1.250/1.249	3.27	9.25	1/4 X 1/8	2.63	3.34
GW607	6.000	N/A	4.00	6.50	16.50	N/A	1.500	3.41	11.78	3/8 X 3/16	3.00	5.28
GW707	7.000	N/A	4.32	7.59	18.91	N/A	1.625	2.97	11.50	3/8 X 3/16	2.87	6.06
GW807	8.000	N/A	4.10	8.86	20.96	N/A	1.875	2.84	12.50	1/2 X 1/4	2.81	6.22
GW1007	10.000	N/A	5.11	10.36	25.47	N/A	2.250	3.76	15.50	1/2 X 1/4	3.69	7.94

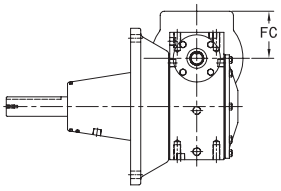
MODEL	OUTPUT FLANGE	S	U	V	X	Y	Z
327	STD	9.50	1.4375/1.4365	4.68	3/8 X 3/16	3.87	6.22
	LARGE*	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.37
387	STD	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.58
457	STD	10.50	1.6875/1.6865	5.50	3/8 X 3/16	4.69	6.00
527	STD	10.50	2.1875/2.1865	5.53	1/2 X 1/4	4.63	6.25
GW607	STD	15.50	2.438	7.63	5/8 X 5/16	6.50	7.00
GW707	STD	15.50	2.937	7.63	3/4 X 3/8	6.44	8.50
GW807	STD	17.06	3.438	9.25	7/8 X 7/16	8.00	10.00
GW1007	STD	17.00	3.938	9.43	1 X 1/2	7.75	12.50

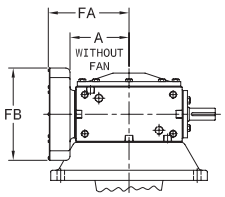
MODEL	OUTPUT FLANGE	A2	B2	C2	D2	E2	P2	R2	X2	Y2
327	STD	.75	11.00	9.000	4.500	9/16	4.75	5/16 NC X 1.00 DP	.75	.38
	LARGE*	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
387	STD	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
457	STD	.81	14.00	12.000	6.000	11/16	5.50	3/8 NC X 1.00 DP	1.00	.50
527	STD	.84	16.00	14.000	7.000	13/16	6.63	3/8 NC X 1.00 DP	1.50	.75
GW607	STD	1.50	19.50	17.000	8.500	15/16	9.50	3/8 NC X 1.00 DP	1.50	.75
GW707	STD	1.75	22.00	19.000	9.500	1-1/8	10.75	3/8 NC X 1.00 DP	2.00	1.00
GW807	STD	2.00	28.00	24.000	12.000	1-5/16	13.75	5/8 NC X 1.50 DP	2.12	1.06
GW1007	STD	2.25	32.00	28.000	14.000	1-5/16	17.00	5/8 NC X 1.50 DP	2.38	1.19

MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
327	6.250	3.125	2.750	1.375	1/2 NC	.75	.90	7.5	3.750	4.000	2.000	7/16 NC	.88	107
387	6.875	3.438	3.000	1.500	1/2 NC	.94	1.00	8.5	4.250	4.750	2.375	1/2 NC	1.00	136
457	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	176
527	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	224
GW607	12.750	6.380	6.380	3.190	5/8 NC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	363
GW707	12.500	6.250	5.500	2.750	1 NC	1.56	1.56	N/A	N/A	N/A	N/A	N/A	N/A	560
GW807	14.250	7.125	6.500	3.250	1 NC	1.66	1.66	N/A	N/A	N/A	N/A	N/A	N/A	780
GW1007	17.750	8.875	6.875	3.438	1-1/4 NC	2.04	2.04	N/A	N/A	N/A	N/A	N/A	N/A	1180

ADDITIONAL DETAIL FOR MODELS GW607 THROUGH GW1007





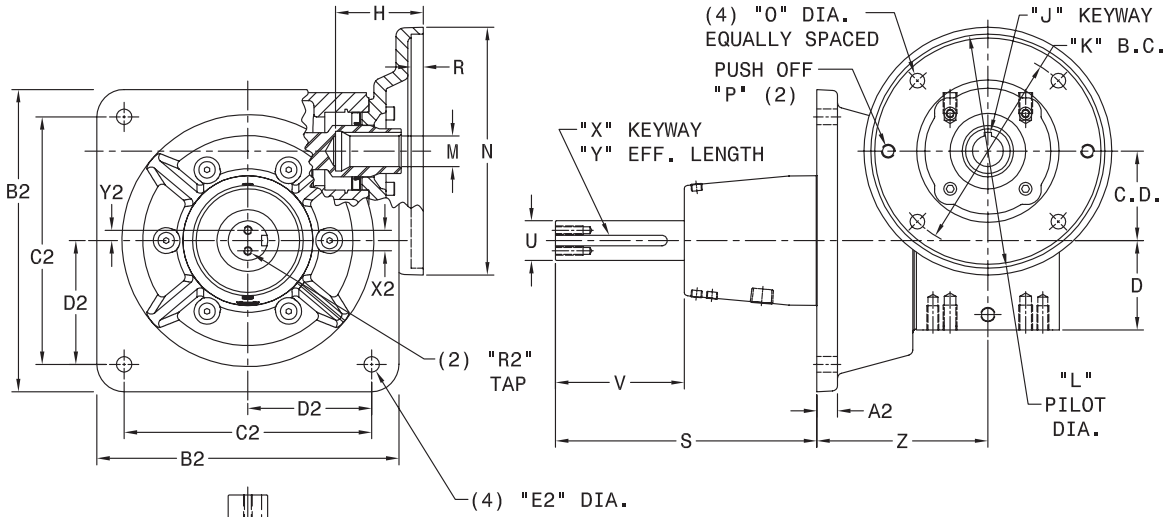


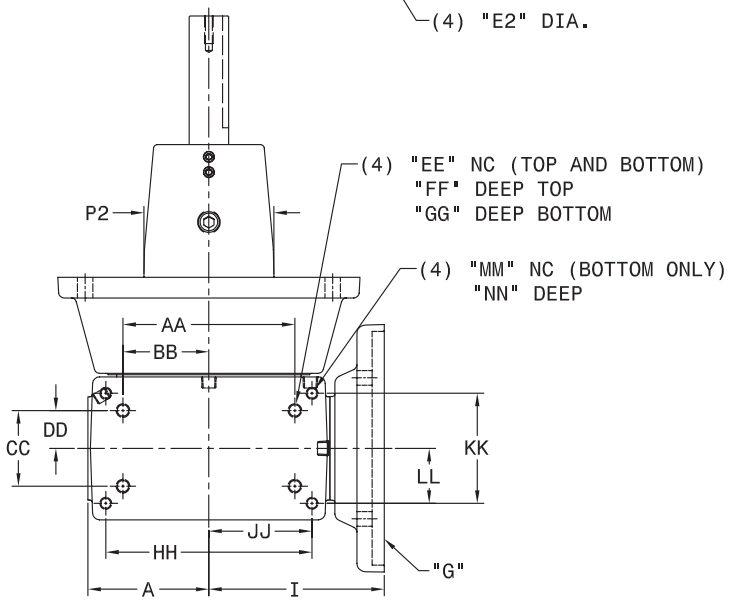
MODEL	A	FA	FB	FC
GW607	N/A	11.13	9.50	4.00
GW707	N/A	11.37	9.65	4.83
GW807	N/A	12.52	9.65	4.83
GW1007	N/A	14.69	11.28	5.62

ALL GW MODELS ARE FAN COOLED.

MODELS

328, 388, 458, 528, GW608



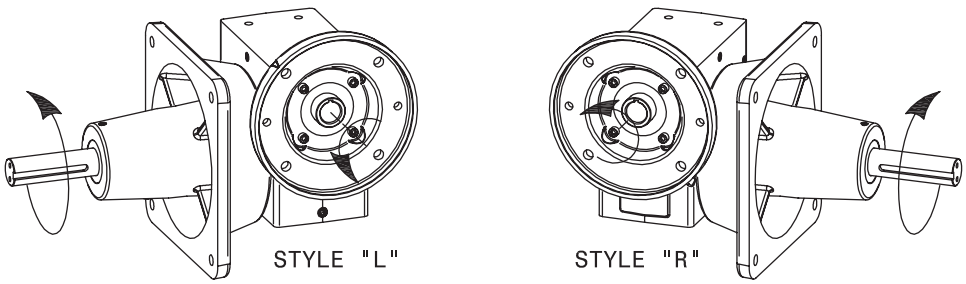


SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE.
CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

328, 388, 458, 528

MODEL	C.D.	A	D	G	H	I	J	K	L	M	N	O	P	R
328	3.251	4.40	3.250	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
				143TC	2.38					.875				
				182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
388	3.751	4.90	3.937	56C	2.27	6.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
				143TC	2.38					.875				
				182TC	3.19	6.88	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
458	4.501	5.67	4.625	56C	2.25	6.75	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	SLOTS	.44
				143TC	2.25					.875				
				182TC	3.19		1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
				213TC	3.50		5/16 X 5/32			1.375				
528*	5.168	6.42	5.375	182TC	3.19	7.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
				213TC	3.50		5/16 X 5/32			1.375				
GW608	6.000	N/A	6.500	56C	4.42	10.45	3/16 x 3/32	5.875	4.501/4.503	0.625	6.50	13/32	HOLES	.38
				143TC	4.42	10.45	3/16 x 3/32	5.875	4.501/4.503	0.875	6.50	13/32	HOLES	.38
				182TC	3.30	9.33	1/4 x 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.50
				213TC	3.30	9.33	5/16 x 5/32	7.250	8.501/8.504	1.375	9.00	17/32	HOLES	.50
				254TC	3.91	9.94	3/8 x 3/16	7.250	8.501/8.504	1.625	9.00	17/32	HOLES	.50

* 56C & 143TC FLANGES AVAILABLE AS MODIFIED STANDARDS

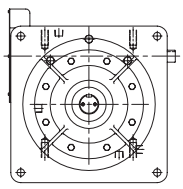
MODEL	OUTPUT FLANGE	S	U	V	X	Y	Z
328	STD	9.50	1.4375/1.4365	4.68	3/8 X 3/16	3.87	6.22
	LARGE**	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.37
388	STD	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.58
458	STD	10.50	1.6875/1.6865	5.50	3/8 X 3/16	4.69	6.00
528	STD	10.50	2.1875/2.1865	5.53	1/2 X 1/4	4.63	6.25
GW608	STD	15.50	2.438	7.63	5/8 X 5/16	6.50	7.00

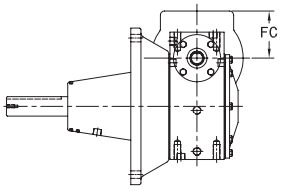
** LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY

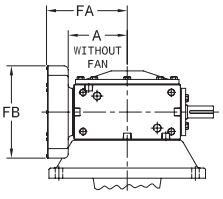
MODEL	OUTPUT FLANGE	A2	B2	C2	D2	E2	P2	R2	X2	Y2
328	STD	.75	11.00	9.000	4.500	9/16	4.75	5/16 NC X 1.00 DP	.75	.38
	LARGE**	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
388	STD	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
458	STD	.81	14.00	12.000	6.000	11/16	5.50	3/8 NC X 1.00 DP	1.00	.50
528	STD	.84	16.00	14.000	7.000	13/16	6.63	3/8 NC X 1.00 DP	1.50	.75
GW608	STD	1.50	19.50	17.000	8.500	15/16	9.50	3/8 NC X 1.00 DP	1.50	.75

** LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY

MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
328	6.250	3.125	2.750	1.375	1/2 NC	.75	.90	7.500	3.750	4.000	2.000	7/16 NC	.88	117
388	6.875	3.438	3.000	1.500	1/2 NC	.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	140
458	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	168
528	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	234
GW608	12.750	6.380	6.380	3.190	5/8 NC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	3730







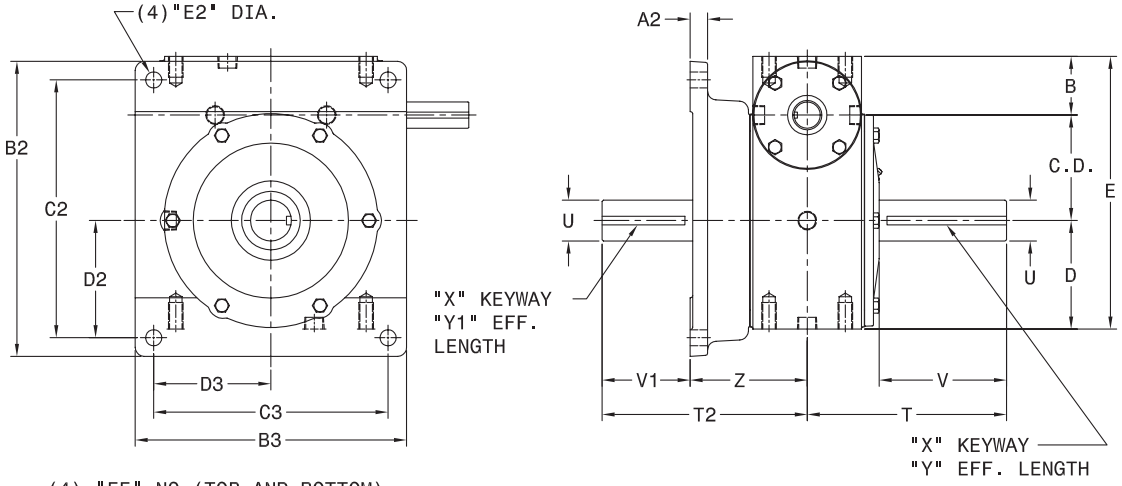
ADDITIONAL DETAIL FOR MODELS GW608

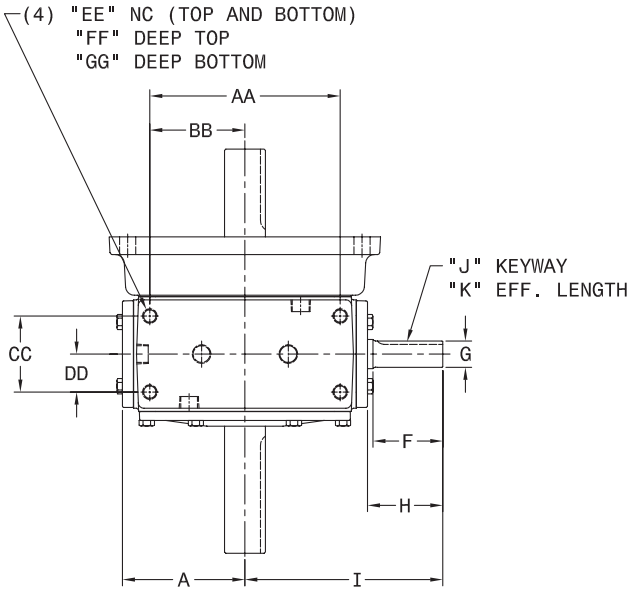
MODEL	A	FA	FB	FC
GW608	N/A	11.13	9.50	4.00

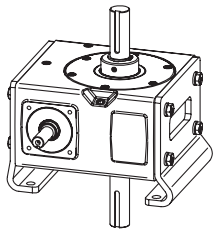
ALL GW MODELS ARE FAN COOLED.

MODELS

459V, 529V





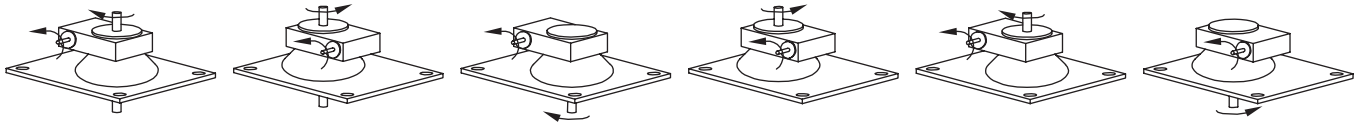


FOR SERIES 180 THROUGH 380 VERTICAL MOUNT EQUIVALENTS, REFER TO KITS SHOWN ON PAGE B-93.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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AL AR BL BR CL CR

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
459V, 529V

MODEL	C.D.	A	B	D	E	F	G	H	I	J	K
459V	4.501	5.23	2.499	4.625	11.625	2.98	1.125/1.124	3.21	8.44	1/4 X 1/8	2.50
529V	5.168	5.98	2.624	5.375	13.167	N/A	1.250/1.249	3.27	9.25	1/4 X 1/8	2.63

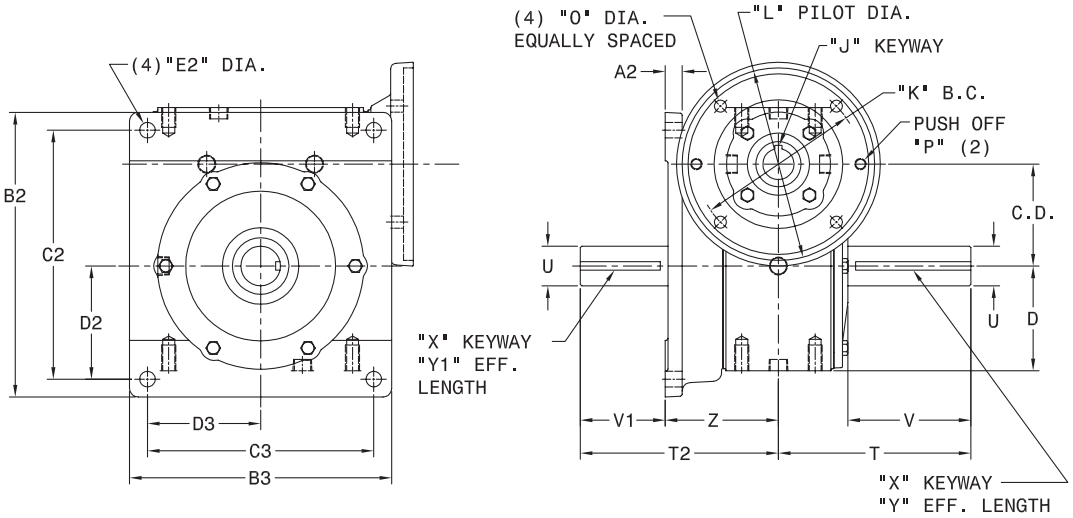
MODEL	T	T2	U	V	V1	X	Y	Y1	Z
459V	8.50	8.75	1.750/1.749	5.43	3.75	3/8 X 3/16	4.59	3.03	5.00
529V	9.00	9.75	2.000/1.999	5.66	4.25	1/2 X 1/4	4.88	3.50	5.50

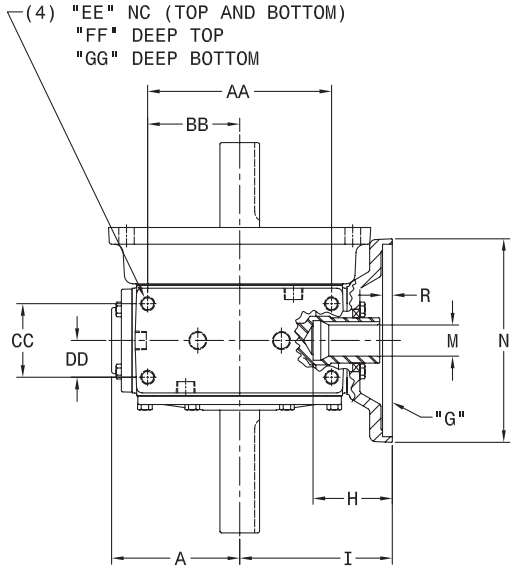
MODEL	A2	B2	B3	C2	C3	D2	D3	E2
459V	.75	12.58	11.58	11.000	10.000	5.000	5.000	11/16
529V	.75	16.83	12.58	15.250	11.000	6.750	5.500	11/16

MODEL	AA	BB	CC	DD	EE	FF	GG	WT. LBS.
459V	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	115
529V	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	144

MODELS

450V, 520V



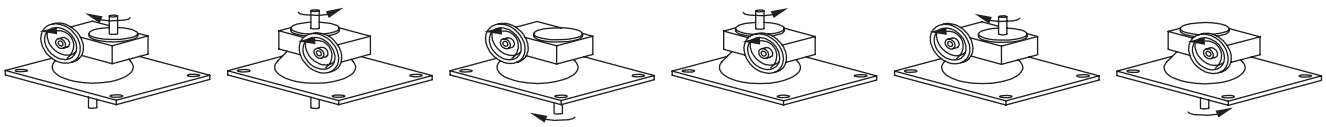


SPECIAL, 48C, METRIC AND SAE HYDRAULIC
INPUT FLANGES AVAILABLE.
CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



AL AR BL BR CL CR

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
450V, 520V

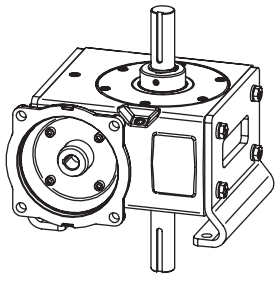
MODEL	C.D.	A	D	G	H	I	J	K	L	M	N	O	P	R
450V	4.501	5.67	4.625	56C	2.25	6.75	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	SLOTS	.44
				143TC	2.25					.875				
				182TC	3.19		1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
				213TC	3.50		5/16 X 5/32			1.375				
520V*	5.168	6.42	5.375	182TC	3.19	7.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44
				213TC	3.50		5/16 X 5/32			1.375				

* 56C & 143TC FLANGES AVAILABLE AS MODIFIED STANDARDS

MODEL	T	T2	U	V	V1	X	Y	Y1	Z
450V	8.50	8.75	1.750/1.749	5.43	3.75	3/8 X 3/16	4.59	3.03	5.00
520V	9.00	9.75	2.000/1.999	5.66	4.25	1/2 X 1/4	4.88	3.50	5.50

MODEL	A2	B2	B3	C2	C3	D2	D3	E2
450V	.75	12.58	11.58	11.000	10.000	5.000	5.000	11/16
520V	.75	16.83	12.58	15.250	11.000	6.750	5.500	11/16

MODEL	AA	BB	CC	DD	EE	FF	GG	WT. LBS.
450V	8.125	4.063	3.250	1.625	5/8 NC	.88	1.13	115
520V	9.500	4.750	3.750	1.875	5/8 NC	1.00	1.25	144



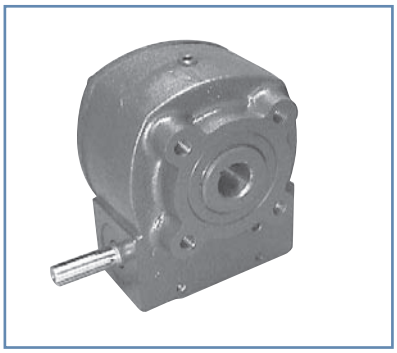
FOR SERIES 180 THROUGH 380
VERTICAL MOUNT EQUIVALENTS,
REFER TO KITS SHOWN ON PAGE B-93.

MODEL W300

Model W300 is a small, compact reducer that is adaptable to many applications in the medium horsepower range. Unit is shaft mounted for direct mounting on drive shafts. Two drilled and tapped holes on either side of housing for torque arm or other mountings.

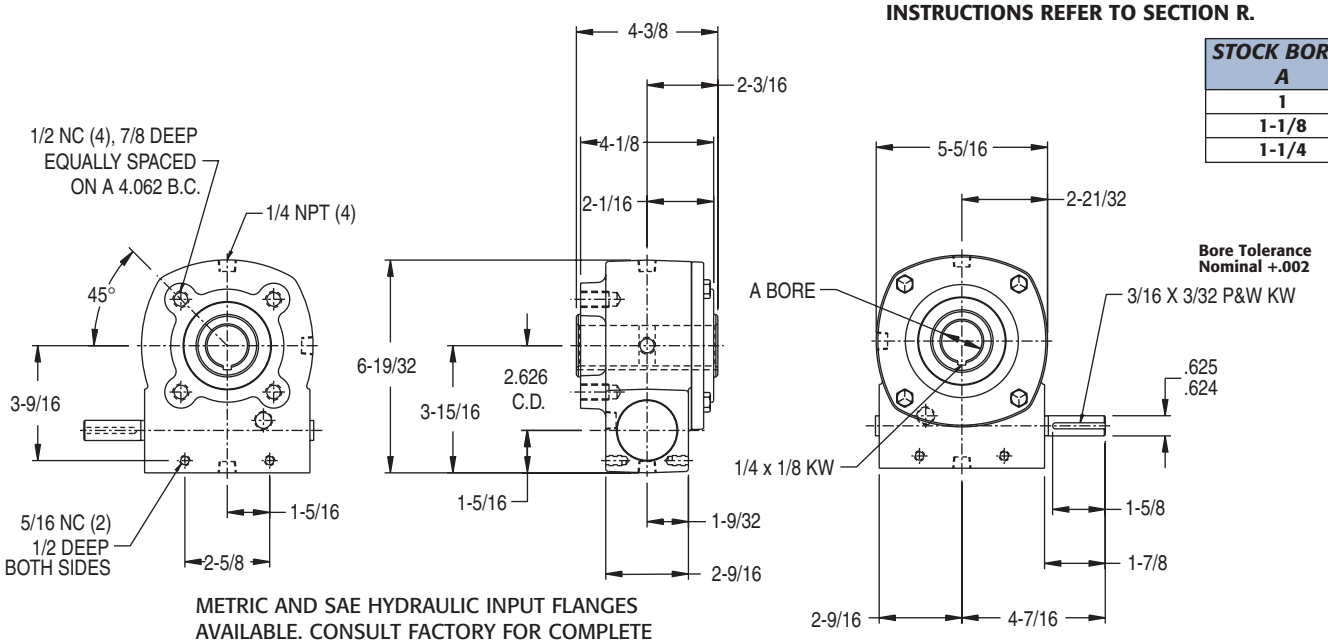
Unit available with all cast iron alloy housings or lightweight aluminum housings.

Construction features include, tapered roller output bearings, input ball bearings, bronze worm gear, and hardened and ground worm.



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

STOCK BORES A
1
1-1/8
1-1/4



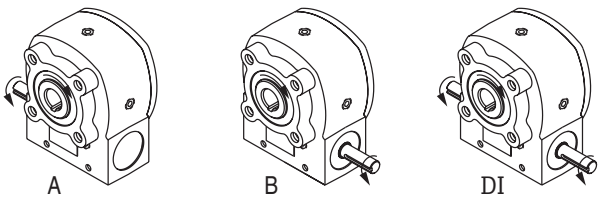
METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

RATING TABLE

RATIO	1750 RPM INPUT			1150 RPM INPUT			850 RPM INPUT			690 RPM INPUT			100 RPM INPUT		
		OUTPUT			OUTPUT			OUTPUT			OUTPUT			OUTPUT	
	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE
10:1	2.45	175.0	800	1.90	115.0	960	1.55	85.0	1090	1.35	69.0	1160	.30	10.0	1650
15:1	1.56	116.6	710	1.13	76.6	845	1.01	56.6	980	.84	46.0	1055	.25	6.6	1560
20:1	1.33	87.5	870	1.02	57.5	1020	.83	42.5	1160	.74	34.5	1220	.23	5.0	1750
25:1	1.04	70.0	865	.84	46.0	1050	.64	34.0	1070	.60	27.6	1160	.14	4.0	1410
30:1	.94	58.3	730	.68	38.3	870	.60	28.3	1015	.51	23.0	1090	.15	3.3	1600
40:1	.71	43.7	820	.54	28.8	1000	.46	21.2	1130	.41	17.2	1200	.13	2.5	1690
50:1	.53	35.0	760	.42	23.0	930	.36	17.0	1060	.31	13.8	1140	.08	2.0	1540
60:1	.50	29.2	640	.42	19.1	840	.35	14.1	990	.30	11.5	1075	.08	1.6	1350

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

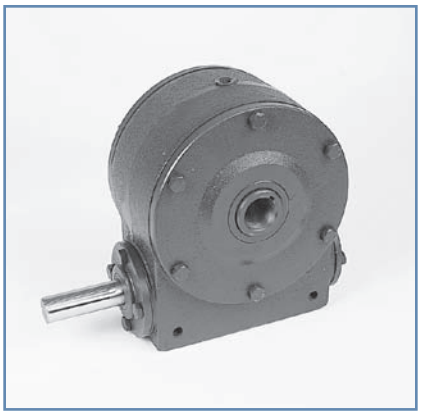
MODEL W50B

Model W50B worm gear reducers are sturdily built, compact, and have a high torque capacity. Output sleeve has hollow bore for direct mounting on driven shaft.

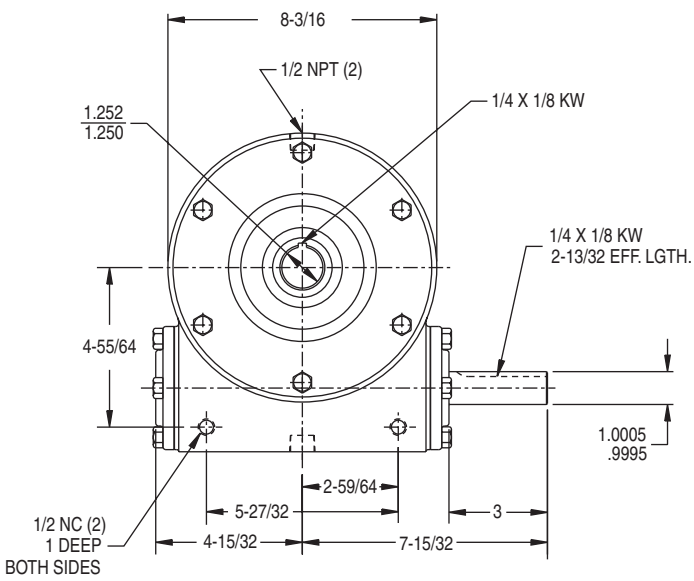
Tapered roller bearings and bronze worm gear for improved efficiency and smooth operation.

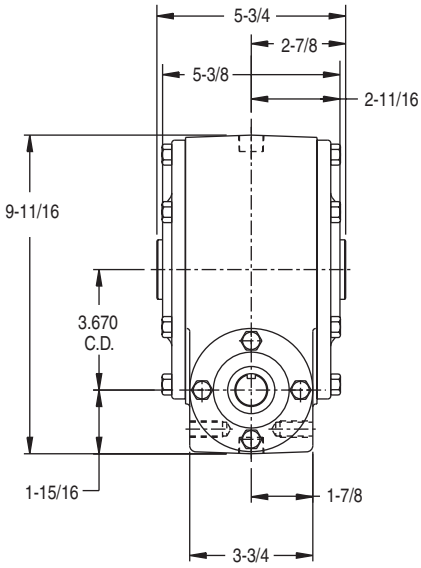
Construction with all cast alloy iron housings; heavy-duty industrial seals.

Factory installed "C" flanges are available on special order.



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.



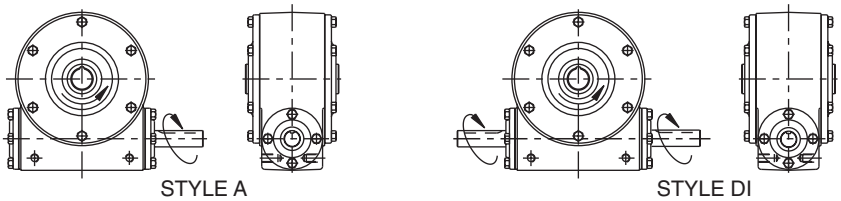


RATING TABLE

RATIO	1750 RPM INPUT			1150 RPM INPUT			850 RPM INPUT			690 RPM INPUT			100 RPM INPUT		
		OUTPUT			OUTPUT			OUTPUT			OUTPUT			OUTPUT	
	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE
8:1	5.5	218.0	1510	4.4	144.0	1860	3.8	106.0	2170	3.4	86.0	2360	.80	12.5	3790
16:1	3.2	109.0	1690	2.6	72.0	2110	2.0	53.0	2420	1.9	43.0	2640	.45	6.25	4180
32:1	1.7	54.7	1640	1.4	36.0	2600	1.2	26.5	2360	1.1	21.5	2590	.25	3.12	4030

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE



STYLE A STYLE DI

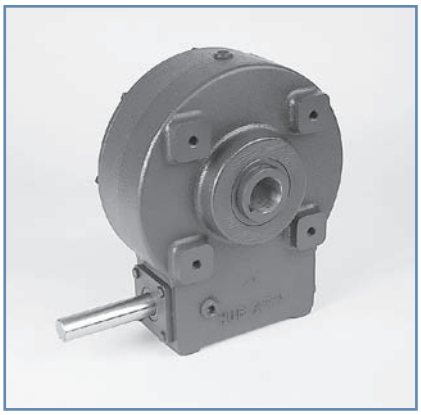
CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL W516

Model W516 is ideally suited for apron drive applications on spreader wagons, bulk feed boxes, etc.

Constructed with all alloy cast iron housings, tapered roller bearings, and industrial type oil seals. Totally enclosed for oil lubrication.

Unit available with either bronze or cast iron worm gear. Also available with output shaft extensions or hollow bore for shaft mounting. Four mounting pads on either side of the housing are drilled and tapped 1/2" NC for direct mounting.



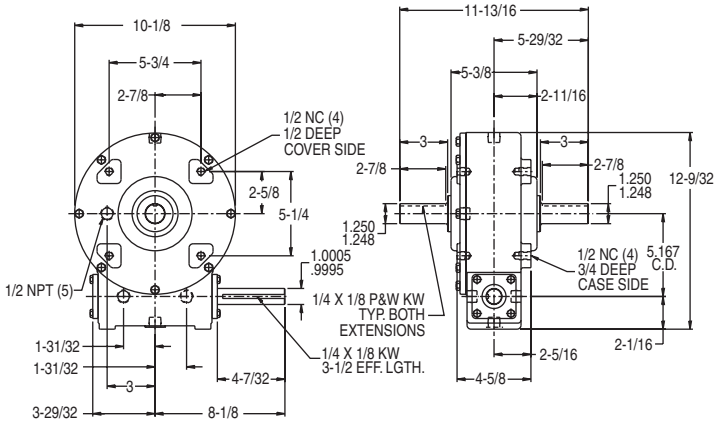
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

RATING TABLE

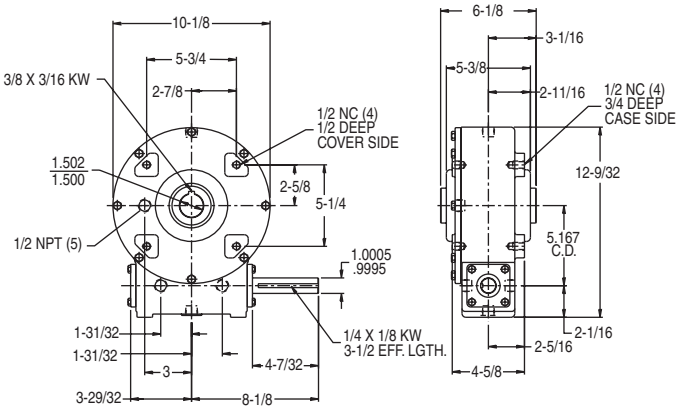
MODEL	RATIO	1750 RPM INPUT			1150 RPM INPUT			850 RPM INPUT			690 RPM INPUT			100 RPM INPUT		
			OUTPUT			OUTPUT			OUTPUT			OUTPUT			OUTPUT	
		INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE	INPUT HP	RPM	IN-LB TORQUE
W516 BRONZE GEAR	*12.5:1	12.7	140	5267	10.5	92	6576	9.4	68	7878	8.5	55.2	8677	1.8	8	12,289
	25:1	7.2	70	5654	6.1	46	7110	5.4	34	8378	4.9	27.6	9225	1.2	4	13,077
	50:1	4.2	35	5402	3.6	23	7343	3.2	17	8890	2.9	13.8	9819	.68	2	14,495
W516 CAST IRON GEAR	*12.5:1							5.1	68	4016	4.5	55.2	4262	1.0	8	5909
	25:1							2.8	34	3891	2.5	27.6	4167	.55	4	5460
	50:1							1.5	17	3613	1.3	13.8	3740	.25	2	3939

*MFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY

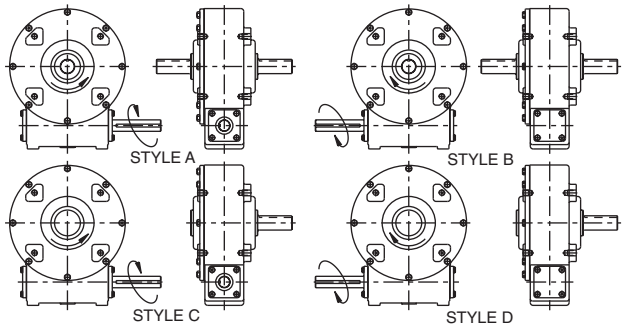
W516 SOLID SHAFT OUTPUT



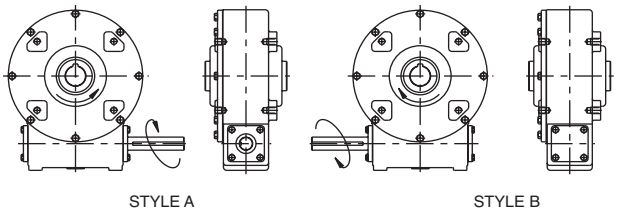
W516 HOLLOW BORE OUTPUT



STYLES AVAILABLE



STYLES AVAILABLE



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODELS RM1, RM2, RM3 - HELICAL RATIO MULTIPLIERS

FEATURES

- Three Cast Iron Models, Two Aluminum Models, One Stainless Steel Model (See Section O)
- Ratios available from 2:1 to 7.5:1
- Can be used as reducer or increaser.
- Provides additional reduction capability when mounted onto Helical Gear Reducer or Worm Gear Reducer
- C-flange or solid input shaft.
- Helical gearing.
- Double lip seals.
- Base mounting available.
- Permanently lubricated at factory.



SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

MODEL NOMENCLATURE EXAMPLE

A RM 1 Q 2.056 56C - 56C

HOUSING MATERIAL
Blank : Cast Iron
A : Aluminum
SS : Stainless Steel (See Section O)
CPA : Cleanline Platinum Plus Aluminum (See Section O)

RATIO MULTIPLIER

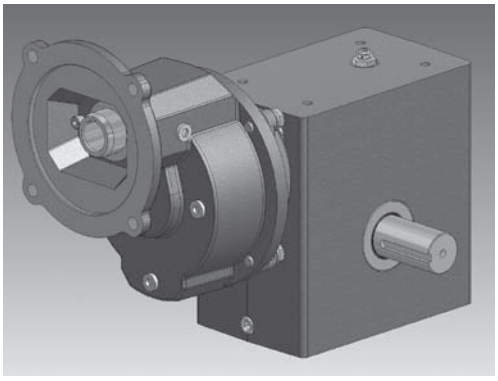
UNIT SIZE
1, 2, 3

INPUT OPTION
Q : Quill style C-Face
C : Coupling style C-Face
S : Shaft input

EXACT RATIO

INPUT FRAME SIZE

OUTPUT FRAME SIZE



Helical Ratio Multipliers, when coupled with a C-faced single reduction worm speed reducer (see illustration) can create an efficient helical-worm double reduction speed reducer combination. Please refer to rating chart example below for selection instructions.

Note: See Section F for dimensions and available frame sizes of Helical ratio multipliers and pages B-32 to B-47 for dimensions and available frame sizes of single reduction units

Also see Section F for ratings of Helical Ratio multipliers as stand alone parallel shaft reducers.

Selection Example: (see next page for rating chart)

HELICAL-WORM DOUBLE REDUCTION MECHANICAL RATINGS

RATINGS @ 1750 INPUT RPM, I.00 SERVICE FACTOR

USE THIS CHART WHEN COUPLING A HELICAL RATIO MULTIPLIER WITH A SINGLE REDUCTION WORM SPEED REDUCER

TOTAL RATIO	OUTPUT RPM	WORM SERIES	WORM RATIO	HELICAL SIZE	HELICAL RATIO	INPUT HP	EFF. %	OUTPUT TORQUE
40.00	43.8	W240	10	RM1			79.1	1613
40.00	43.8	260	10	RM2			78.1	2539
40.00	43.8	320	10	RM2	4.00	3.63	77.8	4070
40.45	43.3	380	10	RM3	4.05	6.29	79.2	7257
			10	RM3			80.2	11029
			10	RM1			72.1	378
			10	RM1	5.11	0.64	73.2	862
51.11	34.2	210	10	RM1	5.11	0.99	73.6	1340

1. Select Total Ratio Desired

2. Select by Input HP or Output Tq required for your application

3. Order C-face model of worm gear drive in series and ratio listed here. (See page B-12)

4. Order RM model and ratio listed here

NOTE: ***INPUT*** FRAME SIZE OF Worm speed reducer MUST match ***OUTPUT*** frame size of Helical ratio multiplier. (See dimensional pages reference above for available frame sizes)

HELICAL-WORM DOUBLE REDUCTION MECHANICAL RATINGS

RATINGS @ 1750 INPUT RPM, I.00 SERVICE FACTOR

USE THIS CHART WHEN COUPLING A HELICAL RATIO MULTIPLIER WITH A SINGLE REDUCTION WORM SPEED REDUCER

TOTAL RATIO	OUTPUT RPM	WORM SERIES	WORM RATIO	HELICAL SIZE	HELICAL RATIO	INPUT HP	EFF. %	OUTPUT TORQUE
40.00	43.8	130	10	RM1	4.00	0.34	73.0	359
40.00	43.8	180	10	RM1	4.00	0.76	74.1	814
40.00	43.8	210	10	RM1	4.00	1.17	74.5	1254
40.00	43.8	W240	10	RM1	4.00	1.42	79.1	1613
40.00	43.8	260	10	RM2	4.00	2.26	78.1	2539
40.00	43.8	320	10	RM2	4.00	3.63	77.8	4070
40.45	43.3	380	10	RM3	4.05	6.29	79.2	7257
40.45	43.3	450	10	RM3	4.05	9.44	80.2	11029
40.45	43.3	520	10	RM3	4.05	11.35	81.2	13420
51.11	34.2	130	10	RM1	5.11	0.28	72.1	378
51.11	34.2	180	10	RM1	5.11	0.64	73.2	862
51.11	34.2	210	10	RM1	5.11	0.99	73.6	1340
51.11	34.2	W240	10	RM1	5.11	1.16	78.4	1680
50.00	35.0	260	10	RM2	5.00	1.91	77.3	2654
50.00	35.0	320	10	RM2	5.00	3.00	76.8	4150
51.67	33.9	380	10	RM3	5.17	5.43	78.4	7914
51.67	33.9	450	10	RM3	5.17	8.18	79.4	12091
51.67	33.9	520	10	RM3	5.17	10.07	80.4	15070
60.00	29.2	130	15	RM1	4.00	0.27	67.2	392
60.00	29.2	180	15	RM1	4.00	0.57	68.6	838
60.00	29.2	210	15	RM1	4.00	0.90	68.4	1324
60.00	29.2	W240	15	RM1	4.00	1.06	74.7	1711
60.00	29.2	260	15	RM2	4.00	1.83	71.1	2812
60.00	29.2	320	15	RM2	4.00	3.30	73.2	5214
60.68	28.8	380	15	RM3	4.05	4.64	74.6	7564
60.68	28.8	450	15	RM3	4.05	7.07	76.0	11728
60.68	28.8	520	15	RM3	4.05	5.80	77.4	12410
74.62	23.5	130	10	RM1	7.46	0.20	70.5	379
74.62	23.5	180	10	RM1	7.46	0.45	71.4	870
74.62	23.5	210	10	RM1	7.46	0.71	71.6	1366
74.62	23.5	W240	10	RM1	7.46	0.83	77.1	1722
71.82	24.4	260	10	RM2	7.18	1.36	75.7	2662
71.82	24.4	320	10	RM2	7.18	2.62	75.0	5070
75.38	23.2	380	10	RM3	7.54	3.97	76.6	8256
75.38	23.2	450	10	RM3	7.54	5.80	77.7	12240
77.51	22.6	520	15	RM3	5.17	8.72	76.5	18615
80.00	21.9	130	20	RM1	4.00	0.21	64.1	385
80.00	21.9	180	20	RM1	4.00	0.46	65.5	861
80.00	21.9	210	20	RM1	4.00	0.66	65.7	1253
80.00	21.9	W240	20	RM1	4.00	0.84	71.3	1730
80.00	21.9	260	20	RM2	4.00	1.36	69.8	2733
80.00	21.9	320	20	RM2	4.00	2.62	69.5	5235
80.90	21.6	380	20	RM3	4.05	3.69	72.0	7746
80.90	21.6	450	20	RM3	4.05	5.63	73.6	12058
80.90	21.6	520	20	RM3	4.05	7.69	75.4	16891
87.87	19.9	130	30	RM1	2.93	0.22	55.6	382
87.87	19.9	180	30	RM1	2.93	0.45	57.5	810
87.87	19.9	210	30	RM1	2.93	0.70	57.3	1265
87.87	19.9	W240	30	RM1	2.93	0.79	65.8	1647
87.39	20.0	260	30	RM2	2.91	1.38	60.9	2656
87.39	20.0	320	30	RM2	2.91	2.36	63.8	4734
87.39	20.0	380	30	RM2	2.91	3.30	65.8	6841
88.92	19.7	450	30	RM3	2.96	5.02	67.9	10899
88.92	19.7	520	30	RM3	2.96	7.01	70.0	15704

CONTINUED ON NEXT PAGE

HELICAL-WORM DOUBLE REDUCTION MECHANICAL RATINGS

RATINGS @ 1750 INPUT RPM, I.00 SERVICE FACTOR

USE THIS CHART WHEN COUPLING A HELICAL RATIO MULTIPLIER WITH A SINGLE REDUCTION WORM SPEED REDUCER

TOTAL RATIO	OUTPUT RPM	WORM SERIES	WORM RATIO	HELICAL SIZE	HELICAL RATIO	INPUT HP	EFF. %	OUTPUT TORQUE
102.22	17.1	130	20	RM1	5.11	0.17	63.0	405
102.22	17.1	180	20	RM1	5.11	0.38	64.4	910
102.22	17.1	210	20	RM1	5.11	0.55	64.5	1305
102.22	17.1	W240	20	RM1	5.11	0.70	70.3	1802
100.00	17.5	260	20	RM2	5.00	1.15	68.7	2852
100.00	17.5	320	20	RM2	5.00	2.23	68.2	5488
100.00	17.5	380	20	RM2	5.00	3.04	70.9	7758
103.34	16.9	450	20	RM3	5.17	4.82	72.5	13009
103.34	16.9	520	20	RM3	5.17	6.66	74.4	18447
120.00	14.6	130	30	RM1	4.00	0.17	53.5	399
120.00	14.6	180	30	RM1	4.00	0.36	55.3	850
120.00	14.6	210	30	RM1	4.00	0.56	54.9	1339
120.00	14.6	W240	30	RM1	4.00	0.63	63.9	1729
120.00	14.6	260	30	RM2	4.00	1.13	58.5	2846
120.00	14.6	320	30	RM2	4.00	1.98	61.3	5256
120.00	14.6	380	30	RM2	4.00	2.76	63.4	7557
121.35	14.4	450	30	RM3	4.05	4.16	65.5	11900
121.35	14.4	520	30	RM3	4.05	5.82	67.7	17210
149.24	11.7	130	20	RM1	7.46	0.12	61.0	404
149.24	11.7	180	20	RM1	7.46	0.27	62.2	913
149.24	11.7	210	20	RM1	7.46	0.38	62.1	1281
149.24	11.7	W240	20	RM1	7.46	0.50	68.5	1840
143.64	12.2	260	20	RM2	7.18	0.83	66.5	2851
143.64	12.2	320	20	RM2	7.18	1.60	65.7	5439
143.64	12.2	380	20	RM2	7.18	2.11	68.5	7461
150.76	11.6	450	20	RM3	7.54	3.46	70.2	13194
150.76	11.6	520	20	RM3	7.54	4.84	72.2	18987
160.00	10.9	130	40	RM1	4.00	0.13	49.6	379
160.00	10.9	180	40	RM1	4.00	0.29	51.2	843
160.00	10.9	210	40	RM1	4.00	0.42	51.4	1256
160.00	10.9	W240	40	RM1	4.00	0.50	58.8	1698
160.00	10.9	260	40	RM2	4.00	0.82	56.8	2674
160.00	10.9	320	40	RM2	4.00	1.61	56.2	5215
160.00	10.9	380	40	RM2	4.00	2.23	59.6	7664
161.80	10.8	450	40	RM3	4.05	3.31	62.0	11961
161.80	10.8	520	40	RM3	4.05	4.42	64.5	16613
204.44	8.6	130	40	RM1	5.11	0.11	48.3	399
204.44	8.6	180	40	RM1	5.11	0.24	49.9	892
204.44	8.6	210	40	RM1	5.11	0.36	49.9	1337
204.44	8.6	W240	40	RM1	5.11	0.42	57.5	1770
200.00	8.8	260	40	RM2	5.00	0.70	55.4	2780
200.00	8.8	320	40	RM2	5.00	1.39	54.6	5461
200.00	8.8	380	40	RM2	5.00	1.85	58.1	7748
200.00	8.8	450	40	RM2	5.00	2.89	60.4	12567
206.68	8.5	520	40	RM3	5.17	3.87	63.1	18150
255.55	6.8	130	50	RM1	5.11	0.09	42.3	341
255.55	6.8	180	50	RM1	5.11	0.21	44.0	845
255.55	6.8	210	50	RM1	5.11	0.24	46.3	1020
255.55	6.8	W240	50	RM1	5.11	0.31	53.6	1512
250.00	7.0	260	50	RM2	5.00	0.40	53.4	1912
250.00	7.0	320	50	RM2	5.00	0.96	50.2	4327
250.00	7.0	380	50	RM2	5.00	1.21	54.2	5917
250.00	7.0	450	50	RM2	5.00	1.97	56.7	10058
250.00	7.0	520	50	RM2	5.00	2.75	59.1	14654

CONTINUED ON NEXT PAGE

HELICAL-WORM DOUBLE REDUCTION MECHANICAL RATINGS

RATINGS @ 1750 INPUT RPM, I.00 SERVICE FACTOR

USE THIS CHART WHEN COUPLING A HELICAL RATIO MULTIPLIER WITH A SINGLE REDUCTION WORM SPEED REDUCER

TOTAL RATIO	OUTPUT RPM	WORM SERIES	WORM RATIO	HELICAL SIZE	HELICAL RATIO	INPUT HP	EFF. %	OUTPUT TORQUE
298.48	5.9	130	40	RM1	7.46	0.08	46.0	397
298.48	5.9	180	40	RM1	7.46	0.18	47.3	893
298.48	5.9	210	40	RM1	7.46	0.27	47.1	1348
298.48	5.9	W240	40	RM1	7.46	0.30	55.1	1801
287.28	6.1	260	40	RM2	7.18	0.50	52.6	2730
287.28	6.1	320	40	RM2	7.18	1.01	51.5	5381
287.28	6.1	380	40	RM2	7.18	1.30	55.0	7409
287.28	6.1	450	40	RM2	7.18	2.12	57.3	12569
287.28	6.1	520	40	RM2	7.18	2.86	60.1	17784
373.10	4.7	130	50	RM1	7.46	0.06	40.0	332
373.10	4.7	180	50	RM1	7.46	0.15	41.5	819
373.10	4.7	210	50	RM1	7.46	0.17	43.6	988
373.10	4.7	W240	50	RM1	7.46	0.22	51.3	1496
359.10	4.9	260	50	RM2	7.18	0.28	50.8	1827
359.10	4.9	320	50	RM2	7.18	0.68	47.0	4114
359.10	4.9	380	50	RM2	7.18	0.85	51.1	5635
359.10	4.9	450	50	RM2	7.18	1.39	53.5	9587
359.10	4.9	520	50	RM2	7.18	1.94	56.1	14045
447.72	3.9	130	60	RM1	7.46	0.06	29.1	279
447.72	3.9	180	60	RM1	7.46	0.11	36.6	659
447.72	3.9	210	60	RM1	7.46	0.15	37.0	895
447.72	3.9	W240	60	RM1	7.46	0.15	49.6	1178
430.92	4.1	260	60	RM2	7.18	0.33	39.0	2023
430.92	4.1	320	60	RM2	7.18	0.49	43.0	3301
430.92	4.1	380	60	RM2	7.18	0.85	51.1	6762
430.92	4.1	450	60	RM2	7.18	0.99	49.9	7627
430.92	4.1	520	60	RM2	7.18	1.36	52.9	11176

DOUBLE REDUCTION

For Compact Light Weight Aluminum Worm Gear Drives

See Spartan™ Worm Gear Drives

Section C

For High Efficiency
Right Angle Gear Drives

See Poweratio® 2000
Helical Bevel and Helical Worm Units

Sections K & L

For Available Electric Motors

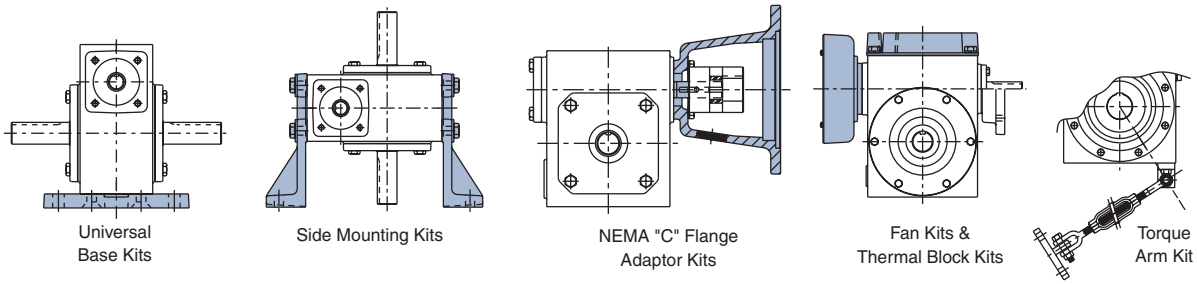
Section H

MODEL INDEX

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2400	2401 **PAGE B-62,B-63**	2402 **PAGE B-64,B-65**	2403 **PAGE B-66,B-67**	2404 **PAGE B-70,B-71**	2405 **PAGE B-72,B-73**	2406 **PAGE B-74,B-75**			2409 **SEE PAGE B-93**	2410 **SEE PAGE B-93**
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3200	3201 **PAGE B-62,B-63**	3202 **PAGE B-64,B-65**	3203 **PAGE B-66,B-67**	3204 **PAGE B-70,B-71**	3205 **PAGE B-72,B-73**	3206 **PAGE B-74,B-75**	3207 **PAGE B-78,B-79**	3208 **PAGE B-80,B-81**	3209 **SEE PAGE B-93**	3210 **SEE PAGE B-93**
3800	3801 **PAGE B-62,B-63**	3802 **PAGE B-64,B-65**	3803 **PAGE B-66,B-67**	3804 **PAGE B-70,B-71**	3805 **PAGE B-72,B-73**	3806 **PAGE B-74,B-75**	3807 **PAGE B-78,B-79**	3808 **PAGE B-80,B-81**	3809 **SEE PAGE B-93**	3810 **SEE PAGE B-93**
4500	4501 **PAGE B-62,B-63**	4502 **PAGE B-64,B-65**	4503 **PAGE B-68,B-69**	4504 **PAGE B-70,B-71**	4505 **PAGE B-72,B-73**	4506 **PAGE B-76,B-77**	4507 **PAGE B-78,B-79**	4508 **PAGE B-80,B-81**	4509 **PAGE B-82,B-83**	4510 **PAGE B-84,B-85**
5200	5201 **PAGE B-62,B-63**	5202 **PAGE B-64,B-65**	5203 **PAGE B-68,B-69**	5204 **PAGE B-70,B-71**	5205 **PAGE B-72,B-73**	5206 **PAGE B-76,B-77**	5207 **PAGE B-78,B-79**	5208 **PAGE B-80,B-81**	5209 **PAGE B-82,B-83**	5210 **PAGE B-84,B-85**
GW60D	GW6001 **PAGE B-62,B-63**	GW6002 **PAGE B-64,B-65**		GW6004 **PAGE B-70,B-71**	GW6005 **PAGE B-72,B-73**		GW6007 **PAGE B-78,B-79**	GW6008 **PAGE B-80,B-81**		
GW70D	GW7001 **PAGE B-62,B-63**	GW7002 **PAGE B-64,B-65**		GW7004 **PAGE B-70,B-71**	GW7005 **PAGE B-72,B-73**		GW7007 **PAGE B-78,B-79**	GW7008 **PAGE B-80,B-81**		
GW80D	GW8001 **PAGE B-62,B-63**	GW8002 **PAGE B-64,B-65**		GW8004 **PAGE B-70,B-71**	GW8005 **PAGE B-72,B-73**		GW8007 **PAGE B-78,B-79**	GW8008 **PAGE B-80,B-81**		
GW100D	GW10001 **PAGE B-62,B-63**	GW10002 **PAGE B-64,B-65**		GW10004 **PAGE B-70,B-71**	GW10005 **PAGE B-72,B-73**		GW10007 **PAGE B-78,B-79**	GW10008 **PAGE B-80,B-81**		

FOR ACCESSORIES REFER TO PAGE B-87 THRU B-97

LUBRICATION AND MOUNTING POSITIONS



Universal Base Kits | Side Mounting Kits | NEMA "C" Flange Adaptor Kits | Fan Kits & Thermal Block Kits | Torque Arm Kit

FOLLOW THE LUBRICATION INSTRUCTIONS THAT ARE FURNISHED FOR THE PRIMARY, AND FINAL DRIVE OF YOUR HUB CITY DOUBLE REDUCTION WORM GEAR REDUCER.

THE TWO UNITS THAT MAKE UP THE DOUBLE REDUCTION ASSEMBLY HAVE INDEPENDENT OIL RESERVOIRS AND EACH MUST BE FILLED TO THE SPECIFIED LEVEL OF OIL INDICATED IN THE LUBRICATION INSTRUCTIONS.

⚠CAUTION — THE DOUBLE REDUCTION WORM GEAR REDUCER MAY BE MOUNTED IN VIRTUALLY ANY POSITION. HOWEVER, IF THE FINAL MOUNTING POSITION IS SUCH THAT ANY OF THE SHAFTS IS IN A VERTICAL POSITION, IT IS SUGGESTED THAT YOU CONSULT THE FACTORY OR YOUR HUB CITY DISTRIBUTOR FOR SPECIAL LUBRICATION INSTRUCTIONS.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 1300, 1800 & 2100				RATIO COMB.			CONVENTIONAL OIL				PAO SYNTHETIC OIL				PAG SYNTHETIC OIL		
	INPUT RPM	RATIO	OUTPUT RPM	PRIM. RATIO	SEC. RATIO	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	INPUT HP	OUTPUT TORQUE
SERIES 1300 RATINGS	1750	50	35.0	5	10	0.316	64.2	366	ALL	ALL	68.7	392	ALL	ALL	73.5	0.316	419
		75	23.3	5	15	0.251	58.9	400	RATIOS	RATIOS	63.2	429	RATIOS	RATIOS	67.8	0.251	460
		100	17.5	5	20	0.194	56.1	392	THERMAL	THERMAL	60.1	420	THERMAL	THERMAL	64.6	0.194	451
		150	11.7	10	15	0.146	52.6	416	EQUALS	EQUALS	56.6	448	EQUALS	EQUALS	61.2	0.146	484
		200	8.75	10	20	0.113	49.8	407	MECH.	MECH.	53.6	438	MECH.	MECH.	57.9	0.113	473
		250	7.00	5	50	0.093	38.2	321			42.6	357			45.7	0.093	384
		300	5.83	20	15	0.085	46.3	424			49.9	457			54.0	0.085	495
		400	4.38	20	20	0.066	43.6	414			47.0	446			51.0	0.066	484
		500	3.50	50	10	0.060	36.6	394			39.9	429			43.1	0.060	463
		600	2.92	20	30	0.057	34.9	430			38.0	468			41.2	0.057	508
		750	2.33	50	15	0.048	32.6	424			35.5	462			38.6	0.048	502
		1000	1.75	50	20	0.038	30.6	414			33.3	451			36.2	0.038	489
		1200	1.46	40	30	0.037	26.7	430			29.4	473			31.9	0.037	513
		1500	1.17	50	30	0.033	23.9	430			26.3	472			28.5	0.033	513
		1800	0.97	60	30	0.031	21.4	430			23.6	473			25.7	0.031	516
		2000	0.88	50	40	0.026	21.7	406			23.9	448			26.0	0.026	486
		2400	0.73	60	40	0.024	19.5	406			21.4	447			23.4	0.024	487
		3000	0.58	60	50	0.019	16.5	330			18.1	363			19.8	0.019	396
		3600	0.49	60	60	0.014	14.2	266			15.7	295			17.1	0.014	321
SERIES 1800 RATINGS*	1750	50	35.0	5	10	0.713	65.3	838	ALL	ALL	69.8	896	ALL	ALL	74.7	0.713	959
		75	23.3	5	15	0.531	60.1	862	RATIOS	RATIOS	64.3	922	RATIOS	RATIOS	69.2	0.531	992
		100	17.5	5	20	0.427	57.4	883	THERMAL	THERMAL	61.5	946	THERMAL	THERMAL	66.0	0.427	1016
		150	11.7	10	15	0.317	53.0	908	EQUALS	EQUALS	57.1	978	EQUALS	EQUALS	61.6	0.317	1056
		200	8.75	10	20	0.253	50.8	927	MECH.	MECH.	54.6	997	MECH.	MECH.	59.0	0.253	1076
		250	7.00	5	50	0.232	39.2	819			42.5	888			45.6	0.232	954
		300	5.83	20	15	0.186	46.3	930			49.8	1001			54.1	0.186	1087
		400	4.38	20	20	0.148	44.3	947			47.8	1021			51.9	0.148	1108
		500	3.50	50	10	0.136	37.0	904			40.3	983			43.5	0.136	1061
		600	2.92	20	30	0.123	34.7	920			38.8	1028			42.1	0.123	1116
		750	2.33	50	15	0.105	32.8	930			35.8	1013			38.7	0.105	1098
		1000	1.75	50	20	0.085	31.0	947			33.7	1030			36.6	0.085	1119
		1200	1.46	40	30	0.082	26.4	932			29.9	1055			32.4	0.082	1144
		1500	1.17	50	30	0.073	23.6	935			26.7	1057			29.0	0.073	1145
		1800	0.97	60	30	0.068	21.2	937			24.0	1061			26.2	0.068	1157
		2000	0.88	50	40	0.059	22.1	931			24.2	1023			26.4	0.059	1113
		2400	0.73	60	40	0.055	19.7	931			21.8	1026			23.7	0.055	1119
		3000	0.58	60	50	0.045	16.8	819			18.5	903			20.1	0.045	983
		3600	0.49	60	60	0.035	14.5	659			16.0	727			17.5	0.035	794
SERIES 2100 RATINGS	1750	50	35.0	5	10	1.11	65.5	1305	ALL	ALL	70.2	1397	ALL	ALL	74.9	1.11	1492
		75	23.3	5	15	0.853	60.0	1381	RATIOS	RATIOS	64.2	1478	RATIOS	RATIOS	68.9	0.853	1588
		100	17.5	5	20	0.610	57.4	1261	THERMAL	THERMAL	61.5	1349	THERMAL	THERMAL	66.1	0.610	1450
		150	11.7	10	15	0.516	52.9	1475	EQUALS	EQUALS	57.0	1588	EQUALS	EQUALS	61.5	0.516	1715
		200	8.75	10	20	0.349	50.5	1270	MECH.	MECH.	54.4	1368	MECH.	MECH.	58.7	0.349	1477
		250	7.00	5	50	0.273	40.1	987			44.6	1097			48.0	0.273	1179
		300	5.83	20	15	0.304	46.2	1519			49.7	1635			53.9	0.304	1774
		400	4.38	20	20	0.201	43.8	1270			47.2	1369			51.3	0.201	1487
		500	3.50	50	10	0.217	36.8	1439			40.0	1566			43.2	0.217	1692
		600	2.92	20	30	0.205	34.7	1537			37.8	1674			41.0	0.205	1818
		750	2.33	50	15	0.174	32.3	1519			35.0	1650			38.1	0.174	1793
		1000	1.75	50	20	0.116	30.5	1270			33.2	1383			36.0	0.116	1500
		1200	1.46	40	30	0.136	26.1	1537			28.8	1692			31.3	0.136	1838
		1500	1.17	50	30	0.122	23.4	1537			25.7	1688			27.9	0.122	1833
		1800	0.97	60	30	0.114	20.9	1537			23.0	1694			25.1	0.114	1848
		2000	0.88	50	40	0.092	21.6	1424			23.7	1566			25.7	0.092	1698
		2400	0.73	60	40	0.086	19.2	1424			21.2	1572			23.1	0.086	1712
		3000	0.58	60	50	0.054	17.1	987			19.3	1118			21.1	0.054	1219
		3600	0.49	60	60	0.048	14.3	896			15.8	989			17.3	0.048	1080

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 1301 AND 1304 225 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 1801 AND 1804 550 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 1802, AND 1805 NOT APPLICABLE. THRUST‡ UP OR DOWN 600 LBS.

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 2101 AND 2104 550 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 2102 AND 2105 NOT APPLICABLE. THRUST‡ UP OR DOWN 600 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 2400, 2600 & 3200				RATIO COMB.			CONVENTIONAL OIL				PAO SYNTHETIC OIL				PAG SYNTHETIC OIL		
	INPUT RPM	RATIO	OUTPUT RPM	PRIM. RATIO	SEC. RATIO	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	INPUT HP	OUTPUT TORQUE
SERIES 2400 RATINGS*	1750	50	35.0	5	10	1.32	69.8	1663	ALL	ALL	74.6	1779	ALL	ALL	79.7	1.32	1900
		75	23.3	5	15	0.992	65.8	1762	RATIOS	RATIOS	70.3	1884	RATIOS	RATIOS	75.6	0.992	2024
		100	17.5	5	20	0.792	62.6	1784	THERMAL	THERMAL	66.9	1908	THERMAL	THERMAL	71.9	0.792	2050
		150	11.7	10	15	0.574	59.4	1844	EQUALS	EQUALS	64.0	1985	EQUALS	EQUALS	69.0	0.574	2142
		200	8.75	10	20	0.462	56.1	1865	MECH.	MECH.	60.3	2007	MECH.	MECH.	65.1	0.462	2165
		250	7.00	5	50	0.381	51.1	1755			51.6	1773			55.3	0.381	1901
		300	5.83	20	15	0.331	52.7	1886			56.7	2032			57.2	0.331	2047
		400	4.38	20	20	0.267	49.6	1905			53.2	2045			57.7	0.267	2219
		500	3.50	50	10	0.241	41.2	1784			44.7	1939			48.3	0.241	2095
		600	2.92	20	30	0.205	43.1	1909			46.9	2077			50.8	0.205	2252
		750	2.33	50	15	0.185	37.8	1886			41.1	2053			44.6	0.185	2226
		1000	1.75	50	20	0.151	35.1	1905			38.2	2070			41.5	0.151	2248
		1200	1.46	40	30	0.132	33.4	1909			36.7	2098			39.8	0.132	2274
		1500	1.17	50	30	0.118	30.0	1909			33.0	2098			35.8	0.118	2277
		1800	0.97	60	30	0.109	27.0	1909			29.8	2105			32.4	0.109	2294
		2000	0.88	50	40	0.098	26.6	1873			29.3	2058			31.8	0.098	2236
		2400	0.73	60	40	0.091	23.9	1873			26.4	2065			28.7	0.091	2249
		3000	0.58	60	50	0.082	21.3	1887			24.1	2136			26.2	0.082	2325
		3600	0.49	60	60	0.053	21.8	1487			23.3	1588			25.5	0.053	1738
SERIES 2600 RATINGS	1750	50	35.0	5	10	1.40	68.9	1737	1.29	1601	74.2	1870	ALL	ALL	78.8	1.40	1987
		75	23.3	5	15	1.40	62.4	2359	1.29	2174	66.8	2524	RATIOS	RATIOS	71.7	1.40	2711
		100	17.5	5	20	1.29	61.3	2840	1.29	2840	65.6	3040	THERMAL	THERMAL	70.4	1.29	3264
		150	11.7	10	15	0.910	55.3	2717	0.820	2448	59.4	2921	EQUALS	EQUALS	64.2	0.91	3157
		200	8.75	10	20	0.774	54.4	3030	0.774	3030	58.5	3259	MECH.	MECH.	63.2	0.774	3520
		250	7.00	5	50	0.440	47.6	1887	0.440	1887	51.5	2041			55.3	0.440	2193
		300	5.83	20	15	0.550	48.3	2869	0.550	2869	52.0	3092			56.4	0.550	3354
		400	4.38	20	20	0.455	47.6	3119	0.455	3119	51.3	3358			55.6	0.455	3644
		500	3.50	50	10	0.270	38.2	1856	0.270	1856	43.4	2108			46.9	0.270	2278
		600	2.92	20	30	0.415	37.2	3338	0.415	3338	40.5	3630			43.9	0.415	3939
		750	2.33	50	15	0.270	33.8	2468	0.270	2468	36.8	2685			40.0	0.270	2915
		1000	1.75	50	20	0.259	33.4	3119	0.259	3119	36.3	3395			39.4	0.259	3683
		1200	1.46	40	30	0.275	28.1	3338	0.275	3338	30.9	3669			33.5	0.275	3982
		1500	1.17	50	30	0.246	25.1	3338	0.246	3338	27.6	3671			30.0	0.246	3982
		1800	0.97	60	30	0.229	22.5	3338	0.229	3338	24.7	3675			27.0	0.229	4013
		2000	0.88	50	40	0.159	24.6	2823	0.159	2823	27.0	3101			29.3	0.159	3366
		2400	0.73	60	40	0.148	22.0	2823	0.148	2823	24.2	3111			26.4	0.148	3393
		3000	0.58	60	50	0.082	21.3	1887	0.082	1887	23.5	2083			25.6	0.082	2270
		3600	0.49	60	60	0.109	14.9	2102	0.109	2102	16.5	2330			18.0	0.109	2542
SERIES 3200 RATINGS**	1750	50	35.0	5	10	3.77	69.3	4708	2.80	3496	74.3	5042	3.32	4440	79.4	3.77	5388
		75	23.3	5	15	3.22	65.0	5661	2.80	4918	69.6	6062	3.22	6062	74.8	3.22	6510
		100	17.5	5	20	2.46	61.6	5465	2.46	5465	65.9	5848	2.46	5848	70.8	2.46	6278
		150	11.7	10	15	2.00	58.2	6284	1.74	5468	62.7	6768	2.00	6768	67.7	2.00	7311
		200	8.75	10	20	1.42	54.5	5591	1.42	5591	58.8	6028	1.42	6028	63.4	1.42	6501
		250	7.00	5	50	1.05	45.4	4273	1.05	4273	49.0	4614	1.05	4614	52.7	1.05	4959
		300	5.83	20	15	1.18	51.5	6551	1.14	6339	55.4	7052	1.18	7052	60.1	1.18	7650
		400	4.38	20	20	0.811	47.9	5591	0.811	5591	51.6	6026	0.811	6026	56.0	0.811	6537
		500	3.50	50	10	0.842	42.3	6418	0.842	6418	46.1	6985	0.842	6985	49.7	0.842	7543
		600	2.92	20	30	0.792	38.7	6627	0.792	6627	43.9	7515	0.792	7515	47.7	0.792	8153
		750	2.33	50	15	0.634	38.3	6551	0.634	6551	41.6	7125	0.634	7125	45.2	0.634	7734
		1000	1.75	50	20	0.443	35.1	5591	0.443	5591	38.2	6100	0.443	6100	41.5	0.443	6624
		1200	1.46	40	30	0.494	31.1	6627	0.494	6627	34.2	7302	0.494	7302	37.1	0.494	7920
		1500	1.17	50	30	0.425	28.8	6627	0.425	6627	31.7	7291	0.425	7291	34.5	0.425	7921
		1800	0.97	60	30	0.409	25.0	6627	0.409	6627	28.2	7494	0.409	7494	30.7	0.409	8141
		2000	0.88	50	40	0.304	25.5	5584	0.304	5584	28.0	6139	0.304	6139	30.4	0.304	6662
		2400	0.73	60	40	0.287	22.5	5584	0.287	5584	24.8	6155	0.287	6155	27.0	0.287	6698
		3000	0.58	60	50	0.197	20.0	4273	0.197	4273	22.1	4712	0.197	4712	24.1	0.197	5139
		3600	0.49	60	60	0.145	18.0	3369	0.145	3369	19.8	3714	0.145	3714	21.7	0.145	4069

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

**OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 2401 AND 2404 1150 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 2402 AND 2405 NOT APPLICABLE. THRUST‡ UP OR DOWN 1000 LBS.
MODELS 2601 AND 2604 1150 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 2602 AND 2605 NOT APPLICABLE.
THRUST‡ UP OR DOWN 1000 LBS.
MODELS 3201 AND 3204 1,100 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 3202 AND 3205 NOT APPLICABLE.
MODELS 3207 AND 3208 — OHL* 1,280 LBS., TO* THRUST OUT 1,700 LBS. AND TI‡ THRUST IN 1,210 LBS. THRUST‡ UP OR DOWN 1,200 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

UNIVERSAL POWER CUBE CATALOG RATINGS

SERIES 3800, 4500 & 5200				RATIO COMB.			CONVENTIONAL OIL				PAO SYNTHETIC OIL				PAG SYNTHETIC OIL		
	INPUT RPM	RATIO	OUTPUT RPM	PRIM. RATIO	SEC. RATIO	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	THERMAL INPUT HP	THERMAL OUTPUT TORQUE	EFF. %	INPUT HP	OUTPUT TORQUE
SERIES 3800 RATINGS	1750	50	35.0	5	10	3.77	70.7	4797	2.80	3563	75.5	5129	3.32	4516	80.8	3.77	5484
		75	23.3	5	15	3.77	66.4	6766	2.80	5025	71.3	7258	3.32	6392	76.4	3.77	7778
		100	17.5	5	20	3.31	64.0	7630	2.80	6451	68.4	8154	3.31	8154	73.5	3.31	8763
		150	11.7	10	15	2.86	59.0	9110	1.74	5546	63.4	9794	2.86	9794	68.8	2.86	10629
		200	8.75	10	20	1.87	56.8	7656	1.74	7113	61.1	8242	1.87	8242	65.9	1.87	8888
		250	7.00	5	50	1.33	48.9	5866	1.33	5866	53.0	6357	1.33	6357	56.9	1.33	6823
		300	5.83	20	15	1.66	52.5	9412	1.14	6471	56.4	10096	1.66	10096	61.3	1.66	10975
		400	4.38	20	20	1.07	49.7	7656	1.07	7656	53.5	8240	1.07	8240	58.4	1.07	9003
		500	3.50	50	10	1.14	43.5	8904	1.14	8904	47.5	9721	1.14	9721	51.2	1.14	9574
		600	2.92	20	30	1.10	40.1	9524	1.10	9524	45.8	10858	1.10	10858	49.3	1.10	11701
		750	2.33	50	15	0.750	39.1	7924	0.630	6656	42.5	8611	0.750	8611	47.0	0.750	9516
		1000	1.75	50	20	0.572	37.1	7656	0.572	7656	40.4	8322	0.572	8322	43.8	0.572	9030
		1200	1.46	40	30	0.706	31.2	9524	0.706	9524	35.9	10951	0.706	10951	38.8	0.706	11834
		1500	1.17	50	30	0.425	28.8	6627	0.425	6627	31.7	7291	0.425	7291	34.5	0.425	7921
		1800	0.97	60	30	0.561	26.2	9524	0.561	9524	29.7	10811	0.561	10811	32.1	0.561	11698
		2000	0.88	50	40	0.385	27.7	7684	0.385	7684	30.6	8489	0.385	8489	33.1	0.385	9180
		2400	0.73	60	40	0.363	24.5	7684	0.363	7684	27.1	8493	0.363	8493	29.4	0.363	9231
		3000	0.58	60	50	0.244	22.3	5866	0.244	5866	24.5	6454	0.244	6454	26.8	0.244	7058
		3600	0.49	60	60	0.178	20.4	4702	0.178	4702	22.4	5181	0.178	5181	24.6	0.178	5675
SERIES 4500 RATINGS*	1750	50	35.0	5	10	8.96	72.9	11750	6.99	9170	78.0	12579	8.27	11615	83.4	8.96	13450
		75	23.3	5	15	6.71	68.8	12480	6.71	12480	73.7	13356	6.71	13356	79.1	6.71	14345
		100	17.5	5	20	5.25	66.5	12580	5.25	12580	71.3	13480	5.25	13480	76.5	5.25	14480
		150	11.7	10	15	4.14	62.6	13980	3.99	13487	67.4	15058	4.14	15058	72.8	4.14	16258
		200	8.75	10	20	2.98	60.2	12920	2.98	60.2	64.8	13918	2.98	13918	69.9	2.98	15012
		250	7.00	5	50	2.12	52.0	9919	2.12	52.0	56.3	10740	2.12	10740	60.5	2.12	11531
		300	5.83	20	15	2.42	56.2	14700	2.42	56.2	60.5	15838	2.42	15838	65.7	2.42	17185
		400	4.38	20	20	1.67	53.8	12920	1.67	53.8	57.9	13923	1.67	13923	62.9	1.67	15113
		500	3.50	50	10	1.62	47.8	13900	1.62	47.8	52.1	15139	1.62	15139	56.2	1.62	9574
		600	2.92	20	30	1.52	45.4	14876	1.52	45.4	49.5	16223	1.52	16223	53.4	1.52	17502
		750	2.33	50	15	1.25	43.4	14700	1.25	43.4	47.3	16021	1.25	16021	51.3	1.25	17376
		1000	1.75	50	20	0.87	41.2	12920	0.87	41.2	45.0	14087	0.87	14087	48.8	0.87	15287
		1200	1.46	40	30	0.95	36.4	14876	0.95	36.4	40.0	16379	0.95	16379	43.3	0.95	17697
		1500	1.17	50	30	0.81	33.8	14876	0.81	33.8	37.3	16412	0.81	16412	40.5	0.81	17797
		1800	0.97	60	30	0.73	31.4	14876	0.73	31.4	34.6	16390	0.73	16390	37.8	0.73	17880
		2000	0.88	50	40	0.58	31.2	13008	0.58	31.2	34.4	14322	0.58	14322	37.3	0.58	15522
		2400	0.73	60	40	0.52	28.9	13006	0.52	28.9	31.9	14330	0.52	14330	34.7	0.52	15625
		3000	0.58	60	50	0.35	26.5	9919	0.35	26.5	29.1	10902	0.35	10902	31.8	0.35	11906
		3600	0.49	60	60	0.25	24.2	7915	0.25	24.2	26.7	8715	0.25	8715	29.2	0.25	9553
SERIES 5200 RATINGS	1750	50	35.0	5	10	12.79	73.8	17000	6.99	9294	79.0	18191	8.27	11766	84.4	12.79	19442
		75	23.3	5	15	9.55	70.2	18100	6.99	13248	75.1	19381	8.27	16783	80.7	9.55	20824
		100	17.5	5	20	7.28	68.3	17910	6.99	17191	73.0	19148	7.28	19148	78.4	7.28	20574
		150	11.7	10	15	5.89	64.2	20415	3.99	13838	69.1	21969	4.69	17504	74.5	5.89	23697
		200	8.75	10	20	4.21	62.1	18820	3.99	17836	66.7	20224	4.21	20224	71.9	4.21	21789
		250	7.00	5	50	2.97	54.5	14590	2.97	14590	59.1	15812	2.97	15812	63.4	2.97	16972
		300	5.83	20	15	3.45	57.8	21510	2.49	15541	62.2	23151	2.93	19682	67.6	3.45	25158
		400	4.38	20	20	2.37	55.6	19020	2.37	19020	59.6	20386	2.37	20386	64.5	2.37	22074
		500	3.50	50	10	2.31	48.9	20330	1.23	10821	53.2	22153	1.43	13709	57.4	2.31	9574
		600	2.92	20	30	2.12	47.6	21780	2.12	21780	51.5	23546	2.12	23546	55.6	2.12	25409
		750	2.33	50	15	1.77	44.9	21510	1.23	14912	48.9	23415	1.43	18872	53.0	1.77	25398
		1000	1.75	50	20	1.23	42.9	19020	1.23	19020	46.7	20708	1.23	20708	50.6	1.23	22438
		1200	1.46	40	30	1.32	38.3	21780	1.32	21780	42.0	23881	1.32	23881	45.5	1.32	25846
		1500	1.17	50	30	1.13	35.7	21780	1.13	21780	39.2	23926	1.13	23926	42.4	1.13	25897
		1800	0.97	60	30	1.01	33.2	21780	1.01	21780	36.5	23937	1.01	23937	39.7	1.01	26060
		2000	0.88	50	40	0.82	32.6	19260	0.82	19260	35.9	21206	0.82	21206	38.9	0.82	22990
		2400	0.73	60	40	0.72	30.7	19260	0.72	19260	33.8	21161	0.72	21161	36.8	0.72	23064
		3000	0.58	60	50	0.48	28.3	14590	0.48	14590	31.1	16024	0.48	16024	33.9	0.48	17490
		3600	0.49	60	60	0.34	26.2	11580	0.34	11580	28.7	12706	0.34	12706	31.4	0.34	13914

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 3801 AND 3804 1,600 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 3802 AND 3805 NOT APPLICABLE. MODELS 3807 AND 3808 — OHL‡ 1,970 LBS., TO‡ THRUST OUT 1,950 LBS. AND TI‡ THRUST IN 1,500 LBS. THRUST‡ UP OR DOWN 1,500 LBS.

*OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 4501 AND 4504 2,200 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 4502, 4503, 4505, AND 4506 NOT APPLICABLE. MODELS 4507 AND 4508 — OHL‡ 2,370 LBS., TO‡ THRUST OUT 3,330 LBS. AND TI‡ THRUST IN 3,140 LBS. MODELS 4509 AND 4510 2,000 LBS. AT CENTER POINT OF SHAFT EXTENSION. THRUST‡ UP OR DOWN 2,500 LBS.

OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 5201 AND 5204 2,600 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 5202, 5203, 5205, AND 5206 NOT APPLICABLE. MODELS 5207 AND 5208 — OHL‡ 3,550 LBS., TO‡ THRUST OUT 4,530 LBS. AND TI‡ THRUST IN 3,360 LBS. MODELS 5209 AND 5210 2,300 LBS. AT CENTER POINT OF SHAFT EXTENSION. THRUST‡ UP OR DOWN 3,000 LBS.

‡OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

GW SERIES CATALOG RATINGS

SERIES GW60D & GW70D

					CONVENTIONAL OIL		PAO SYNTHETIC OIL		PAG SYNTHETIC OIL	
	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE	EFF. %	MECH. OUTPUT TORQUE
SERIES GW60D RATINGS	1750	75	23.1	9.10	78.4	19271	80.4	19753	81.9	20138
		100	16.5	8.67	68.6	21417	70.3	21952	71.7	22381
		150	11.4	5.95	73.3	23471	75.1	24058	76.6	24527
		200	8.54	4.95	69.0	24607	70.7	25222	72.1	25714
		250	7.14	4.25	64.9	24841	66.5	25462	67.8	25959
		300	5.69	3.61	65.9	25821	67.5	26467	68.8	26983
		400	4.27	3.01	61.4	26473	63.0	27135	64.2	27664
		500	3.41	2.52	59.3	26872	60.8	27544	62.0	28081
		600	2.85	2.24	55.7	27151	57.1	27830	58.2	28373
		750	2.38	1.93	51.8	27386	53.1	28071	54.1	28618
		900	1.98	1.62	51.0	27434	52.3	28120	53.3	28669
		1000	1.75	1.61	49.2	27737	50.4	28430	51.4	28985
		1200	1.42	1.40	47.0	27683	48.1	28375	49.1	28929
		1500	1.19	1.24	43.1	28088	44.2	28790	45.1	29352
		1800	0.99	1.00	40.1	25273	41.1	25905	41.9	26410
		2400	0.73	0.84	36.9	27893	37.9	28590	38.6	29148
		3000	0.58	0.75	34.0	26792	34.9	27462	35.5	27998
		3600	0.49	0.65	28.0	23067	28.7	23644	29.3	24105
SERIES GW70D RATINGS	1750	75	23.1	9.13	82.7	20601	84.8	21116	86.4	21528
		100	16.5	9.13	79.1	27535	81.1	28223	82.6	28774
		150	11.4	7.25	76.3	30621	78.2	31387	79.7	31999
		200	8.54	5.81	74.4	31857	76.2	32653	77.7	33291
		250	7.14	4.90	72.2	31238	74.1	32019	75.5	32644
		300	5.69	4.27	70.0	33136	71.8	33964	73.2	34627
		400	4.27	3.41	67.2	33805	68.8	34650	70.2	35326
		500	3.41	2.86	64.7	34209	66.3	35064	67.6	35748
		600	2.85	2.53	61.7	34477	63.2	35339	64.4	36028
		750	2.38	2.13	59.6	33682	61.1	34524	62.3	35198
		900	1.98	1.73	58.4	32016	59.8	32816	61.0	33457
		1000	1.75	1.73	54.9	35031	56.2	35907	57.3	36607
		1200	1.42	1.52	52.2	35168	53.5	36047	54.6	36751
		1500	1.19	1.28	50.6	34325	51.9	35183	52.9	35870
		1800	0.99	1.04	49.1	32580	50.4	33395	51.3	34046
		2400	0.73	0.90	43.3	33661	44.4	34503	45.2	35176
		3000	0.58	0.76	39.7	32512	40.7	33325	41.5	33975
		3600	0.49	0.60	37.8	29307	38.7	30040	39.5	30626

NOTE: ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD VALUES LISTED IN POUNDS. THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEAR CASE HOUSING. AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT INPUT HP TO 1750 RPM CATALOG RATING.

THRUST AND OVERHUNG LOAD RATINGS (LBS.)	GW60D	GW70D
Thrust Load Ratings (Low Speed Shaft, All Ratios)	3990	4009
Overhung Load Capacity* (High Speed Shaft, All Ratios)	150	150
Overhung Load Capacity* (Low Speed Shaft, All Ratios)	3723	6209
Overhung Load Capacity** (Extended Brg Design Output Shaft, All Ratios)	2245	3791

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

*THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEARCASE HOUSING.

**LOAD LOCATED AT END OF OUTPUT SHAFT.

GW SERIES CATALOG RATINGS

SERIES GW80D & GW100D

	INPUT RPM	RATIO	OUTPUT RPM	MECH. INPUT HP	CONVENTIONAL OIL EFF. %	CONVENTIONAL OIL MECH. OUTPUT TORQUE	PAO SYNTHETIC OIL EFF. %	PAO SYNTHETIC OIL MECH. OUTPUT TORQUE	PAG SYNTHETIC OIL EFF. %	PAG SYNTHETIC OIL MECH. OUTPUT TORQUE
SERIES GW80D RATINGS	1750	75	23.1	15.50	83.9	35507	86.0	36395	87.6	37105
		100	16.5	12.60	80.2	38575	82.2	39539	83.8	40311
		150	11.4	9.82	77.6	42212	79.5	43267	81.1	44112
		200	8.54	7.92	75.5	44158	77.4	45262	78.9	46145
		250	7.14	6.61	73.8	43010	75.7	44085	77.1	44945
		300	5.69	5.82	71.6	46181	73.4	47336	74.9	48259
		400	4.27	4.65	68.8	47245	70.5	48426	71.9	49371
		500	3.41	3.88	67.0	45835	68.7	46981	70.0	47898
		600	2.85	3.43	63.6	48316	65.1	49524	66.4	50490
		750	2.38	2.87	61.7	46812	63.2	47982	64.4	48919
		900	1.98	2.50	58.8	46627	60.3	47793	61.4	48725
		1000	1.75	2.34	56.8	49201	58.3	50431	59.4	51415
		1200	1.42	2.05	54.6	49420	56.0	50656	57.1	51644
		1500	1.19	1.71	52.8	47819	54.1	49014	55.2	49971
		1800	0.99	1.29	52.2	42944	53.6	44018	54.6	44876
		2400	0.73	1.20	45.3	46987	46.5	48162	47.4	49101
		3000	0.58	1.02	41.5	45708	42.5	46851	43.3	47765
		3600	0.49	0.80	39.6	41112	40.6	42140	41.4	42962
SERIES GW100D RATINGS	1750	75	23.1	26.5	84.9	61010	87.0	62535	88.7	63755
		100	16.5	20.8	81.7	64363	83.8	65972	85.4	67259
		150	11.4	16.5	78.8	72069	80.8	73871	82.3	75312
		200	8.54	13.5	76.3	76261	78.2	78168	79.7	79693
		250	7.14	11.3	74.8	74571	76.6	76435	78.1	77927
		300	5.69	10.1	72.2	80671	74.0	82688	75.4	84301
		400	4.27	8.12	69.2	83011	70.9	85086	72.3	86746
		500	3.41	6.89	66.3	84431	68.0	86542	69.3	88230
		600	2.85	6.03	64.0	85377	65.6	87511	66.9	89219
		750	2.38	5.04	62.1	82964	63.7	85038	64.9	86697
		900	1.98	4.13	60.3	79353	61.8	81337	63.0	82924
		1000	1.75	4.21	56.3	87344	57.7	89528	58.8	91274
		1200	1.42	3.73	53.1	87832	54.4	90028	55.5	91784
		1500	1.19	3.13	51.4	85216	52.7	87346	53.8	89051
		1800	0.99	2.56	50.0	81353	51.3	83387	52.3	85014
		2400	0.73	2.17	44.4	83314	45.5	85397	46.4	87063
		3000	0.58	1.83	42.6	80836	43.7	82857	44.5	84474
		3600	0.49	1.46	38.7	73284	39.7	75116	40.4	76582

NOTE: ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD VALUES LISTED IN POUNDS. THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEAR CASE HOUSING. AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT INPUT HP TO 1750 RPM CATALOG RATING.

THRUST AND OVERHUNG LOAD RATINGS (LBS.)	GW80D	GW100D
Thrust Load Ratings (Low Speed Shaft, All Ratios)	4777	6808
Overhung Load Capacity* (High Speed Shaft, All Ratios)	175	300
Overhung Load Capacity* (Low Speed Shaft, All Ratios)	7761	11028
Overhung Load Capacity** (Extended Brg Design Output Shaft, All Ratios)	4850	8500

ADDITIONAL RATINGS FOR OTHER INPUT SPEEDS ARE AVAILABLE AT: WWW.HUBCITYINC.COM

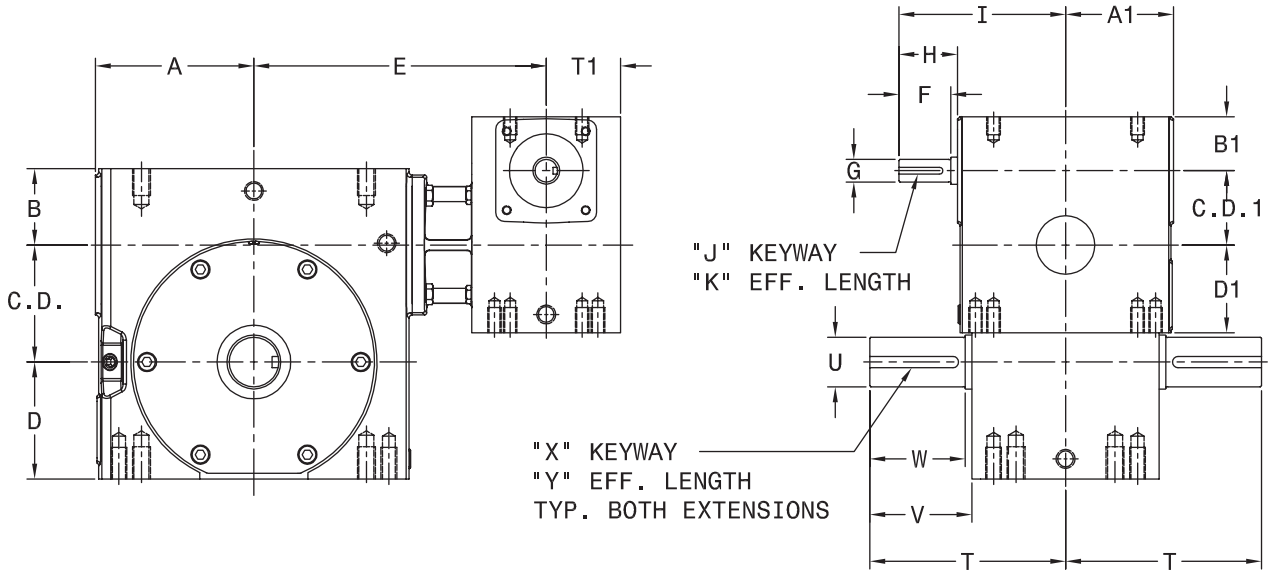
*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

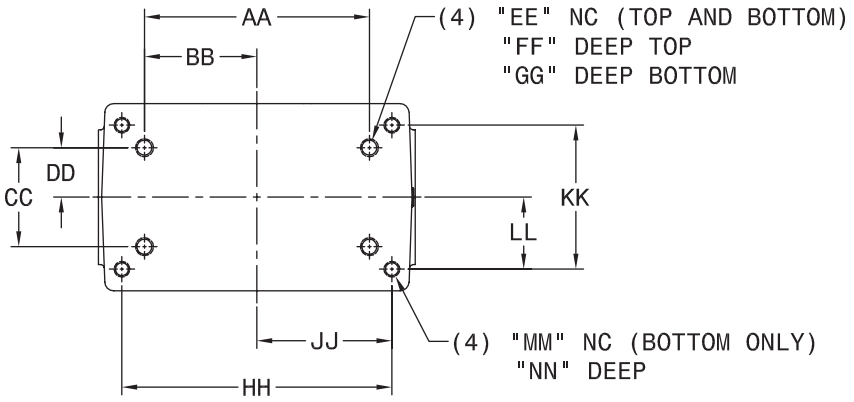
*THE POINT OF APPLICATION OF THE OVERHUNG LOAD IS CONSIDERED TO BE ONE SHAFT DIAMETER MEASURED OUTWARD FROM THE GEARCASE HOUSING.

**LOAD LOCATED AT END OF OUTPUT SHAFT.

MODELS

1301, 1801, 2101, 2401, 2601, 3201, 3801, 4501, 5201, GW6001, GW7001, GW8001, GW10001

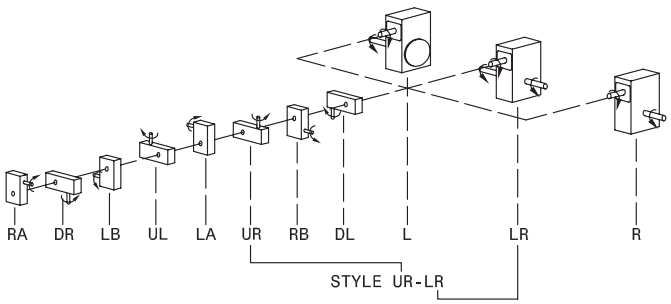




FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1301, 1801, 2101, 2401, 2601, 3201, 3801, 4501, 5201, GW6001, GW7001, GW8001, GW10001

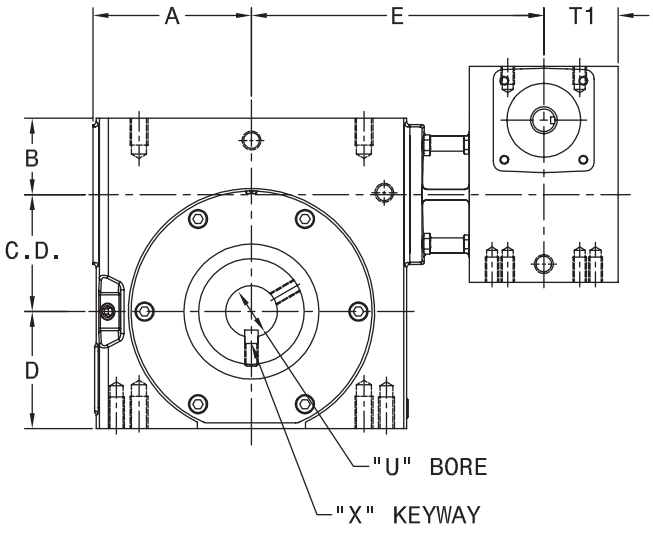
MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1	E	F
1301	131	134-56C	1.334	1.334	2.28	2.28	1.186	1.186	1.562	1.562	5.07	1.35
1801	131	184-56C	1.751	1.334	2.65	2.28	1.374	1.186	1.875	1.562	5.44	1.35
2101	131	214-56C	2.064	1.334	3.00	2.28	1.500	1.186	2.437	1.562	5.87	1.35
2401	131	244-56C	2.376	1.334	3.38	2.28	2.062	1.186	2.500	1.562	6.25	1.35
2601	131	264-56C	2.626	1.334	3.66	2.28	1.874	1.186	2.938	1.562	6.53	1.35
3201	211	324-143TC	3.251	2.064	4.40	3.00	2.124	1.500	3.250	2.437	8.12	1.44
3801	211	384-143TC	3.751	2.064	4.90	3.00	2.374	1.500	3.937	2.437	8.62	1.44
4501	321	454-213TC	4.501	3.251	5.67	4.40	2.499	2.124	4.625	3.250	9.13	2.23
5201	321	524-213TC	5.168	3.251	6.42	4.40	2.624	2.124	5.375	3.250	9.88	2.23
GW6001	CUSTOM	GW601	6.000	3.251	10.24	5.02	4.00	2.63	6.50	3.50	13.30	2.35
GW7001	CUSTOM	GW701	7.000	3.251	10.63	5.02	4.32	2.63	7.59	3.50	12.96	2.35
GW8001	CUSTOM	GW801	8.000	4.251	11.93	6.10	4.10	2.69	8.86	4.44	13.94	3.57
GW10001	CUSTOM	GW1001	10.000	5.251	14.34	7.50	5.11	3.63	10.36	5.12	17.05	3.40

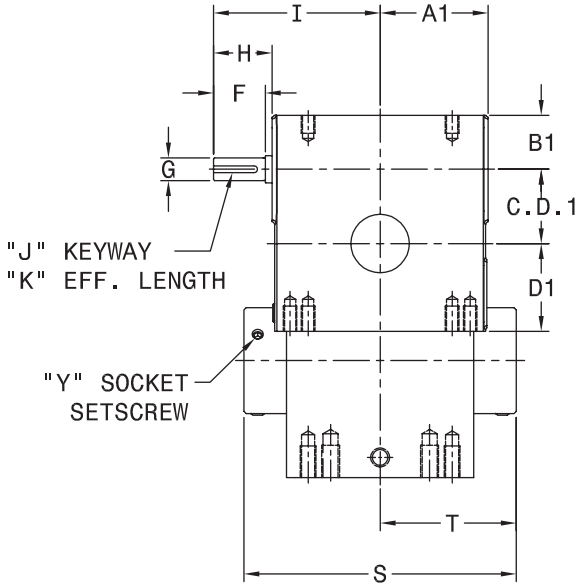
MODEL	G	H	I	J	K	T	T1	U	V	W	X	Y
1301	.500/.499	1.54	3.82	1/8 X 1/16	1.16	3.25	1.56	.625/.624	1.69	N/A	3/16 X 3/32	1.38
1801	.500/.499	1.54	3.82	1/8 X 1/16	1.16	3.50	1.56	.750/.749	1.78	1.54	3/16 X 3/32	1.41
2101	.500/.499	1.54	3.82	1/8 X 1/16	1.16	4.25	1.56	.875/.874	2.19	1.95	3/16 X 3/32	1.83
2401	.500/.499	1.54	3.82	1/8 X 1/16	1.16	4.50	1.56	1.125/1.124	2.31	2.06	1/4 X 1/8	1.74
2601	.500/.499	1.54	3.82	1/8 X 1/16	1.16	4.50	1.56	1.250/1.249	2.25	N/A	1/4 X 1/8	1.85
3201	.625/.624	1.63	4.63	3/16 X 3/32	1.13	5.44	2.06	1.375/1.374	2.84	N/A	5/16 X 5/32	2.31
3801	.625/.624	1.63	4.63	3/16 X 3/32	1.13	6.69	2.06	1.500/1.499	3.88	N/A	3/8 X 3/16	3.16
4501	.875/.874	2.48	6.88	3/16 X 3/32	1.91	7.25	2.60	1.625/1.624	4.18	3.90	3/8 X 3/16	3.28
5201	.875/.874	2.48	6.88	3/16 X 3/32	1.91	7.81	2.60	1.750/1.749	4.47	4.17	3/8 X 3/16	3.50
GW6001	0.875	2.38	6.76	3/16 X 3/32	1.75	10.00	3.40	2.500	4.65	N/A	5/8 X 5/16	4.00
GW7001	0.875	2.38	6.76	3/16 X 3/32	1.75	11.76	3.40	2.750	5.65	N/A	5/8 X 5/16	4.00
GW8001	1.250	3.47	9.57	1/4 X 1/8	2.88	12.25	3.62	3.000	5.98	5.26	3/4 X 3/8	4.50
GW10001	1.250	3.38	10.88	1/4 X 1/8	3.00	14.75	4.28	3.750	6.76	N/A	7/8 X 7/16	5.00

MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
1301	2.250	1.125	1.625	.812	1/4 UNC	.50	.50	3.250	1.625	2.000	1.000	5/16 NC	.75	20
1801	3.125	1.562	1.625	.812	1/4 UNC	.50	.50	4.188	2.094	2.750	1.375	5/16 NC	.75	25
2101	4.000	2.000	2.000	1.000	3/8 UNC	.50	.70	5.000	2.500	2.875	1.438	3/8 NC	.70	34
2401	5.000	2.500	2.875	1.438	3/8 UNC	.70	.70	N/A	N/A	N/A	N/A	N/A	N/A	42
2601	4.875	2.437	2.688	1.344	3/8 UNC	.70	.70	6.375	3.188	3.375	1.688	3/8 NC	.70	47
3201	6.250	3.125	2.750	1.375	1/2 UNC	.75	.90	7.500	3.750	4.000	2.000	7/16 NC	.88	83
3801	6.875	3.438	3.000	1.500	1/2 UNC	.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	108
4501	8.125	4.063	3.250	1.625	5/8 UNC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	172
5201	9.500	4.750	3.750	1.875	5/8 UNC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	198
GW6001	12.750	6.380	6.380	3.190	5/8 UNC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	402
GW7001	12.500	6.250	5.500	2.750	1 UNC	1.56	1.56	N/A	N/A	N/A	N/A	N/A	N/A	478
GW8001	14.250	7.125	6.500	3.250	1 UNC	1.66	1.66	N/A	N/A	N/A	N/A	N/A	N/A	718
GW10001	17.750	8.875	6.875	3.438	1-1/4 UNC	2.04	2.04	N/A	N/A	N/A	N/A	N/A	N/A	1136

MODELS

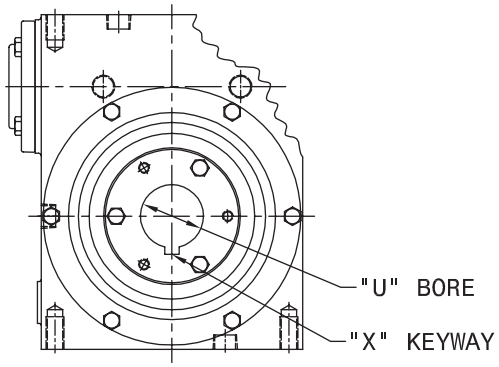
1802, 2102, 2402, 2602, 3202, 3802, 4502, 5202, GW6002, GW7002, GW8002, GW10002

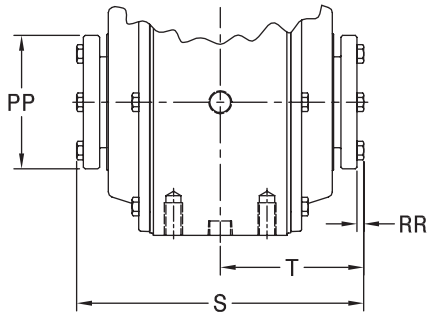




QD BUSHING DETAIL FOR MODELS 4502 & 5202

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.



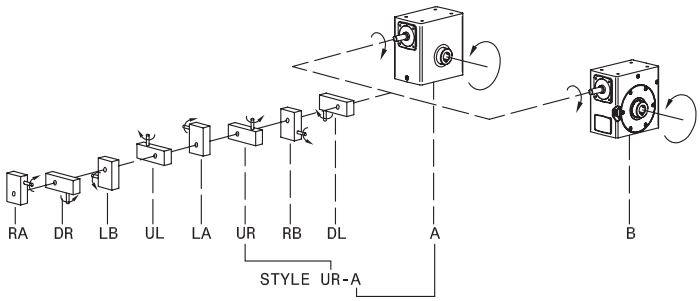


THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE. SEE PAGE B-95.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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WWW.HUBCITYINC.COM



SECONDARY UNIT STYLE SPECIFICATION REQUIRED ON POWERCUBE MODELS 1802 THROUGH 3802 ONLY.

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1802, 2102, 2402, 2602, 3202, 3802, 4502, 5202, GW6002, GW7002, GW8002, GW10002

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1
1802	131	185-56C	1.751	1.334	2.65	2.28	1.374	1.186	1.875	1.562
2102	131	215-56C	2.064	1.334	3.00	2.28	1.500	1.186	2.437	1.562
2402	131	245-56C	2.376	1.334	3.38	2.28	2.062	1.186	2.500	1.562
2602	131	265-56C	2.626	1.334	3.66	2.28	1.874	1.186	2.938	1.562
3202	211	325-143TC	3.251	2.064	4.40	3.00	2.124	1.500	3.250	2.437
3802	211	385-143TC	3.751	2.064	4.90	3.00	2.374	1.500	3.937	2.437
4502	321	455-213TC	4.501	3.251	5.67	4.40	2.499	2.124	4.625	3.250
5202	321	525-213TC	5.168	3.251	6.42	4.40	2.624	2.124	5.375	3.250
GW6002	CUSTOM	GW602	6.000	3.251	10.24	5.02	4.00	2.63	6.50	3.50
GW7002	CUSTOM	GW702	7.000	3.251	10.63	5.02	4.32	2.63	7.59	3.50
GW8002	CUSTOM	GW802	8.000	4.251	11.93	6.10	4.10	2.69	8.86	4.44
GW10002	CUSTOM	GW1002	10.000	5.251	14.34	7.50	5.11	3.63	10.36	5.12

MODEL	E	F	G	H	I	J	K	S	T	T1	WT. LBS.
1802	5.44	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	4.81	2.41	1.56	25
2102	5.87	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	5.56	2.78	1.56	35
2402	6.25	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	5.93	2.97	1.56	44
2602	6.53	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	5.93	2.97	1.56	47
3202	8.12	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13	7.56	3.78	2.06	89
3802	8.62	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13	7.56	3.78	2.06	105
4502	9.13	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	10.00	5.00	2.60	177
5202	9.88	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	11.13	5.56	2.60	205
GW6002	13.30	2.35	.875	2.38	6.76	3/16 X 3/32	1.75	11.50	5.75	3.40	402
GW7002	12.96	2.35	.875	2.38	6.76	3/16 X 3/32	1.75	13.50	6.75	3.40	478
GW8002	13.94	3.57	1.250	3.47	9.57	1/4 X 1/8	2.88	14.50	7.25	3.62	718
GW10002	17.05	3.40	1.250	3.38	10.88	1/4 X 1/8	3.00	18.50	9.25	4.28	1136

STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
1802	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
2102	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
2402 & 2602	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
3202 & 3802	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG.
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG.
GW6002	2	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-3/16	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-1/4	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-7/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-1/2	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-11/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-15/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-3/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-7/16	7/8 x 7/16	NO	1/2 NC X 3/4 LG

BORE TOLERANCE NOMINAL + .002 (MODELS 1802 THRU 6002)
BORE TOLERANCE NOMINAL + .0025 (MODELS GW7002 THRU GW10002)

STOCK BORES (continued)

MODEL	U	X	KEY FURNISHED	Y
GW7002	2-7/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-1/2	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-11/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-15/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-7/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-15/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW8002	3-7/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	3-15/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	4-3/16	1 X 1/2	N0	1/2 NC X 1/2 LG
	4-7/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW10002	3-7/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	3-15/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	4-7/16	1 X 1/2	NO	5/8 NC X 5/8 LG
	4-15/16	1-1/4 X 5/8	NO	5/8 NC X 5/8 LG
	5-7/16 (Max.)	1-1/4 X 5/16	1-1/4 X 15/16	5/8 NC X 5/8 LG

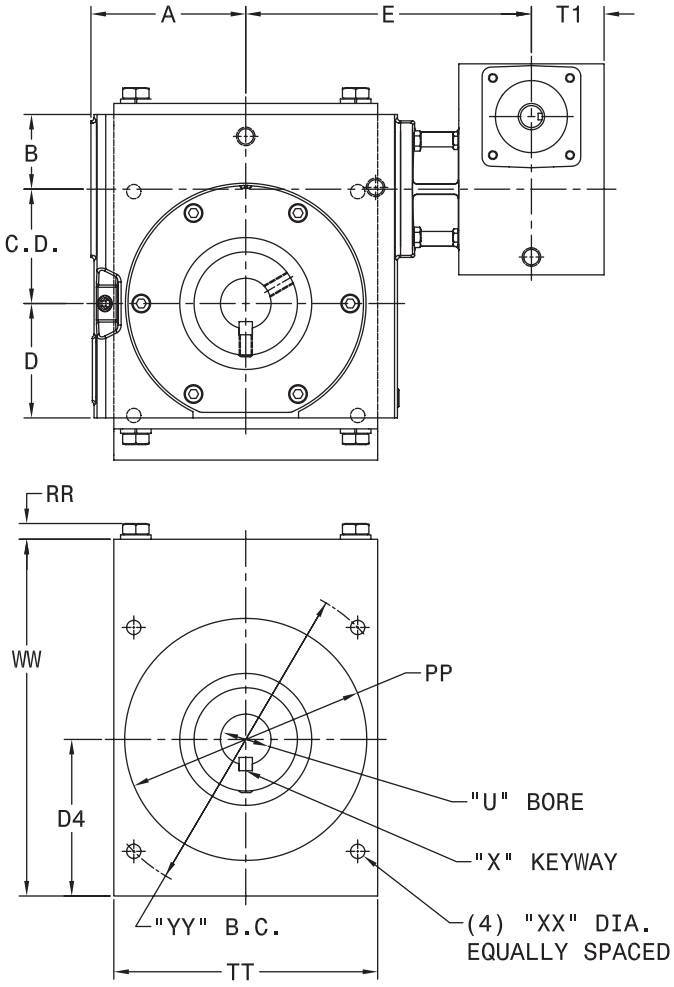
QD BUSHING BORES

MODEL	U	X	Y	PP	RR	KEY	TYPE	KIT*
4502	1-15/16	1/2 X 1/4	-	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2		-					0229-02684
	2-3/16		-					0229-02685
	2-7/16	5/8 X 3/16	-			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32	-			3/4 x 13/32		0229-02687
5202	2-3/16	1/2 X 1/4	-	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16	-			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8	-			3/4 X 1/2		0229-02690
	3		-					0229-02691
	3-3/16		-					0229-02692
	3-7/16	7/8 X 1/16	-			7/8 X 1/2		0229-02693

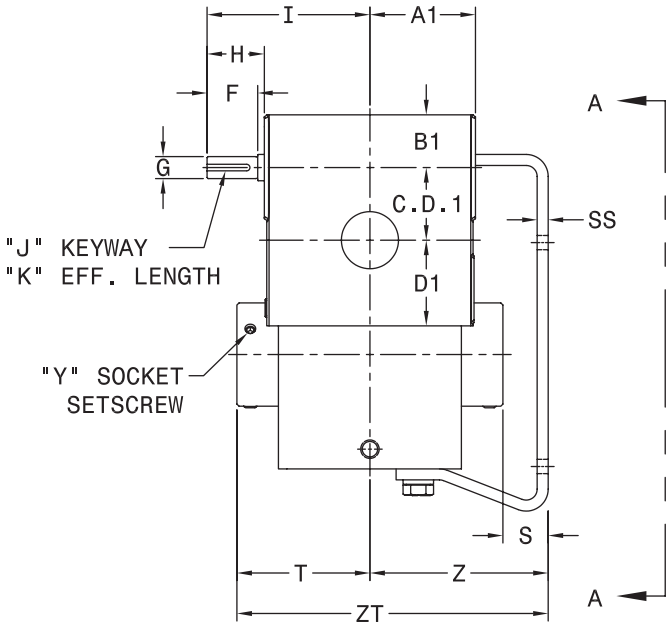
* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

MODELS

1803, 2103, 2403, 2603, 3203, 3803



VIEW A-A

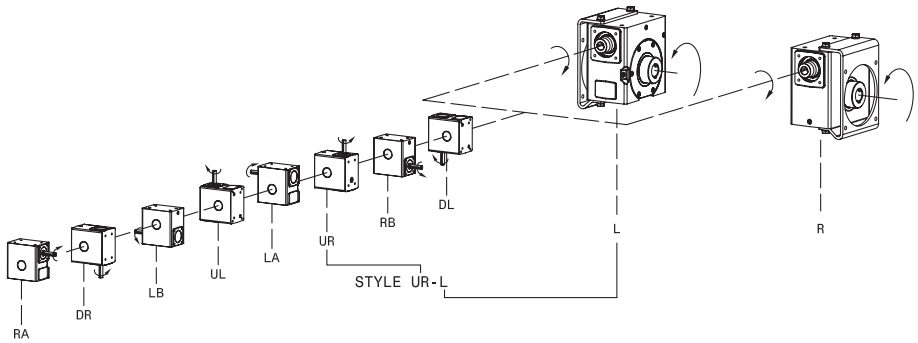


FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1803, 2103, 2403, 2603, 3203, 3803

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1
1803	131	186-56C	1.751	1.334	2.65	2.28	1.374	1.186	1.875	1.562
2103	131	216-56C	2.064	1.334	3.00	2.28	1.500	1.186	2.437	1.562
2403	131	246-56C	2.376	1.334	3.38	2.28	2.062	1.186	2.500	1.562
2603	131	266-56C	2.626	1.334	3.66	2.28	1.874	1.186	2.938	1.562
3203	211	326-143TC	3.251	2.064	4.40	3.00	2.124	1.500	3.250	2.437
3803	211	386-143TC	3.751	2.064	4.90	3.00	2.374	1.500	3.937	2.437

MODEL	E	F	G	H	I	J	K	T1
1803	5.44	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	1.56
2103	5.87	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	1.56
2403	6.25	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	1.56
2603	6.53	1.35	.500/.499	1.54	3.82	1/8 X 1/16	1.16	1.56
3203	8.12	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13	2.06
3803	8.62	1.44	.625/.624	1.63	4.63	3/16 X 3/32	1.13	2.06

MODEL	D4	S	T	Z	PP	RR	SS	TT	WW	XX	YY	ZT	Wt. Lbs.
1803	3.13	.91	2.41	3.31	4.25	.22	.25	4.88	6.50	11/32	5.875	5.71	28
2103	3.75	.85	2.78	3.63	4.75	.33	.31	5.75	7.63	13/32	7.000	6.41	40
2403	3.61	.75	2.97	3.72	5.00	.33	.25	6.00	8.30	13/32	7.500	6.69	49
2603	3.89	.66	2.97	3.63	5.75	.33	.31	6.75	8.70	13/32	8.000	6.60	53
3203	4.45	.22	3.78	4.00	6.88	.44	.31	7.50	10.14	13/32	9.000	7.78	97
3803	5.09	.72	3.78	4.50	7.50	.44	.31	8.25	11.53	9/16	10.000	8.28	115

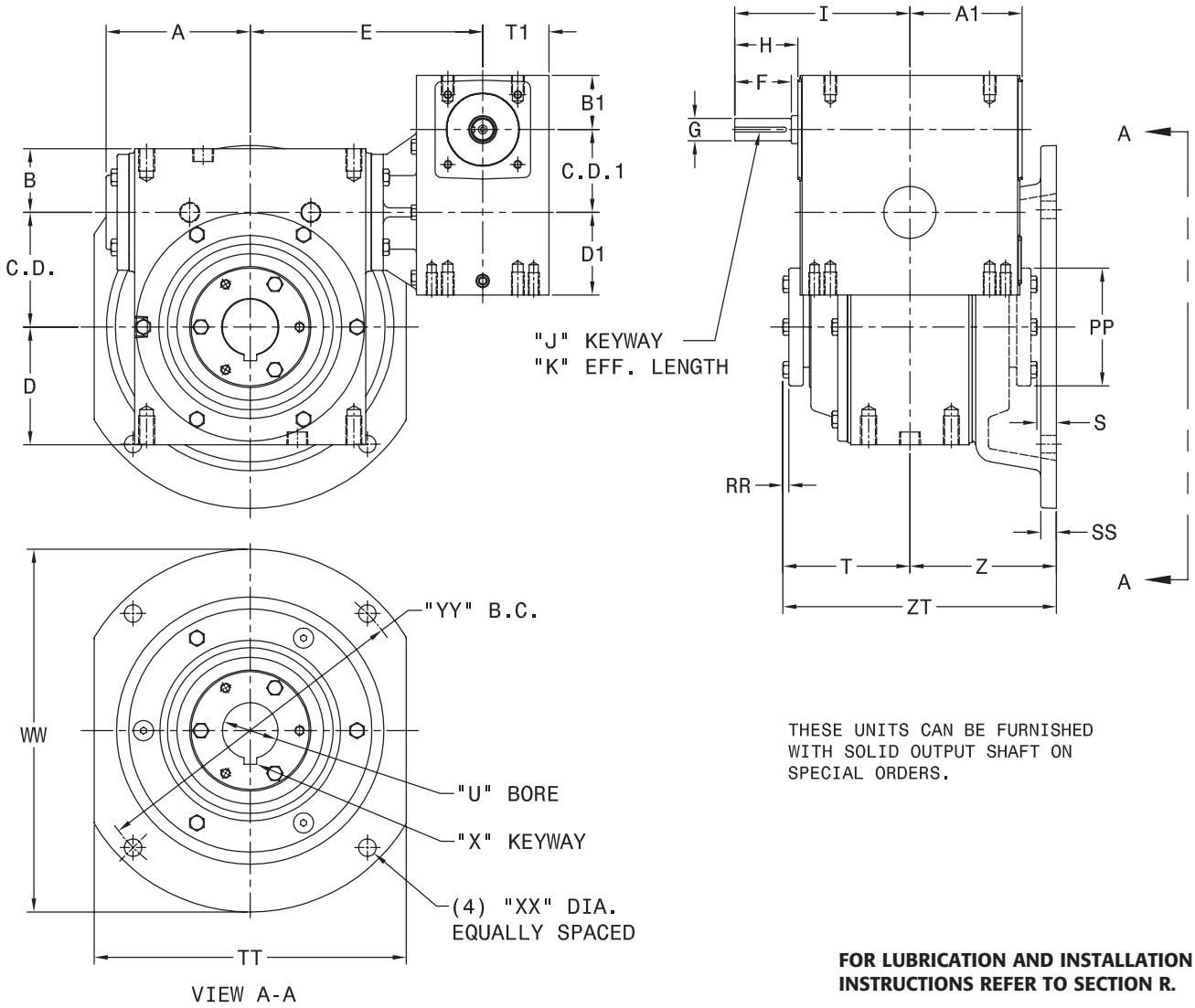
STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
1803	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
2103	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
2403 & 2603	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
3203 & 3803	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG

BORE TOLERANCE NOMINAL + .002

MODELS

4503, 5203

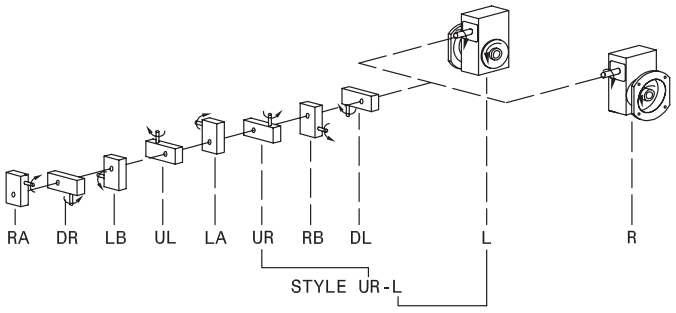


THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
4503, 5203

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1
4503	321	456-213TC	4.501	3.251	5.67	4.40	2.499	2.124	4.625	3.250
5203	321	526-213TC	5.168	3.251	6.42	4.40	2.624	2.124	5.375	3.250

MODEL	E	F	G	H	I	J	K	S	T	T1	Z
4503	9.13	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	.75	5.00	2.60	5.75
5203	9.88	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	1.44	5.56	2.60	7.00

MODEL	SS	TT	WW	XX	YY	ZT	WT. LBS.
4503	.63	12.25	14.25	11/16	13.00	10.75	185
5203	.75	12.50	15.50	11/16	14.00	12.56	214

QD BUSHING BORES

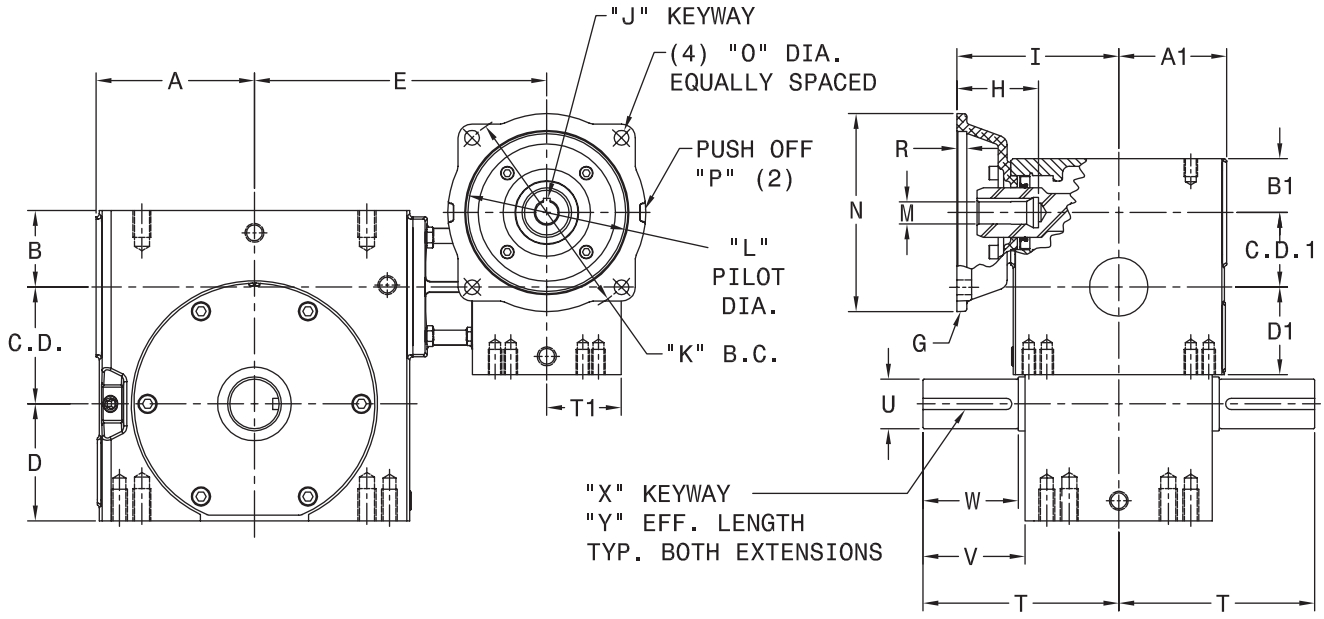
MODEL	U	X	PP	RR	KEY	TYPE	KIT*
4503	1-15/16	1/2 X 1/4	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2						0229-02684
	2-3/16						0229-02685
	2-7/16	5/8 X 3/16			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32			3/4 x 13/32		0229-02687
5203	2-3/16	1/2 X 1/4	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8			3/4 X 1/2		0229-02690
	3						0229-02691
	3-3/16						0229-02692
	3-7/16	7/8 X 1/16			7/8 X 1/2		0229-02693

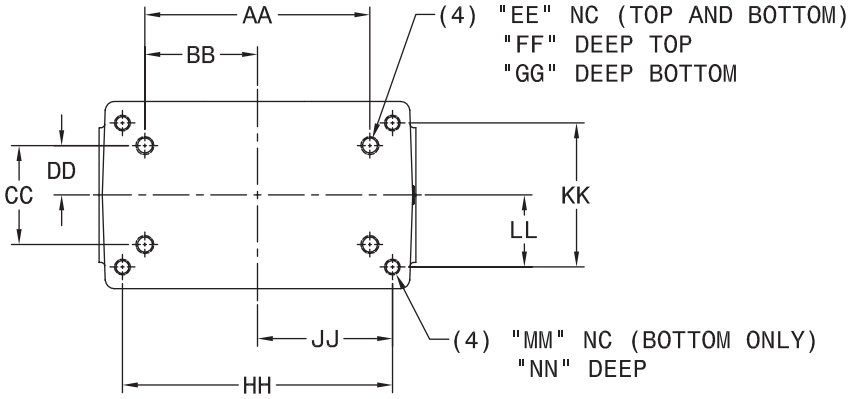
* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

BORE TOLERANCE NOMINAL +.002

MODELS

1304, 1804, 2104, 2404, 2604, 3204, 3804, 4504, 5204, GW6004, GW7004, GW8004, GW10004



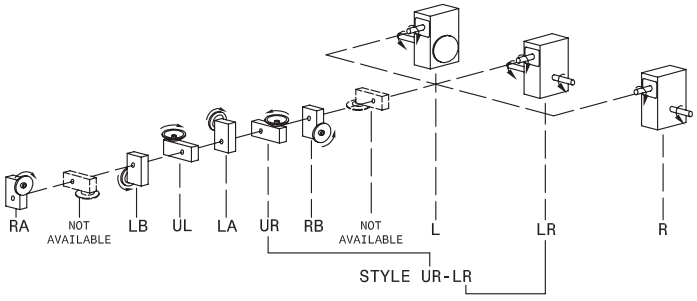


FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1304, 1804, 2104, 2404, 2604, 3204, 3804, 4504, 5204, GW6004, GW7004, GW8004, GW10004

SECONDARY UNIT DIMENSIONS

MODEL	PRIMARY	SECONDARY	C.D.	A	B	D	E	T	U	V	W	X	Y
1304	134	134-56C	1.334	2.28	1.186	1.562	5.07	3.25	.625/.624	1.69	N/A	3/16 X 3/32	1.38
1804	134	184-56C	1.751	2.65	1.374	1.875	5.44	3.50	.750/.749	1.78	1.54	3/16 X 3/32	1.41
2104	134	214-56C	2.064	3.00	1.500	2.437	5.87	4.25	.875/.874	2.19	1.95	3/16 X 3/32	1.83
2404	134	244-56C	2.376	3.38	2.062	2.500	6.25	4.50	1.125/1.124	2.31	2.06	1/4 X 1/8	1.74
2604	134	264-56C	2.626	3.66	1.874	2.938	6.53	4.50	1.250/1.249	2.25	N/A	1/4 X 1/8	1.85
3204	214	324-143TC	3.251	4.40	2.124	3.250	8.12	5.44	1.375/1.374	2.84	N/A	5/16 X 5/32	2.31
3804	214	384-143TC	3.751	4.90	2.374	3.937	8.62	6.69	1.500/1.499	3.88	N/A	3/8 X 3/16	3.16
4504	324	454-213TC	4.501	5.67	2.499	4.625	9.13	7.25	1.625/1.624	4.18	3.90	3/8 X 3/16	3.28
5204	324	524-213TC	5.168	6.42	2.624	5.375	9.88	7.81	1.750/1.749	4.47	4.17	3/8 X 3/16	3.50
GW6004	CUSTOM	GW601	6.000	10.24	4.00	6.50	13.30	10.00	2.500	4.65	N/A	5/8 X 5/16	4.00
GW7004	CUSTOM	GW701	7.000	10.63	4.32	7.59	12.96	11.76	2.750	5.65	N/A	5/8 X 5/16	4.00
GW8004	CUSTOM	GW801	8.000	11.93	4.10	8.86	13.94	12.25	3.000	5.98	5.26	3/4 X 3/8	4.50
GW10004	CUSTOM	GW1001	10.000	14.34	5.11	10.36	17.05	14.75	3.750	6.76	N/A	7/8 X 7/16	5.00

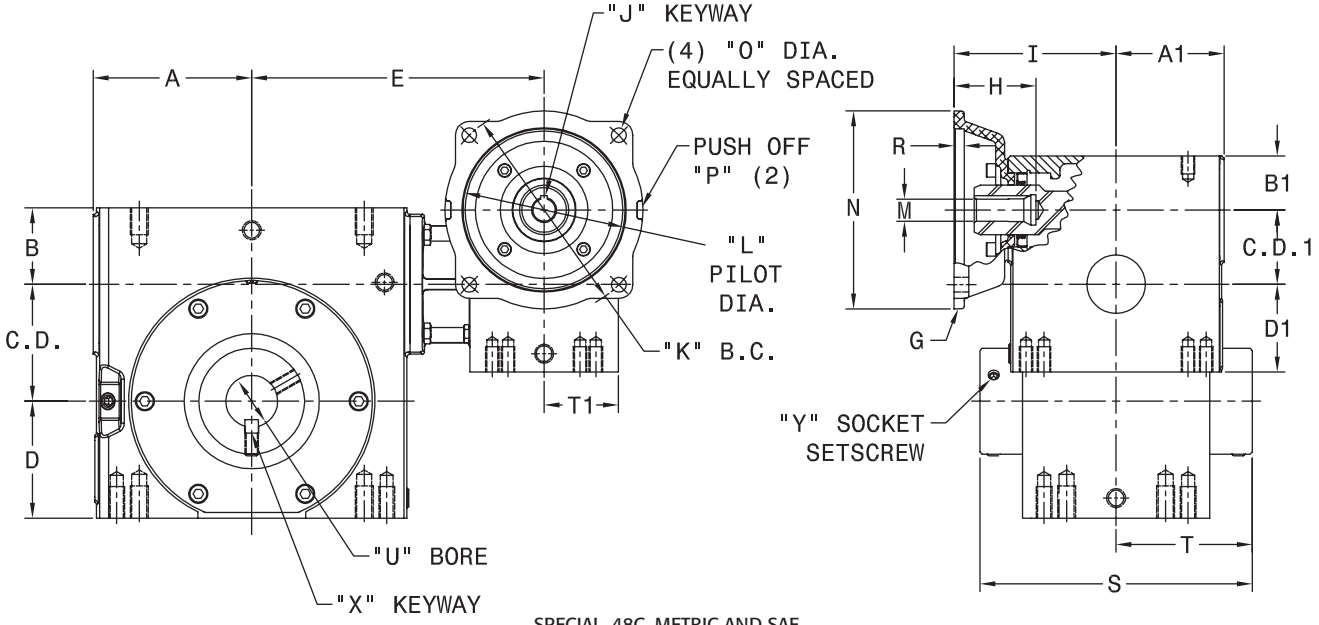
MODEL	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	WT. LBS.
1304	2.250	1.125	1.625	.812	1/4 UNC	.50	.50	3.250	1.625	2.000	1.000	5/16 NC	.75	21
1804	3.125	1.562	1.625	.812	1/4 UNC	.50	.50	4.188	2.094	2.750	1.375	5/16 NC	.75	26
2104	4.000	2.000	2.000	1.000	3/8 UNC	.50	.70	5.000	2.500	2.875	1.438	3/8 NC	.70	35
2404	5.000	2.500	2.875	1.438	3/8 UNC	.70	.70	N/A	N/A	N/A	N/A	N/A	N/A	43
2604	4.875	2.437	2.688	1.344	3/8 UNC	.70	.70	6.375	3.188	3.375	1.688	3/8 NC	.70	48
3204	6.250	3.125	2.750	1.375	1/2 UNC	.75	.90	7.500	3.750	4.000	2.000	7/16 NC	.88	85
3804	6.875	3.438	3.000	1.500	1/2 UNC	.94	1.00	8.500	4.250	4.750	2.375	1/2 NC	1.00	110
4504	8.125	4.063	3.250	1.625	5/8 UNC	.88	1.13	N/A	N/A	N/A	N/A	N/A	N/A	176
5204	9.500	4.750	3.750	1.875	5/8 UNC	1.00	1.25	N/A	N/A	N/A	N/A	N/A	N/A	202
GW6004	12.750	6.380	6.380	3.190	5/8 UNC	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	406
GW7004	12.500	6.250	5.500	2.750	1 UNC	1.56	1.56	N/A	N/A	N/A	N/A	N/A	N/A	482
GW8004	14.250	7.125	6.500	3.250	1 UNC	1.66	1.66	N/A	N/A	N/A	N/A	N/A	N/A	728
GW10004	17.750	8.875	6.875	3.438	1-1/4 UNC	2.04	2.04	N/A	N/A	N/A	N/A	N/A	N/A	1151

PRIMARY UNIT DIMENSIONS

MODEL	G	H	I	J	K	L	M	N	O	P	R	C.D.1	A1	B1	D1	T1
1304	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
1804	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2104	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2404	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2604	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
3204	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
3804	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
4504	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
5204	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
GW6004	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW7004	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW8004	56C	2.33	6.45	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	4.251	6.10	2.69	4.44	3.62
	143TC						.875									
	182TC	3.44	7.40	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	7.96	3/8 X 3/16			1.625									
GW10004	56C	2.44	7.85	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	5.251	7.50	3.63	5.12	4.28
	143TC						.875									
	182TC	3.44	8.80	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	9.36	3/8 X 3/16			1.625									

MODELS

1805, 2105, 2405, 2605, 3205, 3805, 4505, 5205, GW6005, GW7005, GW8005, GW10005

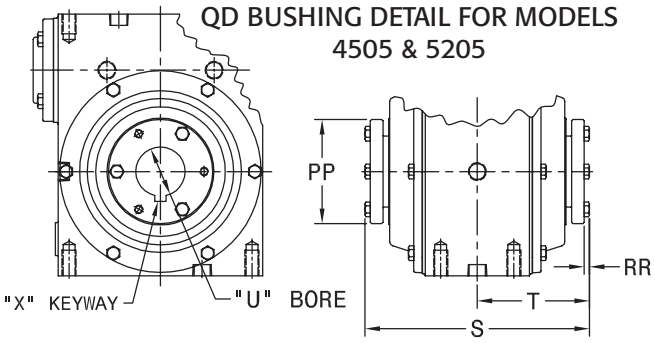


SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE. SEE PAGE B-95.

SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

QD BUSHING DETAIL FOR MODELS 4505 & 5205



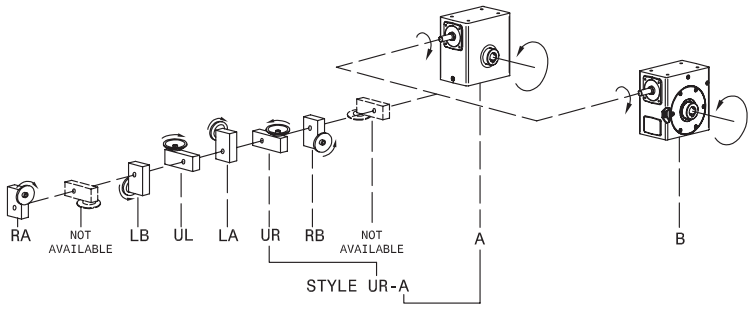
QD BUSHING BORES

MODEL	U	X	Y	PP	RR	KEY	TYPE	KIT*
4505	1-15/16	1/2 X 1/4	-	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2		-					0229-02684
	2-3/16		-					0229-02685
	2-7/16	5/8 X 3/16	-			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32	-			3/4 x 13/32		0229-02687
5205	2-3/16	1/2 X 1/4	-	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16	-			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8	-			3/4 X 1/2		0229-02690
	3		-					0229-02691
	3-3/16		-					0229-02692
	3-7/16	7/8 X 1/16	-			7/8 X 1/2		0229-02693

* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



SECONDARY UNIT STYLE SPECIFICATION REQUIRED ON POWERCUBE MODELS 1805 THROUGH 3805 ONLY.

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1805, 2105, 2405, 2605, 3205, 3805, 4505, 5205, GW6005, GW7005, GW8005, GW10005

SECONDARY UNIT DIMENSIONS

MODEL	PRIMARY	SECONDARY	C.D.	A	B	D	E	S	T	WT. LBS.
1805	134	185-56C	1.751	2.65	1.374	1.875	5.44	4.81	2.41	26
2105	134	215-56C	2.064	3.00	1.500	2.437	5.87	5.56	2.78	36
2405	134	245-56C	2.376	3.38	2.062	2.500	6.25	5.93	2.97	45
2605	134	265-56C	2.626	3.66	1.874	2.938	6.53	5.93	2.97	48
3205	214	325-143TC	3.251	4.40	2.124	3.250	8.12	7.56	3.78	91
3805	214	385-143TC	3.751	4.90	2.374	3.937	8.62	7.56	3.78	107
4505	324	455-213TC	4.501	5.67	2.499	4.625	9.13	10.00	5.00	181
5205	324	525-213TC	5.168	6.42	2.624	5.375	9.88	11.13	5.56	209
GW6005	CUSTOM	GW602	6.000	10.24	4.00	6.50	13.30	11.50	5.75	406
GW7005	CUSTOM	GW702	7.000	10.63	4.32	7.59	12.96	13.50	6.75	482
GW8005	CUSTOM	GW802	8.000	11.93	4.10	8.86	13.94	14.50	7.25	728
GW10005	CUSTOM	GW1002	10.000	14.34	5.11	10.36	17.05	18.50	9.25	1151

PRIMARY UNIT DIMENSIONS

MODEL	G	H	I	J	K	L	M	N	O	P	R	C.D.1	A1	B1	D1	T1
1805	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2105	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2405	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
2605	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	1.334	2.28	1.186	1.562	1.56
3205	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
3804	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
4505	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
5205	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
GW6005	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW7005	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW8005	56C	2.33	6.45	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	4.251	6.10	2.69	4.44	3.62
	143TC						.875									
	182TC	3.44	7.40	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	7.96	3/8 X 3/16			1.625									
GW10005	56C	2.44	7.85	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	5.251	7.50	3.63	5.12	4.28
	143TC						.875									
	182TC	3.44	8.80	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	9.36	3/8 X 3/16			1.625									

STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
1805	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
2105	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
2405 & 2605	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
3205 & 3805	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG.
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG.
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG.
GW6005	2	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-3/16	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-1/4	1/2 x 1/4	NO	1/2 NC X 3/4 LG
	2-7/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-1/2	5/8 x 5/16	NO	1/2 NC X 3/4 LG
	2-11/16	5/8 x 5/16	NO	1/2 NC X 3/4 LG

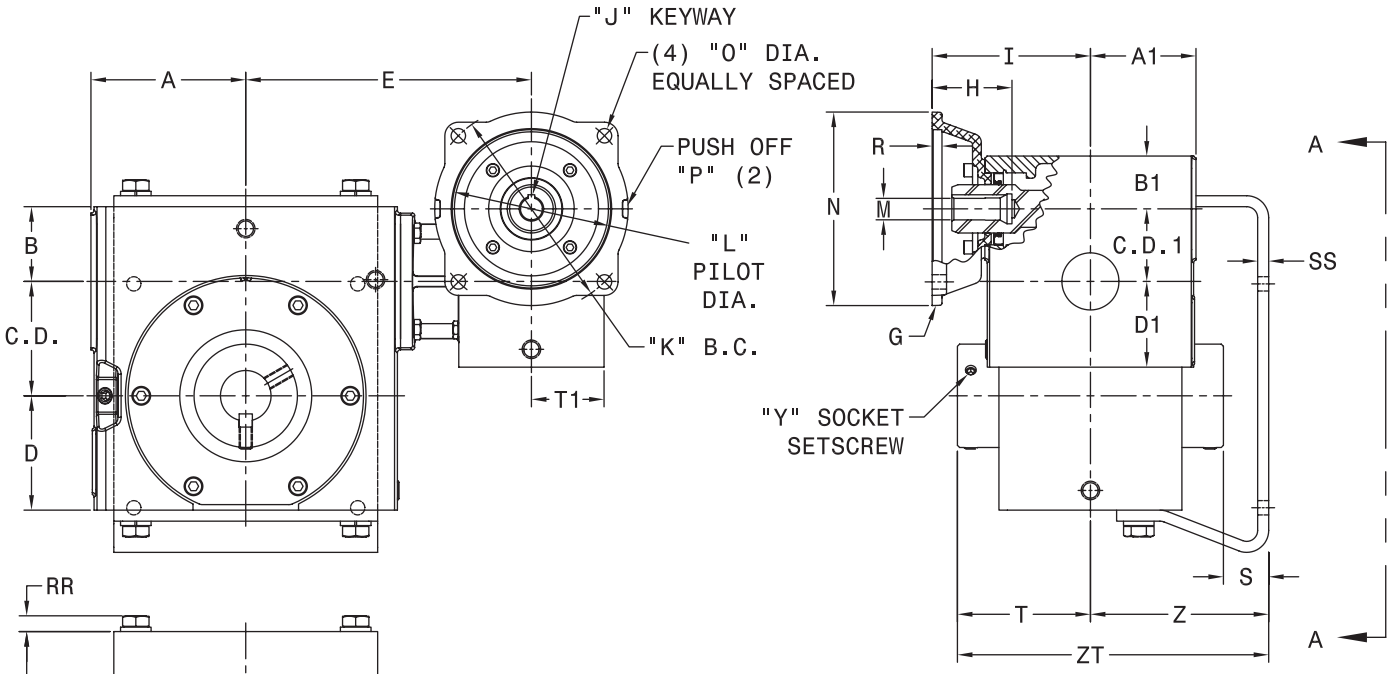
BORE TOLERANCE NOMINAL + .002 (MODELS 1805 THRU 6005)
BORE TOLERANCE NOMINAL + .0025 (MODELS GW7005 THRU GW10005)

STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
GW6005 (con't)	2-15/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-3/16	3/4 x 3/8	NO	1/2 NC X 3/4 LG
	3-7/16	7/8 x 7/16	NO	1/2 NC X 3/4 LG
GW7005	2-7/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-1/2	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-11/16	5/8 X 5/16	NO	1/2 NC X 1/2 LG
	2-15/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-7/16	3/4 X 3/8	NO	1/2 NC X 1/2 LG
	3-15/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW8005	3-7/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	3-15/16	7/8 X 7/16	NO	1/2 NC X 1/2 LG
	4-3/16	1 X 1/2	N0	1/2 NC X 1/2 LG
	4-7/16 (Max.)	1 X 1/4	1 X 3/4	1/2 NC X 1/2 LG
GW10005	3-7/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	3-15/16	7/8 X 7/16	NO	5/8 NC X 5/8 LG
	4-7/16	1 X 1/2	NO	5/8 NC X 5/8 LG
	4-15/16	1-1/4 X 5/8	NO	5/8 NC X 5/8 LG
	5-7/16 (Max.)	1-1/4 X 5/16	1-1/4 X 15/16	5/8 NC X 5/8 LG

MODELS

1806, 2106, 2406, 2606, 3206, 3806

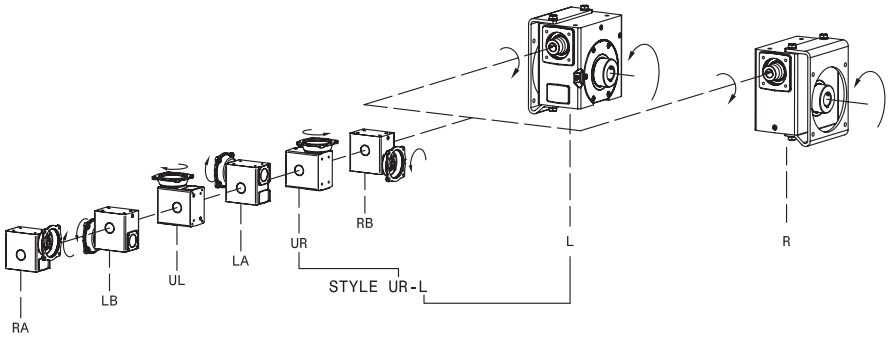


FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

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STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

1806, 2106, 2406, 2606, 3206, 3806

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1	E	WT. LBS.
1806	134	186-56C	1.751	1.334	2.65	2.28	1.374	1.186	1.875	1.562	5.44	29
2106	134	216-56C	2.064	1.334	3.00	2.28	1.500	1.186	2.437	1.562	5.87	41
2406	134	246-56C	2.376	1.334	3.38	2.28	2.062	1.186	2.500	1.562	6.25	50
2606	134	266-56C	2.626	1.334	3.66	2.28	1.874	1.186	2.938	1.562	6.53	54
3206	214	326-143TC	3.251	2.064	4.40	3.00	2.124	1.500	3.250	2.437	8.12	99
3806	214	386-143TC	3.751	2.064	4.90	3.00	2.374	1.500	3.937	2.437	8.62	117

MODEL	G	H	I	J	K	L	M	N	O	P	R
1806	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
2106	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
2406	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
2606	56C	2.27	3.63	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
3206	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
	143TC	2.38					.875				
3806	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19
	143TC	2.38					.875				

MODEL	D4	S	T	T1	Z	PP	RR	SS	TT	WW	XX	YY	ZT
1806	3.13	.91	2.41	1.56	3.31	4.25	.22	.25	4.88	6.50	11/32	5.875	5.71
2106	3.75	.85	2.78	1.56	3.63	4.75	.33	.31	5.75	7.63	13/32	7.000	6.41
2406	3.61	.75	2.97	1.56	3.72	5.00	.33	.25	6.00	8.30	13/32	7.500	6.69
2606	3.89	.66	2.97	1.56	3.63	5.75	.33	.31	6.75	8.70	13/32	8.000	6.60
3206	4.45	.22	3.78	2.06	4.00	6.88	.44	.31	7.50	10.14	13/32	9.000	7.78
3806	5.09	.72	3.78	2.06	4.50	7.50	.44	.31	8.25	11.53	9/16	10.000	8.28

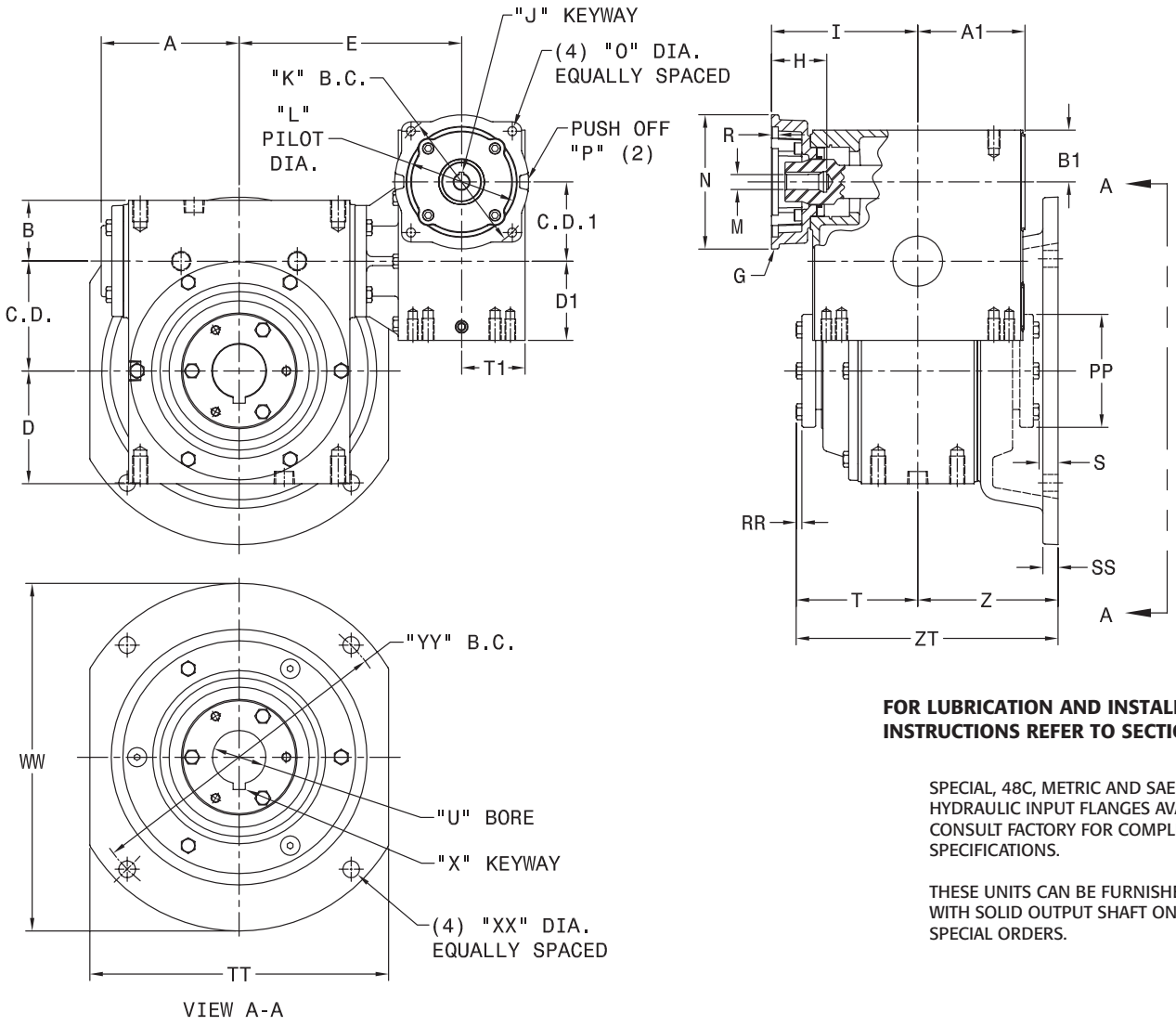
STOCK BORES

MODEL	U	X	KEY FURNISHED	Y
1806	15/16	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
	1 (Max.)	1/4 X 1/8	1/4 Sq.	10-24 NC X 1/4 LG
2106	15/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4 (Max.)	1/4 X 1/8	1/4 Sq.	1/4 NC X 1/4 LG
2406 & 2606	1	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-3/16	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-1/4	1/4 X 1/8	1/4 Sq.	5/16 NC X 5/16 LG
	1-7/16 (Max.)	3/8 X 1/8	3/8 X 5/16	1/4 NC X 1/4 LG
3206 & 3806	1-7/16	3/8 X 3/16	3/8 Sq.	3/8 NC X 5/8 LG
	1-15/16	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2	1/2 X 1/4	1/2 Sq.	3/8 NC X 3/8 LG
	2-3/16 (Max.)	1/2 X 1/8	1/2 Sq.	3/8 NC X 3/8 LG

BORE TOLERANCE NOMINAL + .002

MODELS

4506, 5206



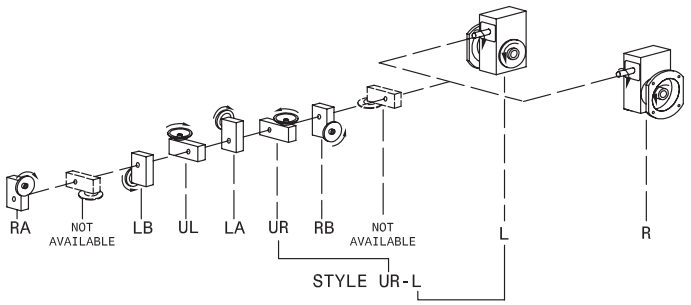
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

THESE UNITS CAN BE FURNISHED WITH SOLID OUTPUT SHAFT ON SPECIAL ORDERS.

STANDARD STYLES AVAILABLE

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CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
4506, 5206

SECONDARY UNIT DIMENSIONS

MODEL	PRIMARY	SECONDARY	C.D.	A	B	D	E	S	T	Z
4506	324	456-213TC	4.501	5.67	2.499	4.625	9.13	.75	5.00	5.75
5206	324	526-213TC	5.168	6.42	2.624	5.375	9.88	1.44	5.56	7.00

MODEL	SS	TT	WW	XX	YY	ZT	WT. LBS.
4506	.63	12.25	14.25	11/16	13.00	10.75	189
5206	.75	12.50	15.50	11/16	14.00	12.56	218

PRIMARY UNIT DIMENSIONS

MODEL	G	H	I	J	K	L	M	N	O	P	R	C.D.1	A1	B1	D1	T1
4506	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
5206	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					

QD BUSHING BORES

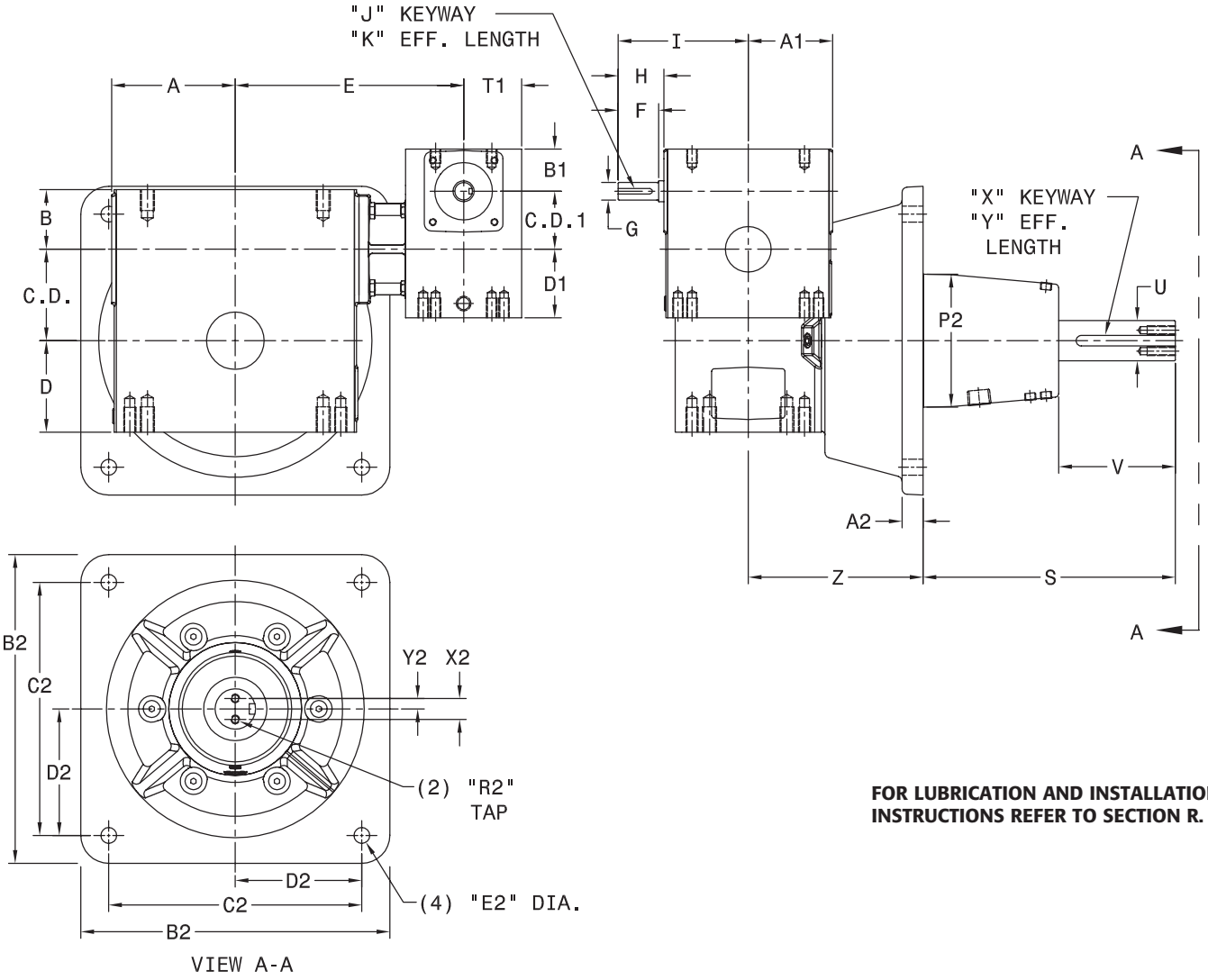
MODEL	U	X	PP	RR	KEY	TYPE	KIT*
4506	1-15/16	1/2 X 1/4	4-5/8	3/8	1/2 Sq.	SF	0229-02683
	2						0229-02684
	2-3/16						0229-02685
	2-7/16	5/8 X 3/16			5/8 x 1/2		0229-02686
	2-15/16	3/4 X 1/32			3/4 x 13/32		0229-02687
5206	2-3/16	1/2 X 1/4	6	7/16	1/2 Sq.	E	0229-02688
	2-7/16	5/8 X 3/16			5/8 Sq.		0229-02689
	2-15/16	3/4 X 1/8			3/4 X 1/2		0229-02690
	3						0229-02691
	3-3/16						0229-02692
	3-7/16	7/8 X 1/16			7/8 X 1/2		0229-02693

* ORDER BY QD BUSHING KIT NUMBER. BUSHING KITS ARE NOT INCLUDED IN REDUCER PRICE. KIT INCLUDES TWO BUSHINGS WITH KEYWAYS AND ONE KEY.

BORE TOLERANCE NOMINAL +.002

MODELS

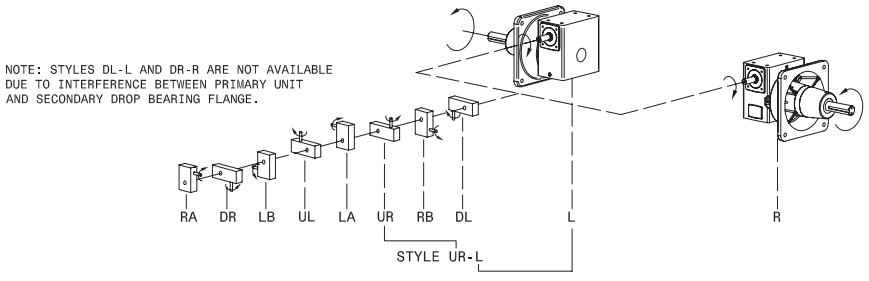
3207, 3807, 4507, 5207, GW6007, GW7007, GW8007, GW10007



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

3207, 3807, 4507, 5207, GW6007, GW7007, GW8007, GW10007

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1	E	F
3207	211	328-143TC	3.251	2.064	4.40	3.00	2.124	1.500	3.250	2.437	8.12	1.44
3807	211	388-143TC	3.751	2.064	4.90	3.00	2.374	1.500	3.937	2.437	8.62	1.44
4507	321	458-213TC	4.501	3.251	5.67	4.40	2.499	2.124	4.625	3.250	9.13	2.23
5207	321	528-213TC	5.168	3.251	6.42	4.40	2.624	2.124	5.375	3.250	9.88	2.23
GW6007	CUSTOM	GW607	6.000	3.251	10.24	5.02	4.00	2.63	6.50	3.50	13.30	2.35
GW7007	CUSTOM	GW707	7.000	3.251	10.63	5.02	4.32	2.63	7.59	3.50	12.96	2.35
GW8007	CUSTOM	GW807	8.000	4.251	11.93	6.10	4.10	2.69	8.86	4.44	13.94	3.57
GW10007	CUSTOM	GW1007	10.000	5.251	14.34	7.50	5.11	3.63	10.36	5.12	17.05	3.40

MODEL	G	H	I	J	K	T1	WT. LBS.
3207	.625/.624	1.63	4.63	3/16 X 3/32	1.13	2.06	130
3807	.625/.624	1.63	4.63	3/16 X 3/32	1.13	2.06	159
4507	.875/.874	2.48	6.88	3/16 X 3/32	1.91	2.60	246
5207	.875/.874	2.48	6.88	3/16 X 3/32	1.91	2.60	294
GW6007	.875	2.38	6.76	3/16 X 3/32	1.75	3.40	444
GW7007	.875	2.38	6.76	3/16 X 3/32	1.75	3.40	643
GW8007	1.250	3.47	9.57	1/4 X 1/8	2.88	3.62	920
GW10007	1.250	3.38	10.88	1/4 X 1/8	3.00	4.28	1406

MODEL	OUTPUT FLANGE	S	U	V	X	Y	Z
3207	STD	9.50	1.4375/1.4365	4.68	3/8 X 3/16	3.87	6.22
	LARGE*	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.37
3807	STD	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.58
4507	STD	10.50	1.6875/1.6865	5.50	3/8 X 3/16	4.69	6.00
5207	STD	10.50	2.1875/2.1865	5.53	1/2 X 1/4	4.63	6.25
GW6007	STD	15.50	2.438	7.63	5/8 X 5/16	6.50	7.00
GW7007	STD	15.50	2.937	7.63	3/4 X 3/8	6.44	8.50
GW8007	STD	17.06	3.438	9.25	7/8 X 7/16	8.00	10.00
GW10007	STD	17.00	3.938	9.43	1 X 1/2	7.75	12.50

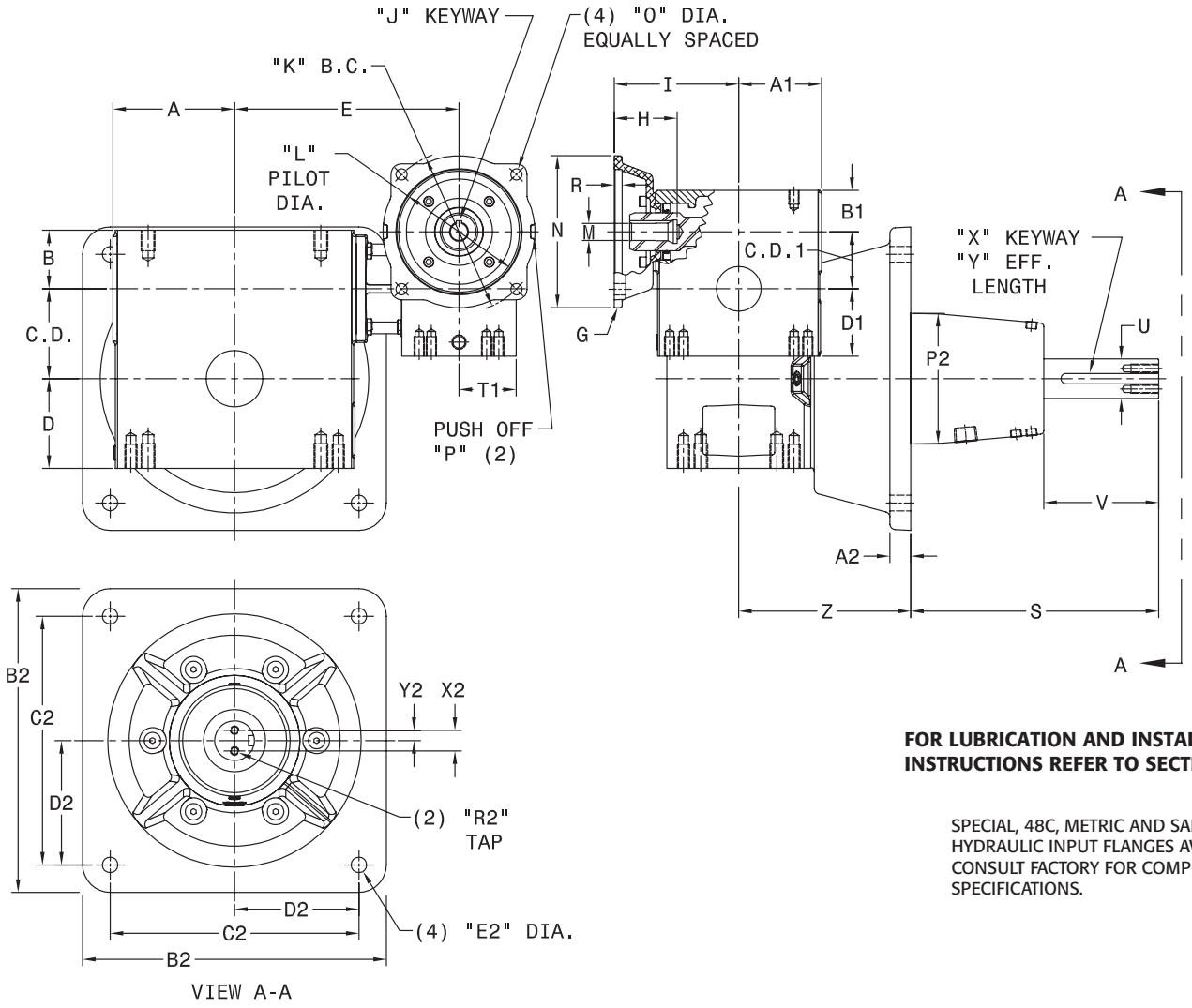
* LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY.

MODEL	OUTPUT FLANGE	A2	B2	C2	D2	E2	P2	R2	X2	Y2
3207	STD	.75	11.00	9.000	4.500	9/16	4.75	5/16 NC X 1.00 DP	.75	.38
	LARGE*	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
3807	STD	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38
4507	STD	.81	14.00	12.000	6.000	11/16	5.50	3/8 NC X 1.00 DP	1.00	.50
5207	STD	.84	16.00	14.000	7.000	13/16	6.63	3/8 NC X 1.00 DP	1.50	.75
GW6007	STD	1.50	19.50	17.000	8.500	15/16	9.50	3/8 NC X 1.00 DP	1.50	.75
GW7007	STD	1.75	22.00	19.000	9.500	1-1/8	10.75	3/8 NC X 1.00 DP	2.00	1.00
GW8007	STD	2.00	28.00	24.000	12.000	1-5/16	13.75	5/8 NC X 1.50 DP	2.12	1.06
GW10007	STD	2.25	32.00	28.000	14.000	1-5/16	17.00	5/8 NC X 1.50 DP	2.38	1.19

* LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY.

MODELS

3208, 3808, 4508, 5208, GW6008, GW7008, GW8008, GW10008



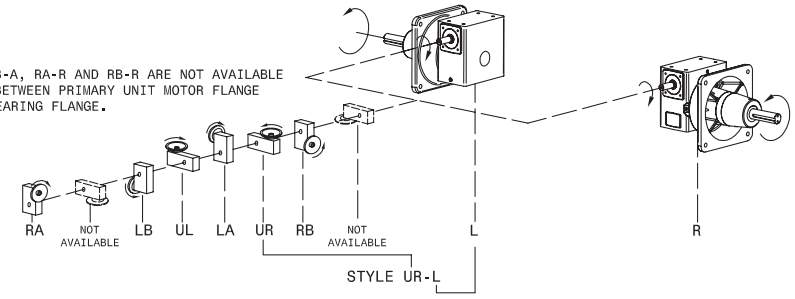
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

STANDARD STYLES AVAILABLE

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NOTE: STYLES LA-L, LB-A, RA-R AND RB-R ARE NOT AVAILABLE DUE TO INTERFERENCE BETWEEN PRIMARY UNIT MOTOR FLANGE AND SECONDARY DROP BEARING FLANGE.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS

3208, 3808, 4508, 5208, GW6008, GW7008, GW8008, GW10008

SECONDARY UNIT DIMENSIONS

MODEL	PRIMARY	SECONDARY	C.D.	A	B	D	E	OUTPUT FLANGE	S	U	V	X	Y	Z
3208	214	328-143TC	3.251	4.40	2.124	3.250	8.12	STD	9.50	1.4375/1.4365	4.68	3/8 X 3/16	3.87	6.22
								LARGE*	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.37
3808	214	388-143TC	3.751	4.90	2.374	3.937	8.62	STD	9.50	1.625/1.624	4.63	3/8 X 3/16	3.69	6.58
4508	324	458-213TC	4.501	5.67	2.499	4.625	9.13	STD	10.50	1.6875/1.6865	5.50	3/8 X 3/16	4.69	6.00
5208	324	528-213TC	5.168	6.42	2.624	5.375	9.88	STD	10.50	2.1875/2.1865	5.53	1/2 X 1/4	4.63	6.25
GW6008	CUSTOM	GW607	6.000	10.24	4.00	6.50	13.30	STD	15.50	2.438	7.63	5/8 X 5/16	6.50	7.00
GW7008	CUSTOM	GW707	7.000	10.63	4.32	7.59	12.96	STD	15.50	2.937	7.63	3/4 X 3/8	6.44	8.50
GW8008	CUSTOM	GW807	8.000	11.93	4.10	8.86	13.94	STD	17.06	3.438	9.25	7/8 X 7/16	8.00	10.00
GW10008	CUSTOM	GW1007	10.000	14.34	5.11	10.36	17.05	STD	17.00	3.938	9.43	1 X 1/2	7.75	12.50

* LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY.

MODEL	OUTPUT FLANGE	A2	B2	C2	D2	E2	P2	R2	X2	Y2	WEIGHT LBS.
3208	STD	.75	11.00	9.000	4.500	9/16	4.75	5/16 NC X 1.00 DP	.75	.38	132
	LARGE*	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38	
3808	STD	.94	12.50	10.500	5.250	9/16	4.94	5/16 NC X 1.00 DP	.75	.38	161
4508	STD	.81	14.00	12.000	6.000	11/16	5.50	3/8 NC X 1.00 DP	1.00	.50	250
5208	STD	.84	16.00	14.000	7.000	13/16	6.63	3/8 NC X 1.00 DP	1.50	.75	298
GW6008	STD	1.50	19.50	17.000	8.500	15/16	9.50	3/8 NC X 1.00 DP	1.50	.75	448
GW7008	STD	1.75	22.00	19.000	9.500	1-1/8	10.75	3/8 NC X 1.00 DP	2.00	1.00	647
GW8008	STD	2.00	28.00	24.000	12.000	1-5/16	13.75	5/8 NC X 1.50 DP	2.12	1.06	930
GW10008	STD	2.25	32.00	28.000	14.000	1-5/16	17.00	5/8 NC X 1.50 DP	2.38	1.19	1431

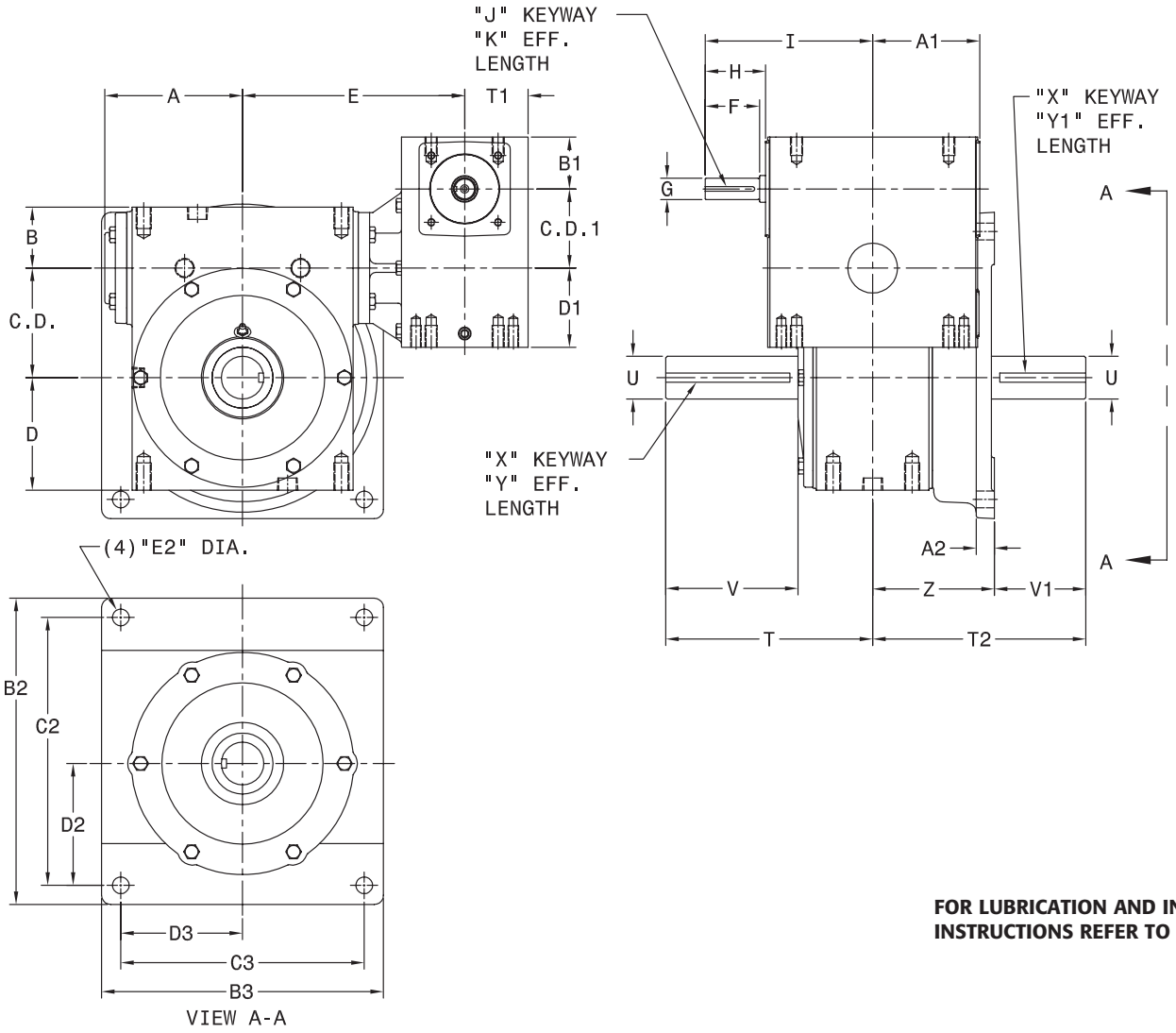
* LARGE FLANGE AVAILABLE AS MODIFIED STANDARD. CONSULT FACTORY.

PRIMARY UNIT DIMENSIONS

MODEL	G	H	I	J	K	L	M	N	O	P	R	C.D.1	A1	B1	D1	T1
3208	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
3808	56C	2.27	4.50	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	2.064	3.00	1.500	2.437	2.06
	143TC	2.38					.875									
4508	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
5208	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
GW6008	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW7008	56C	2.33	5.88	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	3.251	5.02	2.63	3.50	3.40
	143TC						.875									
	182TC	2.94	6.50	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC	3.10	6.94	5/16 X 5/32			1.375									
GW8008	56C	2.33	6.45	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	4.251	6.10	2.69	4.44	3.62
	143TC						.875									
	182TC	3.44	7.40	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	7.96	3/8 X 3/16			1.625									
GW10008	56C	2.44	7.85	3/16 X 3/32	5.875	4.501/4.503	.625	5.88	13/32	N/A	.19	5.251	7.50	3.63	5.12	4.28
	143TC						.875									
	182TC	3.44	8.80	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	N/A	.19					
	213TC			5/16 X 5/32			1.375									
	256TC	4.00	9.36	3/8 X 3/16			1.625									

MODELS

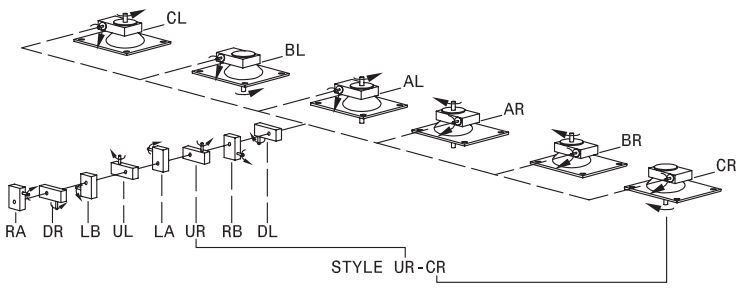
4509, 5209



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

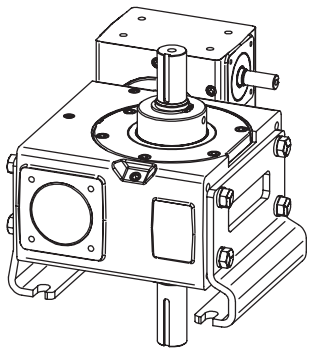
MODELS
4509, 5209

MODEL	PRIMARY	SECONDARY	C.D.	C.D.1	A	A1	B	B1	D	D1
4509	321	450V-213TC	4.501	3.251	5.67	4.40	2.499	2.124	4.625	3.250
5209	321	520V-213TC	5.168	3.251	6.42	4.40	2.624	2.124	5.375	3.250

MODEL	E	F	G	H	I	J	K	T1
4509	9.13	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	2.60
5209	9.88	2.23	.875/.874	2.48	6.88	3/16 X 3/32	1.91	2.60

MODEL	T	T2	U	V	V1	X	Y	Y1	Z
4509	8.50	8.75	1.750/1.749	5.43	3.75	3/8 X 3/16	4.59	3.03	5.00
5209	9.00	9.75	2.000/1.999	5.66	4.25	1/2 X 1/4	4.88	3.50	5.50

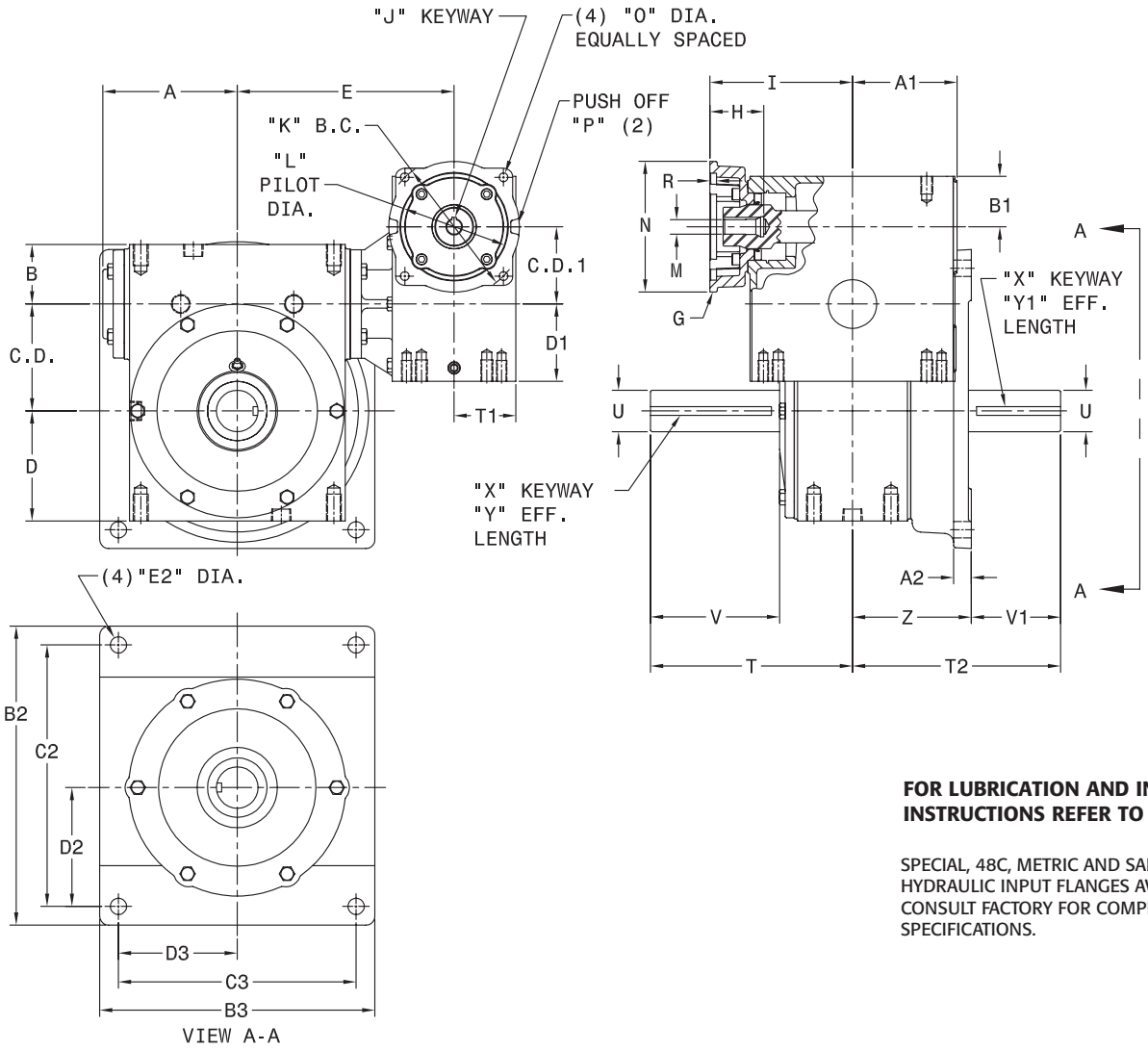
MODEL	A2	B2	B3	C2	C3	D2	D3	E2	WT. LBS.
4509	8.50	8.75	1.750/1.749	5.43	3.75	3/8 X 3/16	4.59	3.03	5.00
5209	9.00	9.75	2.000/1.999	5.66	4.25	1/2 X 1/4	4.88	3.50	5.50



FOR SERIES 1800 THROUGH 3800 VERTICAL MOUNT EQUIVALENTS, REFER TO KITS SHOWN ON PAGE B-93.

MODELS

4510, 5210



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

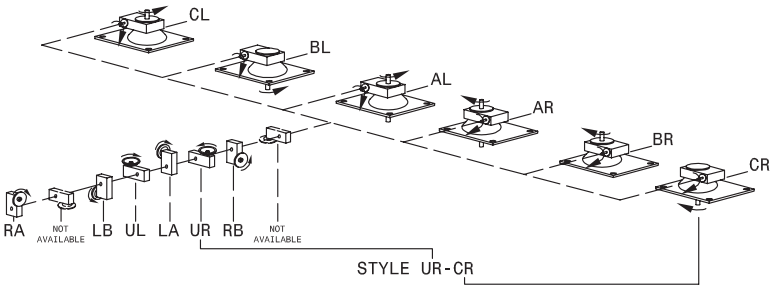
SPECIAL, 48C, METRIC AND SAE HYDRAULIC INPUT FLANGES AVAILABLE. CONSULT FACTORY FOR COMPLETE SPECIFICATIONS.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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PRIMARY STYLES LB & LA NOT AVAILABLE WITH SECONDARY STYLES AR, BR, OR CR.

PRIMARY STYLES RA & RB NOT AVAILABLE WITH SECONDARY STYLES AL, BL, OR CL.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS
4510, 5210

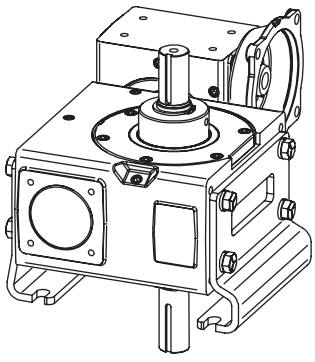
SECONDARY UNIT DIMENSIONS

MODEL	PRIMARY	SECONDARY	C.D.	A	B	D	E	T	T2	U	V	V1
4510	321	450V-213TC	4.501	5.67	2.499	4.625	9.13	8.50	8.75	1.750/1.749	5.43	3.75
5210	321	520V-213TC	5.168	6.42	2.624	5.375	9.88	9.00	9.75	2.000/1.999	5.66	4.25

MODEL	X	Y	Y1	Z	A2	B2	B3	C2	C3	D2	D3	E2	WT. LBS.
4510	3/8 X 3/16	4.59	3.03	5.00	.75	12.58	11.58	11.000	10.000	5.000	5.000	11/16	189
5210	1/2 X 1/4	4.88	3.50	5.50	.75	16.83	12.58	15.250	11.000	6.750	5.500	11/16	218

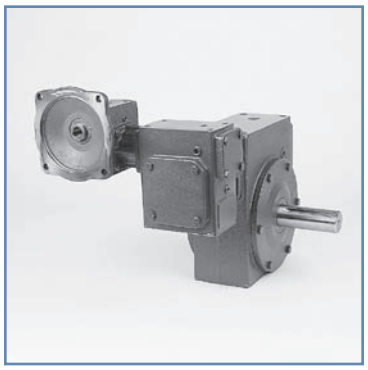
PRIMARY UNIT DIMENSIONS

MODEL	G	H	I	J	K	L	M	N	O	P	R	C.D.1	A1	B1	D1	T1
4510	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					
5210	56C	2.27	6.00	3/16 X 3/32	5.875	4.501/4.503	.625	5.50	13/32	SLOTS	.19	3.251	4.40	2.124	3.250	2.60
	143TC	2.38					.875									
	182TC	3.19	6.38	1/4 X 1/8	7.250	8.501/8.504	1.125	9.00	17/32	HOLES	.44					



FOR SERIES 1800 THROUGH 3800 VERTICAL MOUNT EQUIVALENTS, REFER TO KITS SHOWN ON PAGE B-93.

TRIPLE REDUCTION



TRIPLE REDUCTION FEATURES

- Provides all the same basic features as the single and double reduction units with three Hub City gearboxes connected.
- Available in ratios from 1000:1 to 216,000:1
- Different models to choose from. Not shown in this catalog. See www.hubcityinc.com

FOR ADDITIONAL TRIPLE REDUCTION INFORMATION,

PLEASE GO TO OUR WEBSITE:

www.hubcityinc.com

ACCESSORIES & FACTORY OPTIONS

The following factory options are also available for gear drives in this catalog. Contact the factory for details on price, availability, and specifications.

CLEANLINE™

See Section O

Features

FDA approved white acrylic paint
Corrosion resistant shaft treatment or stainless steel shafts
Stainless steel hardware and nameplate

Options

Motorized versions
BISSC Standards

METRIC VERSIONS

Features

Metric Motor flanges
Metric shaft dimensions
Metric mounting dimensions

Options

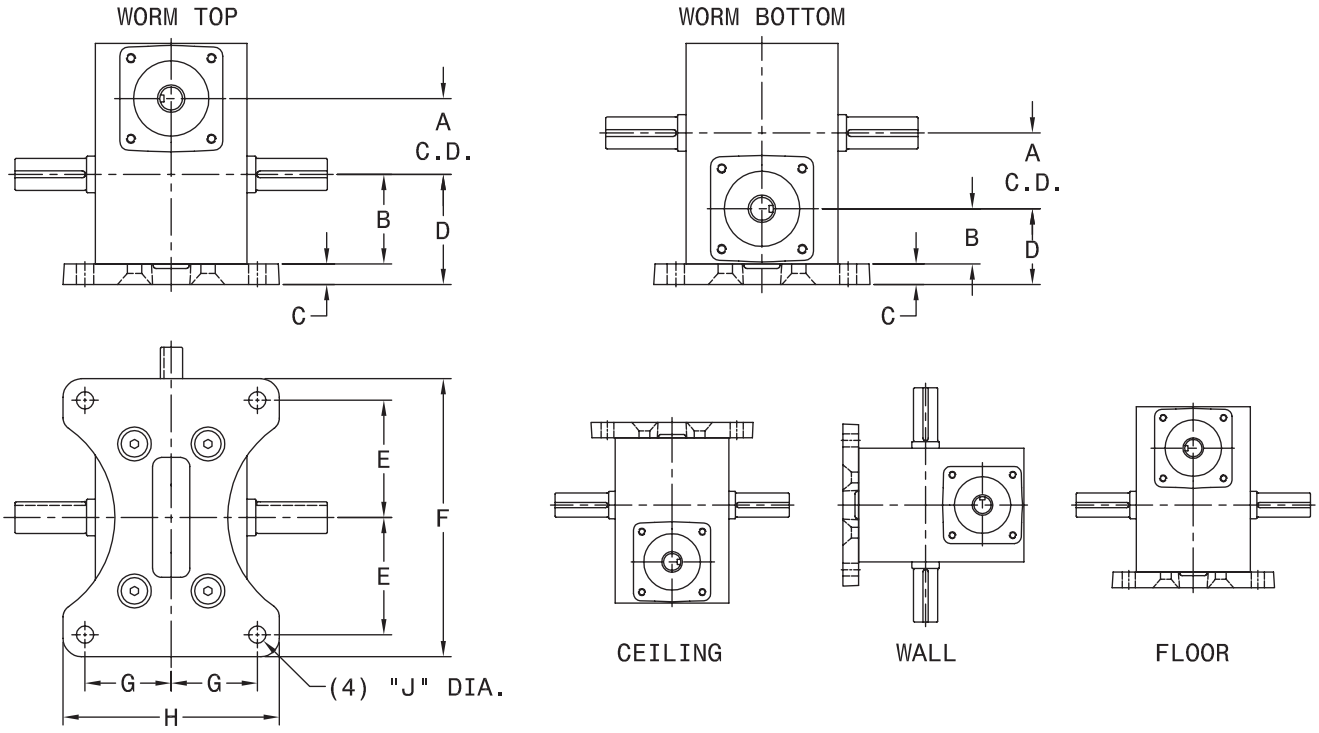
Motorized versions
Modified and Custom Designs

MODIFIED AND CUSTOM DESIGNS

If you have looked through this catalog and do not see exactly what you need, Hub City has the capability and engineering expertise to design and produce a special drive. Capabilities range from flange and shaft modifications, to custom housing dimensions. Consult the factory or your Hub City representative with your specifications.

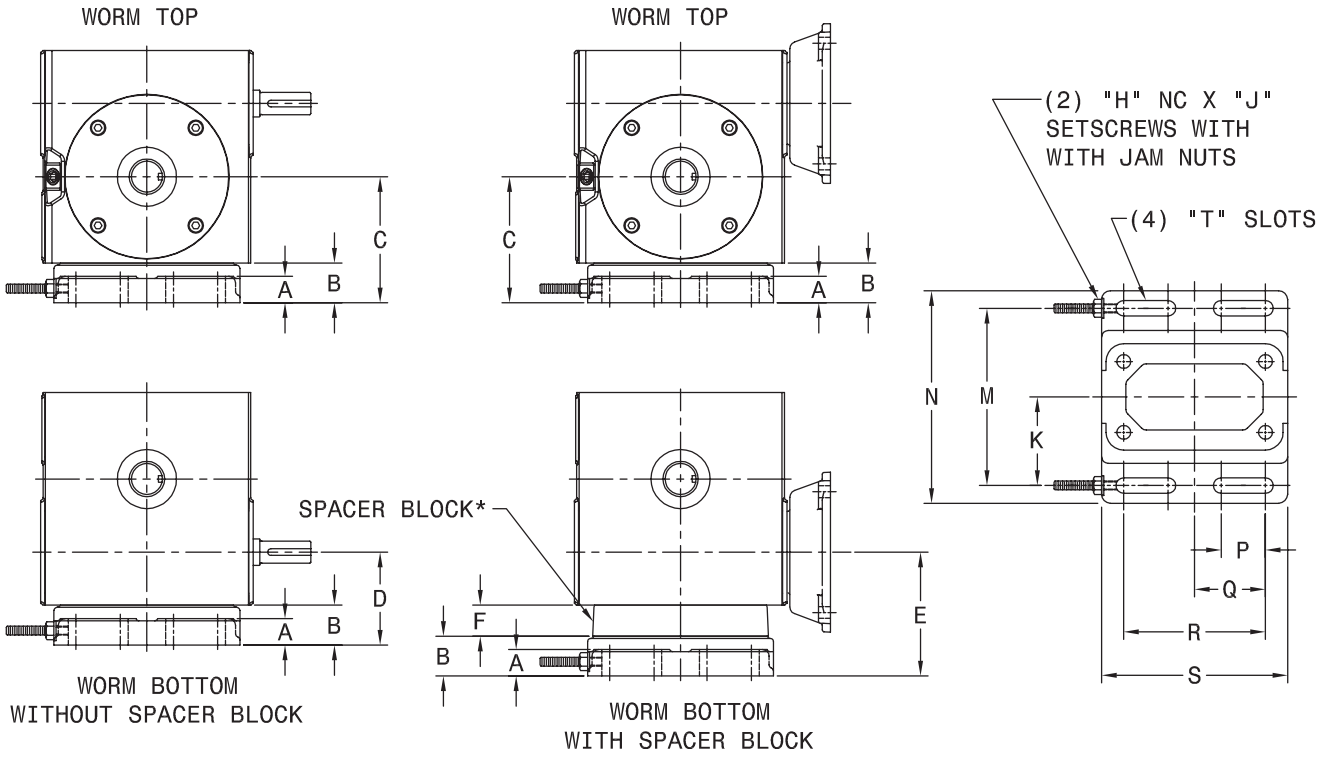
UNIVERSAL BASE KITS

C-FACE UNITS MOUNTED WITH WORM BOTTOM ARE NOT RECOMMENDED AND WILL NOT WORK WITH THESE BASE KITS. IF IT IS NECESSARY TO MOUNT THE UNIT IN THIS POSITION, USE THE ADJUSTABLE BASE KIT SHOWN ON PAGE B-89 OR CONSULT FACTORY FOR OTHER AVAILABLE MOUNTING FEET.



SERIES	KIT NUMBER	SHIPPING WT. LBS.		A	B	C	D	E	F	G	H	J
130	0229-01761	1.9	WORM TOP	1.334	1.562	.687	2.249	2-3/16	5-3/8	1-21/32	4-3/16	11/32
			WORM BOTTOM		1.186		3.207					
180	0229-01592	1.8	WORM TOP	1.751	1.875	.875	2.750	2-7/8	6-7/8	2-1/4	5-5/8	13/32
			WORM BOTTOM		1.374		4.000					
210	0229-01750	4.5	WORM TOP	2.064	2.437	.562	2.999	3-3/16	7-1/2	2-11/32	5-13/16	15/32
			WORM BOTTOM		1.500		4.125					
W240	0229-03062	6.0	WORM TOP	2.376	2.500	.750	3.250	3-17/32	8-3/8	2-7/16	6-3/16	15/32
			WORM BOTTOM		2.062		5.188					
260	0229-01785	7.7	WORM TOP	2.626	2.938	.750	3.688	4	9-1/2	2-5/8	6-3/4	17/32
			WORM BOTTOM		1.874		5.250					
320	0229-01925	9.0	WORM TOP	3.251	3.250	1.125	4.375	4-3/4	10-3/4	3-1/16	7-3/8	17/32
			WORM BOTTOM		2.124		6.500					
380	0229-02409	10.0	WORM TOP	3.751	3.937	.875	4.812	5-3/16	11-5/8	3-1/2	8-1/4	19/32
			WORM BOTTOM		2.374		7.000					
450	0229-02480	16.3	WORM TOP	4.501	4.625	1.000	5.625	6-1/16	13-3/8	3-13/16	8-7/8	21/32
			WORM BOTTOM		2.499		8.000					
520	0229-02484	17.8	WORM TOP	5.168	5.375	1.062	6.437	7-1/16	16	4-3/16	10-1/4	25/32
			WORM BOTTOM		2.624		8.854					
GW60	0279-00620	31	WORM TOP	6.000	6.500	1.250	7.750	8-1/4	19	4-3/4	12	29/32
			WORM BOTTOM		4.000		5.250					
GW70	0279-00600	41	WORM TOP	7.000	7.59	1.42	9.00	6-1/2	15-3/8	5-5/8	13-3/8	1-1/8
			WORM BOTTOM		4.32		12.75					
GW80	0279-00601	48	WORM TOP	8.000	8.86	1.65	10.50	7-3/8	17-3/8	5-3/4	13-1/2	1-1/8
			WORM BOTTOM		4.10		13.75					
GW100	0279-00602	76	WORM TOP	10.000	10.36	1.65	12.00	8-1/2	21-9/64	7	16-7/8	1-7/16
			WORM BOTTOM		5.11		16.76					

ADJUSTABLE BASE KITS

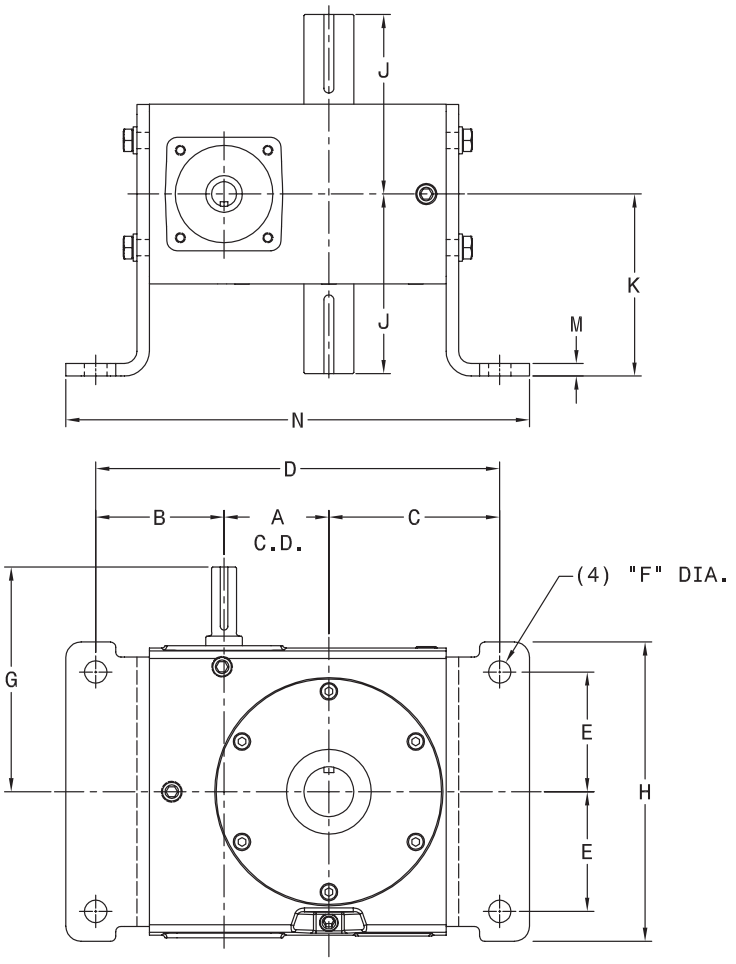


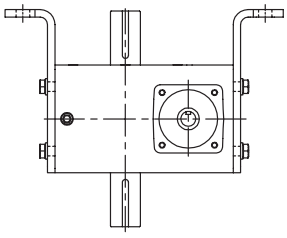
SERIES	ADJUSTABLE BASE KIT NUMBER	ADJUSTABLE BASE KIT SHIPPING WT.	SPACER BLOCK KIT NUMBER *	SPACER BLOCK KIT SHIPPING WT.	A	B	C	D	E
130	0229-00015	3.0 lbs.	0229-00023	3.0 lbs.	3/4	1-1/8	2-11/16	2-5/16	3-1/2
180	0229-00016	4.0 lbs.	0229-00024	3.0 lbs.	3/4	1-1/8	3	2-1/2	3-1/2
210	0229-00017	5.0 lbs.	0229-00025	3.0 lbs.	3/4	1-1/8	3-9/16	2-5/8	3-1/2
W240	0229-02988	8.0 lbs.	N/A	N/A	7/8	1-7/16	3-15/16	3-1/2	N/A
260	0229-00018	8.0 lbs.	N/A	N/A	7/8	1-5/8	4-9/16	3-1/2	N/A
320	0229-00019	10.0 lbs.	N/A	N/A	7/8	1-3/8	4-5/8	3-1/2	N/A
380	0229-00020	11.0 lbs.	N/A	N/A	7/8	1-3/8	5-5/16	3-3/4	N/A
450	0229-00021	15.0 lbs.	N/A	N/A	7/8	1-3/8	6	3-7/8	N/A
520	0229-00022	23.0 lbs.	N/A	N/A	1	1-1/2	6-7/8	4-1/8	N/A

* CONTACT FACTORY FOR SPACER BLOCK KIT AVAILABILITY.

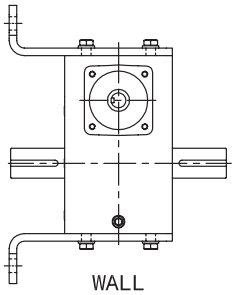
SERIES	F	H	J	K	M	N	P	Q	R	S	T
130	1-3/16	1/4	1-1/4	2	4	4-3/4	3/4	1-3/16	2-3/8	3-3/8	5/16
180	1	1/4	1-1/2	2-1/8	4-1/4	5-1/4	1	1-9/16	3-1/8	4-1/4	5/16
210	7/8	1/4	1-3/4	2-1/2	5	6	1-1/4	2	4	5-1/4	7/16
W240	N/A	3/8	2-1/2	3	6	7-1/4	1-1/4	2-1/2	5	7	9/16
260	N/A	3/8	2	2-3/4	5-1/2	6-3/4	1-1/4	2-7/16	4-7/8	6-1/2	9/16
320	N/A	3/8	2	3	6	7-1/8	1-3/8	3-1/8	6-1/4	7-3/4	9/16
380	N/A	3/8	2	3-1/8	6-1/4	7-1/2	1-1/2	3-7/16	6-7/8	8-3/8	9/16
450	N/A	3/8	2-1/2	3-5/8	7-1/4	8-3/4	1-5/8	3-7/8	7-3/4	9-5/8	11/16
520	N/A	3/8	2-1/2	4-1/4	8-1/2	10	1-7/8	4-3/4	9-1/2	11-3/8	11/16

SIDE MOUNTING KITS

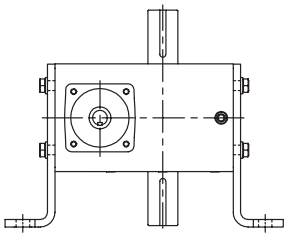




CEILING



WALL



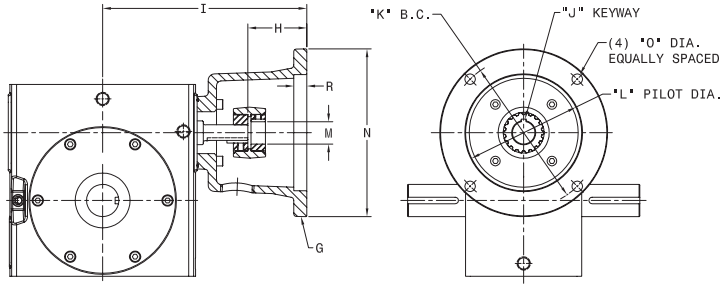
FLOOR

CONSULT FACTORY FOR VERTICAL SHAFT APPLICATIONS

SERIES	SIDE MTG KIT NUMBER	SIDE MTG KIT SHIPPING WT.	A C.D.	B	C	D	E	F	G	H	J	K	M	N	MATL*
130	0229-02989	3.2 lbs.	1.334	2.05	2.43	5.81	1.63	.31	3.82	4.00	3.25	3.312	.25	6.58	ST **
180	0229-02990	4.2 lbs.	1.751	2.37	2.88	7.00	2.13	.44	4.19	5.25	3.50	3.562	.25	8.00	ST **
210	0229-02991	9.3 lbs.	2.064	2.75	3.69	8.50	2.13	.44	4.63	5.75	4.25	4.375	.31	9.50	ST **
W240	0229-02992	9.6 lbs.	2.376	3.06	3.50	8.94	2.44	.44	5.00	6.00	4.50	4.562	.31	9.94	ST **
260	0229-02993	11.7 lbs.	2.626	3.22	4.28	10.12	3.00	.56	5.63	7.50	4.50	4.562	.31	11.62	ST **
320	0229-02994	14.0 lbs.	3.251	3.44	4.56	11.25	4.00	.56	6.88	9.25	5.44	5.50	.31	12.51	ST **
380	0229-02995	17.0 lbs.	3.751	3.87	5.44	13.06	4.25	.56	7.38	9.75	6.69	6.812	.31	14.32	ST **
450	0229-02497	34.1 lbs.	4.501	4.25	6.38	15.13	5.13	.66	8.44	11.50	7.25	7.375	.69	16.39	CI
520	0229-02498	43.5 lbs.	5.168	4.50	7.25	16.92	5.38	.66	9.25	12.00	7.81	7.937	.69	18.17	CI
GW60	0279-00621	36 lbs.	6.000	6.19	8.69	20.88	5.88	.91	11.78	14.75	10.00	7.31	.50	23.26	ST
GW70	0279-00603	71 lbs.	7.000	6.87	10.12	23.99	6.25	1.13	11.50	14.88	11.76	7.000	.75	26.91	ST
GW80	0279-00604	78 lbs.	8.000	6.38	11.12	25.50	7.00	1.13	12.50	17.00	12.25	8.000	.75	28.96	ST
GW100	0279-00605	156 lbs.	10.000	7.76	12.99	30.75	8.88	1.44	15.50	20.88	14.75	9.000	1.00	37.47	ST

* ST = STEEL, CI = CAST IRON
** CONSULT FACTORY FOR AVAILABILITY OF OPTIONAL CAST IRON MOUNTING FEET

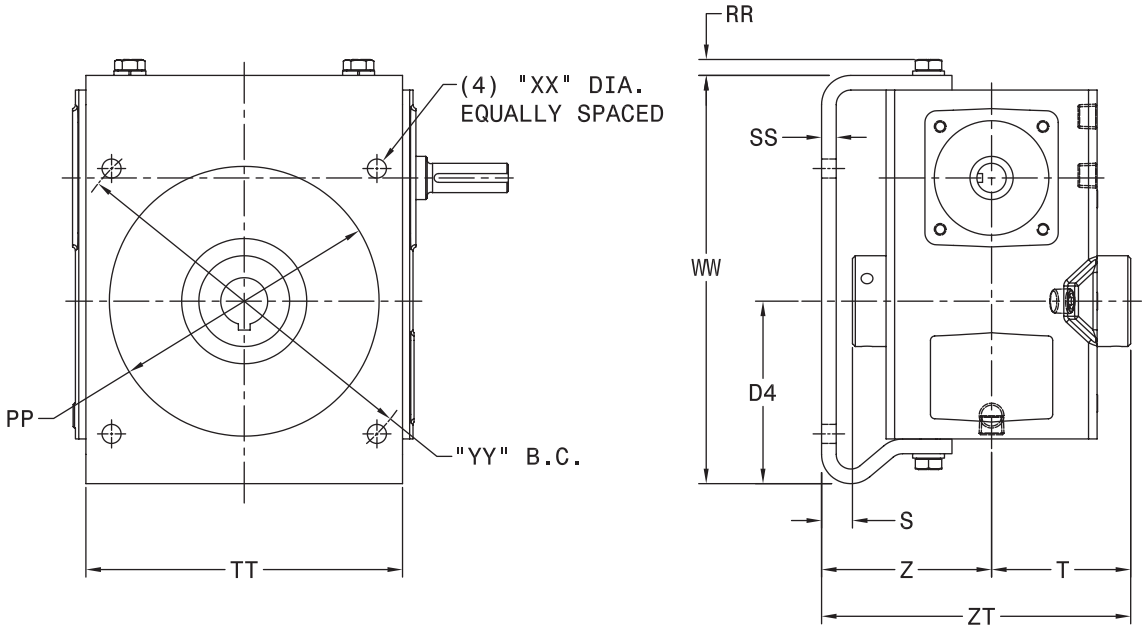
NEMA "C" FLANGE ADAPTOR KITS

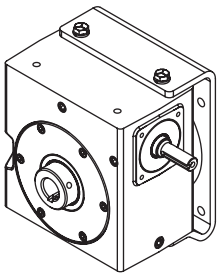


SERIES	G - NEMA FLANGE	FLANGE KIT NUMBER	FLANGE KIT SHIPPING WT.	H	I	J	K	L	M	N	O	R
130	56C	0229-02975	9.4 lbs.	2.21	6.03	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.38
180	56C	0229-02976	9.4 lbs.	2.21	6.40	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.38
210	56C	0229-02977	9.4 lbs.	2.28	6.91	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.50
	143TC, 145TC 182C, 184C	0229-02978	9.3 lbs.						.875			
W240	56C	0229-02977	9.4 lbs.	2.29	7.29	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.50
	143TC, 145TC 182C, 184C	0229-02978	9.3 lbs.						.875			
260	56C	0229-02979	10.0 lbs.	2.28	7.91	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.50
	143TC, 145TC 182C, 184C	0229-02980	9.9 lbs.						.875			
	182TC, 184TC 213C, 215C	0229-02981	22.5 lbs.	4.00	9.63	1/4 x 1/8	7.250	8.501/8.504	1.125	9.10	17/32	.50
320	56C	0229-02982	11.7 lbs.	2.18	9.06	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.20
	143TC, 145TC 182C, 184C	0229-02983	11.6 lbs.						.875			
	182TC, 184TC 213C, 215C	0229-02984	22.2 lbs.	3.44	10.32	1/4 x 1/8	7.250	8.501/8.504	1.125	9.10	17/32	.50
380	56C	0229-02985	11.5 lbs.	2.18	9.56	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.20
	143TC, 145TC 182C, 184C	0229-02986	11.4 lbs.						.875			
	182TC, 184TC 213C, 215C	0229-02987	22.0 lbs.	3.44	10.82	1/4 x 1/8	7.250	8.501/8.504	1.125	9.10	17/32	.50
450	56C	0229-02893	13.9 lbs.	2.44	10.88	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.20
	143TC, 145TC 182C, 184C	0229-02894							.875			
	182TC, 184TC 213C, 215C	0229-02895	22.8 lbs.	3.25	11.69	1/4 x 1/8	7.250	8.501/8.504	1.125	9.06	17/32	.38
520	56C	0229-02897	15.4 lbs.	2.38	11.63	3/16 X 3/32	5.875	4.501/4.503	.625	6.50	13/32	.20
	143TC, 145TC 182C, 184C	0229-02898							.875			
	182TC, 184TC 213C, 215C	0229-02899	24.9 lbs.	3.19	12.44	1/4 x 1/8	7.250	8.501/8.504	1.125	9.06	17/32	.38
GW60	182TC, 184TC 213C, 215C	0279-00622	28 lbs.	4.10	15.88	1/4 x 1/8	7.250	8.501/8.504	1.125	9.00	17/32	.19
	213TC, 215TC 254C, 256C	0279-00623				5/16 x 5/32			1.375			
	256TC, 256TC	0279-00624		4.72	16.50	3/8 x 3/16			1.625			
GW70	182TC, 184TC 213C, 215C	0279-00606	14 lbs.	4.19	15.69	1/4 x 1/8	7.250	8.501/8.504	1.125	9.25	17/32	.19
	213TC, 215TC 254C, 256C	0279-00607	16 lbs.			5/16 x 5/32			1.375			
	256TC, 256TC	0279-00608	28 lbs.			3/8 x 3/16			1.625			
GW80	213TC, 215TC 254C, 256C	0279-00609	16 lbs.	4.27	16.77	5/16 x 5/32	7.250	8.501/8.504	1.375	9.25	17/32	.19
	256TC, 256TC	0279-00610	28 lbs.			3/8 x 3/16			1.625			

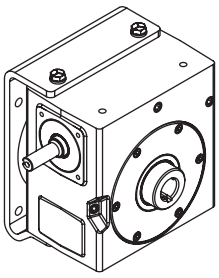
NOTE: THE C-FLANGE KITS REFERRED TO HERE ARE FOR SINGLE REDUCTION UNITS. REFER TO PAGE B-62 TO B-85 TO DETERMINE THE PRIMARY UNIT SERIES THAT IS USED TO MAKE UP A DOUBLE REDUCTION UNIT. SEE PAGE B-95 FOR C-FLANGE KITS TO BE USED FOR DOUBLE REDUCTION SIZES GW700 / GW1000.

SIDE MOUNT FLANGE BRACKET KITS

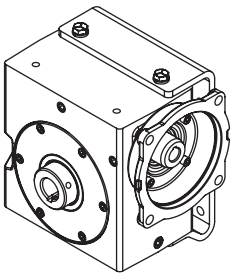




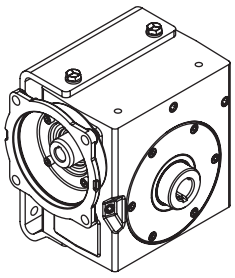
STYLE A SHOWN
W/KIT MOUNTED ON RIGHT



STYLE B SHOWN
W/KIT MOUNTED ON LEFT



STYLE A SHOWN
W/KIT MOUNTED ON RIGHT

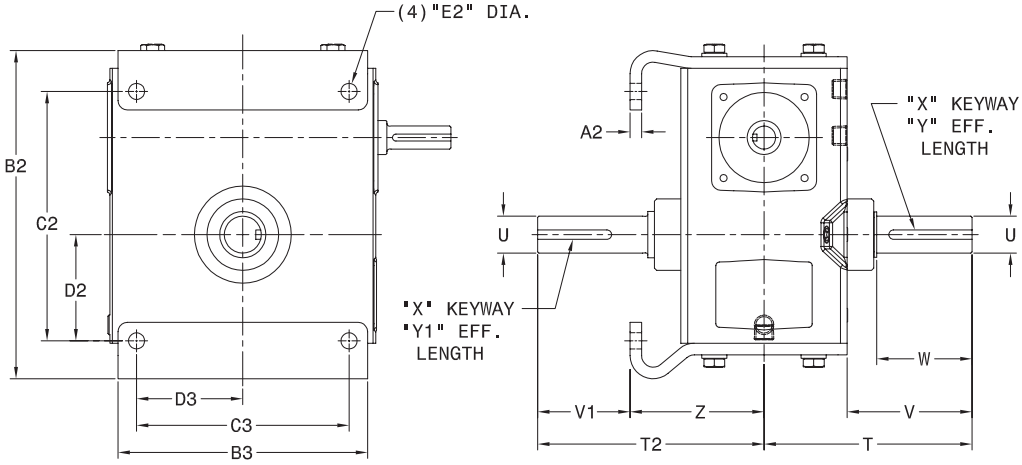


STYLE B SHOWN
W/KIT MOUNTED ON LEFT

NOTE: SIDE MOUNT KITS ARE INTENDED TO BE ATTACHED ON THE SIDE OPPOSITE OF THE PIPE PLUGS AND COVER OF A HOLLOW BORE UNIT, MODELS "XX2" OR "XX5" AS SHOWN. **CUSTOMER IS REQUIRED TO SPECIFY THE STYLE OF THE GEARBOX WHEN ORDERING TO ACCOMPLISH THIS.**

SERIES	SIDE MOUNT KIT NO.	SHIPPING WT. LBS.	D4	S	T	Z	PP	RR	SS	TT	WW	XX	YY	ZT
180	0229-02950	5.2	3.13	.91	2.41	3.31	4.25	.22	.25	4.88	6.50	11/32	5.875	5.71
210	0229-02951	7.5	3.75	.85	2.78	3.63	4.75	.33	.31	5.75	7.63	13/32	7.000	6.41
W240	0229-02952	7.1	3.61	.75	2.97	3.72	5.00	.33	.25	6.00	8.30	13/32	7.500	6.69
260	0229-02953	8.1	3.89	.66	2.97	3.63	5.75	.33	.31	6.75	8.70	13/32	8.000	6.60
	0229-02954	9.4	4.07	1.66	2.97	4.63	5.75	.33	.31	6.75	8.88	13/32	8.000	7.60
320	0229-02955	10.0	4.45	.22	3.78	4.00	6.88	.44	.31	7.50	10.14	13/32	9.000	7.78
380	0229-02956	12.1	5.09	.72	3.78	4.50	7.50	.44	.31	8.25	11.53	9/16	10.000	8.28

VERTICAL MOUNTING KITS

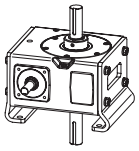


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS OR REVIEW VERTICAL SHAFT LUBRICATION INSTRUCTIONS INCLUDED IN KIT.

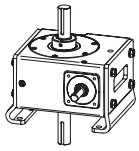
NOTE: VERTICAL MOUNT KITS ARE INTENDED TO BE ATTACHED SO THE MOUNTING FEET ARE ON THE SIDE OPPOSITE OF THE PIPE PLUGS AND COVER OF A HOLLOW BORE UNIT, MODELS "XX2" OR "XX5" AS SHOWN. **CUSTOMER IS REQUIRED TO SPECIFY THE STYLE OF THE GEARBOX WHEN ORDERING TO ACCOMPLISH THIS.**

BASE MODEL	STOCK BORE REQUIRED
182 OR 185	1.000
212 OR 215	1.000
242 OR 245	1.000

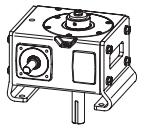
BASE MODEL	STOCK BORE REQUIRED
262 OR 265	1.000
322 OR 325	1.438
382 OR 385	1.938



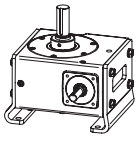
STYLE: AL
MODEL XX2 OR XX5
STYLE "B"
PLUS "AL, AR" KIT



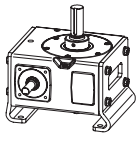
STYLE: AR
MODEL XX2 OR XX5
STYLE "A"
PLUS "AL, AR" KIT



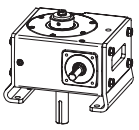
STYLE: BL
MODEL XX2 OR XX5
STYLE "B"
PLUS "BL, CR" KIT



STYLE: BR
MODEL XX2 OR XX5
STYLE "A"
PLUS "BR, CL" KIT



STYLE: CL
MODEL XX2 OR XX5
STYLE "B"
PLUS "BR, CL" KIT

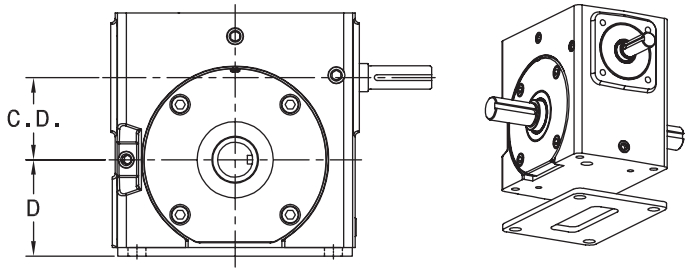


STYLE: CR
MODEL XX2 OR XX5
STYLE "A"
PLUS "BL, CR" KIT

SERIES	STYLE	VERTICAL MT. KIT NO.	SHIP WT. LBS.	T	T2	U	V	V1	W	X	Y	Y1	Z	A2	B2	B3	C2	C3	D2	D3	E2
180	AL,AR	0229-02957	7.2	4.50	5.19	0.750	2.78	2.00	1.87	3/16	1.66	1.79	3.19	.25	7.00	4.75	5.00	4	2.13	2.00	.44*
	BL,CR	0229-02958	7.0	N/A	5.19	0.749	N/A	2.00	N/A	X	N/A	1.79									
	BR,CL	0229-02959	6.7	4.50	N/A		2.78	N/A	1.92	3/32	1.66	N/A									
210	AL,AR	0229-02960	9.9	5.00	5.50	0.875	2.94	2.25	1.99	3/16	1.79	1.73	3.25	.31	7.68	4.75	5.25	4	2.13	2.00	.44
	BL,CR	0229-02961	9.6	N/A	5.50	0.874	N/A	2.25	N/A	X	N/A	1.73									
	BR,CL	0229-02962	9.5	5.00	N/A		2.94	N/A	2.04	3/32	1.79	N/A									
W240	AL,AR	0229-02963	12.9	5.63	6.13	1.000	3.44	2.50	2.58	1/4	2.13	1.88	3.63	.31	9.98	6.50	7.75	5.75	2.38	2.88	.44*
	BL,CR	0229-02964	12.4	N/A	6.13	0.999	N/A	2.50	N/A	X	N/A	1.88									
	BR,CL	0229-02965	12.3	5.63	N/A		3.44	N/A	2.48	1/8	2.13	N/A									
260	AL,AR	0229-02966	12.5	5.63	6.13	1.000	3.38	2.50	2.58	1/4	2.13	1.88	3.63	.31	8.88	6.75	6.75	5.75	2.88	2.88	.44
	BL,CR	0229-02967	12.0	N/A	6.13	0.999	N/A	2.50	N/A	X	N/A	1.88									
	BR,CL	0229-02968	11.9	5.63	N/A		3.38	N/A	2.48	1/8	2.13	N/A									
320	AL,AR	0229-02969	17.3	6.38	7.00	1.250	3.78	2.75	2.31	1/4	2.06	2.06	4.25	.31	10.48	7.25	7.75	6.25	3.25	3.13	.56*
	BL,CR	0229-02970	16.5	N/A	7.00	1.249	N/A	2.75	N/A	X	N/A	2.06									
	BR,CL	0229-02971	16.3	6.38	N/A		3.78	N/A	2.35	1/8	2.16	N/A									
380	AL,AR	0229-02972	23.1	7.50	7.75	1.500	4.75	3.25	3.38	3/8	3.00	2.59	4.50	.31	11.69	8.00	9.00	7	3.75	3.50	.56
	BL,CR	0229-02973	21.5	N/A	7.75	1.499	N/A	3.25	N/A	X	N/A	2.59									
	BR,CL	0229-02974	21.3	7.50	N/A		4.75	N/A	3.47	3/16	3.00	N/A									

* SLOTTED HOLES

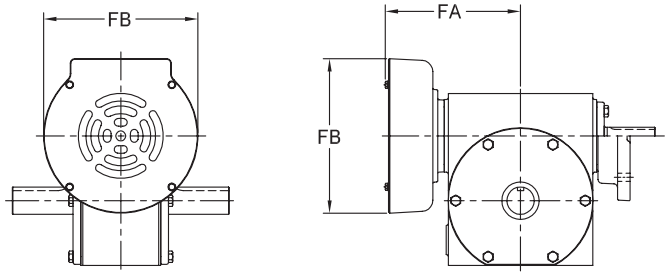
UNIVERSAL MOUNTING SPACER



UNIVERSAL MOUNTING SPACERS ARE DESIGNED TO MATCH THE "D" MOUNTING HEIGHT FROM THE OUTPUT CENTERLINE TO THE BOTTOM MOUNTING SURFACE OF COMPETITIVE UNITS.

SERIES	SPACER PART NO.	SPACER SHIPPING WT.	C.D.	D (WITH SPACER)	D (WITHOUT SPACER)
130	0223-07625	1.0 LBS.	1.334	1-23/32	1-9/16
180	0223-07626	1.3 LBS.	1.751	2-1/16	1-7/8
210	NOT AVAILABLE - CONSULT FACTORY		2.064	N/A	2-7/16
W240	NOT REQUIRED	-	2.376	-	2-1/2
260	NOT REQUIRED	-	2.626	-	2-15/16
320	0223-07627	3.5 LBS.	3.251	3-1/2	3-1/4
380	NOT AVAILABLE - CONSULT FACTORY		3.751	N/A	3-15/16

FANS

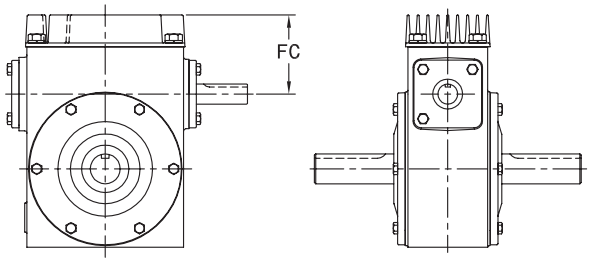


WHEN FAN KITS AND THERMAL BLOCK KITS ARE UTILIZED, SYNTHETIC LUBRICANT IS RECOMMENDED. SEE SECTION R.

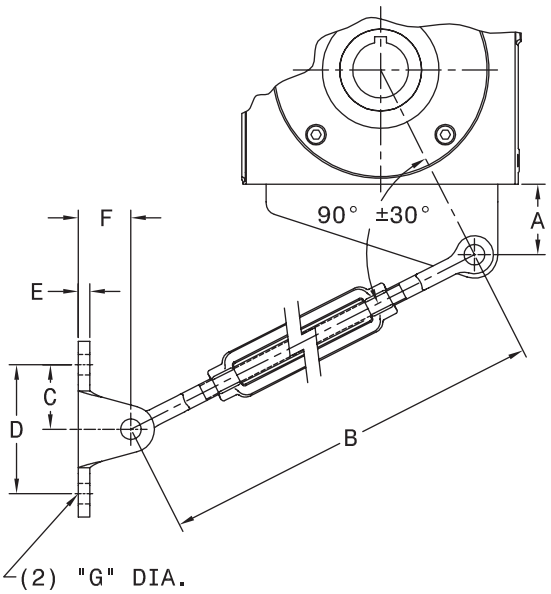
SERIES	INPUT	FAN KIT PART NO.	FAN KIT SHIPPING WT.	FA	FB
450	SHAFT	0229-02891	11 LBS.	7-3/4	9-5/8
	QUILL	0229-02982			
520	SHAFT	0229-02896	11 LBS.	8-1/2	9-5/8
	QUILL	0229-02892			

THERMAL BLOCK KITS

SERIES	THERMAL BLOCK KIT PART NO.	THERMAL BLOCK KIT SHIPPING WT.	FC
450	0229-00033	4 LBS.	4-3/16
520	0229-00034	5 LBS.	4-5/16



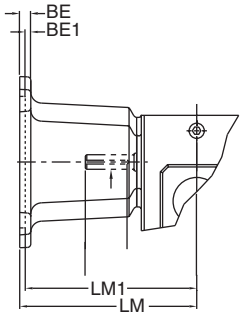
TORQUE ARM KITS

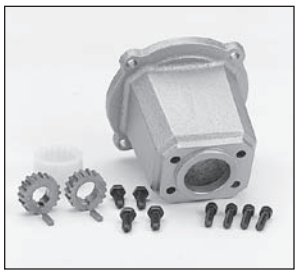


MODEL*	TORQUE ARM KIT NUMBER	A	B	C	D	E	F	G
182, 185	0229-02996	1.37	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
212, 215	0229-02997	1.50	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
242, 245	0229-02998	1.75	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
262, 265	0229-02999	2.00	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
322,325	0229-03000	2.25	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
382, 385	0229-03001	2.50	11.13 MIN. 17 MAX.	1-3/8	2-3/4	1/4	1.13	7/16
452, 455	0229-02604	1.25	12.50 MIN. 18.38 MAX.	1-5/8	3-1/4	1/2	1.25	21/32
522, 525	0229-02679	1.50	12.50 MIN. 18.38 MAX.	1-5/8	3-1/4	1/2	1.25	21/32
GW602, GW605	0279-00625	5.000	27.00 MIN. 31.00 MAX.	1-13/16	3-5/8	1/4	1.32	21/32

* SAME KITS ARE USED WHEN THE MODEL IS THE FINAL UNIT ON A DOUBLE REDUCTION OR TRIPLE REDUCTION WORM GEAR REDUCER.

C FLANGE MOTOR MOUNTING KITS



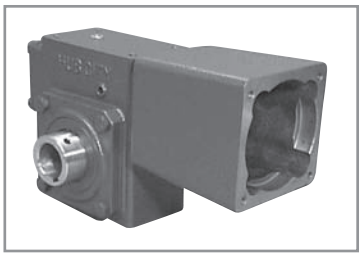


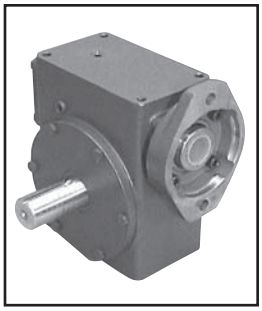
DOUBLE REDUCTION (FITS PRIMARY UNIT)

UNIT SIZE	FLANGE SIZE	KIT NUMBER	BE	BE1	LM	LM1	SHIPPING WT (LBS)
GW60D & GW70D	56C	0279-00611	0.38	N/A	9.01	N/A	7
	140TC	0279-00612	0.38	N/A	9.01	N/A	7
	180TC	0279-00613	N/A	0.5	N/A	10.01	11
	210TC	0279-00614	N/A	0.5	N/A	10.01	11
GW80D & GW100D	56C	0279-00615	0.38	N/A	11.81/13.21^	N/A	8
	140TC	0279-00616	0.38	N/A	11.81/13.21^	N/A	8
	180TC	0279-00617	N/A	0.5	N/A	12.90/14.30^	11
	210TC	0279-00618	N/A	0.5	N/A	12.90/14.30^	11
	250TC	0279-00619	N/A	0.5	N/A	13.46/14.86^	12

^FIRST VALUE LISTED APPLIES TO GW80D/SECOND VALUE APPLIES TO GW100D

SERVO MOTOR FLANGES and HYDRAULIC INPUT FLANGES

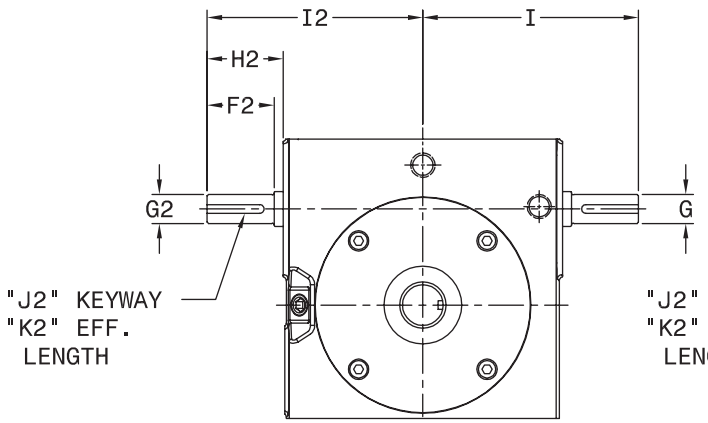




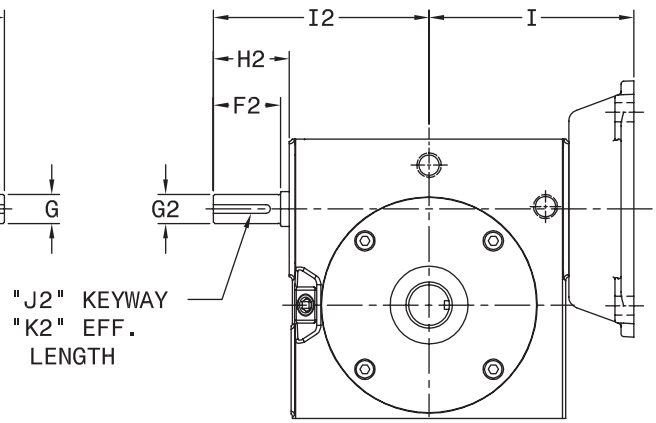
Servo Motor Flanges and Hydraulic Input Flanges are available as factory options. Consult Factory for complete specifications.

EXTENDED WORM SHAFTS

DOUBLE EXTENDED WORM SHAFT



C-FLANGE EXTENDED WORM SHAFT



NEW! DOUBLE EXTENDED WORM SHAFT DIMENSIONS

SERIES	F2	G	G2	H2	I	I2	J2	K2
130 SHAFT INPUT	1.35	.500/.499	.500/.499	1.54	3.82	3.82	1/8 X 1/16	1.16
180 SHAFT INPUT	1.35	.500/.499	.500/.499	1.54	4.19	4.19	1/8 X 1/16	1.16
210 SHAFT INPUT	1.44	.625/.624	.625/.624	1.63	4.63	4.63	3/16 X 3/32	1.13
W240 SHAFT INPUT	1.43	.625/.624	.625/.624	1.63	5.00	5.00	3/16 X 3/32	1.21
260 SHAFT INPUT	1.73	.625/.624	.625/.624	1.97	5.63	5.63	3/16 X 3/32	1.49
320 SHAFT INPUT	2.23	.875/.874	.875/.874	2.48	6.88	6.88	3/16 X 3/32	1.91
380 SHAFT INPUT	2.20	1.000/.999	1.000/.999	2.48	7.38	7.38	1/4 X 1/8	1.91
450 SHAFT INPUT	2.98	1.125/1.124	1.000/.999	3.21	8.44	8.44	1/4 X 1/8	2.50
520 SHAFT INPUT	3.02	1.250/1.249	1.000/.999	3.27	9.25	9.25	1/4 X 1/8	2.47

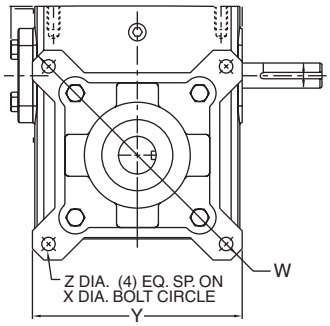
NEW! C-FLANGE EXTENDED WORM SHAFT DIMENSIONS

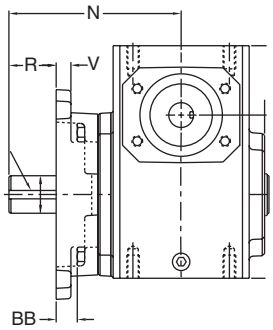
SERIES	F2	G2	H2	I	I2	J2	K2
130 QUILL INPUT	1.35	.500/.499	1.54	3.63	3.82	1/8 X 1/16	1.16
180 QUILL INPUT	1.35	.500/.499	1.54	4.00	4.19	1/8 X 1/16	1.16
210 QUILL INPUT	1.44	.625/.624	1.63	4.50	4.63	3/16 X 3/32	1.13
W240 QUILL INPUT	1.43	.625/.624	1.63	SEE SERIES W240 PAGES	5.00	3/16 X 3/32	1.21
260 QUILL INPUT	1.73	.625/.624	1.97	SEE SERIES 260 PAGES	5.63	3/16 X 3/32	1.49
320 QUILL INPUT	2.23	.875/.874	2.48	SEE SERIES 320 PAGES	6.88	3/16 X 3/32	1.91
380 QUILL INPUT	2.20	1.000/.999	2.48	SEE SERIES 380 PAGES	7.38	1/4 X 1/8	1.91
450 QUILL INPUT	2.50	1.000/.999	2.79	6.75	8.44	1/4 X 1/8	2.00
520 QUILL INPUT	2.59	1.000/.999	2.83	7.50	9.25	1/4 X 1/8	2.03

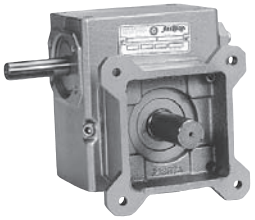
REF. - OLD DOUBLE EXTENDEND WORM SHAFT DIMS.				*REF. - OLD C-FLANGE EXTENDEND WORM SHAFT DIMS.*		
SERIES	*G2*	*H2*	*I2*	*G2*	*H2*	*I2*
130	.437/.436	1.50	3.50	.437/.436	2.22	4.22
180	.500/.499	1.53	4.00	.437/.436	2.25	4.72
210	.625/.624	1.54	4.44	.562/.560	1.66	4.56
260	.625/.624	2.22	5.62	.562/.560	2.22	5.62
320	.875/.874	2.56	6.75	.750/.749	2.70	6.90
380	1.000/.999	2.43	7.13	.750/.749	2.58	7.28
450	NO CHANGE					
520	NO CHANGE					

GW WORM GEAR SERIES

OPTIONAL SIDE MOUNTING FLANGE DETAIL

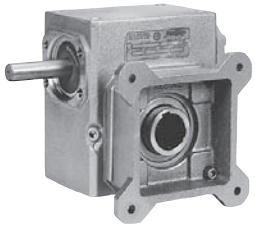


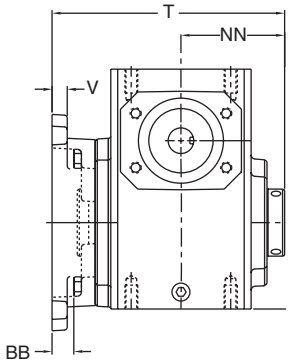




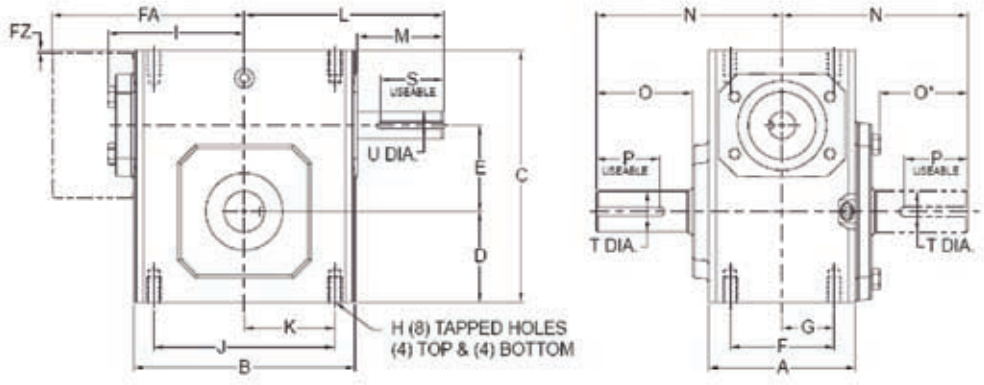
UNIT	BB	N	NN	R	T	V	W	X DIA.	Y	Z DIA.	WT. LBS.
GW60	1.38	10.00	5.75	2.74	13.01	.75	18.00	15.63	14.00	.69	38
GW70	1.57	11.76	6.75	4.32	14.20	.75	21.00	18.38	15.63	.78	45
GW80	1.89	12.25	7.25	3.92	15.59	.75	24.00	21.00	17.88	1.03	50
GW100	1.85	14.75	9.25	5.70	18.32	1.00	29.00	25.00	21.19	1.03	55

NOTE:
MOUNTING FLANGE AVAILABLE WITH SOLID OUTPUT OR HOLLOW BORE UNITS, SINGLE OR DOUBLE REDUCTION. MUST BE ORDERED WITH GEAR DRIVE. NOT AVAILABLE IN KIT FORM.





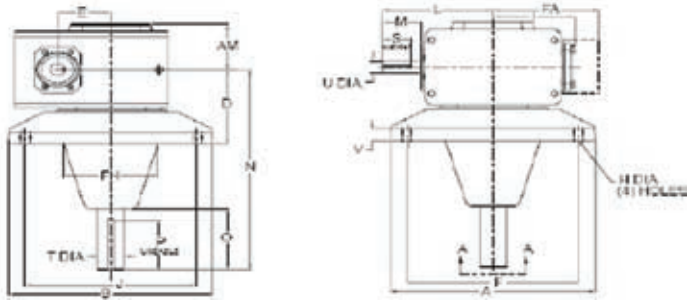
DIMENSIONAL COMPARISON
HUB CITY OLD TO NEW STYLE (GW SERIES)



SERIES	A	B	C	D	E	F	FA	FZ	G	H	H DEPTH
GW60	8.13	14.50	16.50	6.500	6	6.380	11.13	0.000	3.190	5/8 UNC	1.00
60	6.75	13.25	15.88	6.625	6	4.875	10.06	-2.625	2.438	7/8 UNC	1.88
GW70	7.63	14.88	18.91	7.590	7	5.500	11.37	0.350	2.750	1 UNC	1.56
70	7.75	15.19	18.50	7.625	7	5.500	11.50	-2.500	2.750	1 UNC	2.00
GW80	8.63	17.00	20.96	8.860	8	6.500	12.52	0.570	3.250	1 UNC	1.66
80	9.00	17.75	21.25	8.750	8	6.500	13.09	-2.500	3.250	1 UNC	2.00

UNIT	I	J	K	L	M	N	O	P**	S**	T DIA.	U DIA.
GW60	N/A	12.75	6.38	11.78	3.41	10.00	4.65	5/8 X 4.00	3/8 X 3.00	2.50	1.500
60	N/A	11.00	5.50	10.75	3.46	10.25	5.12	1/2 X 4.25	3/8 X 2.81	2.25	1.500
GW70	N/A	12.50	6.25	11.50	2.97	11.76	5.65	5/8 X 4.00	3/8 X 2.87	2.75	1.625
70	N/A	12.50	6.25	12.00	3.63	11.13	5.44	5/8 X 5.00	3/8 X 3.13	2.75	1.750
GW80	N/A	14.25	7.13	12.50	2.84	12.25	5.98	3/4 X 4.50	1/2 X 2.81	3.00	1.875
80	N/A	14.75	7.38	13.63	3.88	12.75	6.25	3/4 X 5.63	1/2 X 3.38	3.25	1.875

EXTENDED BEARING UNITS



SERIES	A	B	D	F	FH	H DIA.	J	N	O	P**	T DIA.	V
GW60	19.50	19.50	7.00	17	9.50	0.938	17	22.50	7.630	5/8 X 6.50	2.438	1.50
60	19.50	19.50	8.25	17	8.50	0.938	17	23.75	7.625	5/8 X 6.50	2.438	1.25
GW70	22.00	22.00	8.50	19	10.75	1.13	19	24.00	7.630	3/4 X 6.44	2.937	1.75
70	22.25	22.25	10.25	19	9.03	1.06	19	25.75	7.625	3/4 X 6.69	2.937	1.50
GW80	28.00	28.00	10.00	24	13.75	1.31	24	27.06	9.250	7/8 X 8.00	3.438	2.00
80	24.25	24.25	11.25	21	10.44	1.31	21	27.31	8.313	7/8 X 7.63	3.438	1.75

**KEYWAY WIDTH BY LENGTH

Spartan™ ALUMINUM WORM GEAR DRIVES

Spartan™ Aluminum Worm Gear Features C-2
Selection Instructions C-3
Mounting Style Guide C-4
Descriptions C-6
Single Reduction Ratings C-7
Single Reduction Dimensions C-8
Double Reduction Worm-Worm Ratings C-10
Double Reduction Worm-Worm Dimensions C-11
Double Reduction Helical-Worm Ratings C-13
Double Reduction Helical-Worm Dimensions C-14
Spartan™ Accessory Kits C-16
Spartan™ Factory Options C-18
Optional Metric Dimensions C-19
Technical Information C-20

For Cast Iron Worm Gear Drives See Section B

Spartan™ ALUMINUM WORM GEAR DRIVES

Compact, Rugged and Lightweight Alternatives for Design Flexibility

BASIC SPECIFICATIONS

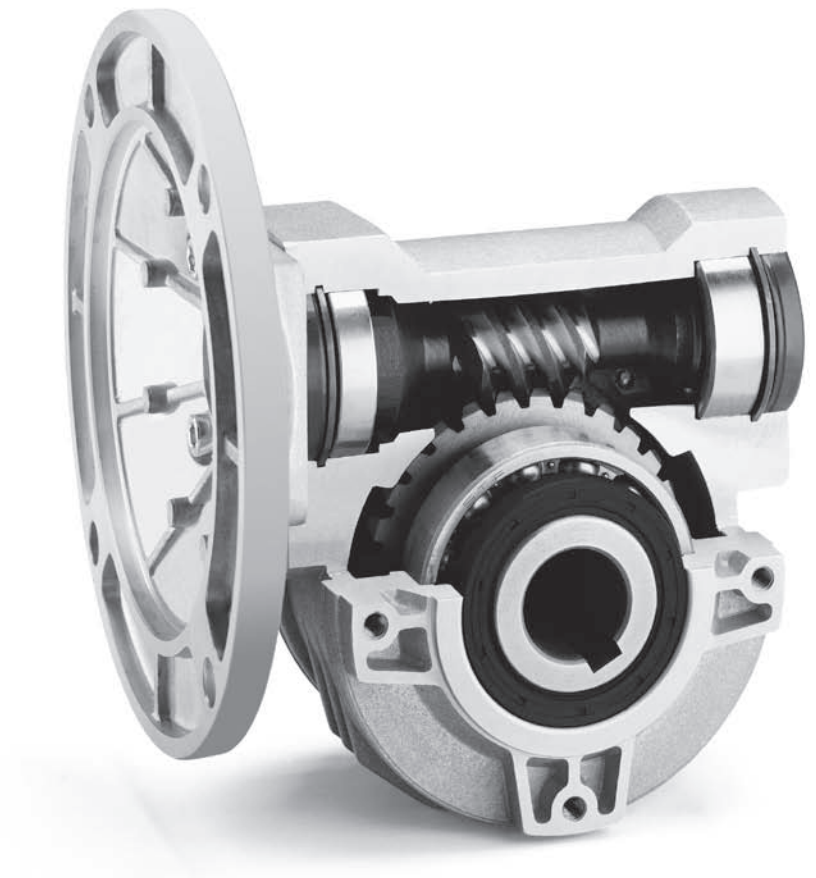
- Power Ratings from 1/4 to 8.2 hp
- Output Torque to 3,900 in-lbs
- Ratios from 7:1 through 4020:1
- Output Speeds 25 rpm to 250 rpm

STANDARD FEATURES

- Vent free design, factory lubricated with premium synthetic PAG460 gear lubricant with an operating temperature range of -25°F to 225°F (-32°C to 104°C)
- Precison machined single-piece aluminum alloy housing designed for light weight with high tensile strength
- Resinol RT (MIL-STD 276) vacuum impregnated housings and caps for protection and sealing
- Alloy shafting for greater strength
- Hardened and ground worm and alloy bronze gear for greater wear life
- Oversized bearings for higher shock and radial load capacity
- Worm-worm and Helical-worm double reduction available

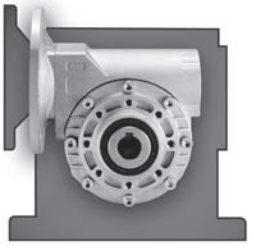
OPTIONAL FEATURES

- Modified Standard and Custom Designs
- Zinc plated steel mounting feet and torque arms
- Long and short output mounting flanges
- Unique or Harsh Environment Adaptations



MOTORIZED WORM GEAR DRIVES

- Motors produced by Marathon Electric for high efficiency, reliability and durability
- General or Definite Purpose Motors
- Brake or inverter duty motors, DC or washdown motors
- Motor/Gear Drive Package Incentives Available, consult factory
- See Section H for Available Motors



Spartan,™ up to two-thirds lighter and one-third smaller than comparable cast iron units!

CALL: (605) 225-0360 • FAX: (605) 225-0567

SELECTION INSTRUCTIONS

The ratings for gear drives in this manual are based on a service factor of 1.00, for uniform load and uniform power source, up to 10 hours of operation per day. For other operating conditions, the application horsepower or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A gear drive should be selected with a rated capacity equal to or greater than the equivalent load.
Table 1 designates recommended service factors for various conditions of load, power source, and duration of service.
AGMA Service Factors for Worm and Helical Worm Gearmotors and Reducers are listed in Section A.

Refer to page A-2 for further information and cautions on the selection of proper service factors.

Input Rotation to Hub City Spartan Worm Gear Reducers can be either clockwise or counter-clockwise.
Consult factory for operation at input speeds above 1750 rpm.

Maximum momentary or starting torque is limited to 300% of rated capacity.

START WITH ONE OF FOUR BASIC UNITS...

Shaft Input
Shaft Output



Shaft Input
Hollow Bore Output



C-face Input
Shaft Output



C-face Input
Hollow Bore Output



AND ADD MOUNTING ACCESSORY KITS...

Horizontal Base Kit



Torque Arm Kit





Side Mounting
Flange Kit



Long Side Mounting
Flange Kit

TO BUILD MULTIPLE CONFIGURATIONS.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.00
	Intermittent 3 hrs.	*	1.00	1.25
	3 - 10 hours	1.00	1.25	1.50
	Over 10 hours	1.25	1.50	1.75
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.50
	Intermittent 3 hrs.	1.25	1.50	1.75
	3 - 10 hours	1.50	1.75	2.00
	Over 10 hours	1.75	2.00	2.25
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

EXPLANATORY NOTES

1. Time specified for intermittent and occasional service refers to total operating time per day.

2. Term “frequent starts and stops” refers to more than 10 starts per hour.

MOUNTING STYLE GUIDE

MOUNTING ACCESSORIES

Select the appropriate mounting accessories from this wide variety of options.



TORQUE ARM KIT



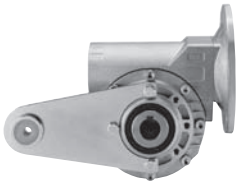
SIDE MOUNTING FLANGE KIT

HOLLOW OUTPUT SHAFT MOUNTED

(See "Descriptions" on page C-6.)

C-FACE QUILL INPUT

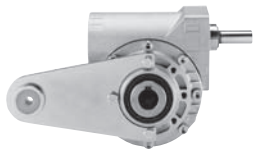






SOLID INPUT SHAFT







SOLID OUTPUT SHAFT

(See "Descriptions" on page C-6.)

C-FACE QUILL INPUT





(❖Non-Standard Option)



SOLID INPUT SHAFT





(❖Non-Standard Option)



✶ NON-STANDARD OPTION ASSEMBLIES MAY BE USEFUL IN CERTAIN APPLICATIONS. PLEASE CONTACT HUB CITY WITH APPLICATION DETAILS.

CALL: (605) 225-0360 • FAX: (605) 225-0567

MOUNTING STYLE GUIDE



LONG SIDE MOUNTING FLANGE KIT



HORIZONTAL BASE KIT (WORM OVER ASSEMBLY)



HORIZONTAL BASE KIT (WORM UNDER ASSEMBLY)



HORIZONTAL BASE KIT (VERTICAL INPUT SHAFT)

































DESCRIPTIONS

DESCRIPTIONS FOR ORDERING SPARTAN™ GEAR REDUCERS

To specify a Spartan™ gear reducer, specify the Mounting Style, Unit Size/Series, Ratio, and Output Shaft Style, Hollow or Solid and Motor Input Flange. See pages C-7, C-10 and C-13 for torque ratings. To order motorized reducers, specify the reducer as shown, indicate the motor description and specify "motorized assembly."

AL **634** **15** **A** **56C** **C322**

SPARTAN™ ALUMINUM GEAR REDUCERS
AL Single Reduction
ALWW Double Reduction Worm-Worm
ALHW Double Reduction Helical-Worm

MOTOR
See Section H for Available Motors

UNIT SIZE

	CENTER DISTANCES INCH	MM
45	1.77	45
50	1.97	50
63	2.48	63
85	3.35	85

MOTOR INPUT FLANGES

SERIES	NEMA FRAME	INPUT SHAFT
450	56C	5/8"
500	56C	5/8"
630	56C*	5/8"
	143-5TC	7/8"
850	143-5TC*	7/8"
	182-4TC	1 1/8"

*INPUT QUILL SHAFT BUSHING REQUIRED.

CONFIGURATION

1 -	Shaft Input - Shaft Output
2 -	Shaft Input - Hollow Bore
4 -	C-Face Input - Shaft Output
5 -	C-Face Input - Hollow Bore

NOTE: FOR DOUBLE REDUCTION UNITS A ZERO (0) IS INSERTED AHEAD OF THIS NUMBER EXAMPLE: ALHW4501

OUTPUT STYLE

** Specify "A" for Hollow Output Shaft or Extension From Below
A = Hollow Shaft Output
B = Left Hand Single Extension Viewed from Drive End
C = Right Hand Single Extension Viewed from Drive End
A = Double Shaft Extension Viewed from Drive End

STANDARD RATIOS

See pages C-7, C-10 and C-13 for ratios available in each model.

FOR MOTOR SELECTION
REFER TO SECTION H

SINGLE REDUCTION RATINGS

SERIES AL450
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
7/1	250	1.378	278	80.0%
10/1	175	0.981	279	79.0%
14/1	125	0.871	338	76.9%
21/1	83	0.796	405	67.0%
28/1	63	0.631	410	65.0%
37/1	47	0.490	414	63.1%
46/1	38	0.397	388	58.9%
60/1	29	0.363	442	55.9%
70/1	25	0.204	278	53.9%
102/1	17.2	0.144	261	48.6%
1150 RPM INPUT SPEED				
7/1	164	0.950	292	80.0%
10/1	115	0.679	294	78.9%
14/1	82	0.602	356	76.9%
21/1	55	0.555	426	67.0%
28/1	47	0.494	431	65.0%
37/1	31	0.340	436	62.9%
46/1	25	0.274	408	59.1%
60/1	19.2	0.250	465	56.0%
70/1	16.4	0.137	292	54.0%
102/1	11.3	0.098	275	49.0%

SERIES AL500
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
7/1	250	2.472	511	82.0%
10/1	175	1.961	565	80.0%
14/1	125	1.494	595	79.0%
18/1	97	1.196	583	75.0%
26/1	67	0.889	577	69.0%
36/1	49	0.684	607	69.0%
43/1	41	0.604	613	66.1%
60/1	29	0.486	613	58.0%
68/1	25.7	0.420	580	56.9%
80/1	21.9	0.368	569	54.1%
100/1	17.5	0.295	516	49.8%
1150 RPM INPUT SPEED				
7/1	164	1.707	538	82.0%
10/1	115	1.355	594	80.0%
14/1	82	1.031	626	79.0%
18/1	64	0.830	613	74.9%
26/1	44	0.614	607	69.1%
36/1	32	0.470	639	68.9%
43/1	27	0.419	645	65.9%
60/1	19.2	0.335	645	57.9%
68/1	16.9	0.289	610	57.1%
80/1	14.4	0.246	599	54.1%
100/1	11.5	0.207	543	49.8%

SERIES AL630
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
7/1	250	5.24	1097	83.0%
10/1	175	4.19	1222	80.9%
15/1	117	2.85	1214	78.9%
19/1	92	2.24	1197	78.1%
24/1	73	1.92	1246	75.0%
30/1	58	1.58	1274	74.1%
36/1	49	1.46	1281	68.5%
45/1	39	1.11	1182	65.8%
67/1	26.1	0.73	1069	60.3%
80/1	21.9	0.63	1034	57.1%
94/1	18.6	0.51	878	51.0%
1150 RPM INPUT SPEED				
7/1	164	3.62	1155	83.1%
10/1	115	2.90	1287	81.0%
15/1	77	1.98	1278	78.8%
19/1	61	1.56	1260	78.2%
24/1	48	1.33	1312	75.2%
30/1	38	1.09	1341	74.3%
36/1	32	1.01	1349	67.3%
45/1	25.6	0.78	1244	65.4%
67/1	17.2	0.51	1125	58.8%
80/1	14.4	0.42	1089	57.1%
94/1	12.2	0.34	924	52.9%

SERIES AL850
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
7/1	250	8.26	1832	88.0%
10/1	175	7.62	2196	80.1%
14/1	125	5.91	2323	78.0%
20/1	88	3.91	2212	79.0%
28/1	63	3.37	2528	75.1%
38/1	46	2.34	2279	70.9%
52/1	34	1.82	2229	65.9%
67/1	26.1	1.56	2458	64.7%
96/1	18.2	0.99	1735	52.5%
1150 RPM INPUT SPEED				
7/1	164	5.70	1929	88.1%
10/1	115	5.27	2312	80.1%
14/1	82	4.08	2446	77.9%
20/1	58	2.71	2329	79.0%
28/1	41	2.31	2661	74.9%
38/1	30	1.61	2399	70.8%
52/1	22.1	1.24	2347	66.1%
67/1	17.2	1.07	2588	65.4%
96/1	12.0	0.66	1827	53.0%

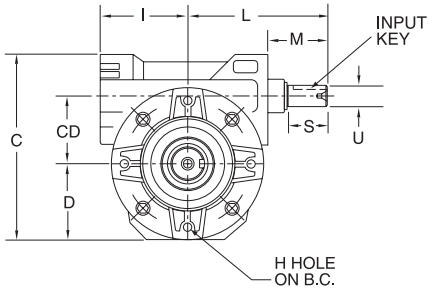
SEE PAGE C-20 FOR OVERHUNG LOAD AND THRUST LOAD RATINGS

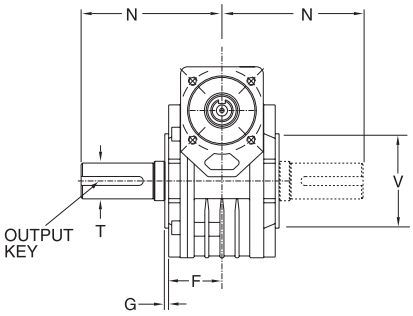
IN THIS CATALOG

RPM =	**Revolutions Per Minute**
HP =	**Horsepower**
TQ =	**Torque In Inch-Pounds**
OHL =	**Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.**
TL =	**Thrust Load In Pounds**

SINGLE REDUCTION DIMENSIONS

SHAFT INPUT, SHAFT OUTPUT MODELS

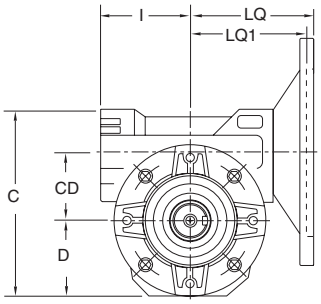


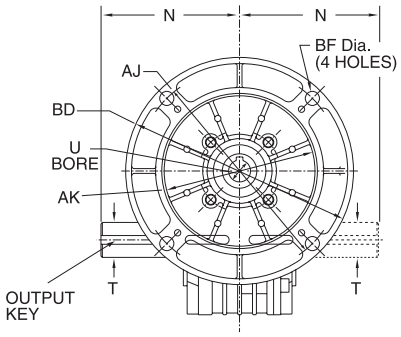


MODELS AL451, AL501, AL631 & AL851

MODEL	C	CD	D	F	G	H(mm)	B.C.	I	L	M	N	S	T	U	V	INPUT KEY	OUTPUT KEYWAY	WT LBS.
AL451	4.76	1.77	1.93	1.38	0.08	4-M6 x 14	2.56	2.16	3.86	1.67	2.97	1.18	0.750	0.625	1.969	3/16 SQ. x 1.00	3/16 SQ.	6
AL501	5.33	1.97	2.15	1.5	0.12	4-M6 x 9	3.7	2.56	4.11	1.74	3.94	1.18	1.000	0.625	2.677	3/16 SQ. x 1.00	1/4 SQ.	8
AL631	6.69	2.48	2.76	1.77	0.19	8-M8 x 17	3.54	3.11	5.43	2.24	4.85	1.75	1.125	0.750	2.953	3/16 SQ. x 1.50	1/4 SQ.	15
AL851	9.15	3.35	3.72	2.52	0.14	4-M10 x 8	5.12	3.86	6.38	2.52	5.55	1.75	1.500	0.875	4.331	3/16 SQ. x 1.50	3/8 SQ.	39

C-FACE INPUT, SHAFT OUTPUT MODELS





* REFER TO SHAFT INPUT MODELS ABOVE FOR OUTPUT PILOT DETAILS

MODELS AL454, AL504, AL634 & AL854

MODEL	C	CD	D	F	G	H(mm)	B.C.	I	LQ* 56C/140TC	LQ1 180TC	N	T	U	V	OUTPUT KEYWAY	WEIGHT LBS.
AL454	4.76	1.77	1.93	1.38	0.08	4-M6 x 14	2.56	2.16	3.33	–	2.97	0.750	0.625	1.969	3/16 SQ.	7
AL504	5.33	1.97	2.15	1.5	0.12	4-M6 x 9	3.7	2.56	3.51	–	3.94	1.000	0.625	2.677	1/4 SQ.	9
AL634	6.69	2.48	2.76	1.77	0.19	8-M8 x 17	3.54	3.11	4.08	–	4.85	1.125	0.750	2.953	1/4 SQ.	16
AL854	9.15	3.35	3.72	2.52	0.14	4-M10 x 8	5.12	3.86	4.83	5.53	5.55	1.500	0.875	4.331	3/8 SQ.	40

*MODELS AL454 AND AL504 AVAILABLE WITH 56C ONLY

MOTOR DATA (INCHES)

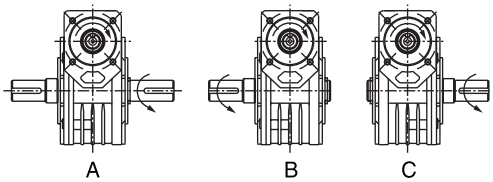
MOTOR FRAME	AJ	AK	BD	BF	U BORE	KEYWAY
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32
180TC	7.250	8.500	9.00	0.531	1.125	1/4 x 1/8

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

STANDARD STYLES AVAILABLE

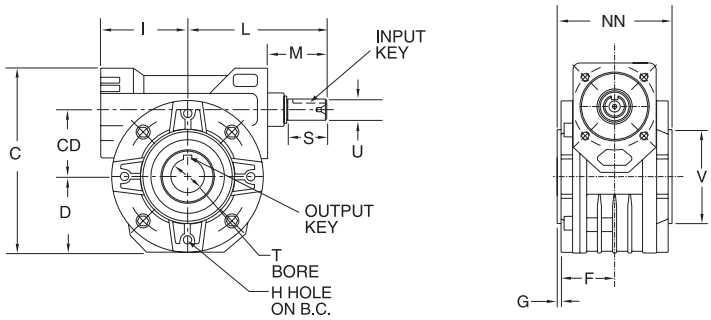
(Input Shaft can be Rotated in Either Direction)



UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

SINGLE REDUCTION DIMENSIONS

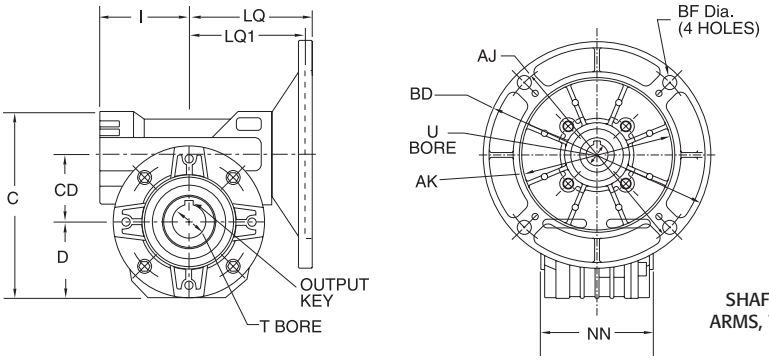
SHAFT INPUT, HOLLOW BORE MODELS



MODELS AL452, AL502, AL632 & AL852

MODEL	C	CD	D	F	G	H(mm)	B.C.	I	L	M	NN	S	T	U	V	INPUT KEY	OUTPUT KEYWAY	WT. LBS.
AL452	4.76	1.77	1.93	1.38	0.08	4-M6 x 14	2.56	2.16	3.86	1.67	2.56	1.18	0.750	0.625	1.969	3/16 SQ. x 1.00	3/16 SQ.	5
AL502	5.33	1.97	2.15	1.5	0.12	4-M6 x 9	3.7	2.56	4.11	1.74	3.19	1.18	1.000	0.625	2.677	3/16 SQ. x 1.00	1/4 SQ.	7
AL632	6.69	2.48	2.76	1.77	0.19	8-M8 x 17	3.54	3.11	5.43	2.24	4.73	1.75	1.125	0.750	2.953	3/16 SQ. x 1.50	1/4 SQ.	13
AL852	9.15	3.35	3.72	2.52	0.14	4-M10 x 8	5.12	3.86	6.38	2.52	5.31	1.75	1.500	0.875	4.331	3/16 SQ. x 1.50	3/8 SQ.	36

C-FACE INPUT, HOLLOW BORE MODELS



* REFER TO SHAFT INPUT MODELS ABOVE FOR OUTPUT PILOT DETAILS

SHAFT MOUNT UNITS REQUIRE TORQUE ARMS, TORQUE ARM KITS ARE AVAILABLE, SEE PAGE C-16

MODELS AL455, AL505, AL635 & AL855

MODEL	C	CD	D	F	G	H(mm)	B.C.	I	LQ* 56C/140TC	LQ1 180TC	NN	T	U	V	OUTPUT KEYWAY	WEIGHT LBS.
AL455	4.76	1.77	1.93	1.38	0.08	4-M6 x 14	2.56	2.16	3.33	–	2.56	0.750	0.625	1.969	3/16 SQ.	6
AL505	5.33	1.97	2.15	1.5	0.12	4-M6 x 9	3.7	2.56	3.51	–	3.19	1.000	0.625	2.677	1/4 SQ.	8
AL635	6.69	2.48	2.76	1.77	0.19	8-M8 x 17	3.54	3.11	4.08	–	4.76	1.125	0.750	2.953	1/4 SQ.	14
AL855	9.15	3.35	3.72	2.52	0.14	4-M10 x 8	5.12	3.86	4.83	5.53	5.31	1.500	0.875	4.331	3/8 SQ.	37

*MODELS AL455 AND AL505 AVAILABLE WITH 56C ONLY

MOTOR DATA (INCHES)

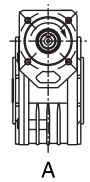
MOTOR FRAME	AJ	AK	BD	BF	U BORE	KEYWAY
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32
180TC	7.250	8.500	9.00	0.531	1.125	1/4 x 1/8

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

STANDARD STYLES AVAILABLE

(Input Shaft can be Rotated in Either Direction)



UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

DOUBLE REDUCTION WORM-WORM RATINGS

FOR MOTOR SELECTION REFER TO SECTION H

SERIES ALWW4500
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
70	25.00	0.332	460	54.8%
98	17.86	0.246	460	52.8%
147	11.90	0.190	504	50.0%
210	8.33	0.139	504	48.2%
294	5.95	0.106	504	45.3%
441	3.97	0.088	504	36.4%
588	2.98	0.072	504	33.3%
777	2.25	0.060	504	30.0%
966	1.81	0.054	504	25.9%
1288	1.36	0.045	504	24.4%
1702	1.03	0.037	504	21.6%
2220	0.788	0.030	504	20.0%
3600	0.486	0.018	460	22.2%
1150 RPM INPUT SPEED				
70	16.43	0.230	485	54.8%
98	11.73	0.170	485	52.9%
147	7.82	0.132	531	50.0%
210	5.48	0.096	531	47.9%
294	3.91	0.073	531	45.2%
441	2.61	0.061	531	36.1%
588	1.96	0.050	531	34.0%
777	1.48	0.042	531	28.6%
966	1.19	0.037	531	27.0%
1288	0.893	0.031	531	25.8%
1702	0.676	0.026	531	23.1%
2220	0.518	0.021	531	19.0%
3600	0.319	0.012	485	16.7%

SERIES ALWW5000
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
70	25.00	0.573	780	53.9%
98	17.86	0.425	780	52.0%
140	12.50	0.305	799	51.8%
182	9.62	0.259	799	47.1%
260	6.73	0.198	799	42.9%
364	4.81	0.145	799	42.1%
546	3.21	0.107	799	38.3%
676	2.59	0.091	799	36.3%
962	1.82	0.072	799	31.9%
1260	1.39	0.065	799	27.7%
1591	1.10	0.056	799	25.0%
2220	0.788	0.045	757	20.0%
3600	0.486	0.028	757	21.4%
1150 RPM INPUT SPEED				
70	16.43	0.396	821	54.0%
98	11.73	0.294	821	52.0%
140	8.21	0.211	841	52.1%
182	6.32	0.179	841	46.9%
260	4.42	0.137	841	43.1%
364	3.16	0.100	841	42.0%
546	2.11	0.074	841	37.8%
676	1.70	0.063	841	36.5%
962	1.20	0.050	841	32.0%
1260	0.913	0.045	841	26.7%
1591	0.723	0.039	841	25.6%
2220	0.518	0.031	797	22.6%
3600	0.319	0.019	797	21.1%

SERIES ALWW6300
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
70	25.00	1.396	1935	55.0%
105	16.67	0.948	1935	54.0%
150	11.67	0.689	1935	52.0%
210	8.33	0.556	1935	46.0%
300	5.83	0.426	1935	42.0%
420	4.17	0.328	1935	39.0%
630	2.78	0.259	1935	32.8%
840	2.08	0.206	1935	31.1%
1110	1.58	0.162	1935	30.2%
1380	1.27	0.139	1935	28.1%
1800	0.972	0.115	1935	26.1%
2160	0.810	0.096	1935	26.0%
4020	0.435	0.064	1935	20.3%
1150 RPM INPUT SPEED				
70	16.43	0.966	2037	55.0%
105	10.95	0.655	2037	54.0%
150	7.67	0.477	2037	52.0%
210	5.48	0.385	2037	46.0%
300	3.83	0.295	2037	42.0%
420	2.74	0.227	2037	39.2%
630	1.83	0.179	2037	33.0%
840	1.37	0.143	2037	30.8%
1110	1.04	0.112	2037	30.4%
1380	0.833	0.096	2037	28.1%
1800	0.639	0.079	2037	26.6%
2160	0.532	0.066	2037	25.8%
4020	0.286	0.044	2037	20.5%

SERIES ALWW8500
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
70	25.00	1.577	2266	57.0%
98	17.86	1.127	2266	57.0%
140	12.50	0.920	2690	58.0%
196	8.93	0.733	2690	52.0%
280	6.25	0.798	3784	47.0%
392	4.46	0.609	3784	44.0%
588	2.98	0.484	3784	37.0%
784	2.23	0.394	3784	34.0%
1036	1.69	0.307	3784	32.9%
1288	1.36	0.272	3784	30.1%
1680	1.040	0.181	3186	29.3%
2280	0.768	0.144	3186	27.1%
3120	0.561	0.113	3186	24.8%
1150 RPM INPUT SPEED				
70	16.43	1.091	2386	5.7%
98	11.73	0.779	2386	57.0%
140	8.21	0.636	2832	58.0%
196	5.87	0.507	2832	52.1%
280	4.11	0.553	3983	47.0%
392	2.93	0.421	3983	43.9%
588	1.96	0.335	3983	37.0%
784	1.47	0.273	3983	34.1%
1036	1.11	0.213	3983	32.9%
1288	0.893	0.188	3983	29.8%
1680	0.685	0.126	3354	28.6%
2280	0.504	0.099	3354	27.3%
3120	0.369	0.079	3354	25.3%

SEE PAGE C-20 FOR OVERHUNG LOAD AND THRUST LOAD RATINGS

IN THIS CATALOG

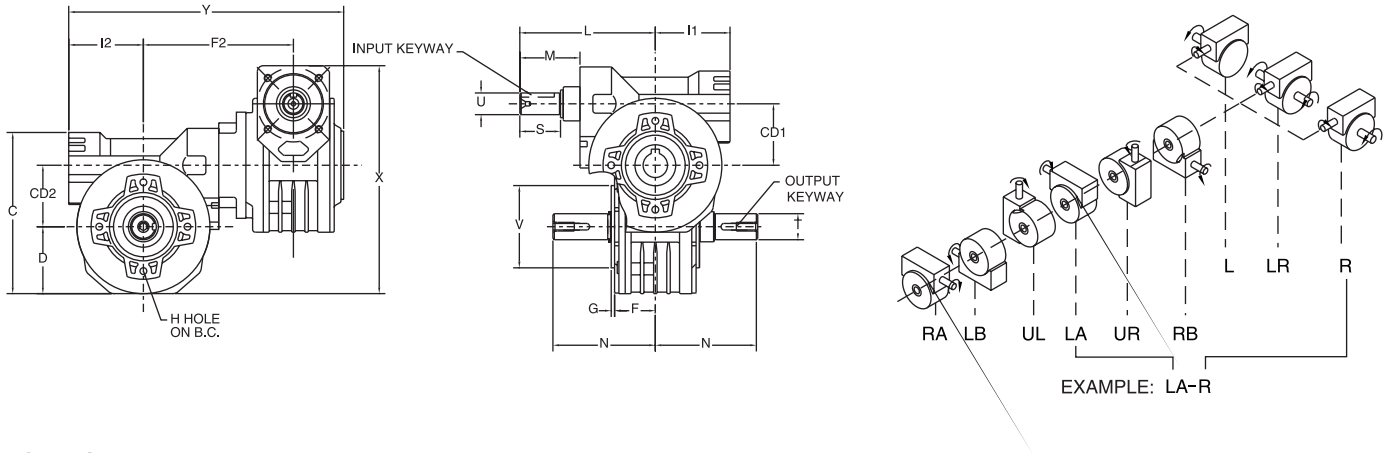
RPM =	**Revolutions Per Minute**
HP =	**Horsepower**
TQ =	**Torque In Inch-Pounds**
OHL =	**Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.**
TL =	**Thrust Load In Pounds**

DOUBLE REDUCTION WORM-WORM DIMENSIONS

SHAFT INPUT, SHAFT OUTPUT MODELS

STANDARD STYLES AVAILABLE

(INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION)



MODELS ALWW4501, ALWW5001, ALWW6301 & ALWW8501

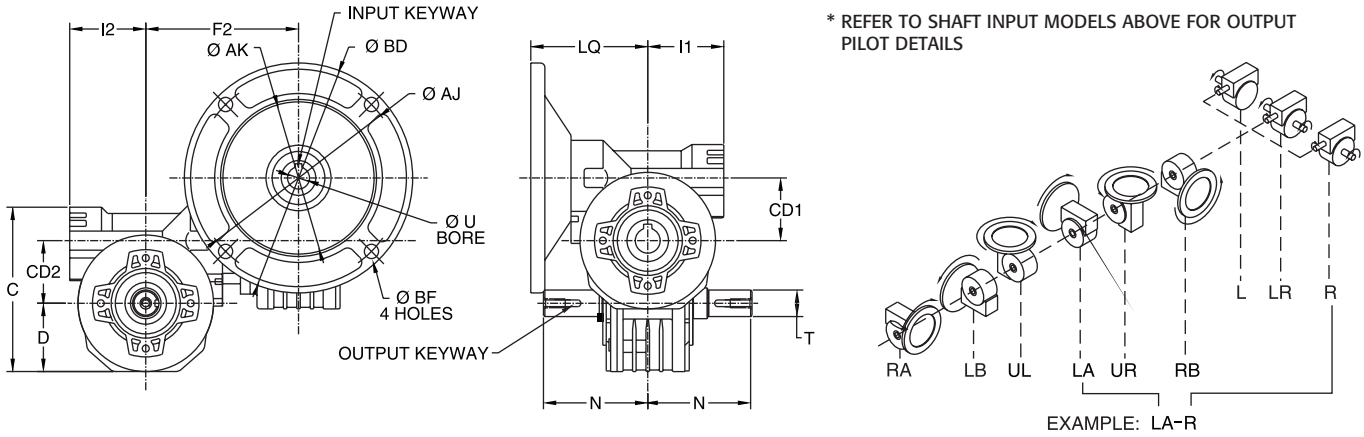
MODEL	C	CD1	CD2	D	F2	F	G	H(mm)	B.C.	I1	I2	L	M	N	S	T	U	V	X	Y	INPUT KEYWAY	OUTPUT KEYWAY	WT LBS.
ALWW4501	4.76	1.77	1.77	1.93	4.35	1.38	0.08	4-M6x14	2.56	2.16	2.16	3.86	1.67	2.97	1.18	.750	.625	1.969	6.42	7.97	3/16 SQX1.00	3/16 SQ	12
ALWW5001	5.33	1.77	1.97	2.15	4.53	1.5	0.12	4-M6x9	3.7	2.16	2.56	3.86	1.67	3.94	1.18	1.000	.625	2.677	6.83	8.54	3/16 SQX1.00	1/4 SQ	13
ALWW6301	6.69	1.77	2.48	2.76	5.74	1.77	0.19	8-M8x17	3.54	2.16	3.11	3.86	1.67	4.85	1.18	1.125	.625	2.953	7.95	10.30	3/16 SQX1.00	1/4 SQ	21
ALWW8501	9.15	1.77	3.35	3.72	6.76	2.52	0.14	4-M10x8	5.12	2.16	3.86	3.86	1.67	5.55	1.18	1.500	.625	4.331	9.78	12.08	3/16 SQX1.00	3/8 SQ	46

C-FACE INPUT, SHAFT OUTPUT MODELS

STANDARD STYLES AVAILABLE

(INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION)

* REFER TO SHAFT INPUT MODELS ABOVE FOR OUTPUT PILOT DETAILS



MODELS ALWW4504, ALWW5004, ALWW6304 & ALWW8504

MODEL	AJ	AK	BD	BF	C	CD1	CD2	D	F2	F	G	H(mm)	B.C.	I1	I2	LQ 56C	N	T	U	V	INPUT KEYWAY	OUTPUT KEYWAY	WT LBS.
ALWW4504	5.875	4.500	6.50	.405	4.76	1.77	1.77	1.93	4.35	1.38	0.08	4-M6x14	2.56	2.16	2.16	3.33	2.97	.750	.625	1.969	3/16 X 3/32	3/16 SQ	13
ALWW5004	5.875	4.500	6.50	.405	5.33	1.77	1.97	2.15	4.53	1.5	0.12	4-M6x9	3.7	2.16	2.56	3.33	3.94	1.000	.625	2.677	3/16 X 3/32	1/4 SQ	14
ALWW6304	5.875	4.500	6.50	.405	6.69	1.77	2.48	2.76	5.74	1.77	0.19	8-M8x17	3.54	2.16	3.11	3.33	4.85	1.125	.625	2.953	3/16 X 3/32	1/4 SQ	22
ALWW8504	5.875	4.500	6.50	.405	9.15	1.77	3.35	3.72	6.76	2.52	0.14	4-M10x8	5.12	2.16	3.86	3.33	5.55	1.500	.625	4.331	3/16 X 3/32	3/8 SQ	47

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

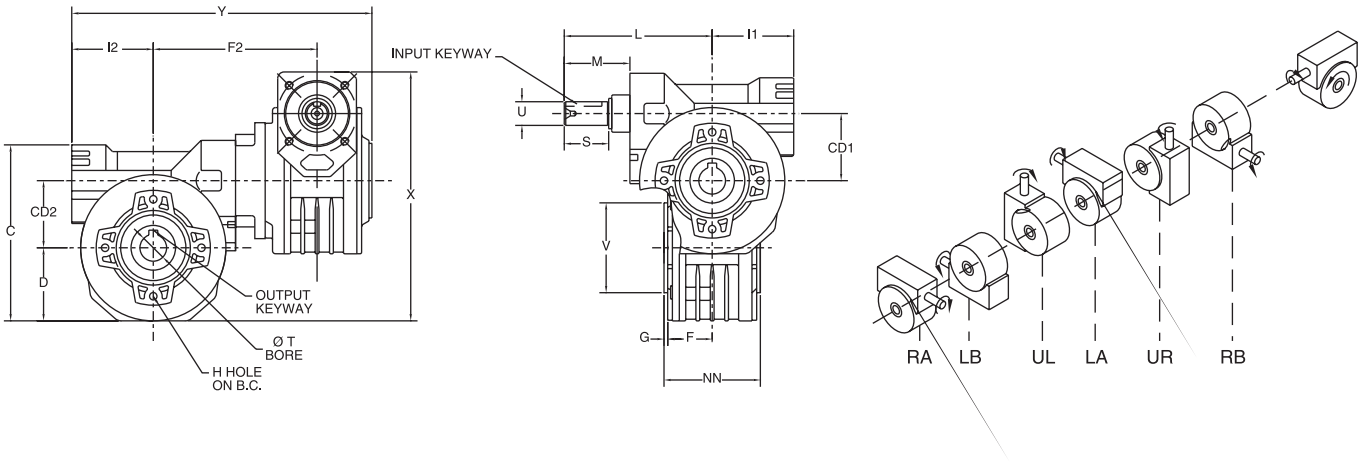
UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

DOUBLE REDUCTION WORM-WORM DIMENSIONS

SHAFT INPUT, HOLLOW BORE MODELS

STANDARD STYLES AVAILABLE

(Input Shaft can be Rotated in Either Direction)



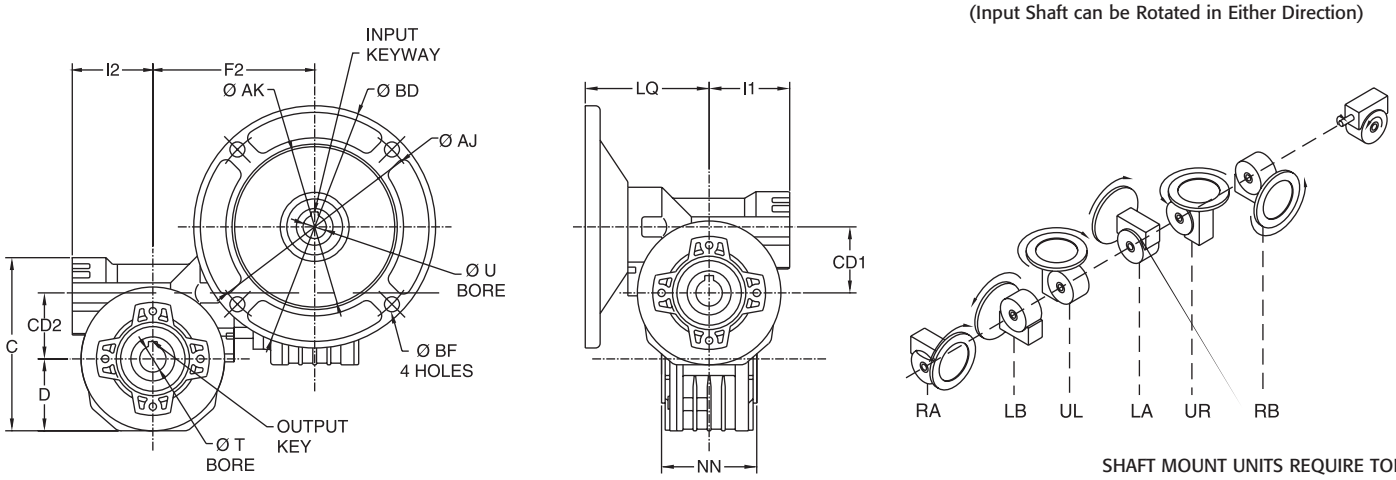
MODELS ALWW4502, ALWW5002, ALWW6302 & ALWW8502

MODEL	C	CD1	CD2	D	F2	F	G	H(mm)	B.C.	I1	I2	L	M	NN	S	T	U	V	X	Y	INPUT KEYWAY	OUTPUT KEYWAY	WT LBS.
ALWW4502	4.76	1.77	1.77	1.93	4.35	1.38	0.08	4-M6x14	2.56	2.16	2.16	3.86	1.67	2.56	1.18	.750	.625	1.969	6.42	7.97	3/16 SQ X 1.00	3/16 SQ	11
ALWW5002	5.33	1.77	1.97	2.15	4.53	1.5	0.12	4-M6x9	3.7	2.16	2.56	3.86	1.67	3.19	1.18	1.000	.625	2.677	6.83	8.54	3/16 SQ X 1.00	1/4 SQ	12
ALWW6302	6.69	1.77	2.48	2.76	5.74	1.77	0.19	8-M8x17	3.54	2.16	3.11	3.86	1.67	4.73	1.18	1.125	.625	2.953	7.95	10.30	3/16 SQ X 1.00	1/4 SQ	19
ALWW8502	9.15	1.77	3.35	3.72	6.76	2.52	0.14	4-M10x8	5.12	2.16	3.86	3.86	1.67	5.31	1.18	1.500	.625	4.331	9.78	12.08	3/16 SQ X 1.00	3/8 SQ	43

C-FACE INPUT, HOLLOW BORE MODELS

STANDARD STYLES AVAILABLE

(Input Shaft can be Rotated in Either Direction)



SHAFT MOUNT UNITS REQUIRE TORQUE ARMS, TORQUE ARM KITS ARE AVAILABLE, SEE PAGE C-16

MODELS ALWW4505, ALWW5005, ALWW6305 & ALWW8505

MODEL	AJ	AK	BD	BF	C	CD1	CD2	D	F2	F	G	H(mm)	B.C.	I1	I2	LQ 56C	NN	T	U	V	INPUT KEYWAY	OUTPUT KEYWAY	WT LBS.
ALWW4505	5.875	4.500	6.50	.405	4.76	1.77	1.77	1.93	4.35	1.38	0.08	4-M6x14	2.56	2.16	2.16	3.33	2.56	.750	.625	1.969	3/16 X 3/32	3/16 SQ	12
ALWW5005	5.875	4.500	6.50	.405	5.33	1.77	1.97	2.15	4.53	1.5	0.12	4-M6x9	3.7	2.16	2.56	3.33	3.19	1.000	.625	2.677	3/16 X 3/32	1/4 SQ	13
ALWW6305	5.875	4.500	6.50	.405	6.69	1.77	2.48	2.76	5.74	1.77	0.19	8-M8x17	3.54	2.16	3.11	3.33	4.76	1.125	.625	2.953	3/16 X 3/32	1/4 SQ	20
ALWW8505	5.875	4.500	6.50	.405	9.15	1.77	3.35	3.72	6.76	2.52	0.14	4-M10x8	5.12	2.16	3.86	3.33	5.31	1.500	.625	4.331	3/16 X 3/32	3/8 SQ	44

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

DOUBLE REDUCTION HELICAL-WORM RATINGS

FOR MOTOR SELECTION
REFER TO SECTION H

SERIES ALHW4500
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
30.1	58.14	0.523	420	74.0%
43.0	40.70	0.377	420	71.6%
60.2	29.07	0.323	420	60.1%
90.3	19.38	0.227	420	56.8%
120.4	14.53	0.183	420	53.0%
159.1	11.00	0.150	420	48.7%
197.8	8.85	0.013	420	47.2%
258.0	6.78	0.100	420	45.0%
301.0	5.81	0.068	294	39.7%
438.6	3.99	0.052	294	36.5%
1150 RPM INPUT SPEED				
30.1	38.2	0.363	443	74.1%
43.0	26.7	0.261	443	72.0%
60.2	19.1	0.224	443	59.8%
90.3	12.74	0.157	443	57.3%
120.4	9.55	0.127	443	52.8%
159.1	7.23	0.104	443	49.0%
197.8	5.81	0.087	443	47.1%
258.0	4.46	0.070	443	44.3%
301.0	3.82	0.047	310	40.4%
438.6	2.62	0.036	310	36.1%

SERIES ALHW6300
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
29.5	59.4	1.767	1387	74.0%
37.2	47	1.417	1387	73.0%
46.5	37.6	1.340	1572	70.0%
55.8	31.4	1.224	1572	64.0%
69.8	25.09	1.026	1572	61.0%
87.8	19.94	0.731	1664	72.0%
110.9	15.78	0.595	1664	70.1%
138.6	12.63	0.505	1664	65.9%
166.3	10.52	0.463	1664	60.0%
207.9	8.42	0.359	1480	55.2%
309.5	5.65	0.260	1480	51.2%
369.6	4.73	0.236	1480	47.0%
434.3	4.03	0.166	1093	42.2%
1150 RPM INPUT SPEED				
29.5	39.0	1.221	1460	74.0%
37.2	30.9	0.981	1460	73.0%
46.5	24.7	0.927	1655	70.0%
55.8	20.6	0.845	1655	64.0%
69.8	16.5	0.710	1655	61.0%
87.8	13.10	0.506	1752	71.9%
110.9	10.37	0.412	1752	69.9%
138.6	8.30	0.350	1752	66.0%
166.3	6.91	0.320	1752	60.0%
207.9	5.53	0.249	1558	55.0%
309.5	3.72	0.180	1558	51.1%
369.6	3.11	0.164	1558	47.0%
434.3	2.65	0.115	1151	41.7%

SERIES ALHW5000
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
30.1	58.10	0.714	589	76.1%
43.0	40.70	0.507	589	75.0%
60.2	29.10	0.394	589	69.0%
77.4	22.61	0.396	673	60.9%
111.8	15.65	0.274	673	60.9%
154.8	11.30	0.215	673	54.0%
184.9	9.46	0.180	589	46.1%
258.0	6.78	0.135	589	45.2%
292.4	5.98	0.109	504	44.0%
344	5.09	0.068	336	39.7%
430	4.07	0.060	336	36.7%
1150 RPM INPUT SPEED				
30.1	38.2	0.494	620	76.1%
43.0	26.7	0.350	620	75.1%
60.2	19.1	0.272	620	69.1%
77.4	14.86	0.274	708	60.9%
111.8	10.29	0.189	708	61.4%
154.8	7.43	0.149	708	55.7%
184.9	6.22	0.125	620	48.8%
258.0	4.46	0.093	620	47.3%
292.4	3.93	0.075	531	44.0%
344	3.34	0.068	354	27.9%
430	2.67	0.042	354	35.7%

SERIES ALHW8500
MECHANICAL RATING (1.0 SERVICE FACTOR)

RATIO TO 1	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	EFFIC-IENCY
1750 RPM INPUT SPEED				
32.3	54.1	3.207	2690	72.0%
46.2	37.9	2.311	2690	70.0%
58.9	29.7	2.247	3195	67.0%
80.6	21.71	1.804	3195	61.0%
103.9	16.85	1.311	2943	60.0%
129.4	13.53	1.053	2943	60.0%
175.6	9.97	0.844	3363	63.0%
240.2	7.28	0.696	3195	53.0%
309.5	5.65	0.551	3195	51.9%
422.1	4.15	0.373	2943	52.0%
443.5	3.95	0.351	2522	45.0%
604.8	2.89	0.289	2522	40.1%
1150 RPM INPUT SPEED				
32.3	35.6	2.221	2831	72.0%
46.2	24.9	1.598	2831	70.0%
58.9	19.5	1.553	3363	67.0%
80.6	14.27	1.248	3363	61.0%
103.9	11.07	0.907	3098	60.0%
129.4	8.89	0.728	3098	60.0%
175.6	6.55	0.584	3540	63.0%
240.2	4.79	0.482	3363	53.1%
309.5	3.72	0.382	3363	51.8%
422.1	2.72	0.257	3098	52.1%
443.5	2.59	0.242	2653	45.0%
604.8	1.9	0.200	2653	40.0%

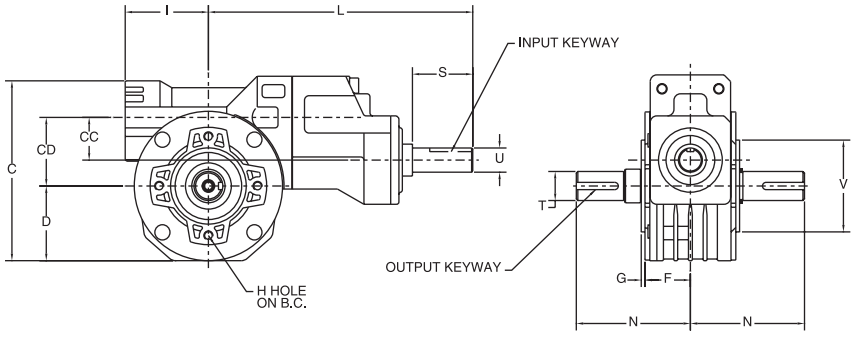
SEE PAGE C-20 FOR OVERHUNG LOAD AND THRUST LOAD RATINGS

IN THIS CATALOG

RPM =	**Revolutions Per Minute**
HP =	**Horsepower**
TQ =	**Torque In Inch-Pounds**
OHL =	**Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.**
TL =	**Thrust Load In Pounds**

DOUBLE REDUCTION HELICAL-WORM DIMENSIONS

SHAFT INPUT, SHAFT OUTPUT MODELS

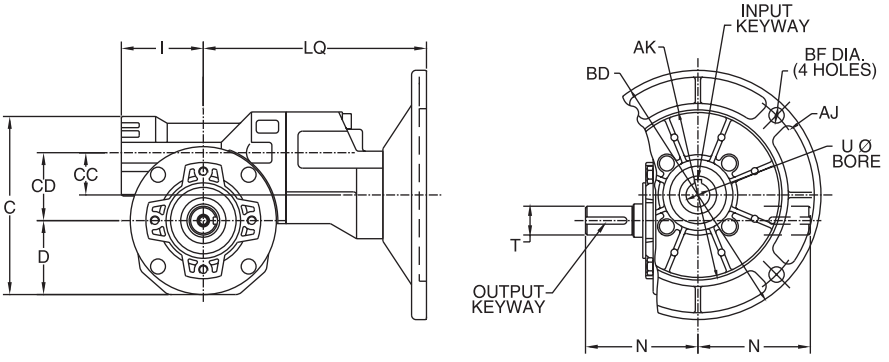


MODELS ALHW4501, ALHW5001, ALHW6301 & ALHW8501

MODEL	C	CD	CC	D	F	G	H(mm)	B.C.	I	L	N	S	T	U	V	INPUT KEYWAY	OUTPUT KEYWAY	WT LBS.
ALHW4501	4.76	1.77	1.10	1.93	1.38	0.08	4-M6x14	2.56	2.16	6.65	2.97	1.42	.750	.625	1.969	3/16 SQ X 1.00	3/16 SQ	8
ALHW5001	5.33	1.97	1.10	2.15	1.5	0.12	4-M6x9	3.7	2.56	6.83	3.94	1.42	1.000	.625	2.677	3/16 SQ X 1.00	1/4 SQ	10
ALHW6301	6.69	2.48	1.50	2.76	1.77	0.19	8-M8x17	3.54	3.11	8.54	4.85	1.65	1.125	.750	2.953	3/16 SQ X 1.00	1/4 SQ	19
ALHW8501	9.15	3.35	1.50	3.72	2.52	0.14	4-M10x8	5.12	3.86	9.21	5.55	1.65	1.500	.750	4.331	3/16 SQ X 1.00	3/8 SQ	46

C-FACE INPUT, SHAFT OUTPUT MODELS

* REFER TO SHAFT INPUT MODELS ABOVE FOR OUTPUT PILOT DETAILS



MODELS ALHW4504, ALHW5004, ALHW6304 & ALHW8504

MODEL	C	CD	CC	D	F	G	H(mm)	B.C.	I	LQ 56C/140TC	N	T	V	OUTPUT KEYWAY	WT LBS.
ALHW4504	4.76	1.77	1.10	1.93	1.38	0.08	4-M6x14	2.56	2.16	6.23	2.97	.750	1.969	3/16 SQ	9
ALHW5004	5.33	1.97	1.10	2.15	1.5	0.12	4-M6x9	3.7	2.56	6.41	3.94	1.000	2.677	1/4 SQ	11
ALHW6304	6.69	2.48	1.50	2.76	1.77	0.19	8-M8x17	3.54	3.11	7.17	4.85	1.125	2.953	1/4 SQ	20
ALHW8504	9.15	3.35	1.50	3.72	2.52	0.14	4-M10x8	5.12	3.86	7.84	5.55	1.500	4.331	3/8 SQ	47

MOTOR DATA (INCHES)

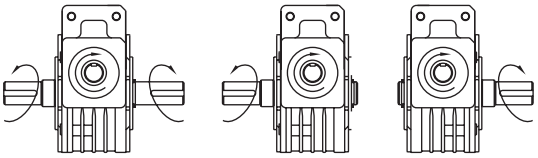
MOTOR FRAME	AJ	AK	BD	BF	U BORE	KEYWAY
56C	5.875	4.500	6.50	0.405	0.625	$^3/_{16}$ x $^3/_{32}$
140TC	5.875	4.500	6.50	0.405	0.875	$^3/_{16}$ x $^3/_{32}$

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

STANDARD STYLES AVAILABLE

(Input Shaft can be Rotated in Either Direction)

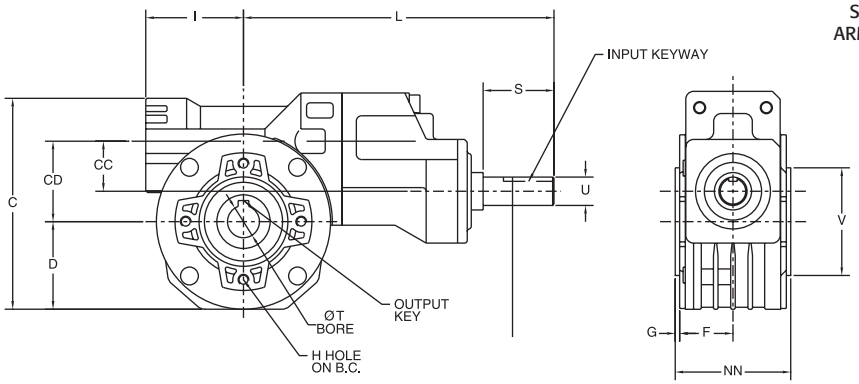


UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

DOUBLE REDUCTION HELICAL-WORM DIMENSIONS

SHAFT INPUT, HOLLOW BORE MODELS

SHAFT MOUNT UNITS REQUIRE TORQUE ARMS, TORQUE ARM KITS ARE AVAILABLE, SEE PAGE C-16

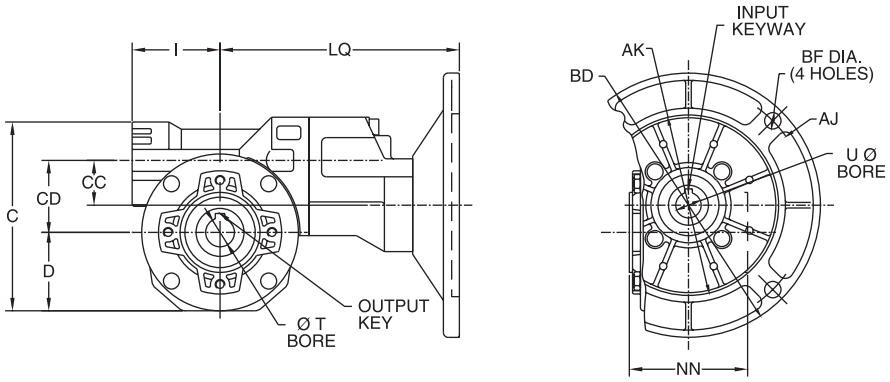


MODELS ALHW4502, ALHW5002, ALHW6302 & ALHW8502

MODEL	C	CD	CC	D	F	G	H(mm)	B.C.	I	L	NN	S	T	U	V	INPUT KEYWAY	OUTPUT KEYWAY	WEIGHT LBS.
ALHW4502	4.76	1.77	1.10	1.93	1.38	0.08	4-M6x14	2.56	2.16	6.65	2.56	1.42	.750	.625	1.969	3/16 SQ X 1.00	3/16 SQ	7
ALHW5002	5.33	1.97	1.10	2.15	1.5	0.12	4-M6x9	3.7	2.56	6.83	3.19	1.42	1.000	.625	2.677	3/16 SQ X 1.00	1/4 SQ	8
ALHW6302	6.69	2.48	1.50	2.76	1.77	0.19	8-M8x17	3.54	3.11	8.54	4.76	1.65	1.125	.750	2.953	3/16SQ X 1.00	1/4 SQ	17
ALHW8502	9.15	3.35	1.50	3.72	2.52	0.14	4-M10x8	5.12	3.86	9.21	4.83	1.65	1.500	.750	4.331	3/16 SQ X 1.00	3/8 SQ	43

C-FACE INPUT, HOLLOW BORE MODELS

* REFER TO SHAFT INPUT MODELS ABOVE FOR OUTPUT PILOT DETAILS



MODELS ALHW4505, ALHW5005, ALHW6305 & ALHW8505

MODEL	C	CD	CC	D	F	G	H(mm)	B.C.	I	LQ 56C/140TC	NN	T	V	OUTPUT KEYWAY	WT LBS.
ALHW4505	4.76	1.77	1.10	1.93	1.38	0.08	4-M6x14	2.56	2.16	6.23	2.56	.750	1.969	3/16 SQ	8
ALHW5005	5.33	1.97	1.10	2.15	1.5	0.12	4-M6x9	3.7	2.56	6.41	3.19	1.000	2.677	1/4 SQ	9
ALHW6305	6.69	2.48	1.50	2.76	1.77	0.19	8-M8x17	3.54	3.11	7.17	4.76	1.125	2.953	1/4 SQ	18
ALHW8505	9.15	3.35	1.50	3.72	2.52	0.14	4-M10x8	5.12	3.86	7.84	4.83	1.500	4.331	3/8 SQ	44

MOTOR DATA (INCHES)

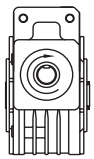
MOTOR FRAME	AJ	AK	BD	BF	U BORE	KEYWAY
56C	5.875	4.500	6.50	0.405	0.625	3/16 x 3/32
140TC	5.875	4.500	6.50	0.405	0.875	3/16 x 3/32

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

METRIC VERSIONS ARE AVAILABLE. PLEASE REFER TO PAGE C-19

STANDARD STYLES AVAILABLE

(Input Shaft can be Rotated in Either Direction)

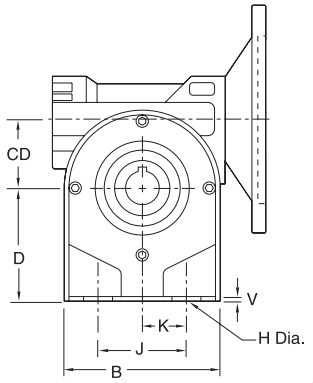


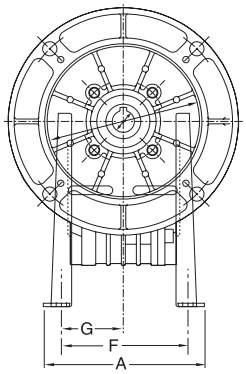
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UNITS ARE FACTORY FILLED WITH LUBRICANT.
FOR IMPORTANT INSTALLATION INFORMATION
REFER TO SECTION R

SPARTAN ACCESSORIES

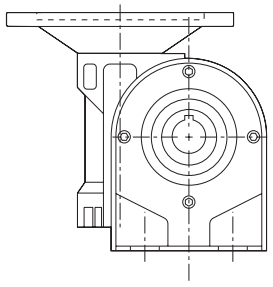
HORIZONTAL BASE KITS



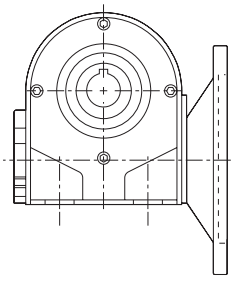


WT

ALTERNATE MOUNTING POSITIONS



WV

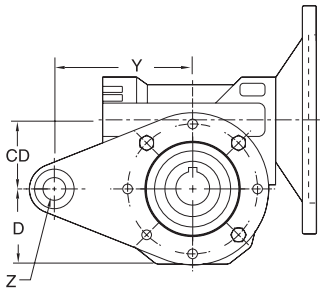


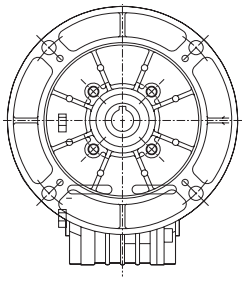
WB

SERIES	A	B	CD	D	F	G	H	J	K	V	PART NUMBER	WEIGHT LBS.
AL450	3.94	3.86	1.77	2.83	3.17	1.59	0.413	2.01	1.01	0.12	0279-00501	1.5
AL500	4.84	4.49	1.97	3.23	3.90	1.95	0.413	2.52	1.26	0.16	0279-00502	2
AL630	5.67	5.24	2.48	3.93	4.35	2.18	0.413	3.74	1.87	0.16	0279-00503	3
AL850	7.17	7.09	3.35	5.59	5.71	2.86	0.413	5.51	2.76	0.20	0279-00504	8

HORIZONTAL BASE KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.
IF HORIZONTAL BASE KIT IS TO BE FACTORY ASSEMBLED, SPECIFY MOUNTING POSITION WT, WV OR WB AS SHOWN ABOVE.

TORQUE ARM KITS





SERIES	CD	D	Y	Z	PART NUMBER	WEIGHT LBS.
AL450	1.77	1.93	3.94	0.315	0279-00505	0.5
AL500	1.97	2.15	3.94	0.315	0279-00506	0.5
AL630	2.48	2.76	5.91	0.394	0279-00507	1
AL850	3.35	3.72	7.87	0.787	0279-00508	2.5

TORQUE ARM KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.
IF TORQUE ARM KIT IS TO BE FACTORY ASSEMBLED, SPECIFY L (LEFT) OR R (RIGHT) WHEN VIEWED FROM INPUT END. (ILLUSTRATION SHOWS TORQUE ARM KIT MOUNTED ON LEFT.)

SHAFT COVER KITS



SERIES	PART NUMBER	WEIGHT LBS.
AL450	0279-00517	1
AL500	0279-00518	1
AL630	0279-00519	1
AL850	0279-00520	1

SHAFT COVERS ARE DESIGNED TO COVER THE NON-PROTRUDING END OF THE OUTPUT SHAFT OR SLEEVE.

NOTE: ACCESSORY KITS ARE ILLUSTRATED WITH SINGLE REDUCTION UNITS BUT WILL ALSO FIT DOUBLE REDUCTION WORM-WORM AND DOUBLE REDUCTION HELICAL-WORM UNITS.

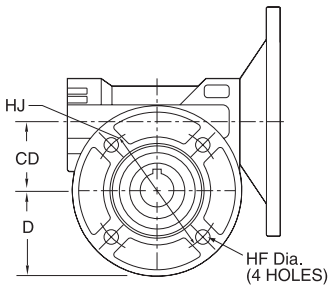
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

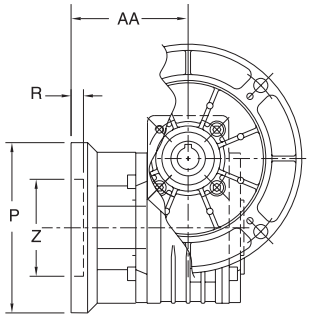
CALL: (605) 225-0360 • FAX: (605) 225-0567

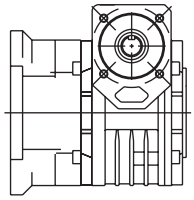
SPARTAN ACCESSORIES

SIDE MOUNTING FLANGE KIT

SIDE MOUNTING FLANGE KITS (INCLUDING LONG) ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.
IF SIDE MOUNTING FLANGE KIT (INCLUDING LONG) IS TO BE FACTORY ASSEMBLED, A MOUNTING LOCATION MUST BE SPECIFIED AS SHOWN.



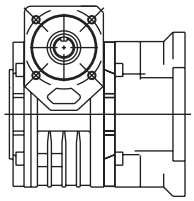




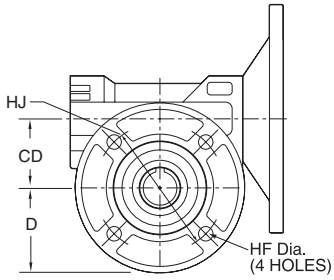
FL

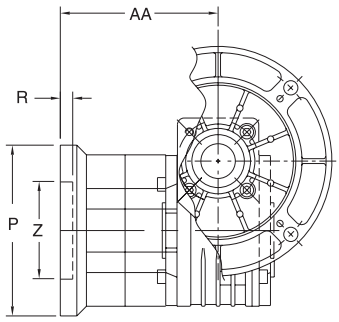
SERIES	AA	CD	D	HF	HJ	P	R	T	Z	PART NUMBER	WEIGHT LBS.
AL450	2.38	1.77	2.16	0.335	3.43	4.33	0.354	0.750	2.362	0279-00509	0.75
AL500	3.35	1.97	2.42	0.413	3.54	4.84	0.354	1.000	2.756	0279-00510	1
AL630	3.39	2.48	3.44	0.413	5.91	6.89	0.276	1.125	4.528	0279-00511	1.5
AL850	4.25	3.35	4.04	0.512	6.93	8.07	0.197	1.500	5.984	0279-00512	4

LONG SIDE MOUNTING FLANGE KIT



FR





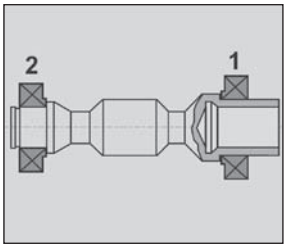
SERIES	AA	CD	D	HF	HJ	P	R	T	Z	PART NUMBER	WEIGHT LBS.
AL450	3.56	1.77	2.16	0.335	3.43	4.33	0.354	0.750	2.362	0279-00513	1
AL500	4.51	1.97	2.42	0.413	3.54	4.84	0.354	1.000	2.756	0279-00514	1.5
AL630	4.57	2.48	3.44	0.413	5.91	6.89	0.276	1.125	4.528	0279-00515	2.5
AL850	5.85	3.35	4.04	0.512	6.93	8.07	0.197	1.500	5.984	0279-00516	5.5

NOTE: ACCESSORY KITS ARE ILLUSTRATED WITH SINGLE REDUCTION UNITS BUT WILL ALSO FIT DOUBLE REDUCTION WORM-WORM AND DOUBLE REDUCTION HELICAL-WORM UNITS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

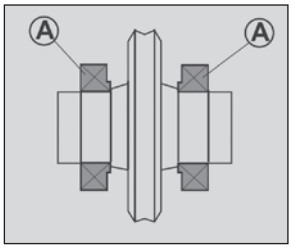
FACTORY OPTIONS

Hub City, Inc., Spartan™ reducers can be specified with factory options on request. Select from the options below or contact Hub City with specific application requests. Contact Hub City for availability of reducers with special features.



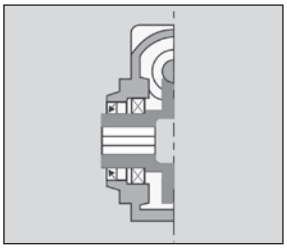
Tapered roller bearings on input worm shaft

SERIES	A	B
AL450	N/A	N/A
AL500	✔	✔
AL630	✔	✔
AL850	✔	✔



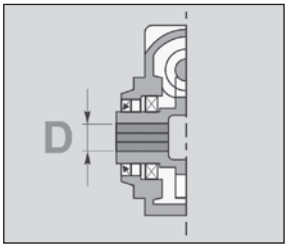
Tapered roller bearings on output shaft

SERIES	A
AL450	N/A
AL500	✔
AL630	✔
AL850	✔



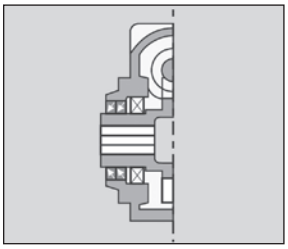
Stainless steel (AISI 303) or bronze output bore

SERIES	MAX DIA. IN. (MM)
AL450	0.875 (22.2)
AL500	1.1875 (30.16)
AL630	1.3125 (33.33)
AL850	1.625 (41.27)



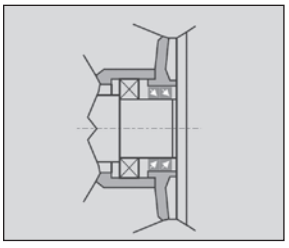
Non-standard output bore

SERIES	MAX DIA. IN. (MM)
AL450	0.875 (22.2)
AL500	1.1875 (30.16)
AL630	1.3125 (33.33)
AL850	1.625 (41.27)



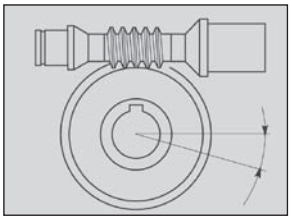
Double output seals

SERIES	SEAL SIZE (MM)
AL450	–
AL500	–
AL630	45/62/7
AL850	55/80/8



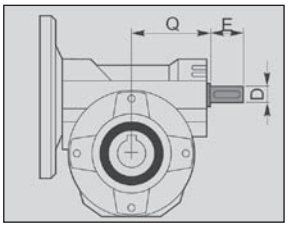
Double input seals

SERIES	SEAL SIZE (MM)
AL450	25/40/7
AL500	25/40/7 or 30/40/7
AL630	35/47/7
AL850	45/62/7



Minimum backlash gearing

AVAILABLE ON ALL SIZES. CONTACT HUB CITY WITH REQUIREMENTS.



Double input worm shaft extension

AVAILABLE ON ALL SIZES. CONTACT HUB CITY WITH REQUIREMENTS.

SPECIAL OPTIONS NOT PICTURED INCLUDE:

- **Epoxy paint**
- **Custom mounting accessories**
- **Custom ratios**
- **NEMA input flange/ metric dimensioned output shaft combinations (See Page C-19)**
- **IEC input flange/ inch dimensioned output shaft combinations (See Page C-19)**
- **Special solid output shaft extensions**

FACTORY OPTIONS
OPTIONAL METRIC MOUNTING DIMENSIONS

SINGLE REDUCTION (REFER TO DIMENSIONAL DRAWINGS ON PAGES C-8 & C-9)

✪ CONTACT FACTORY FOR AVAILABILITY OF METRIC INPUT OPTIONS. THE OUTPUT BORE AND/OR SOLID OUTPUT SHAFT EXTENSION WILL BE METRIC AS STANDARD WITH METRIC INPUT OPTIONS.

▲ KEYWAY WIDTH BY DEPTH

❖ AJ MOUNTING HOLES ARE ROTATED 45° FROM POSITIONS SHOWN ON B14 INPUT OPTIONS AS FOLLOWS:D56D(ALL), D63D(MODELS AL450 & AL500), D71D & D80D(MODELS AL630)

♦ DIMENSIONS ARE MAXIMUM (B5 AND B14 OPTIONS)

◊ B14 OPTION NOT AVAILABLE

❑ B5 OPTION NOT AVAILABLE

■ ALSO APPLIES TO FRAME SIZE D112MD

✓ SOLID METRIC OUTPUT SHAFT DIAMETER TOLERANCE IS -0.005/-0.020.
HOLLOW BORE TOLERANCE IS H7.

OPTIONAL METRIC DIMENSIONS✪ - MM

MODEL	LQ1♦ IEC B5 & B14 OPTIONS						T ✓	N	OUTPUT KEYWAY
	D56D	D63D	D71D	D80D	D90D	D100LD■	(standard for metric units)		
AL450	74❖❑	74❖	74	N/A	N/A	N/A	18	75	6
AL500	81.5❖❑	81.5❖	81.5	81.5	N/A	N/A	25	100	8
AL630	N/A	99.5 ◊	99.5❖	99.5❖	99.5	N/A	25	123	8
AL850	N/A	N/A	124 ◊	124	124	124	35	141	10

OPTIONAL METRIC DIMENSIONS✪ - MM

IEC FRAME	B5					B14❖					INPUT BORE DIA	INPUT KEYWAY▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF❖		
D56D	100	80	120	10	7	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

WORM-WORM DOUBLE REDUCTION (REFER TO DIMENSIONAL DRAWINGS ON PAGES C-11 & C-12)

▯ CONTACT FACTORY FOR AVAILABILITY OF METRIC INPUT OPTIONS. THE OUTPUT BORE AND/OR SOLID OUTPUT SHAFT EXTENSION WILL BE METRIC AS STANDARD WITH METRIC INPUT OPTIONS.

▲ KEYWAY WIDTH BY DEPTH

❖ AJ MOUNTING HOLES ARE ROTATED 45° FROM POSITIONS SHOWN ON B14 INPUT OPTIONS AS FOLLOWS: D56D(ALL), D63D(ALL)

♦ DIMENSIONS ARE MAXIMUM (B5 AND B14 OPTIONS)

■ B5 OPTION NOT AVAILABLE

OPTIONAL METRIC DIMENSIONS▯ - MM

MODELS	LQ♦ IEC B5 & B14 OPTIONS			T H7	N	OUTPUT KEYWAY
	D56D■	D63D	D71D	(standard for metric units)		
ALWW4500	74❖	74❖	74	18	75	6
ALWW5000	74❖	74❖	74	25	100	8
ALWW6300	74❖	74❖	74	25	123	8
ALWW8500	74❖	74❖	74	35	141	10

OPTIONAL METRIC DIMENSIONS▯ - MM

IEC FRAME	B5					B14❖					INPUT BORE DIA	INPUT KEYWAYs
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF❖		
D56D	N/A	N/A	N/A	N/A	N/A	65❖	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5

HELICAL WORM DOUBLE REDUCTION (REFER TO DIMENSIONAL DRAWINGS ON PAGE C-14 & C-15)

▯ CONTACT FACTORY FOR AVAILABILITY OF METRIC INPUT OPTIONS. THE OUTPUT BORE AND/OR SOLID OUTPUT SHAFT EXTENSION WILL BE METRIC AS STANDARD WITH METRIC INPUT OPTIONS.

▲ KEYWAY WIDTH BY DEPTH

❖ AJ MOUNTING HOLES ARE ROTATED 45° FROM POSITIONS SHOWN ON B14 INPUT OPTIONS AS FOLLOWS:

D63D(ALL), D71D & D80D(MODELS ALHW6300 & ALHW 8500)

♦ DIMENSIONS ARE MAXIMUM (B5 AND B14 OPTIONS)

■ B14 OPTION NOT AVAILABLE

NOTE: "T" DIMENSION APPLIES TO **BOTH** SOLID AND HOLLOW OUTPUT MODELS.

OPTIONAL METRIC DIMENSIONS▯ - MM

MODEL	LQ♦ IEC B5 & B14 OPTIONS				T H7	N	OUTPUT KEYWAY
	D63D	D71D	D80D	D90D	(standard for metric units)		
ALHW4500	136 ❖	136	N/A	N/A	18	75	6
ALHW5000	141 ❖	141	N/A	N/A	25	100	8
ALHW6300	179 ❖	179 ❖	179 ❖	179	25	123	8
ALHW8500	197 ■	197 ❖	197 ❖	197	35	141	10

OPTIONAL METRIC DIMENSIONS▯ - MM

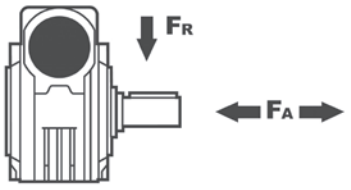
IEC FRAME	B5					B14❖					INPUT BORE DIA	INPUT KEYWAY▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF❖		
D63D	115	95	140	11	9	75❖	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85❖	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100❖	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

TECHNICAL INFORMATION

MAXIMUM OVERHUNG LOAD‡ AND THRUST LOAD RATINGS (LBS.)

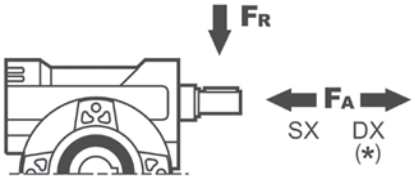
SINGLE REDUCTION OUTPUT SHAFT RATINGS‡

OUTPUT RPM	MODELS							
	AL450		AL500		AL630		AL850	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
200	40	200	54	270	81	405	112	562
150	45	225	63	315	90	450	130	652
100	50	248	68	338	104	518	135	675
75	54	270	76	382	112	562	157	787
50	58	315	86	428	135	675	180	900
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304



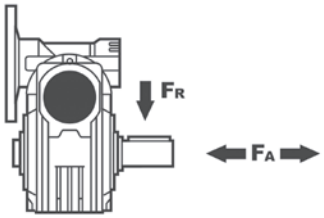
SINGLE REDUCTION INPUT SHAFT RATINGS‡

INPUT RPM	MODELS							
	AL450		AL500		AL630		AL850	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	9	43	16	79	19	93	33	167



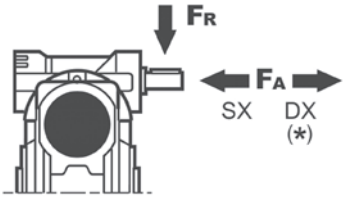
DOUBLE REDUCTION WORM-WORM OUTPUT SHAFT RATINGS‡

OUTPUT RPM	MODELS							
	ALWW4500		ALWW5000		ALWW6300		ALWW8500	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304



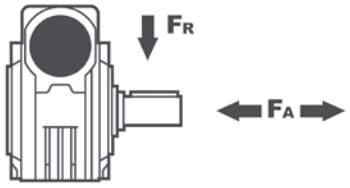
DOUBLE REDUCTION WORM-WORM INPUT SHAFT RATINGS‡

INPUT RPM	MODELS							
	ALWW4500		ALWW5000		ALWW6300		ALWW8500	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	9	43	9	43	9	43	9	43



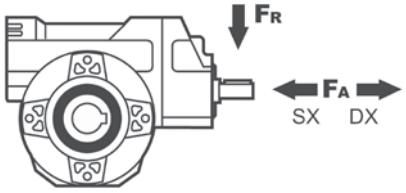
DOUBLE REDUCTION HELICAL/WORM OUTPUT SHAFT RATINGS‡

OUTPUT RPM	MODELS							
	ALHW4500		ALHW5000		ALHW6300		ALHW8500	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
75	54	270	76	382	112	562	157	787
50	58	315	86	428	135	675	180	900
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304



DOUBLE REDUCTION HELICAL/WORM INPUT SHAFT RATINGS‡

INPUT RPM	MODELS							
	ALHW4500		ALHW5000		ALHW6300		ALHW8500	
	F_A	F_R	F_A	F_R	F_A	F_R	F_A	F_R
1750	9	46	9	46	13	63	22	112



F_R = RADIAL LOAD RATING = OVERHUNG LOAD (LBS)
F_A = AXIAL LOAD RATING = THRUST RATING (LBS)
* AXIAL LOADS IN THE DX DIRECTION SHOULD BE AVOIDED.
‡ OVERHUNG LOAD IS LOCATED AT CENTERLINE OF SHAFT EXTENSION FOR SOLID INPUT OUTPUT SHAFT STYLE

BEVEL GEAR DRIVES

Selection of Units, Classes of Service,
Starting Torque, Thermal Capacity D-3
Quick Selection Tables D-4, D-5
Rating and Dimensions
- Models AD1, AD2 ..... D-6, D-7
- Models AD3, AD4, AD5 ..... D-8, D-9
- Model M2 ..... D-10, D-11
- Model M3 ..... D-12, D-13
- Model 44 ..... D-14, D-15
- Model 11 ..... D-16, D-17
- Model 150 ..... D-18, D-19
- Model 165 ..... D-20, D-21
- Model 175 ..... D-22, D-23
- Model 66 ..... D-24, D-25
- Model 65 ..... D-26, D-27
- Model 600 ..... D-28, D-29
- Model 88 ..... D-30, D-31
- Models 800, 810 ..... D-32, D-33
- Model 850 ..... D-34, D-35
- Model 1000 ..... D-36, D-37
- Model 1010 ..... D-38, D-39
- Model 1050 ..... D-40, D-41
- Model 1200 ..... D-42, D-43
- Model 1250 ..... D-44, D-45
- Model 1700 ..... D-46, D-47
- Model 2200 ..... D-48, D-49
- Model 790 ..... D-50, D-51
- Model 920 ..... D-52, D-53
- Model 950 ..... D-54, D-55

Metric Bevel Gear Drives ..... D-56 to D-58
RA Series ..... D-59 to D-64
Accessories & Factory Options ..... D-65 to D-68

D

BEVEL GEAR DRIVES

Over 40 Standard Models

BASIC SPECIFICATIONS

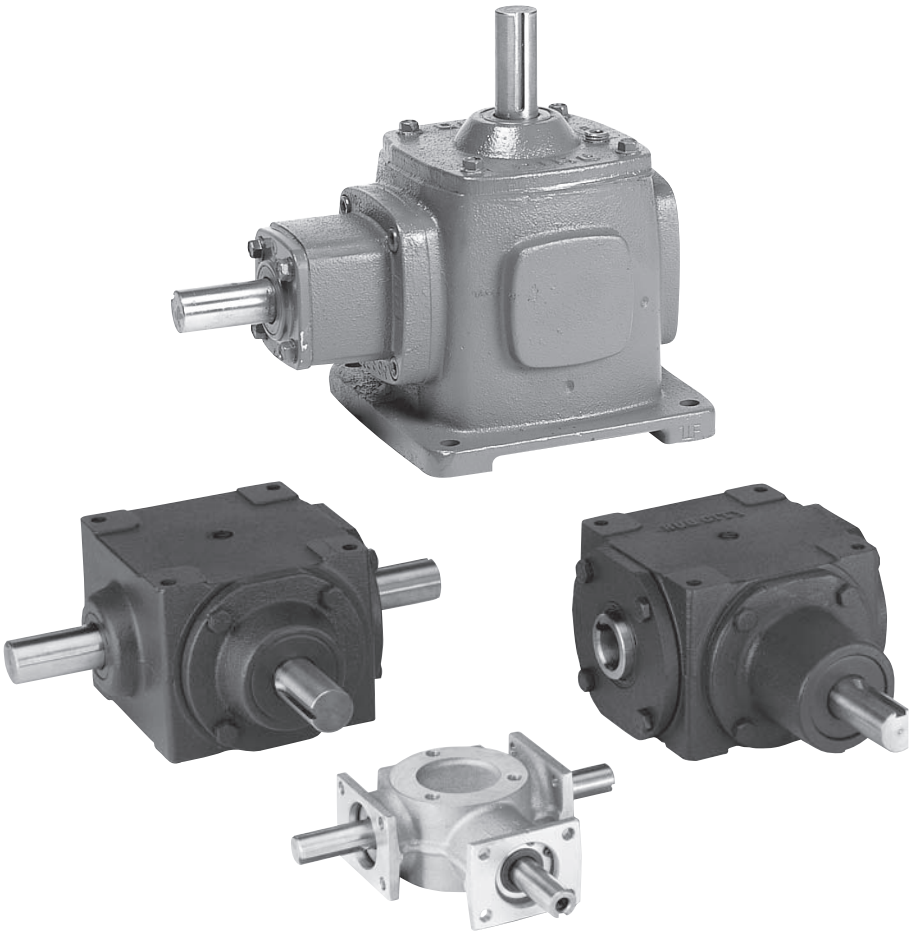
- Power Ratings from .016 to 1250 hp
- Output Torque to 58,000 inch/lbs
- Ratios from 1:1 through 7.33:1
- Operating Speeds to 3600 rpm

STANDARD FEATURES

- Universal Mounting Dimensions Assure Maximum Design Flexibility
- Ductile Iron or Cast Iron Housings Designed for Superior Thermal Conductivity Provides Rigid Gear and Bearing Support.
- Cast Aluminum Housings Provide Corrosion Resistance for Models AD1 through AD5
- Spiral Bevel or Straight Bevel Gearing Provides Efficient Operation and Durability
- Alloy Shafting for Greater Strength.
- Ball or Tapered Roller Bearings for Endurance and Strength
- Heavy-Duty Industrial Seals Keep Contaminants Out

OPTIONAL FEATURES

- Modified Standard and Custom Designs
- C-Face or Hydraulic Motor Mounting Flanges
- Metric Versions to Meet Global Market Demands
- CleanLine Washdown and BISSC Configurations
- Unique or Harsh Environment Adaptations



For Stainless Steel Bevel Gear Drives See HUB³ Section O

For Higher Ratio Bevel Drives See Poweratio® 2000 Helical Bevel Section K

SELECTION OF BEVEL GEAR DRIVES

Bevel gear drives are selected on the basis of SPEED, RATIO, HORSEPOWER, and TORQUE. The QUICK SELECTION TABLES, page D4 & D-5 are designed to assist you in making a rapid selection of the model to fit your requirements. To use this table, find your required INPUT RPM and RATIO in the table and look across the page for the unit with the proper INPUT HORSEPOWER for your application. For example, if the application INPUT SPEED is 1750 RPM and you require a 1:1 RATIO capable of transmitting 90 HORSEPOWER, from the chart the proper selection is a Model 88 with spiral bevel gears. The Table of Contents will guide you to the catalog pages containing complete engineering data and specifications for the model you have selected.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.25
	Intermittent 3 hrs.	*	1.00	1.50
	3 - 10 hours	1.00	1.25	1.75
	Over 10 hours	1.25	1.50	2.00
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.75
	Intermittent 3 hrs.	1.25	1.50	2.00
	3 - 10 hours	1.50	1.75	2.25
	Over 10 hours	1.75	2.00	2.50
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

EXPLANATORY NOTES

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

STARTING TORQUE

Momentary or starting torque should be limited to 200 per cent of rated capacity for Hub City Bevel gear drives.

THERMAL CAPACITY

The thermal capacity of a unit is the maximum capacity at which the unit will operate at a temperature not exceeding 200° F. Under certain conditions of high load and high RPM the thermal capacity may be somewhat less than the mechanical capacity. If thermal capacity is exceeded, provision must be made for additional cooling of the unit or external recirculation of lubricant. Factory engineers are ready to assist designers with their problems, at all times.

EFFICIENCY

Bevel Gearing and Ball or Tapered Roller Bearings provide a drive with very high efficiency. The approximate efficiency is 97.5%.

SERVICE FACTORS

The ratings for gear drives in this manual are based on a service factor of 1.00, for uniform load and uniform power source, up to 10 hours of operation per day. For other operating conditions, the application horsepower or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A gear drive should be selected with a rated capacity equal to or greater than the equivalent rating. Table 1 designates recommended service factors for various conditions of load, power source, and duration of service.

AGMA Service Factors for Drives and Reducers are listed on pages A-7 to A-8.

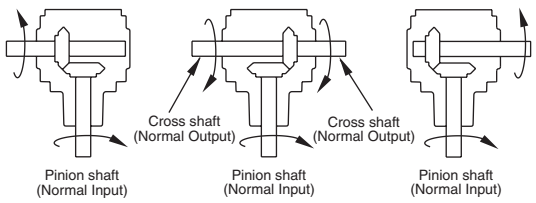
Refer to page A-2 for further information and cautions on the selection of proper service factors.

APPLICATIONS

Bevel Gear Drives transfer power at 90°. Generally this power transfer is a 1:1 ratio with relation to speed. These gear drives are also capable of increasing or reducing speed.

SHAFT ROTATION

Shaft rotation is determined by the relative location of the gears. Right hand (clockwise) or left hand (counter - clockwise) rotations are determined by viewing the end of the shaft. Pinion shaft can be rotated in either direction.



The above illustrations show common terms normally used in discussing Bevel Gear Drives.

QUICK MODEL SELECTION

STRAIGHT BEVEL GEAR DRIVES BY INPUT HORSEPOWER														
INPUT RPM	RATIO	OUTPUT RPM	M2 M3	RA-0	44	11	150	165	66	600	88	800	810	1000
	1:1	2400	3.00											
	1.47:1	1644				8.0								
2400	1.5:1	1600	2.10											
	1.8:1	1333				7.3								
	2:1	1200	1.40				9.0	9.0						
	1:1	1750	2.25	2.0	20.0									
	1.43:1	1225			10.1									
	1.47:1	1199				6.1								
1750	1.5:1	1168	1.57				9.2	9.2	15.0					
	1.8:1	972				5.4								
	2:1	875	1.04	2.5	5.90		6.3	6.3	7.3					
	3:1	583		1.7							15.0			
	1:1	1150	1.50	1.50	13.8	12.0	12.0	17.0	24.2	34.0				
	1.36:1	852							11.4					
	1.43:1	805			6.9									
	1.47:1	788				4.2								
1150	1.5:1	767	1.03				6.2	6.2	10.6		39.0	44.0	44.0	
	1.7:1	676										33.0	33.0	
	1.8:1	638				3.6								
	2:1	575	.70	1.9	4.1		4.3	4.3	5.4		22.0			
	3:1	383		1.3							9.9			
	1:1	690	.93	1.0	8.4	7.6	7.6	10.6	16.3	23.9	36.5	56.2	56.2	80.0
	1.21:1	575										40.0	40.0	55.0
	1.33:1	519										37.0	37.0	
	1.36:1	511							7.2					
	1.43:1	483			4.3									
	1.47:1	473				2.6								
690	1.5:1	460	.65				3.9	3.9	7.1		24.0	28.0	28.0	
	1.7:1	406										21.6	21.6	
	1.8:1	383				2.2								
	1.87:1	369												39.0
	2:1	345	.43	1.3	2.5		2.7	2.7	3.9		13.8			
	2.21:1	314												26.0
	3:1	230		.93							6.5			
	1:1	100	.14	.25	1.2	1.2	1.2	1.7	2.9	4.3	5.8	9.0	9.0	17.0
	1.21:1	83										6.7	6.7	11.0
	1.33:1	75										6.1	6.1	
	1.36:1	74							1.4					
	1.43:1	70			.71									
100	1.47:1	68				.44								
	1.5:1	66	.12				.65	.65	1.4		3.8	4.6	4.6	
	1.7:1	59										3.4	3.4	
	2:1	50		.30	.41		.50	.50	.70		2.3			
	2.2:1	45												4.8
	3:1	33		.20										

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QUICK MODEL SELECTION

SPIRAL BEVEL GEAR DRIVES BY INPUT HORSEPOWER																			
INPUT RPM	RATIO	OUTPUT RPM	AD1 AD4	AD2 AD5	AD3	RA-1	11 150 165 175	RA-2	65 66	RA-3	600	88	RA-4	800 810 850	1010 1050	1200	1250	1700	2200
3600	1:1	3600	1.81	4.31	10.25														
	2:1	1800	.53	2.12	3.82														
2400	1:1	2400	1.24	2.95	7.10	17.6	21.8	27.3	59.0	51.3	59.0								
	1.29:1	1860									46.3								
	1.53:1	1569							46.0										
	2:1	1200	.36	1.45	2.62	12.8	12.3	19.1	20.7	49.6									
	3:1	800					7.0		12.5										
1750	1:1	1750	.91	2.19	5.27	14.1	16.0	21.9	46.0	41.1	46.0	90.0	52.2	132	251	296	380	701	1250
	1.29:1	1356									34.7								
	1.33:1	1316													195	232		334	491
	1.5:1	1167										69.9		69.9	173	205	205	301	480
	1.53:1	1143							35.0										
	2:1	875	.26	1.07	1.96	10.3	9.0	15.3	15.4	39.6		56.0	49.5	56.0	124	235	235	305	
	3:1	583				6.5		13.1	9.2	27.3		30.7	40.2	30.7	55.8	133	133	159	237
1150	1:1	1150	.61	1.47	3.55	10.5	11.0	16.3	30.5	30.0	30.5	63.0	38.9	90.0	173	204	261	482	868
	1.29:1	891									23.6								
	1.33:1	865													134	164		228	337
	1.5:1	767										47.0		47.0	118	145	145	206	330
	1.53:1	751							23.0										
	2:1	575	.18	.72	1.32	7.5	6.1	10.9	10.3	27.3		38.0	36.9	38.0	84.4	166	166	210	
	3:1	383				4.5		9.7	6.2	18.7		20.6	30.0	20.6	37.7	93.0	93.0	108	162
690	1:1	690	.37	.90	2.19	7.3	6.8	11.4	20.0	18.8	20.0	39.5	27.2	56.0	109	128	165	305	549
	1.29:1	535									14.6								
	1.33:1	519													83.5	112		144	212
	1.5:1	460										29.5		29.5	73.8	85.0	85.0	130	208
	1.53:1	451							15.0										
	2:1	345	.11	.44	.81	4.7	3.7	6.9	6.3	17.3		23.0	25.8	23.0	52.5	113	113	132	
	3:1	230				2.8		6.1	3.8	11.8		12.6	20.9	12.6	28.4	61.0	61.0	67.0	101
100	1:1	100	.06	.14	.34	1.3	1.1	2.2	3.7	3.2	3.7	6.5	5.2	9.0	18.5	21.0	27.0	50.0	92.0
	1.29:1	77									2.3								
	1.33:1	75													13.1	20.0		23.0	35.0
	1.5:1	67										4.8		4.8	11.8	18.0	18.0	21.0	34.0
	1.53:1	65							3.0										
	2:1	50	.02	.07	.13	.77	.55	1.1	.95	2.9		3.6	5.3	3.6	8.3	20.0	20.0	21.0	
	3:1	33				.45		1.0	.55	1.9		1.9	3.5	1.9	3.7	10.0	10.0	11.0	16.0

BEVEL GEAR DRIVE NOMENCLATURE EXAMPLES

150 1/1 A,B ST

Model
See page D1 for a list of available models

Gear Ratio
See Ratings pages D-6 to D-55 for available ratios in each model.

Style
See pages D-6 to D-56 for available styles in each model. Please note: many standard assemblies incorporate two styles such as: A, B; C, F or D, E

Gear Type
SP: Spiral Bevel
ST: Straight Bevel

RA SERIES

RA2 2/1 A SR M1 & M2

Model
See pages D-59 to D-63 for available models

Gear Ratio
See Ratings pages D-59 to D-63 for available ratios in each RA model.

Style
See pages D-59 to D-63 for available styles in each model

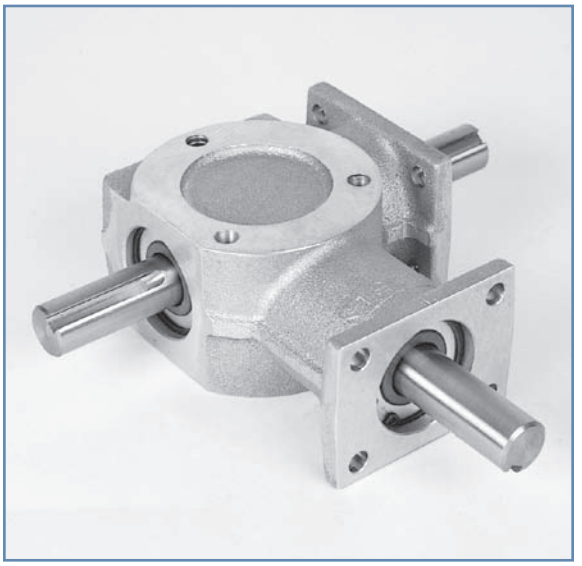
Shaft Rotation
See pages D-59 to D-63
SR: Standard Rotation
RR: Reverse Rotation

Mounting Position
See page D-64

MODELS AD1, AD2

FEATURES

- Cast aluminum housing designed to resist corrosion and provide rigid gear and bearing support.
- Stainless steel or chrome plated shaft provide resistance to corrosion.
- Precision ball bearings to accommodate higher operating speeds.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Permanently lubricated at factory to assure trouble free service.
- Universal mounting (4 surfaces) to assure maximum design flexibility.



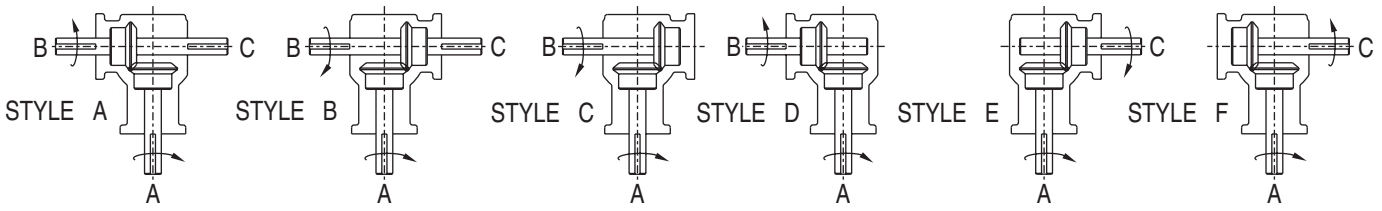
RATING TABLE

INPUT RPM†		MODEL AD1 RATIO		MODEL AD2 RATIO	
		1:1	2:1Δ	1:1	2:1Δ
3600	INPUT HORSEPOWER	1.810	.525	4.310	2.120
	OUTPUT TORQUE IN. LBS.	31.700	18.400	75.500	74.200
2400	INPUT HORSEPOWER	1.240	.356	2.950	1.450
	OUTPUT TORQUE IN. LBS.	32.500	18.700	77.400	76.100
1750	INPUT HORSEPOWER	.913	.262	2.190	1.070
	OUTPUT TORQUE IN. LBS.	32.900	18.900	78.700	77.200
1150	INPUT HORSEPOWER	.609	.176	1.470	.720
	OUTPUT TORQUE IN. LBS.	33.400	19.300	80.300	78.600
850	INPUT HORSEPOWER	.457	.131	1.100	.540
	OUTPUT TORQUE IN. LBS.	33.900	19.500	81.300	79.400
690	INPUT HORSEPOWER	.374	.108	.900	.440
	OUTPUT TORQUE IN. LBS.	34.200	19.700	81.900	80.000
400	INPUT HORSEPOWER	.220	.064	.530	.260
	OUTPUT TORQUE IN. LBS.	34.700	20.000	83.300	81.200
200	INPUT HORSEPOWER	.112	.033	.270	.130
	OUTPUT TORQUE IN. LBS.	35.100	20.300	84.700	82.400
100	INPUT HORSEPOWER	.057	.016	.140	.070
	OUTPUT TORQUE IN. LBS.	35.600	20.500	85.800	83.200

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY

Δ2:1 RATIO HAS PLATED PINION SHAFTS

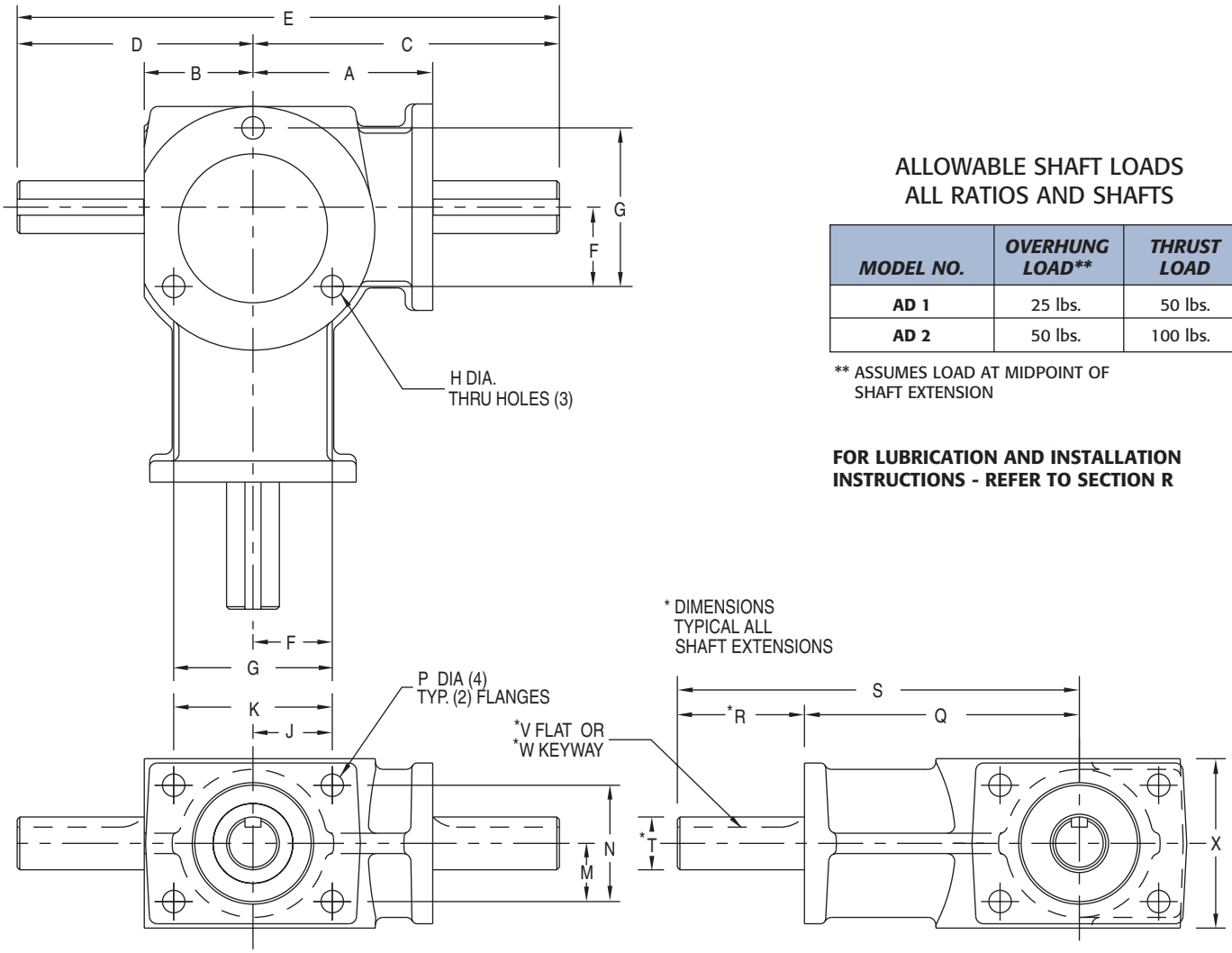
STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODELS AD1, AD2



ALLOWABLE SHAFT LOADS
ALL RATIOS AND SHAFTS

MODEL NO.	OVERHUNG LOAD**	THRUST LOAD
AD 1	25 lbs.	50 lbs.
AD 2	50 lbs.	100 lbs.

** ASSUMES LOAD AT MIDPOINT OF SHAFT EXTENSION

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

SHIPPING WEIGHTS

MODEL AD1 .....1/2 lb.
MODEL AD2 .....2 lbs.

INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

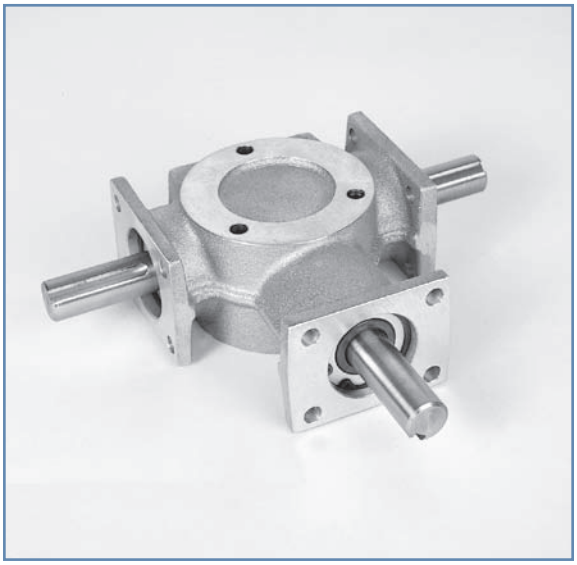
MODEL NO.	A	B	C	D	E	F	G	H	J	K	M	N	P
AD1	1-3/8	31/32	1-31/32	1-9/16	3-17/32	.656	1.312	13/64	.594	1.188	.438	.875	11/64
AD2	2-1/8	1-9/32	3-5/8	2-25/32	6-13/32	.937	1.875	17/64	.937	1.875	.687	1.375	17/64

MODEL NO.	Q	R	S	T	V	W	X
AD1	2-5/32	19/32	2-3/4	.3745/.3740	1/32 DEEP	.60 EFF. FLAT	1.255/1.250
AD2	3-1/4	1-1/2	4-3/4	.6245/.6240	—	3/16 X 3/32 1-7/32 EFF. LGTH.	2.005/2.000

MODELS AD3, AD4, AD5

FEATURES

- Cast aluminum housing designed to resist corrosion and provide rigid gear and bearing support.
- Stainless steel or chrome plated shaft provide resistance to corrosion.
- Precision ball bearings to accommodate higher operating speeds.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Permanently lubricated at factory to assure trouble free service.
- Universal mounting (5 surfaces) to assure maximum design flexibility.
- Metric versions available. (Refer to page D-56)



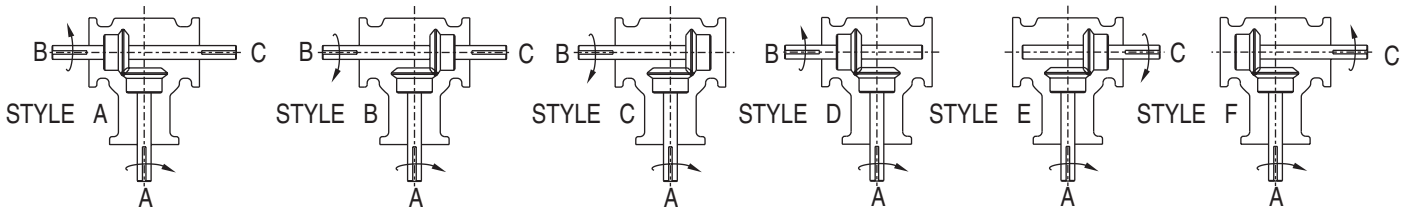
RATING TABLE

INPUT RPM†		MODEL AD4 RATIO		MODEL AD5 RATIO		MODEL AD3 RATIO	
		1:1	2:1Δ	1:1	2:1Δ	1:1	2:1Δ
3600	INPUT HORSEPOWER	1.810	.525	4.310	2.120	10.250	3.820
	OUTPUT TORQUE IN. LBS.	31.700	18.400	75.500	74.200	179.560	133.800
2400	INPUT HORSEPOWER	1.240	.356	2.950	1.450	7.100	2.620
	OUTPUT TORQUE IN. LBS.	32.500	18.700	77.400	76.100	186.400	137.600
1750	INPUT HORSEPOWER	.913	.262	2.190	1.070	5.270	1.960
	OUTPUT TORQUE IN. LBS.	32.900	18.900	78.700	77.200	189.700	141.000
1150	INPUT HORSEPOWER	.609	.176	1.470	.720	3.550	1.320
	OUTPUT TORQUE IN. LBS.	33.400	19.300	80.300	78.600	194.800	144.400
850	INPUT HORSEPOWER	.457	.131	1.100	.540	2.670	.990
	OUTPUT TORQUE IN. LBS.	33.900	19.500	81.300	79.400	198.000	146.800
690	INPUT HORSEPOWER	.374	.108	.900	.440	2.190	.810
	OUTPUT TORQUE IN. LBS.	34.200	19.700	81.900	80.000	200.100	148.200
400	INPUT HORSEPOWER	.220	.064	.530	.260	1.300	.480
	OUTPUT TORQUE IN. LBS.	34.700	20.000	83.300	81.200	204.800	151.200
200	INPUT HORSEPOWER	.112	.033	.270	.130	.670	.250
	OUTPUT TORQUE IN. LBS.	35.100	20.300	84.700	82.400	209.400	154.400
100	INPUT HORSEPOWER	.057	.016	.140	.070	.340	.130
	OUTPUT TORQUE IN. LBS.	35.600	20.500	85.800	83.200	212.900	156.600

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY

Δ2:1 RATIO HAS PLATED PINION SHAFTS

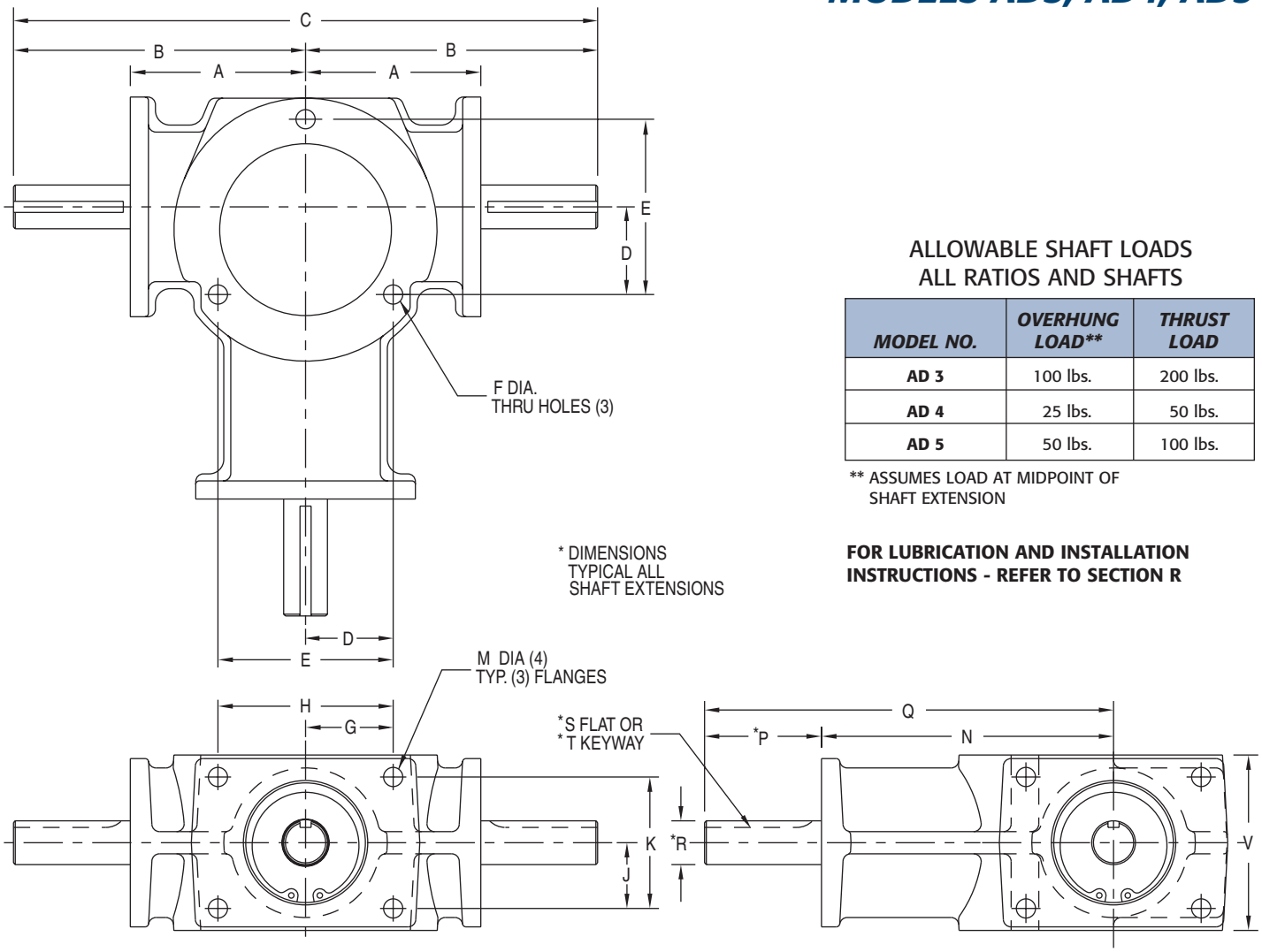
STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODELS AD3, AD4, AD5



* DIMENSIONS TYPICAL ALL SHAFT EXTENSIONS

ALLOWABLE SHAFT LOADS ALL RATIOS AND SHAFTS

MODEL NO.	OVERHUNG LOAD**	THRUST LOAD
AD 3	100 lbs.	200 lbs.
AD 4	25 lbs.	50 lbs.
AD 5	50 lbs.	100 lbs.

** ASSUMES LOAD AT MIDPOINT OF SHAFT EXTENSION

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

SHIPPING WEIGHTS

MODEL AD3 .....8-1/4 lbs.
MODEL AD4 .....1/2 lb.
MODEL AD5 .....2 lbs.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

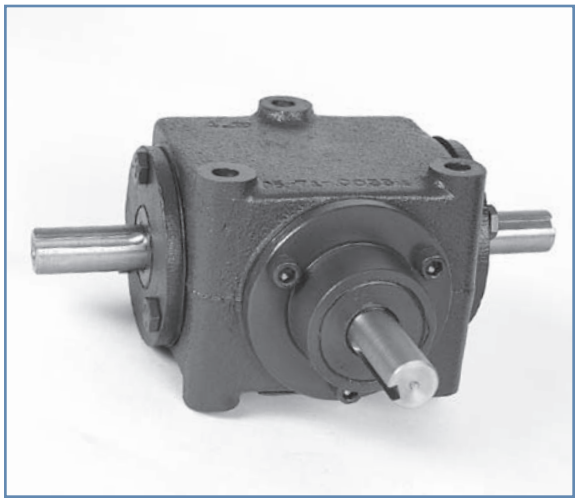
MODEL NO.	A	B	C	D	E	F	G	H	J	K	M
AD3	3	5	10	1.500	3.000	21/64	1.500	3.000	1.125	2.250	21/64
AD4	1-3/8	1-63/64	3-61/64	.656	1.312	17/64	.594	1.188	.438	.875	11/64
AD5	2-1/8	3-5/8	7-1/4	.937	1.875	17/64	.937	1.875	.687	1.375	17/64

MODEL NO.	N	P	Q	R	S	T	V
AD3	5	2	7	.750/.749	–	3/16 X 3/32 1-9/16 EFF. LGTH.	3.005/3.000
AD4	2-5/32	19/32	2-3/4	.3745/.3740	1/32 DEEP	.60 EFF. FLAT	1.255/1.250
AD5	3-1/4	1-1/2	4-3/4	.6245/.6240	–	3/16 X 3/32 1-7/32 EFF. LGTH.	2.005/2.000

MODEL M2

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Precision ball bearings to accommodate higher operating speeds.
- Choice of seven (7) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Hub City lubricant recommended. (Refer to section R)



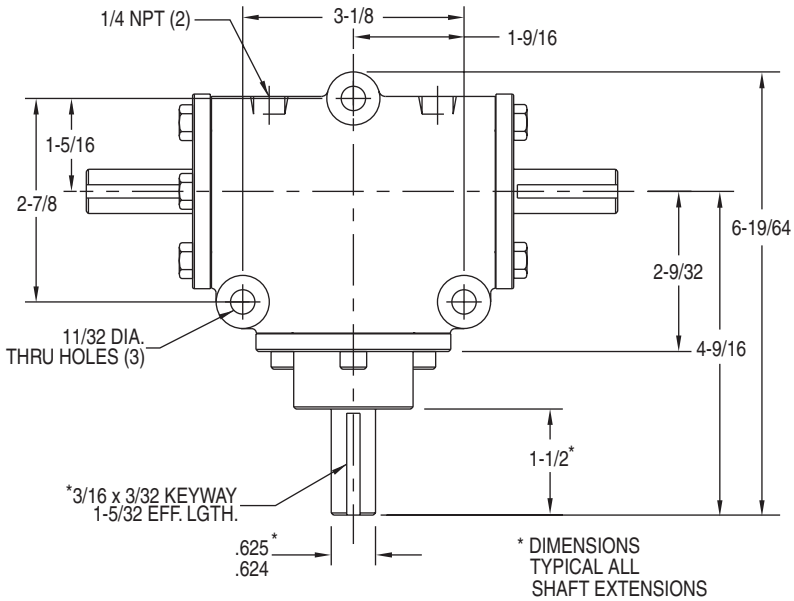
RATING TABLE

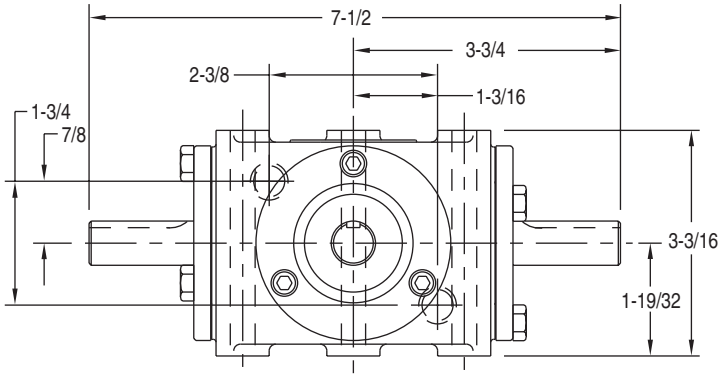
INPUT RPM†		REDUCTION RATIOS					*INCREASER RATIOS	
		1:1	SPIRAL 1:1Δ	1.5:1	2:1	SPIRAL 2:1Δ	1:1.5	1:2
3000	INPUT HORSEPOWER		3.59	2.60	1.75	1.77		
	OUTPUT TORQUE IN. LBS.		75.50	82.00	73.00	74.20		
	‡INPUT O.H.L.		25.00	72.00	83.00	30.00		
	‡OUTPUT O.H.L.		70.00	200.00	245.00	100.00		
2400	INPUT HORSEPOWER	3.00	2.95	2.10	1.40	1.45		
	OUTPUT TORQUE IN. LBS.	79.00	77.40	83.00	74.00	76.10		
	‡INPUT O.H.L.	67.00	45.00	85.00	90.00	50.00		
	‡OUTPUT O.H.L.	155.00	105.00	220.00	270.00	135.00		
1750	INPUT HORSEPOWER	2.25	2.19	1.57	1.04	1.07	2.10	
	OUTPUT TORQUE IN. LBS.	81.00	78.70	84.00	75.00	77.20	50.00	
	‡INPUT O.H.L.	88.00	60.00	98.00	102.00	70.00	95.00	
	‡OUTPUT O.H.L.	177.00	150.00	245.00	300.00	180.00	89.00	
1150	INPUT HORSEPOWER	1.50	1.47	1.03	.70	.72	1.40	1.20
	OUTPUT TORQUE IN. LBS.	83.00	80.30	85.00	77.00	78.60	51.00	33.00
	‡INPUT O.H.L.	110.00	90.00	118.00	121.00	95.00	114.00	110.00
	‡OUTPUT O.H.L.	205.00	175.00	290.00	350.00	210.00	104.00	96.00
850	INPUT HORSEPOWER	1.13	1.10	.80	.53	.54	1.05	.92
	OUTPUT TORQUE IN. LBS.	84.00	81.30	88.00	78.00	79.40	51.50	34.00
	‡INPUT O.H.L.	131.00	100.00	137.00	142.00	105.00	134.00	128.00
	‡OUTPUT O.H.L.	240.00	210.00	320.00	382.00	240.00	119.00	111.00
690	INPUT HORSEPOWER	.93	.90	.65	.43	.44	.86	.76
	OUTPUT TORQUE IN. LBS.	85.00	81.90	89.00	80.00	80.00	50.00	34.50
	‡INPUT O.H.L.	137.00	110.00	144.00	148.00	112.00	140.00	136.00
	‡OUTPUT O.H.L.	267.00	230.00	350.00	400.00	270.00	126.00	118.00
400	INPUT HORSEPOWER	.55	.53	.39	.26	.26	.50	.45
	OUTPUT TORQUE IN. LBS.	87.00	83.30	92.00	82.00	81.20	53.00	35.50
	‡INPUT O.H.L.	169.00	125.00	175.00	180.00	138.00	173.00	168.00
	‡OUTPUT O.H.L.	330.00	300.00	400.00	400.00	330.00	157.00	149.00
300	INPUT HORSEPOWER	.42	.40	.30	.20	.19	.40	.34
	OUTPUT TORQUE IN. LBS.	88.00	84.70	95.00	83.00	82.40	56.00	36.00
	‡INPUT O.H.L.	189.00	150.00	190.00	190.00	152.00	190.00	185.00
	‡OUTPUT O.H.L.	378.00	400.00	400.00	400.00	400.00	173.00	164.00
100	INPUT HORSEPOWER	.14	.14	.12	.08	.07	.14	.12
	OUTPUT TORQUE IN. LBS.	90.00	85.80	113.00	100.00	83.20	59.00	38.00
	‡INPUT O.H.L.	190.00	160.00	190.00	190.00	175.00	190.00	190.00
	‡OUTPUT O.H.L.	400.00	400.00	400.00	400.00	400.00	190.00	190.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
*AVAILABLE IN STYLE "G" ONLY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.
ΔMFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY.

MODEL M2





NOTE: STYLE G

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

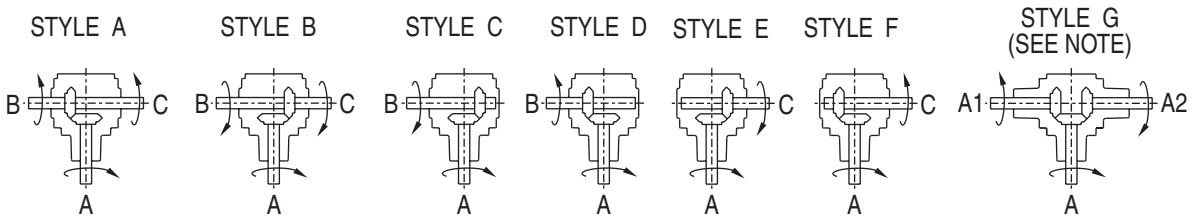
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .9 lbs.
STYLES G . . . . . .10 lbs.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE

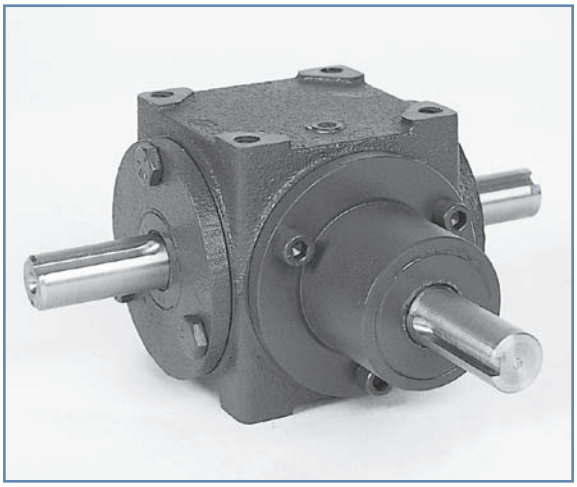


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL M3

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Precision ball bearings to accommodate higher operating speeds.
- Choice of seven (7) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-57)



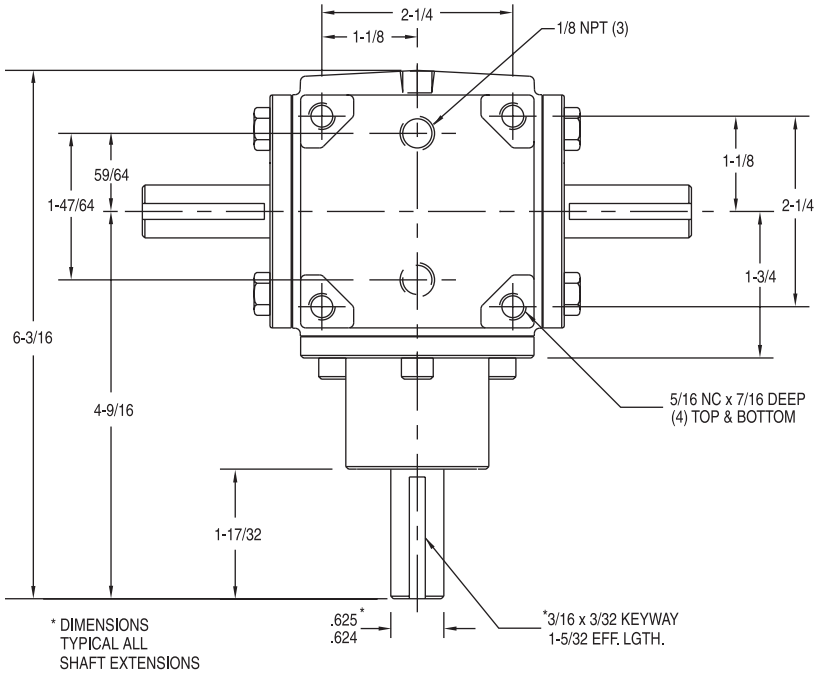
RATING TABLE

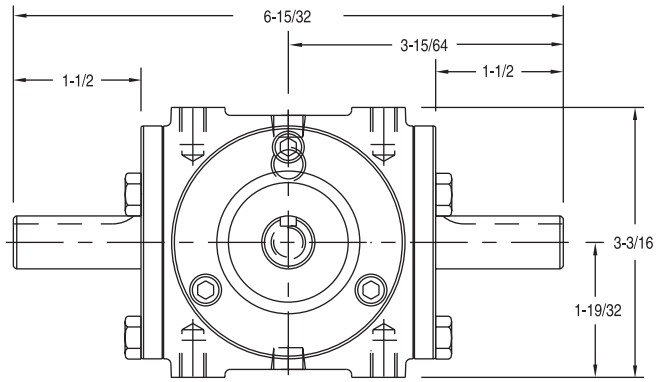
INPUT RPM†		REDUCTION RATIOS 1:1	SPIRAL 1:1△	1.5:1	2:1	SPIRAL 2:1△	*INCREASER RATIOS 1:1.5	1:2
3000	INPUT HORSEPOWER		3.59	2.60	1.75	1.77		
	OUTPUT TORQUE IN. LBS.		75.50	82.00	73.00	74.20		
	‡INPUT O.H.L.		25.00	72.00	83.00	30.00		
	‡OUTPUT O.H.L.		70.00	200.00	245.00	100.00		
2400	INPUT HORSEPOWER	3.00	2.95	2.10	1.40	1.45		
	OUTPUT TORQUE IN. LBS.	79.00	77.40	83.00	74.00	76.10		
	‡INPUT O.H.L.	67.00	45.00	85.00	90.00	50.00		
	‡OUTPUT O.H.L.	155.00	105.00	220.00	270.00	135.00		
1750	INPUT HORSEPOWER	2.25	2.19	1.57	1.04	1.07	2.10	
	OUTPUT TORQUE IN. LBS.	81.00	78.70	84.00	75.00	77.20	50.00	
	‡INPUT O.H.L.	88.00	60.00	98.00	102.00	70.00	95.00	
	‡OUTPUT O.H.L.	177.00	150.00	245.00	300.00	180.00	89.00	
1150	INPUT HORSEPOWER	1.50	1.47	1.03	.70	.72	1.40	1.20
	OUTPUT TORQUE IN. LBS.	83.00	80.30	85.00	77.00	78.60	51.00	33.00
	‡INPUT O.H.L.	110.00	90.00	118.00	121.00	95.00	114.00	110.00
	‡OUTPUT O.H.L.	205.00	175.00	290.00	350.00	210.00	104.00	96.00
850	INPUT HORSEPOWER	1.13	1.10	.80	.53	.54	1.05	.92
	OUTPUT TORQUE IN. LBS.	84.00	81.30	88.00	78.00	79.40	51.50	34.00
	‡INPUT O.H.L.	131.00	100.00	137.00	142.00	105.00	134.00	128.00
	‡OUTPUT O.H.L.	240.00	210.00	320.00	382.00	240.00	119.00	111.00
690	INPUT HORSEPOWER	.93	.90	.65	.43	.44	.86	.76
	OUTPUT TORQUE IN. LBS.	85.00	81.90	89.00	80.00	80.00	50.00	34.50
	‡INPUT O.H.L.	137.00	110.00	144.00	148.00	112.00	140.00	136.00
	‡OUTPUT O.H.L.	267.00	230.00	350.00	400.00	270.00	126.00	118.00
400	INPUT HORSEPOWER	.55	.53	.39	.26	.26	.50	.45
	OUTPUT TORQUE IN. LBS.	87.00	83.30	92.00	82.00	81.20	53.00	35.50
	‡INPUT O.H.L.	169.00	125.00	175.00	180.00	138.00	173.00	168.00
	‡OUTPUT O.H.L.	330.00	300.00	400.00	400.00	330.00	157.00	149.00
300	INPUT HORSEPOWER	.42	.40	.30	.20	.19	.40	.34
	OUTPUT TORQUE IN. LBS.	88.00	84.70	95.00	83.00	82.40	56.00	36.00
	‡INPUT O.H.L.	189.00	150.00	190.00	190.00	152.00	190.00	185.00
	‡OUTPUT O.H.L.	378.00	400.00	400.00	400.00	400.00	173.00	164.00
100	INPUT HORSEPOWER	.14	.14	.12	.08	.07	.14	.12
	OUTPUT TORQUE IN. LBS.	90.00	85.80	113.00	100.00	83.20	59.00	38.00
	‡INPUT O.H.L.	190.00	160.00	190.00	190.00	175.00	190.00	190.00
	‡OUTPUT O.H.L.	400.00	400.00	400.00	400.00	400.00	190.00	190.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
*AVAILABLE IN STYLE "G" ONLY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.
△MFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY.

MODEL M3





NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

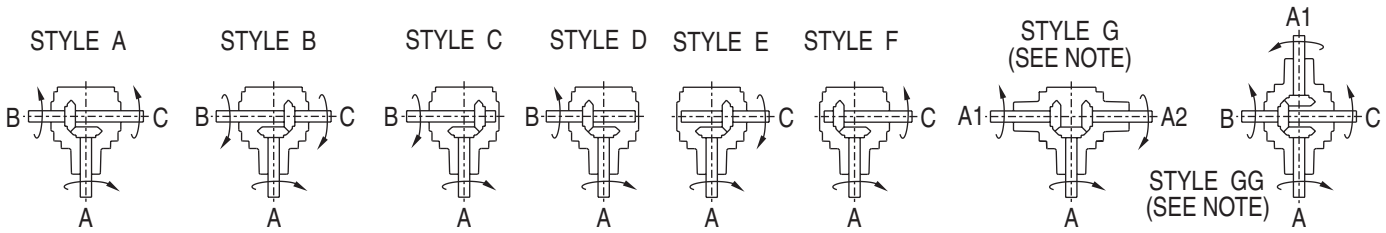
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .10 lbs.
STYLES G . . . . . .12 lbs.
STYLES GG. . . . . .15 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

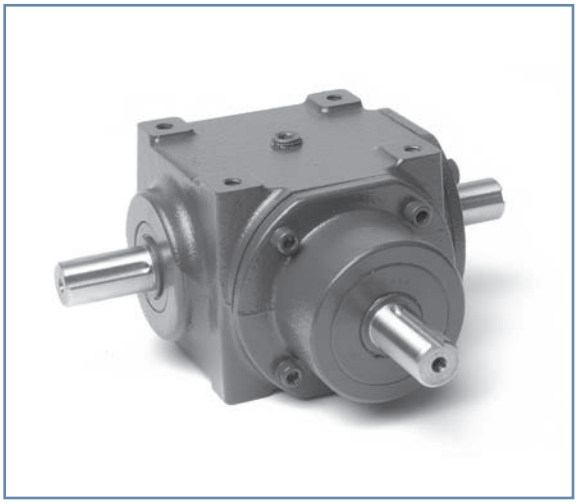


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 44

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of three (3) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Hub City lubricant recommended. (Refer to section R)



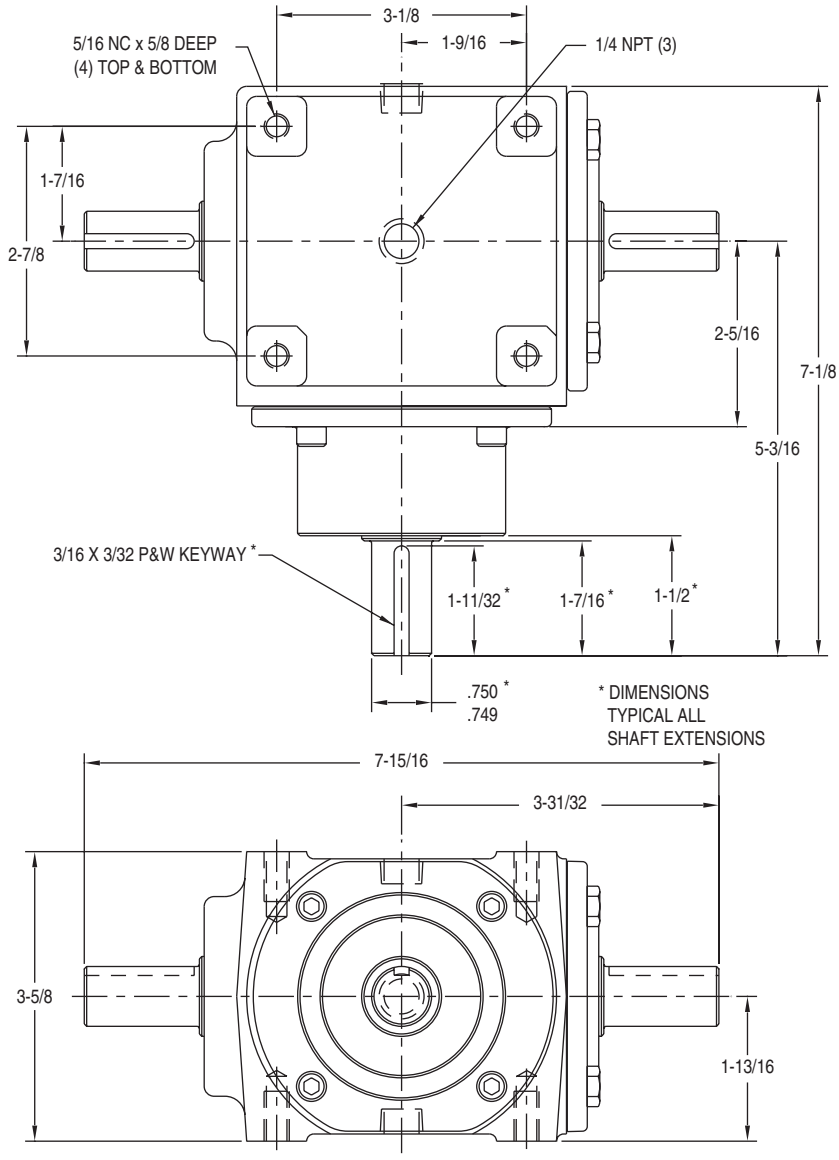
RATING TABLE

INPUT RPM†		*1:1 ST*	*1.428:1 ST*	*2:1 ST*
1750	INPUT HORSEPOWER	19.96	10.05	5.95
	OUTPUT TORQUE (IN-LBS)	719	516	429
	INPUT O.H.L.	65	248	359
	OUTPUT O.H.L.	259	471	600
1150	INPUT HORSEPOWER	13.77	6.89	4.07
	OUTPUT TORQUE (IN-LBS)	755	540	446
	INPUT O.H.L.	143	339	445
	OUTPUT O.H.L.	325	557	600
850	INPUT HORSEPOWER	10.3	5.24	3.08
	OUTPUT TORQUE (IN-LBS)	764	555	457
	INPUT O.H.L.	227	415	493
	OUTPUT O.H.L.	389	600	600
690	INPUT HORSEPOWER	8.36	4.33	2.54
	OUTPUT TORQUE (IN-LBS)	764	564	465
	INPUT O.H.L.	298	473	528
	OUTPUT O.H.L.	440	600	600
400	INPUT HORSEPOWER	4.85	2.61	1.53
	OUTPUT TORQUE (IN-LBS)	764	588	482
	INPUT O.H.L.	504	600	600
	OUTPUT O.H.L.	590	600	600
300	INPUT HORSEPOWER	3.64	2.00	1.17
	OUTPUT TORQUE (IN-LBS)	764	600	491
	INPUT O.H.L.	599	600	600
	OUTPUT O.H.L.	600	600	600
100	INPUT HORSEPOWER	1.21	0.71	0.41
	OUTPUT TORQUE (IN-LBS)	764	636	518
	INPUT O.H.L.	600	600	600
	OUTPUT O.H.L.	600	600	600

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡ OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 44



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

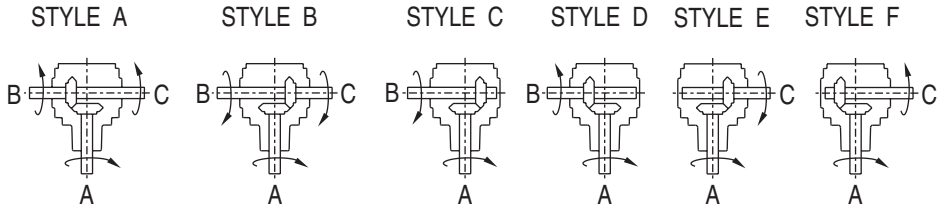
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .15 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 11

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of six (6) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Hub City lubricant recommended. (Refer to section R)
- Available with stainless steel construction made to order.



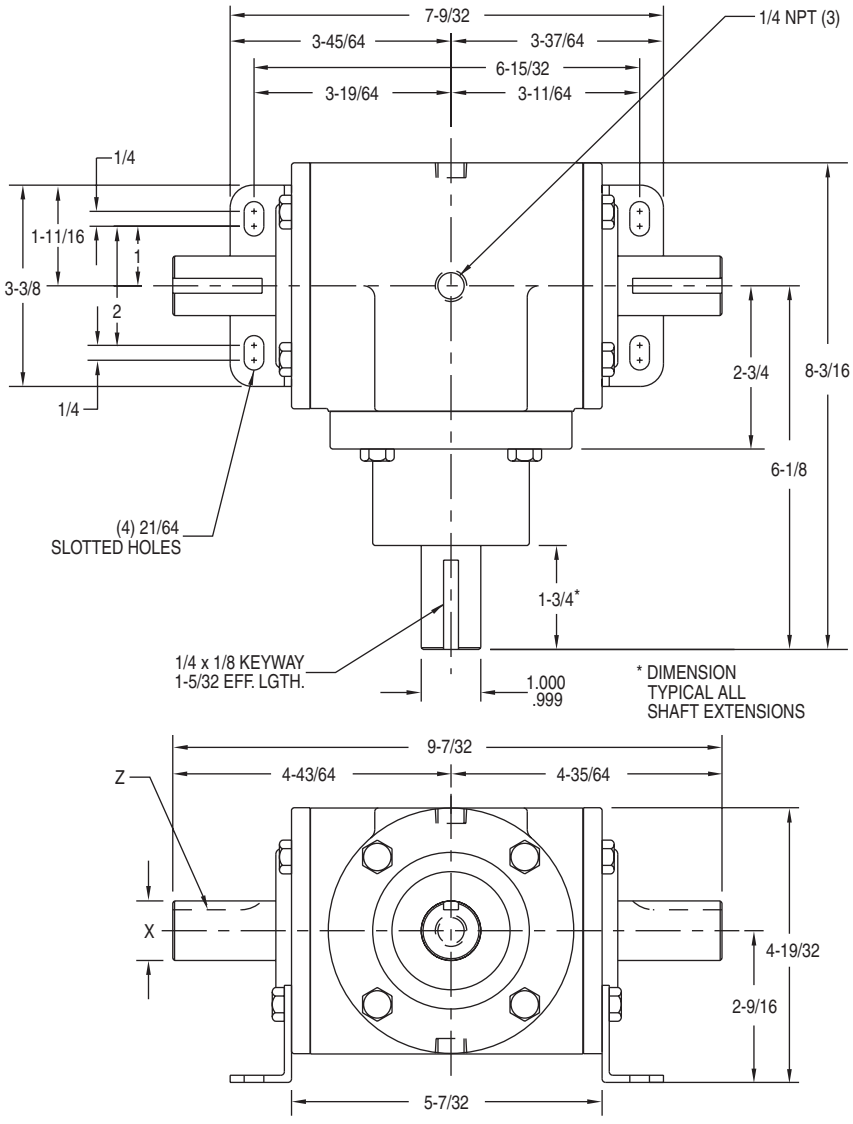
RATING TABLE

INPUT RPM†		REDUCTION RATIOS				INCREASER RATIOS	
		1:1	SPIRAL 1:1	1.47:1	1.8:1	1:1.47	1:1.8
2400	INPUT HORSEPOWER		21.80	8.00	7.30		
	OUTPUT TORQUE IN. LBS.		570.00	315.00	344.00		
	‡INPUT O.H.L.		65.00	248.00	223.00		
	‡OUTPUT O.H.L.		215.00	315.00	420.00		
1750	INPUT HORSEPOWER		16.00	6.10	5.40		
	OUTPUT TORQUE IN. LBS.		580.00	330.00	350.00		
	‡INPUT O.H.L.		80.00	277.00	255.00		
	‡OUTPUT O.H.L.		265.00	345.00	475.00		
1150	INPUT HORSEPOWER	12.00	11.00	4.20	3.60	5.60	5.55
	OUTPUT TORQUE IN. LBS.	660.00	600.00	340.00	355.00	205.00	169.00
	‡INPUT O.H.L.	190.00	93.00	322.00	303.00	261.00	273.00
	‡OUTPUT O.H.L.	280.00	310.00	405.00	545.00	225.00	135.00
850	INPUT HORSEPOWER	9.00	8.30	3.20	2.70	4.20	4.15
	OUTPUT TORQUE IN. LBS.	670.00	615.00	350.00	360.00	208.00	171.00
	‡INPUT O.H.L.	227.00	106.00	349.00	342.00	309.00	312.00
	‡OUTPUT O.H.L.	320.00	355.00	450.00	595.00	225.00	135.00
690	INPUT HORSEPOWER	7.60	6.80	2.60	2.20	3.50	3.40
	OUTPUT TORQUE IN. LBS.	680.00	620.00	360.00	362.00	213.00	173.00
	‡INPUT O.H.L.	248.00	139.00	388.00	371.00	348.00	341.00
	‡OUTPUT O.H.L.	360.00	395.00	495.00	575.00	225.00	135.00
400	INPUT HORSEPOWER	4.40	4.10	1.60	1.30	2.20	2.05
	OUTPUT TORQUE IN. LBS.	700.00	645.00	370.00	370.00	231.00	179.00
	‡INPUT O.H.L.	335.00	175.00	470.00	456.00	430.00	426.00
	‡OUTPUT O.H.L.	430.00	475.00	630.00	770.00	225.00	135.00
300	INPUT HORSEPOWER	3.40	3.10	1.20	1.00	1.70	1.55
	OUTPUT TORQUE IN. LBS.	710.00	650.00	380.00	393.00	238.00	181.00
	‡INPUT O.H.L.	381.00	225.00	523.00	505.00	464.00	475.00
	‡OUTPUT O.H.L.	500.00	550.00	680.00	800.00	225.00	135.00
100	INPUT HORSEPOWER	1.20	1.10	.44	.40	.68	.54
	OUTPUT TORQUE IN. LBS.	730.00	693.00	415.00	456.00	286.00	189.00
	‡INPUT O.H.L.	600.00	445.00	600.00	600.00	600.00	600.00
	‡OUTPUT O.H.L.	740.00	800.00	800.00	800.00	225.00	135.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡ OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 11



CROSS SHAFT REDUCTION RATIOS				
MODEL NO.	1:1	1:1 SPIRAL	1.47:1	1.8:1
DIA. X	1.000 / .999			
KEYWAY Z	1/4 x 1/8 x1-5/32 EFF. LGTH.			

CROSS SHAFT INCREASER RATIOS		
RATIO	1:1.47	1:1.8
DIA. X	.750 / .749	.625 / .624
KEYWAY Z	3/16 x 3/32 x 1-7/32 EFF. LGTH.	

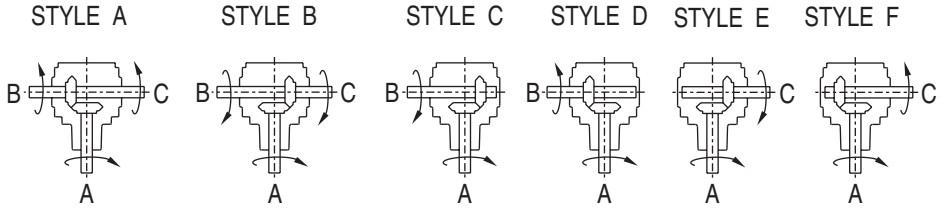
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT

STYLES A, B, C, D, E, F . . . . . .21 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

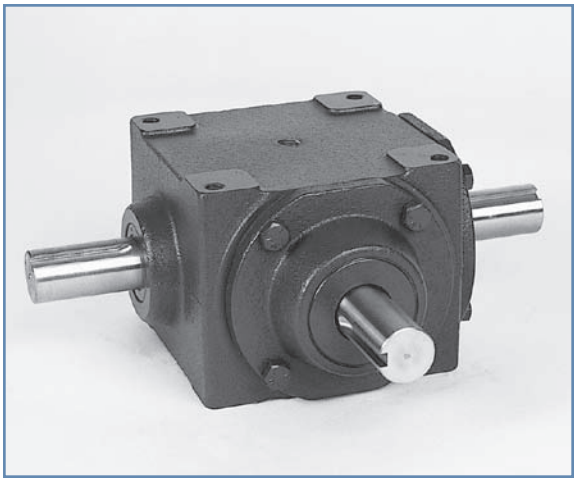


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 150

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of nine (9) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and foot mounting kits available. (Refer to page D-65)
- Hub City lubricant recommended. (Refer to section R)



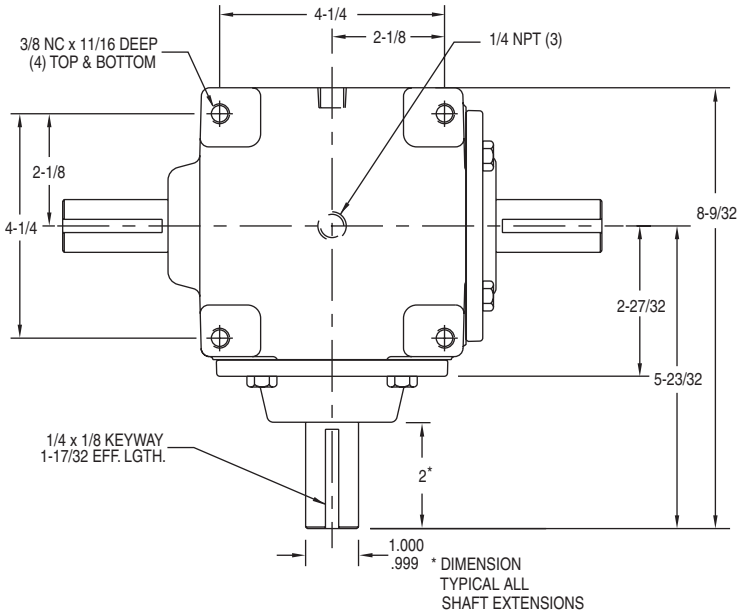
RATING TABLE

INPUT RPM†		REDUCTION RATIOS						INCREASER RATIOS		
		1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.5:1	2:1	SPIRAL 2:1	1:1.5	1:2	SPIRAL 1:1.5
3000	INPUT HORSEPOWER		26.80		28.00					
	OUTPUT TORQUE IN. LBS.		564.00		883.00					
	‡INPUT O.H.L.		40.00		20.00					
	‡OUTPUT O.H.L.		160.00		200.00					
2400	INPUT HORSEPOWER		21.80		22.70	9.00	13.65			
	OUTPUT TORQUE IN. LBS.		570.00		895.00	341.00	717.00			
	‡INPUT O.H.L.		86.00		35.00	136.00	75.00			
	‡OUTPUT O.H.L.		215.00		225.00	410.00	600.00			
1750	INPUT HORSEPOWER		16.00	9.20	16.90	6.25	10.25			24.70
	OUTPUT TORQUE IN. LBS.		580.00	500.00	911.00	442.00	736.00			593.00
	‡INPUT O.H.L.		106.00	127.00	50.00	191.00	100.00			45.00
	‡OUTPUT O.H.L.		265.00	320.00	275.00	455.00	665.00			75.00
1150	INPUT HORSEPOWER	12.00	11.00	6.20	11.30	4.25	7.00	8.20	7.20	16.70
	OUTPUT TORQUE IN. LBS.	660.00	600.00	510.00	930.00	465.00	761.00	299.00	195.00	610.00
	‡INPUT O.H.L.	112.00	124.00	197.00	75.00	240.00	125.00	168.00	237.00	60.00
	‡OUTPUT O.H.L.	280.00	310.00	380.00	375.00	525.00	750.00	135.00	135.00	90.00
850	INPUT HORSEPOWER	9.00	8.30	4.70	8.50	3.25	5.25	6.10	5.70	12.50
	OUTPUT TORQUE IN. LBS.	670.00	615.00	520.00	941.00	481.00	777.00	301.00	210.00	618.00
	‡INPUT O.H.L.	128.00	142.00	249.00	150.00	337.00	150.00	239.00	334.00	135.00
	‡OUTPUT O.H.L.	320.00	355.00	425.00	450.00	575.00	800.00	135.00	135.00	110.00
690	INPUT HORSEPOWER	7.60	6.80	3.90	6.90	2.70	4.30	5.00	4.70	10.20
	OUTPUT TORQUE IN. LBS.	680.00	620.00	530.00	950.00	494.00	788.00	304.00	215.00	621.00
	‡INPUT O.H.L.	144.00	158.00	286.00	160.00	371.00	160.00	273.00	365.00	150.00
	‡OUTPUT O.H.L.	360.00	395.00	470.00	500.00	555.00	800.00	135.00	135.00	125.00
400	INPUT HORSEPOWER	4.40	4.10	2.30	4.10	1.60	2.60	3.00	2.80	6.00
	OUTPUT TORQUE IN. LBS.	700.00	645.00	550.00	964.00	504.00	815.00	315.00	220.00	630.00
	‡INPUT O.H.L.	172.00	190.00	412.00	200.00	450.00	270.00	396.00	432.00	195.00
	‡OUTPUT O.H.L.	430.00	475.00	610.00	650.00	780.00	800.00	135.00	135.00	135.00
300	INPUT HORSEPOWER	3.40	3.10	1.80	3.10	1.25	2.00	2.30	2.20	4.60
	OUTPUT TORQUE IN. LBS.	710.00	650.00	560.00	974.00	525.00	829.00	322.00	230.00	640.00
	‡INPUT O.H.L.	203.00	220.00	456.00	225.00	496.00	370.00	469.00	451.00	237.00
	‡OUTPUT O.H.L.	500.00	550.00	655.00	750.00	800.00	800.00	135.00	135.00	135.00
100	INPUT HORSEPOWER	1.20	1.10	.65	1.05	.50	.70	.81	.75	1.60
	OUTPUT TORQUE IN. LBS.	730.00	693.00	615.00	993.00	630.00	876.00	340.00	235.00	672.00
	‡INPUT O.H.L.	363.00	332.00	600.00	350.00	600.00	600.00	600.00	600.00	325.00
	‡OUTPUT O.H.L.	740.00	800.00	800.00	800.00	800.00	800.00	135.00	135.00	135.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡ OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 150



NOTE: STYLE G & GG

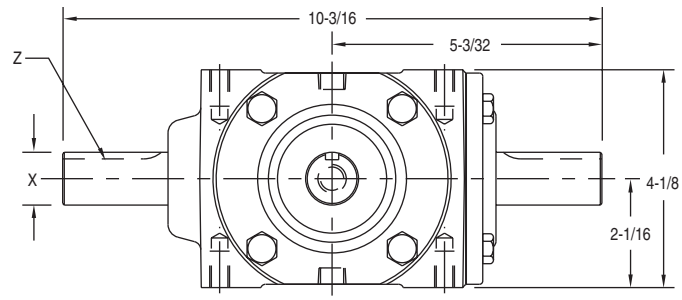
1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

CROSS SHAFT REDUCTION RATIOS						
MODEL NO.	**1:1**	**SPIRAL 1:1**	**1.5:1**	**SPIRAL 1.5:1**	**2:1**	**SPIRAL 2:1**
DIA. X	1.000 / .999					
KEYWAY Z	1/4 x 1/8 x1-17/32 EFF. LGTH.					

CROSS SHAFT INCREASER RATIOS			
RATIO	**1:1.5**	**SPIRAL 1:1.5**	**1:2**
DIA. X	.625** / .624	1.000 / .999	.625** / .624
KEYWAY Z	3/16 x 3/32 x 1-19/32 EFF. LGTH.	1/4 x 1/8 x 1-7/32 EFF. LGTH.	3/16 x 3/32 x 1-19/32 EFF. LGTH.

**FOR STYLES A, B & GG ONLY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

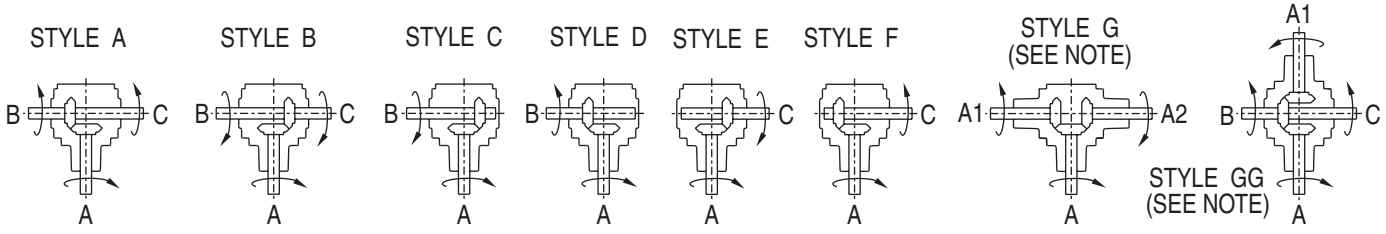


DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .25 lbs.
STYLES G . . . . . .26 lbs.
STYLES GG. . . . . .28 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

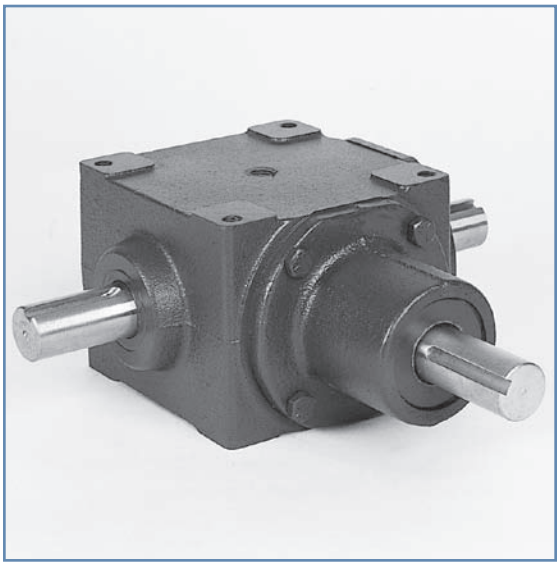


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 165

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of ten (10) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Hydraulic motor mounting flanges available. (Refer to page D-67)
- Base and foot mounting kits available. (Refer to page D-65)
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-57)



RATING TABLE

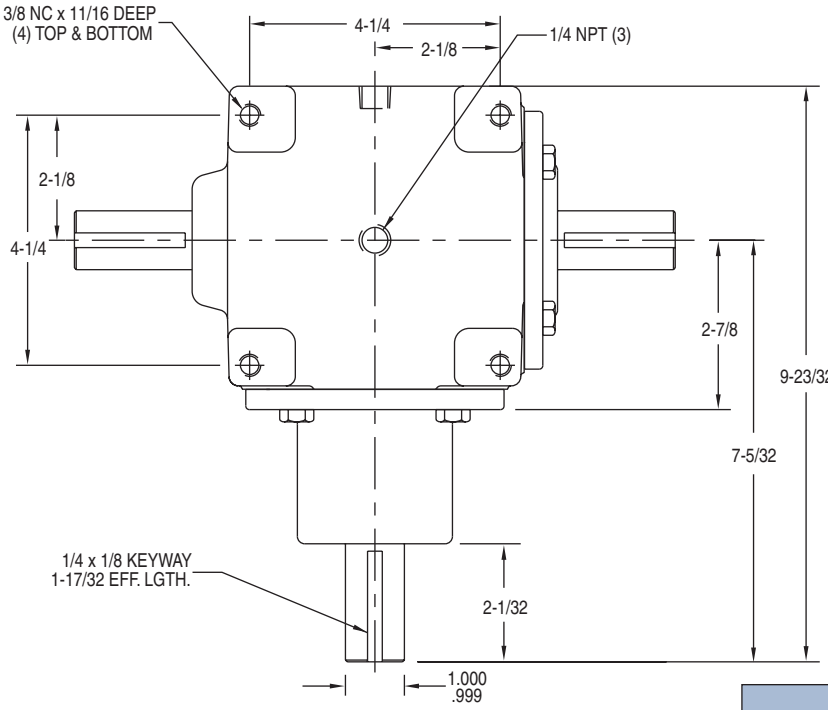
INPUT RPM†		REDUCTION RATIOS							INCREASER RATIOS			
		1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.5:1	2:1	SPIRAL 2:1	SPIRAL 3:1	1:1.5	SPIRAL 1:1.5	1:2	SPIRAL 1:2
3000	INPUT HORSEPOWER		26.87		28.00		16.75	8.70				
	OUTPUT TORQUE IN. LBS.		564.00		883.00		703.00	548.00				
	‡INPUT O.H.L.		25.00		25.00		55.00	225.00				
	‡OUTPUT O.H.L.		160.00		200.00		500.00	625.00				
2400	INPUT HORSEPOWER		21.80		22.70	9.00	13.65	7.00				
	OUTPUT TORQUE IN. LBS.		570.00		895.00	341.00	717.00	554.00				
	‡INPUT O.H.L.		54.00		50.00	330.00	85.00	275.00				
	‡OUTPUT O.H.L.		215.00		225.00	410.00	600.00	700.00				
1750	INPUT HORSEPOWER		16.00	9.20	16.90	6.25	10.25	5.20		24.70		
	OUTPUT TORQUE IN. LBS.		580.00	500.00	911.00	442.00	736.00	562.00		593.00		
	‡INPUT O.H.L.		114.00	366.00	75.00	372.00	125.00	350.00		60.00		
	‡OUTPUT O.H.L.		265.00	320.00	275.00	455.00	665.00	775.00		75.00		
1150	INPUT HORSEPOWER	17.00	11.00	6.20	11.30	4.25	7.00	3.50	8.20	16.70	7.20	13.44
	OUTPUT TORQUE IN. LBS.	930.00	600.00	510.00	930.00	465.00	761.00	571.00	299.00	610.00	195.00	368.00
	‡INPUT O.H.L.	79.00	182.00	426.00	125.00	434.00	200.00	475.00	429.00	115.00	426.00	80.00
	‡OUTPUT O.H.L.	260.00	310.00	380.00	375.00	525.00	750.00	800.00	135.00	90.00	135.00	135.00
850	INPUT HORSEPOWER	13.00	8.30	4.70	8.50	3.25	5.25	2.60	6.10	12.50	5.70	10.20
	OUTPUT TORQUE IN. LBS.	960.00	615.00	520.00	941.00	481.00	777.00	576.00	301.00	618.00	210.00	377.00
	‡INPUT O.H.L.	121.00	211.00	473.00	250.00	481.00	280.00	575.00	477.00	225.00	469.00	150.00
	‡OUTPUT O.H.L.	305.00	355.00	425.00	450.00	555.00	800.00	800.00	135.00	110.00	135.00	135.00
690	INPUT HORSEPOWER	10.60	6.80	3.90	6.90	2.70	4.30	2.10	5.00	10.20	4.70	8.40
	OUTPUT TORQUE IN. LBS.	970.00	620.00	530.00	950.00	494.00	788.00	578.00	304.00	621.00	215.00	383.00
	‡INPUT O.H.L.	156.00	243.00	508.00	325.00	517.00	345.00	600.00	512.00	290.00	500.00	210.00
	‡OUTPUT O.H.L.	345.00	395.00	470.00	500.00	575.00	800.00	800.00	135.00	125.00	135.00	135.00
400	INPUT HORSEPOWER	6.30	4.10	2.30	4.10	1.60	2.60	1.24	3.00	6.00	2.80	5.06
	OUTPUT TORQUE IN. LBS.	1000.00	645.00	550.00	964.00	504.00	815.00	586.00	315.00	630.00	220.00	398.00
	‡INPUT O.H.L.	374.00	319.00	600.00	375.00	600.00	500.00	600.00	600.00	345.00	600.00	400.00
	‡OUTPUT O.H.L.	425.00	475.00	610.00	650.00	780.00	800.00	800.00	135.00	135.00	135.00	135.00
300	INPUT HORSEPOWER	5.00	3.10	1.80	3.10	1.25	2.00	.94	2.30	4.60	2.20	3.87
	OUTPUT TORQUE IN. LBS.	1010.00	650.00	560.00	974.00	525.00	829.00	592.00	322.00	644.00	230.00	406.00
	‡INPUT O.H.L.	450.00	384.00	600.00	475.00	600.00	600.00	600.00	600.00	425.00	600.00	500.00
	‡OUTPUT O.H.L.	500.00	550.00	655.00	750.00	800.00	800.00	800.00	135.00	135.00	135.00	135.00
100	INPUT HORSEPOWER	1.65	1.10	.65	1.05	.50	.70	.32	.81	1.60	.75	1.37
	OUTPUT TORQUE IN. LBS.	1040.00	693.00	615.00	993.00	630.00	876.00	605.00	340.00	672.00	235.00	433.00
	‡INPUT O.H.L.	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00	600.00
	‡OUTPUT O.H.L.	775.00	800.00	800.00	800.00	800.00	800.00	800.00	135.00	135.00	135.00	135.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODEL 165



NOTE: STYLE G & GG

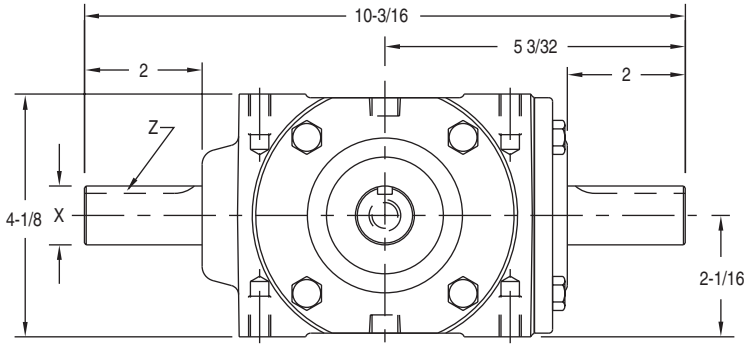
1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

RATING AND DIMENSIONS

CROSS SHAFT REDUCTION RATIOS							
MODEL NO.	1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.5:1	2:1	SPIRAL 2:1	SPIRAL 3:1
DIA. X	1.000 / .999						
KEYWAY Z	1/4 x 1/8 x1-5/32 EFF. LGTH.						



CROSS SHAFT INCREASER RATIOS				
RATIO	1:1.5	SPIRAL 1:1.5	1:2	SPIRAL 1:2
DIA. X	.625** / .624	1.000 / .999	.625** / .624	
KEYWAY Z	3/16 x 3/32 x 1-19/32 EFF. LGTH.	1/4 x 1/8 x 1-17/32 EFF. LGTH.	3/16 x 3/32 x 1-19/32 EFF. LGTH.	

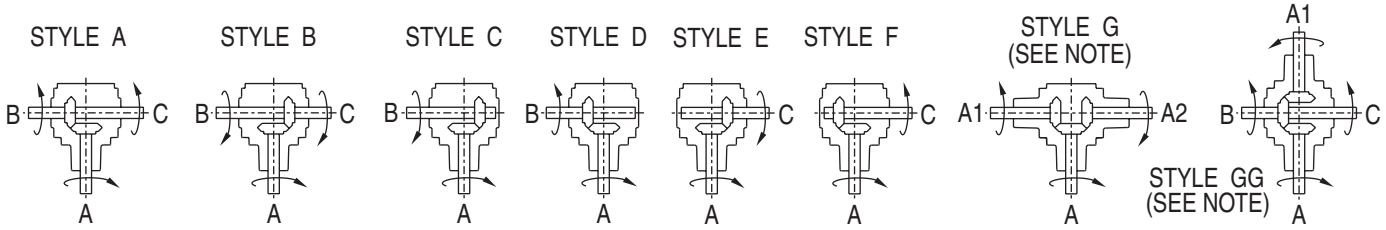
**FOR STYLES A, B & GG ONLY.

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .25 lbs.
STYLES G . . . . . .31 lbs.
STYLES GG. . . . . .36 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

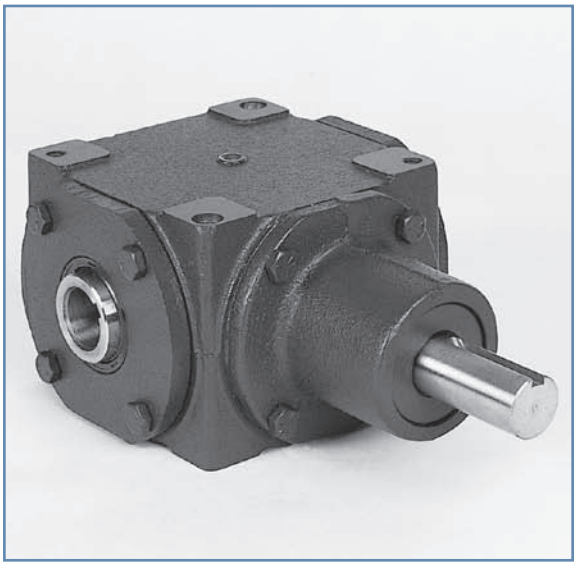


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 175

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and foot mounting kits available. (Refer to pages D-65)
- Hydraulic motor mounting flanges available on input only. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-58)



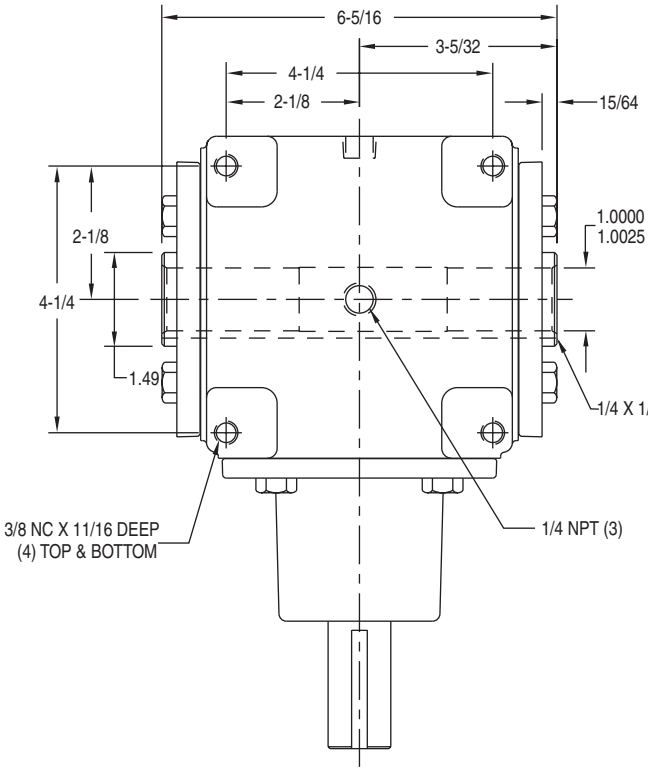
RATING TABLE

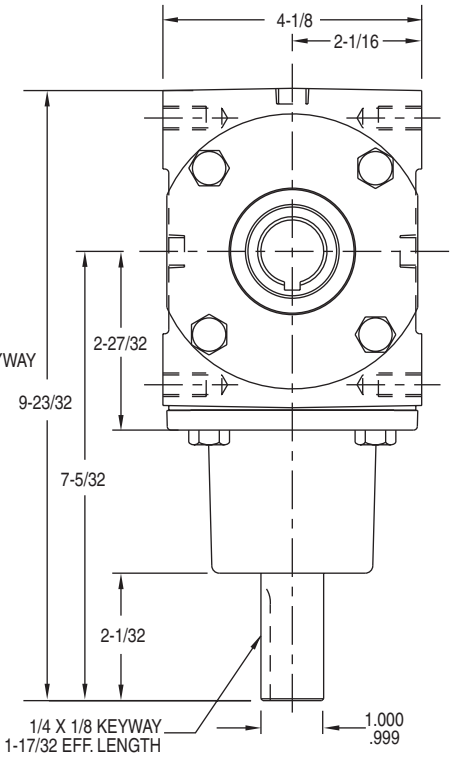
INPUT RPM†		*REDUCTION RATIOS*			
		SPIRAL 1:1	*SPIRAL 1.5:1*	*SPIRAL 2:1*	*SPIRAL 3:1*
3000	INPUT HORSEPOWER	26.87	28.00	16.75	8.70
	OUTPUT TORQUE IN. LBS.	564.00	883.00	703.00	548.00
	‡INPUT O.H.L.	25.00	25.00	55.00	225.00
2400	INPUT HORSEPOWER	21.80	22.70	13.65	7.00
	OUTPUT TORQUE IN. LBS.	570.00	895.00	717.00	554.00
	‡INPUT O.H.L.	54.00	50.00	85.00	275.00
1750	INPUT HORSEPOWER	16.00	16.90	10.25	5.20
	OUTPUT TORQUE IN. LBS.	580.00	911.00	736.00	562.00
	‡INPUT O.H.L.	114.00	75.00	125.00	350.00
1150	INPUT HORSEPOWER	11.00	11.30	7.00	3.50
	OUTPUT TORQUE IN. LBS.	600.00	930.00	761.00	571.00
	‡INPUT O.H.L.	182.00	125.00	200.00	475.00
850	INPUT HORSEPOWER	8.30	8.50	5.25	2.60
	OUTPUT TORQUE IN. LBS.	615.00	941.00	777.00	576.00
	‡INPUT O.H.L.	211.00	250.00	280.00	575.00
690	INPUT HORSEPOWER	6.80	6.90	4.30	2.10
	OUTPUT TORQUE IN. LBS.	620.00	950.00	788.00	578.00
	‡INPUT O.H.L.	243.00	325.00	345.00	600.00
400	INPUT HORSEPOWER	4.10	4.10	2.60	1.24
	OUTPUT TORQUE IN. LBS.	645.00	964.00	815.00	586.00
	‡INPUT O.H.L.	319.00	375.00	500.00	600.00
300	INPUT HORSEPOWER	3.10	3.10	2.00	.94
	OUTPUT TORQUE IN. LBS.	650.00	974.00	829.00	592.00
	‡INPUT O.H.L.	384.00	475.00	600.00	600.00
100	INPUT HORSEPOWER	1.10	1.05	.70	.32
	OUTPUT TORQUE IN. LBS.	693.00	993.00	876.00	605.00
	‡INPUT O.H.L.	600.00	600.00	600.00	600.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 175





NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

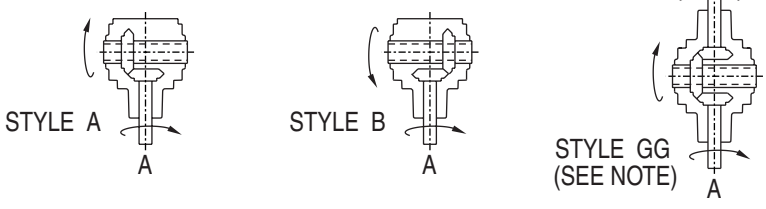
DRY SHIPPING WEIGHTS

STYLES A, B . . . . . .25 lbs.
STYLES GG. . . . . .36 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

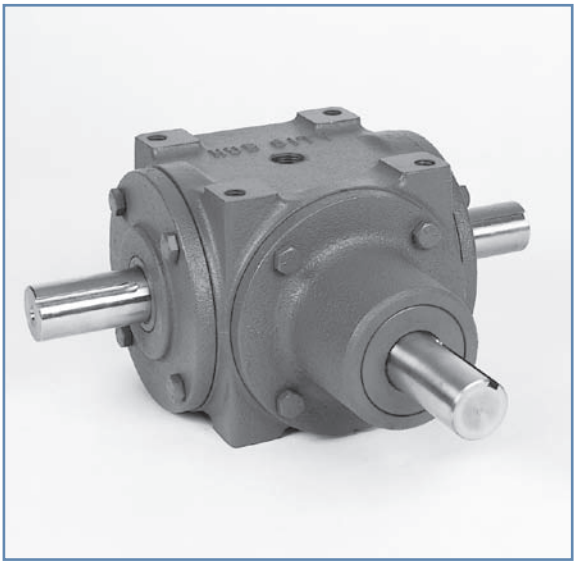


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 66

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of eleven (11) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base, cross shaft and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Reversing model available as factory option. (Refer to page D-66)
- Hydraulic motor mounting flanges available. (Refer to page D-67)
- Hub City lubricant recommended.(Refer to section R)
- Metric versions available. (Refer to page D-57)



RATING TABLE

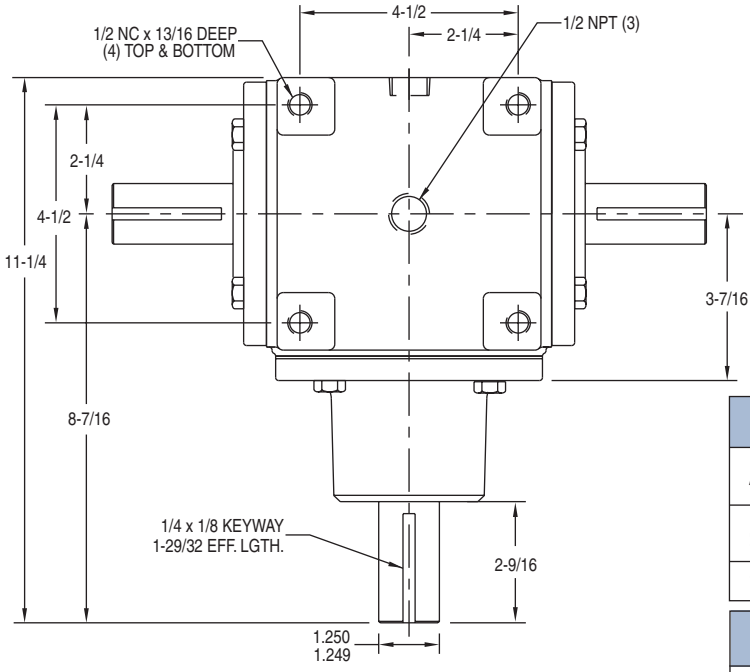
		REDUCTION RATIOS							INCREASER RATIOS			
INPUT RPM†		1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.53:1	2:1	SPIRAL 2:1	SPIRAL 3:1	1:1.5	SPIRAL 1:1.53	1:2	SPIRAL 1:2
3000	INPUT HORSEPOWER				56.00		25.50	15.40				
	OUTPUT TORQUE IN. LBS.				1765.00		1072.00	951.00				
	‡INPUT O.H.L.				38.00		100.00	35.00				
	‡OUTPUT O.H.L.				80.00		725.00	100.00				
2400	INPUT HORSEPOWER		59.00		46.00		20.67	12.50		64.00		
	OUTPUT TORQUE IN. LBS.		1550.00		1810.00		1085.00	961.00		1120.00		
	‡INPUT O.H.L.		30.00		59.00		125.00	45.00		42.00		
	‡OUTPUT O.H.L.		65.00		100.00		800.00	225.00		68.00		
1750	INPUT HORSEPOWER		46.00	15.00	35.00	7.30	15.40	9.20		49.00		
	OUTPUT TORQUE IN. LBS.		1650.00	810.00	1887.00	525.00	1112.00	975.00		1180.00		
	‡INPUT O.H.L.		62.00	351.00	97.00	459.00	225.00	85.00		79.00		
	‡OUTPUT O.H.L.		100.00	300.00	140.00	330.00	900.00	350.00		140.00		
1150	INPUT HORSEPOWER	24.20	30.50	10.60	23.00	5.40	10.30	6.15		34.50		19.90
	OUTPUT TORQUE IN. LBS.	1320.00	1670.00	870.00	1930.00	591.00	1125.70	989.00		1260.00		545.00
	‡INPUT O.H.L.	126.00	109.00	446.00	133.00	521.00	400.00	100.00		102.00		325.00
	‡OUTPUT O.H.L.	190.00	160.00	340.00	190.00	380.00	1075.00	500.00		149.00		300.00
850	INPUT HORSEPOWER	19.00	24.00	8.20	18.00	4.50	7.68	4.60	11.80	26.50	7.00	15.00
	OUTPUT TORQUE IN. LBS.	1410.00	1790.00	910.00	2000.00	667.00	1139.00	998.00	580.00	1310.00	260.00	556.00
	‡INPUT O.H.L.	158.00	143.00	524.00	161.00	567.00	525.00	195.00	513.00	142.00	576.00	450.00
	‡OUTPUT O.H.L.	230.00	210.00	400.00	230.00	440.00	1080.00	750.00	520.00	178.00	400.00	350.00
690	INPUT HORSEPOWER	16.30	20.00	7.10	15.00	3.90	6.28	3.75	9.80	21.80	6.75	12.30
	OUTPUT TORQUE IN. LBS.	1480.00	1830.00	970.00	2050.00	712.00	1147.00	1009.00	600.00	1330.00	308.00	562.00
	‡INPUT O.H.L.	213.00	178.00	558.00	217.00	603.00	600.00	215.00	559.00	212.00	598.00	500.00
	‡OUTPUT O.H.L.	265.00	250.00	445.00	270.00	465.00	1080.00	800.00	679.00	307.00	400.00	400.00
300	INPUT HORSEPOWER	8.14	10.00	3.50	7.00	1.80	2.80	1.65	4.90	10.00	3.25	5.50
	OUTPUT TORQUE IN. LBS.	1700.00	2100.00	1100.00	2205.00	756.00	1177.00	1031.00	685.00	1400.00	340.00	578.00
	‡INPUT O.H.L.	418.00	312.00	744.00	421.00	806.00	900.00	550.00	750.00	370.00	793.00	875.00
	‡OUTPUT O.H.L.	425.00	420.00	645.00	425.00	715.00	1080.00	1080.00	770.00	393.00	400.00	400.00
100	INPUT HORSEPOWER	2.86	3.70	1.40	3.00	.70	.95	.55	1.80	3.50	1.30	1.88
	OUTPUT TORQUE IN. LBS.	1800.00	2330.00	1320.00	2835.00	882.00	1198.00	1056.00	775.00	1470.00	410.00	592.00
	‡INPUT O.H.L.	625.00	493.00	900.00	611.00	900.00	900.00	800.00	900.00	420.00	900.00	900.00
	‡OUTPUT O.H.L.	695.00	685.00	965.00	685.00	1080.00	1080.00	1080.00	900.00	620.00	400.00	400.00
	STYLE											
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	6.29	5.42	3.10	4.04	1.87	2.17	1.24	7.45	9.39	6.71	8.31
	C, D, E, F	6.08	5.21	3.00	3.96	1.82	2.12	1.22	6.99	9.08	6.38	7.98
	G	8.76	7.45	4.43	6.27	2.59	3.19	1.68	9.54	12.28	10.71	12.24
	GG	9.21	7.90	4.46	5.47	2.81	3.08	1.97	10.87	15.04	9.96	13.23
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	6.29	5.42	6.97	9.42	7.50	8.67	11.17	3.31	4.03	1.68	2.08
	C, D, E, F	6.08	5.21	6.76	9.22	7.29	8.46	10.96	3.11	3.90	1.59	1.99
	G	8.76	7.45	9.96	14.62	10.35	12.77	15.16	4.24	5.27	2.68	3.06
	GG	9.21	7.90	10.03	12.74	11.22	12.33	17.70	4.83	6.46	2.49	3.31

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODEL 66

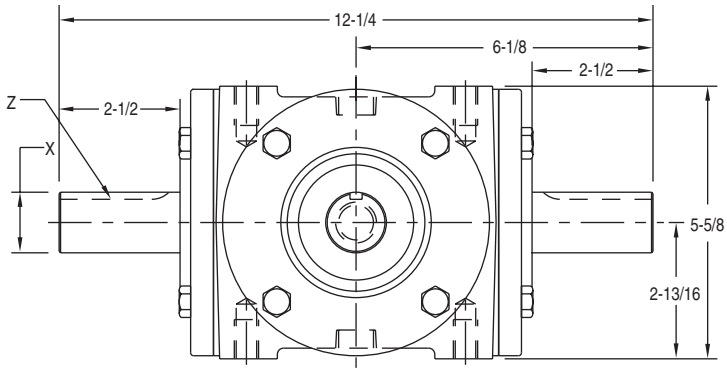


NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

CROSS SHAFT REDUCTION RATIOS							
MODEL NO.	1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.53:1	2:1	SPIRAL 2:1	SPIRAL 3:1
DIA. X	1.250 / 1.249						
KEYWAY Z	1/4 x 1/8 x1-29/32 EFF. LGTH.						

CROSS SHAFT INCREASER RATIOS				
RATIO	1:1.5	SPIRAL 1:1.5	1:2	SPIRAL 1:2
DIA. X	1.250 / 1.249	1.125 / 1.124	1.000 / .999	1.000 / .999
KEYWAY Z	1/4 x 1/8 x 1-29/32 EFF. LGTH.			



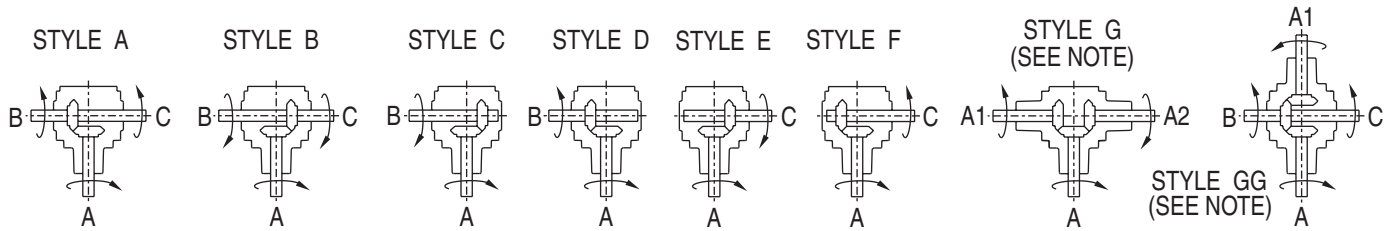
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .43 lbs.
STYLES G . . . . . .53 lbs.
STYLES GG. . . . . .65 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

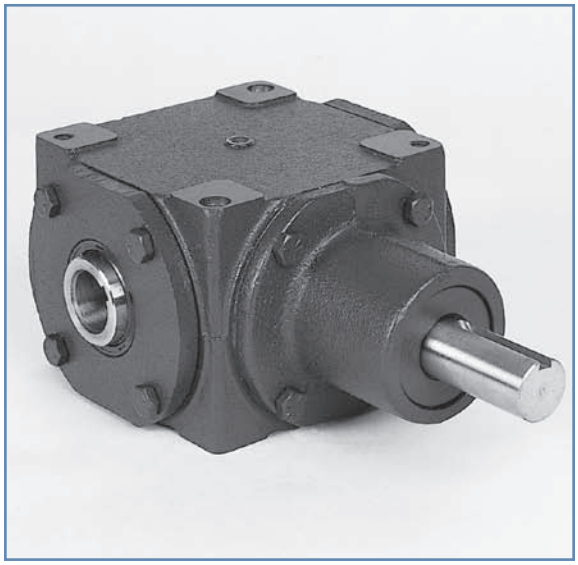


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 65

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Hydraulic motor mounting flanges available on input only. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-58)



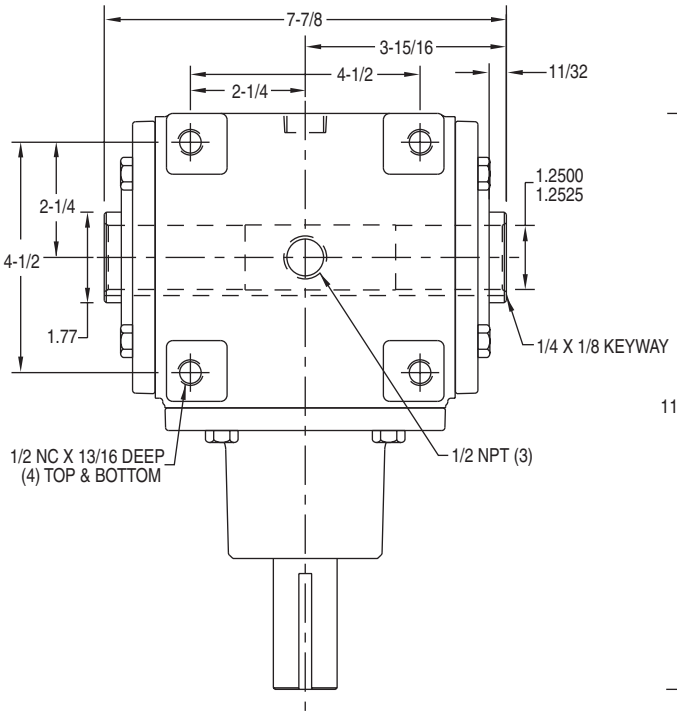
RATING TABLE

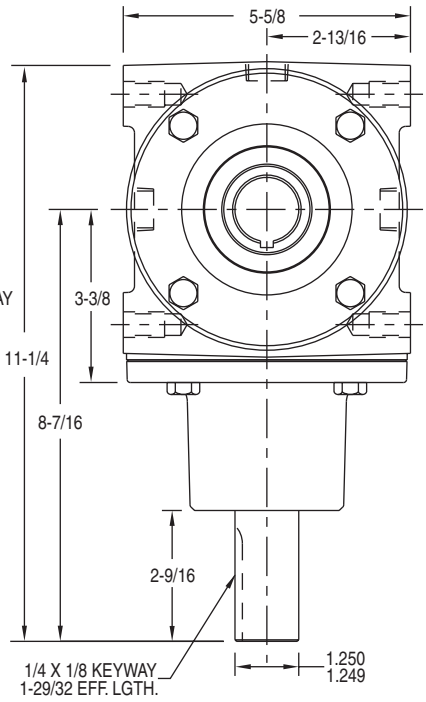
INPUT RPM†		REDUCTION RATIOS			
		SPIRAL 1:1	SPIRAL 1.53:1	SPIRAL 2:1	SPIRAL 3:1
3000	INPUT HORSEPOWER		56.00	25.50	15.40
	OUTPUT TORQUE IN. LBS.		1765.00	1072.00	951.00
	‡INPUT O.H.L.		38.00	100.00	35.00
2400	INPUT HORSEPOWER	59.00	46.00	20.67	12.50
	OUTPUT TORQUE IN. LBS.	1550.00	1810.00	1085.00	961.00
	‡INPUT O.H.L.	30.00	59.00	125.00	45.00
1750	INPUT HORSEPOWER	46.00	35.00	15.40	9.20
	OUTPUT TORQUE IN. LBS.	1650.00	1887.00	1112.10	975.00
	‡INPUT O.H.L.	62.00	97.00	225.00	85.00
1150	INPUT HORSEPOWER	30.50	23.00	10.30	6.15
	OUTPUT TORQUE IN. LBS.	1670.00	1930.00	1125.70	989.00
	‡INPUT O.H.L.	109.00	133.00	400.00	100.00
850	INPUT HORSEPOWER	24.00	18.00	7.68	4.60
	OUTPUT TORQUE IN. LBS.	1790.00	2000.00	1139.00	998.00
	‡INPUT O.H.L.	143.00	161.00	525.00	195.00
690	INPUT HORSEPOWER	20.00	15.00	6.28	3.75
	OUTPUT TORQUE IN. LBS.	1830.00	2050.00	1147.00	1009.00
	‡INPUT O.H.L.	178.00	217.00	600.00	215.00
400	INPUT HORSEPOWER	13.00	9.20	3.71	2.20
	OUTPUT TORQUE IN. LBS.	2050.00	2170.00	1169.00	1028.00
	‡INPUT O.H.L.	254.00	283.00	875.00	450.00
300	INPUT HORSEPOWER	10.00	7.00	2.80	1.65
	OUTPUT TORQUE IN. LBS.	2100.00	2205.00	1177.00	1031.00
	‡INPUT O.H.L.	312.00	421.00	900.00	550.00
100	INPUT HORSEPOWER	3.70	3.00	.95	.55
	OUTPUT TORQUE IN. LBS.	2330.00	2835.00	1198.00	1056.00
	‡INPUT O.H.L.	493.00	611.00	900.00	800.00
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	STYLE A, B	7.53	4.65	2.58	1.60
	GG	10.31	6.08	3.52	2.39
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	7.53	10.88	10.31	14.43
	GG	10.31	14.22	14.09	21.50

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡ OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 65





NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

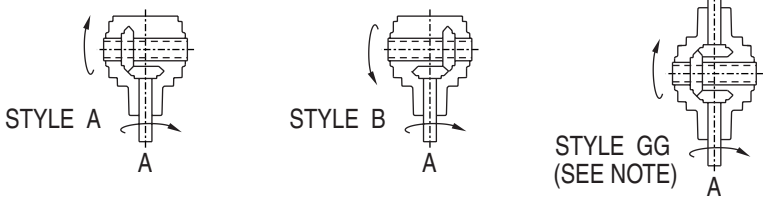
DRY SHIPPING WEIGHTS

STYLES A, B . . . . . .48 lbs.
STYLES GG. . . . . .68 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 600

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of six (6) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base, cross shaft and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Hydraulic motor mounting flanges available. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)



RATING TABLE

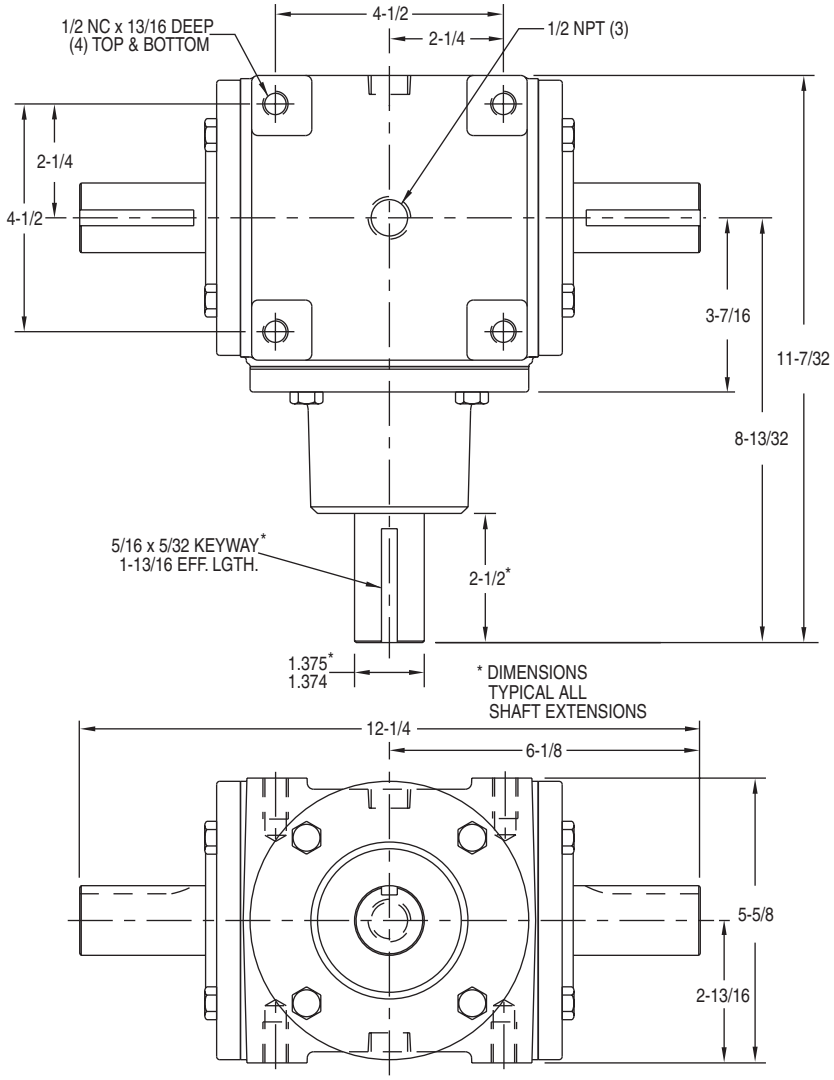
INPUT RPM†		REDUCTION RATIOS 1:1	SPIRAL 1:1	SPIRAL 1.2:1Δ	SPIRAL 1.29:1	1.5:1	2:1	INCREASER RATIOS SPIRAL 1:1.29	SPIRAL 1:1.2Δ
2400	INPUT HORSEPOWER		59.00	53.10	46.30			52.30	55.70
	OUTPUT TORQUE IN. LBS.		1550.00	1670.00	1570.00			1063.00	1221.00
	‡INPUT O.H.L.		30.00	63.00	95.00			28.00	30.00
	‡OUTPUT O.H.L.		65.00	75.00	110.00			64.00	59.00
1750	INPUT HORSEPOWER		46.00	39.80	34.70	15.00	7.30	39.30	41.90
	OUTPUT TORQUE IN. LBS.		1650.00	1720.00	1610.00	810.00	525.00	1095.00	1258.00
	‡INPUT O.H.L.		62.00	84.00	129.00	351.00	459.00	58.00	50.00
	‡OUTPUT O.H.L.		100.00	113.00	130.00	300.00	330.00	111.00	96.00
1150	INPUT HORSEPOWER	34.00	30.50	27.00	23.60	10.60	5.40	26.70	28.00
	OUTPUT TORQUE IN. LBS.	1860.00	1670.00	1770.00	1660.00	870.00	591.00	1133.00	129.80
	‡INPUT O.H.L.	84.00	109.00	136.00	199.00	446.00	521.00	102.00	97.00
	‡OUTPUT O.H.L.	220.00	160.00	178.00	190.00	340.00	380.00	178.00	148.00
850	INPUT HORSEPOWER	28.30	24.00	20.30	17.80	8.20	4.50	20.10	21.30
	OUTPUT TORQUE IN. LBS.	2090.00	1790.00	1810.00	1700.00	910.00	667.00	1158.00	1317.00
	‡INPUT O.H.L.	114.00	143.00	189.00	253.00	524.00	567.00	137.00	117.00
	‡OUTPUT O.H.L.	260.00	210.00	232.00	275.00	400.00	440.00	233.00	191.00
690	INPUT HORSEPOWER	23.90	20.00	16.70	14.60	7.10	3.90	16.60	17.66
	OUTPUT TORQUE IN. LBS.	2180.00	1830.00	1830.00	1720.00	970.00	712.00	1174.00	1344.00
	‡INPUT O.H.L.	163.00	178.00	215.00	433.00	558.00	603.00	168.00	143.00
	‡OUTPUT O.H.L.	290.00	250.00	316.00	452.00	445.00	465.00	292.00	265.00
400	INPUT HORSEPOWER	15.20	13.00	9.94	8.68	4.60	2.40	9.90	10.54
	OUTPUT TORQUE IN. LBS.	2380.00	2050.00	1880.00	1760.00	1000.00	733.00	1211.00	1385.00
	‡INPUT O.H.L.	359.00	254.00	289.00	544.00	725.00	719.00	241.00	216.00
	‡OUTPUT O.H.L.	370.00	350.00	414.00	563.00	578.00	572.00	415.00	356.00
300	INPUT HORSEPOWER	11.80	10.00	7.50	6.58	3.50	1.80	7.50	7.95
	OUTPUT TORQUE IN. LBS.	2480.00	2100.00	1890.00	1780.00	1100.00	756.00	1228.00	1392.00
	‡INPUT O.H.L.	418.00	312.00	343.00	605.00	744.00	806.00	301.00	284.00
	‡OUTPUT O.H.L.	445.00	420.00	497.00	628.00	645.00	715.00	462.00	411.00
100	INPUT HORSEPOWER	4.10	3.70	2.61	2.27	1.40	.70	2.60	2.78
	OUTPUT TORQUE IN. LBS.	2710.00	2330.00	1970.00	1850.00	1320.00	882.00	1278.00	1461.00
	‡INPUT O.H.L.	692.00	493.00	516.00	817.00	900.00	900.00	462.00	423.00
	‡OUTPUT O.H.L.	720.00	685.00	713.00	850.00	965.00	1080.00	710.00	630.00
	STYLE								
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	8.24	7.49	6.10	5.69	3.10	1.87	9.88	9.03
	C, D, E, F	7.94	7.19	5.90	5.51	3.00	1.82	9.39	8.61
	G	11.40	10.27	8.66	8.26	4.43	2.59	12.73	11.95
	GG	12.04	10.91	8.77	7.27	4.46	2.81	14.80	13.32
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	8.24	7.49	8.79	9.46	6.97	7.50	5.94	6.27
	C, D, E, F	7.94	7.19	8.49	9.16	6.76	7.29	5.64	5.98
	G	11.40	10.27	12.47	13.74	9.96	10.35	7.65	8.30
	GG	12.04	10.91	12.62	12.10	10.03	11.22	8.90	9.25

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

ΔMFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY

MODEL 600



NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

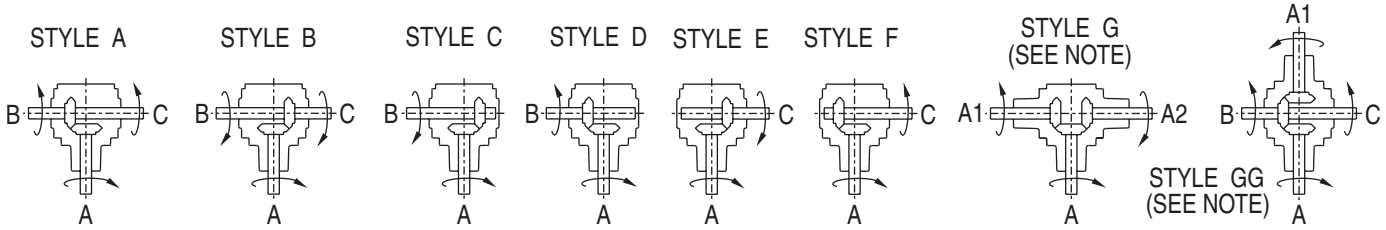
DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .48 lbs.
STYLES G . . . . . .60 lbs.
STYLES GG. . . . . .68 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

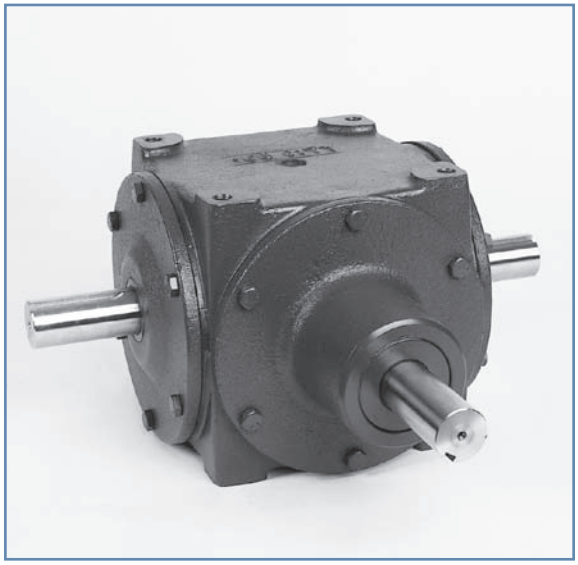


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 88

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of thirteen (13) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Reversing model available as factory option. (Refer to page D-66)
- Hydraulic motor mounting flanges available. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)

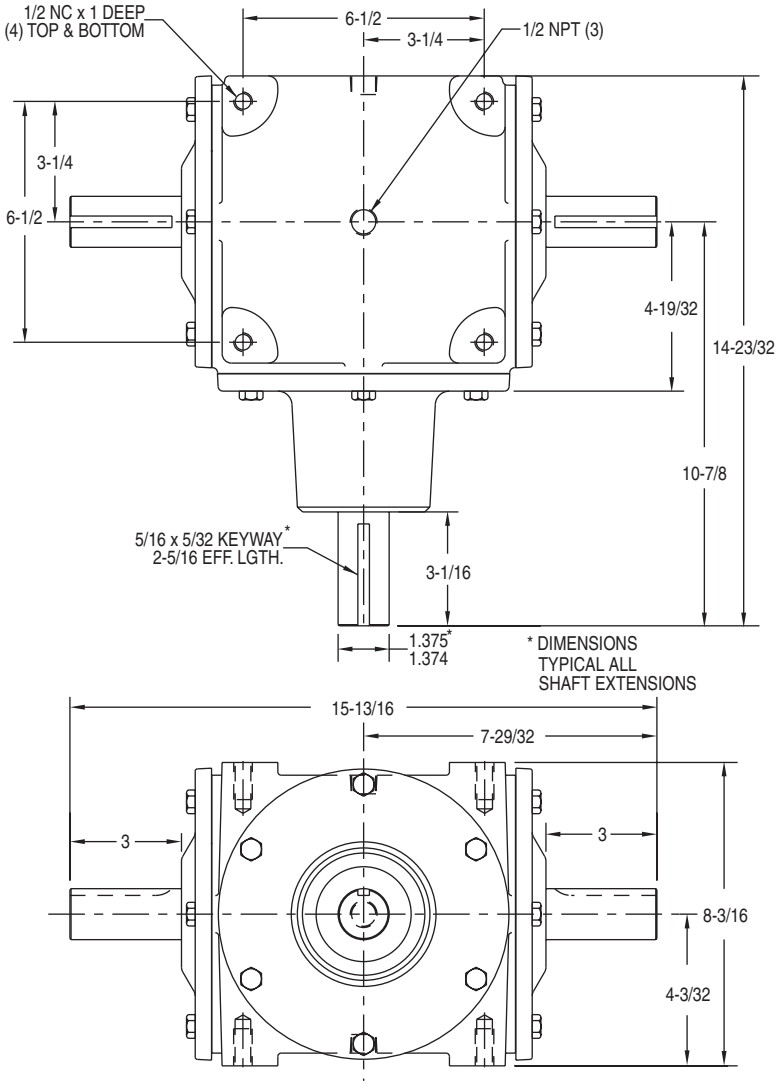


RATING TABLE

		REDUCTION RATIOS								INCREASER RATIOS				
INPUT RPM†		1:1	SPIRAL 1:1	1.5:1	SPIRAL 1.5:1	2:1	SPIRAL 2:1	3:1	SPIRAL 3:1	1:1.5	SPIRAL 1:1.5	1:2	SPIRAL 1:2	1:3*
1750	INPUT HORSEPOWER		90.00		69.00		56.00	15.00	30.69					
	OUTPUT TORQUE IN. LBS.		3240.00		3720.00		4070.00	1621.00	3316.00					
	‡INPUT O.H.L.		35.00		97.00		85.00	600.00	65.00					
	‡OUTPUT O.H.L.		320.00		475.00		225.00	760.00	400.00					
1150	INPUT HORSEPOWER		63.00	39.00	47.00	22.00	38.00	9.90	20.55		68.00		73.00	
	OUTPUT TORQUE IN. LBS.		3450.00	3200.00	3860.00	2410.00	4169.00	1629.00	3378.70		2480.00		2000.00	
	‡INPUT O.H.L.		202.00	99.00	216.00	330.00	150.00	709.00	175.00		152.00		115.00	
	‡OUTPUT O.H.L.		370.00	570.00	600.00	700.00	275.00	820.00	525.00		219.00		210.00	
850	INPUT HORSEPOWER	44.00	48.00	29.00	35.70	16.50	29.00	7.50	15.39		51.00		55.00	
	OUTPUT TORQUE IN. LBS.	3260.00	3558.00	3220.00	3970.00	2446.00	4230.00	1669.00	3423.40		2520.00		2039.00	
	‡INPUT O.H.L.	103.00	243.00	309.00	234.00	506.00	185.00	793.00	200.00		176.00		145.00	
	‡OUTPUT O.H.L.	385.00	410.00	600.00	625.00	850.00	350.00	900.00	620.00		252.00		225.00	
690	INPUT HORSEPOWER	36.50	39.50	24.00	29.50	13.80	23.00	6.50	12.59	25.00	42.50	26.00	45.00	11.40
	OUTPUT TORQUE IN. LBS.	3330.00	3607.00	3290.00	4040.00	2520.00	4267.00	1780.00	3449.90	1520.00	2585.00	1188.00	2055.00	350.00
	‡INPUT O.H.L.	234.00	308.00	432.00	329.00	602.00	235.00	843.00	240.00	290.00	247.00	373.00	175.00	892.00
	‡OUTPUT O.H.L.	450.00	475.00	685.00	710.00	950.00	400.00	1200.00	700.00	710.00	356.00	603.00	275.00	641.00
400	INPUT HORSEPOWER	21.50	23.50	14.30	17.60	8.50	13.80	3.80	7.43	18.00	26.00	15.40	27.00	7.30
	OUTPUT TORQUE IN. LBS.	3390.00	3702.00	3380.00	4160.00	2680.00	4356.00	1800.00	3512.00	1890.00	2730.00	1210.00	2127.00	380.00
	‡INPUT O.H.L.	514.00	429.00	565.00	546.00	925.00	325.00	1035.00	330.00	612.00	396.00	792.00	244.00	1062.00
	‡OUTPUT O.H.L.	565.00	590.00	910.00	930.00	1170.00	635.00	1400.00	825.00	831.00	498.00	819.00	500.00	778.00
300	INPUT HORSEPOWER	16.40	18.00	10.90	13.50	6.50	10.50	2.90	5.62	15.00	20.00	11.75	20.00	5.70
	OUTPUT TORQUE IN. LBS.	3440.00	3780.00	3435.00	4250.00	2730.00	4394.00	1827.00	3542.00	2020.00	2790.00	1235.00	2101.00	400.00
	‡INPUT O.H.L.	600.00	486.00	794.00	631.00	1038.00	365.00	1147.00	420.00	700.00	452.00	996.00	275.00	1170.00
	‡OUTPUT O.H.L.	630.00	655.00	995.00	1020.00	1250.00	875.00	1475.00	925.00	889.00	514.00	987.00	625.00	860.00
100	INPUT HORSEPOWER	5.80	6.50	3.80	4.80	2.30	3.60	1.00	1.91	5.60	7.10	4.25	7.00	2.00
	OUTPUT TORQUE IN. LBS.	3650.00	4095.00	3590.00	4440.00	2898.00	4511.00	1891.00	3611.30	2350.00	2980.00	1340.00	2206.00	420.00
	‡INPUT O.H.L.	1050.00	843.00	1400.00	1120.00	1400.00	650.00	1400.00	850.00	1235.00	608.00	1400.00	500.00	1400.00
	‡OUTPUT O.H.L.	1075.00	1100.00	1475.00	1500.00	1500.00	1200.00	1500.00	1365.00	1400.00	829.00	1400.00	900.00	1250.00
	STYLE													
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	31.46	45.53	19.28	22.28	10.72	10.50	6.59	4.67	44.31	51.04	44.56	44.27	NA
	C, D, E, F	31.08	45.15	19.12	22.11	10.63	10.40	6.55	4.63	43.48	50.22	43.09	42.81	NA
	G	45.90	66.96	30.86	35.61	17.18	17.08	11.26	7.44	57.94	67.46	54.75	54.50	72.33
	GG	46.30	67.79	26.03	31.14	13.93	14.48	8.40	6.49	71.34	85.97	71.99	71.85	NA
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	31.46	45.53	43.38	50.12	42.87	41.99	59.30	42.01	19.69	22.69	11.14	11.07	NA
	C, D, E, F	31.08	45.15	43.02	49.75	42.51	41.61	58.94	41.64	19.33	22.32	10.78	10.70	NA
	G	45.90	66.96	69.45	80.13	68.73	68.31	101.36	66.93	25.75	29.98	13.69	13.62	8.04
	GG	46.30	67.79	58.56	70.06	55.73	57.92	75.60	58.41	31.71	38.21	18.00	17.96	NA

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.
*AVAILABLE IN STYLE G ONLY

MODEL 88



NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

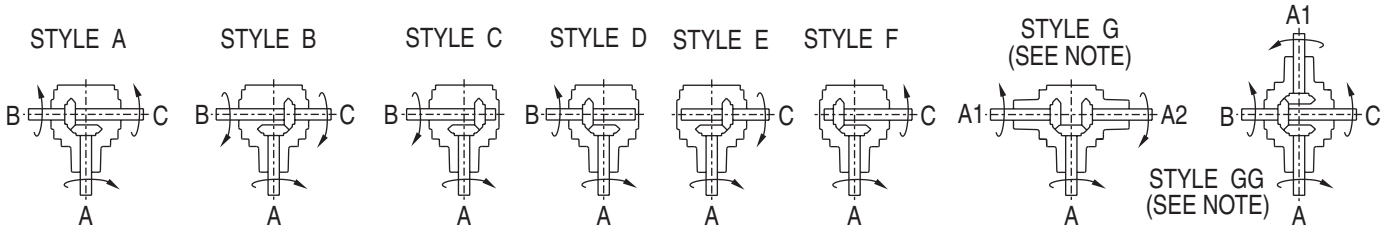
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . .88 lbs.
STYLES G . . . . . 100 lbs.
STYLES GG. . . . . 112 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODELS 800-810

FEATURES

- Rugged ductile iron housing provides maximum gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of thirteen (13) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Hydraulic motor mounting flanges available. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-57)



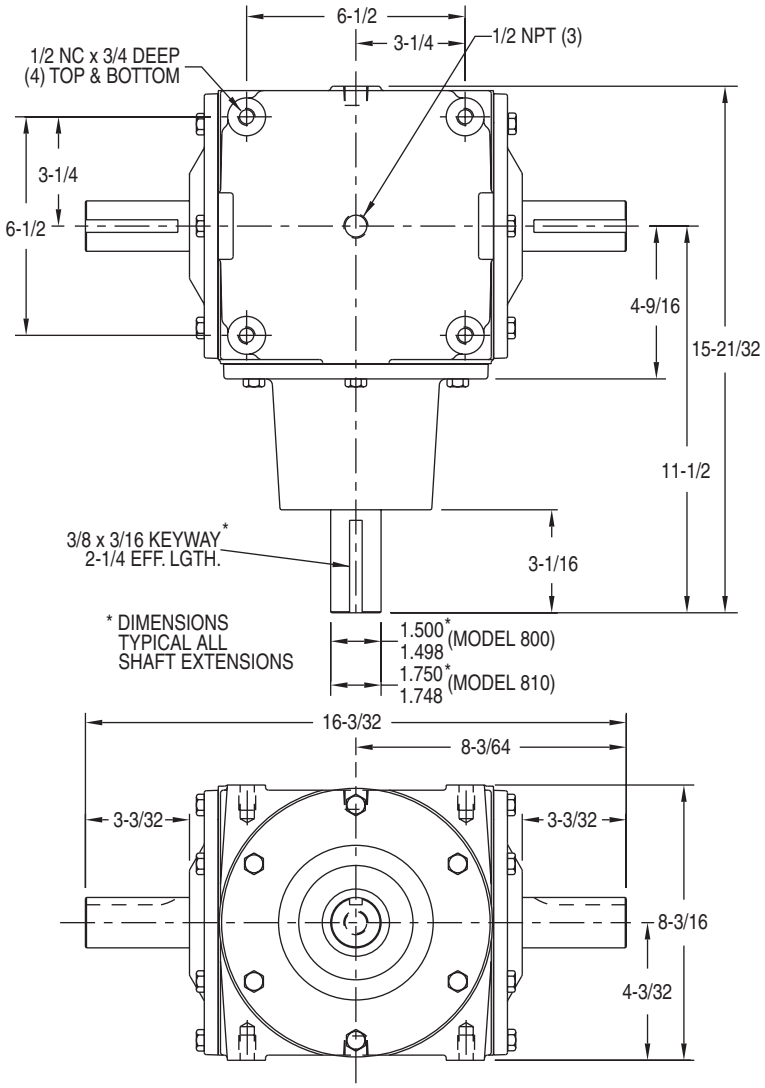
RATING TABLE

INPUT RPM†		REDUCTION RATIOS									INCREASER RATIOS			
		1:1	SPIRAL 1:1	1.21:1Δ	1.33:1	1.5:1	SPIRAL 1.5:1	1.71:1	SPIRAL 2:1	SPIRAL 3:1	1:1.21Δ	1:1.33	1:1.5	1:1.71Δ*
1750	INPUT HORSEPOWER		132.00				69.00		56.00	30.69				
	OUTPUT TORQUE IN. LBS.		4750.00				3720.00		4070.00	3316.00				
	‡INPUT O.H.L.		140.00				75.00		65.00	100.00				
	‡OUTPUT O.H.L.		690.00				500.00		750.00	600.00				
1150	INPUT HORSEPOWER		90.00			44.00	47.00	33.00	38.00	20.55				
	OUTPUT TORQUE IN. LBS.		4930.00			3620.00	3830.00	3100.00	4169.00	3378.70				
	‡INPUT O.H.L.		308.00			1036.00	300.00	1076.00	225.00	290.00				
	‡OUTPUT O.H.L.		708.00			1280.00	1100.00	1330.00	1400.00	950.00				
850	INPUT HORSEPOWER		67.00	48.00	45.00	34.00	35.70	26.00	29.00	15.39				
	OUTPUT TORQUE IN. LBS.		4970.00	4271.00	4350.00	3780.00	3970.00	3280.00	4230.00	3423.40				
	‡INPUT O.H.L.		478.00	1062.00	1098.00	1162.00	475.00	1189.00	300.00	400.00				
	‡OUTPUT O.H.L.		870.00	1125.00	1175.00	1425.00	1550.00	1475.00	1600.00	1200.00				
690	INPUT HORSEPOWER	56.20	56.00	40.00	37.00	28.00	29.50	21.60	23.00	12.59	46.00	48.00	42.00	29.10
	OUTPUT TORQUE IN. LBS.	5130.00	5115.00	4383.00	4400.00	3840.00	4040.00	3327.00	4267.00	3449.90	3500.00	3290.00	2560.00	1550.00
	‡INPUT O.H.L.	1040.00	566.00	1149.00	1192.00	1257.00	625.00	1280.00	450.00	475.00	1023.00	1020.00	1069.00	1174.00
	‡OUTPUT O.H.L.	940.00	940.00	1185.00	1235.00	1525.00	1750.00	1580.00	2050.00	1350.00	1076.00	1101.00	1066.00	1268.00
400	INPUT HORSEPOWER	33.80	33.00	24.00	22.10	17.00	17.60	13.00	13.80	7.43	28.00	22.00	20.00	18.30
	OUTPUT TORQUE IN. LBS.	5320.00	5200.00	4527.00	4630.00	4010.00	4160.00	3485.00	4356.00	3512.10	3780.00	3410.00	2710.00	1680.00
	‡INPUT O.H.L.	1309.00	934.00	1425.00	1471.00	1530.00	975.00	1558.00	925.00	700.00	1284.00	1292.00	1338.00	1446.00
	‡OUTPUT O.H.L.	1160.00	1160.00	1515.00	1640.00	1970.00	2200.00	1915.00	2200.00	1650.00	1400.00	1445.00	1387.00	1541.00
300	INPUT HORSEPOWER	25.80	25.00	19.00	16.60	13.00	13.50	10.00	10.50	5.62	22.00	22.00	20.00	14.00
	OUTPUT TORQUE IN. LBS.	5420.00	5250.00	4788.00	4720.00	4100.00	4250.00	3580.00	4394.00	3542.00	3860.00	3460.00	2800.00	1720.00
	‡INPUT O.H.L.	1474.00	1155.00	1572.00	1647.00	1699.00	1200.00	1750.00	1200.00	800.00	1430.00	1456.00	1484.00	1613.00
	‡OUTPUT O.H.L.	1340.00	1340.00	1740.00	1790.00	2125.00	2200.00	2195.00	2200.00	1800.00	1572.00	1646.00	1552.00	1750.00
100	INPUT HORSEPOWER	9.00	9.00	6.70	6.10	4.60	4.80	3.40	3.60	1.91	8.00	7.80	6.90	5.10
	OUTPUT TORQUE IN. LBS.	5660.00	5670.00	5067.00	5000.00	4350.00	4440.00	3642.00	4511.00	3611.30	4200.00	3690.00	2900.00	1880.00
	‡INPUT O.H.L.	1750.00	1750.00	1750.00	1750.00	1750.00	1750.00	1750.00	1750.00	1200.00	1750.00	1750.00	1750.00	1750.00
	‡OUTPUT O.H.L.	2080.00	2080.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	2200.00	1750.00	1750.00	1750.00	1750.00
	STYLE													
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	57.58	52.29	40.37	37.28	29.88	26.60	22.91	15.11	8.62	59.82	67.11	69.14	NA
	C, D, E, F	56.64	51.17	39.73	36.75	29.46	26.18	22.58	14.88	8.51	58.44	65.45	67.02	NA
	G	83.96	76.02	61.83	58.08	47.13	40.03	36.11	22.54	11.46	81.99	90.52	91.16	91.85
	GG	91.35	83.41	61.04	52.06	41.22	38.81	31.79	22.32	14.20	92.76	105.11	109.00	NA
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	57.58	52.29	59.11	65.94	67.22	59.84	66.98	60.46	77.56	40.86	37.94	30.73	NA
	C, D, E, F	56.64	51.17	58.16	65.00	66.28	58.90	66.04	59.52	76.62	39.92	37.00	29.79	NA
	G	83.96	76.02	90.53	102.74	106.05	90.07	105.58	90.16	103.13	56.00	51.17	40.52	31.41
	GG	91.35	83.41	98.37	92.09	92.74	87.32	92.96	89.27	127.77	63.35	59.42	48.45	NA

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

ΔMFG. TO ORDER – CONSULT FACTORY FOR PRICE AND DELIVERY.
*MODEL 800 ONLY

MODELS 800-810



NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

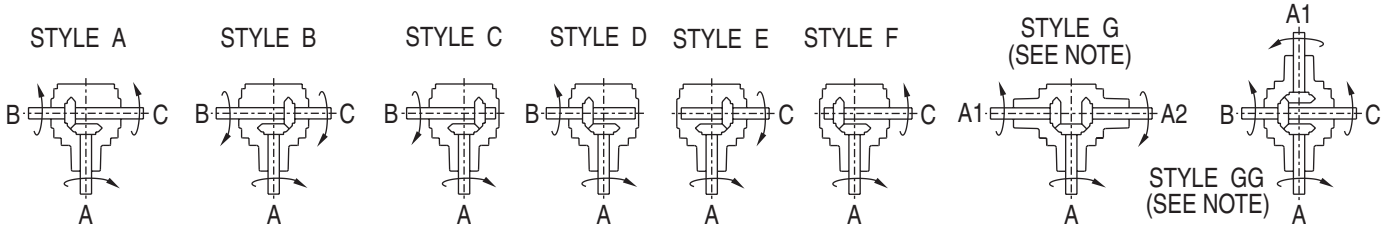
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

	800	810
STYLES A, B, C, D, E, F	**90 lbs.**	**92 lbs.**
STYLES G	**123 lbs.**	**125 lbs.**
STYLES GG	**141 lbs.**	**145 lbs.**

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

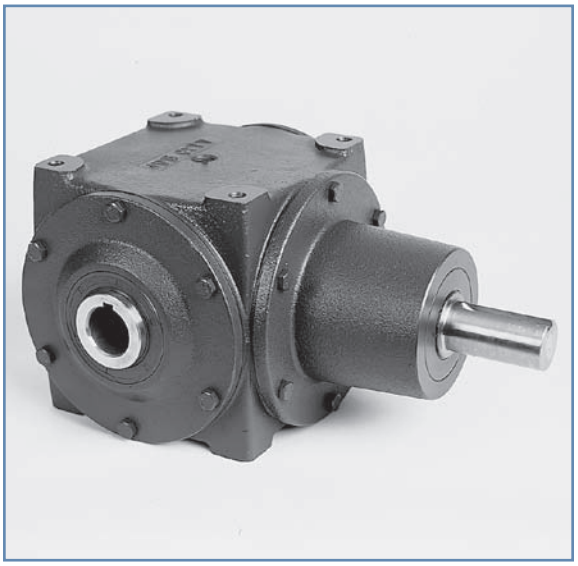


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 850

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base and pinion shaft mounting kits available. (Refer to pages D-65, D-66)
- Hydraulic motor mounting flanges available on input only. (Refer to page D-67)
- Hub City lubricant recommended. (Refer to section R)
- Metric versions available. (Refer to page D-58)



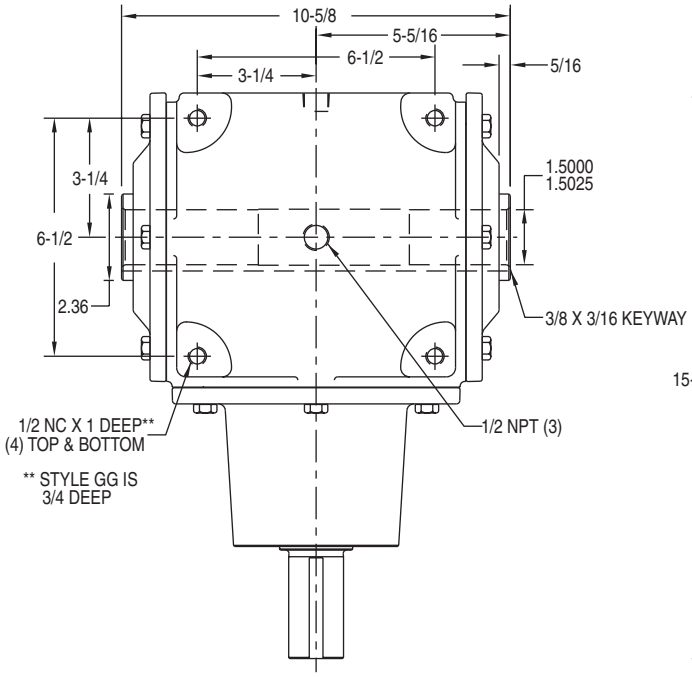
RATING TABLE

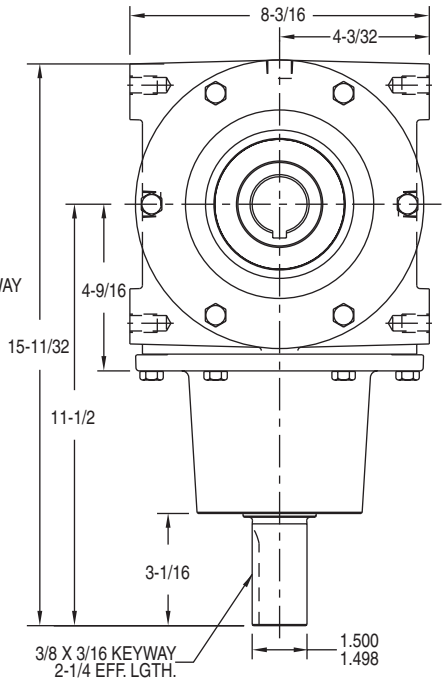
INPUT RPM†		*REDUCTION RATIOS*			
		SPIRAL 1:1	***SPIRAL 1.5:1***	***SPIRAL 2:1***	***SPIRAL 3:1***
1750	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	132.00 4750.00 140.00	69.00 3720.00 75.00	56.00 4070.00 65.00	30.69 3316.00 100.00
1150	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	90.00 4930.00 308.00	47.00 3860.00 300.00	38.00 4169.00 225.00	20.55 3378.70 290.00
850	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	67.00 4970.00 478.00	35.70 3970.00 475.00	29.00 4230.00 300.00	15.39 3423.40 400.00
690	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	56.00 5115.00 566.00	29.50 4040.00 625.00	23.00 4267.00 450.00	12.59 3449.90 475.00
400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	33.00 5200.00 934.00	17.60 4160.00 975.00	13.80 4356.00 925.00	7.43 3512.10 700.00
300	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	25.00 5250.00 1155.00	13.50 4250.00 1200.00	10.50 4394.00 1200.00	5.62 3542.00 800.00
100	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	9.00 5670.00 1750.00	4.80 4440.00 1750.00	3.60 4511.00 1750.00	1.91 3611.30 1200.00
	STYLE				
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B GG	52.90 74.95	28.14 38.65	17.12 23.93	10.06 15.36
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B GG	52.90 74.95	63.31 86.97	68.46 95.71	90.50 138.22

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡ OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.

MODEL 850





NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

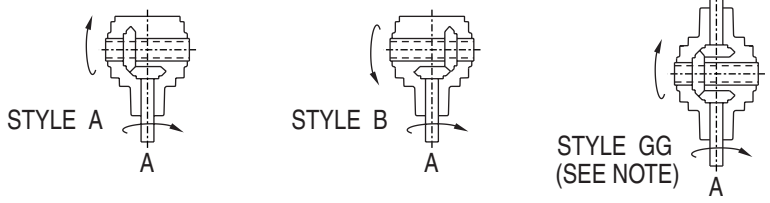
DRY SHIPPING WEIGHTS

STYLES A, B . . . . . .88 lbs.
STYLES GG. . . . . 135 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1000

FEATURES

- Rugged ductile iron housing provides maximum gear and bearing support.
- High alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of seven (7) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base mounting kits available. (Refer to pages D-65)
- Hub City lubricant recommended. (Refer to section R)



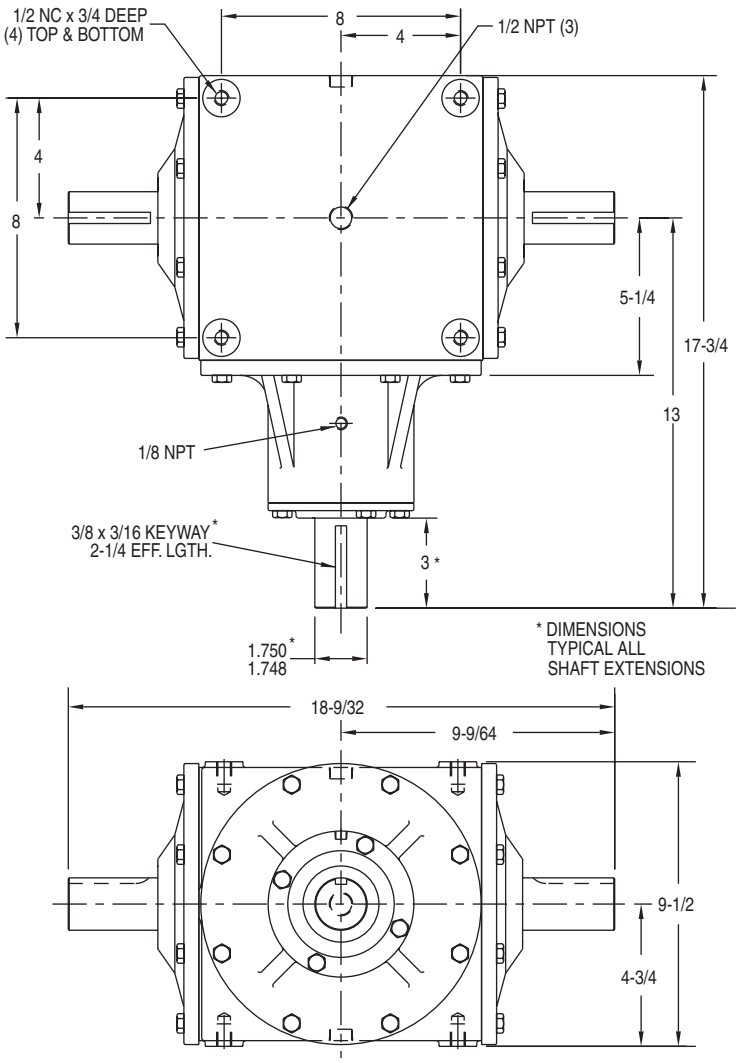
RATING TABLE

INPUT RPM†		REDUCTION RATIOS						INCREASER RATIOS				
		1:1	1.21:1△	1.50:1	1.87:1	2.00:1	2.21:1	1:1.21△	1:1.50	1:1.87	1:2.00	1:2.21*
1000	INPUT HORSEPOWER			75.0	50.1	48.0	36.2					
	OUTPUT TORQUE IN. LBS.			7080.0	5900.0	6060.0	5900.0					
	‡INPUT O.H.L.			900.0	1100.0	950.0	1120.0					
	‡OUTPUT O.H.L.			1150.0	1350.0	1100.0	1200.0					
850	INPUT HORSEPOWER		63.0	65.0	43.0	41.7	31.0					
	OUTPUT TORQUE IN. LBS.		5606.0	7230.0	5954.0	6170.0	5059.0					
	‡INPUT O.H.L.		1090.0	1000.0	1296.0	1050.0	1311.0					
	‡OUTPUT O.H.L.		1525.0	1400.0	1875.0	1250.0	1550.0					
690	INPUT HORSEPOWER	80.0	55.0	54.0	39.0	27.7	26.0	57.0	61.4			
	OUTPUT TORQUE IN. LBS.	7304.0	6026.0	7410.0	6660.0	6470.0	5216.0	4337.0	3740.0			
	‡INPUT O.H.L.	964.0	1153.0	1100.0	1353.0	1200.0	1410.0	1088.0	1000.0			
	‡OUTPUT O.H.L.	875.0	1585.0	1500.0	1980.0	1450.0	1650.0	1252.0	1100.0			
400	INPUT HORSEPOWER	53.3	35.0	33.2	24.0	21.1	17.0	39.0	38.0	34.6	31.6	28.8
	OUTPUT TORQUE IN. LBS.	8400.0	6602.0	7840.0	7065.0	6650.0	5890.0	5119.0	3990.0	2910.0	2490.0	2060.0
	‡INPUT O.H.L.	1161.0	1418.0	1300.0	1651.0	1450.0	1684.0	1280.0	1100.0	1371.0	1250.0	1461.0
	‡OUTPUT O.H.L.	1560.0	1915.0	1700.0	2315.0	1600.0	1810.0	1392.0	1250.0	1408.0	1350.0	1343.0
300	INPUT HORSEPOWER	41.5	27.0	25.6	18.5	16.2	13.0	29.0	29.6	27.7	24.4	22.9
	OUTPUT TORQUE IN. LBS.	8720.0	6804.0	8050.0	7288.0	6810.0	6022.0	4266.0	4140.0	3110.0	2560.0	2190.0
	‡INPUT O.H.L.	1323.0	1597.0	1350.0	1842.0	1600.0	1877.0	1312.0	1200.0	1526.0	1400.0	1616.0
	‡OUTPUT O.H.L.	1740.0	2140.0	1850.0	2595.0	1800.0	1950.0	1420.0	1300.0	1567.0	1500.0	1490.0
100	INPUT HORSEPOWER	17.0	11.0	9.2	7.0	5.8	4.8	13.0	10.9	9.8	9.0	8.5
	OUTPUT TORQUE IN. LBS.	10700.0	8319.0	8740.0	8005.0	7340.0	6646.0	6825.0	4570.0	3300.0	2830.0	2430.0
	‡INPUT O.H.L.	2018.0	2360.0	2000.0	2300.0	2000.0	2500.0	1957.0	1750.0	2360.0	2000.0	2450.0
	‡OUTPUT O.H.L.	2480.0	2960.0	2200.0	3540.0	2200.0	2500.0	1981.0	1900.0	2500.0	2200.0	2197.0
	STYLE											
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	140.6	75.4		43.8		35.9	75.9		51.3		
	C, D, E, F	139.6	74.7	Consult	42.6	Consult	35.7	74.9	Consult	50.3	Consult	
	G	187.5	115.4	Factory	74.9	Factory	58.5	107.9	Factory	54.5	Factory	48.5
	GG	210.2	108.9		55.8		48.7	116.8		82.7		
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	140.6	108.6		153.3		173.9	109.3		179.2		
	C, D, E, F	139.6	107.6	Consult	152.3	Consult	172.9	107.9	Consult	177.8	Consult	
	G	187.5	166.2	Factory	263.2	Factory	283.1	155.5	Factory	194.0	Factory	234.5
	GG	210.2	156.9		195.2		235.9	168.3		289.2		

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

△MFG. TO ORDER – CONSULT FACTORY FOR PRICE AND DELIVERY.
*AVAILABLE IN STYLE G ONLY.

MODEL 1000



NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

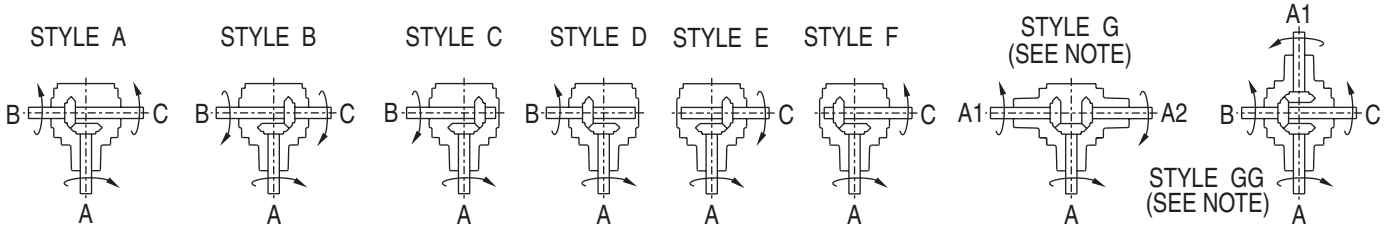
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . 150 lbs.
STYLES G . . . . . 160 lbs.
STYLES GG. . . . . 175 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

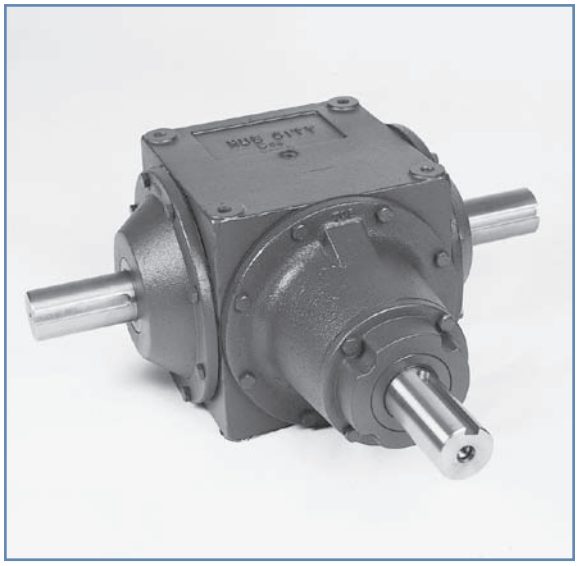


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1010

FEATURES

- Rugged ductile iron housing provides maximum gear and bearing support.
- High alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of six (6) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base mounting kits available. (Refer to pages D-65)
- Hub City lubricant recommended. (Refer to section R)
- Hub City "Counter Flow" bearing lubrication system.
- Metric versions available. (Refer to page D-57)



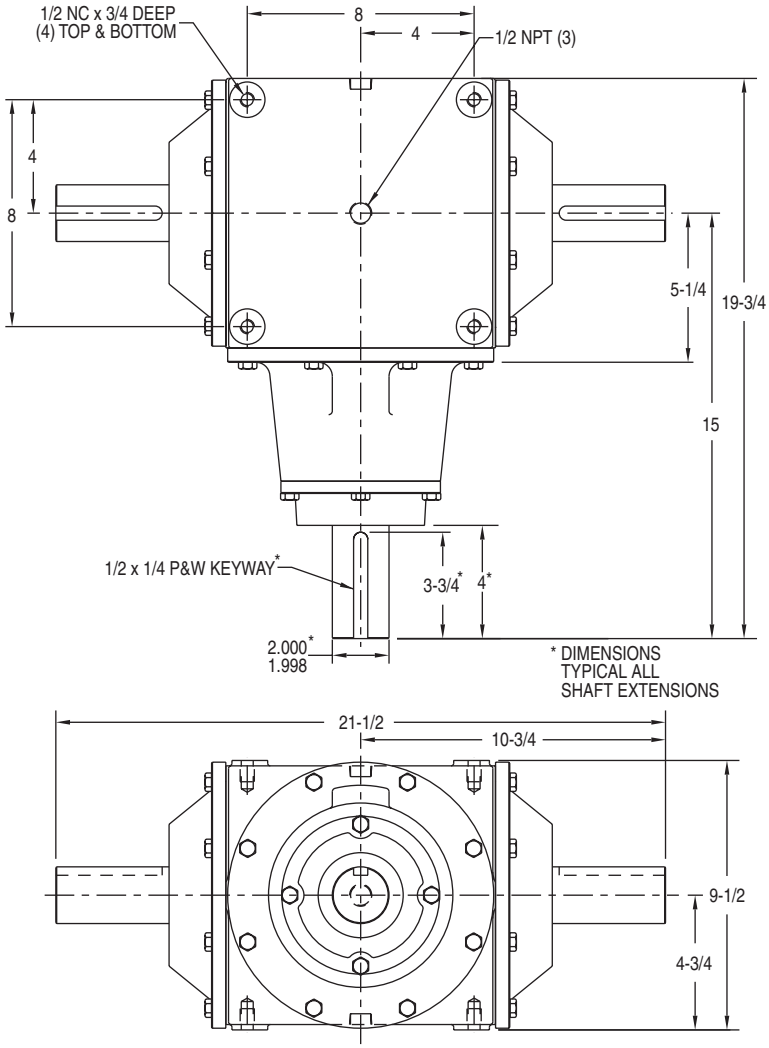
RATING TABLE

INPUT RPM†		REDUCTION RATIOS					INCREASER RATIO
		SPIRAL 1:1	SPIRAL 1.3:1Δ	SPIRAL 1.5:1	SPIRAL 2:1	SPIRAL 3:1Δ	1:1.5
1750	INPUT HORSEPOWER	251.00	195.00	173.00	123.90	55.80	232.40
	OUTPUT TORQUE IN. LBS.	9039.00	9360.00	9350.00	8924.00	6028.00	5577.00
	‡INPUT O.H.L.	820.00	400.00	100.00	130.00	140.00	764.00
	‡OUTPUT O.H.L.	1398.00	1500.00	2100.00	2100.00	2100.00	681.00
1150	INPUT HORSEPOWER	173.00	133.50	118.20	84.40	37.70	159.40
	OUTPUT TORQUE IN. LBS.	9481.00	9750.00	9717.00	9251.00	6198.00	5821.00
	‡INPUT O.H.L.	1178.00	500.00	385.00	433.00	455.00	1134.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	1385.00
850	INPUT HORSEPOWER	131.50	101.20	89.50	63.80	28.40	121.10
	OUTPUT TORQUE IN. LBS.	9750.00	10,002.00	9954.00	9461.00	6317.00	5985.00
	‡INPUT O.H.L.	1493.00	750.00	665.00	748.00	780.00	1449.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	1958.00
690	INPUT HORSEPOWER	108.60	83.50	73.80	52.50	23.30	100.10
	OUTPUT TORQUE IN. LBS.	9920.00	10,167.00	10,111.00	9591.00	6384.00	6091.00
	‡INPUT O.H.L.	1737.00	1100.00	902.00	994.00	1000.00	1674.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00
400	INPUT HORSEPOWER	65.60	49.90	44.30	31.40	13.90	60.40
	OUTPUT TORQUE IN. LBS.	10,320.00	10,480.00	10,470.00	9895.00	6570.00	6341.00
	‡INPUT O.H.L.	1850.00	1700.00	1635.00	1745.00	1850.00	1850.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00
300	INPUT HORSEPOWER	50.20	38.10	33.70	23.80	10.60	46.10
	OUTPUT TORQUE IN. LBS.	10,546.00	10,670.00	10,620.00	10,000.00	6680.00	6606.00
	‡INPUT O.H.L.	1850.00	1850.00	1850.00	1850.00	1850.00	1850.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00
100	INPUT HORSEPOWER	18.50	13.10	11.80	8.30	3.70	16.20
	OUTPUT TORQUE IN. LBS.	11,659.00	11,005.00	11,130.00	10,462.00	6995.00	6815.00
	‡INPUT O.H.L.	1850.00	1850.00	1850.00	1850.00	1850.00	1850.00
	‡OUTPUT O.H.L.	2100.00	2100.00	2100.00	2100.00	2100.00	2100.00
	STYLE						
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	281	96	105	68	31	111
	C, D, E, F	279	95	104	67	30	105
	G	412	154	156	100	41	159
	GG	419	124	152	101	48	168
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	281	170	235	272	274	250
	C, D, E, F	279	168	233	270	272	236
	G	412	273	351	398	367	357
	GG	419	220	342	405	436	379

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.
ΔMFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY

MODEL 1010



ATTENTION

FOR CONTINUOUS DUTY APPLICATIONS ABOVE 1000 RPM THE CAPACITY OF THESE UNITS MAY BE LIMITED BY THERMAL CONSIDERATIONS. IN THESE CASES OIL CIRCULATION AND OIL COOLING MAY BE REQUIRED. CONSULT THE FACTORY FOR APPLICATION ASSISTANCE.

NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

D

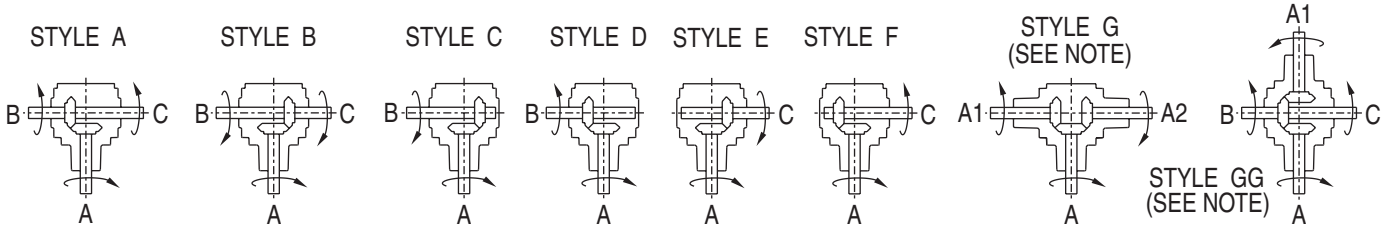
RATING AND DIMENSIONS

DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F ..... 195 lbs.
STYLES G ..... 195 lbs.
STYLES GG ..... 225 lbs.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1050

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged ductile iron housing provides maximum gear and bearing support.
- High alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of five (5) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Hub City lubricant recommended. (Refer to section R)
- Hub City "Counter Flow" bearing lubrication system.
- Metric versions available. (Refer to page D-58)



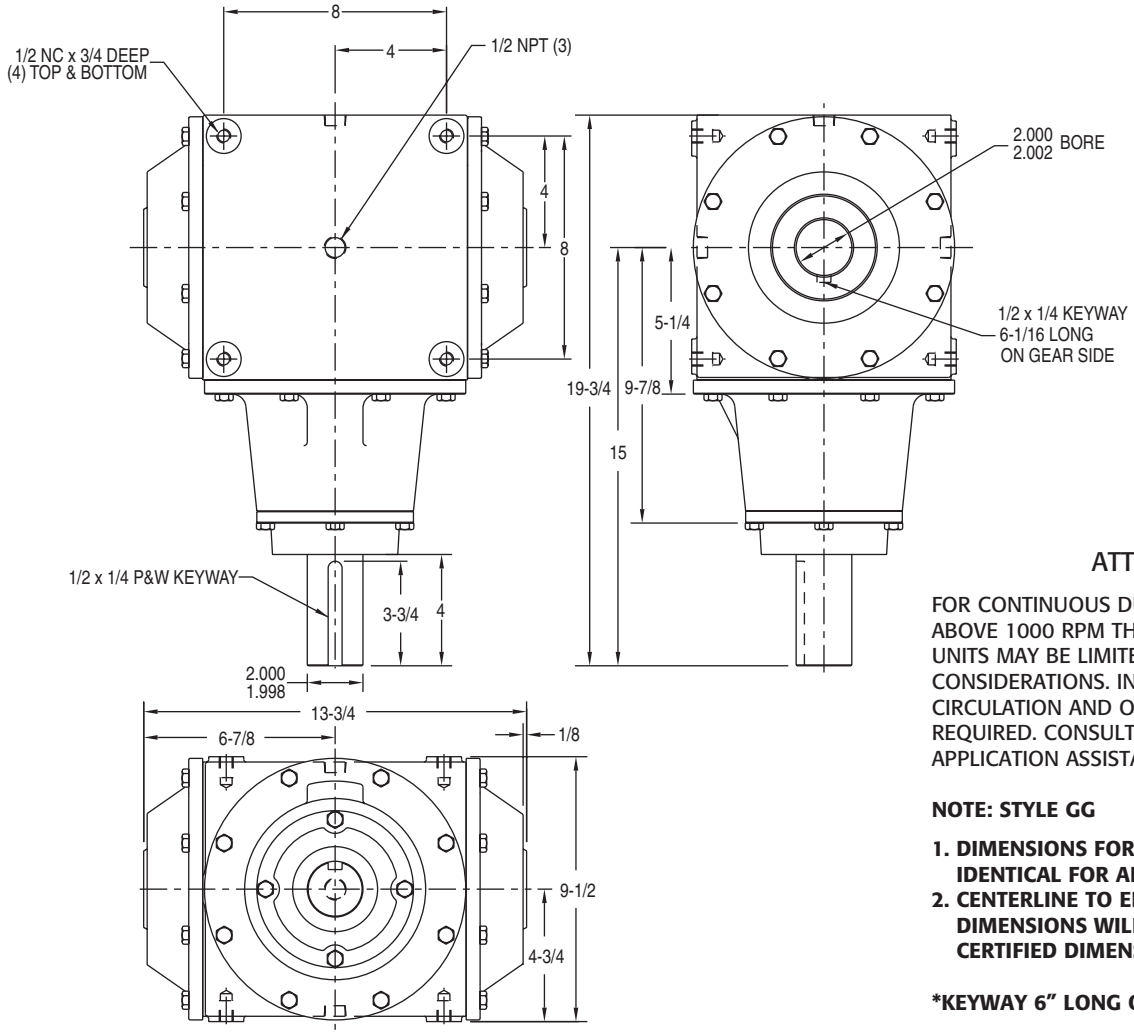
RATING TABLE

INPUT RPM†		*REDUCTION RATIOS*				
		SPIRAL 1:1	***SPIRAL 1.3:1△***	***SPIRAL 1.5:1***	***SPIRAL 3:1△***	***SPIRAL 2:1***
1750	INPUT HORSEPOWER	251.00	195.00	173.10	55.80	123.90
	OUTPUT TORQUE IN. LBS.	9039.00	9360.00	9350.00	6028.00	8924.00
	‡INPUT O.H.L.	820.00	400.00	100.00	140.00	130.00
1150	INPUT HORSEPOWER	173.00	133.50	118.20	37.70	84.40
	OUTPUT TORQUE IN. LBS.	9481.00	9750.00	9717.00	6198.00	9251.00
	‡INPUT O.H.L.	1178.00	500.00	385.00	455.00	433.00
850	INPUT HORSEPOWER	131.50	101.20	89.50	28.40	63.80
	OUTPUT TORQUE IN. LBS.	9750.00	10,002.00	9954.00	6317.00	9461.00
	‡INPUT O.H.L.	1493.00	750.00	665.00	780.00	748.00
690	INPUT HORSEPOWER	108.60	83.50	73.80	23.30	52.50
	OUTPUT TORQUE IN. LBS.	9920.00	10,167.00	10,111.00	6384.00	9591.00
	‡INPUT O.H.L.	1737.00	1100.00	902.00	1000.00	994.00
400	INPUT HORSEPOWER	65.60	49.90	44.30	13.90	31.40
	OUTPUT TORQUE IN. LBS.	10,320.00	10,480.00	10,470.00	6570.00	9895.00
	‡INPUT O.H.L.	1850.00	1700.00	1635.00	1850.00	1745.00
300	INPUT HORSEPOWER	50.20	38.10	33.70	10.60	23.80
	OUTPUT TORQUE IN. LBS.	10,546.00	10,670.00	10,620.00	6680.00	10,000.00
	‡INPUT O.H.L.	1850.00	1850.00	1850.00	1850.00	1850.00
100	INPUT HORSEPOWER	18.50	13.10	11.80	3.70	8.30
	OUTPUT TORQUE IN. LBS.	11,659.00	11,005.00	11,130.00	6995.00	10,462.00
	‡INPUT O.H.L.	1850.00	1850.00	1850.00	1850.00	1850.00
	STYLE					
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	249.8	104.4	108.5	32.2	65.9
	GG	388.4	132.6	154.5	44.3	96.8
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	249.8	184.7	244.1	289.5	263.7
	GG	388.4	234.5	347.6	398.7	387.1

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

△MFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY

MODEL 1050



ATTENTION

FOR CONTINUOUS DUTY APPLICATIONS ABOVE 1000 RPM THE CAPACITY OF THESE UNITS MAY BE LIMITED BY THERMAL CONSIDERATIONS. IN THESE CASES OIL CIRCULATION AND OIL COOLING MAY BE REQUIRED. CONSULT THE FACTORY FOR APPLICATION ASSISTANCE.

NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

***KEYWAY 6" LONG ON GEAR SIDE**

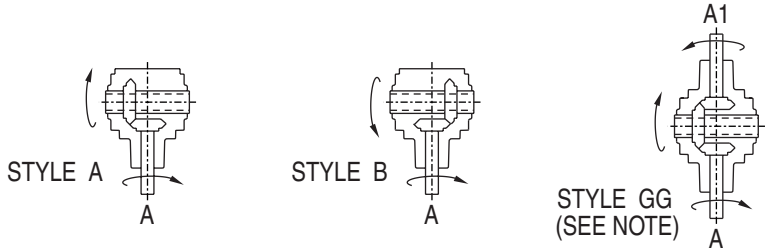
DRY SHIPPING WEIGHTS

STYLES A, B . . . . . 175 lbs.
STYLES GG . . . . . 225 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

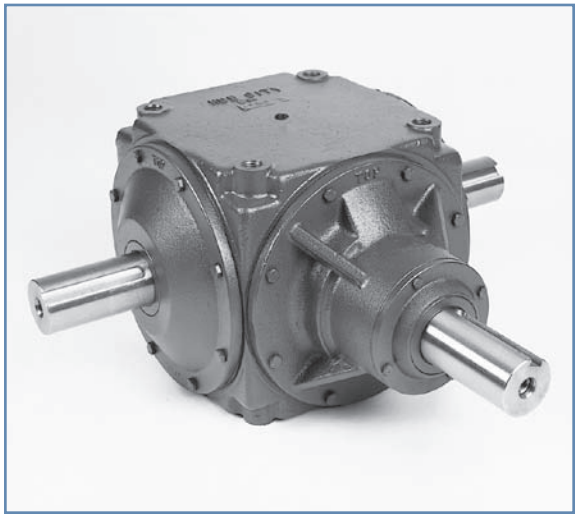


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1200

FEATURES

- Rugged ductile iron housing provides maximum gear and bearing support.
- High alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of six (6) standard gear ratios.
- Available with 8" or 10" pitch diameter gears in 1:1 ratio to provide optimum design flexibility.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Universal mounting assures maximum design flexibility.
- Base mounting kits available. (Refer to pages D-65)
- Hub City lubricant recommended. (Refer to section R)
- Hub City "Counter Flow" bearing lubrication system.
- Metric versions available. (Refer to page D-57)

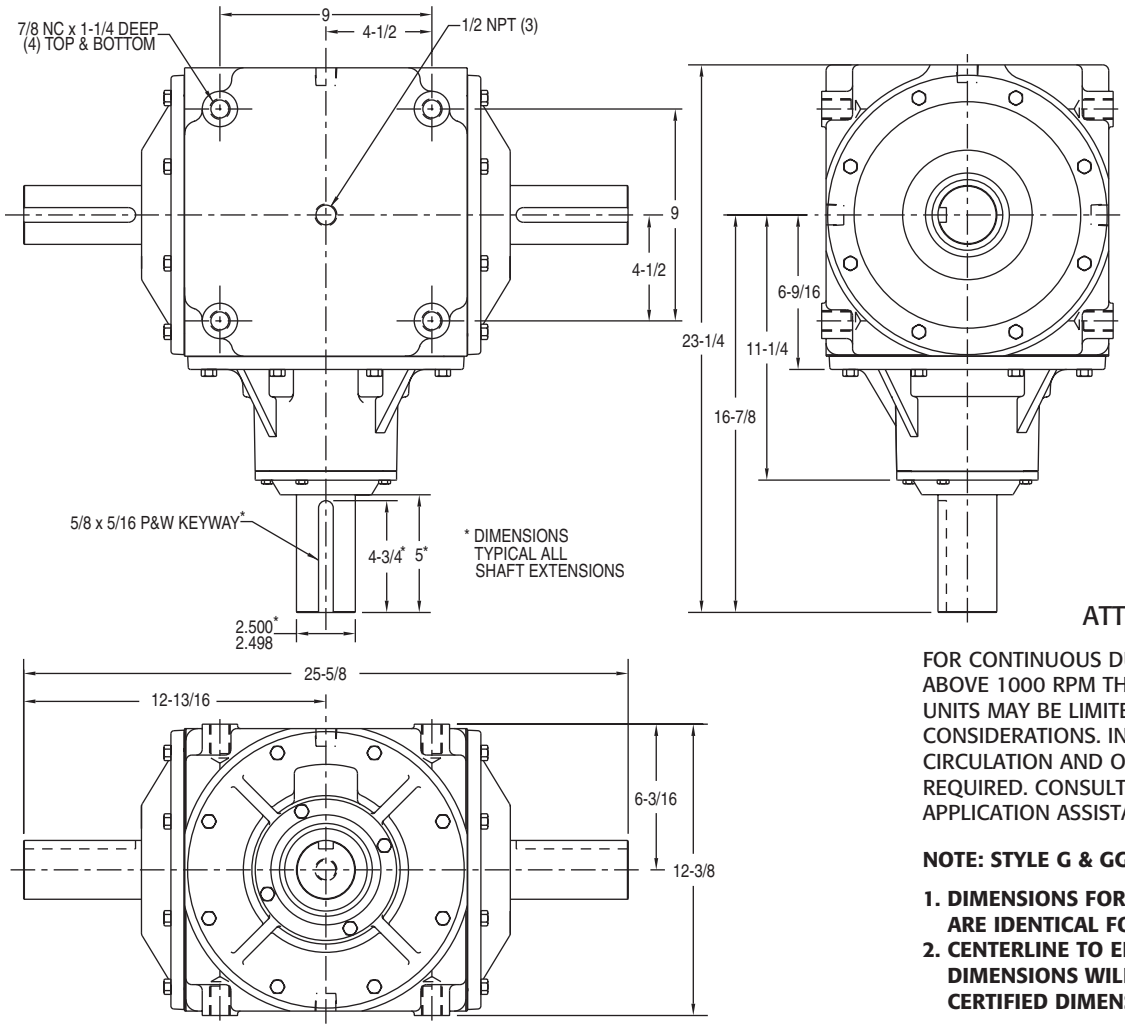


RATING TABLE

INPUT RPM†		REDUCTION RATIOS					
		SPIRAL 1:1 (8")	SPIRAL 1: 1 (10")	SPIRAL 1.33:1△	SPIRAL 1.5:1	SPIRAL 2:1	SPIRAL 3:1
1750	INPUT HORSEPOWER	296.00	380.00	246.00	196.00	224.00	118.00
	OUTPUT TORQUE IN. LBS.	10,680.00	13,685.00	11,821.00	10,591.00	16,148.00	12,749.00
	‡INPUT O.H.L.	118.00	177.00	104.00	109.00	102.00	117.00
	‡OUTPUT O.H.L.	396.00	155.00	657.00	1284.00	579.00	2217.00
1150	INPUT HORSEPOWER	203.50	261.00	168.00	134.00	155.00	79.00
	OUTPUT TORQUE IN. LBS.	11,148.00	14,304.00	12,278.00	11,005.00	16,931.00	13,051.00
	‡INPUT O.H.L.	238.00	391.00	209.00	213.00	196.00	236.00
	‡OUTPUT O.H.L.	816.00	570.00	1009.00	1692.00	960.00	2805.00
850	INPUT HORSEPOWER	154.70	199.00	128.00	102.00	116.00	60.00
	OUTPUT TORQUE IN. LBS.	11,466.00	14,755.00	12,694.00	11,347.00	17,180.00	13,363.00
	‡INPUT O.H.L.	296.00	570.00	319.00	326.00	250.00	292.00
	‡OUTPUT O.H.L.	1185.00	918.00	1244.00	1980.00	1199.00	3216.00
690	INPUT HORSEPOWER	127.80	164.50	106.00	85.00	97.00	49.00
	OUTPUT TORQUE IN. LBS.	11,670.00	15,025.00	12,900.00	11,551.00	17,584.00	13,521.00
	‡INPUT O.H.L.	437.00	714.00	396.00	391.00	340.00	392.00
	‡OUTPUT O.H.L.	1473.00	1197.00	1297.00	2081.00	1290.00	3591.00
400	INPUT HORSEPOWER	77.20	99.70	63.00	50.00	57.00	30.00
	OUTPUT TORQUE IN. LBS.	12,160.00	15,709.00	13,270.00	11,893.00	18,000.00	14,197.00
	‡INPUT O.H.L.	872.00	1153.00	759.00	777.00	532.00	713.00
	‡OUTPUT O.H.L.	2354.00	2050.00	2137.00	3001.00	1905.00	4200.00
300	INPUT HORSEPOWER	59.00	76.30	48.00	39.00	44.00	22.50
	OUTPUT TORQUE IN. LBS.	12,390.00	16,029.00	13,453.00	12,057.00	18,479.00	14,267.00
	‡INPUT O.H.L.	1148.00	1431.00	911.00	932.00	692.00	910.00
	‡OUTPUT O.H.L.	2911.00	2594.00	2594.00	3475.00	2668.00	4200.00
100	INPUT HORSEPOWER	21.00	27.00	17.00	14.00	16.00	7.70
	OUTPUT TORQUE IN. LBS.	13,230.00	17,017.00	14,184.00	13,087.00	20,281.00	14,600.00
	‡INPUT O.H.L.	2495.00	2813.00	1012.00	1079.00	820.00	1236.00
	‡OUTPUT O.H.L.	4200.00	4200.00	4200.00	4200.00	4200.00	4200.00
	STYLE						
WR² (Lb. In.²) REFERRED TO HIGH SPEED SHAFT	A, B	422.5	691.7	181.6	176.9	152.2	95.9
	C, D, E, F	416.2	685.5	178.0	174.2	150.6	95.2
	G	614.1	1018.2	264.4	270.6	229.9	135.4
	GG	627.1	1031.1	266.4	249.0	220.4	149.5
WR² (Lb. In.²) REFERRED TO LOW SPEED SHAFT	A, B	422.5	691.7	321.2	398.1	608.6	862.8
	C, D, E, F	416.2	685.5	315.0	391.9	602.4	856.6
	G	614.1	1018.2	467.6	608.8	919.6	1218.2
	GG	627.1	1031.1	471.2	560.4	881.4	1345.2

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.
△MFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY

MODEL 1200



ATTENTION

FOR CONTINUOUS DUTY APPLICATIONS ABOVE 1000 RPM THE CAPACITY OF THESE UNITS MAY BE LIMITED BY THERMAL CONSIDERATIONS. IN THESE CASES OIL CIRCULATION AND OIL COOLING MAY BE REQUIRED. CONSULT THE FACTORY FOR APPLICATION ASSISTANCE.

NOTE: STYLE G & GG

1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

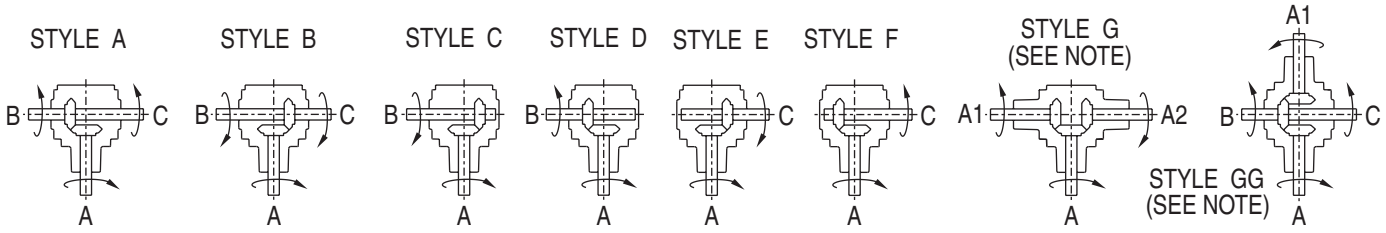
DRY SHIPPING WEIGHTS

STYLES A, B, C, D, E, F . . . . . 300 lbs.
STYLES G . . . . . 315 lbs.
STYLES GG. . . . . 330 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

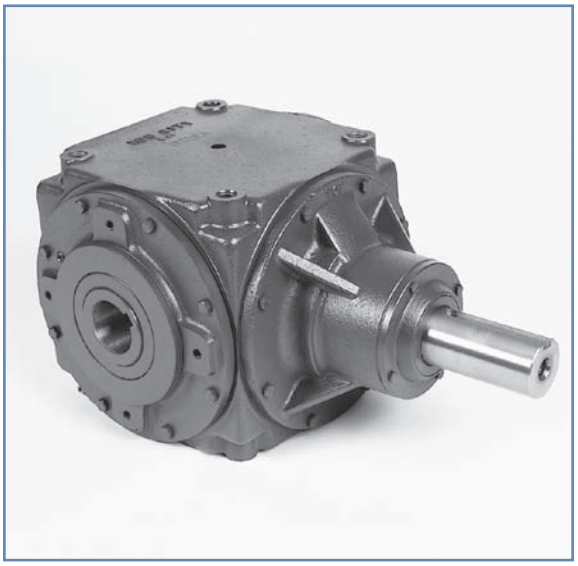


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1250

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged ductile iron housing provides maximum gear and bearing support.
- High alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Hub City lubricant recommended. (Refer to section R)
- Hub City "Counter Flow" bearing lubrication system.
- Metric versions available. (Refer to page D-58)



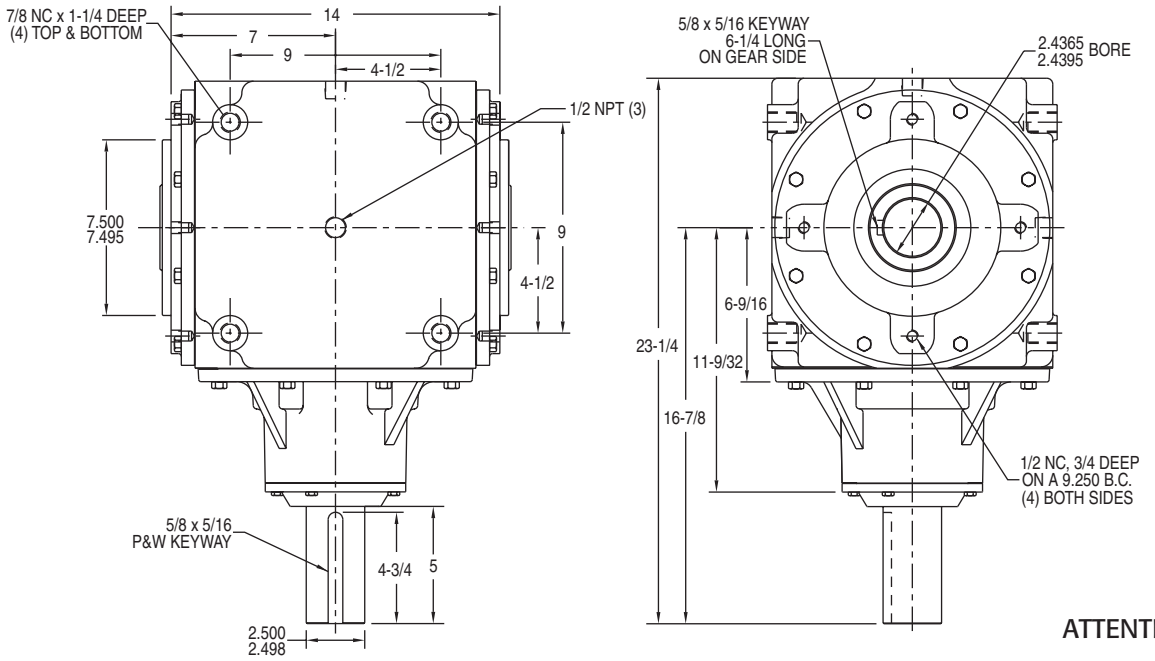
RATING TABLE

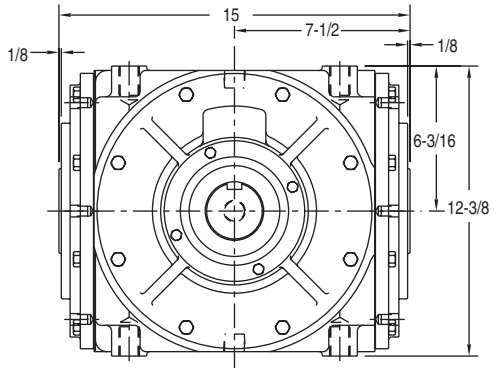
INPUT RPM†		REDUCTION RATIOS			
		SPIRAL 1:1	SPIRAL 1.5:1	SPIRAL 2:1	SPIRAL 3:1
1750	INPUT HORSEPOWER	380.00	196.00	224.00	118.00
	OUTPUT TORQUE IN. LBS.	13,685.00	10,594.00	16,148.00	12,749.00
	‡INPUT O.H.L.	177.00	109.00	102.00	117.00
1150	INPUT HORSEPOWER	261.00	134.00	155.00	79.00
	OUTPUT TORQUE IN. LBS.	14,304.00	11,005.00	16,931.00	13,051.00
	‡INPUT O.H.L.	391.00	213.00	196.00	236.00
850	INPUT HORSEPOWER	199.00	102.00	116.00	60.00
	OUTPUT TORQUE IN. LBS.	14,755.00	11,347.00	17,180.00	13,363.00
	‡INPUT O.H.L.	570.00	326.00	250.00	292.00
690	INPUT HORSEPOWER	164.50	85.00	97.00	49.00
	OUTPUT TORQUE IN. LBS.	15,025.00	11,551.00	17,584.00	13,521.00
	‡INPUT O.H.L.	714.00	391.00	340.00	392.00
400	INPUT HORSEPOWER	99.70	50.00	57.00	30.00
	OUTPUT TORQUE IN. LBS.	15,709.00	11,843.00	18,000.00	14,197.00
	‡INPUT O.H.L.	1153.00	777.00	532.00	713.00
300	INPUT HORSEPOWER	76.30	39.00	44.00	22.50
	OUTPUT TORQUE IN. LBS.	16,029.00	12,057.00	18,479.00	14,267.00
	‡INPUT O.H.L.	1431.00	932.00	692.00	910.00
100	INPUT HORSEPOWER	27.00	14.00	16.00	7.70
	OUTPUT TORQUE IN. LBS.	17,017.00	13,087.00	20,281.00	14,600.00
	‡INPUT O.H.L.	2813.00	1079.00	820.00	1236.00
	STYLE				
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	739.20	194.00	161.30	100.20
	GG	1078.50	266.00	229.60	153.70
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	739.20	436.40	645.40	901.70
	GG	1078.50	598.60	918.20	1384.10

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

MODEL 1250





ATTENTION

FOR CONTINUOUS DUTY APPLICATIONS ABOVE 1000 RPM THE CAPACITY OF THESE UNITS MAY BE LIMITED BY THERMAL CONSIDERATIONS. IN THESE CASES OIL CIRCULATION AND OIL COOLING MAY BE REQUIRED. CONSULT THE FACTORY FOR APPLICATION ASSISTANCE.

NOTE: STYLE GG

1. **DIMENSIONS FOR SHAFTS A, AND A1 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

***KEYWAY 6-1/4" LONG ON GEAR SIDE.**

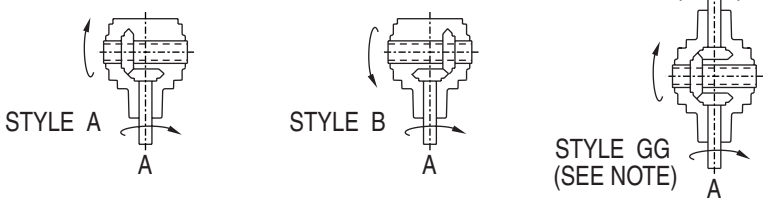
DRY SHIPPING WEIGHTS

STYLES A, B..... 305 lbs.
STYLES GG..... 330 lbs.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

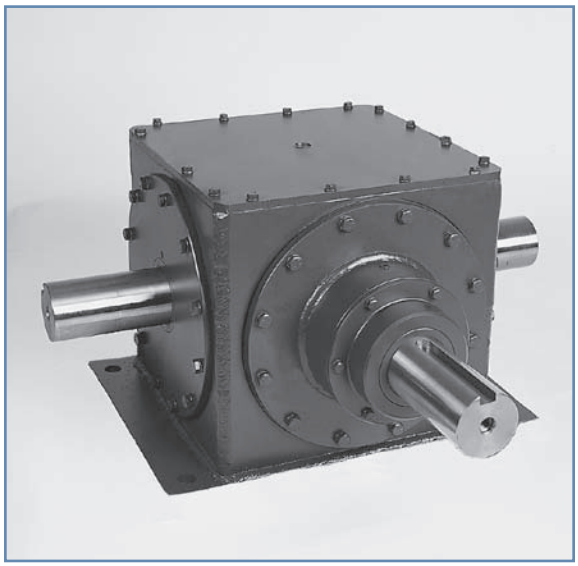


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 1700

FEATURES

- Rigid steel weldment housing designed for positive gear and bearing support.
- High tensile shafts for extra strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of five (5) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Designed for high temperature applications.
- Special lubrication devices and equipment available based upon application.
- Made to order – see application requirements on page D-47.



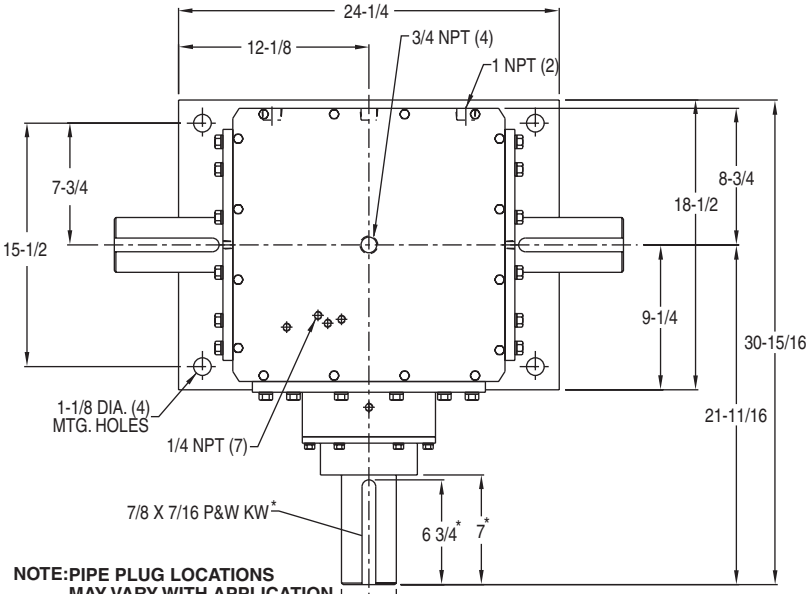
RATING TABLE

INPUT RPM†		REDUCTION RATIOS				
		SPIRAL 1:1	SPIRAL 1.33:1	SPIRAL 1.5:1	SPIRAL 2:1	SPIRAL 3:1
1750	INPUT HORSEPOWER	701	334	301	305	159
	OUTPUT TORQUE IN. LBS.	25,246	15,998	16,260	21,969	17,179
1150	INPUT HORSEPOWER	482	228	206	210	108
	OUTPUT TORQUE IN. LBS.	26,416	16,619	16,934	23,018	17,757
850	INPUT HORSEPOWER	369	174	157	159	81
	OUTPUT TORQUE IN. LBS.	27,360	17,159	17,462	23,579	18,018
690	INPUT HORSEPOWER	305	144	130	132	67
	OUTPUT TORQUE IN. LBS.	27,859	17,493	17,811	24,114	18,360
400	INPUT HORSEPOWER	186	87	78	79	40
	OUTPUT TORQUE IN. LBS.	29,307	18,232	18,435	24,895	18,907
300	INPUT HORSEPOWER	142	66	59	60	30
	OUTPUT TORQUE IN. LBS.	29,831	18,441	18,592	25,210	18,907
100	INPUT HORSEPOWER	50	23	21	21	11
	OUTPUT TORQUE IN. LBS.	31,513	19,279	19,853	26,470	20,798
	STYLE					
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	1975	667	540	462	324
	C, D, E, F	1900	626	509	445	317
	G	2935	939	740	649	419
	GG	2955	937	812	692	534
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	1975	1179	1215	1847	2914
	C, D, E, F	1900	1110	1145	1781	2850
	G	2935	1668	1666	2594	3774
	GG	2955	1665	1828	2767	4806

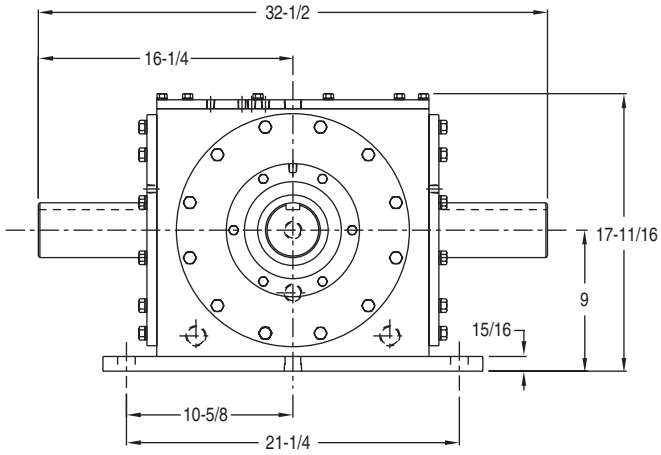
†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

MODEL 1700



NOTE: PIPE PLUG LOCATIONS MAY VARY WITH APPLICATION AND MOUNTING POSITION. CONSULT FACTORY.



APPLICATION DATA REQUIRED BEFORE ORDER ENTRY

1. What is drive expected to accomplish?
2. What is the size and type of the power source?
3. What is the HP/Torque requirement and type of the load?
4. What is the input RPM?
5. What is the gear ratio?
6. How are the power source and load connected? If other than coupling connection, what are the details? Such as the size and pitch of sprocket or pulley and the direction of the OHL?
7. Are there special environmental considerations? Temperature extremes (hot or cold), dust, enclosures, etc.?
8. Are there special lubrication problems? Such as vertical shafts or angled mounting?
9. Which style is required? (A, B, C, etc.)
10. Are any modifications required in shaft size, shaft length or mounting configuration?

NOTE: STYLE G & GG

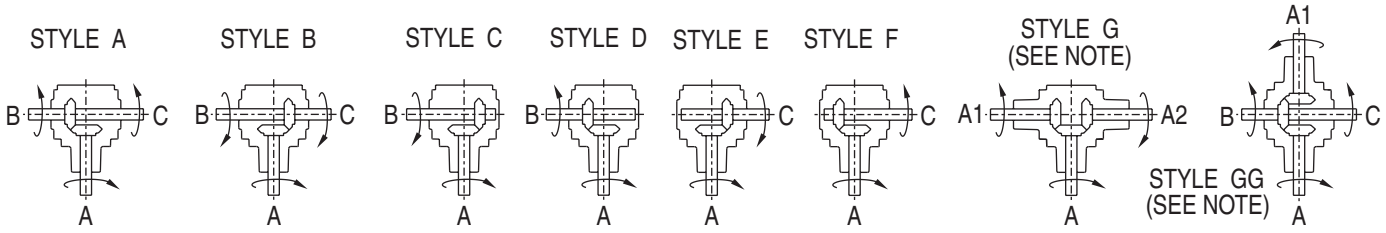
1. **DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.**
2. **CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.**

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 850 LBS.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

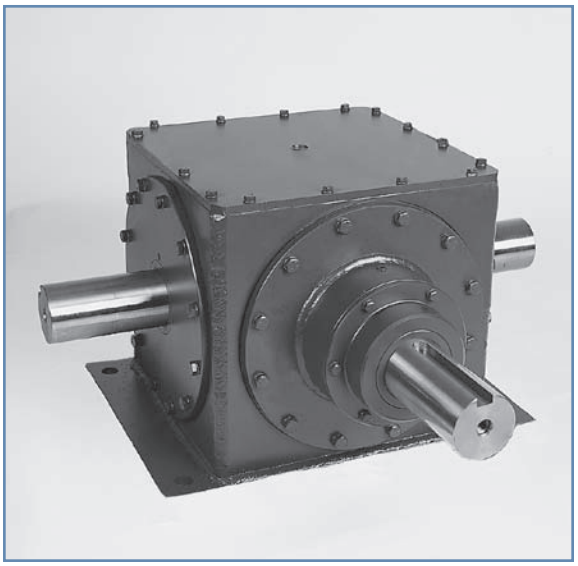


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 2200

FEATURES

- Rigid steel weldment housing designed for positive gear and bearing support.
- High tensile shafts for extra strength.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Designed for high temperature applications.
- Special lubrication devices and equipment available based upon application.
- Made to order – see application requirements on page D-49.



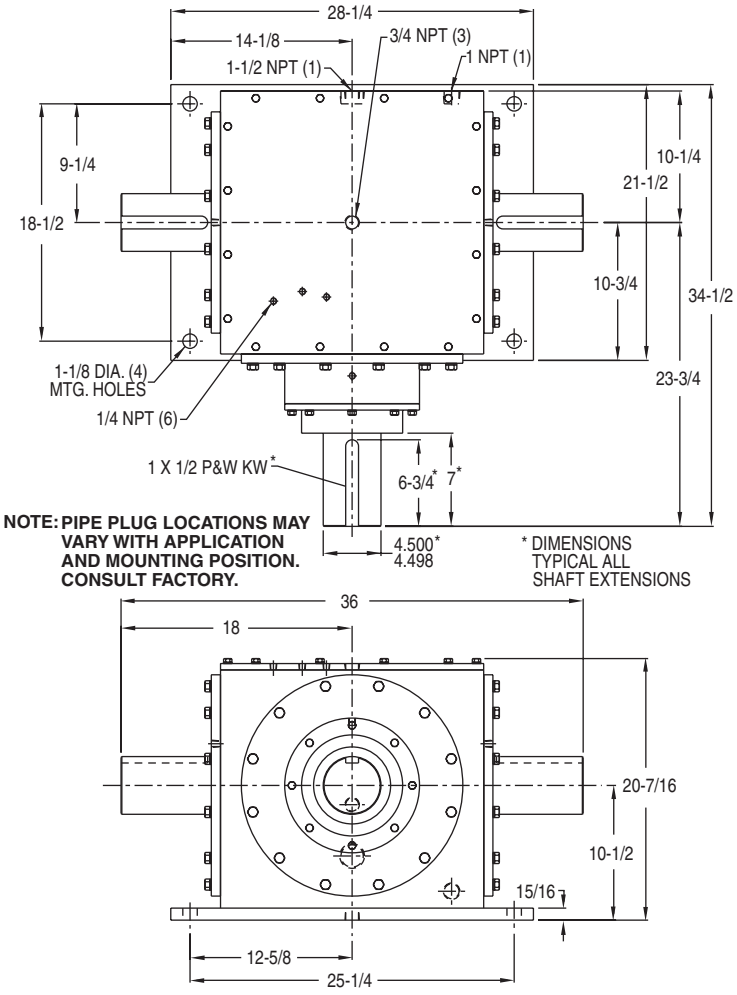
RATING TABLE

INPUT RPM†		REDUCTION RATIOS			
		SPIRAL 1:1	SPIRAL 1.33:1	SPIRAL 1.5:1	SPIRAL 3:1
1750	INPUT HORSEPOWER	1,250	491	480	237
	OUTPUT TORQUE IN. LBS.	45,018	23,518	25,930	25,600
1150	INPUT HORSEPOWER	868	337	330	162
	OUTPUT TORQUE IN. LBS.	47,570	24,564	27,128	26,635
850	INPUT HORSEPOWER	659	257	251	122
	OUTPUT TORQUE IN. LBS.	48,863	25,334	27,916	27,138
690	INPUT HORSEPOWER	549	212	208	101
	OUTPUT TORQUE IN. LBS.	50,146	25,754	28,498	27,676
400	INPUT HORSEPOWER	335	128	126	60
	OUTPUT TORQUE IN. LBS.	52,783	26,683	29,779	28,361
300	INPUT HORSEPOWER	257	98	96	46
	OUTPUT TORQUE IN. LBS.	53,991	27,362	30,252	28,992
100	INPUT HORSEPOWER	92	35	34	16
	OUTPUT TORQUE IN. LBS.	57,983	29,338	32,142	30,252
	STYLE				
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	5605	1480	1384	729
	C, D, E, F	5400	1420	1339	718
	G	8028	1885	2101	918
	GG	8282	2205	2051	1200
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	5605	2619	3115	6563
	C, D, E, F	5400	2526	3014	6465
	G	8028	3350	4727	8258
	GG	8282	3918	4615	10795

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

MODEL 2200



APPLICATION DATA REQUIRED BEFORE ORDER ENTRY

1. What is drive expected to accomplish?
2. What is the size and type of the power source?
3. What is the HP/Torque requirement and type of the load?
4. What is the input RPM?
5. What is the gear ratio?
6. How are the power source and load connected? If other than coupling connection, what are the details? Such as the size and pitch of sprocket or pulley and the direction of the OHL?
7. Are there special environmental considerations? Temperature extremes (hot or cold), dust, enclosures, etc.?
8. Are there special lubrication problems? Such as vertical shafts or angled mounting?
9. Which style is required? (A, B, C, etc.)
10. Are any modifications required in shaft size, shaft length or mounting configuration?

NOTE: STYLE G & GG

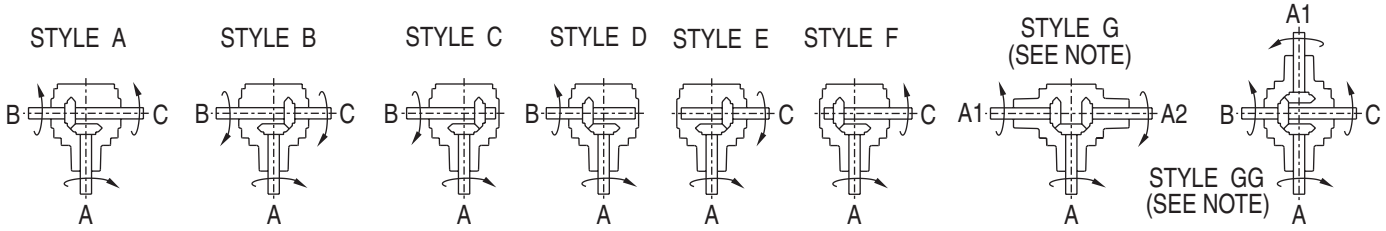
1. DIMENSIONS FOR SHAFTS A, A1, AND A2 ARE IDENTICAL FOR ALL RATIOS.
2. CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 1,350 LBS.

STANDARD STYLES AVAILABLE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 790

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Tapered roller bearings for endurance and strength.
- Hub City "Counter Flow" bearing lubrication system.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Choice of two (2) gear ratios.
- Choice of three (3) stock output bore sizes.
- Hub City lubricant recommended. (Refer to section R)



RATING TABLE

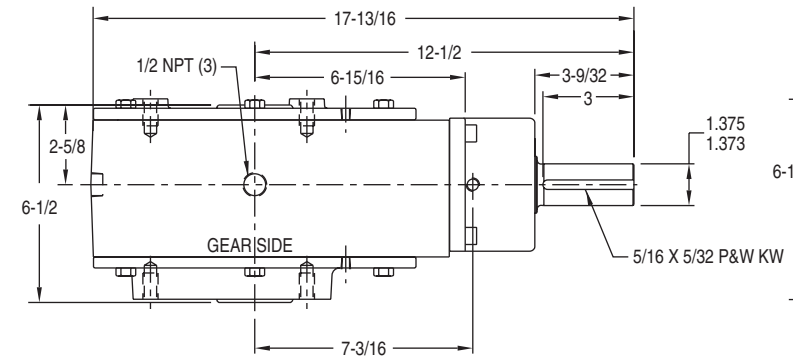
INPUT RPM (PINION SHAFT)†		STRAIGHT BEVEL GEAR 2:1 RATIO		SPIRAL BEVEL GEAR Δ3.78:1 RATIO	
		OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS
3000	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.			800.0	64.00 4941.00 320.00
2400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.			640.0	52.00 5018.00 376.00
1750	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.			467.0	39.00 5158.00 464.00
1150	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	575.0	24.60 2696.00 589.00	307.0	26.00 5231.00 589.00
850	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	425.0	18.53 2748.00 699.00	227.0	19.00 5170.00 699.00
690	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	345.0	15.80 2886.00 780.00	184.0	15.90 5337.00 780.00
400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	200.0	9.69 3054.00 900.00	107.0	9.40 5426.00 900.00
300	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	150.0	7.94 3336.00 900.00	80.0	7.20 5558.00 900.00
200	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	100.0	5.35 3371.00 900.00	53.3	4.80 5562.00 900.00
100	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	50.0	2.85 3592.00 900.00	26.7	2.50 5783.00 900.00

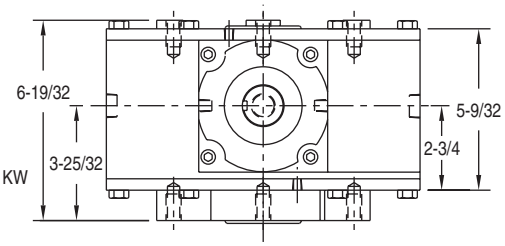
†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

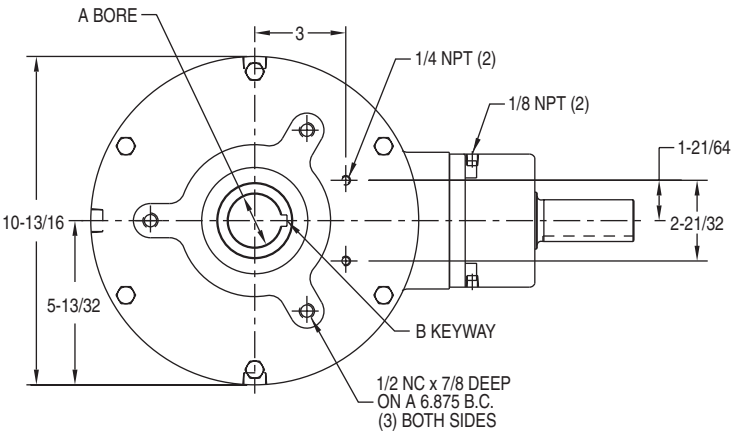
ΔCW INPUT ROTATION PREFERRED. CCW CONSULT FACTORY

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODEL 790







BORE A	KEYWAY B
1-1/2	3/8 x 3/16
1-11/16	3/8 x 3/16
1-3/4	3/8 x 3/16

BORE TOLERANCE
NOMINAL +.002

DRY SHIPPING WEIGHT 90 LBS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

MODEL 920

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of six (6) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Differential type spiral bevel gearing to provide maximum RPM reduction and low noise levels at higher operating speeds.
- Choice of four (4) stock output bore sizes.
- Hub City lubricant recommended. (Refer to section R)

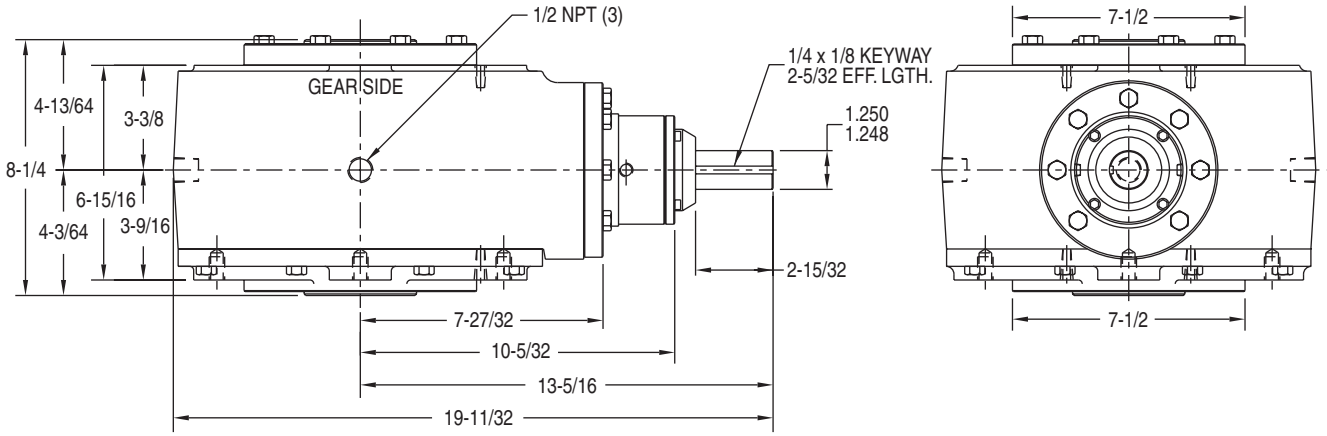


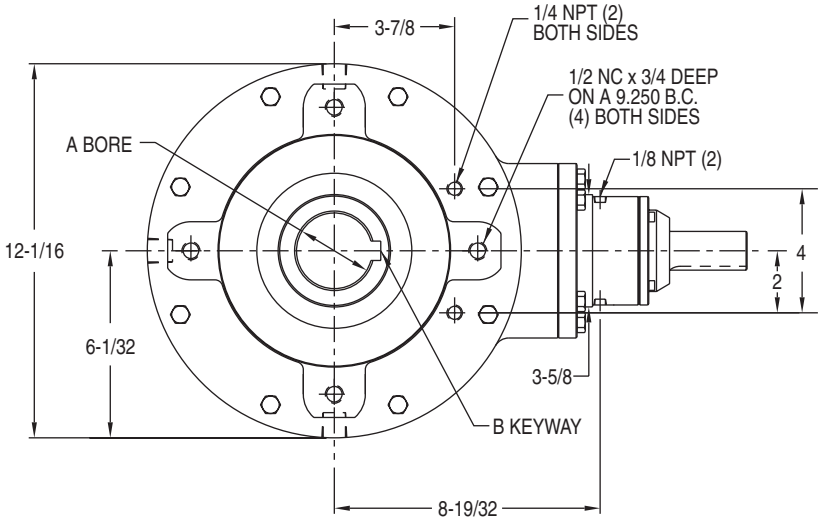
RATING TABLE

INPUT RPM (PINION SHAFT)†		SPIRAL BEVEL GEARS											
		Δ3.25:1		Δ3.78:1		Δ4.11:1		Δ4.86:1		Δ5.57:1		Δ6.67:1	
		OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS	OUTPUT RPM	RATINGS
3000	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	923.00	131.33 8964.00 80.00	793.60	118.11 9376.00 75.00	730.00	110.00 9480.00 65.00	618.00	76.00 7752.00 85.00	538.60	65.08 7612.00 100.00	450.00	48.00 6720.00 110.00
2400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	738.50	107.34 9156.00 283.00	634.90	96.59 9584.00 293.00	584.00	90.00 9720.00 286.00	494.00	62.00 7920.00 299.00	430.90	52.84 7725.00 314.00	360.00	38.50 6732.00 319.00
1750	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	538.50	80.51 9420.00 450.00	463.00	71.50 9731.00 450.00	426.00	66.00 9780.00 450.00	360.00	46.00 8040.00 450.00	314.20	39.18 7855.00 450.00	263.00	28.50 6828.00 450.00
1150	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	353.80	54.57 9720.00 450.00	304.20	47.60 9860.00 450.00	280.00	44.00 9900.00 450.00	237.00	31.00 8232.00 450.00	206.50	26.32 8030.00 450.00	173.00	19.00 6900.00 450.00
850	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	261.50	41.00 9876.00 450.00	224.90	37.28 10443.00 450.00	207.00	35.00 10644.00 450.00	175.00	24.00 8640.00 450.00	152.60	20.10 8298.00 450.00	127.50	14.00 6948.00 450.00
690	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	212.30	33.74 10008.00 450.00	182.50	30.49 10526.00 450.00	168.00	28.50 10680.00 450.00	142.00	20.00 8880.00 450.00	123.90	16.68 8484.00 450.00	103.50	11.50 6996.00 450.00
400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	123.00	20.10 10284.00 450.00	105.80	18.18 10824.00 450.00	97.50	17.00 10980.00 450.00	82.20	12.00 9240.00 450.00	71.80	10.05 8818.00 450.00	60.00	7.00 7356.00 450.00
300	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	92.30	15.26 10416.00 450.00	79.40	13.86 10992.00 450.00	73.00	13.00 11208.00 450.00	61.70	9.25 9432.00 450.00	53.90	7.98 9330.00 450.00	45.00	6.00 8400.00 450.00
200	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	61.50	10.33 10572.00 450.00	52.90	9.44 11246.00 450.00	48.50	8.90 11556.00 450.00	41.40	6.30 9648.00 450.00	35.90	5.45 9564.00 450.00	30.00	4.25 8928.00 450.00
100	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	30.75	5.26 10764.00 450.00	26.45	4.85 11554.00 450.00	24.30	4.60 11928.00 450.00	20.70	3.30 10104.00 450.00	17.95	2.86 10034.00 450.00	15.00	2.30 8997.00 450.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.
ΔCW INPUT ROTATION PREFERRED. CCW CONSULT FACTORY.
§MAXIMUM RUNNING TORQUE.

MODEL 920





FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

BORE A	KEYWAY B
1-15/16	1/2 x 1/4
2	1/2 x 1/4
2-1/4	1/2 x 1/4
2-7/16	5/8 x 5/16

BORE TOLERANCE
NOMINAL +.003

DRY SHIPPING WEIGHT 143 LBS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

MODEL 950

FEATURES

- Shaft mounted design for direct mounting on drive shaft of equipment to be driven.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Tapered roller bearings for endurance and strength.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- Choice of four (4) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Differential type spiral bevel gearing to provide maximum RPM reduction and low noise levels at higher operating speeds.
- Choice of three (3) stock output bore sizes.
- Hub City lubricant recommended. (Refer to section R)
- Hub City "Counter Flow" bearing lubrication system.



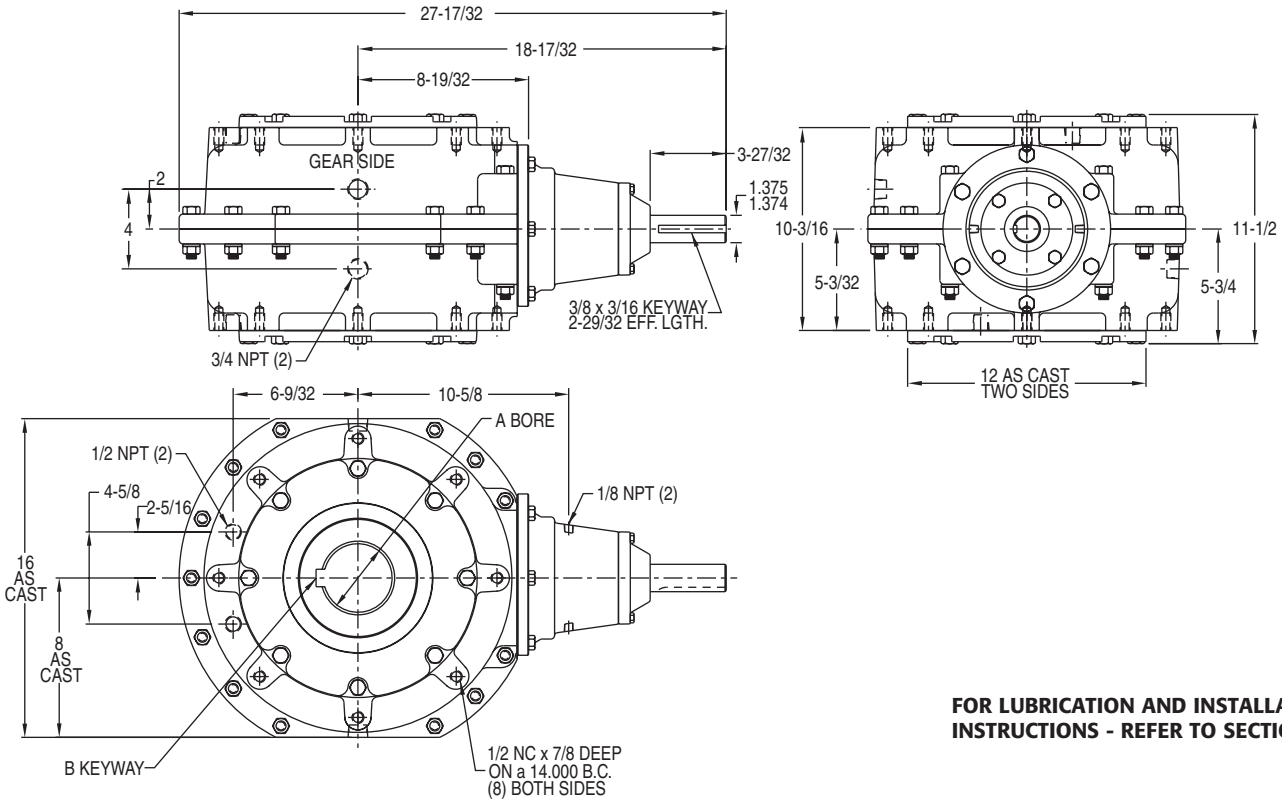
RATING TABLE

INPUT RPM†		*REDUCTION RATIOS SPIRAL BEVEL GEARS*			
		Δ4.56:1	*Δ5.50:1*	*Δ6.50:1*	*Δ7.33:1*
1750	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	164.00 26,933.00 379.00	152.00 30,108.00 285.00	104.00 24,346.00 426.00	86.00 22,703.00 500.00
1150	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	112.10 28,014.00 500.00	103.00 31,009.00 500.00	70.70 25,205.00 500.00	57.80 23,219.00 500.00
850	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	84.30 28,506.00 500.00	77.80 31,730.00 500.00	52.90 25,491.00 500.00	43.40 23,592.00 500.00
690	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	69.20 28,833.00 500.00	63.90 32,091.00 500.00	43.20 25,634.00 500.00	35.50 23,768.00 500.00
400	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	40.80 29,324.00 500.00	37.80 32,812.00 500.00	25.40 25,634.00 500.00	21.20 24,482.00 500.00
300	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	31.10 29,816.00 500.00	28.70 33,173.00 500.00	19.40 26,494.00 500.00	16.00 24,638.00 500.00
200	INPUT HORSEPOWER OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	21.20 30,472.00 500.00	19.40 33,714.00 500.00	13.10 26,923.00 500.00	10.80 24,946.00 500.00
100	INPUT HORSEPOWER §OUTPUT TORQUE IN. LBS. ‡INPUT O.H.L.	10.70 30,799.00 500.00	9.80 34,074.00 500.00	6.60 27,210.00 500.00	5.40 25,225.00 500.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

ΔCW INPUT ROTATION PREFERRED. CCW CONSULT FACTORY.
§MAXIMUM RUNNING TORQUE.

MODEL 950



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

BORE A	*KEYWAY B*
3-7/16	7/8 x 7/16
*3-15/16	7/8 x 3/16
*4-7/16	1-1/8 x 9/16

*OUTPUT SLEEVE NOT NORMALLY STOCKED.
BORE TOLERANCE NOMINAL +.005

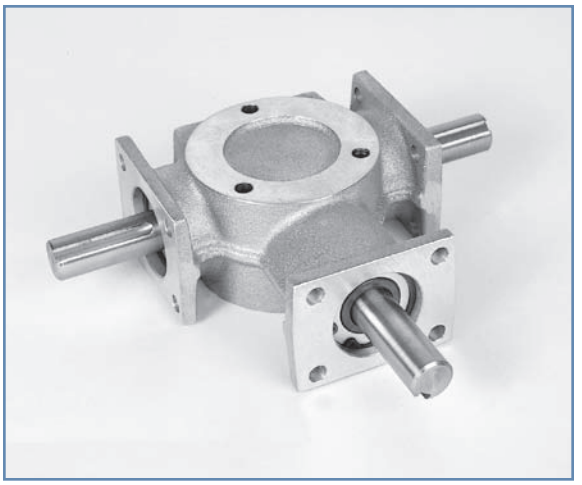
DRY SHIPPING WEIGHT 340 LBS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

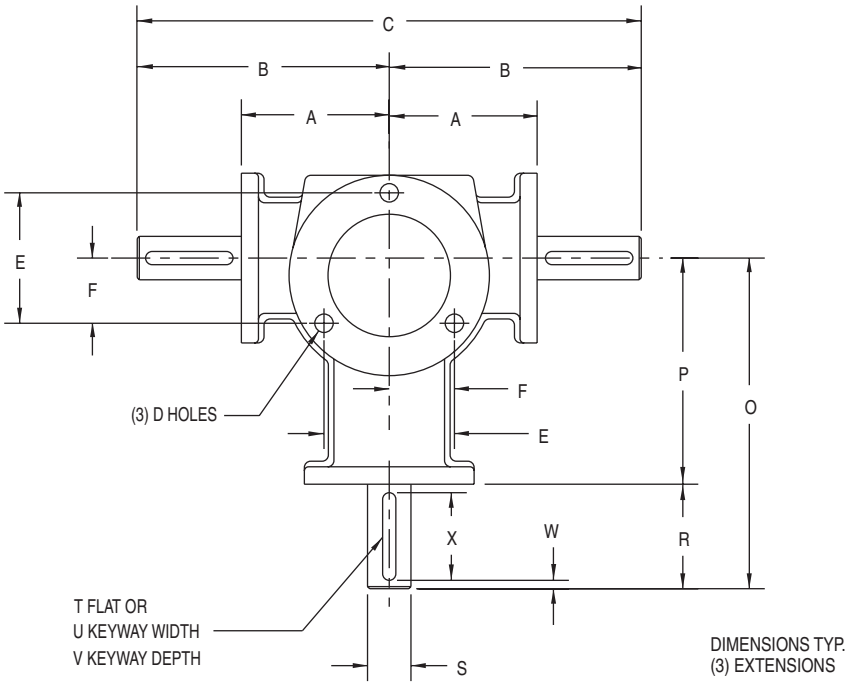
MODELS AD4M, AD5M, AD3M

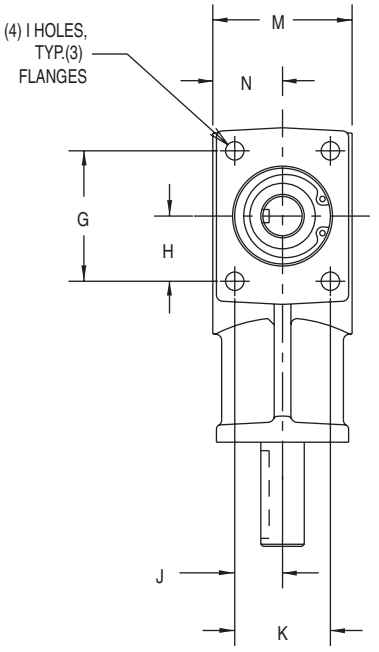
FEATURES

- Metric mounting dimensions, bearings and seals.
- Additional features listed on page D-8.
- Available ratios: 1:1SP, 2:1SP.
- Ratings and Assembly styles listed on pages D-8 and D-9.



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R





DIMENSIONS (mm)

MODEL	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	R	S	T	U	V	W	X
AD4M	35	50	100	5.3	34	17	30	15	4.3	11	22	32	16	70	55	15	9.008 8.981	0.7 Deep	–	–	0	12
AD5M	54	92	184	6.4	48	24	48	24	6.4	18	36	52	26	121	83	38	15.008 14.981	–	5.00 4.96	3	3	30
AD3M	76	127	254	8.4	76	38	76	38	8.4	28	56	76	38	178	127	51	19.008 18.981	–	6.00 5.96	3.5	3	45

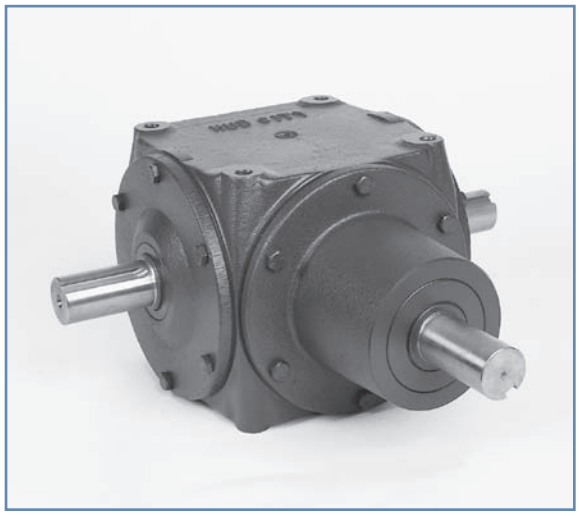
NOTE: SP = SPIRAL BEVEL GEARING

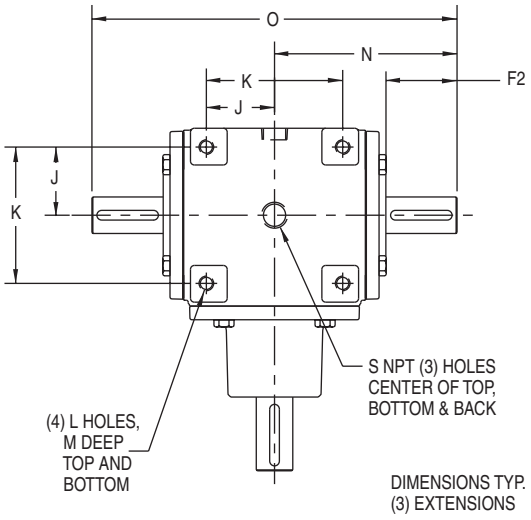
MODELS M3M, 165M, 66M, 800M, 101M, 120M

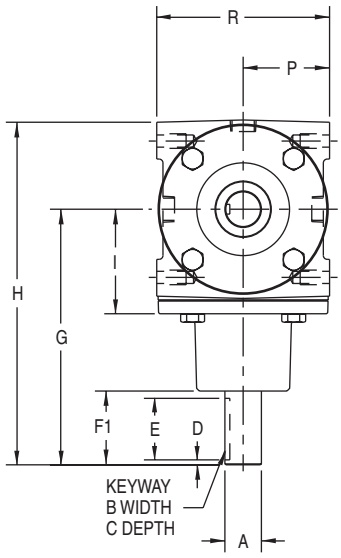
FEATURES

- Metric mounting dimensions, hardware, bearings and seals.
- Additional features listed on pages referenced below.
- Available ratios:
  M3M 1:1, 1.5:1, 2:1
  165M 1:1, 1:1SP, 1.5:1, 1.5:1SP, 2:1, 2:1SP, 1:1.5SP, 1:2SP
  66M 1:1, 1:1SP, 1.5:1, 1.53:1SP, 2:1, 2:1SP, 3:1SP, 1:1.53SP, 1:2SP
  800M 1:1SP, 1.5:1SP, 2:1SP, 3:1SP
  101M 1:1SP, 1.5:1SP, 2:1SP
  120M 1:1SP, 1.5:1SP, 2:1SP, 3:1SP
- Ratings and Assembly styles refer to the following pages:
  M3M Pages D-12, D-13
  165M Pages D-20, D-21
  66M Pages D-24, D-25
  800M Pages D-32, D-33
  101M Pages D-38, D-39
  120M Pages D-42, D-43

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R







DIMENSIONS (mm)

MODEL	A	B	C	D	E	F1	F2	G	H	I	J	K	L	M	N	O	P	R	S
M3M	15.008 14.981	5.00 4.96	3	2	30	38	35	115	155	45	28	56	M8 x 1.25	10	80	160	40	80	1/8 Inch
165M	25.008* 24.961	8.00 7.95	4	4	45	55	56	185	250	72	54	108	M8 x 1.25	16	135	270	53	106	1/4 Inch
66M	30.008** 29.981	8.00 7.95	4	4	50	61	59	210	281	86	56	112	M12 x 1.75	24	150	300	71	142	1/2 Inch
800M	40.010 39.978	12.00 11.95	5	4	70	81	83	295	392	116	83	166	M12 x 1.75	25***	210	420	104	206	1/2 Inch
101M	50.010 49.978	14.00 13.95	5.5	4	90	100	103	380	501	134	102	204	M16 x 2	24	275	550	120	240	1/2 Inch
120M	60.010 59.978	18.00 17.95	7	4	110	122	121	425	581	167	115	230	M20 x 2.5	30	320	640	157	314	1/2 Inch

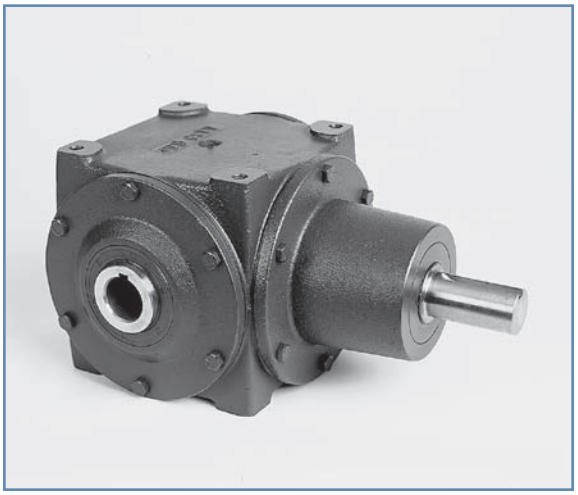
NOTE: SP = SPIRAL BEVEL GEARING

** CROSS SHAFT ON 66M 1:1.53 SPIRAL INCREASER IS 28.008 - 27.981.
** CROSS SHAFT ON 66M 1:2 SPIRAL INCREASER IS 25.008 - 24.981.

* CROSS SHAFT ON 165M 1:2 SPIRAL INCREASER IS 15.008 - 14.981.
*** MOUNTING HOLE DEPTH ON 800M STYLE GG IS 19.

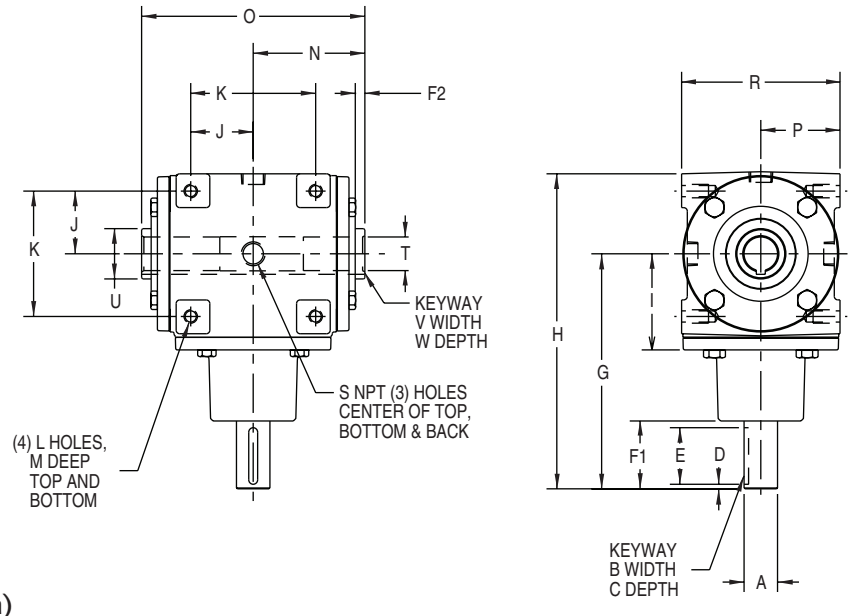
MODELS 175M, 65M, 850M, 105M, 125M

FEATURES



- Metric mounting dimensions, hardware, bearings and seals.
- Additional features listed on pages referenced below.
- Available ratios:
  175M 1:1SP, 1.5:1SP, 2:1SP, 3:1SP
  65M 1:1SP, 1.53:1SP, 2:1SP, 3:1SP
  850M 1:1SP, 1.5:1SP, 2:1SP, 3:1SP
  105M 1:1SP, 1.5:1SP, 2:1SP
  125M 1:1SP, 1.5:1SP, 2:1SP, 3:1SP
- Ratings and Assembly styles refer to the following pages:
  175M Pages D-22, D-23
  65M Pages D-26, D-27
  850M Pages D-34, D-35
  105M Pages D-40, D-41
  125M Pages D-44, D-45

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R



DIMENSIONS (mm)

MODEL	A	B	C	D	E	F1	F2	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W
175M	25.008 24.981	8.00 7.95	4	4	45	55	6	185	250	72	54	108	M8 x 1.25	16	80	160	53	106	1/4 Inch	25.000 25.063	38	8.00 8.05	3.3
65M	30.008 29.981	8.00 7.95	4	4	50	61	9	210	281	86	56	112	M12 x 1.75	24	100	200	71	142	1/2 Inch	30.000 30.063	45	8.00 8.05	3.3
850M	40.010 39.978	12.00 11.95	5	4	70	81	8	295	392	116	83	166	M12 x 1.75	25*	135	270	104	208	1/2 Inch	40.000 40.063	60	12.00 12.05	3.3
105M	50.010 49.978	14.00 13.95	5.5	4	90	100	11	380	501	134	102	204	M16 x 2	24	183	365	120	240	1/2 Inch	50.000 50.075	75	14.00 14.05	3.8
125M	60.010 59.978	18.00 17.95	7	4	110	122	10	425	581	167	115	230	M20 x 2.5	30	198	395	157	314	1/2 Inch	60.000 60.075	90	18.00 18.05	4.4

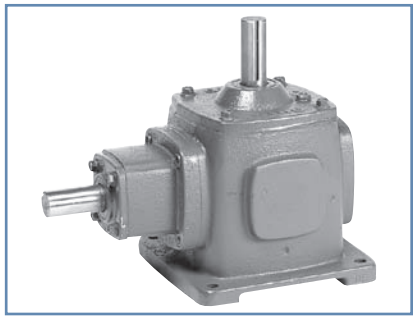
NOTE: SP = SPIRAL BEVEL GEARING

* MOUNTING HOLE DEPTH ON 850M STYLE GG IS 19.

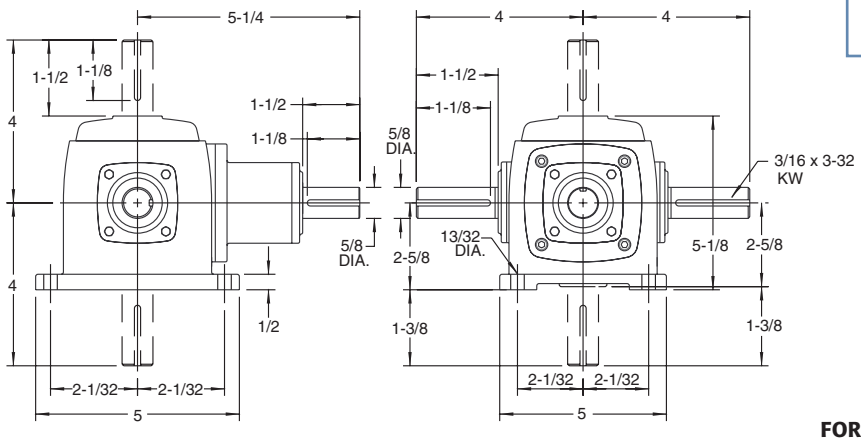
MODEL RA-0

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Ball bearings for endurance and strength.
- Choice of three (3) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Factory Filled with EP-4 Gear Oil.



SHIPPING WEIGHT 13 LBS.



Output Shaft Overhung Load = 90 lbs, Located 0.75 inches From End of Shaft Extension.

Input Shaft Overhung Load = 60 lbs, Located 0.75 inches From End of Shaft Extension.

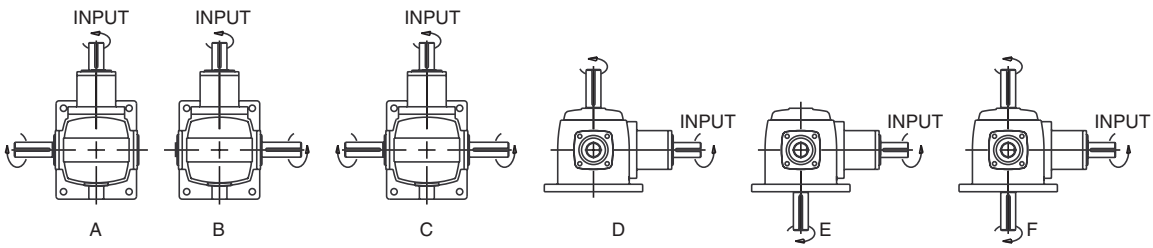
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

RATINGS

INPUT RPM		REDUCTION RATIOS			INCREASER RATIOS	
		1:01	2:1	3:1	1:2	1:3
1750	INPUT HORSEPOWER	2.00	2.50	1.70	-	-
	OUTPUT TORQUE (IN-LBS)	72.0	180	184	-	-
1150	INPUT HORSEPOWER	1.50	1.90	1.30	-	-
	OUTPUT TORQUE (IN-LBS)	82.2	208	214	-	-
850	INPUT HORSEPOWER	1.20	1.50	1.00	2.70	-
	OUTPUT TORQUE (IN-LBS)	89.0	222	222	100	-
690	INPUT HORSEPOWER	1.00	1.30	0.93	2.35	2.56
	OUTPUT TORQUE (IN-LBS)	91.3	237	255	107	77.72
540	INPUT HORSEPOWER	0.90	1.10	0.79	2.00	2.18
	OUTPUT TORQUE (IN-LBS)	105	257	277	117	85.06
300	INPUT HORSEPOWER	0.60	0.70	0.50	1.29	1.41
	OUTPUT TORQUE (IN-LBS)	126	294	315	135	97.83
100	INPUT HORSEPOWER	0.25	0.30	0.20	0.56	0.57
	OUTPUT TORQUE (IN-LBS)	158	378	378	175	120.02

ASSEMBLIES

ROTATIONS SHOWN ARE FOR STANDARD ROTATION - SR
FOR OPPOSITE OUTPUT ROTATION, ORDER REVERSE ROTATION - RR.

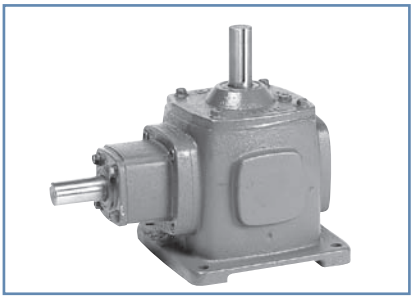


IN ADDITION TO ASSEMBLY STYLE, SPECIFY MOUNTING POSITION WHEN ORDERING-SEE PAGE D-64.

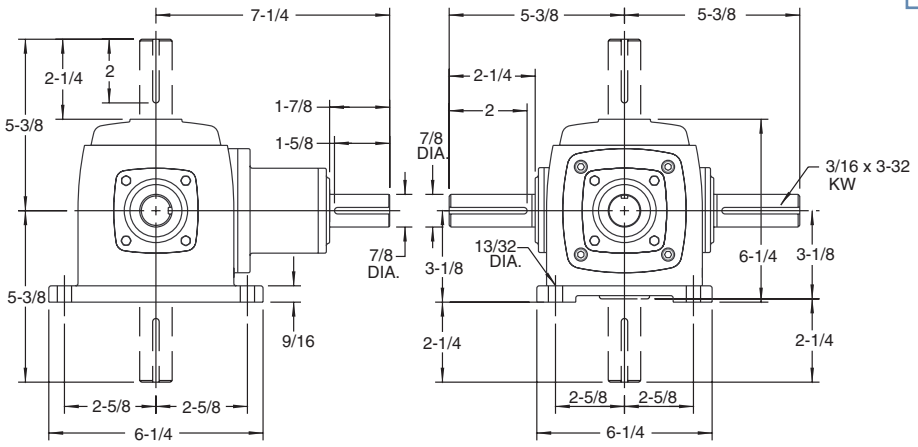
MODEL RA-1

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of three (3) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Factory Filled with EP-4 Gear Oil.



SHIPPING WEIGHT 28 LBS.



Output Shaft Overhung Load = 200 lbs, Located 1.36 inches From End of Shaft Extension.

Input Shaft Overhung Load = 135 lbs, Located 0.94 inches From End of Shaft Extension.

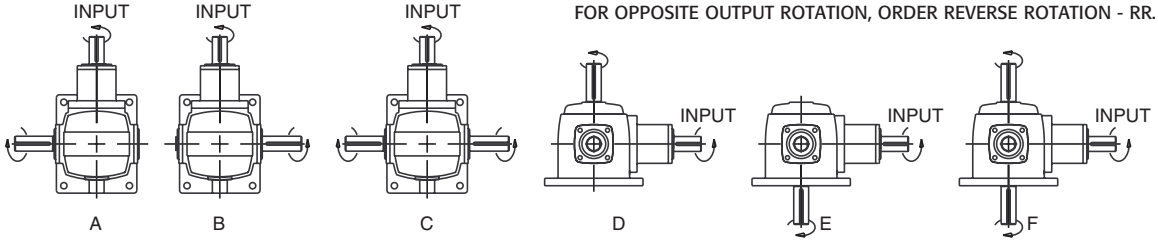
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

RATINGS

INPUT RPM		*REDUCTION RATIOS*			*INCREASER RATIO*
		SPIRAL 1:01	*SPIRAL 2:1*	*SPIRAL 3:1*	*SPIRAL 1:2*
3000	INPUT HORSEPOWER	20.60	15.00	10.60	-
	OUTPUT TORQUE (IN-LBS)	433	630	668	-
2400	INPUT HORSEPOWER	17.60	12.80	8.70	-
	OUTPUT TORQUE (IN-LBS)	462	672	685	-
1750	INPUT HORSEPOWER	14.10	10.30	6.50	-
	OUTPUT TORQUE (IN-LBS)	508	742	702	-
1150	INPUT HORSEPOWER	10.50	7.50	4.50	13.96
	OUTPUT TORQUE (IN-LBS)	575	822	740	382
850	INPUT HORSEPOWER	8.50	5.70	3.40	10.68
	OUTPUT TORQUE (IN-LBS)	630	845	756	396
690	INPUT HORSEPOWER	7.30	4.70	2.80	8.83
	OUTPUT TORQUE (IN-LBS)	667	859	767	404
540	INPUT HORSEPOWER	6.00	3.80	2.20	7.18
	OUTPUT TORQUE (IN-LBS)	700	887	770	419
300	INPUT HORSEPOWER	3.50	2.20	1.30	4.19
	OUTPUT TORQUE (IN-LBS)	735	924	819	441
100	INPUT HORSEPOWER	1.30	0.77	0.45	1.49
	OUTPUT TORQUE (IN-LBS)	819	971	851	469

ASSEMBLIES

ROTATIONS SHOWN ARE FOR STANDARD ROTATION - SR
FOR OPPOSITE OUTPUT ROTATION, ORDER REVERSE ROTATION - RR.



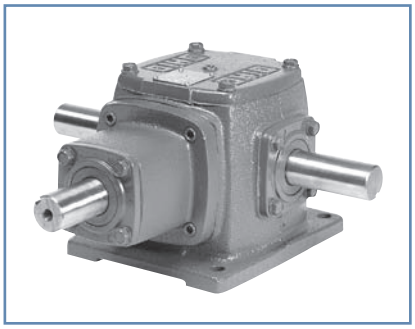
IN ADDITION TO ASSEMBLY STYLE, SPECIFY MOUNTING POSITION WHEN ORDERING-SEE PAGE D-64.

CALL: (605) 225-0360 • FAX: (605) 225-0567

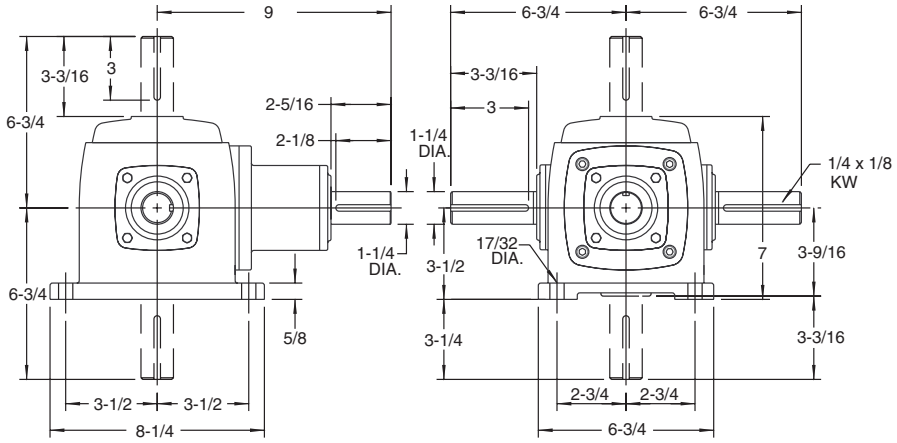
MODEL RA-2

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of three (3) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Factory Filled with EP-4 Gear Oil.



SHIPPING WEIGHT 40 LBS.



Output Shaft Overhung Load = 400 lbs, Located 1.93 inches From End of Shaft Extension.

Input Shaft Overhung Load = 270 lbs, Located 1.16 inches From End of Shaft Extension.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

RATINGS

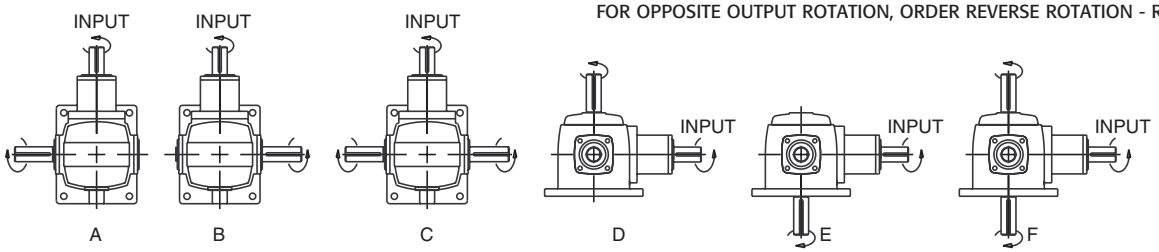
INPUT RPM		REDUCTION RATIOS			INCREASER RATIO
		SPIRAL 1:1	SPIRAL 2:1	SPIRAL 3:1	SPIRAL 1:2
2400	INPUT HORSEPOWER	27.30	19.10	16.30	-
	OUTPUT TORQUE (IN-LBS)	717	1003	1284	-
1750	INPUT HORSEPOWER	21.90	15.30	13.10	-
	OUTPUT TORQUE (IN-LBS)	789	1102	1415	-
1150	INPUT HORSEPOWER	16.30	10.90	9.70	20.22
	OUTPUT TORQUE (IN-LBS)	893	1195	1595	554
850	INPUT HORSEPOWER	13.20	8.30	7.40	15.49
	OUTPUT TORQUE (IN-LBS)	979	1231	1646	575
690	INPUT HORSEPOWER	11.40	6.90	6.10	12.94
	OUTPUT TORQUE (IN-LBS)	1041	1261	1672	591
540	INPUT HORSEPOWER	9.60	5.50	4.80	10.36
	OUTPUT TORQUE (IN-LBS)	1120	1284	1681	605
300	INPUT HORSEPOWER	6.10	3.20	2.80	6.10
	OUTPUT TORQUE (IN-LBS)	1282	1345	1765	640
100	INPUT HORSEPOWER	2.20	1.10	1.00	2.13
	OUTPUT TORQUE (IN-LBS)	1387	1387	1891	670

CROSS SHAFT REDUCTION RATIOS		
DIMENSION	SPIRAL 1:1	SPIRAL 2:1
DIA. X	1.250 / 1.249	
KEYWAY Z	1/4 X 1/8 X 3.00 P&W KW	

CROSS SHAFT INCREASER RATIOS		
DIMENSION	SPIRAL 1:2 STYLE A, B, C, D, E	SPIRAL 1:2 STYLE C, F
DIA. X	1.250 / 1.249	.750 / .749
KEYWAY Z	1/4 X 1/8 X 3.00 P&W KW	3/16 X 3/32 X 3.00 P&W KW

ASSEMBLIES

ROTATIONS SHOWN ARE FOR STANDARD ROTATION - SR
FOR OPPOSITE OUTPUT ROTATION, ORDER REVERSE ROTATION - RR.

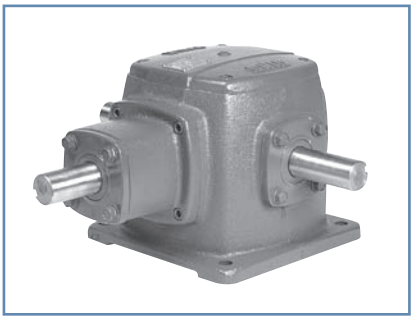


IN ADDITION TO ASSEMBLY STYLE, SPECIFY MOUNTING POSITION WHEN ORDERING-SEE PAGE D-64.

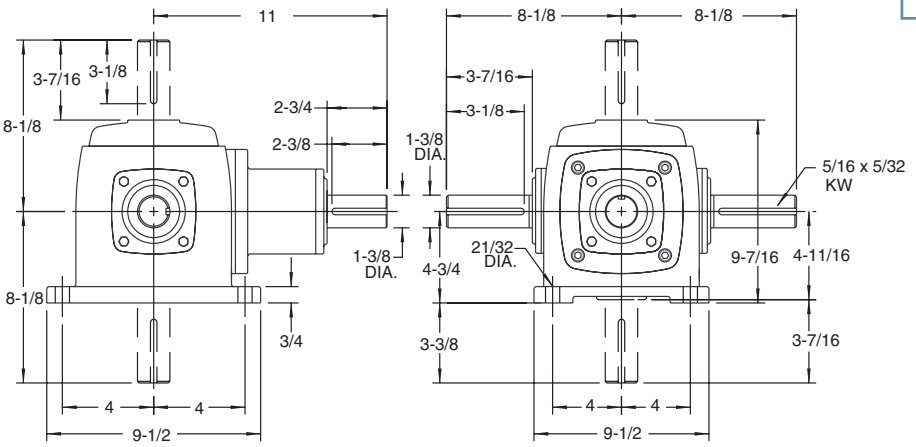
MODEL RA-3

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of three (3) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Factory Filled with EP-4 Gear Oil.



SHIPPING WEIGHT 85 LBS.



Output Shaft Overhung Load = 600 lbs, Located 2.07 inches From End of Shaft Extension.

Input Shaft Overhung Load = 400 lbs, Located 1.37 inches From End of Shaft Extension.

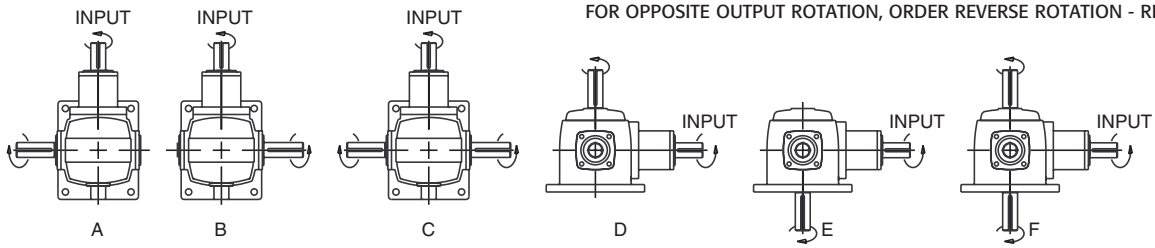
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

RATINGS

INPUT RPM		*REDUCTION RATIOS*			*INCREASER RATIO*
		SPIRAL 1:1	*SPIRAL 2:1*	*SPIRAL 3:1*	*SPIRAL 1:2*
2400	INPUT HORSEPOWER	51.3	49.6	35.2	-
	OUTPUT TORQUE (IN-LBS)	1347	2605	2773	-
1750	INPUT HORSEPOWER	41.1	39.6	27.3	-
	OUTPUT TORQUE (IN-LBS)	1480	2852	2950	-
1150	INPUT HORSEPOWER	30.0	27.3	18.7	50.2
	OUTPUT TORQUE (IN-LBS)	1644	2992	3075	1376
850	INPUT HORSEPOWER	22.7	20.9	14.2	38.7
	OUTPUT TORQUE (IN-LBS)	1683	3099	3159	1435
690	INPUT HORSEPOWER	18.8	17.3	11.8	32.0
	OUTPUT TORQUE (IN-LBS)	1717	3160	3233	1470
540	INPUT HORSEPOWER	15.1	13.8	9.4	25.87
	OUTPUT TORQUE (IN-LBS)	1762	3221	3291	1507
300	INPUT HORSEPOWER	8.8	8.0	5.4	15.13
	OUTPUT TORQUE (IN-LBS)	1849	3361	3403	1590
100	INPUT HORSEPOWER	3.2	2.9	1.9	5.57
	OUTPUT TORQUE (IN-LBS)	2017	3656	3592	1757

ASSEMBLIES

ROTATIONS SHOWN ARE FOR STANDARD ROTATION - SR
FOR OPPOSITE OUTPUT ROTATION, ORDER REVERSE ROTATION - RR.



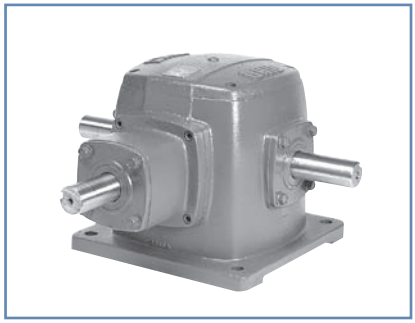
IN ADDITION TO ASSEMBLY STYLE, SPECIFY MOUNTING POSITION WHEN ORDERING-SEE PAGE D-64.

CALL: (605) 225-0360 • FAX: (605) 225-0567

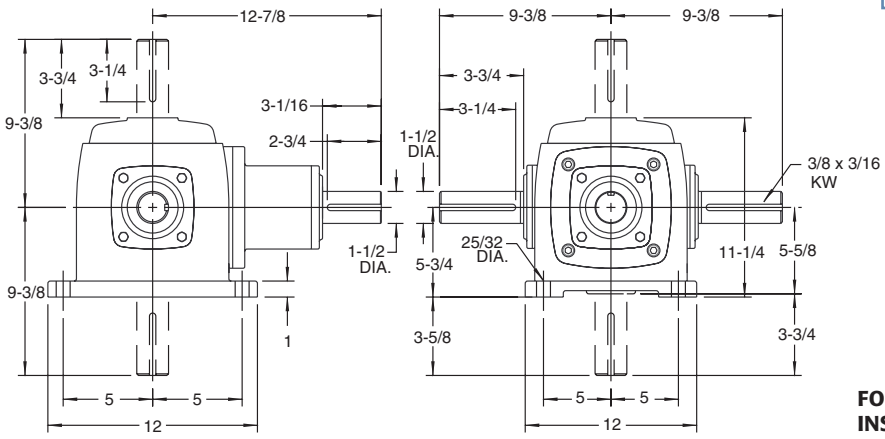
MODEL RA-4

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of three (3) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Factory Filled with EP-4 Gear Oil.



SHIPPING WEIGHT 140 LBS.



Output Shaft Overhung Load = 800 lbs, Located 2.25 inches From End of Shaft Extension.

Input Shaft Overhung Load = 550 lbs, Located 1.56 inches From End of Shaft Extension.

Heavy Duty Version with 1-3/4 Dia. Shafts Available, Consult Factory.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

RATINGS

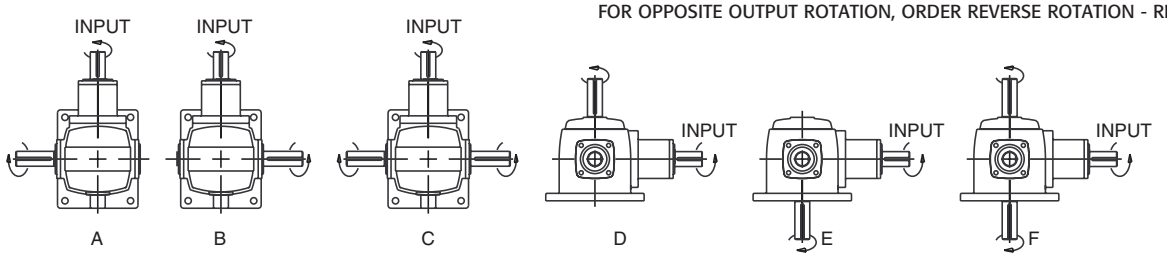
INPUT RPM		REDUCTION RATIOS			INCREASER RATIOS	
		SPIRAL 1:1	SPIRAL 2:1	SPIRAL 3:1	SPIRAL 1:2	SPIRAL 1:3
1750	INPUT HORSEPOWER	52.2	49.5	40.2	-	-
	OUTPUT TORQUE (IN-LBS)	1880	3565	4343	-	-
1150	INPUT HORSEPOWER	38.9	36.9	30.0	-	-
	OUTPUT TORQUE (IN-LBS)	2132	4045	4932	-	-
850	INPUT HORSEPOWER	31.5	29.8	24.2	55.0	-
	OUTPUT TORQUE (IN-LBS)	2336	4419	5383	2037	-
690	INPUT HORSEPOWER	27.2	25.8	20.9	47.8	38.8
	OUTPUT TORQUE (IN-LBS)	2484	4713	5727	2184	1773
540	INPUT HORSEPOWER	22.9	21.7	17.6	40.4	32.9
	OUTPUT TORQUE (IN-LBS)	2673	5065	6162	2359	1918
300	INPUT HORSEPOWER	14.4	14.4	10.5	27.1	19.8
	OUTPUT TORQUE (IN-LBS)	3025	6050	6627	2851	2086
100	INPUT HORSEPOWER	5.2	5.3	3.5	10.2	6.7
	OUTPUT TORQUE (IN-LBS)	3277	6627	6627	3177	2121

CROSS SHAFT REDUCTION RATIOS			
DIMENSION	SPIRAL 1:1	SPIRAL 2:1	SPIRAL 3:1
DIA. X	1.250 / 1.249		
KEYWAY Z	3/8 X 3/16 X 3.25 P&W KW		

CROSS SHAFT INCREASER RATIOS			
DIMENSION	SPIRAL 1:2 STYLE A, B, D, E	SPIRAL 1:2 A, B, D, E	SPIRAL 1:3 C, F
DIA. X	1.500 / 1.499		1.187 / 1.186
KEYWAY Z	3/8 X 3/16 X 3.25 P&W KW		1/4 X 1/8 X 3.25 P&W

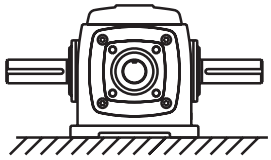
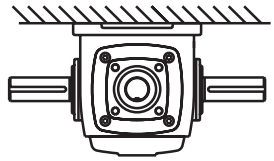
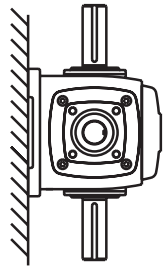
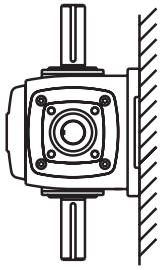
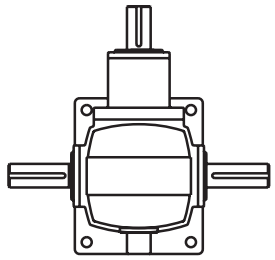
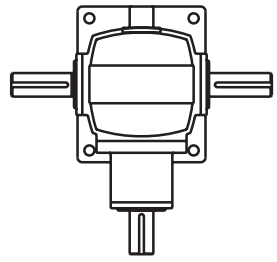
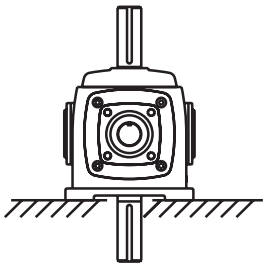
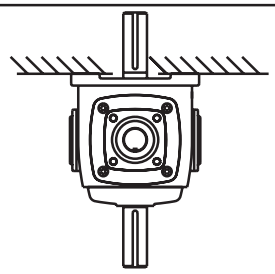
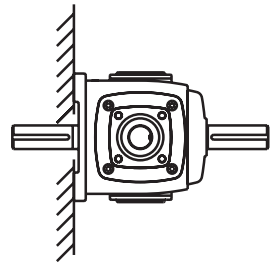
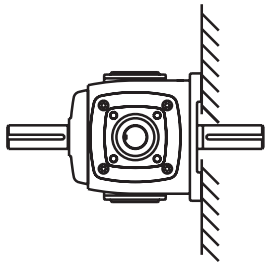
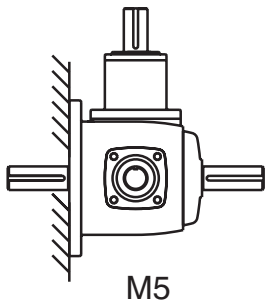
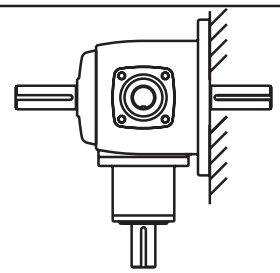
ASSEMBLIES

ROTATIONS SHOWN ARE FOR STANDARD ROTATION - SR
FOR OPPOSITE OUTPUT ROTATION, ORDER REVERSE ROTATION - RR.



IN ADDITION TO ASSEMBLY STYLE, SPECIFY MOUNTING POSITION WHEN ORDERING-SEE PAGE D-64.

RA MOUNTING POSITIONS

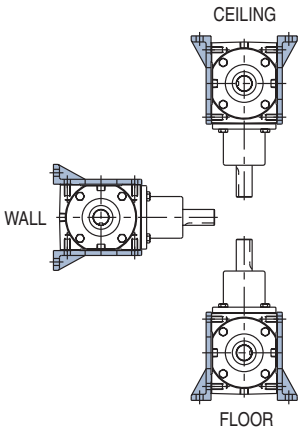
ASSEMBLIES A, B, & C	 M1 FLOOR MOUNT	 M2 CEILING MOUNT	 M3 WALL MOUNT
ASSEMBLIES A, B, & C	 M4 WALL MOUNT	 M5 WALL MOUNT	 M6 WALL MOUNT
ASSEMBLIES D, E, & F	 M1 FLOOR MOUNT	 M2 CEILING MOUNT	 M3 WALL MOUNT
ASSEMBLIES D, E, & F	 M4 WALL MOUNT	 M5 WALL MOUNT	 M6 WALL MOUNT

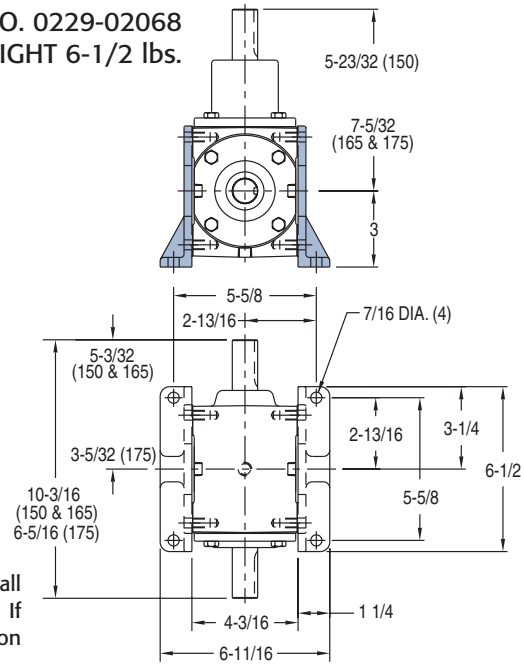
ACCESSORIES AND FACTORY OPTIONS

FOOT MOUNTING KIT (ACCESSORY)

MODELS 150, 165, 175

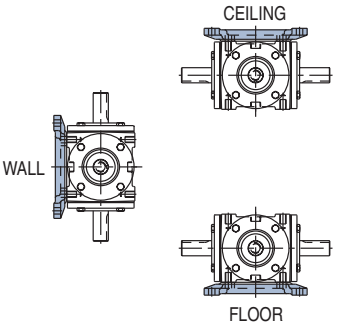
KIT NO. 0229-02068
(KIT ONLY) WEIGHT 6-1/2 lbs.

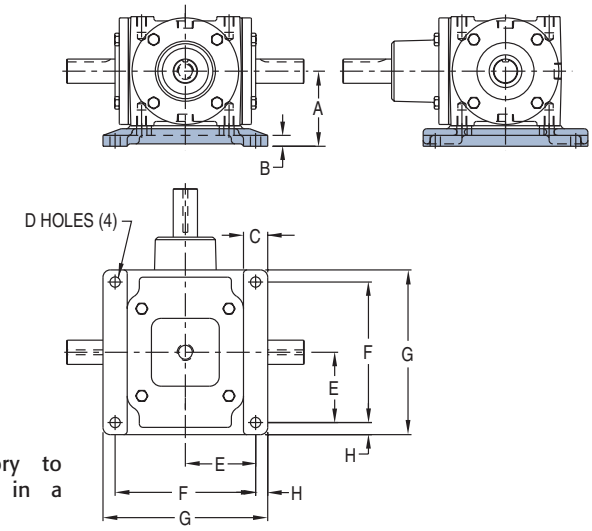




FOOT MOUNTING KITS are available as an accessory to provide ceiling, floor, or wall mounting with the pinion shaft positioned at right angle to the mounting surface. If any shaft is mounted in a vertical position, consult the factory for special lubrication instructions.

BASE MOUNTING KIT (ACCESSORY)





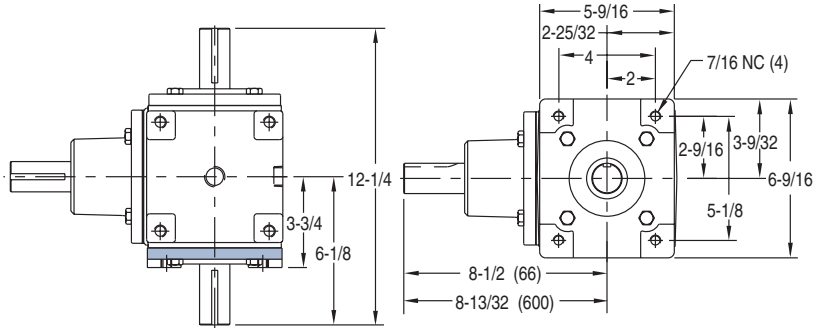
BASE MOUNTING KITS as illustrated is available as an accessory to provide ceiling, floor, or wall mounting. If any shaft is mounted in a vertical position, consult the factory for special lubrication instructions.

MODEL	A	B	C	D	E	F	G	H	PART NUMBER	WT. EA. LBS.
150, 165, 175	3	3/8	NA	7/16	2-13/16	5-5/8	6-1/2	7/16	0229-00008	8
66, 65, 600	3-7/8	9/16	1-1/4	17/32	3-5/8	7-1/4	8-1/2	5/8	0229-00011	15
88, 800, 810, 850	5-1/4	5/8	1-3/4	17/32	5	10	11-1/2	3/4	0229-00012	31
1000, 1010, 1050	6-1/8	3/4	1-3/4	17/32	5-3/4	11-1/2	13	3/4	0229-00013	40
1200, 1250	8	31/32	2-1/2	15/16	7	14	16-5/8	1-5/16	0229-00014	75

ACCESSORIES AND FACTORY OPTIONS

CROSS SHAFT MOUNTING (FACTORY OPTION)

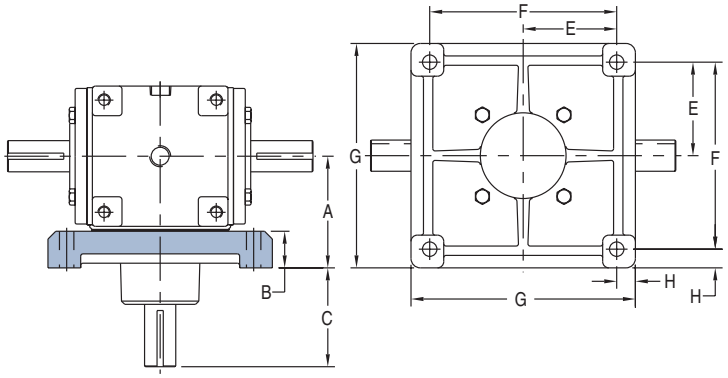
MODELS 66, 600



CROSS SHAFT MOUNTING is available as a **FACTORY OPTION** to provide a mounting face on the shaft side of the gear drive. The Mounting Flange also serves as the bearing cap and is factory installed. If any shaft is mounted in a vertical position, consult the factory for special lubrication instructions.

PINION SHAFT MOUNTING KIT (FACTORY OPTION)

MODELS 66, 65, 600, 88, 800, 810, 850



PINION SHAFT MOUNTING KIT is available as a **FACTORY OPTION** to provide a mounting flange on the pinion face of the gear drive. If any shaft is mounted in a vertical position, consult the factory for special lubrication instructions.

MODEL	A	B	C	D	E	F	G	H	WT. EA. LBS.
66, 65, 600	4-1/2	1-15/32	3-15/16 (66, 65) 3-29/32 (600)	37/64	3-3/4	7-1/2	9	3/4	18
88, 800, 810, 850	5-1/2	1-1/16	5-3/8 (88) 6 (800, 810, 850)	37/64	5	10	11-1/4	5/8	31

REVERSING SHIFT MECHANISM

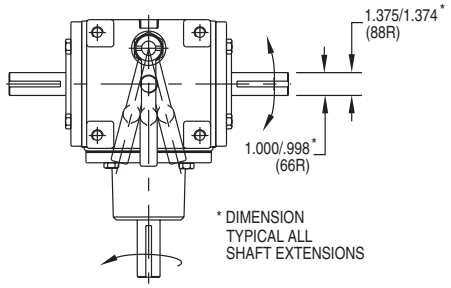
MODELS 66R, 88R (FACTORY OPTION)

For output shaft change of rotation.

1. FORWARD

2. NEUTRAL

3. REVERSE



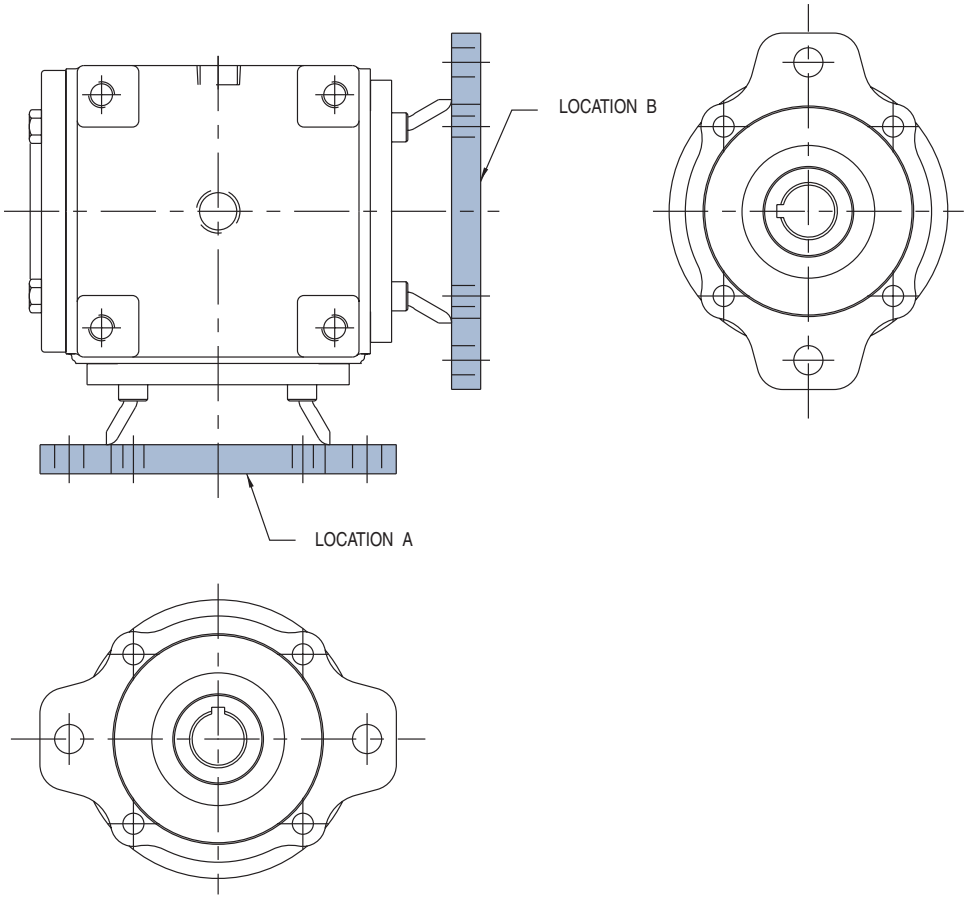
MODEL	RATIOS AVAILABLE			
	1:1	1.5:1	2:1	3:1
66R	X	X	X	
88R	X	X	X	X

NOTE: REVERSING UNITS ARE DESIGNED FOR LIGHT DUTY APPLICATIONS. THE RATINGS FOR REVERSING UNITS ARE LESS THAN THE RATINGS FOR THE STANDARD UNITS SHOWN ON PAGES D-24 AND D-30.

MODELS 165, 175, 66, 65, 600, 88, 800, 850 HYDRAULIC MOTOR MOUNTS

HYDRAULIC MOTOR MOUNTING (FACTORY OPTION)

HYDRAULIC MOTOR MOUNTS ARE AVAILABLE AS SHOWN IN THE CHART BELOW. HYDRAULIC MOTOR MOUNTS ARE AVAILABLE ONLY AS FACTORY OPTIONS. FOR ADDITIONAL INFORMATION AND DIMENSIONS CONTACT HUB CITY CUSTOMER SERVICE. ENGINEERING DRAWINGS OF THESE UNITS ARE AVAILABLE UPON REQUEST.



D

HYDRAULIC MOTOR MOUNTS AVAILABLE

MODEL	*SAE A (2) Hole Female Location A*	*SAE A (4) Hole Female Location A*	*SAE B (2) or (4) Hole Female Location A*	*SAE B (2) or (4) Hole Female Location B*	*SAE B (2) or (4) Hole Male Location A*	*SAE C (2) Hole Female Location A*	*SAE C (4) Hole Female Location A*	*SAE C (4) Hole Female Location A*
165, 175	X	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
66, 65, 600	X	X	X	X	X	Not Available	X	X
88, 800, 850	Not Available	Not Available	X	x (2) Hole Only	Not Available	X	Not Available	Not Available

HYDRAULIC MOTOR MOUNTS LISTED AS NOT AVAILABLE CAN BE MANUFACTURED ON A SPECIAL ORDER BASIS.

FACTORY OPTIONS

The following factory options are available for gear drives in this catalog. Contact the factory for details on price, availability, and specifications.

CLEANLINE™ (REFER TO SECTION O)

When application conditions demand premium washdown duty gear drives.

FEATURES
FDA approved white acrylic paint
Corrosion resistant shaft treatment or stainless steel shafts
Stainless steel hardware and nameplate

OPTIONS
BISSC Standards

METRIC VERSIONS (SEE PAGES D-56 THRU D-58)

FEATURES
Metric shaft dimensions
Metric mounting dimensions

OPTIONS
Modified and Custom Designs

C-FACE MOTOR FLANGES

Motor Flanges are available for select models of Bevel Gear Drives. Motor Flanges must be factory assembled.

MODIFIED AND CUSTOM DESIGNS

If you have looked through this catalog and do not see exactly what you need, Hub City has the capability and engineering expertise to design and produce a special drive. Capabilities range from flange and shaft modifications, to custom housing dimensions. Consult the factory or your Hub City representative with your specifications.

COOLING TOWER DRIVES

Cooling Tower Drive Features. E-2
Selection of Units, Classes of Service,
Service Factors E-3
Outline Dimensions
Models 5000, 8000, 9000 . . . . . .E-4

E

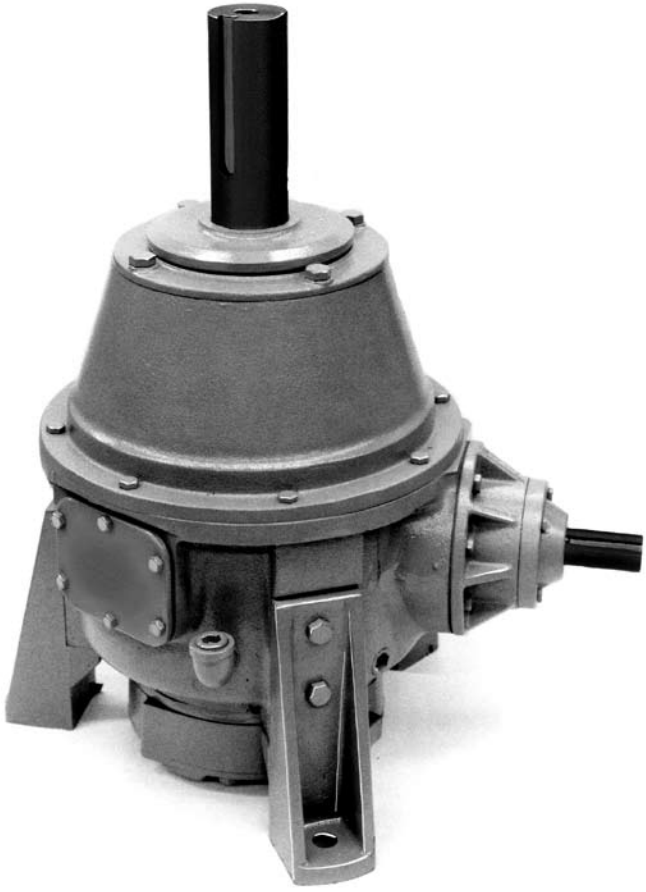
COOLING TOWER DRIVES

BASIC SPECIFICATIONS

- Power ratings from 12 HP to 168 HP.
- Output torque capability to 31,000 inch/lbs.
- Ratios from 2.62:1 to 7.33:1.

STANDARD FEATURES

- Heavy duty alloy cast iron housings provide vibration dampening, reduced noise level, precision gear and bearing alignment under load
- Heavy duty matched and lapped nickel alloy spiral bevel gears for efficient operation and durability
- High capacity tapered roller bearings at all bearing positions
- Superior strength high alloy steel fan shafts
- Double lip, spring loaded, extended wear life input seals
- Five channel labyrinth type fan shaft seal to exclude and expel foreign material
- Gear sets and fan shafts phosphate coated to prevent gear profile scoring during start-up and run in, and shaft fan/coupling interface fretting corrosion
- Hub City "counter flow" bearing and gear lubrication system to optimize unit life
- High volume isolated sloped bottom condensation sump to enhance lubrication and bearing life in the most hostile environments
- Internal and external housing surfaces double prime coated to maximize corrosion resistance
- External housing surfaces finish coated with satin gloss industrial enamel for additional corrosion protection



STANDARD FEATURES *(con't)*

- All internal components and surfaces factory coated with a corrosion resistant material to facilitate site storage prior to installation
- Large inspection ports
- Oil fill, level and drain ports for remote service plumbing
- Units are designed using AGMA (American Gear Manufacturers Association) and CMI (Cooling Technology Institute) as guidelines

OPTIONAL FEATURES

- Extreme low temperature operation (see page E3)
- Fan shaft contact lip seals and heavy-duty industrial breathers
- Oil level column sight gages for remote observation
- Hub City cooling tower drives can be economically factory modified to meet unique application and/or industrial/civil code requirements.

CALL: (605) 225-0360 • FAX: (605) 225-0567

RATINGS & SELECTION

RATINGS FOR CLASS 1 SERVICE (1.0 SERVICE FACTOR)

1750 RPM INPUT

MODEL NO.	5000			8000						9000			
GEAR RATIO	2.62	3.27	3.78	3.25	3.78	4.11	4.86	5.57	6.67	4.56	5.50	6.50	7.33
HORSEPOWER	23.4	17.7	12.5	98.0	95.0	82.0	56.0	50.0	32.0	168.0	156.0	104.0	86.0

1450 RPM INPUT

MODEL NO.	5000			8000						9000			
GEAR RATIO	2.62	3.27	3.78	3.25	3.78	4.11	4.86	5.57	6.67	4.56	5.50	6.50	7.33
HORSEPOWER	20.0	14.0	10.7	82.0	79.0	66.0	46.6	43.0	27.7	144.0	126.0	89.0	69.0

1150 RPM INPUT

MODEL NO.	5000			8000						9000			
GEAR RATIO	2.62	3.27	3.78	3.25	3.78	4.11	4.86	5.57	6.67	4.56	5.50	6.50	7.33
HORSEPOWER	16.4	11.0	8.6	65.0	62.5	54.0	37.3	33.0	22.3	115.0	100.0	67.0	55.0

TABLE II – SERVICE FACTORS*

Light Air Conditioning, Intermittent Duty cycle, Seasonal Application. 1.50
Continuous Industrial Service, 24 Hours Per Day, Large Air Conditioning 1.75
Heavy-duty Industrial, Continuous 24 Hours Per Day, High Loading 2.00
†Multi-Cylinder engines, Heavy-duty Service 3.00

*THE COOLING TOWER INSTITUTE (CTI) RECOMMENDS A SERVICE FACTOR OF 2.00 FOR ALL APPLICATIONS.

†CONSULT WITH FACTORY ENGINEERING ON APPLICATION.

E

ENGINEERING FORMULAS

$$\text{Gear Ratio} \times \frac{\text{Motor RPM}}{\text{Fan RPM}}$$

Fan tip Speed (ft./Min) = fan Diameter (ft.) x Fan speed (RPM) x 3.1416

$$\text{Fan RPM} \times \frac{\text{Motor RPM}}{\text{Gear Ratio}}$$

EXAMPLE: A 24 H.P. Motor is required on a Wet Tower with a fan speed of 320 RPM. The motor speed will be 1750 RPM. This will be for year-around heavy industrial use.

The approximate Gear Ratio can be determined by dividing Motor RPM by Fan RPM (i.e. 1750 ÷ 320 = 5.47). the Service Factor is selected by referring to Table II (i.e. 2.0). The required Class I Rating is determined by multiplying the Motor H.P. by the Service Factor (i.e. 25.0 x 2.0 = 50.0 H.P.)

A Gear Drive can now be selected by referring to the table for CLASS I HORSEPOWER @ 1750 RPM INPUT. The MODEL 8000, 5.57:1 Ratio, will be the best selection with an Output Fan Speed of 314 RPM. Page E-4 illustrates full dimension and mounting particulars. TO ORDER, SPECIFY MODEL AND GEAR RATIO.

COLD TEMPERATURE OPERATION

For cold temperature operation Hub City can factory install thermostatically controlled heaters or supply low temperature synthetic lubricant. Refer to Section R for lubrication instructions or contact the factory.

OUTLINE DIMENSIONS

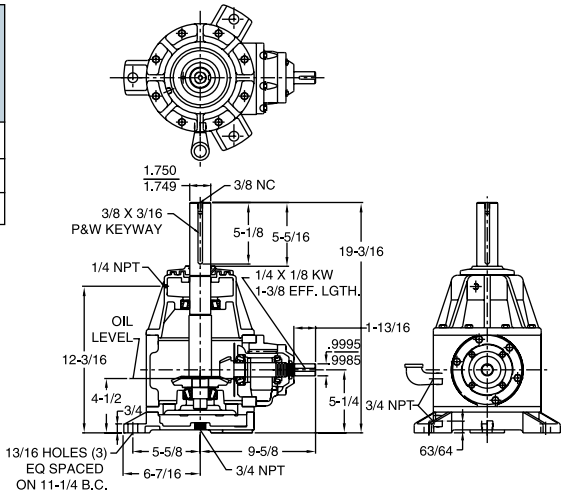
SERIES 5000



RATIO	WR^2 MOMENT OF INERTIA REFERRED TO — HIGH SPEED SHAFT	LOW SPEED SHAFT
2.62:1	4.7 lb-in²	31.9 lb-in²
3.27:1	3.9 lb-in²	41.9 lb-in²
3.78:1	3.5 lb-in²	49.3 lb-in²

DRY SHIPPING WEIGHT . . . . . .97 lbs.

HUB CITY LUBRICANT RECOMMENDED
SEE SECTION R.



SERIES 8000

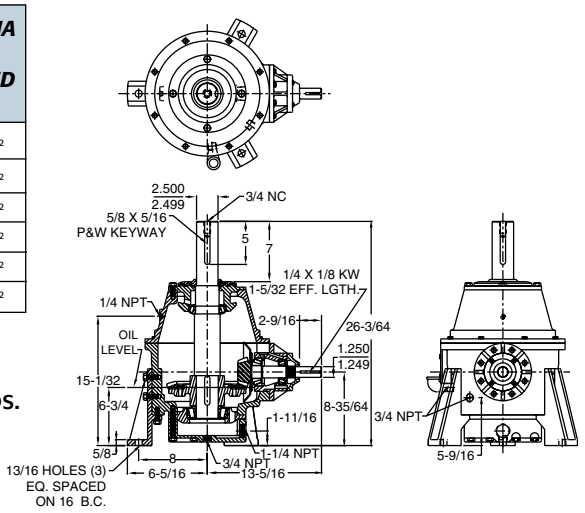


RATIO	WR^2 MOMENT OF INERTIA REFERRED TO — HIGH SPEED SHAFT	LOW SPEED SHAFT
***3.25:1**	32.0 lb-in²	443.6 lb-in²
***3.78:1**	35.7 lb-in²	510.2 lb-in²
4.11:1	33.6 lb-in²	568.0 lb-in²
4.86:1	28.7 lb-in²	678.0 lb-in²
5.57:1	25.4 lb-in²	768.4 lb-in²
6.67:1	21.5 lb-in²	957.0 lb-in²

* MFG. TO ORDER — CONSULT FACTORY FOR PRICE AND DELIVERY.

DRY SHIPPING WEIGHT . . . . . 270 lbs.

HUB CITY LUBRICANT RECOMMENDED
SEE SECTION R.



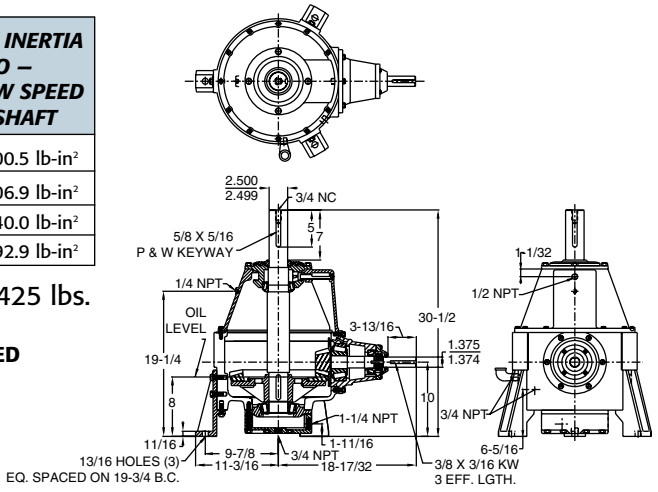
SERIES 9000



RATIO	WR^2 MOMENT OF INERTIA REFERRED TO — HIGH SPEED SHAFT	LOW SPEED SHAFT
4.56:1	91.4 lb-in²	1900.5 lb-in²
5.50:1	72.9 lb-in²	2206.9 lb-in²
6.50:1	60.1 lb-in²	2540.0 lb-in²
7.33:1	53.8 lb-in²	2892.9 lb-in²

DRY SHIPPING WEIGHT . . . . . 425 lbs.

HUB CITY LUBRICANT RECOMMENDED
SEE SECTION R.



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

CALL: (605) 225-0360 • FAX: (605) 225-0567

PARALLEL SHAFT DRIVES

Introductory Information F-2
Pre-Selection Information F-3
Quick Selection Tables F-4, F5
Rating and Dimensions
- Helical Ratio Multipliers ..... F-6 to F-9
- Model 22 - Single Reduction Speed Reducer F-10, F-11
- Model 230 - Single Reduction Speed Reducer F-12, F-13
- Model 240 - Single Reduction Speed Reducer F-14, F-15
- Model 280 - Single Reduction Speed Reducer F-16, F-17
- Model 85L - Single Reduction Speed Reducer F-18, F-19
- Model 200 - Single Reduction Speed Reducer F-20, F-21
- Model 95L - Single Reduction Speed Reducer F-22, F-23
- Model 95H - Single Reduction Speed Reducer F-24, F-25
- Model 290 - Single Reduction Speed Reducer F-26, F-27
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- Model 8 - Double Reduction Speed Reducer F-48, F-49
- Model HT100 - Shifting Transmission F-50, F-51

SAE Standards F-52, F-53
Factory Options F-54

F

PARALLEL SHAFT DRIVES

BASIC SPECIFICATIONS

- Power ratings from 1/4 to 530 hp
- Output Torque to 120,000 inch/lbs
- Ratios from 1:1 through 70:1
- Output Speeds 24 rpm to 2400 rpm

STANDARD FEATURES

- Up to three input modes for integrating with hydraulic or electric motors or for externally coupled driving sources.
- Cast iron housing designed for superior thermal conductivity provides rigid gear and bearing support.
- High strength alloy case hardened gears for greater wear life.
- Alloy shafting for greater strength.
- Precision ball bearings or tapered roller bearings for endurance and strength.
- Heavy duty industrial seals to keep contaminants out.

OPTIONAL FEATURES

- Modified Standard and Custom Designs
- Optional Output Bore Sizes for Shaft Mount Versions
- CleanLine Washdown and BISSC® Configurations
- Unique or Harsh Environment Adaptations



MOTORIZED PARALLEL SHAFT DRIVES

- Motors Produced by Marathon Electric for High Efficiency, Reliability and Durability
- General or Definite Purpose Motors
- Brake or Inverter Duty Motors, DC or Washdown Motors
- Motor/Gear Drive Package Incentives Available, Consult Factory

FOR MORE SHAFT MOUNTED REDUCERS SEE POWERTORQUE® SHAFT MOUNT REDUCERS SECTION G & POWERATIO 2000® COMPACT HELICAL PARALLEL DRIVES SECTION J

PRE-SELECTION INFORMATION

GENERAL DESIGN FEATURES

Hub City parallel shaft speed reducers provide you with a nearly unlimited degree of design flexibility in OEM configurations, or for incorporation in existing systems. Up to three input modes provide for integration with hydraulic motors, electric motors, or for externally coupled driving sources.

Units can be specified for torque to 122,361 lb.-in., horsepower ratings to 530 H.P., and reduction ratios to 70:1, depending on the model and AGMA class of operation required. The wide range of ratios is facilitated by the availability of single and double reduction designs.

Hub City parallel-shaft speed reducers provide the advantages of a sealed, integrated configuration —compact and easily planned into your systems with inherently accurate shaft alignment. A wide range of ratios and ratings offer a selection which can usually be utilized with the driven equipment. These capabilities can also be extended where necessary by use of external V-belts, chains, and other couplings.

All units are designed for long service under heavy-duty conditions, and machined from high alloy gray iron or ductile iron housing castings. The gear drives are equipped with ball, roller or tapered roller bearings, depending on position in the gear train and on operating requirements. Units also include high strength high alloy case hardened gears, double lip seals, and high quality steel shafts and sleeves.

Hub City provides adaptors for most units for both hydraulic and NEMA C Face electric motors, as well as all required bushings, backstops, torque arms, and other accessories that may be required for most applications. Consult each individual reducer dimension page for input styles available.

This catalog includes representative standard Hub City shaft-mounted speed reducers; however, complete engineering capabilities are available to you for development of modified or new designs.

INPUT CONFIGURATION DESCRIPTIONS

Shaft Input Units – These speed reducers are designed for external coupling through V-belts, chain drives, or other means. Overhung load data can be provided on individual models.



Hydraulic Motor Units – These speed reducers are provided with either a 2-bolt or 4-bolt mounting flange for direct coupling to a hydraulic motor. The hydraulic motor shaft mates directly with the reducer input pinion through a spline or round key adaptor. A "floating" adaptor accommodates any possible concentricity difference.



Electric Motor Units – Hub City speed reducers in this group are equipped with a NEMA "C" flange for direct mounting to a flanged electric motor. The electric motor shaft and reducer input pinion mate coaxially.



BACKSTOPS

Optional backstops are offered at extra cost for applications that require the prevention of reverse rotation. Backstops are built-in to the high speed shaft module assembly. Backstops must be factory assembled. When ordering specify desired direction of free rotation of the reducer output shaft – as viewed facing the end of the shaft extension.

CAUTION Backstops are not recommended for applications involving energy absorption and shock or torque loads in excess of reducer ratings or on applications such as chair lifts, amusement rides, etc. where the safety of a person or property is dependent on their function. On such applications, other safety devices should be provided.

Backstops are designed to prevent rotation not more than five times in an 8 hour period with a minimum of one minute in the over-running direction between each engagement. If reversing operation is more frequent or over-running time is less, the application should be referred to the factory.

NOTE: LUBRICANTS WITH EXTREME PRESSURE (EP) ADDITIVES SHOULD NOT BE USED IN UNITS WITH BUILT-IN BACKSTOP.

EFFICIENCY

Helical or Spur Gearing and Ball or Tapered Roller Bearings provide a drive with very high efficiency. The approximate efficiency is 97.5% per gear stage.

HOW TO ORDER

When ordering a Parallel Shaft Drive it is necessary to select a model, gear ratio, input configuration and assembly style where applicable.

For shaft mounted units also specify output bore size.

Input configuration options:

- Shaft
- Hydraulic (specify flange size and input bushing size)
- Electric(specify flange size and input bushing size)
- (see above for Input Configuration Descriptions)

NOT ALL INPUT CONFIGURATIONS ARE AVAILABLE ON ALL MODELS.
SEE INDIVIDUAL MODEL PAGES FOR INPUT CONFIGURATIONS AVAILABLE.

F

QUICK MODEL SELECTION

Hub City Parallel Shaft Speed Reducers can be selected on the basis of speed and torque or horsepower. Quick selection tables on the following pages can be used with 1750 rpm input speed and uniform power source. Table 3 provides reducer selection by H.P. and output speed. It also provides different AGMA load classifications designated for shaft mount reducers. Tables 4 and 5 provide selection by output torque and output speed, for Class I service (1.00 S.F.). Conversion factors for AGMA class II and III are provided below the tables.
For other input speeds, and specific rating data, refer to the unit rating tables for each model.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.25
	Intermittent 3 hrs.	*	1.00	1.50
	3 - 10 hours	1.00	1.25	1.75
	Over 10 hours	1.25	1.50	2.00
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.75
	Intermittent 3 hrs.	1.25	1.50	2.00
	3 - 10 hours	1.50	1.75	2.25
	Over 10 hours	1.75	2.00	2.50
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

Explanatory Notes

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

TABLE 3 – REDUCER SELECTION: H.P. / OUTPUT SPEED

HP	CLASS I		CLASS II		CLASS III	
	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL
1/4	6-400	52	8-400	52	13-400	52
1/3	10-400	52	13-400	52	20-400	52
1/2	15-400	52	20-400	52	30-400	52
	6-14	1,83,85L	8-19	1,83,85L	10-29	1,83,85L
3/4	23-400	52	33-400	52	48-400	52
	8-22	1,83,85L	12-32	1,83,85L	15-47	1,83,85L
					11-14	89
1	31-400	52	43-400	52	64-400	52
	12-30	1,83,85L	16-42	1,83,85L	22-63	1,83,85L
	7-11	89	11-15	89	15-21	89
					12-14	3,95L
1-1/2	48-400	52	71-400	52	104-400	52
	17-47	1,83,85L	24-70	1,83,85L	32-103	1,83,85L
	12-16	89	22-23	2	22-31	89
	10-12	3,95L	16-21	89	15-21	3,95L
			13-15	3,95L	10-14	4
2	67-400	52	103-400	52	155-400	52
	22-66	1,83,85L	33-102	1,83,85L	44-154	1,83,85L
	15-21	89	30-32	2	42-43	2
	7-14	4	22-29	89	30-42	89
			18-21	3,95L	22-29	3,95L
			10-17	4	15-21	4
					8-14	5
3	113-400	52	172-400	52	244-400	52
	33-112	1,83,85L	50-171	1,83,85L	72-243	1,83,85L
	23-32	89	34-49	89	68-71	2
	19-22	3.95L	28-33	3,95L	46-67	89
	12-18	4	16-27	4	37-45	3,95L
	6-17	5	8-15	5	23-36	4
					12-22	5

HP	CLASS I		CLASS II		CLASS III	
	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL
5	208-400	52	320-400	52	139-400	1,83,85L
	61-207	1,83,85L	92-319	1,83,85L	128-138	2
	57-60	2	86-91	2	88-137	89
	52-56	89	60-85	89	69-87	3,95L
	33-51	3,95L	48-84	3,95L	38-68	4
	20-32	4	29-47	4	21-37	5
	11-19	5	15-28	5	16-30	6
			12-14	6	10-15	75
7-1/2	360-400	52	157-400	1,83,85L	223-400	1,83,85L
	102-359	1,83,85L	150-156	2	210-222	2
	96-101	2	98-149	89	146-209	89
	64-95	89	78-97	3,95L	117-145	3,95L
	51-63	3,95L	44-77	4	64-116	4
	31-50	4	22-43	5	31-63	5
	16-30	5	18-21	6	24-30	6
	12-15	6	11-17	75	14-23	75
10	147-400	1,83,85L	217-400	1,83,85L	320-400	1,83,85L
	138-146	2	210-216	2	300-319	2
	92-137	89	143-209	89	208-299	89
	72-91	3,95L	113-142	3,95L	164-207	3,95L
	42-71	4	61-112	4	89-163	4
	22-41	5	31-60	5	45-88	5
	17-21	6	24-30	6	33-44	6
	10-16	75	15-23	75	21-32	75
15	239-400	1,83,85L	362-400	1,83,85L	342-400	89
	224-238	2	340-361	2	271-341	3,95L
	156-223	89	239-339	89	152-270	4
	121-155	3,95L	122-237	3,95L	68-151	5
	66-120	4	101-121	4	50-67	6
	33-65	5	48-100	5	30-49	75
	25-32	6	37-47	6		
	16-24	75	21-36	75		

NOTE: THE AGMA LOAD CLASSES PROVIDE FOR A MOMENTARY OR STARTING LOAD OF 2.0 TIMES FOR CLASS I, 2.8 FOR CLASS II AND 4.0 FOR CLASS III

SERVICE FACTORS

The ratings for gear drives in this manual are based on a service factor of 1.00, for uniform load and uniform power source, up to 10 hours of operation per day. For other operating conditions, the application horsepower or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A gear drive should be selected with a rated capacity equal to or greater than the equivalent rating.

AGMA Load Classification Numbers for Gearmotors and Shaft Mount Reducers are listed on pages A-5 and A-6. AGMA Load Classification Numbers for Drives and Reducers are listed on pages A-7 and A-8.

Table 1 designates recommended service factors for various conditions of load, power source, and duration of service.

Table 2 designates load classification numbers for gearmotors and shaft mount reducers with uniform power source, and indicates the relationship between service factors and load classification numbers.

Refer to page A-2 for further information and cautions on the selection of proper service factors.

TABLE 2 – LOAD CLASSIFICATION NUMBERS

LOAD CLASS (S.F.)	UP TO 3 HRS. TOTAL OPERATION PER DAY	3 TO 10 HRS. TOTAL OPERATION PER DAY	OVER 10 HRS. TOTAL OPERATION PER DAY
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

HP	CLASS I		CLASS II		CLASS III	
	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL	OUTPUT RPM	MODEL
20	340-400	1,83,85L	331-400	89	380-400	3,95L
	321-339	2	260-330	3,95L	212-379	4
	219-320	89	147-259	4	100-211	5
	174-218	3,95L	66-146	5	70.99	6
	94-173	4	49-65	6	42-69	75
	45-93	5	30-48	75		
	34-44	6				
	22-33	75				
25	290-400	89	348-400	3,95L	278-400	4
	236-289	3,95L	192-347	4	127-277	5
	123-235	4	88-191	5	93-126	6
	58-122	5	64-87	6	52-92	75
	43-57	6	37-63	75		
	26-42	75				
30	372-400	89	235-400	4	344-400	4
	284-371	3,95L	111-234	5	164-343	5
	158-283	4	79-110	6	120-163	6
	72-157	5	46-78	75	66-119	75
	53-71	6			59-65	8
	32-52	75				
40	360-400	3,95L	235-400	4	234-400	5
	222-359	4	111-234	5	170-233	6
	106-221	5	79-110	6	97-169	75
	75-105	6	46-78	75	59-96	8
	43-74	75				
50	294-400	4	240-300	5	310-400	5
	222-359	4	111-234	5	170-233	6
	100-135	6	86-146	75	130-221	75
	56-99	75	59-85	8	59-129	8
75	231-400	5	350-400	5	370-400	6
	164-230	6	252-349	6	210-369	75
	95-163	75	146-251	75	115-209	8
125	306-400	6	270-300	75	339-400	8
	182-305	75	115-269	8		
150	382-400	6	343-400	75	339-400	8
	225-381	75				
200	316-400	75	339-400	8		
290	339-400	8				

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QUICK MODEL SELECTION

TABLE 4 – OUTPUT TORQUE SELECTION

Single Reduction Speed Reducers
Output Rotation Opposite Input Rotation

(Selections Based on 1750 Input – For other Input Speeds see Rating Tables)
(Torque Given in Lb.-In. Max., for AGMA Class I Service*)

OUTPUT SPEED (RPM)	MODEL NUMBERS												
	NOMINAL RATIO	RM1	RM2	RM3	22	230	240	280	85L	200	95L	95H	290
1750	1:1	NA	NA	NA	919	NA	NA	3179	NA	5589	NA	NA	14610
1150	1.5:1	NA	NA	NA	1100	NA	NA	NA	NA	6917	NA	NA	17250
875	2:1	347	424	1412	1237	NA	NA	NA	2800	7336	4962	10750	19590
690	2.53:1	NA	NA	NA	1237	NA	NA	NA	NA	NA	NA	NA	NA
583	3:1	384	433	1357	NA	713	NA	NA	3290	6602	5657	12100	21535
438	4:1	419	511	1621	NA	545	1214	NA	3534	6288	6100	12500	24000
350	5:1	428	529	1836	NA	437	1310	NA	3740	NA	6380	11400	23335
282	6.2:1	NA	NA	NA	NA	NA	1084	NA	3866	NA	6600	NA	NA
250	7:1	NA	664	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
240	7.3:1	NA	NA	NA	NA	NA	917	NA	NA	NA	NA	NA	NA
233	7.5:1	419	NA	1538	NA	NA	NA	NA	NA	NA	NA	NA	NA
219	8:1	NA	NA	NA	851	NA	NA	NA	NA	NA	NA	NA	NA

* FOR AGMA CLASS II SERVICE, DIVIDE TORQUE RATINGS BY 1.4; FOR CLASS III, BY 2.0.

TABLE 5 – OUTPUT TORQUE SELECTION

F

Double Reduction Speed Reducers
Output Rotation Same As Input Rotation

(Selections Based on 1750 Input – For other Input Speeds see Rating Tables)
(Torque Given in Lb.-In. Max., for AGMA Class I Service*)

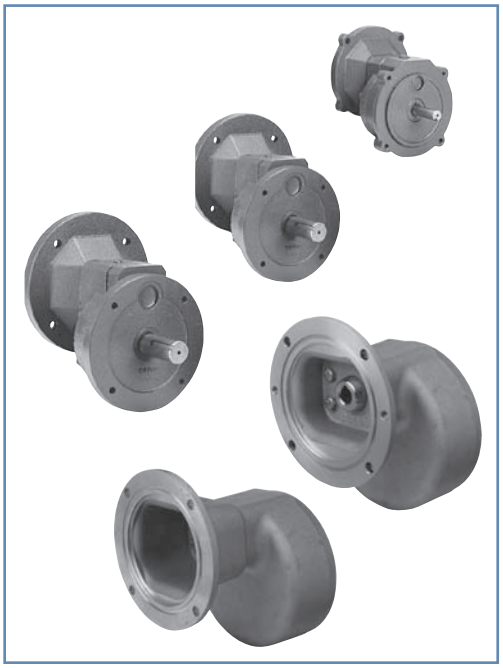
OUTPUT SPEED (RPM)	MODEL NUMBERS											
	NOMINAL RATIO	52	83L	1	2	89	3	4	5	6	75	8
350	5:1	NA	NA	NA	3871	NA	6452	8536	18968	24935	NA	53002
290	6:1	NA	3833	NA	NA	5475	NA	NA	NA	NA	NA	NA
218	8:1	NA	4025	NA	NA	5829	NA	11314	NA	NA	NA	NA
175	10:1	NA	NA	4241	4395	6013	7336	NA	21649	28297	NA	66871
145	12:1	NA	4318	NA	NA	6196	NA	12136	NA	NA	NA	NA
117	15:1	NA	NA	4485	4651	NA	7813	NA	22969	30000	76851	97235
110	16:1	1667	NA	NA	NA	NA	NA	12714	NA	NA	NA	NA
88	20:1	1765	4790	4873	5093	NA	NA	13395	24957	32597	NA	NA
70	25:1	1882	NA	5161	5076	NA	8460	14265	24873	32487	80624	104607
58	30:1	NA	NA	NA	NA	NA	9191	14644	26800	34909	81506	107060
44	40:1	NA	NA	NA	NA	NA	9532	NA	NA	NA	NA	NA
39	45:1	NA	NA	NA	NA	NA	9624	NA	NA	NA	NA	NA
35	50:1	NA	NA	5559	5803	NA	NA	NA	28406	37101	NA	NA
30	60:1	NA	NA	NA	5824	NA	NA	NA	NA	NA	NA	NA
27	65:1	NA	NA	NA	NA	NA	9737	NA	NA	NA	NA	NA
24	70:1	NA	NA	NA	5859	NA	NA	NA	NA	NA	NA	NA

* FOR AGMA CLASS II SERVICE, DIVIDE TORQUE RATINGS BY 1.4; FOR CLASS III, BY 2.0.

MODELS RM1, RM2, RM3 - SINGLE REDUCTION

FEATURES

- Three Cast Iron Models, Two Aluminum Models, One Stainless Steel Model (See Section O)
- Ratios available from 2:1 to 7.5:1
- Can be used as reducer or increaser.
- Provides additional reduction capability when mounted onto Helical Gear Reducer or Worm Gear Reducer
- C-flange or solid input shaft.
- Helical gearing.
- Double lip seals.
- Base mounting available.
- Permanently lubricated at factory.



SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

MODEL NOMENCLATURE EXAMPLE

A RM 1 Q 2.056 56C - 56C

HOUSING MATERIAL
Blank : Cast Iron
A : Aluminum
SS : Stainless Steel (See Section O)
CPA : Cleanline Platinum Plus Aluminum (See Section O)

RATIO MULTIPLIER

UNIT SIZE
1, 2, 3

INPUT OPTION
Q : Quill style C-Face
C : Coupling style C-Face
S : Shaft input

EXACT RATIO

INPUT FRAME SIZE

OUTPUT FRAME SIZE

RM1 RATINGS @1750 RPM INPUT (48, 56 Cast Iron or Aluminum Housing)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	MAX LS OHL
2.056	851	4.69	347	222
2.929	598	3.64	384	265
4.000	438	2.91	419	300
5.111	342	2.33	428	300
7.462	235	1.56	419	300

RM2 RATINGS @1750 RPM INPUT (56, 140 Cast Iron or Aluminum Housing)

				56C OUTPUT	140TC OUTPUT
RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	MAX LS OHL	MAX LS OHL
2.000	875	6.00	424	358	358
2.913	601	4.21	433	375	434
4.000	438	3.63	511	375	455
5.000	350	3.00	529	375	455
7.182	244	2.62	664	375	455

RM3 RATINGS @1750 RPM INPUT (180, 210, 250 Available in Cast Iron Housing Only)

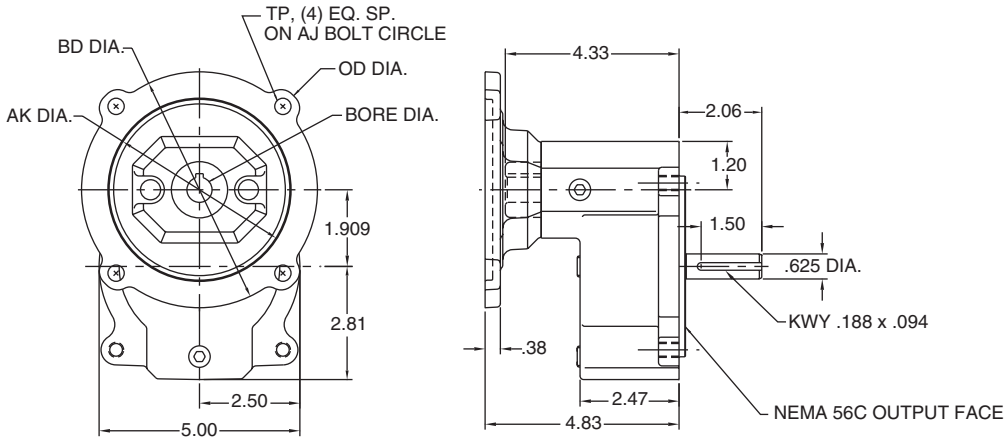
RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	MAX LS OHL
2.000	875	20.00	1412	900
2.964	590	12.98	1357	900
4.045	433	11.35	1621	900
5.167	339	10.07	1836	900
7.538	232	5.80	1544	900

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODELS RM1 & RM2 - SINGLE REDUCTION
CAST IRON HOUSING

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

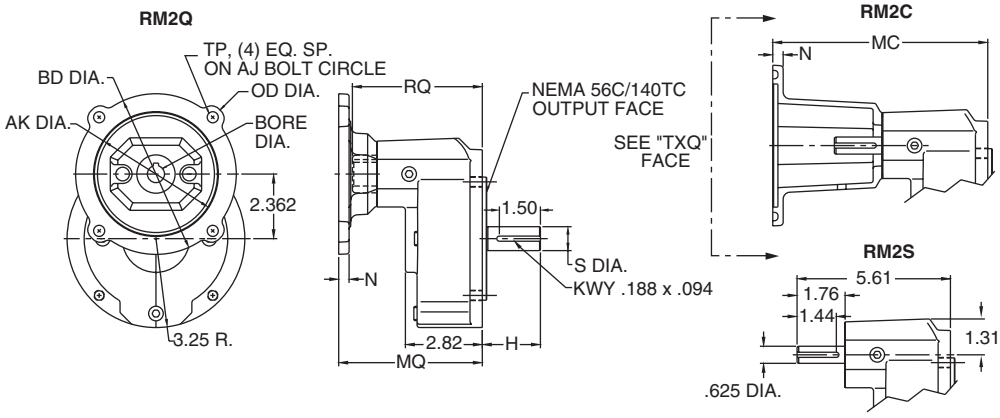
MODEL RM1



	INPUT FRAME	AJ	AK	BD	OD	TP	BORE	INPUT KWY.**	WEIGHT (lbs.)
RM1Q	48C	3.75	3.00	3.88	4.36	.28	.500	1/8 x 1/16	19
	56C	5.88	4.50	5.88	6.64	.41	.625	3/16 x 3/32	19

** KEYWAY WIDTH BY DEPTH.

MODEL RM2



	INPUT-OUTPUT FRAME	AJ	AK	BD	TP	BORE	OD	MQ	N	MC	RQ	IP KWY.*	H	S DIA.	OP KWY.*	WEIGHT (lbs)
RM2Q RM2C RM2S	56C-56C	5.88	4.50	5.88	.41	.625	6.64	5.25	.38	7.86	4.75	.188 x .094	2.06	.625	.188 x .094	22
	56C-140TC	5.88	4.50	5.88	.41	.625	6.64	5.25	.38	7.86	4.75	.188 x .094	2.13	.875	.188 x .094	22
	140TC-56C	5.88	4.50	5.88	.41	.875	6.64	5.25	.38	7.86	4.75	.188 x .094	2.06	.625	.188 x .094	22
	140TC-140TC	5.88	4.50	5.88	.41	.875	6.64	5.25	.38	7.86	4.75	.188 x .094	2.13	.875	.188 x .094	22

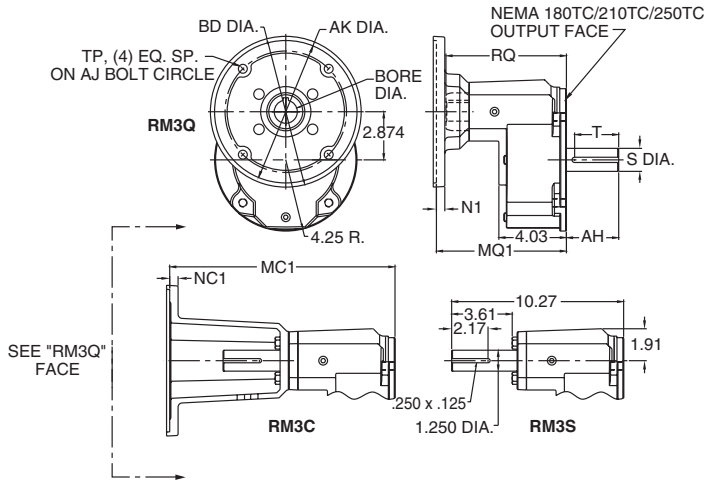
*KEYWAY WIDTH BY DEPTH

NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY. CONTACT FACTORY FOR CERTIFIED DIMENSIONS.

MODEL RM3 - SINGLE REDUCTION

CAST IRON HOUSING

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

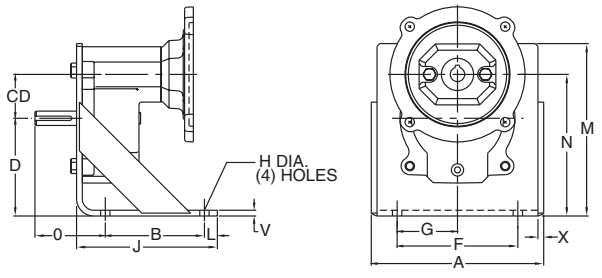


	INPUT-OUTPUT FRAME**	AJ	AK	BD	TP	BORE	MQ1	N1	MC1	NC1	RQ	IP KWY.*	AH	S DIA.	OP KWY.*	WEIGHT (lbs)
RM3Q	180TC-180TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	2.62	1.125	.250 x .125 x 1.80	45
	210TC-180TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	312 x .156	2.62	1.125	.250 x .125 x 1.80	45
	250TC-180TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	2.62	1.125	.250 x .125 x 1.80	45
RM3C	180TC-210TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	3.12	1.375	.312 x .156 x 2.63	45
	210TC-210TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	.312 x .156	3.12	1.375	.312 x .156 x 2.63	45
	250TC-210TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	3.12	1.375	.312 x .156 x 2.63	45
RM3S	180TC-250TC	7.25	8.50	9.00	.53	1.125	7.76	.50	13.45	.50	7.25	.250 x .125	3.75	1.625	.375 x .188 x 3.00	45
	210TC-250TC	7.25	8.50	9.00	.53	1.375	7.76	.50	13.45	.50	7.25	.312 x .156	3.75	1.625	.375 x .188 x 3.00	45
	250TC-250TC	7.25	8.50	9.00	.53	1.625	8.32	.50	14.01	.50	7.65	.375 x .188	3.75	1.625	.375 x .188 x 3.00	45

* KEYWAY WIDTH BY DEPTH
**56C AND 140TC AVAILABLE FOR INPUT FLANGE ONLY. 180TC/210TC INPUT FLANGE SHOWN.

NOTE: ALL DIMENSIONS ARE FOR REFERENCE ONLY. CONTACT FACTORY FOR CERTIFIED DIMENSIONS.

MOUNTING BASE FOR RATIO MULTIPLIERS

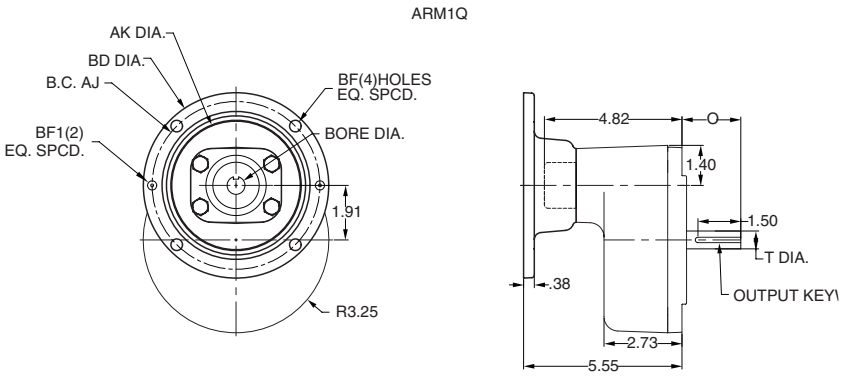


	OUTPUT	A	B	CD	D	F	G	H	J	X	L	M	N	O	V	X	PART NO.	WEIGHT (lbs)
RM1	56C	7.50	6.13	1.909	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.06	.25	.25	0279-00552	2
RM2	56C	7.50	6.13	2.362	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.06	.25	.25	0279-00552	2
	140TC	7.50	6.13	2.362	4.250	5.25	2.63	.41	4.31	.25	.56	7.50	6.16	3.12	.25	.25		
RM3	180TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	3.88	.25	.25		
	210TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	4.38	.25	.25	0279-00553	3
	250TC	9.50	7.38	2.874	5.000	7.00	3.50	.53	5.25	.25	.63	9.44	7.88	5.00	.25	.25		

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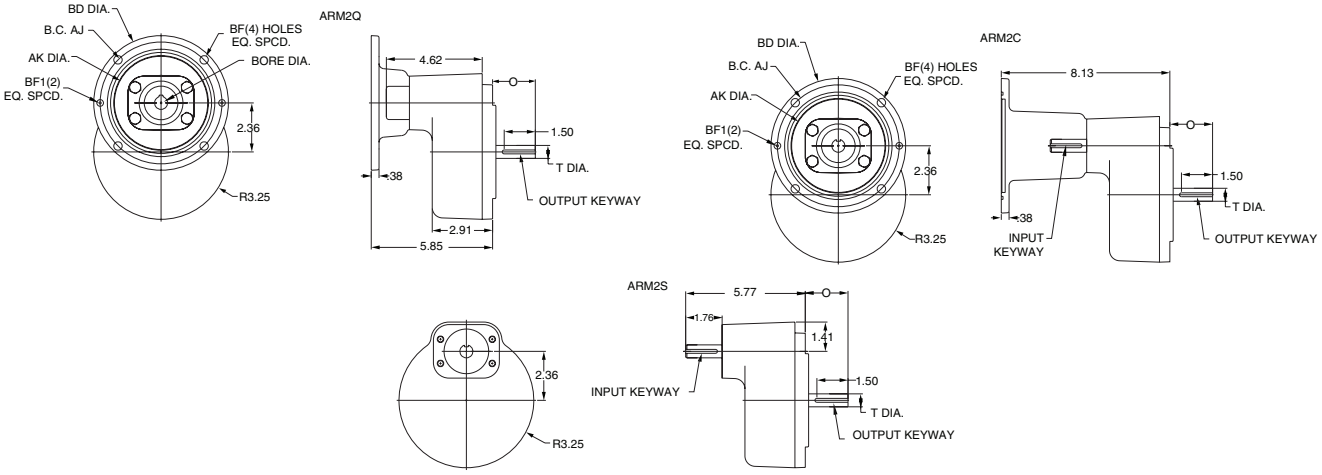
MODELS ARM1Q & ARM2Q - SINGLE REDUCTION
ALUMINUM HOUSING

MODEL ARM1Q



STYLE	FRAME COMBINATIONS	AJ	AK	BD	BF	BF1	O	T	INPUT BORE	INPUT KEYWAY	OUTPUT KEYWAY	WEIGHT (lbs)
ARM1Q	48CZ-56C	3.75	3.00	4.36	0.28	1/4-20 UNC	2.06	0.625	0.50	1/8 X 1/16	3/16 x 3/32	9.5
	56C-56C	5.88	4.50	6.64	0.41	3/8-16 UNC	2.06	0.625	0.63	3/16 X 3/32	3/16 x 3/32	9.5

MODEL ARM2



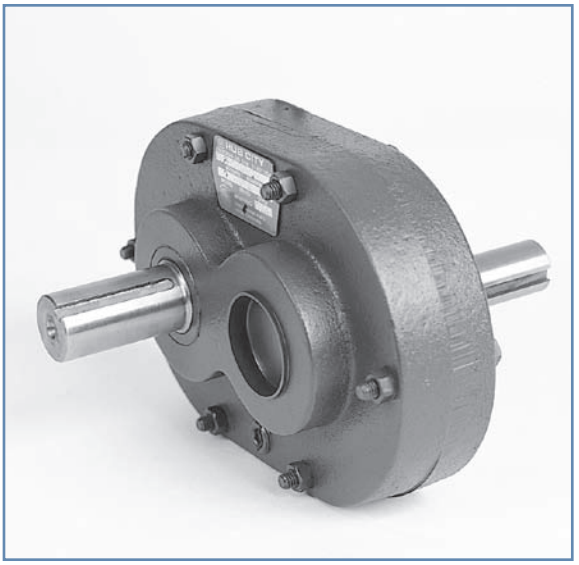
STYLE	FRAME COMBINATIONS	AJ	AK	BD	BF	BF1	O	T	INPUT BORE	INPUT KEYWAY	OUTPUT KEYWAY	WEIGHT (lbs)
ARM2Q ARM2C ARM2S	140TC-56C	5.88	4.50	6.64	0.41	3/8-16 UNC	2.06	0.625	0.63	3/16 X 3/32	3/16 x 3/32	11.5
	140TC-140TC	5.88	4.50	6.64	0.41	3/8-16 UNC	2.125	0.625	0.88	3/16 X 3/32	3/16 x 3/32	11.5

SEE PAGE F-8 FOR FOOT MOUNTING KITS.

MODEL 22 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of four (4) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount units available. (Style SO.)
- Foot mount kits available. Part Number 0229-00026.
- HUB CITY lubricant recommended. (Refer to Section R.)



SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

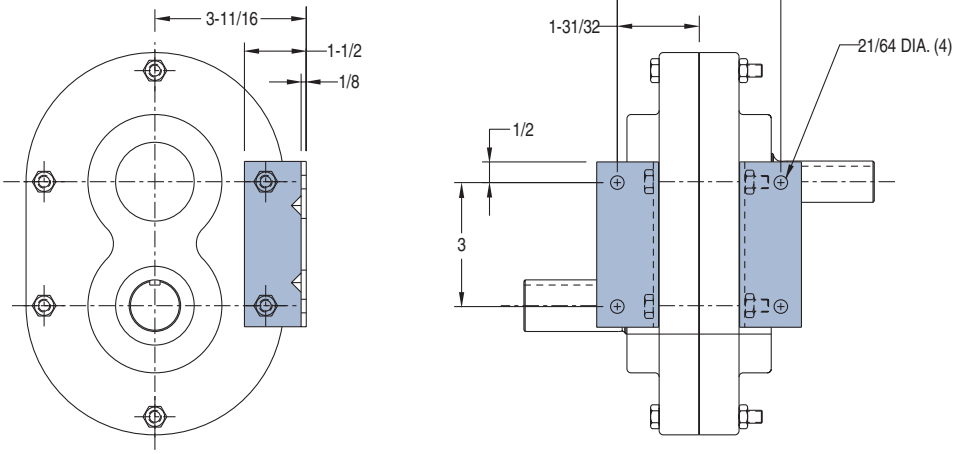
RATING TABLE

INPUT RPM		RATIOS			
		1:1	1.5:1	2:1	2.53:1
1750	INPUT HORSEPOWER	26.3	21.2	17.7	14
	OUTPUT RPM.	1750	1250	875	692
	OUTPUT TORQUE IN. LBS.	919	1111	1237	1237
1150	INPUT HORSEPOWER	18.9	15	12.3	9.9
	OUTPUT RPM	1150	767	575	455
	OUTPUT TORQUE IN. LBS.	1005	1196	1308	1332
850	INPUT HORSEPOWER	15.3	12	10	7.9
	OUTPUT RPM	850	567	425	336
	OUTPUT TORQUE IN. LBS.	1100	1295	1438	1438
690	INPUT HORSEPOWER	12.9	10.2	8.5	6.9
	OUTPUT RPM	690	460	345	273
	OUTPUT TORQUE IN. LBS.	1143	1356	1506	1547
100	INPUT HORSEPOWER	2.3	1.9	1.4	1.1
	OUTPUT RPM	100	67	50	40
	OUTPUT TORQUE IN. LBS.	1406	1742	1712	1701

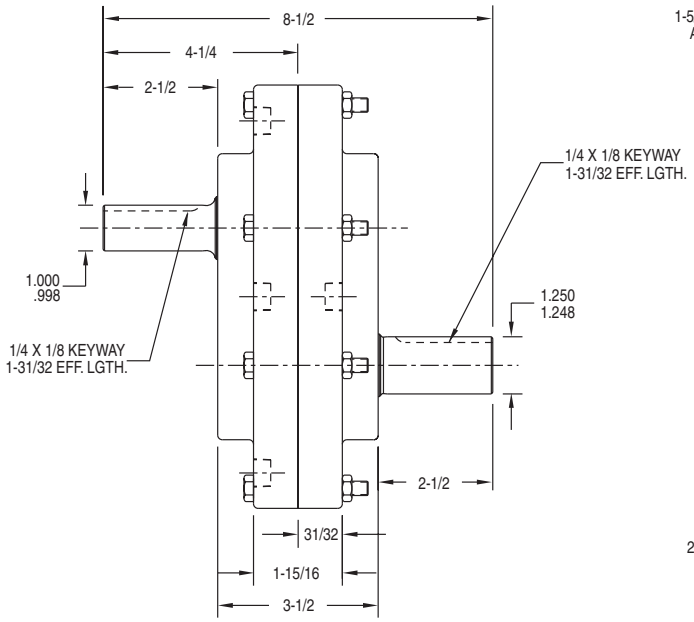
FOOT MOUNTING KIT

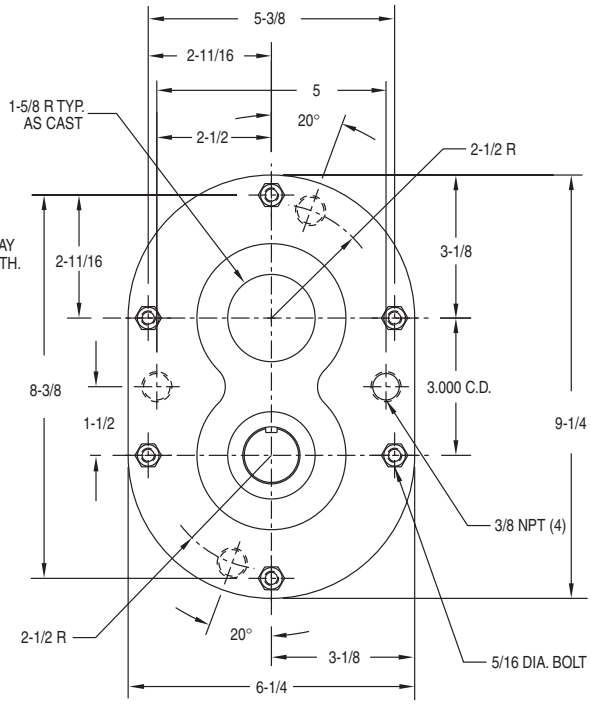
MUST BE ORDERED IN ADDITION TO DRIVE IF REQUIRED.

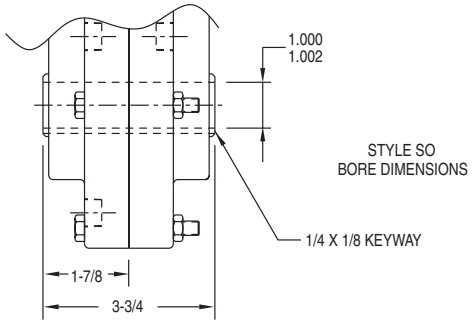
PART NO. 0229-00026



MODEL 22 - SINGLE REDUCTION







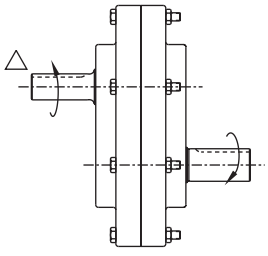
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

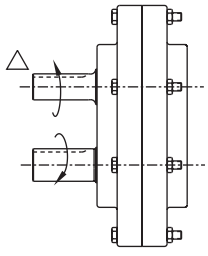
DRY SHIPPING WEIGHT 24 LBS.

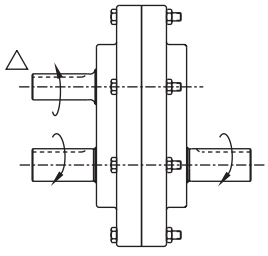
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

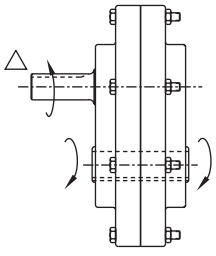
STANDARD STYLES AVAILABLE

Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.


STYLE A


STYLE C


STYLE DO

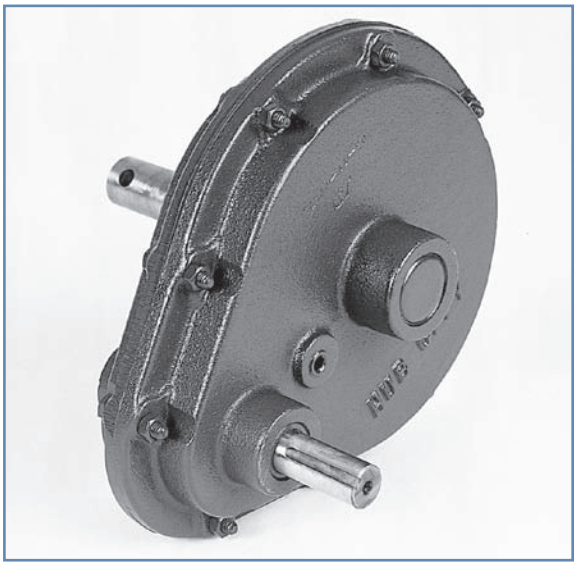

STYLE SO

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 230 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Heat treated alloy steel pinion and alloy cast iron gear for strength and long life.
- Needle bearings on high speed shaft. Bronze bushings on low speed shaft.
- Choice of three (3) gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- HUB CITY lubricant recommended. (Refer to Section R)



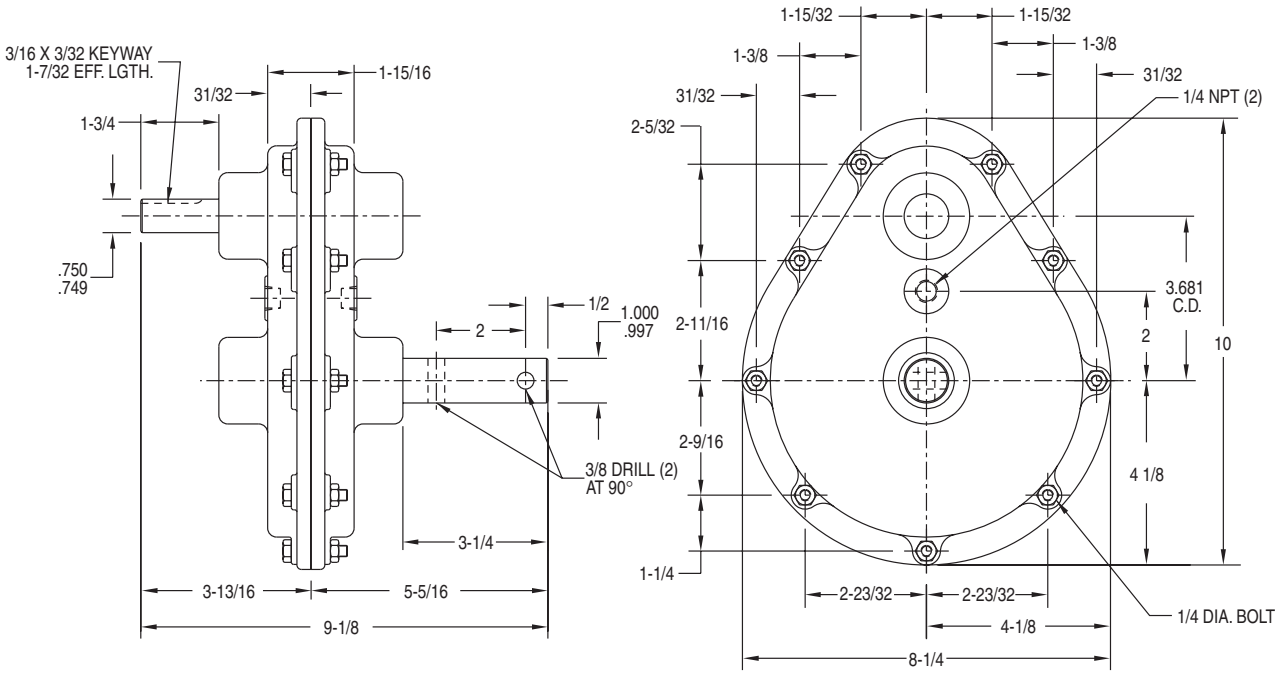
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		*RATIOS*		
		*3.11:1**	*4.21:1**	*5:1*
1750	INPUT HORSEPOWER	6.8	3.9	2.5
	OUTPUT RPM	583	438	350
	OUTPUT TORQUE IN. LBS.	713	545	437
1150	INPUT HORSEPOWER	4.5	2.7	1.8
	OUTPUT RPM	383	288	230
	OUTPUT TORQUE IN. LBS.	718	574	478
850	INPUT HORSEPOWER	3.7	2.2	1.4
	OUTPUT RPM	283	213	170
	OUTPUT TORQUE IN. LBS.	798	633	503
690	INPUT HORSEPOWER	3.2	1.9	1.2
	OUTPUT RPM	230	173	138
	OUTPUT TORQUE IN. LBS.	851	673	532
100	INPUT HORSEPOWER	.5	.4	.2
	OUTPUT RPM	33	25	20
	OUTPUT TORQUE IN. LBS.	917	978	611

*MFG. TO ORDER — CONSULT FACTORY FOR PRICE AND DELIVERY.

MODEL 230 - SINGLE REDUCTION



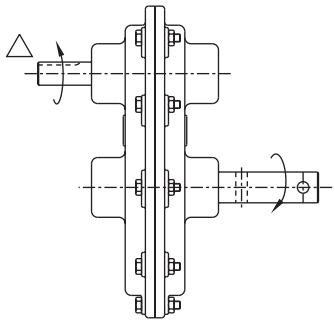
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 23 LBS.

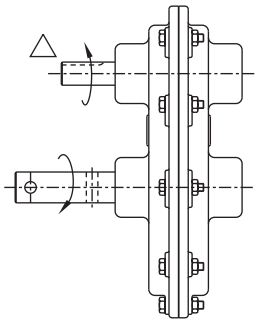
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE

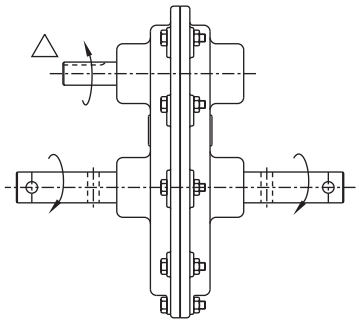
Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.



STYLE A



STYLE C



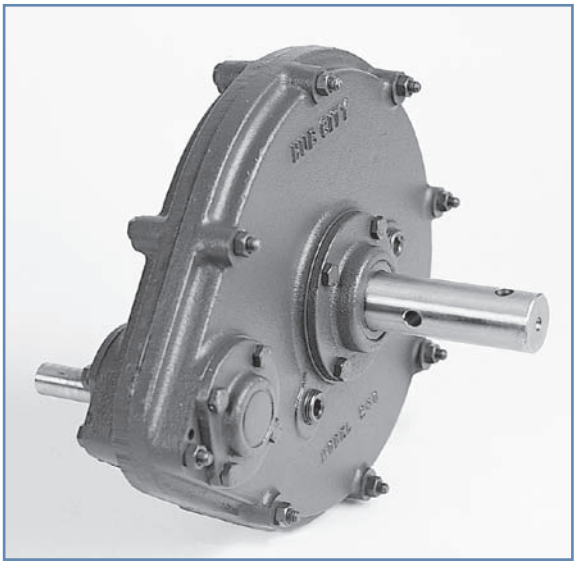
STYLE DO

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 240 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of five (5) gear ratios.
- Heat treated alloy steel pinion and alloy cast iron gear for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- HUB CITY lubricant recommended. (Refer Section R)



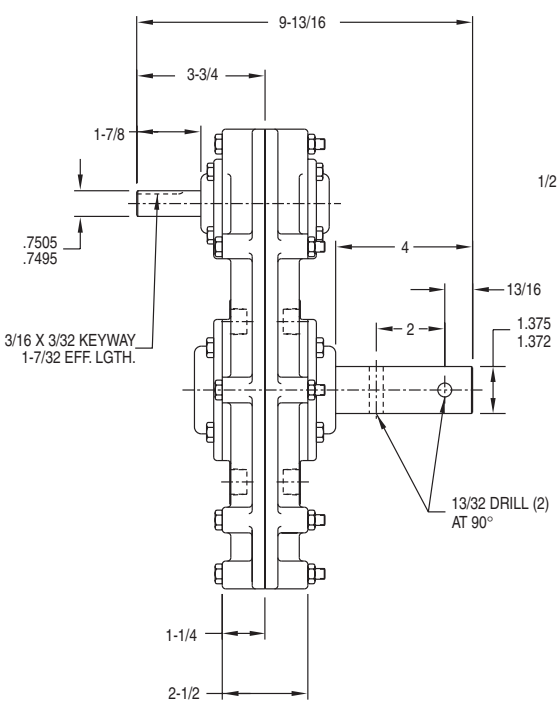
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

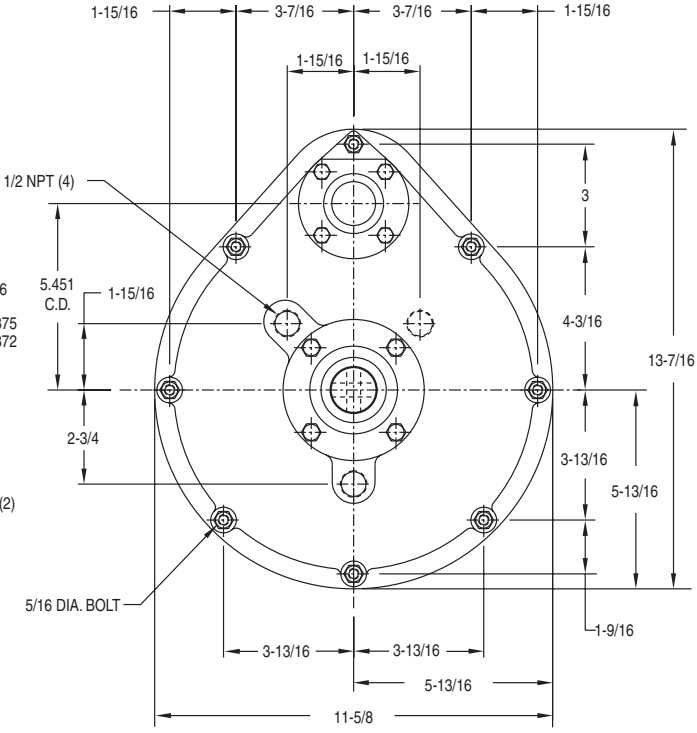
RATING TABLE

INPUT RPM		*RATIOS*				
		*3.95:1**	*5:1*	*6.2:1**	*7.3:1**	*8:1*
1750	INPUT HORSEPOWER	8.8	7.5	5	3.6	3.05
	OUTPUT RPM	443	350	282	240	219
	OUTPUT TORQUE IN. LBS.	1214	1310	1084	917	851
1150	INPUT HORSEPOWER	7	5.5	3.5	2.5	2.1
	OUTPUT RPM	291	230	185	158	144
	OUTPUT TORQUE IN. LBS.	1471	1462	1157	997	892
850	INPUT HORSEPOWER	5.50	4.2	2.7	1.75	1.7
	OUTPUT RPM	215	170	137	116	106
	OUTPUT TORQUE IN. LBS.	1564	1510	1205	922	980
690	INPUT HORSEPOWER	4.5	3.3	2.2	1.7	1.3
	OUTPUT RPM	175	138	111	95	86
	OUTPUT TORQUE IN. LBS.	1572	1462	1249	1093	924
100	INPUT HORSEPOWER	.85	.7	.5	.35	.2
	OUTPUT RPM	25	20	16	14	13
	OUTPUT TORQUE IN. LBS.	2079	2140	1910	1528	941

*MFG. TO ORDER — CONSULT FACTORY FOR PRICE AND DELIVERY.

MODEL 240 - SINGLE REDUCTION



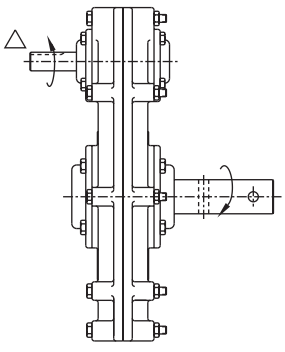


FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

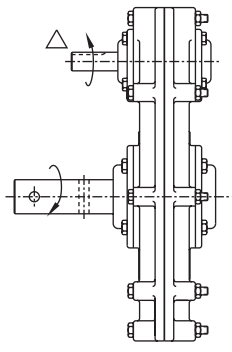
DRY SHIPPING WEIGHT 42 LBS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE



STYLE A



STYLE C

△ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 280 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Heat treated alloy steel gearing for strength and long wear life.
- Helical gears for greater strength and lower noise level.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- HUB CITY lubricant recommended. (Refer to Section R)

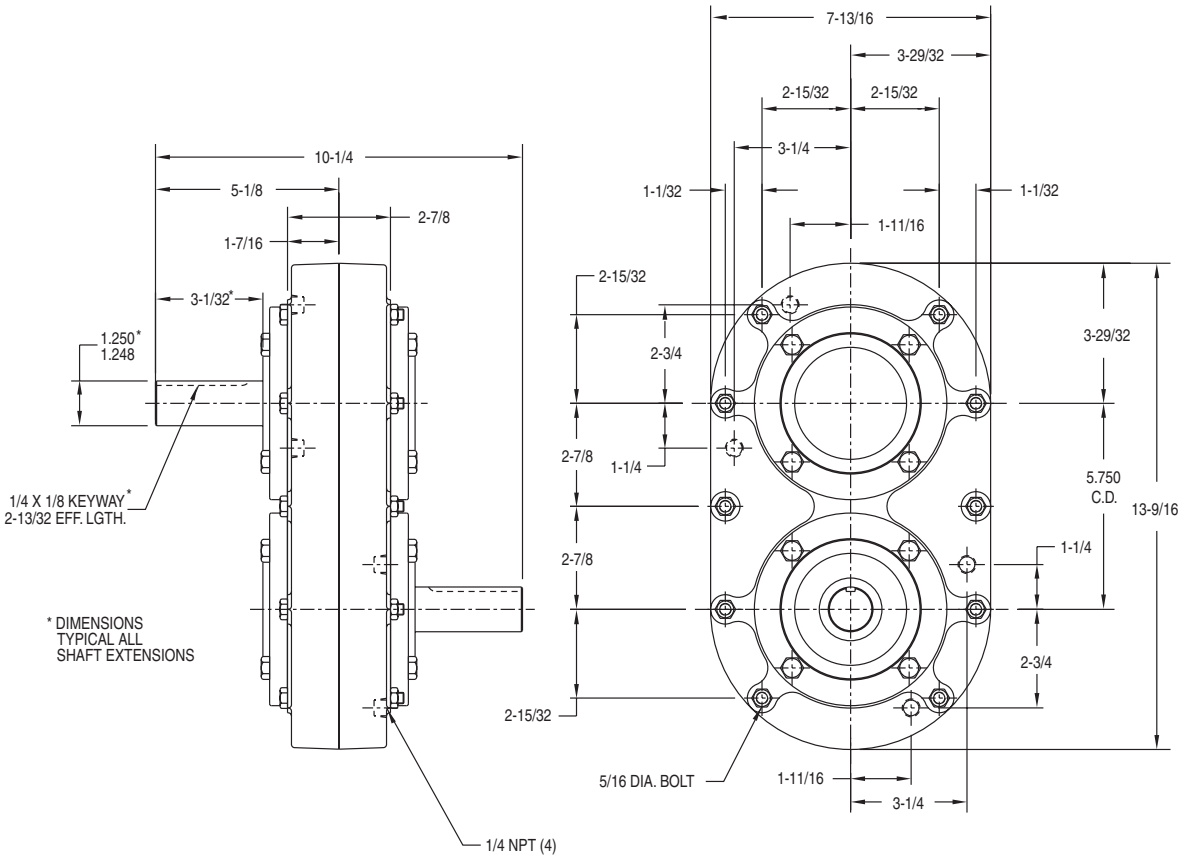


SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		*RATIO 1:1*
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	91 1750 3179
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	67 1150 3562
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	52 850 3740
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	44 690 3898
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	8 100 4891

MODEL 280 - SINGLE REDUCTION



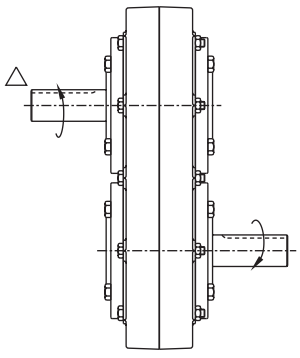
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 62 LBS.

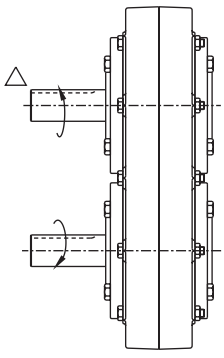
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE

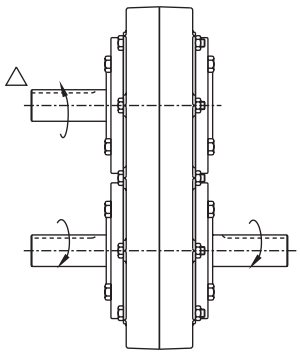
Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.



STYLE A



STYLE C



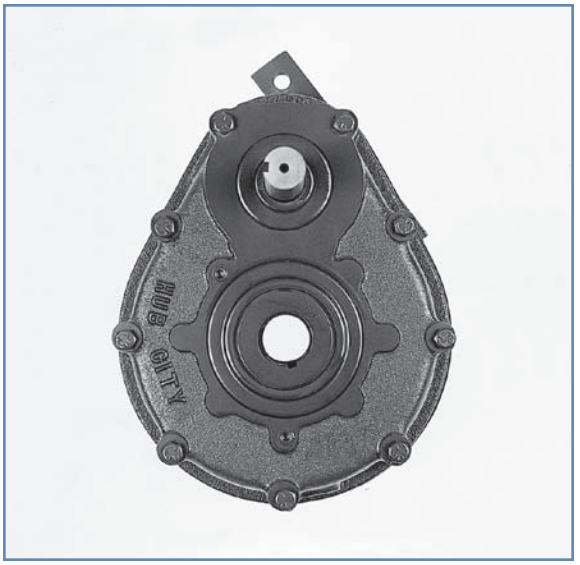
STYLE DO

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 85L – SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of five (5) standard ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)
- Unit may be operated as a speed increaser or speed reducer.



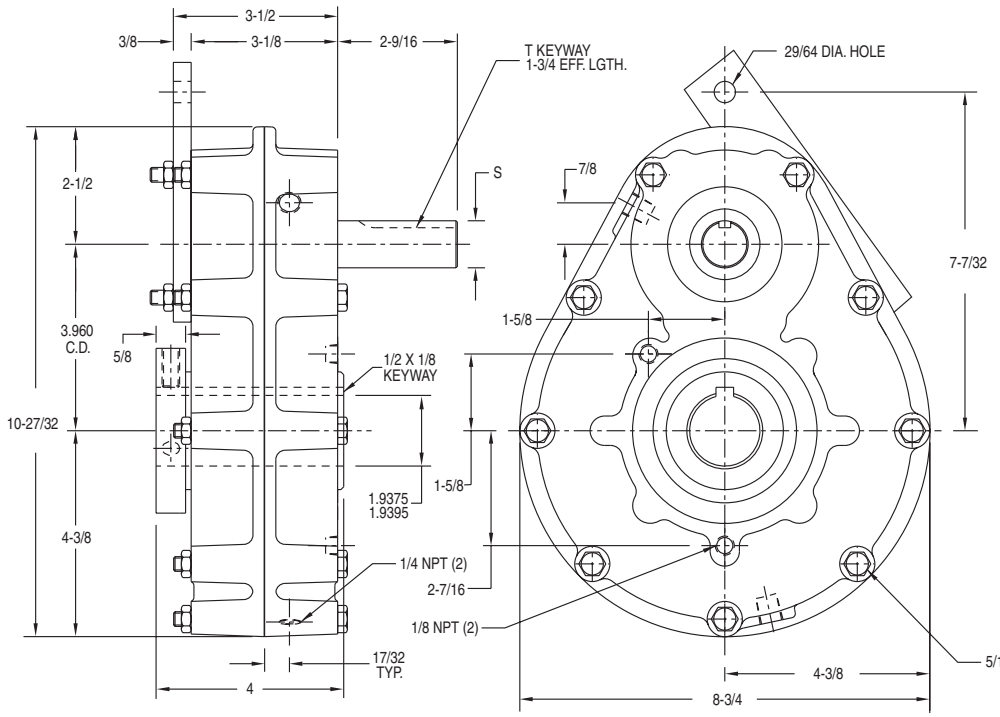
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

RATING TABLES

INPUT RPM		SPEED REDUCER RATIOS				
		2.04:1	3.12:1	4.00:1	5.00:1	6.09:1
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	38.5 858 2800	29.6 561 3291	24.8 438 3534	21.0 350 3740	17.8 287 3866
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	29.5 564 3267	21.7 369 3669	17.8 288 3866	15.0 230 4056	12.5 189 4144
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	23.8 417 3564	17.1 272 3905	13.9 213 4085	11.6 170 4245	9.8 140 4364
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	20.3 338 3745	14.4 221 4056	11.7 173 4226	9.7 138 4380	8.2 113 4500
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	4.24 49.0 5398	2.87 32.0 5592	2.25 25.0 5620	1.81 20.0 5658	1.49 16.4 5680

INPUT RPM		SPEED INCREASER RATIOS				
		1:2.04	1:3.12	1:4.00	1:5.00	1:6.09
1000	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	49.4 2043 1524				
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	42.7 1737 1551	44.7 2650 1064			
540	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	28.4 1103 1620	29.7 1683 1113	30.9 2160 902	26.7 2700 623	26.5 3289 508
300	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	16.5 613 1697	17.3 935 1169	18.1 1200 949	15.6 1500 655	15.5 1827 535
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	5.86 204 1807	6.18 312 1248	6.44 400 1014	5.57 500 701	5.54 609 573

MODEL 85L – SINGLE REDUCTION



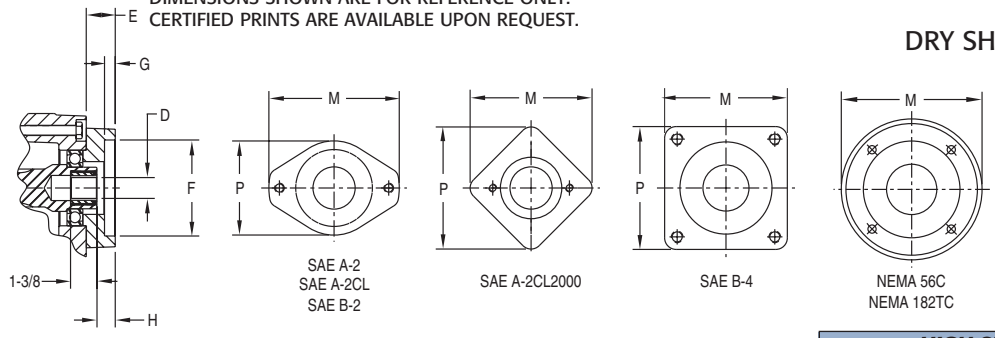
SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE – CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 40 LBS.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



SEE CHART FOR (QTY) J HOLES ON K B.C. FOR EACH FLANGE SIZE

HIGH SPEED SHAFT DIMENSIONS		
RATIO	S DIA.	T KEYWAY
2:1, 3:1, 4:1 & 5:1 6:1	1.000/.998 .875/.874	1/4 X 1/8 3/16 X 3/32

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1", 1-1/8, 1-3/16, 1-1/4, 1-3/8, 1-7/16 1-1/2, 1-5/8, 1-11/16, 1-3/4, 1-13/16, 1-7/8, 2", 1-3/8-6B Spl, 1-3/8-21T Spline

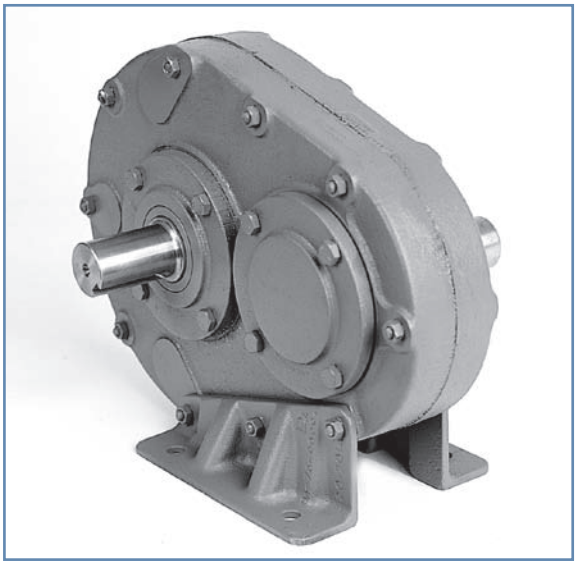
INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	5-1/8	4-1/16
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	5-1/8	4-1/16
A-2CL2000	1-13/16	3.251 / 3.253	13/32	51/64	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/16	4.001 / 4.003	7/16	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.003	7/16	7/16	(4) 1/2 NC	5	5-1/8	5-1/8
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.502 / 8.505	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 200 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Tapered roller bearings for endurance and strength.
- Choice of five (5) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Helical gears for greater strength and lower noise level.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Ductile iron feet provide rigid mounting base.
- Shaft mount units available. (Style SO.)
- HUB CITY lubricant recommended. (Refer to Section R)

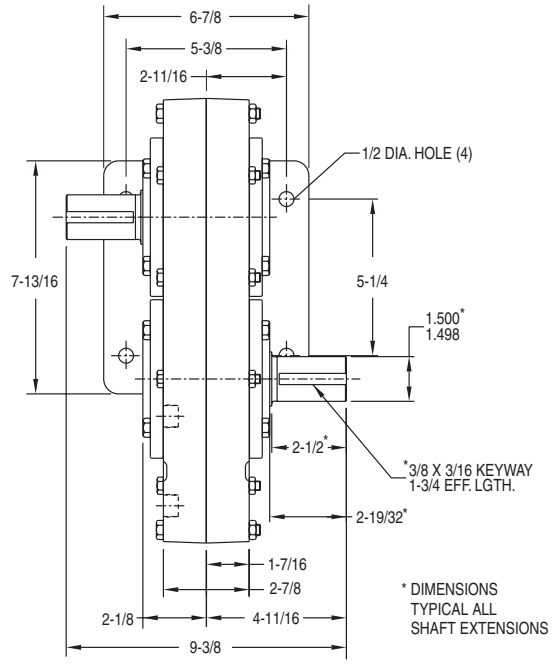


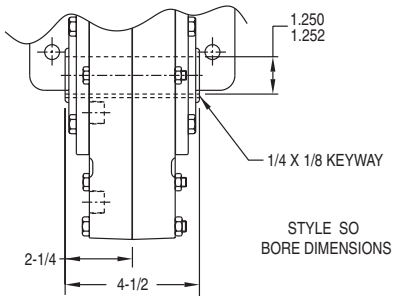
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

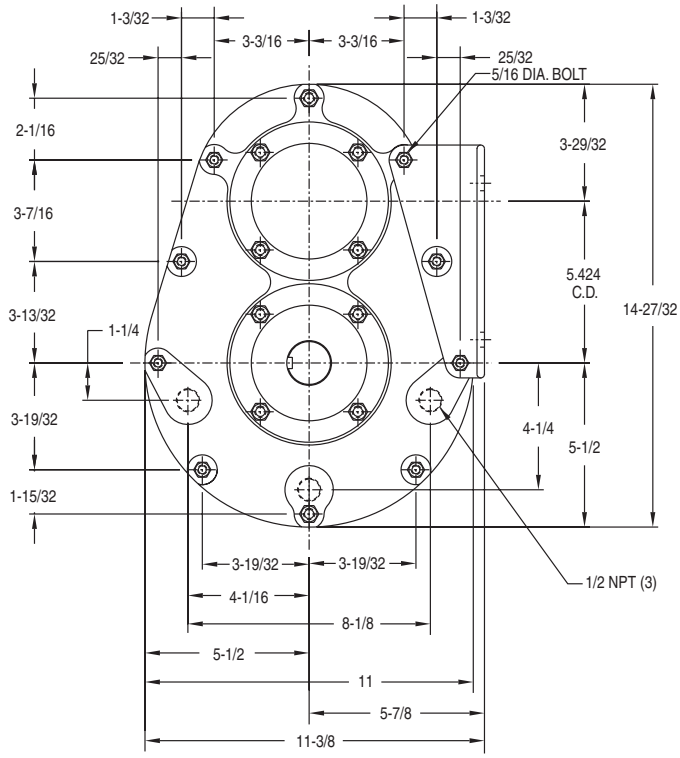
RATING TABLE

INPUT RPM		*RATIOS*				
		1:1 HELICAL	*1.5:1 HELICAL*	*2:1 HELICAL*	*3:1 HELICAL*	*4:1 HELICAL*
1750	INPUT HORSEPOWER	160	132	105	63	45
	OUTPUT RPM	1750	1167	875	583	438
	OUTPUT TORQUE IN. LBS.	5589	6917	7336	6602	6288
1150	INPUT HORSEPOWER	119	91	71	44	33
	OUTPUT RPM	1150	767	575	383	288
	OUTPUT TORQUE IN. LBS.	6326	7256	7548	7017	7017
850	INPUT HORSEPOWER	89	71	53	32	27
	OUTPUT RPM	850	567	425	283	213
	OUTPUT TORQUE IN. LBS.	6401	7660	7624	6905	7768
690	INPUT HORSEPOWER	75	60	48	28	20
	OUTPUT RPM	690	460	345	230	173
	OUTPUT TORQUE IN. LBS.	6645	7974	8506	7442	7088
100	INPUT HORSEPOWER	13	10	8	4.8	3.5
	OUTPUT RPM	100	67	50	33	25
	OUTPUT TORQUE IN. LBS.	7947	9170	9781	8803	8559

MODEL 200 - SINGLE REDUCTION







SAE A-2, B-2/4, C-2 & C-4 MOTOR FLANGES AVAILABLE ON HIGH SPEED SHAFT AS MODIFIED STANDARD UNITS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

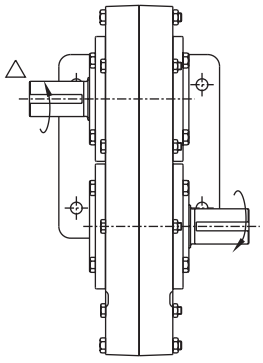
DRY SHIPPING WEIGHT 83 LBS.

OPTIONAL OUTPUT BORE:
1-1/2 WITH 3/8 X 3/16 KEYWAY

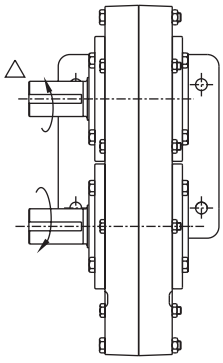
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

STANDARD STYLES AVAILABLE

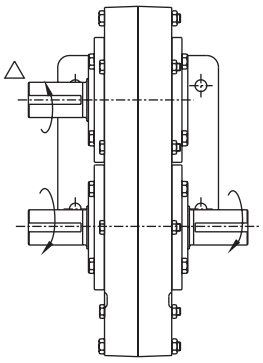
Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.



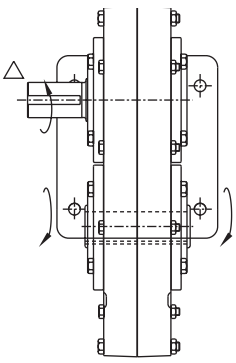
STYLE A



STYLE C



STYLE DO



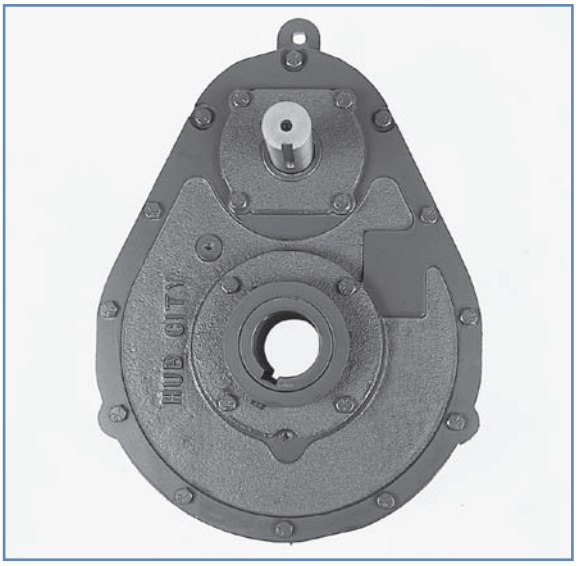
STYLE SO

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 95L — SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on high speed shaft. Tapered roller bearings on low speed shaft.
- Choice of five (5) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)
- Unit may be operated as a speed increaser or speed reducer.



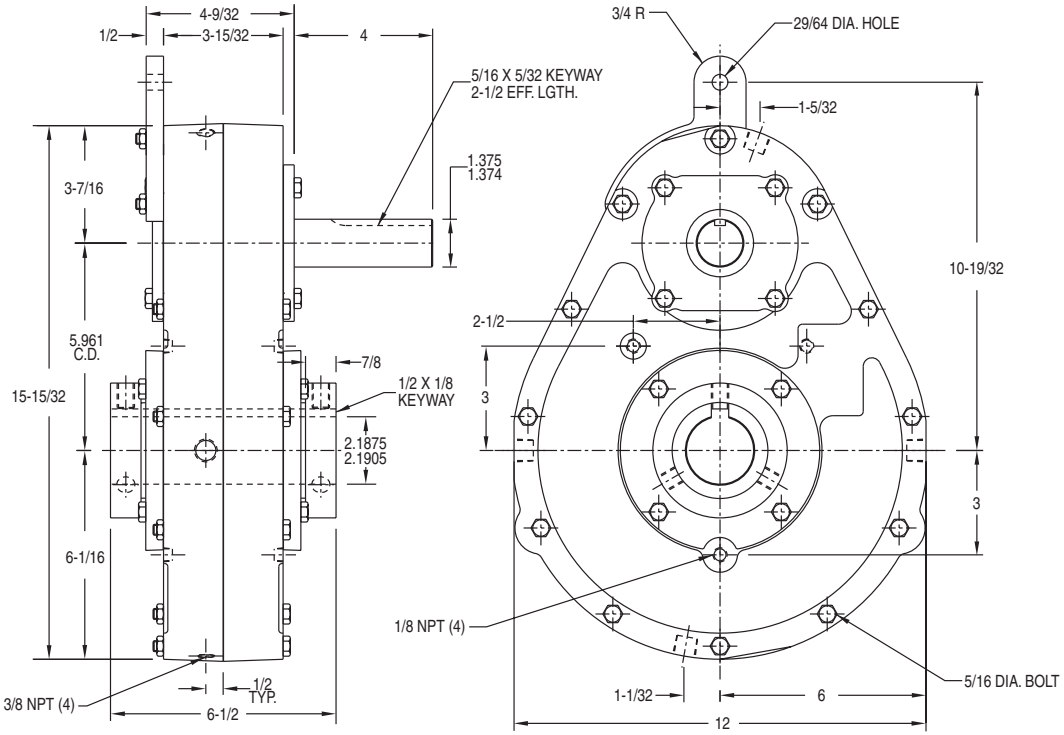
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

RATING TABLES

INPUT RPM		SPEED REDUCER RATIOS				
		2.19:1	3.10:1	4.19:1	4.86:1	5.83:1
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	63.5 799 4962	51.2 565 5657	40.9 418 6111	36.9 360 6387	31.8 300 6600
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	48.4 525 5749	37.5 371 6306	29.5 274 6712	26.3 237 6923	22.4 197 7071
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	38.8 388 6242	29.5 274 6712	23.0 203 7071	20.4 175 7263	17.4 146 7444
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	33.0 315 6543	24.9 223 6972	19.3 165 7312	17.1 142 7500	14.4 118 7615
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	6.85 45.7 9357	4.96 32.3 9593	3.68 23.8 9618	3.20 20.6 9706	2.68 17.1 9763

INPUT RPM		SPEED INCREASER RATIOS				
		1:2.19	1:3.10	1:4.19	1:4.86	1:5.83
1000	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	103.9 2192 2988				
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	90.1 1863 3048	86.1 2635 2057			
540	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	60.2 1183 3204	57.6 1674 2166	64.3 2263 1792	65.9 2634 1583	63.5 3150 1270
300	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	35.3 658 3384	33.8 930 2291	37.4 1256 1898	38.8 1457 1678	37.4 1750 1347
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	12.70 219 3645	12.20 310 2476	13.70 419 2055	14.10 486 1818	13.50 583 1461

MODEL 95L — SINGLE REDUCTION



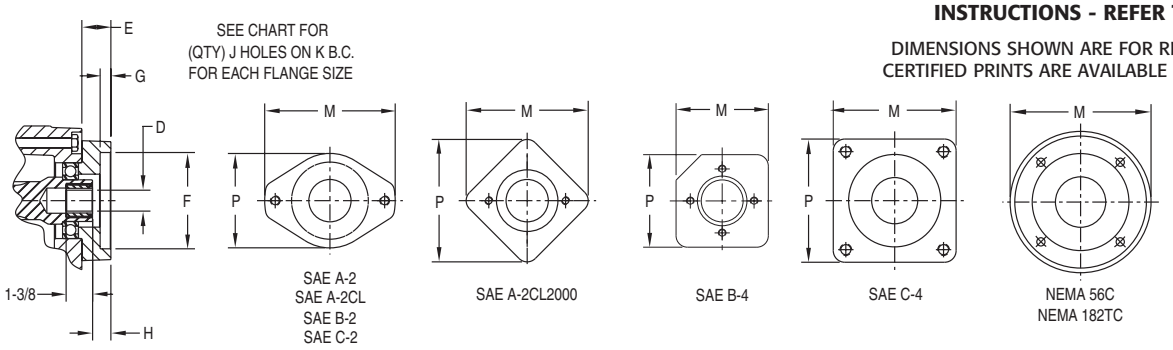
SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

DRY SHIPPING WEIGHT 95 LBS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-3/4, 1-7/8, 1-15/16, 2", 2-1/8, 2-1/4, 1-3/8-6B Spline, 1-3/8-21T Spline

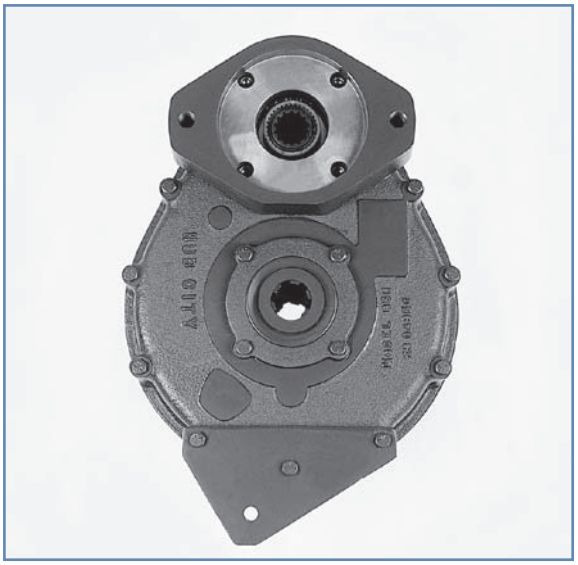
INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	6-7/8	5-1/4
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	6-7/8	5-1/4
A-2CL2000	1-13/16	3.251 / 3.253	13/32	51/64	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/16	4.001 / 4.004	15/32	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.004	7/16	7/16	(4) 1/2 NC	5	6-1/16	6-1/16
C-2	1-7/8	5.001 / 5.004	17/32	7/8	(2) 5/8 NC	7-1/8	8-1/2	5-15/16
C-4	1-7/8	5.001 / 5.004	17/32	7/8	(4) 1/2 NC	6-3/8	6-1/16	6-1/16
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.502 / 8.505	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 95H - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Tapered roller bearings on all shafts.
- Choice of four (4) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Helical gears for greater strength and lower noise level.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)
- Unit may be operated as a speed increaser or speed reducer.



SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

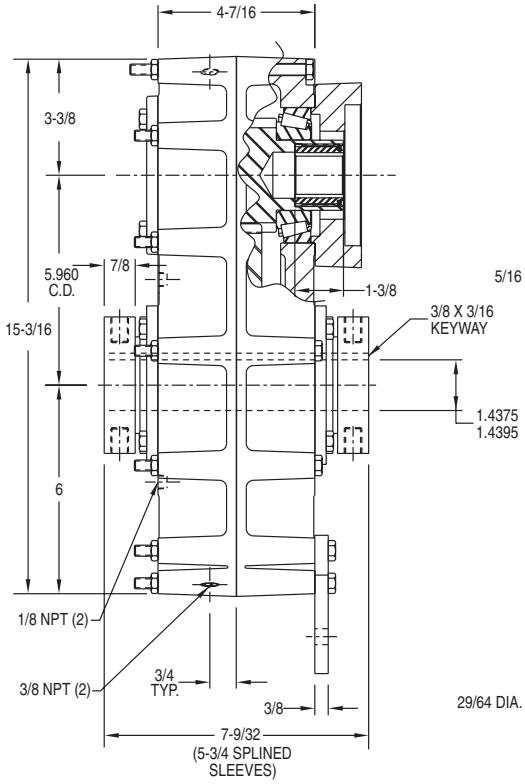
RATING TABLES

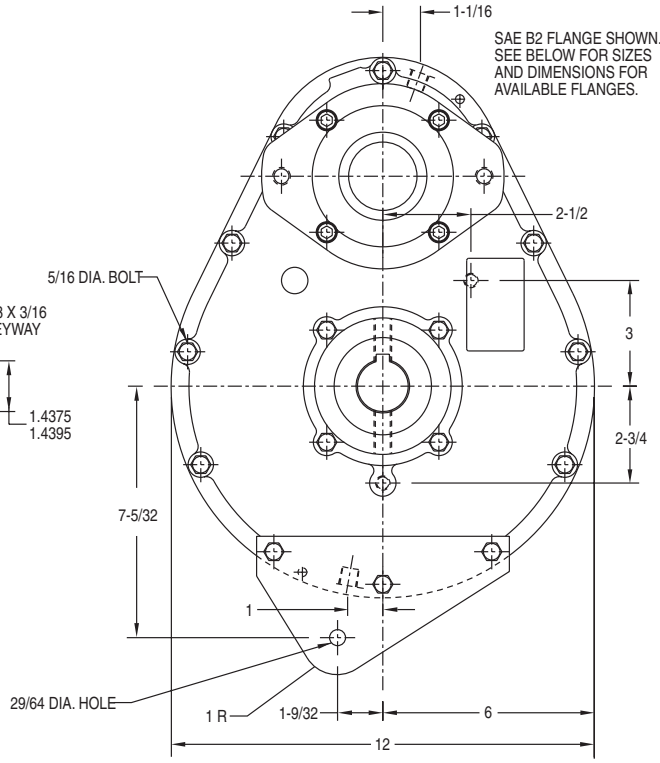
INPUT RPM		SPEED REDUCER RATIOS			
		2.07:1	3.05:1	3.94:1	4.93:1*
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	144.4 846 10756	111.1 575 12188	88.63 444 12590	64.3 355 11433
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	99.4 555 11265	76.2 378 12713	60.6 291 13095	43.9 233 11863
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	75.6 410 11602	57.8 279 13058	45.9 215 13423	33.2 172 12142
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	62.6 333 11820	47.7 226 13279	37.9 175 13636	33.2 140 12319
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	9.46 48 13065	7.44 33 14628	5.92 25 14926	4.33 20 13464

INPUT RPM		SPEED INCREASER RATIOS			
		1:2.07	1:3.05	1:3.94	1:4.93*
1000	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	167.2 2069 5094			
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	145.1 1759 5195	157.2 2588 3826		
540	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	96.8 1117 5460	105.2 1644 4029	105.7 2130 3127	93.9 2664 2220
300	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	56.8 620 5764	61.8 913 4261	62.2 1183 3311	55.3 1479 2353
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	20.4 207 6207	22.3 304 4603	22.5 394 3583	19.9 493 2550

*MFG. TO ORDER – CONSULT FACTORY FOR PRICE AND DELIVERY.

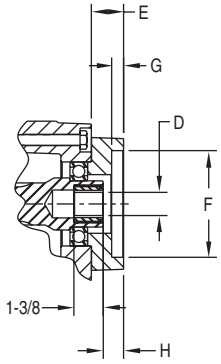
MODEL 95H - SINGLE REDUCTION

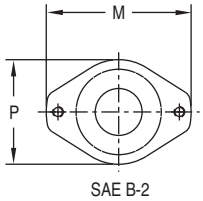




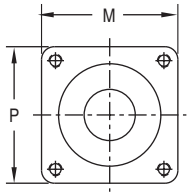
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.





SAE B-2
SAE C-2



SAE C-4

SEE CHART FOR
(QTY) J HOLES ON K B.C.
FOR EACH FLANGE SIZE

SHAFT MOUNTED UNITS
REQUIRE TORQUE ARMS.
TORQUE ARM KITS ARE
AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS,
OUTPUT BORES AND INPUT
BORES ARE AVAILABLE —
CONSULT FACTORY.

DRY SHIPPING WEIGHT 95 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1-3/8-6B Spline, 1-3/8-21T Spline

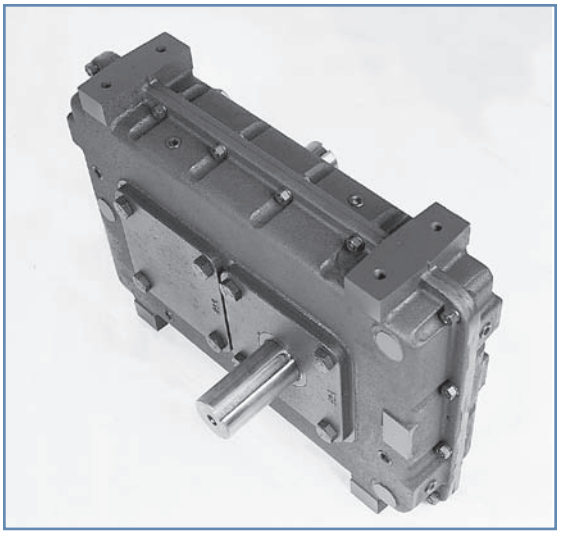
INPUT BUSHING SIZES D			
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE
1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE	
1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE	

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
B-2	1-5/16	4.001 / 4.004	15/32	33/64	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
C-2	1-3/4	5.001 / 5.004	17/32	61/64	(2) 5/8 NC	7-1/8	8-1/2	5-15/16
C-4	1-3/4	5.001 / 5.004	17/32	61/64	(4) 1/2 NC	6-3/8	6-1/16	6-1/16

MODEL 290 - SINGLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Tapered roller bearings for endurance and strength.
- Choice of six (6) standard gear ratios.
- Case carburized alloy steel gearing for strength and long wear life.
- Helical gears for greater strength and lower noise level.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Heat treated alloy steel shafting for greater strength and wear resistance.



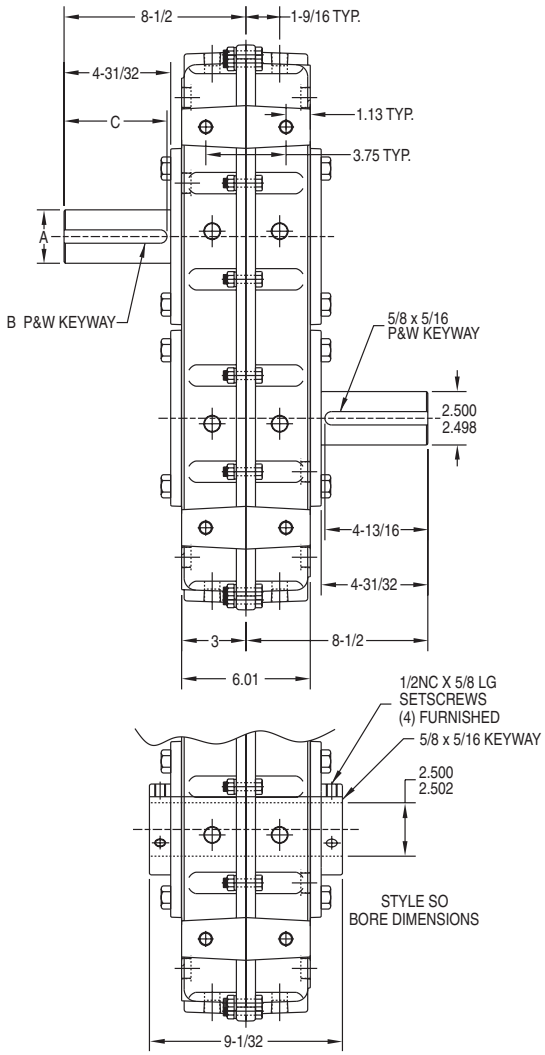
SINGLE REDUCTION UNITS PROVIDE OPPOSITE DIRECTION OUTPUT ROTATION

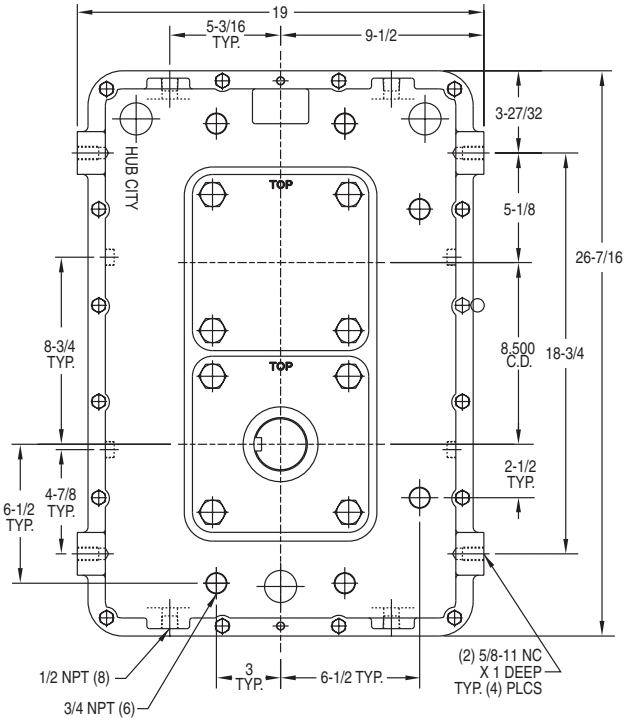
RATING TABLE

INPUT RPM		RATIOS					
		1:1 HELICAL	1.5:1 HELICAL	2:1 HELICAL	3:1 HELICAL	4:1 HELICAL	5:1 HELICAL
2400	INPUT HORSEPOWER	530.1	418.4	357.1	262.6	220.1	171.5
	OUTPUT RPM	2400	1600	1200	800	600	480
	OUTPUT TORQUE IN. LBS.	13920	16481.1	18754.6	20688.5	23117	22523.3
	(*) INPUT O.H.L.	740	746	982	1170	1212	1309
	(*) OUTPUT O.H.L.	695	1022	1188	1625	1790	2259
1750	INPUT HORSEPOWER	405.8	319.4	272	199.3	166.6	129.6
	OUTPUT RPM	1750	1166.7	875	583.3	437.5	350
	OUTPUT TORQUE IN. LBS.	14613.6	17254.4	19590.6	21535.5	24000	23334.7
	(*) INPUT O.H.L.	959	974	1185	1343	1392	1485
	(*) OUTPUT O.H.L.	903	1255	1457	1944	2145	2593
1150	INPUT HORSEPOWER	282.7	221.8	188.3	137.4	114.4	88.8
	OUTPUT RPM	1150	766.7	575	383.3	287.5	230
	OUTPUT TORQUE IN. LBS.	15495.4	18229.7	20637.9	22585.7	25086.4	24326.6
	(*) INPUT O.H.L.	1308	1340	1510	1620.7	1680	1765
	(*) OUTPUT O.H.L.	1237	1654	1890	2456	2715	3130
850	INPUT HORSEPOWER	217.1	169.8	143.9	104.7	87	67.4I
	OUTPUT RPM	850	566.7	425	263.3	212.5	170
	OUTPUT TORQUE IN. LBS.	16095.4	18888	21340.4	23283.4	25802.9	24976.9
	(*) INPUT O.H.L.	1528	1582	1736	1851	1909	2004
	(*) OUTPUT O.H.L.	1521	1980	2252	2834	3107	3493
690	INPUT HORSEPOWER	180.5	141	119.3	86.6	71.2	55.6
	OUTPUT RPM	690	460	345	230	172.5	138
	OUTPUT TORQUE IN. LBS.	16490.2	19318.8	21798.1	23734.9	26000	25394.5
	(*) INPUT O.H.L.	1681	1751	1894	2012	2068	2170
	(*) OUTPUT O.H.L.	1740	2232	2532	3126	3410	3773
300	INPUT HORSEPOWER	85.2	66.1	55.7	40.1	30.9	24.8
	OUTPUT RPM	300	200	150	100	75	60
	OUTPUT TORQUE IN. LBS.	17892.4	20833.5	23394.9	25292.2	26000	26000
	(*) INPUT O.H.L.	2432	2555	2664	2798	2850	2978
	(*) OUTPUT O.H.L.	2818	3383	3751	4444	4857	5000
100	INPUT HORSEPOWER	30.6	23.4	19.8	13.8	10.3	8.3
	OUTPUT RPM	100	66.7	50	33.3	25	20
	OUTPUT TORQUE IN. LBS.	19298.8	22124	24950.8	26000	26000	26000
	(*) INPUT O.H.L.	3853	4007	4120	4273	4336	4476
	(*) OUTPUT O.H.L.	4355	5000	5000	5000	5000	5000
WR^2 Referred to: ($LBS.IN^2$)	HIGH SPEED SHAFT	566.8	842.1	1112.2	1839.2	2027.7	2410.2
	LOW SPEED SHAFT	566.8	374.3	278	182.1	126.7	96.4

(*) OVERHUNG LOAD (LBS) AT CENTER OF SHAFT EXTENSIONS

MODEL 290 - SINGLE REDUCTION





HIGH SPEED SHAFT DIMENSIONS			
RATIO	A	B	C
1:1, 1.5:1, 2:1 & 3:1	2.500/2.498	5/8 X 5/16	4-13/16
4:1 & 5:1	1.750/1.748	3/8 X 3/16	4-1/4

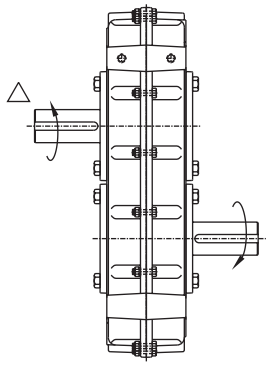
FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

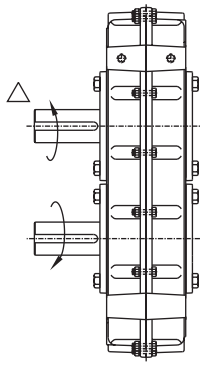
DRY SHIPPING WEIGHT 335 LBS.

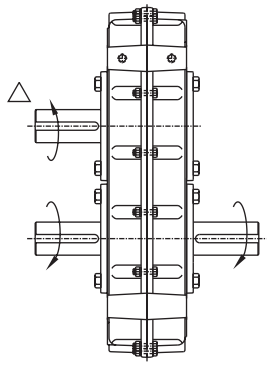
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

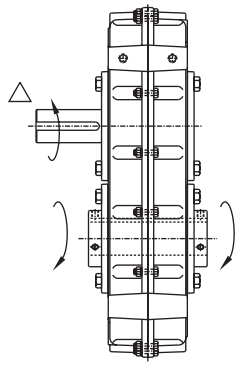
Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.

STANDARD STYLES AVAILABLE


STYLE A


STYLE C


STYLE DO


STYLE SO

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL 52 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of three (3) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

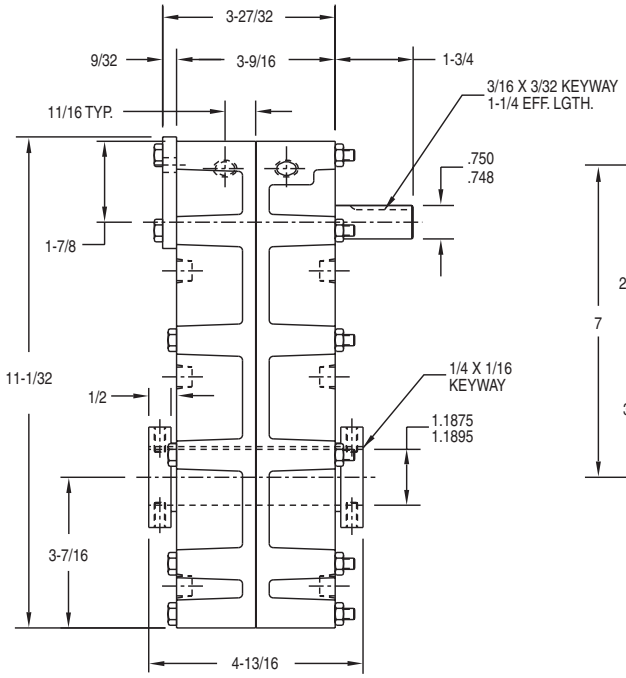


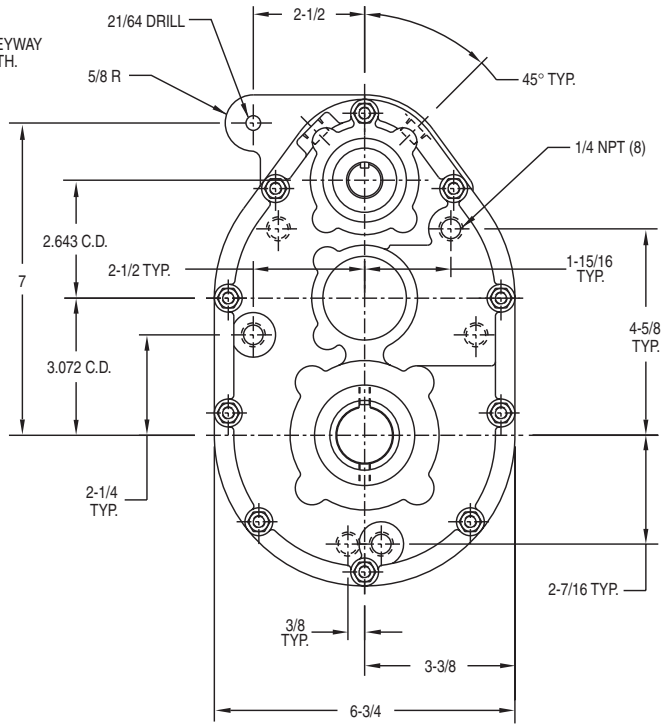
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

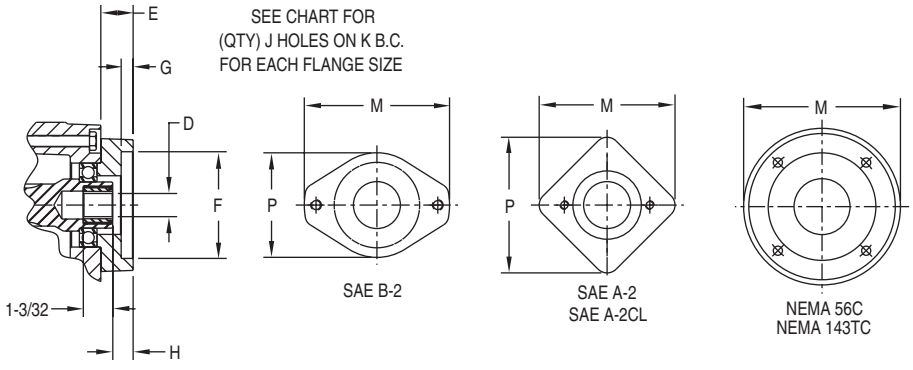
INPUT RPM		*RATIOS*		
		15.69:1	*19.67:1*	*25.56:1*
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	3 112 1667	2.5 89 1765	2.1 68 1882
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	2.2 73 1858	1.8 58 1927	1.5 45 1991
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	1.7 54 1941	1.4 43 2000	1.1 33 2033
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	1.4 44 1996	1.2 35 2029	0.9 27 2045
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	.22 6.4 2100	.17 5.1 2100	.13 3.9 2100

MODEL 52 - DOUBLE REDUCTION





DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 25 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1", 1-1/8, 1-1/4

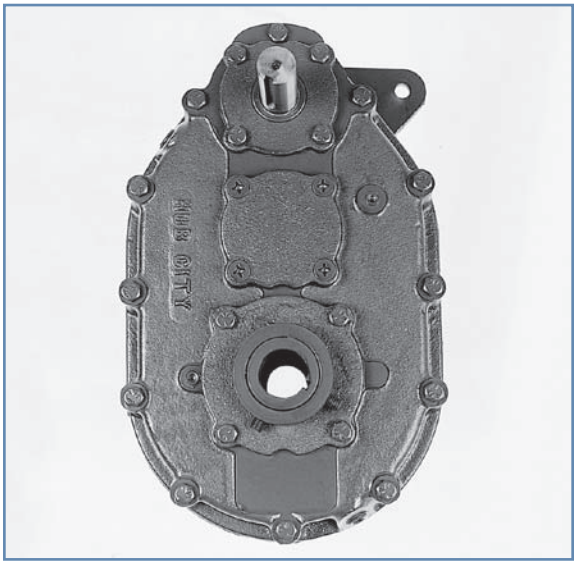
INPUT BUSHING SIZES D		
.625 DIA. - 3/16 X 3/32 KW	.875 DIA. - 3/16 X 3/32 KW	1" - 6B SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-1/2	3.251 / 3.253	5/16	19/32	(2) 3/8 NC	4-3/16	4-1/2	4-1/2
A-2CL	1-3/4	3.251 / 3.253	3/16	19/32	(2) 1/2 NC	4-3/16	4-1/2	4-1/2
B-2	1-5/8	4.001 / 4.003	7/16	3/4	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
56C	2	4.502 / 4.504	3/16	1-7/32	(4) 13/32 DIA.	5-7/8	6-1/2	--

MODELS 83L & 83S - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of four (4) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

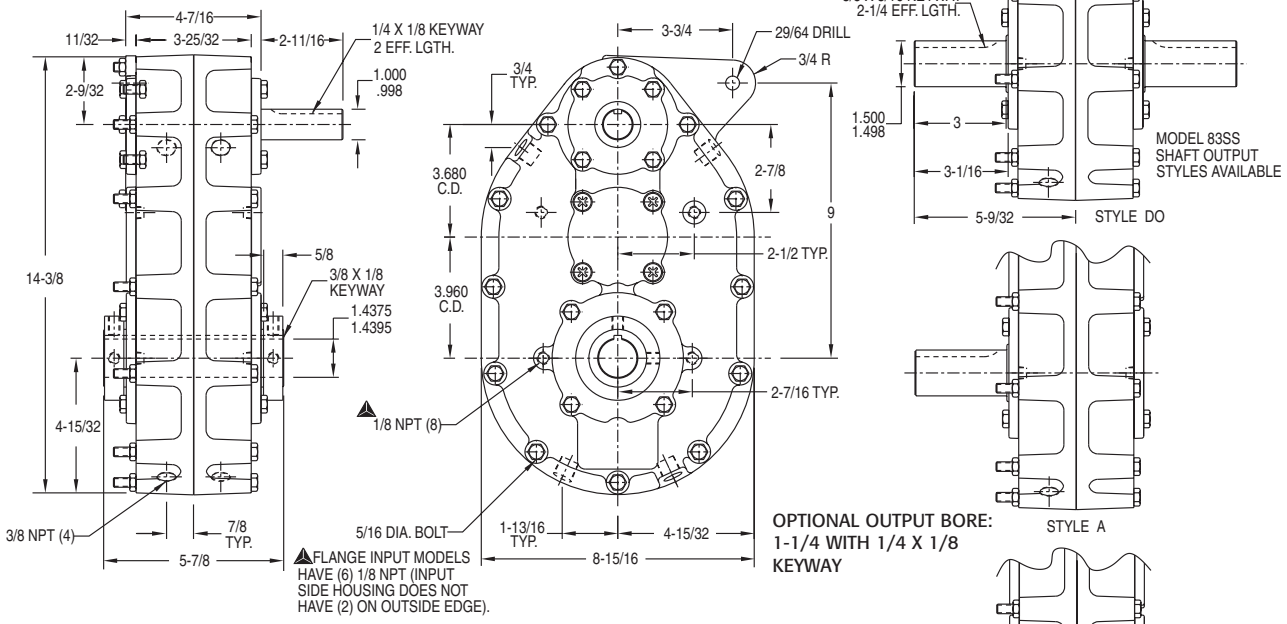


DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		*RATIOS*			
		6.09:1	*8.14:1*	*12.47:1*	*19.37:1*
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	17.8 287 3833	14.0 215 4025	9.8 140 4318	7.0 90 4790
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	12.6 189 4124	9.9 141 4308	7.1 92 4766	5.0 59 5782
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	9.8 140 4321	7.8 104 4597	5.6 68 5108	3.8 44 5418
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	8.2 113 4481	6.7 85 4872	4.7 55 5253	3.2 36 5502
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	1.50 16.4 5632	1.13 12.3 5677	.74 8.0 5700	.48 5.2 5700

MODELS 83L & 83S - DOUBLE REDUCTION



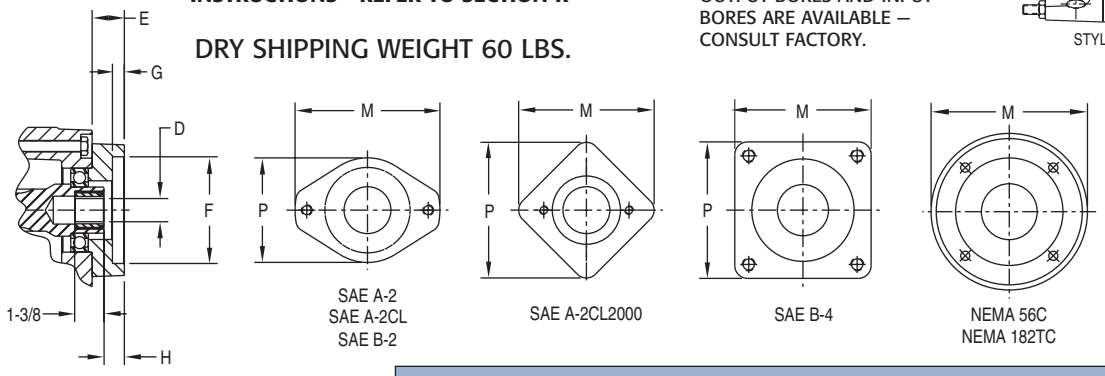
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 60 LBS.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.



SEE CHART FOR (QTY) J HOLES ON K B.C. FOR EACH FLANGE SIZE

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1", 1-1/8, 1-3/16, 1-1/4, 1-3/8, 1-1/2

INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	5-1/8	4-1/16
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	5-1/8	4-1/16
A-2CL2000	1-13/16	3.251 / 3.253	13/32	51/64	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/16	4.001 / 4.003	7/16	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.003	7/16	7/16	(4) 1/2 NC	5	5-1/8	5-1/8
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.502 / 8.505	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 89 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of four (4) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

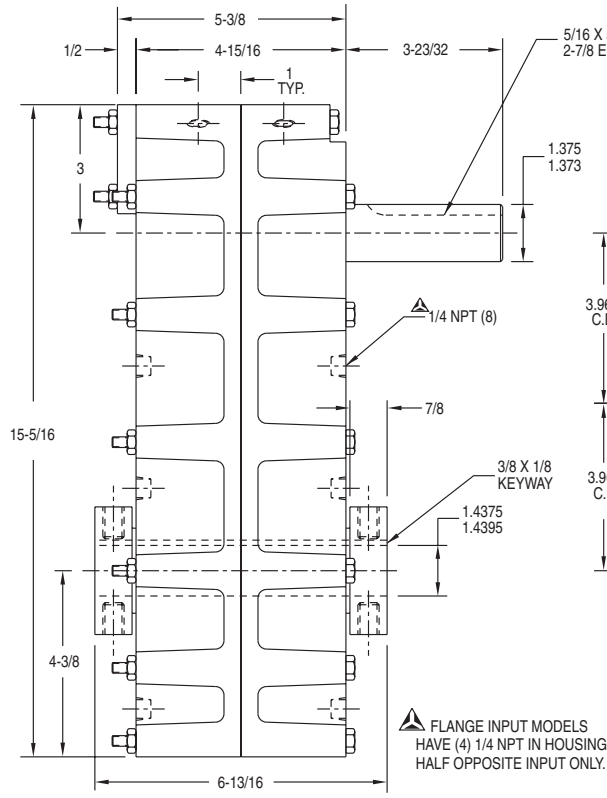


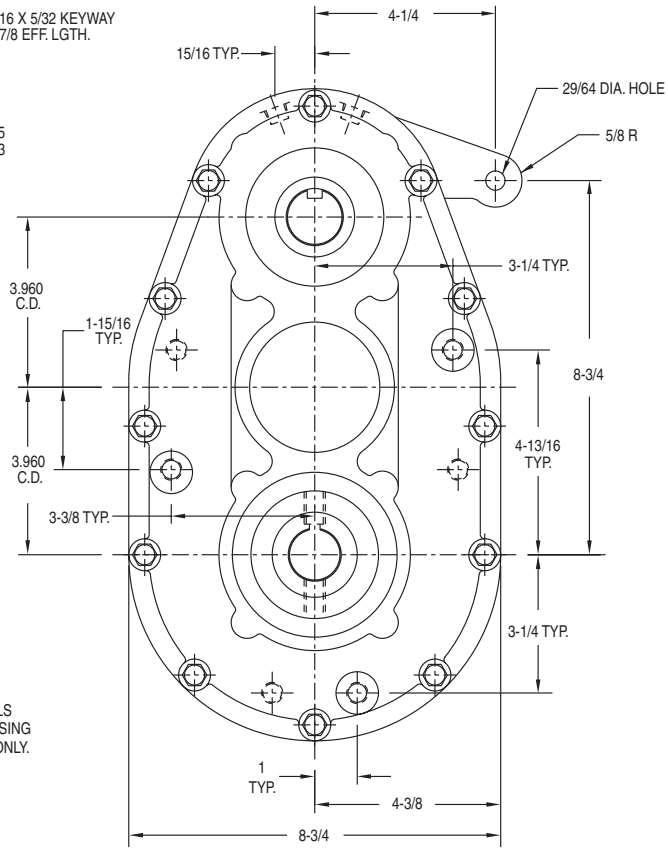
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

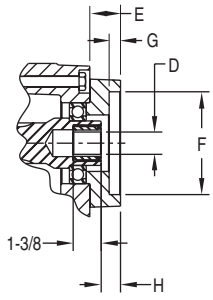
INPUT RPM		*RATIOS*			
		6.02:1	*8.58:1*	*10.49:1*	*12.84:1*
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	25.8 291 5476	19.2 204 5829	16.2 167 6013	13.7 136 6196
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	18.2 1911 5885	13.5 134 6210	11.5 110 6476	9.9 90 6857
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	14.1 141 6174	10.7 99 6689	9.3 81 7096	7.9 66 7338
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	11.9 115 6394	9.2 80 7096	7.8 66 7338	6.6 54 7542
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	2.16 16.6 8047	1.54 11.7 8136	1.26 9.5 8160	1.03 7.8 8160

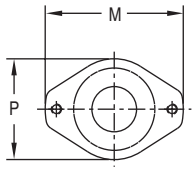
MODEL 89 - DOUBLE REDUCTION



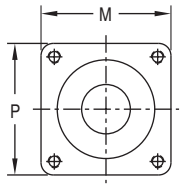


DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

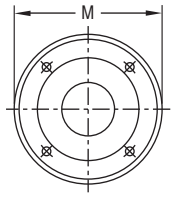




SAE A-2
SAE A-2CL
SAE B-2
SAE C-2



SAE B-4
SAE C-4



NEMA 56C
NEMA 182TC

SEE CHART FOR
(QTY) J HOLES ON K B.C.
FOR EACH FLANGE SIZE

SHAFT MOUNTED UNITS
REQUIRE TORQUE ARMS.
TORQUE ARM KITS ARE
AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS,
OUTPUT BORES AND INPUT
BORES ARE AVAILABLE —
CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 70 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1", 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8

INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	5-1/8	4-1/16
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	5-1/8	4-1/16
B-2	1-7/16	4.001 / 4.003	7/16	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.003	7/16	7/16	(4) 1/2 NC	5	5-1/8	5-1/8
C-2	1-7/8	5.001 / 5.003	17/32	31/32	(2) 5/8 NC	7-1/8	8-1/2	5-15/16
C-4	1-7/8	5.001 / 5.003	17/32	31/32	(4) 1/2 NC	6-3/8	6-1/16	6-1/16
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.501 / 8.504	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

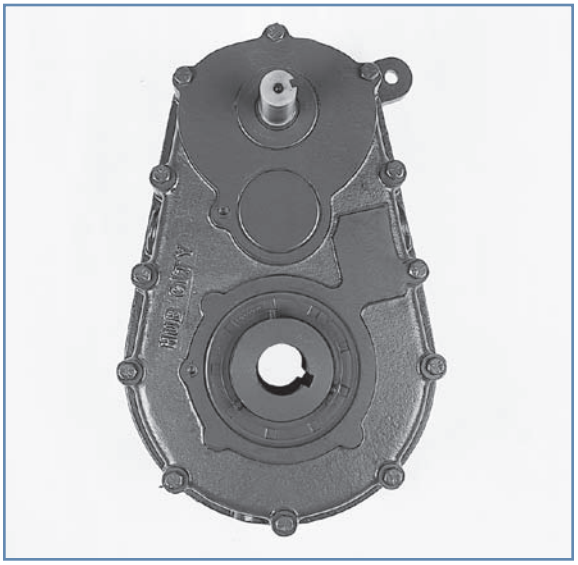
F

DOUBLE REDUCTION

MODEL 1 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of five (5) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

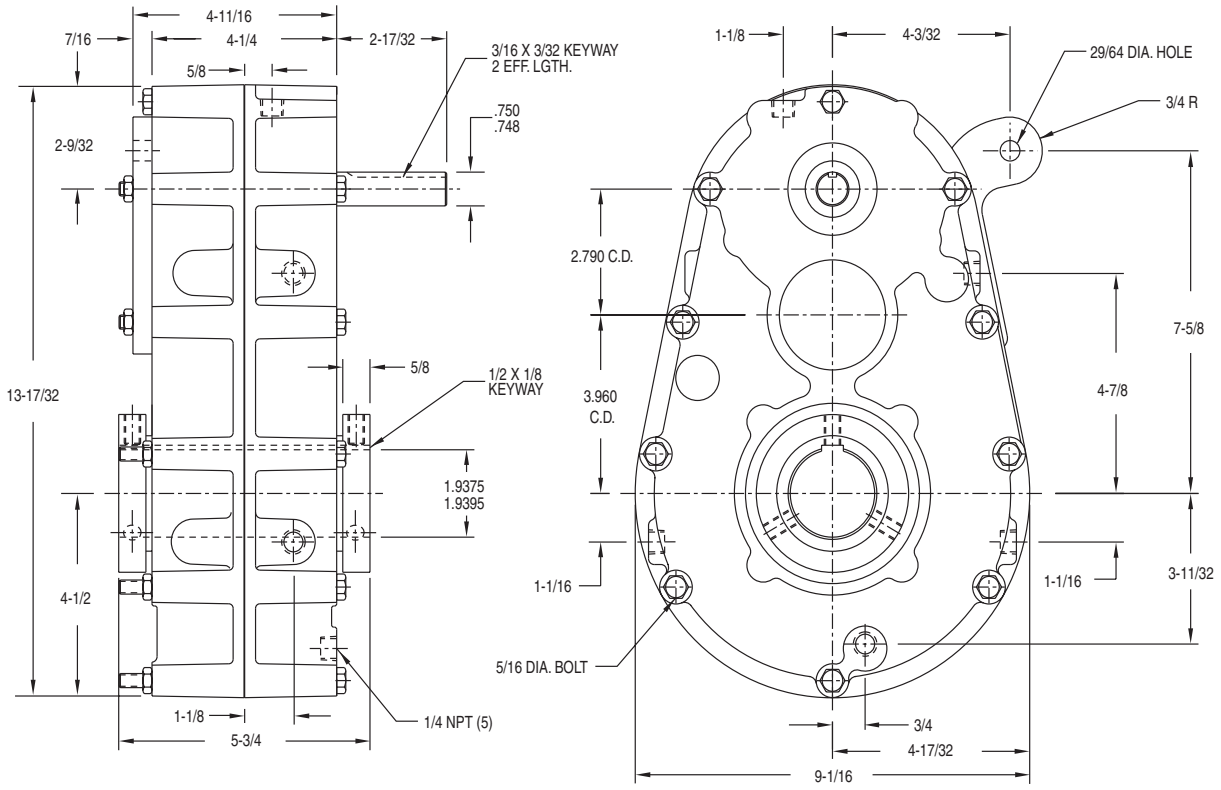


DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

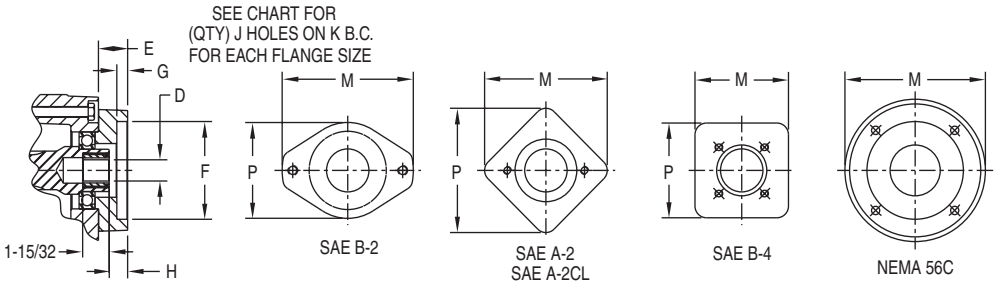
RATING TABLE

INPUT RPM		*RATIOS*				
		10.37:1	*15.06:1*	*19.87:1*	*25.46:1*	*48.42:1*
1750	INPUT HORSEPOWER	11.6	8.4	6.9	5.7	3.3
	OUTPUT RPM	169	116	88	69	36
	OUTPUT TORQUE IN. LBS.	4241	4485	4873	5161	5559
1150	INPUT HORSEPOWER	8.2	6.3	4.9	4.0	2.2
	OUTPUT RPM	111	76	58	45	24
	OUTPUT TORQUE IN. LBS.	4571	5061	5265	5459	5625
850	INPUT HORSEPOWER	6.6	4.8	3.8	3.0	1.6
	OUTPUT RPM	82	56	43	33	18
	OUTPUT TORQUE IN. LBS.	4974	5294	5490	5575	5680
690	INPUT HORSEPOWER	5.6	4.0	3.1	2.5	1.3
	OUTPUT RPM	67	46	35	27	14
	OUTPUT TORQUE IN. LBS.	5179	5444	5565	5608	5714
100	INPUT HORSEPOWER	.90	.62	.47	.37	.19
	OUTPUT RPM	9.6	6.6	5.0	3.9	2.1
	OUTPUT TORQUE IN. LBS.	5760	5760	5760	5760	5760

MODEL 1 - DOUBLE REDUCTION



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE – CONSULT FACTORY.

DRY SHIPPING WEIGHT 60 LBS.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1-3/16, 1-1/4, 1-1/2, 2"

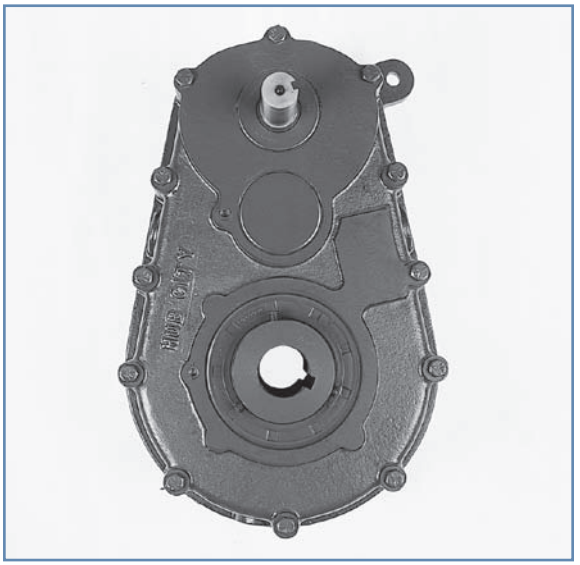
INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	.875 DIA. - 3/16 X 3/32 KW	1.000 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-3/4	3.251 / 3.253	5/16	15/32	(2) 3/8 NC	4-3/16	5-1/2	5-1/2
A-2CL	1-3/4	3.251 / 3.253	3/16	15/32	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/8	4.001 / 4.003	7/16	19/32	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/8	4.001 / 4.003	7/16	19/32	(4) 1/2 NC	5	6-1/8	6-1/8
56C	2	4.502 / 4.504	3/16	23/32	(4) 13/32 DIA.	5-7/8	6-1/2	--

MODEL 2 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of eight (8) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

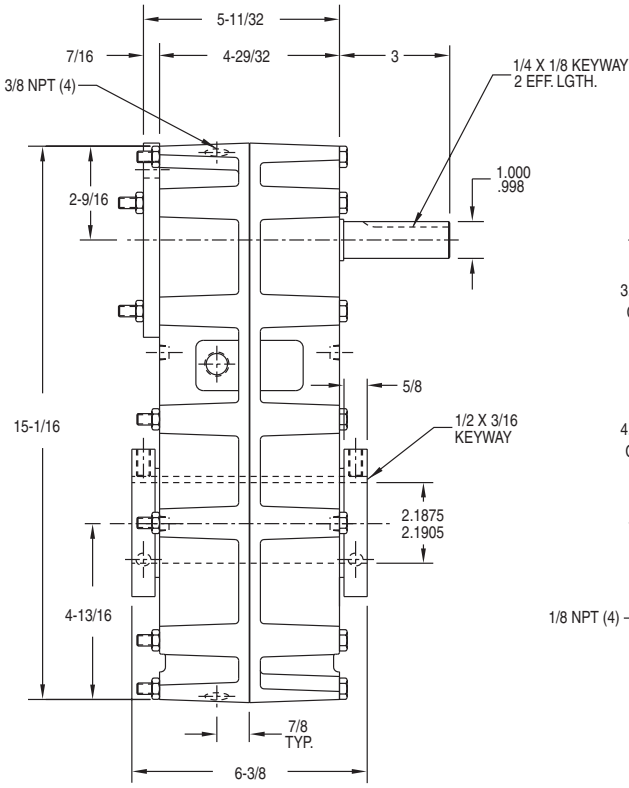


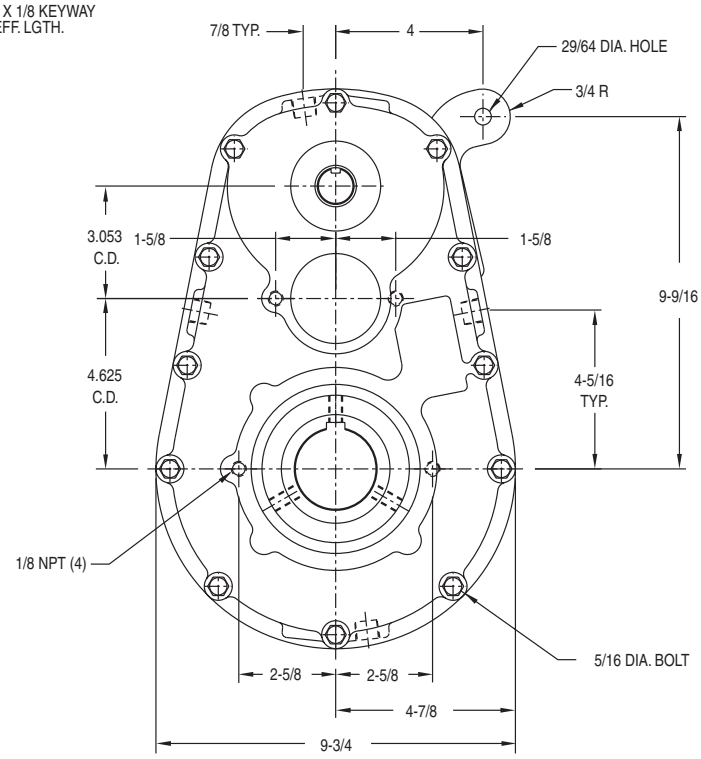
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

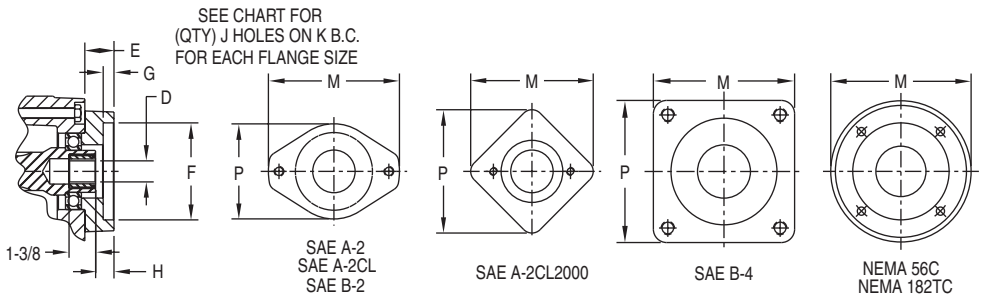
INPUT RPM		RATIOS							
		5.00:1	10.00:1	15.00:1	20.00:1	25.00:1	51.08:1	59.08:1	72.00:1
1750	INPUT HORSEPOWER	21.9	18.5	8.8	7.2	5.8	3.2	2.8	2.3
	OUTPUT RPM	350	175	117	88	70	34	30	24
	OUTPUT TORQUE IN. LBS.	3871	4395	4651	5093	5076	5803	5825	5859
1150	INPUT HORSEPOWER	15.7	8.7	6.5	5.1	4.1	2.1	1.9	1.5
	OUTPUT RPM	230	115	77	58	46	23	19	16
	OUTPUT TORQUE IN. LBS.	4208	4687	5259	5499	5484	5865	5893	5928
850	INPUT HORSEPOWER	12.1	7.1	5.0	3.9	3.1	1.6	1.4	1.1
	OUTPUT RPM	170	85	57	43	34	17	14	12
	OUTPUT TORQUE IN. LBS.	4412	5128	5500	5736	5720	5917	5952	5976
690	INPUT HORSEPOWER	10.2	6.0	4.3	3.2	2.6	1.3	1.1	.9
	OUTPUT RPM	138	69	46	35	28	14	12	10
	OUTPUT TORQUE IN. LBS.	4559	5366	5761	5802	5797	5952	5988	6000
100	INPUT HORSEPOWER	1.90	.97	.65	.49	.39	.19	.16	.13
	OUTPUT RPM	20.0	10.0	6.7	5.0	4.0	2.0	1.7	1.4
	OUTPUT TORQUE IN. LBS.	5882	6000	6000	6000	6000	6000	6000	6000

MODEL 2 - DOUBLE REDUCTION





DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 80 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1", 1-1/4, 1-1/2, 1-3/4, 1-15/16, 2"

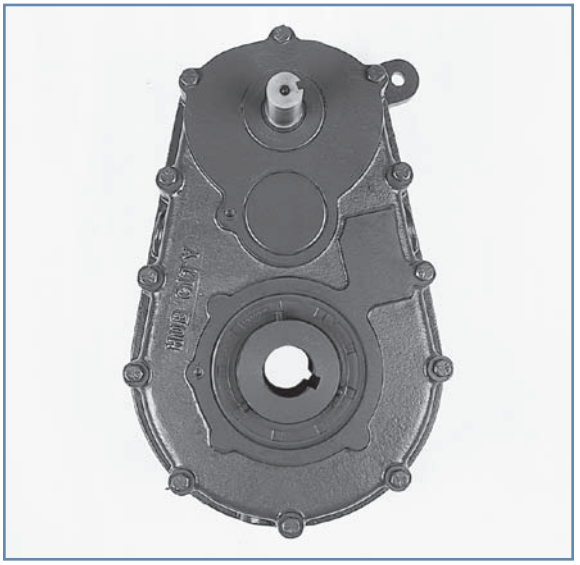
INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	5-1/8	4-1/16
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	5-1/8	4-1/16
A-2CL2000	1-13/16	3.251 / 3.253	13/32	51/64	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/16	4.001 / 4.003	7/16	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.003	7/16	7/16	(4) 1/2 NC	5	5-1/8	5-1/8
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.502 / 8.505	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 3 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of eight (8) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

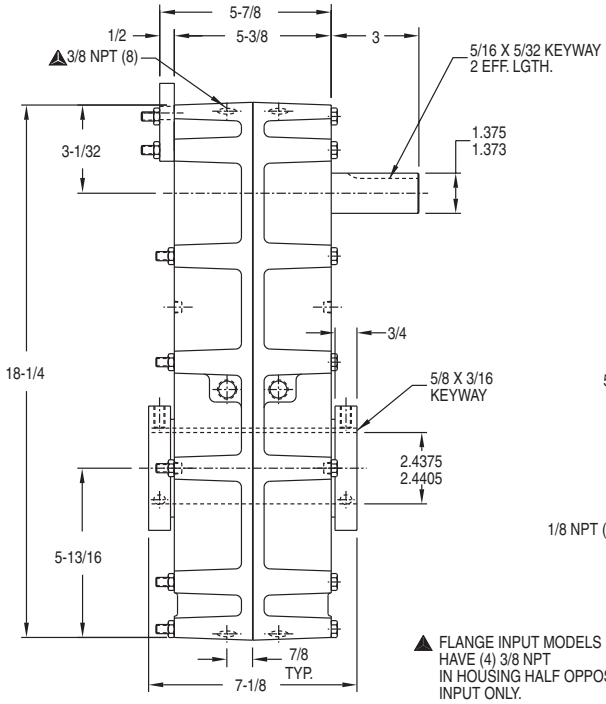


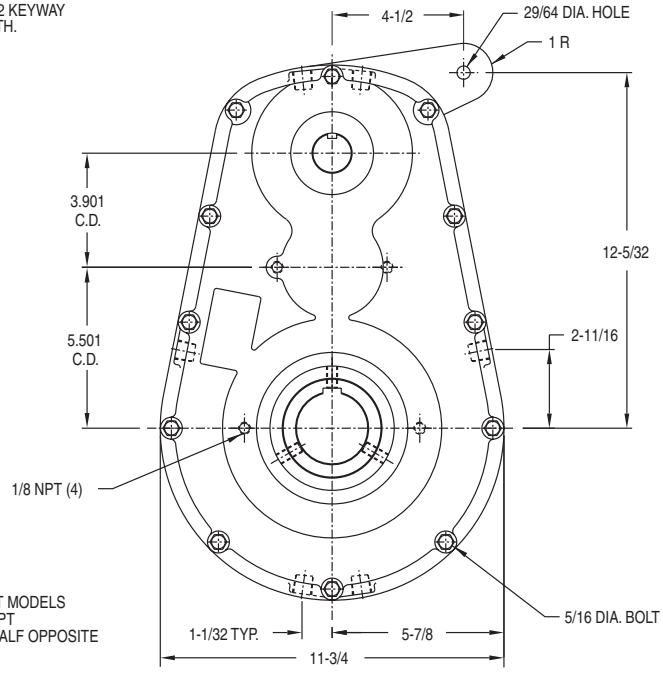
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		*RATIOS*							
		4.92:1	***10.08:1***	***15.19:1***	***25.34:1***	***31.14:1***	***40.57:1***	***44.89:1***	***63.99:1***
1750	INPUT HORSEPOWER	37.2	20.6	14.6	9.5	8.4	6.7	6.1	4.3
	OUTPUT RPM	356	174	115	69	56	43	39	27
	OUTPUT TORQUE IN. LBS.	6452	7336	7813	8460	9191	9532	9624	9737
1150	INPUT HORSEPOWER	26.2	14.5	10.8	6.7	5.8	4.5	4.0	2.9
	OUTPUT RPM	234	114	76	45	37	28	26	18
	OUTPUT TORQUE IN. LBS.	6918	7836	8787	9141	9643	9727	9756	9842
850	INPUT HORSEPOWER	20.5	11.7	8.3	5.2	4.3	3.3	3.0	2.1
	OUTPUT RPM	173	84	56	34	27	21	19	13
	OUTPUT TORQUE IN. LBS.	7331	8576	9191	9533	9737	9794	9823	9950
690	INPUT HORSEPOWER	17.2	9.9	7.0	4.3	3.5	2.7	2.5	1.7
	OUTPUT RPM	140	68	45	27	22	17	15	11
	OUTPUT TORQUE IN. LBS.	7576	8960	9479	9662	9785	9861	9900	9980
100	INPUT HORSEPOWER	3.23	1.61	1.07	.64	.52	.40	.36	.25
	OUTPUT RPM	20.3	9.9	6.6	3.9	3.2	2.5	2.2	1.6
	OUTPUT TORQUE IN. LBS.	9804	10000	10000	10000	10000	10000	10000	10000

MODEL 3 - DOUBLE REDUCTION

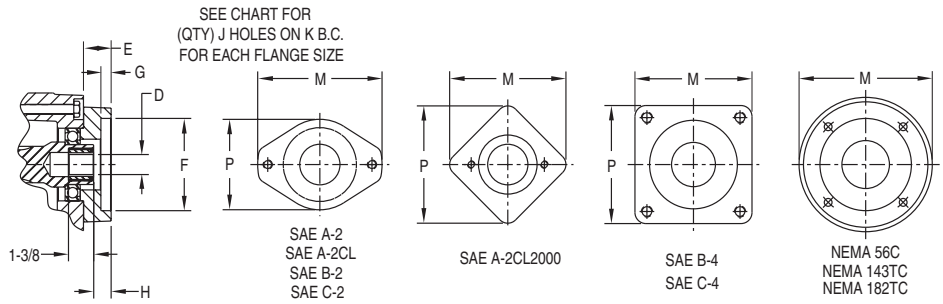




▲ FLANGE INPUT MODELS HAVE (4) 3/8 NPT IN HOUSING HALF OPPOSITE INPUT ONLY.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R



SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

DRY SHIPPING WEIGHT 120 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1-3/8, 1-3/4, 1-7/8, 1-15/16, 2-3/16, 2-1/4, 2-5/16, 2-3/8

INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-7/16	3.251 / 3.253	5/16	7/16	(2) 3/8 NC	4-3/16	5-1/8	4-1/16
A-2CL	1-7/16	3.251 / 3.253	3/16	7/16	(2) 1/2 NC	4-3/16	5-1/8	4-1/16
A-2CL2000	1-13/16	3.251 / 3.253	13/32	51/64	(2) 1/2 NC	4-3/16	5-1/2	5-1/2
B-2	1-7/16	4.001 / 4.003	7/16	7/16	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-7/16	4.001 / 4.003	7/16	7/16	(4) 1/2 NC	5	5-1/8	5-1/8
C-2	1-7/8	5.001 / 5.003	17/32	7/8	(2) 5/8 NC	7-1/8	8-1/2	6-1/8
C-4	1-7/8	5.001 / 5.003	17/32	7/8	(4) 1/2 NC	6-3/8	6-1/16	6-1/16
56C	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
143TC	1-5/8	4.502 / 4.504	5/16	5/8	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-7/16	8.502 / 8.505	5/16	1-7/16	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 4 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on high speed shaft. Tapered roller bearings on low speed shaft.
- Choice of seven (7) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

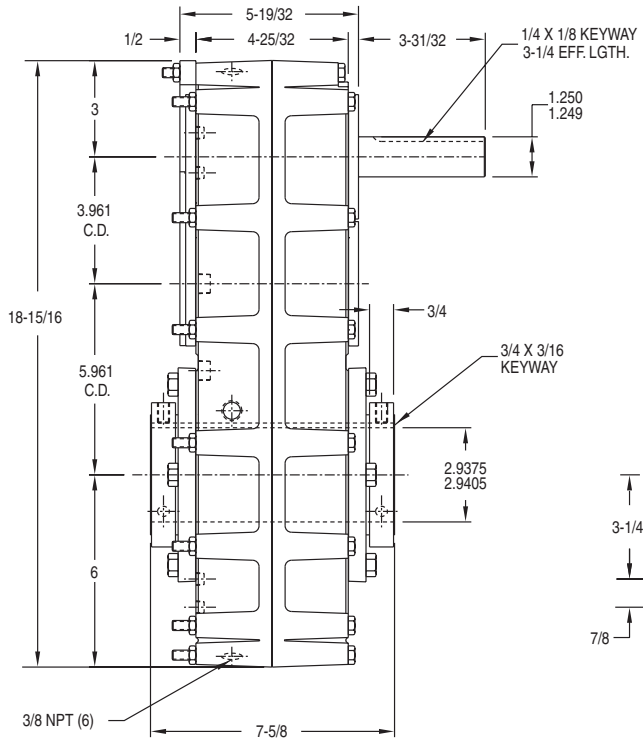


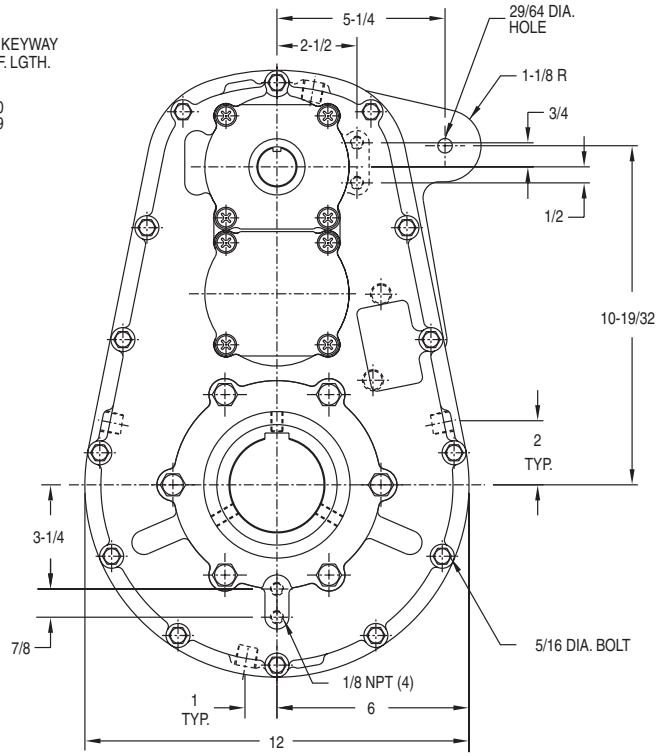
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		*RATIOS*						
		5.02:1	*7.99:1*	*12.42:1*	*15.87:1*	*18.96:1*	*23.65:1*	*30.02:1*
1750	INPUT HORSEPOWER	49.9	40.1	27.7	22.7	20.0	17.1	13.8
	OUTPUT RPM	350	219	141	110	92	74	58
	OUTPUT TORQUE IN. LBS.	8536	11314	12136	12714	13395	14265	14644
1150	INPUT HORSEPOWER	34.0	28.2	20.0	16.7	14.3	11.9	9.6
	OUTPUT RPM	250	144	93	72	61	49	38
	OUTPUT TORQUE IN. LBS.	8851	12081	13361	14227	14537	15099	15433
850	INPUT HORSEPOWER	25.7	22.2	15.9	12.9	11.0	9.0	7.1
	OUTPUT RPM	170	106	68	54	45	36	28
	OUTPUT TORQUE IN. LBS.	9052	12878	14329	14847	15185	15478	15584
690	INPUT HORSEPOWER	21.1	19.1	13.2	10.8	9.1	7.4	5.8
	OUTPUT RPM	138	86	56	43	36	29	23
	OUTPUT TORQUE IN. LBS.	9155	13646	14713	15272	15463	15584	15660
100	INPUT HORSEPOWER	3.33	3.23	2.03	1.63	1.37	1.1	.86
	OUTPUT RPM	20.0	12.5	8.0	6.3	5.3	4.2	3.3
	OUTPUT TORQUE IN. LBS.	10535	15940	16020	16020	16020	16020	16020

MODEL 4 - DOUBLE REDUCTION



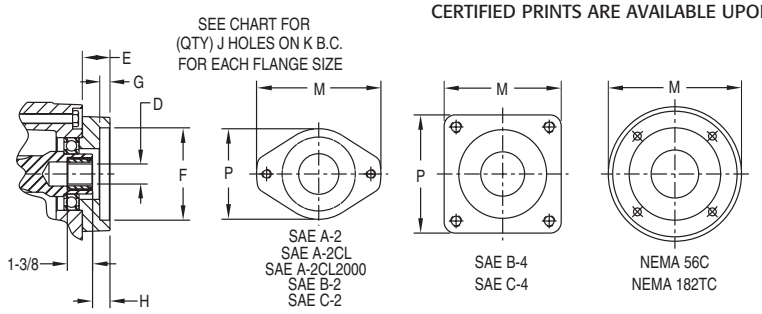


DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE SEE PAGE F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R



DRY SHIPPING WEIGHT 130 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
1-15/16, 2", 2-3/16, 2-7/16, 2-1/2, 3"

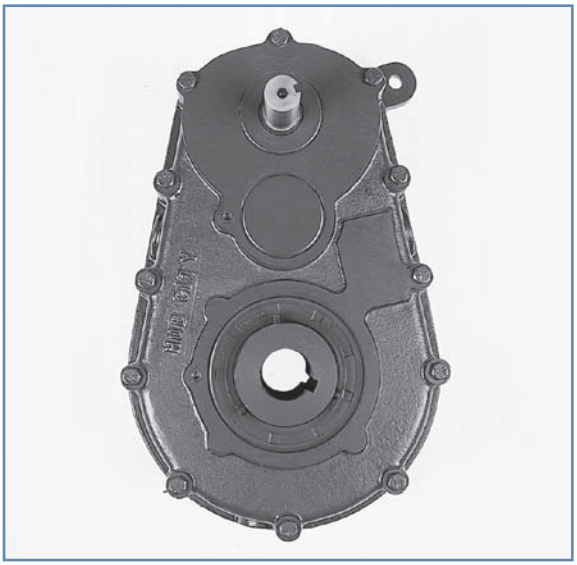
INPUT BUSHING SIZES D			
.625 DIA. - 3/16 X 3/32 KW	1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE
.875 DIA. - 3/16 X 3/32 KW	1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-1/4	3.251 / 3.253	5/16	51/64	(2) 3/8 NC	4-3/16	6-7/8	5-1/4
A-2CL	1-1/4	3.251 / 3.253	3/16	51/64	(2) 1/2 NC	4-3/16	6-7/8	5-1/4
A-2CL2000	1-1/4	3.251 / 3.253	5/16	51/64	(2) 1/2 NC	4-3/16	6-7/8	5-1/4
B-2	1-1/4	4.001 / 4.003	7/16	51/64	(2) 1/2 NC	5-3/4	6-7/8	5-1/4
B-4	1-1/4	4.001 / 4.003	7/16	51/64	(4) 1/2 NC	5	5-1/8	5-1/8
C-2	1-1/4	5.001 / 5.003	9/16	51/64	(2) 5/8 NC	7-1/8	8-1/2	6-1/8
C-4	1-1/4	5.001 / 5.003	9/16	51/64	(4) 1/2 NC	6-3/8	6-1/8	6-1/8
56C	2	4.502 / 4.504	5/16	1-35/64	(4) 13/32 DIA.	5-7/8	6-9/16	--
182TC	2-9/16	8.501 / 8.504	5/16	2-7/64	(4) 17/32 DIA.	7-1/4	9-1/8	--

MODEL 5 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Ball bearings on all shafts.
- Choice of seven (7) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)



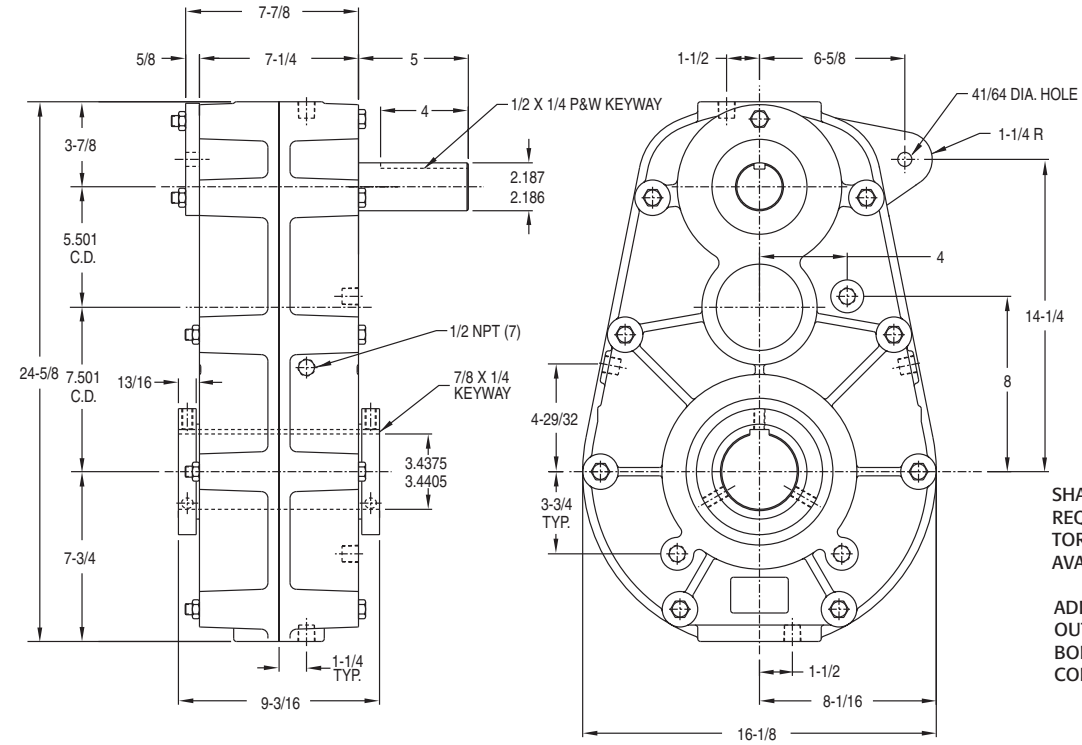
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		RATIOS						
		5.04:1	10.36:1	15.22:1	19.99:1	25.81:1	29.89:1	49.62:1
1750	INPUT HORSEPOWER	106.6	59.2	42.8	35.4	27.3	25.4	16.2
	OUTPUT RPM	347	169	115	88	68	59	35
	OUTPUT TORQUE IN. LBS.	18968	21649	22969	24957	24873	26800	28406
1150	INPUT HORSEPOWER	76.2	41.9	31.5	25.1	19.4	17.6	10.8
	OUTPUT RPM	228	111	76	58	45	38	23
	OUTPUT TORQUE IN. LBS.	20617	23333	25767	26947	26874	28334	28739
850	INPUT HORSEPOWER	59.0	33.7	24.4	19.4	14.9	13.2	8.0
	OUTPUT RPM	169	82	56	43	33	28	17
	OUTPUT TORQUE IN. LBS.	21618	25388	27022	28107	28027	28599	28994
690	INPUT HORSEPOWER	49.4	28.5	20.5	15.9	12.3	10.7	6.6
	OUTPUT RPM	137	67	45	35	27	23	14
	OUTPUT TORQUE IN. LBS.	22307	26438	27867	28433	28506	28739	29167
100	INPUT HORSEPOWER	9.26	4.59	3.13	2.38	1.84	1.59	.96
	OUTPUT RPM	19.8	9.7	6.6	5.0	3.9	3.3	2.0
	OUTPUT TORQUE IN. LBS.	28824	29400	29400	29400	29400	29400	29400

BORE TOLERANCE NOMINAL +.003

MODEL 5 - DOUBLE REDUCTION



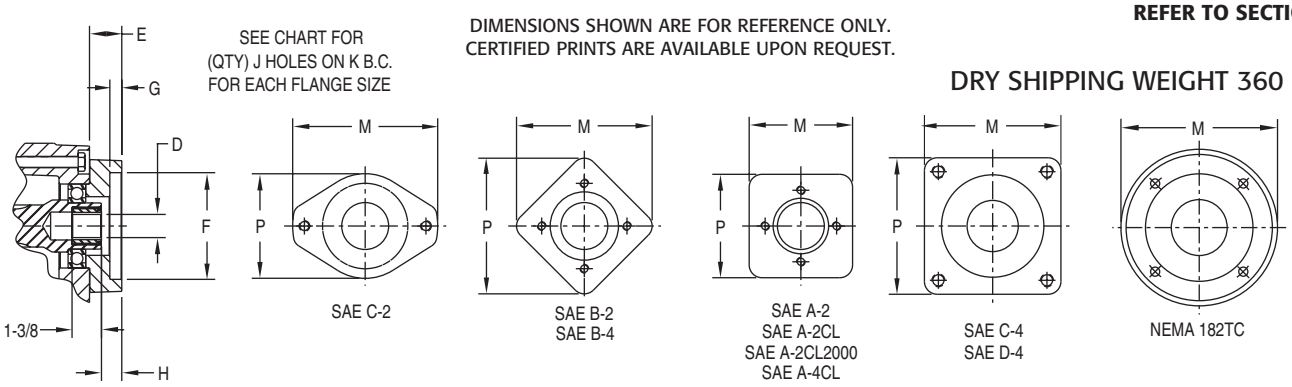
SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE See Page F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DRY SHIPPING WEIGHT 360 LBS.



OPTIONAL LOW SPEED BORE SIZES AVAILABLE
2-3/16, 2-1/4, 2-7/16, 2-1/2, 2-13/16, 2-3/4, 2-15/16, 3", 3-1/4, 3-1/2

INPUT BUSHING SIZES D			
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE
1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE	
1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE	

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1-3/8	3.251 / 3.253	5/16	53/64	(2) 3/8 NC	4-3/16	6-1/16	6-1/16
A-2CL	1-3/8	3.251 / 3.253	3/16	53/64	(2) 1/2 NC	4-3/16	6-1/16	6-1/16
A-2CL2000	1-3/8	3.251 / 3.253	5/16	53/64	(2) 1/2 NC	4-3/16	6-1/16	6-1/16
A-4CL	1-3/8	3.251 / 3.253	3/16	53/64	(4) 1/2 NC	4-3/16	6-1/16	6-1/16
B-2	1-3/8	4.001 / 4.003	7/16	53/64	(2) 1/2 NC	5-3/4	6-1/16	6-1/16
B-4	1-3/8	4.001 / 4.003	7/16	53/64	(4) 1/2 NC	5	6-1/16	6-1/16
C-2	1-1/2	5.001 / 5.003	9/16	31/32	(2) 5/8 NC	7-1/8	8-1/2	6-1/8
C-4	1-1/2	5.001 / 5.003	9/16	31/32	(4) 1/2 NC	6-3/8	6-1/16	6-1/16
D-4	1-1/2	6.001 / 6.003	9/16	31/32	(4) 3/4 NC	9	8	8
182TC	2-7/16	8.501 / 8.504	5/16	1-57/64	(4) 17/32 DIA.	7-1/4	9-1/8	—

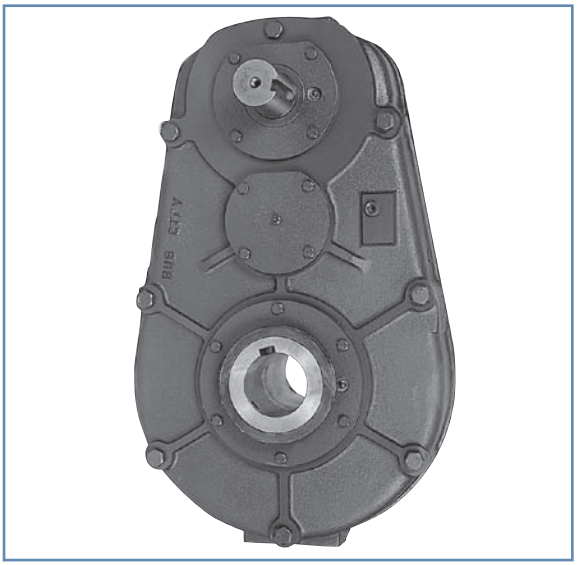
F

DOUBLE REDUCTION

MODEL 6 - DOUBLE REDUCTION

FEATURES

- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Tapered roller bearings on all shafts.
- Choice of seven (7) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

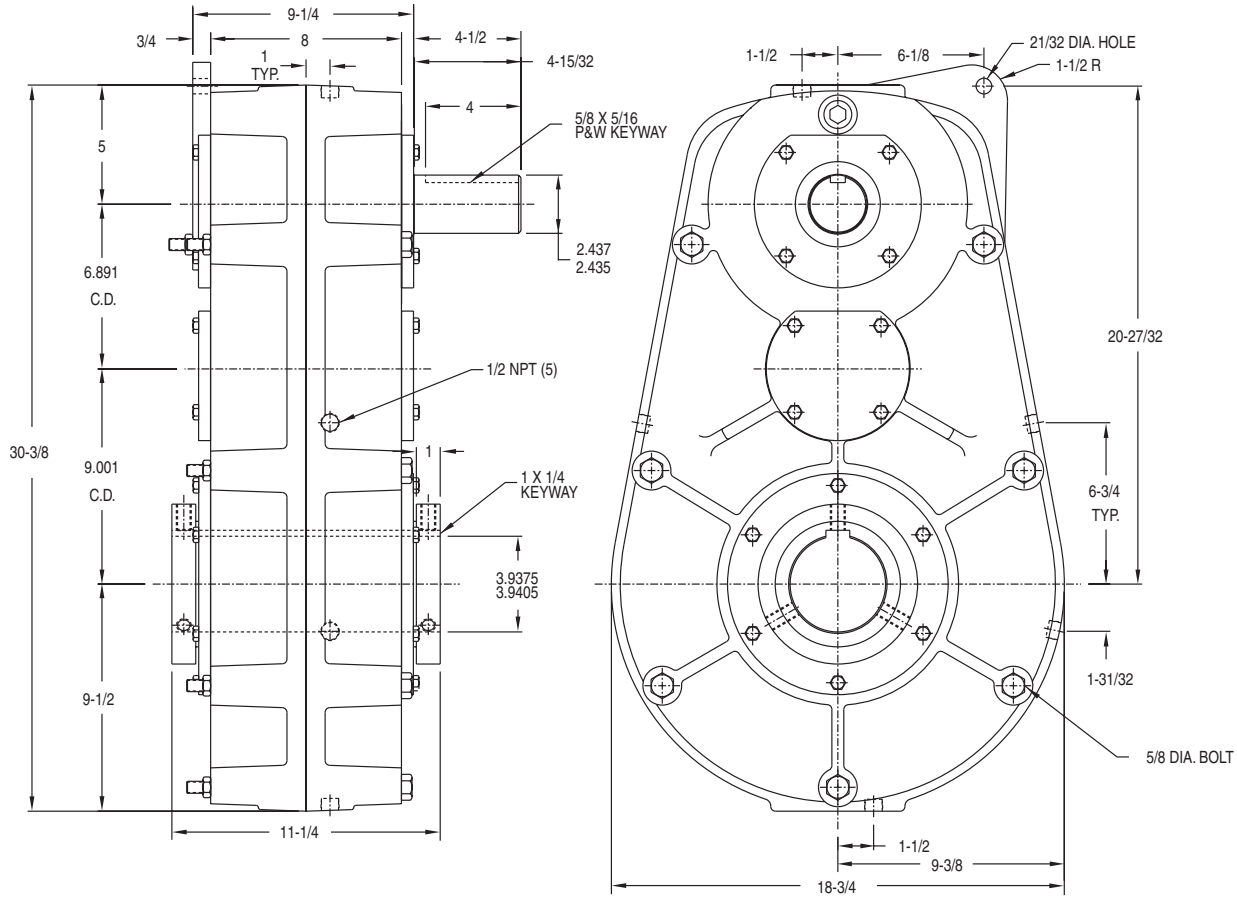


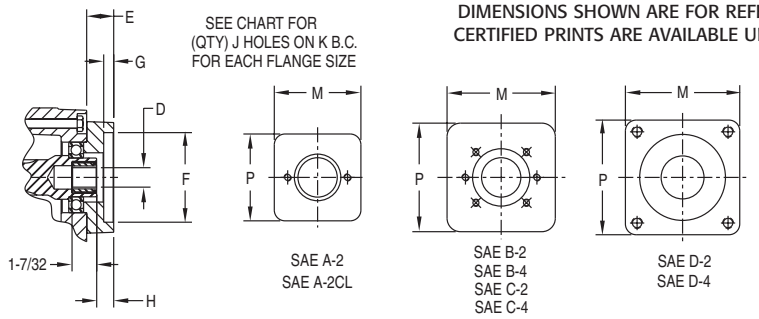
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

RATING TABLE

INPUT RPM		RATIOS						
		5.16:1	10.48:1	15.23:1	19.99:1	24.84:1	29.32:1	50.69:1
1750	INPUT HORSEPOWER	136.9	76.5	55.8	46.2	37.1	33.7	20.7
	OUTPUT RPM	339	167	115	88	70	60	35
	OUTPUT TORQUE IN. LBS.	24935	28297	30000	32597	32487	34909	37101
1150	INPUT HORSEPOWER	97.9	54.1	41.3	32.8	26.3	23.5	13.8
	OUTPUT RPM	223	110	76	58	46	39	23
	OUTPUT TORQUE IN. LBS.	27119	30476	33745	35197	35700	36958	37536
850	INPUT HORSEPOWER	75.7	43.7	31.9	25.3	20.3	17.5	10.3
	OUTPUT RPM	165	81	56	43	34	29	17
	OUTPUT TORQUE IN. LBS.	28381	33275	35294	36711	36606	37317	37870
690	INPUT HORSEPOWER	63.3	36.8	26.7	20.8	16.7	14.3	8.4
	OUTPUT RPM	134	66	45	35	28	24	14
	OUTPUT TORQUE IN. LBS.	29246	34532	36398	37137	37101	37500	38095
100	INPUT HORSEPOWER	11.8	5.93	4.08	3.11	2.50	2.12	1.23
	OUTPUT RPM	19.4	9.5	6.6	5.0	4.0	3.4	2.0
	OUTPUT TORQUE IN. LBS.	37721	38400	38400	38400	38400	38400	38400

MODEL 6 - DOUBLE REDUCTION





DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE See Page F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 480 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
4"

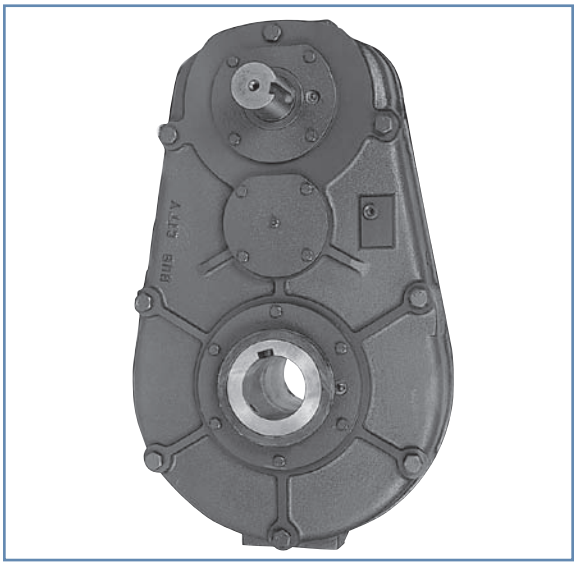
INPUT BUSHING SIZES D		
1.000 DIA. - 1/4 X 1/8 KW	13T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE
9T - 16/32 D.P. SPLINE	14T - 12/24 D.P. SPLINE	21T - 16/32 D.P. SPLINE

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	7/8	3.251 / 3.253	--	5/8	(2) 3/8 NC	4-3/16	8-3/8	8-3/8
A-2CL	7/8	3.251 / 3.253	--	5/8	(2) 1/2 NC	4-3/16	8-3/8	8-3/8
B-2	7/8	4.001 / 4.003	--	5/8	(2) 1/2 NC	5-3/4	8-3/8	8-3/8
B-4	7/8	4.001 / 4.003	--	5/8	(4) 1/2 NC	5	8-3/8	8-3/8
C-2	7/8	5.001 / 5.003	9/16	5/8	(2) 5/8 NC	7-1/8	8-3/8	8-3/8
C-4	7/8	5.001 / 5.003	9/16	5/8	(4) 1/2 NC	6-3/8	8-3/8	8-3/8
D2-4	7/8	6.001 / 6.003	9/16	5/8	(4) 25/32 DIA.	9	8-3/8	8-3/8

MODEL 75 - DOUBLE REDUCTION

FEATURES

- Rugged Ductile iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Precision bearings on all shafts.
- Choice of nine (9) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

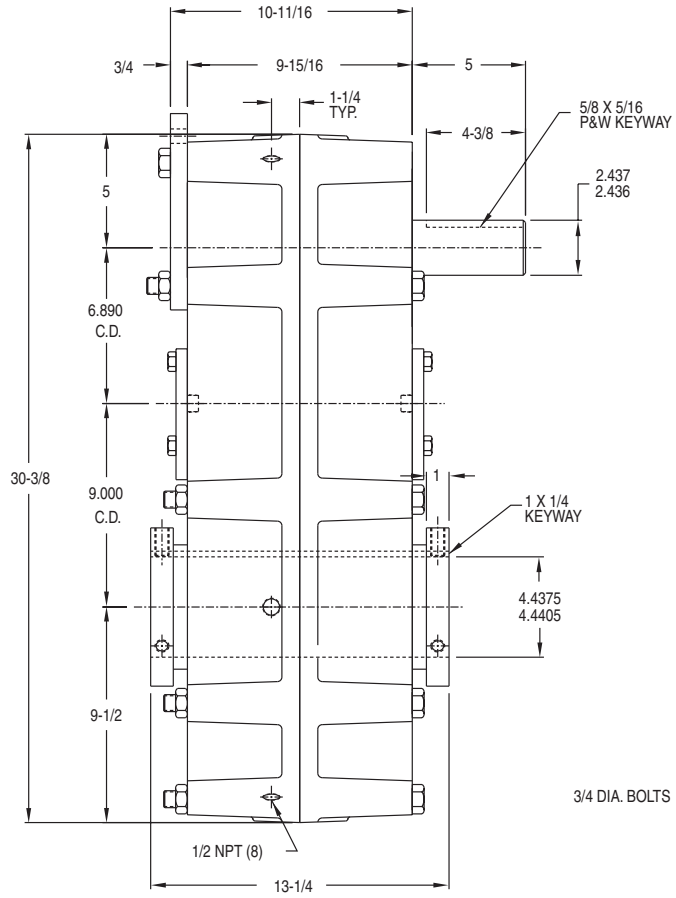


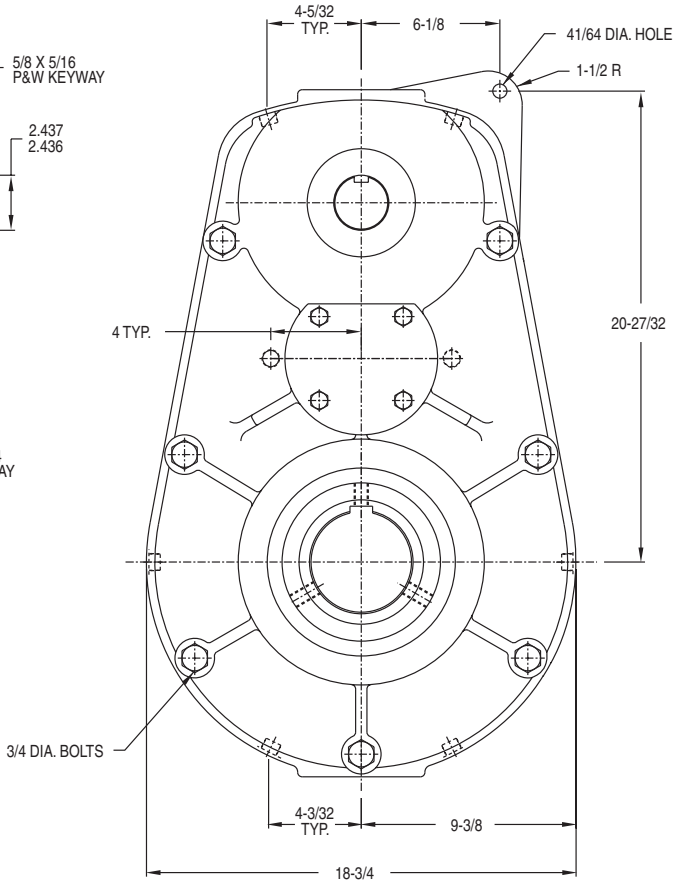
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

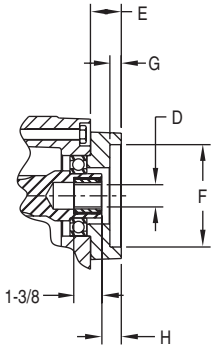
RATING TABLE

INPUT RPM		RATIOS								
		5.06:1	9.9:1	15.37:1	20:1	25.56:1	29.38:1	39.85:1	49.3:1	59.76:1
1750	INPUT HORSEPOWER	252.8	146.8	121.5	95.7	89.0	79.0	54.4	39.7	32.1
	OUTPUT RPM	346	177	114	88	68	60	44	35	29
	OUTPUT TORQUE IN. LBS.	46019	52329	67301	68940	80624	81506	79727	70441	69056
1150	INPUT HORSEPOWER	175.0	100.9	82.1	67.9	59.3	52.0	37.9	26.9	21.7
	OUTPUT RPM	227	116	75	58	45	39	29	23	19
	OUTPUT TORQUE IN. LBS.	48475	54744	69217	74461	82395	81395	81125	72866	71281
850	INPUT HORSEPOWER	133.7	76.8	61.7	51.5	44.9	39.0	27.2	20.3	16.4
	OUTPUT RPM	168	86	55	43	33	29	21	17	14
	OUTPUT TORQUE IN. LBS.	50122	56339	70444	76432	82389	83279	82228	74429	72705
690	INPUT HORSEPOWER	110.9	63.4	50.6	42.5	36.4	32.0	22.3	16.7	13.5
	OUTPUT RPM	136	70	45	35	27	23	17	14	12
	OUTPUT TORQUE IN. LBS.	51195	57368	71213	77696	83279	84167	82820	75419	73615
100	INPUT HORSEPOWER	18.4	10.3	7.9	6.8	5.5	4.8	3.4	2.6	2.1
	OUTPUT RPM	19.8	10.1	6.5	5.0	3.9	3.4	2.5	2.0	1.7
	OUTPUT TORQUE IN. LBS.	58585	64233	75960	85983	86822	86822	86402	81728	79313

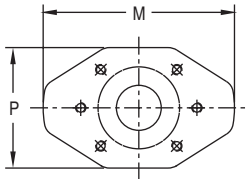
MODEL 75 - DOUBLE REDUCTION



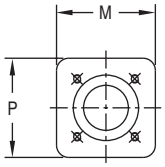




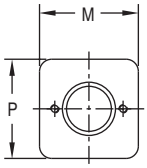
SEE CHART FOR (QTY) J HOLES ON K B.C. FOR EACH FLANGE SIZE



SAE C-2
SAE C-4



SAE B-4



SAE A-2
SAE A-2CL
SAE B-2

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE See Page F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 550 LBS.

OPTIONAL LOW SPEED BORE SIZES AVAILABLE
3", 3-7/16, 3-15/16, 4", 4-3/16

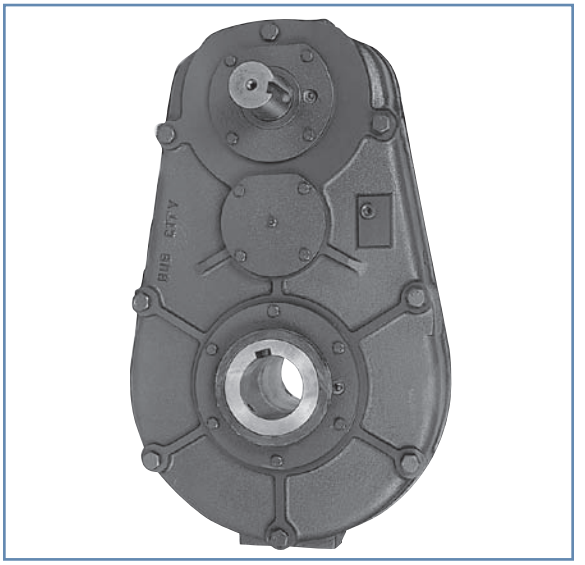
INPUT BUSHING SIZES D			
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE
1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE	
1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE	

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1	3.251 / 3.253	--	5/8	(2) 3/8 NC	4-3/16	8	8
A-2CL	1	3.251 / 3.253	--	5/8	(2) 1/2 NC	4-3/16	8	8
B-2	1	4.001 / 4.003	--	5/8	(2) 1/2 NC	5-3/4	8	8
B-4	1	4.001 / 4.003	--	5/8	(4) 1/2 NC	5	8	8
C-2	1	5.001 / 5.003	9/16	5/8	(2) 5/8 NC	7-1/8	10-5/8	8-1/2
C-4	1	5.001 / 5.003	9/16	5/8	(4) 1/2 NC	6-3/8	10-5/8	8-1/2

MODEL 8 - DOUBLE REDUCTION

FEATURES

- Rugged Ductile iron housing designed for rigid gear and bearing support.
- Alloy shafting and sleeves for greater strength.
- Precision bearings on all shafts.
- Choice of five (5) standard gear ratios.
- Heat treated alloy steel gearing for strength and long wear life.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Shaft mount design for direct mounting on the drive shaft of equipment to be driven.
- HUB CITY lubricant recommended. (Refer to Section R)

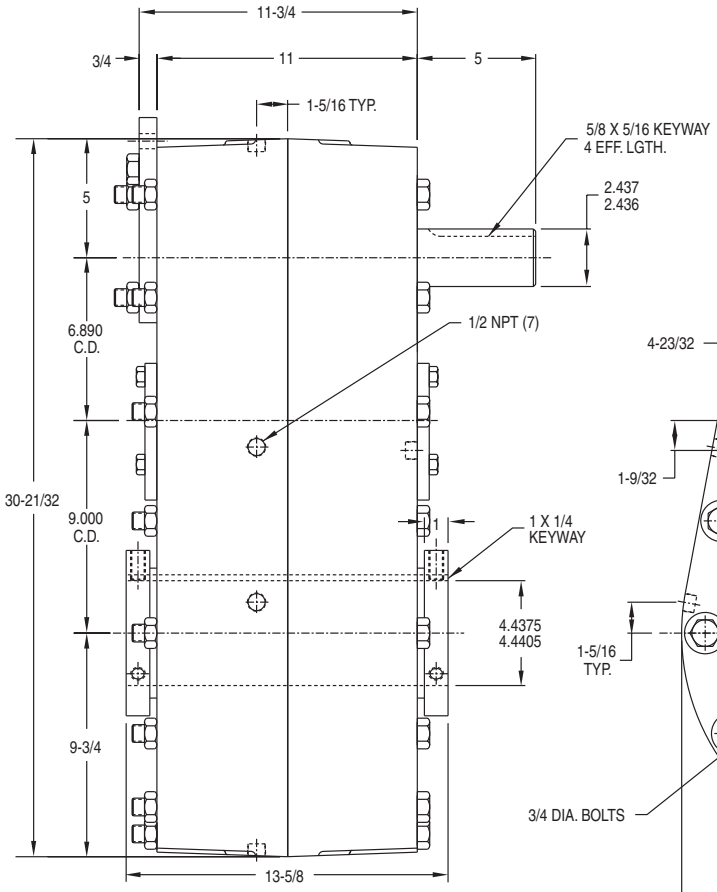


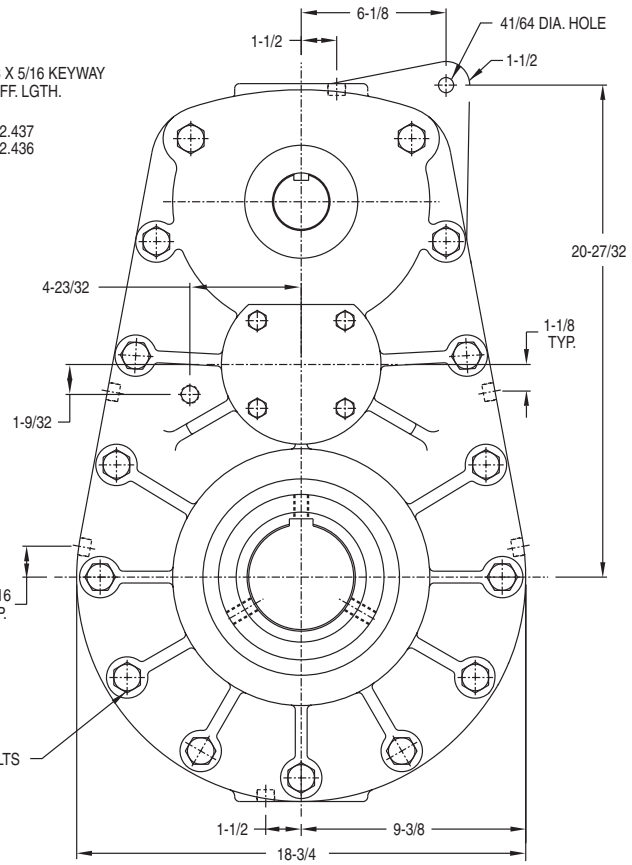
DOUBLE REDUCTION UNITS PROVIDE SAME DIRECTION OUTPUT ROTATION

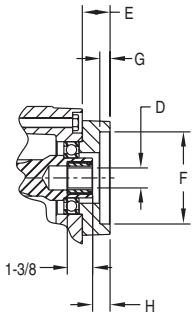
RATING TABLE

INPUT RPM		*RATIOS*				
		5.16:1	***10.46:1***	***15.21:1***	***24.90:1***	***29.82:1***
1750	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	291.0 339 53002	181.1 167 66871	181.1 115 97235	119.0 70 104607	101.7 59 107060
1150	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	205.1 223 56848	126.5 110 71094	126.4 76 103376	80.8 46 108114	69.0 39 110434
850	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	158.7 165 59496	97.3 81 73950	96.4 56 106583	61.0 34 110359	52.0 29 112585
690	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	132.6 134 61252	81.0 66 75822	79.5 45 108257	50.1 28 111775	42.7 23 113939
100	INPUT HORSEPOWER OUTPUT RPM OUTPUT TORQUE IN. LBS.	23.24 19.4 74057	13.77 9.6 88932	12.67 6.6 119006	7.84 4.0 120646	6.64 3.3 122361

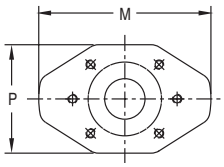
MODEL 8 - DOUBLE REDUCTION



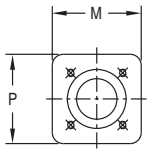




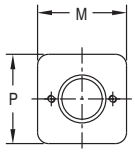
SEE CHART FOR (QTY) J HOLES ON K B.C. FOR EACH FLANGE SIZE



SAE C-2
SAE C-4



SAE B-4



SAE A-2
SAE A-2CL
SAE B-2

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

SHAFT MOUNTED UNITS REQUIRE TORQUE ARMS. TORQUE ARM KITS ARE AVAILABLE See Page F-53.

ADDITIONAL RATIOS, OUTPUT BORES AND INPUT BORES ARE AVAILABLE — CONSULT FACTORY.

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 725 LBS.

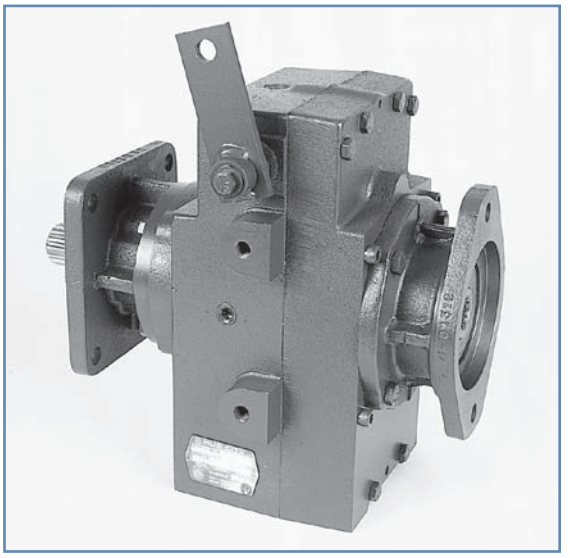
OPTIONAL LOW SPEED BORE SIZES AVAILABLE
3", 3-7/16, 3-15/16, 4", 4-3/16

INPUT BUSHING SIZES D			
1.000 DIA. - 1/4 X 1/8 KW	1.250 DIA. - 5/16 X 1/8 KW	13T - 16/32 D.P. SPLINE	21T - 16/32 D.P. SPLINE
1.125 DIA. - 1/4 X 1/8 KW	1" - 6B SPLINE	14T - 12/24 D.P. SPLINE	
1.250 DIA. - 1/4 X 1/8 KW	9T - 16/32 D.P. SPLINE	15T - 16/32 D.P. SPLINE	

FLANGE	E	COUNTERBORE F	G	H	(QTY) J HOLES	B.C. DIA. K	M	P
A-2	1	3.251 / 3.253	--	15/16	(2) 3/8 NC	4-3/16	8	8
A-2CL	1	3.251 / 3.253	--	15/16	(2) 1/2 NC	4-3/16	8	8
B-2	1	4.001 / 4.003	--	15/16	(2) 1/2 NC	5-3/4	8	8
B-4	1	4.001 / 4.003	--	15/16	(4) 1/2 NC	5	8	8
C-2	1	5.001 / 5.003	9/16	15/16	(2) 5/8 NC	7-1/8	10-5/8	8-1/2
C-4	1	5.001 / 5.003	9/16	15/16	(4) 1/2 NC	6-3/8	10-5/8	8-1/2

MODEL HT-100 SHIFTING TRANSMISSION

FEATURES



- Input and output shafts in-line.
- Shifting mechanism allows selection of neutral and two (2) ratios.
- Rugged cast iron housing designed for rigid gear and bearing support.
- Alloy shafting for greater strength.
- Heavy-duty ball bearings on input and output shafts.
- Needle bearings on pilot and counter shaft.
- Heat treated alloy steel gearing for strength and long wear life.
- Choice of 1:1 and two (2) standard gear ratios.
- Heavy-duty industrial seals to keep lubricant in and dirt out.
- Available with hydraulic flange or shaft input.
- HUB CITY lubricant recommended. (Refer to Section R)
- HT-100 manufactured to order only. Consult factory for price and delivery.

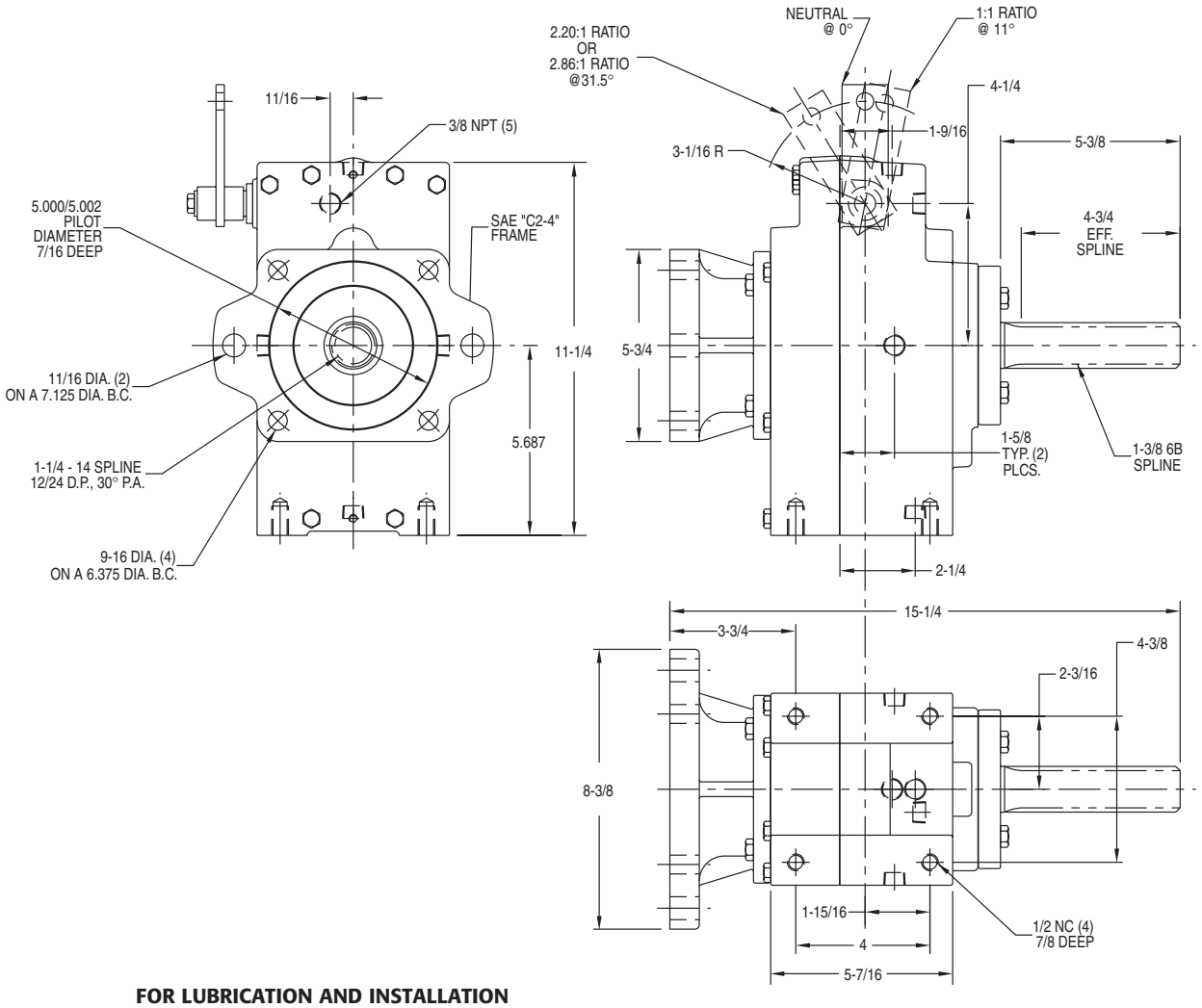
RATING TABLE

INPUT		RATIOS 1:1 AND 2.20:1	RATIOS 1:1 AND 2.86:1
1750	INPUT HORSEPOWER	32.8	22.7	32.8	15.9
	OUTPUT RPM	1750	797	1750	612
	OUTPUT TORQUE IN. LBS.	1181	1794	1181	1637
1150	INPUT HORSEPOWER	23.1	15.9	23.1	11.0
	OUTPUT RPM	1150	524	1150	402
	OUTPUT TORQUE IN. LBS.	1266	1915	1266	1725
850	INPUT HORSEPOWER	17.9	12.3	17.9	8.4
	OUTPUT RPM	850	387	850	297
	OUTPUT TORQUE IN. LBS.	1327	1997	1327	1772
690	INPUT HORSEPOWER	14.9	10.2	14.9	6.9
	OUTPUT RPM	690	314	690	241
	OUTPUT TORQUE IN. LBS.	1361	2049	1361	1804
100	INPUT HORSEPOWER	2.6	1.7	2.6	1.1
	OUTPUT RPM	100	46	100	35
	OUTPUT TORQUE IN. LBS.	1639	2370	1639	1981

OVERHUNG LOAD - INPUT 450 LBS.
OUTPUT 550 LBS.

CALL: (605) 225-0360 • FAX: (605) 225-0567

MODEL HT-100 SHIFTING TRANSMISSION

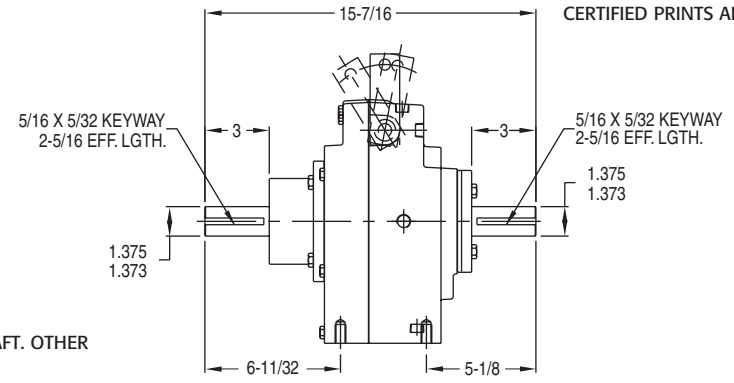


FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DRY SHIPPING WEIGHT 65 LBS.

ALTERNATE INPUT DESIGN

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



Δ INDICATES HIGH SPEED SHAFT. OTHER STYLES AVAILABLE.

CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

SAE STANDARDS

SAE J744 HYDRAULIC POWER, PUMPS

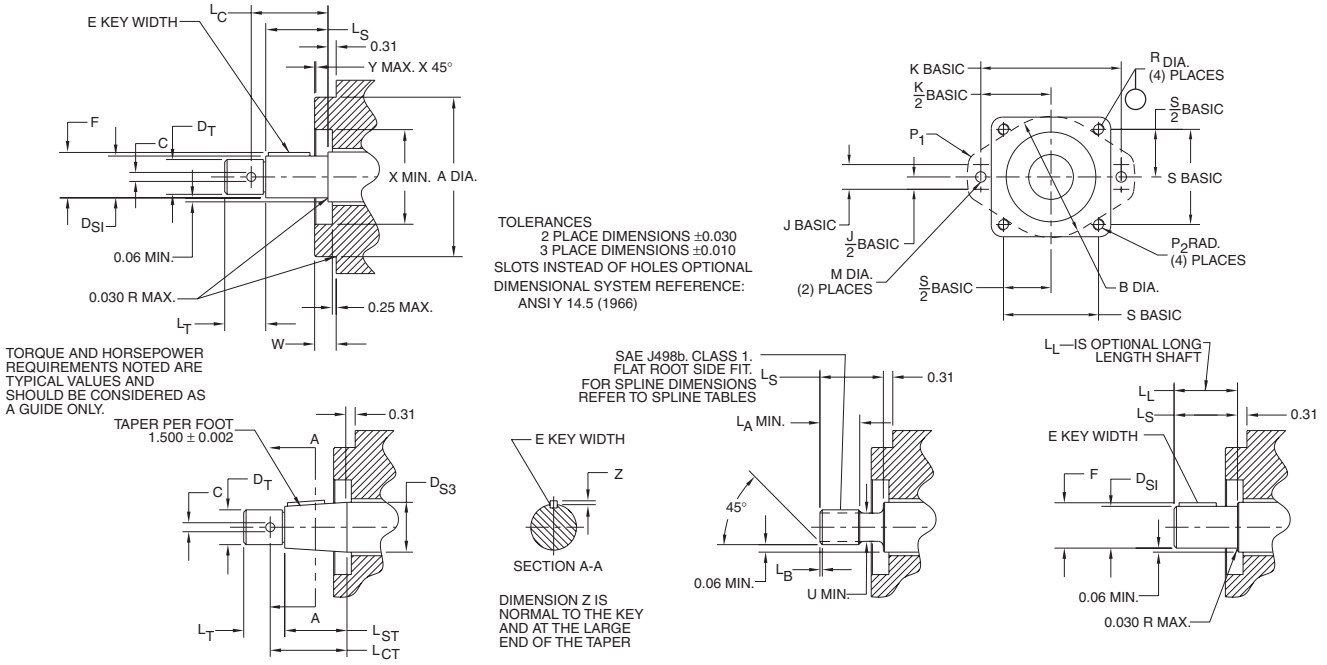


TABLE 1 — DIMENSIONS OF HYDRAULIC POWER PUMP AND MOTOR MOUNTING FLANGE AND SHAFTS RELATED TO HORSEPOWER REQUIREMENTS

Mounting Flange and Shaft Size	SHAFT[A] S1 = 25,000 PSI		SHAFT DIMENSIONS															
			STRAIGHT WITH THREAD								TAPERED							
	TORQUE IN.-LB.	HP AT 1000 RPM	D_{S1}	D_T	C +0.005 =-.003	L_C	L_S	L_T	E +0.001 -0.000	F ±0.005	D_{S3}	D_T	C +0.005 -0.003	L_{CT}	L_{ST}	L_T	E +0.001 -0.000	Z
A-A	260	4.25	0.500 / 0.499	3/8-24 UNF 2A	0.094	1.125	0.750	0.562	0.125	0.664	0.500 / 0.499	5/16-32 UNF 2A	0.078	0.984	0.688	0.500	0.125	0.064 / 0.054
A	517	8.25	0.625 / 0.624	1/2-20 UNF 2A	0.125	1.344	0.938	0.719	0.1563	0.693	0.625 / 0.624	1/2-20 UNF 2A	0.125	1.094	0.688	0.719	0.1563	0.084 / 0.074
B	1,852	29.3	0.875 / 0.874	5/8-18 UNF 2A	0.156	1.875	1.312	0.906	0.250	0.982	0.875 / 0.874	5/8-18 UNF 2A	0.156	1.688	1.125	0.906	0.250	0.131 / 0.121
B-B	2,987	47.5	1.000 / 0.998	3/4-16 UNF 2A	0.156	2.062	1.500	1.062	0.250	1.106	1.001 / 0.999	3/4-16 UNF 2A	0.156	1.938	1.375	1.062	0.250	0.131 / 0.121
C	5,677	90.0	1.250 / 1.248	1-12 UNF 2A	0.156	2.625	1.875	1.219	0.3125	1.386	1.251 / 1.249	1-12 UNF 2A	0.156	1.938	1.375	1.219	0.3125	0.162 / 0.152
C-C	10,777	171	1.500 / 1.498	1-1/8-12 UNF 2A	0.156	2.875	2.125	1.375	0.375	1.664	1.501 / 1.499	1-1/8-12 UNF 2A	0.156	2.438	1.875	1.375	0.375	0.194 / 0.184
D	15,057	239	1.750 / 1.748	1-1/4-12 UNF 2A	0.156	3.500	2.625	1.562	0.4375	1.941	1.751 / 1.749	1-1/4-12 UNF 2A	0.156	2.812	2.125	1.562	0.4375	0.225 / 0.215
E	15,057	238	1.750 / 1.748	1-1/4-12 UNF 2A	0.156	3.500	2.625	1.562	0.4375	1.941	1.751 / 1.749	1-1/4-12 UNF 2A	0.156	2.812	2.125	1.562	0.4375	0.225 / 0.215
F	24,245	285	–	–	–	–	–	–	–	–	2.001 / 1.999	1-1/4-12 UNF 2A	0.156	3.562	2.875	1.562	0.500	0.256 / 0.246

SAE STANDARDS

SAE J744 HYDRAULIC POWER, PUMPS

Mounting Flange and Shaft Size	SHAFT[A] S1= 25,000 psi		SHAFT DIMENSIONS										PILOT DIMENSIONS Common to 2 and 4 Bolt Flanges			
			30 DEG. INVOLUTE SPLINE					STRAIGHT WITHOUT THREAD								
	TORQUE IN.-LB.	HP AT 1000 RPM	U SPLINE	MIN	L_A	L_S	L_B	D_{S1}	L_S	E +0.001 -0.000	L_L	F ±0.005	A +0.000 -0.002	W +0.000 -0.020	X MIN	Y MAX
A-A	260	4.25	9T 20/40 DP	0.3760	0.20	0.750	0.06	0.500 / 0.499	0.750	0.125	–	0.554	2.000	0.250	–	0.00
A	517	8.25	9T 16/32 DP	0.4725	0.30	0.938	0.06	0.625 / 0.624	0.938	0.1563	2.00	0.693	3.250	0.250	–	0.00
B	1,852	29.3	13T 16/32 DP	0.7225	0.40	1.312	0.06	0.875 / 0.874	1.312	0.250	2.50	0.982	4.000	0.380	2.00	0.04
B-B	2,987	47.5	15T 16/32 DP	0.8475	0.50	1.500	0.06	1.000 / 0.998	1.500	0.250	2.75	1.106	4.000	0.380	2.00	0.04
C	5,677	90.0	14T 12/24 DP	1.0497	0.60	1.875	0.09	1.250 / 1.248	1.875	0.3125	3.00	1.386	5.000	0.500	2.50	0.04
C-C	10,777	171	17T 12/24 DP	1.2997	0.70	2.125	0.09	1.500 / 1.498	2.125	0.375	3.25	1.664	5.000	0.500	2.50	0.04
D	15,057	239	13T 8/16 DP	1.4530	0.80	2.625	0.12	1.750 / 1.748	2.626	0.4375	3.62	1.941	6.000	0.500	2.75	0.04
E	15,067	239	13T 8/16 DP	1.4530	0.80	2.625	0.12	1.750 / 1.748	2.625	0.4375	3.62	1.941	6.5000	0.625	2.75	0.09
F	24,245	285	15T 8/16 DP	1.7030	1.00	3.125	0.12	–	–	–	–	–	7.000	0.625	2.75	0.09

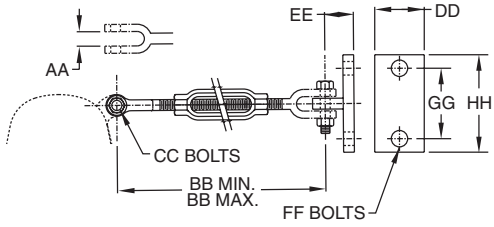
MOUNTING FLANGE AND SHAFT SIZE	SHAFT[A] S1= 25,000 PSI		FLANGE DIMENSIONS							
			2 BOLT TYPE					4 BOLT TYPE		
	TORQUE IN.-LB.	HP AT 1000 RPM	K	M +0.010 -0.005	P_1 RADIUS	B	J	S	R +0.010 -0.005	P_2
A-A	260	4.25	3.250	0.406	0.38	2.50	0.56	–	–	–
A	517	8.25	4.188	0.438	0.47	3.75	0.72	–	–	–
B	1.852	29.3	5.750	0.562	0.56	4.75	0.99	3.536	0.562	0.56
B-B	2.987	47.5	5.750	0.562	0.56	4.75	0.99	3.536	0.562	0.56
C	5.677	90.0	7.125	0.688	0.62	5.81	1.22	4.508	0.562	0.62
C-C	10.777	171	7.125	0.688	0.62	5.81	1.22	4.508	0.562	0.62
D	15,057	239	9.000	0.812	0.75	7.88	1.55	6.364	0.812	0.75
E	15.057	239	12.500	1.062	1.00	10.62	2.15	8.839	0.812	0.75
F	24.245	285	13.781	1.062	1.00	11.75	2.37	9.745	1.062	1.00

[A] TORSIONAL STRESS CALCULATED AT SPLINE SHAFT UNDERCUT (U DIMENSION, MIN) WITH NO STRESS RISER CONSIDERED.
TORQUE AND HORSEPOWER REQUIREMENTS NOTED ARE TYPICAL VALUES AND SHOULD BE CONSIDERED AS A GUIDE ONLY.

ACCESSORIES

TORQUE ARMS

TORQUE ARM	AA	BB MAX.	BB MIN.	CC BOLTS	DD	EE	FF BOLTS	GG	HH
A	5/8	19-5/16	13-5/16	7/16 Dia.	1-1/2	1-5/16	3/8	3	4
B	15/16	35-1/8	23-1/8	5/8 Dia.	2-3/8	1-3/4	5/8	4-1/2	6



TORQUE ARMS APPLICATION CHART

TORQUE ARM	MOD. 1	MOD. 2	MOD. 3	MOD. 4	MOD. 5	MOD. 6	MOD. 75	MOD. 8	MOD. 52	MOD. 83L	MOD. 89	MOD. 85L	MOD. 95L
A	X	X	X	X					X	X	X	X	X
B					X	X	X	X					

FACTORY OPTIONS

The following factory options are available for gear drives in this catalog. Contact the factory for details on price, availability, and specifications.

CLEANLINE™

When application conditions demand premium washdown duty gear drives.

FEATURES
FDA approved white acrylic paint
Corrosion resistant shaft treatment or stainless steel shafts
Stainless steel hardware and nameplate

OPTIONS
Motorized versions
BISSC Standards

METRIC VERSIONS

FEATURES
Metric Motor flanges
Metric shaft dimensions
Metric mounting dimensions

OPTIONS
Motorized versions
Modified and Custom Designs

BACKSTOPS

Backstops are available for applications that require the prevention of reverse rotation. Backstops must be factory assembled.

MODIFIED AND CUSTOM DESIGNS

If you have looked through this catalog and do not see exactly what you need, Hub City has the capability and engineering expertise to design and produce a special drive. Capabilities range from flange and shaft modifications, to custom housing dimensions. Consult the factory or your Hub City representative with your specifications.

PowerTorque® SHAFT MOUNT REDUCERS

PowerTorque® Features and Description G-2
Nomenclature G-4
Selection Instructions G-5
Selection By Horsepower G-7
Mechanical Ratings G-12
Dimensions G-14
Accessories G-15
Screw Conveyor Accessories G-22

G

For Additional Models of Shaft Mount Reducers See Sections F & J

PowerTorque® SHAFT MOUNT REDUCERS

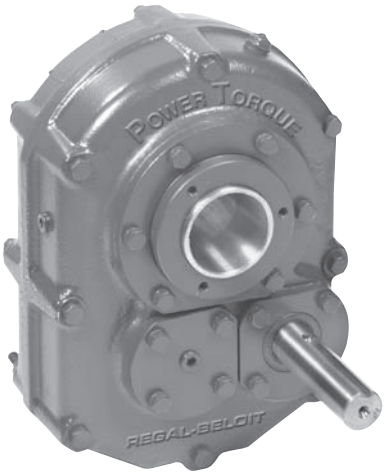
Ten models available from 1/4 HP through 200 HP capacity

MANUFACTURING QUALITY

Manufactured to the highest quality standards in the industry, assembled using precision manufactured components made from top quality materials

Designed for the toughest applications in the industry

98.5% Efficiency per Gear Stage!



HOUSINGS

High strength ductile iron housings, rather than cast iron material

GEARING

High Efficiency gearing is manufactured from 8620 steel, case carburized, hardened to RC62, and precision ground, AGMA Class 11, rather than crowned and shaved



OUTPUT BORES

Standard bores range from1-7/16" through 5-7/16"

RATIOS

Ratios from 9:1, 15:1 and 25:1

SHAFTS

Input shafts are machined from high strength alloy steel and hardened for premium load carrying capability

BEARINGS

Tapered roller bearings are selected for optimum life and load carrying capability

SEALS

Double lip seals feature metal reinforcement and ride on precision ground shaft surfaces for longevity

LUBRICATION

Ample lubrication is provided by abundant splash from the large oil sump

INTERCHANGEABLITY

Dimensionally and mechanically interchangeable with most major brands

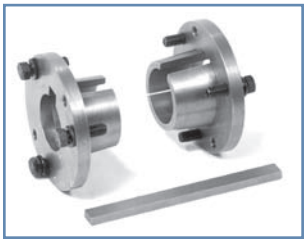
WARRANTY

Backed by an 18 month warranty for assured dependable longevity while providing trouble free service

CALL: (605) 225-0360 • FAX: (605) 225-0567

THE HUB CITY ADVANTAGE

Hub City PowerTorque® Accessories complete the drive package by providing tapered bushings, backstops, and motor mounts. Screw conveyor drive accessories include adapter flanges and drive shafts.



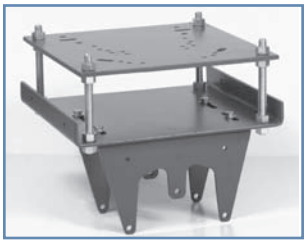
TAPERED BUSHING KITS

Flanged bushing mount
Removal screws allow for easy demounting
Ductile iron material for shock resistance
Clamp fit, no setscrews
Split design eliminates seizing problems



BACKSTOP ASSEMBLIES

Quick installation on input shaft
Internally installed, sealed from contamination
Lubricated by internal gear lubricant
Designed to operate in either direction



MOTOR MOUNTS

All-Steel construction for rigidity
Compact design eliminates need for motor base
Top plate adjusts for easy tensioning of drive belt
Mounting holes provided match NEMA standards



SCREW CONVEYOR ADAPTER FLANGES

Conform to CEMA standards
Bolt-on design allows easy mounting
Open center for contaminate dropout



SCREW CONVEYOR DRIVE SHAFTS

Machined from high strength alloy steel
Conform to CEMA dimensional standards
Easy installation into standard hollow bore



BELT GUARDS

All-Steel construction
Adjustable to fit a wide range of sheaves and motor frames
Designed for easy installation, no drilling required

G

DESCRIPTION

DESCRIPTIONS FOR ORDERING SHAFT MOUNT REDUCERS

Model | **Maximum Output Bore** | **Input Configuration** | **Ratio**

PT2 115 S 25

POWERTORQUE® SHAFT MOUNT REDUCER

UNIT SIZE

1
2
3
4
5
6
7
8
9
10

AGMA MAXIMUM OUTPUT BORE

107 : 1-7/16
115 : 1-15/16″
203 : 2-3/16″
207 : 2-7/16″
215 : 2-15/16″
307 : 3-7/16″
315 : 3-15/16″
407 : 4-7/16″
415 : 4-15/16″
507 : 5-7/16″

NOMINAL RATIO

09 : 9/1
15 : 15/1
25 : 25/1

INPUT CONFIGURATION

S : Shaft Input

PART NUMBER PREFIXES

0270-XXXXX Standard Assembly
0271-XXXXX Modified Assembly
0273-XXXXX Standard Service Part
0275-XXXXX Modified Service Part
0279-XXXXX Accessory Kit

SELECTION PROCEDURE

Hub City PowerTorque® reducers are selected on the basis of input horsepower and output speed. There are ten double reduction PowerTorque® Models available in nominal ratios of 9:1, 15:1, and 25:1 with output speeds to 200 RPM and ratings up to 200 HP. The selection tables have been established so that once the horsepower and driven speed are known the appropriate model can be readily selected.

AGMA LOAD CLASSIFICATION NUMBERS

Determine the AGMA Load Classification Number for your application from the tables in section A. In mechanical drives the presence of shock loads will usually reduce the life of the reducers. In order to provide optimum service in heavily loaded applications, it is necessary to use load classes to adjust the reducer ratings for the stresses created by different types of loads. The AGMA Load Classes provide for a momentary or starting load of 2.0 times for Class I, 2.8 for Class II, and 4.0 for Class III. Refer to section A for further information and cautions on the selection of proper service factors

LOAD CLASS (S.F.)	UP TO 3 HRS. TOTAL OPERATION PER DAY	3 TO 10 HRS. TOTAL OPERATION PER DAY	OVER 10 HRS. TOTAL OPERATION PER DAY
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

SELECT REDUCER SIZE AND RATIO

Refer to the applicable Selection Table for the AGMA Load Class I, II, or III on pages G-7 to G-11. Locate the required HP and Output Speed, and read across to find the reducer size.

SELECT TAPERED BUSHINGS

Compare the hollow shaft bore with the diameter of the driven shaft. If the driven shaft is smaller than the maximum bore for the reducer selected, select the proper tapered bushings from the table on page G-15 to adapt the hollow shaft bore to the diameter of the driven shaft. If the driven shaft diameter is larger than the maximum bore for the reducer selected, it is necessary to either turn down the driven shaft, or select a larger reducer.

SELECT SHEAVE RATIO

To determine the V-belt sheave ratio required to produce the desired output speed, use the following formula: sheave ratio = exact motor RPM / (output RPM X exact gear ratio).

Refer to the catalog of your chosen V-belt supplier to select the most economical V-belt drive to transmit the HP at the required output speed by following the selection procedure outlined in the V-belt catalog.

SELECTION PROCEDURE

⚠CAUTION

Refer to the Minimum Diameter for Driven Sheaves listed in the Selection Tables to be certain that your driven sheave selection is larger than the minimum diameter recommended for the reducer selected.

ACCESSORIES:

SELECT MOTOR MOUNT
Select the motor frame and motor mount size from the tables on page G-16 to G-19 based on the reducer size.

SELECT BELT GUARDS
Select belt guards from the tables on pages G-20 and G-21 based on the reducer size.

SELECT SCREW CONVEYOR DRIVE SHAFT AND ADAPTER
Select the CEMA adapter and drive shaft from the tables on page G-22 based on the reducer size.

SELECT BACKSTOP
Optional backstops are available for applications that require the prevention of reverse rotation. Select the backstop from the table on page G-15 based on the reducer size. Backstops are installed on the high speed pinion shaft by removing the cover on the back side (opposite side from the input shaft extension) of the housing.

⚠CAUTION

Backstops are not recommended for applications involving energy absorption and shock or torque loads in excess of reducer ratings or on applications such as chair lifts, amusement rides, etc. where the safety of a person or property is dependent on their function. On such applications, other safety devices should be provided.

Backstops are designed to prevent rotation not more than five times in an 8 hour period with a minimum of one minute in the over-running direction between each engagement. If reversing operation is more frequent or over-running time is less, the application should be referred to the factory.

⚠CAUTION

Lubricants with extreme pressure (EP) additives should not be used in units with backstops installed.

OTHER ACCESSORIES SUPPLIED UPON REQUEST:

Cooling Fans
Mounting Brackets
Auxiliary Seal Kits

NOTE: A torque-arm assembly is supplied with all shaft mount reducers.

For Lubrication and Installation Instructions Refer to Section R.

SELECTION BY INPUT HORSEPOWER

CLASS I SERVICE

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
0.25	4 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.33	5 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.50	4 ~ 6	PT2115-25		3.0
	7 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.75	4 ~ 5	PT3203-25		4.0
	6 ~ 10	PT2115-25		3.0
	11 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1	4 ~ 5	PT4207-25		4.6
	6 ~ 7	PT3203-25		4.0
	8 ~ 15	PT2115-25		3.0
	16 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1.5	4	PT5215-25		5.4
	5 ~ 7	PT4207-25		4.6
	8 ~ 12	PT3203-25		4.0
	13 ~ 23	PT2115-25		3.0
	24 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
2	4 ~ 6	PT5215-25		5.4
	7 ~ 10	PT4207-25		4.6
	11 ~ 17	PT3203-25		4.0
	18 ~ 32	PT2115-25	PT2115-15	3.0
	33 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
3	4 ~ 5	PT6307-25		6.2
	6 ~ 10	PT5215-25		5.4
	11 ~ 15	PT4207-25		4.6
	16 ~ 26	PT3203-25		4.0
	27 ~ 51	PT2115-25	PT2115-15	3.0
	52 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
5	5 ~ 6	PT7315-25		6.2

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
5 (con't.)	7 ~ 9	PT6307-25		6.2
	10 ~ 17	PT5215-25		5.4
	18 ~ 26	PT4207-25	PT4207-15	4.6
	27 ~ 46	PT3203-25	PT3203-15	4.0
	47 ~ 70	PT2115-25	PT2115-15	3.0
	71 ~ 85	PT2115-25	PT2115-15	3.0
	86 ~ 92	PT1107-09	PT2115-15	4.0/3.0
	93 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
7.5	4 ~ 6	PT8407-25		6.2
	7 ~ 9	PT7315-25		6.2
	10 ~ 15	PT6307-25		6.2
	16 ~ 26	PT5215-25		5.4
	27 ~ 40	PT4207-25	PT4207-15	4.6
	41 ~ 70	PT3203-25	PT3203-15	4.0
	71 ~ 74	PT3203-25	PT3203-15	4.0
	75 ~ 85	PT2115-25	PT2115-15	3.0
	86 ~ 95	PT2115-15		3.0
	96 ~ 140	PT2115-15		3.0
	141 ~ 200		PT2115-09	5.0
10	4 ~ 6	PT9415-25		8.0
	6 ~ 8	PT8407-25		6.2
	9 ~ 12	PT7315-25		6.2
	13 ~ 20	PT6307-25		6.2
	21 ~ 36	PT5215-25	PT5215-15	5.4
	37 ~ 56	PT4207-25	PT4207-15	4.6
	57 ~ 70	PT3203-25	PT3203-15	4.0
	71 ~ 85	PT3203-25	PT3203-15	4.0
	86 ~ 103	PT3203-15	PT3203-09	4.0/5.0
	104 ~ 115	PT2115-15		3.0
	116 ~ 140	PT2115-15		3.0
	141 ~ 158	PT3203-09		5.0
	159 ~ 200	**PT3203-09**		**5.0**
15	**4 ~ 6**	**PT10507-25**		**8.5**
	7 ~ 8	**PT9415-25**		**8.0**
	9 ~ 13	**PT8407-25**		**6.2**
	14 ~ 19	PT7315-25		6.2
	20 ~ 32	PT6307-25	PT6307-15	6.2
	33 ~ 56	PT5215-25	PT5215-15	5.4
	57 ~ 70	PT4207-25	PT4207-15	4.6
	71 ~ 85	PT4207-25	PT4207-15	4.6
	86 ~ 93	PT4207-15	PT4207-09	4.6/6.5
	94 ~ 115	PT3203-15	PT3203-09*	4.0/5.0
	116 ~ 140	PT3203-15	PT3203-09*	4.0/5.0
	141 ~ 145		PT3203-09*	5.0
	146 ~ 200		PT3203-09*	5.0
20	7 ~ 8	PT10507-25		8.5
	9 ~ 12	PT9415-25		8.0
	13 ~ 18	PT8407-25		6.2
	19 ~ 26	PT7315-25	PT7315-15	6.2
	27 ~ 45	PT6307-25	PT6307-15	6.2
	46 ~ 70	PT5215-25	PT5215-15	5.4
	71 ~ 78	PT5215-25	PT5215-15	5.4
	79 ~ 85	PT4207-25	PT4207-15	4.6
	86 ~ 115	PT4207-15	PT4207-09*	4.6/6.5
	116 ~ 140	PT4207-15*	PT4207-09*	4.6/6.5
	141 ~ 200		PT3203-09*	5.0
25	8 ~ 10	PT10507-25		8.5
	11 ~ 15	PT9415-25		8.0

*ADDITIONAL COOLING PROVISIONS MAY BE REQUIRED. CONSULT FACTORY WITH APPLICATION DETAILS.

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SELECTION BY INPUT HORSEPOWER

CLASS I SERVICE CONT.

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
25 (con't.)	16 ~ 23	PT8407-25		6.2
	24 ~ 33	PT7315-25	PT7315-15	6.2
	34 ~ 59	PT6307-25	PT6307-15	6.2
	60 ~ 70	PT5215-25*	PT5215-15*	5.4
	71 ~ 80	PT5215-25*	PT5215-15*	5.4
	81 ~ 101	PT5215-15*	PT5215-09*	5.4
	102 ~ 132	PT4207-15*	PT4207-09*	4.6/6.5
	133 ~ 140	PT4207-15*	PT4207-09*	4.6/6.5
	141 ~ 163		PT4207-09*	6.5
	164 ~ 200		PT4207-09*	6.5
30	10 ~ 13	PT10507-25		8.5
	14 ~ 19	PT9415-25		8.0
	20 ~ 28	PT8407-25	PT8407-15	6.2
	29 ~ 41	PT7315-25	PT7315-15	6.2
	42 ~ 70	PT6307-25	PT6307-15	6.2
	71 ~ 75	PT6307-25	PT6307-15	6.2
	76 ~ 115	PT5215-15*	PT5215-09*	5.4/7.0
	116 ~ 125	PT5215-15*	PT5215-09*	5.4/7.0
	126 ~ 131		PT4207-09*	6.5
	132 ~ 200		PT4207-09*	6.5
40	13 ~ 18	PT10507-25		8.5
	19 ~ 25	PT9415-25	PT9415-15	8.0
	26 ~ 38	PT8407-25	PT8407-15	6.2
	39 ~ 57	PT7315-25	PT7315-15	6.2
	58 ~ 70	PT6307-25	PT6307-15	6.2
	71 ~ 81	PT6307-25*	PT6307-15*	6.2
	82 ~ 114	PT6307-15*	PT6307-09*	6.2/7.0
	115 ~ 125	PT5215-15*	PT5215-09*	5.4/7.0
	126 ~ 200		PT5215-09*	7.0
50	16 ~ 22	PT10507-25		8.5
	23 ~ 32	PT9415-25	PT9415-15	8.0
	33 ~ 49	PT8407-25	PT8407-15	6.2
	50 ~ 70	PT7315-25	PT7315-15	6.2
	71 ~ 74	PT7315-25	PT7315-15	6.2
	75 ~ 125	PT6307-15*	PT7315-09*	6.2/7.0
	126 ~ 163		PT7315-09*	7.0
	164 ~ 200		PT6307-09*	7.0
60	19 ~ 27	PT10507-25		8.5
	28 ~ 39	PT9415-25	PT9415-15	8.0
	40 ~ 60	PT8407-25	PT8407-15	6.2
	61 ~ 70	PT7315-25*	PT7315-15*	6.2
	71 ~ 120	PT7315-15*	PT7315-09*	6.2/7.0
	121 ~ 131		PT7315-09*	7.0
	132 ~ 200		PT7315-09*	7.0
75	24 ~ 34	PT10507-25		8.5
	35 ~ 50	PT9415-25	PT9415-15	8.0
	51 ~ 70	PT8407-25	PT8407-15	6.2
	71 ~ 78		PT8407-15*	6.2
	79 ~ 120	PT7315-15*	PT7315-09*	6.2/7.0
	121 ~ 200		PT7315-09*	7.0
100	32 ~ 46	PT10507-25		8.5
	47 ~ 69	PT9415-25*	PT9415-15*	8.0
	70 ~ 120		PT8407-15*	6.2
	121 ~ 123		PT7315-09*	7.0
	124 ~ 200		PT7315-09*	7.0
125	41 ~ 59	PT10507-25		8.5
	60 ~ 70	PT9415-25*	PT9415-15*	8.0
	71 ~ 90		PT9415-15*	8.0
	91 ~ 123		PT8407-15*	6.2
150	50 ~ 70	PT10507-25		8.5
	71 ~ 78	PT10507-25*		8.5
	79 ~ 120		PT9415-15	8.0

CLASS II SERVICE

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
0.25	5 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.33	4 ~ 6	PT2115-25		3.0
	7 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.5	4 ~ 5	PT3203-25		4.0
	6 ~ 9	PT2115-25		3.0
	10 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.75	4 ~ 5	PT4207-25		4.6
	6 ~ 8	PT3203-25		4.0
	9 ~ 16	PT2115-25		3.0
	17 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1	5 ~ 7	PT4207-25		4.6
	8 ~ 11	PT3203-25		4.0
	12 ~ 22	PT2115-25		3.0
	23 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1.5	5 ~ 6	PT5215-25		5.4
	7 ~ 11	PT4207-25		4.6
	12 ~ 18	PT3203-25		4.0
	19 ~ 34	PT2115-25	PT2115-15	3.0
	35 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
2	4 ~ 5	PT6307-25		6.2
	6 ~ 9	PT5215-25		5.4
	10 ~ 14	PT4207-25		4.6
	15 ~ 24	PT3203-25	PT3203-15	4.0
	25 ~ 47	PT2115-25	PT2115-15	3.0
	48 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
3	4 ~ 5	PT7315-25		6.2
	6 ~ 8	PT6307-25		6.2
	9 ~ 14	PT5215-25		5.4
	15 ~ 22	PT4207-25	PT4207-15	4.6
	23 ~ 38	PT3203-25	PT3203-15	4.0
	39 ~ 70	PT2115-25	PT2115-15	3.0
	71 ~ 75	PT2115-25	PT2115-15	3.0
	76 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0

*ADDITIONAL COOLING PROVISIONS MAY BE REQUIRED. CONSULT FACTORY WITH APPLICATION DETAILS.

SELECTION BY INPUT HORSEPOWER

CLASS II SERVICE CONT.

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
3 (con't.)	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
5	4 ~ 6	PT8407-25		6.2
	7 ~ 8	PT7315-25		6.2
	9 ~ 14	PT6307-25		6.2
	15 ~ 24	PT5215-25		5.4
	25 ~ 37	PT4207-25	PT4207-15	4.6
	38 ~ 69	PT3203-25	PT3203-15	4.0
	70 ~ 85	PT2115-25	PT2115-15	3.0
	86 ~ 89	PT2115-15	PT2115-09	3.0/5.0
	90 ~ 136	PT2115-15	PT2115-09	3.0/5.0
	137 ~ 140	PT1107-15	PT2115-09	3.0/5.0
	141 ~ 200	PT1107-09		4.0
7.5	5	PT9415-25		8.0
	6 ~ 9	PT8407-25		6.2
	10 ~ 13	PT7315-25		6.2
	14 ~ 21	PT6307-25		6.2
	22 ~ 38	PT5215-25	PT5215-15	5.4
	39 ~ 59	PT4207-25	PT4207-15	4.6
	60 ~ 70	PT3203-25	PT3203-15	4.0
	71 ~ 85	PT3203-25	PT3203-15	4.0
	86 ~ 110	PT3203-15	PT3203-09	4.0/5.0
	111 ~ 122	PT2115-15	PT3203-09	3.0/5.0
	123 ~ 140	PT2115-15	PT3203-09	3.0/5.0
	141 ~ 183		PT3203-09	5.0
	184 ~ 200		PT2115-09	5.0
10	5	PT10507-25		8.5
	6 ~ 7	PT9415-25		8.0
	8 ~ 12	PT8407-25		6.2
	13 ~ 18	PT7315-25		6.2
	19 ~ 29	PT6307-25	PT6307-15	6.2
	30 ~ 52	PT5215-25	PT5215-15	5.4
	53 ~ 70	PT4207-25	PT4207-15	4.6
	71 ~ 84	PT4207-25	PT4207-15	4.6
	85 ~ 130	PT3203-15	PT3203-09	4.0/5.0
	131 ~ 140	PT3203-15	PT3203-09	4.0/5.0
	141 ~ 200		PT3203-09	5.0
15	7 ~ 9	PT10507-25		8.5
	10 ~ 12	PT9415-25		8.0
	13 ~ 19	PT8407-25		6.2
	20 ~ 27	PT7315-25		6.2
	28 ~ 47	PT6307-25	PT6307-15	6.2
	48 ~ 70	PT5215-25	PT5215-15	5.4
	71 ~ 82	PT5215-25	PT5215-15	5.4
	83 ~ 117	PT4207-15	PT4207-09	4.6/6.5
	118 ~ 140	PT4207-15	PT4207-09	4.6/6.5
	141 ~ 150		PT4207-09	6.5
	151 ~ 200		PT3203-09*	5.0
20	9 ~ 12	PT10507-25		8.5
	13 ~ 17	PT9415-25		8.0
	18 ~ 26	PT8407-25		6.2
	27 ~ 38	PT7315-25	PT7315-15	6.2
	39 ~ 68	PT6307-25	PT6307-15	6.2
	69 ~ 80	PT5215-25	PT5215-15	5.4
	81 ~ 89		PT5215-15	5.4
	91 ~ 117	PT5215-15*	PT5215-09*	5.4/7.0
	118 ~ 125	PT4207-15*	PT4207-09*	4.6/6.5
	126 ~ 200		PT4207-09*	6.5

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
25	11 ~ 15	PT10507-25		8.5
	16 ~ 22	PT9415-25		8.0
	23 ~ 33	PT8407-25	PT8407-15	6.2
	34 ~ 49	PT7315-25	PT7315-15	6.2
	50 ~ 80	PT6307-25	PT6307-15	6.2
	81 ~ 94	PT6307-15	PT6307-09	6.2/7.0
	95 ~ 125	PT5215-15*	PT5215-09*	5.4/7.0
	126 ~ 174		PT5215-09*	7.0
	175 ~ 200		PT4207-09*	6.5
30	13 ~ 19	PT10507-25		8.5
	20 ~ 27	PT9415-25	PT9415-15	8.0
	28 ~ 41	PT8407-25	PT8407-15	6.2
	42 ~ 60	PT7315-25	PT7315-15	6.2
	61 ~ 76	PT6307-25	PT6307-15	6.2
	77 ~ 89	PT6307-15	PT6307-09	6.2/7.0
	90 ~ 125	PT6307-15*	PT6307-09*	6.2/7.0
	126 ~ 200		PT5215-09*	7.0
40	18 ~ 25	PT10507-25		8.5
	26 ~ 36	PT9415-25	PT9415-15	8.0
	37 ~ 56	PT8407-25	PT8407-15	6.2
	57 ~ 75	PT7315-25	PT7315-15	6.2
	76 ~ 88		PT7315-15	6.2
	89 ~ 114	PT6307-15*		6.2
	115 ~ 120	PT6307-15*	PT6307-09*	6.2/7.0
	121 ~ 200		PT6307-09*	7.0
50	22 ~ 32	PT10507-25		8.5
	33 ~ 46	PT9415-25	PT9415-15	8.0
	47 ~ 70	PT8407-25	PT8407-15	6.2
	71 ~ 72	PT8407-25	PT8407-15	6.2
	73 ~ 95		PT7315-15*	6.2
	96 ~ 110	PT7315-15*	PT7315-09	6.2/7.0
	111 ~ 120	PT7315-15*	PT7315-09*	6.2/7.0
	121 ~ 179		PT7315-09*	7.0
	180 ~ 200		PT6307-09*	7.0
60	27 ~ 39	PT10507-25		8.5
	40 ~ 56	PT9415-25	PT9415-15	8.0
	57 ~ 70	PT8407-25	PT8407-15	6.2
	71 ~ 75	PT8407-25	PT8407-15	6.2
	76 ~ 89		PT8407-15	6.2
	90 ~ 120	PT7315-15*	PT7315-09*	6.2/7.0
	121 ~ 200		PT7315-09*	7.0
75	34 ~ 49	PT10507-25		8.5
	50 ~ 73	PT9415-25	PT9415-15	8.0
	74 ~ 75	PT8407-25	PT8407-15	6.2
	76 ~ 120		PT8407-15*	6.2
	121 ~ 133		PT7315-09*	7.0
	134 ~ 200		PT7315-09*	7.0
100	46 ~ 67	PT10507-25		8.5
	68 ~ 75	PT9415-25*	PT9415-15*	8.0
	76 ~ 103		PT9415-15*	8.0
	104 ~ 120		PT8407-15*	6.2
	181 ~ 200		PT7315-09*	7.0
125	59 ~ 79	PT10507-25*		8.5
	80 ~ 120		PT9415-15*	8.0
150	73 ~ 75	PT10507-25*		8.5

*ADDITIONAL COOLING PROVISIONS MAY BE REQUIRED. CONSULT FACTORY WITH APPLICATION DETAILS.

SELECTION BY INPUT HORSEPOWER

CLASS III SERVICE

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
0.25	4 ~ 6	PT2115-25		3.0
	7 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 89	PT1107-15	PT1107-09	3.0/4.0
	90 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.33	5 ~ 9	PT2115-25		3.0
	10 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.50	4 ~ 5	PT4207-25		4.6
	6 ~ 7	PT3203-25		4.0
	8 ~ 15	PT2115-25		3.0
	16 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
0.75	4	PT5215-25		5.4
	5 ~ 7	PT4207-25		4.6
	8 ~ 12	PT3203-25		4.0
	13 ~ 23	PT2115-25		3.0
	24 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1.00	4 ~ 6	PT5215-25		5.4
	7 ~ 10	PT4207-25		4.6
	11 ~ 17	PT3203-25		4.0
	18 ~ 32	PT2115-25		3.0
	33 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
1.5	4 ~ 5	PT6307-25		6.2
	6 ~ 10	PT5215-25		5.4
	11 ~ 15	PT4207-25		4.6
	16 ~ 26	PT3203-25		4.0
	27 ~ 51	PT2115-25	PT2115-15	3.0
	52 ~ 70	PT1107-25	PT1107-15	3.0
	71 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
2	5 ~ 7	PT6307-25		6.2
	8 ~ 13	PT5215-25		5.4
	14 ~ 21	PT4207-25		4.6
	22 ~ 36	PT3203-25	PT3203-15	4.0
	37 ~ 71	PT2115-25	PT2115-15	3.0
	72 ~ 85	PT1107-25	PT1107-15	3.0
	86 ~ 115	PT1107-15	PT1107-09	3.0/4.0
	116 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
3	4 ~ 5	PT8407-25		6.2
	6 ~ 7	PT7315-25		6.2
	8 ~ 12	PT6307-25		6.2
	13 ~ 20	PT5215-25		5.4
	21 ~ 32	PT4207-25	PT4207-15	4.6
	33 ~ 57	PT3203-25	PT3203-15	4.0
	58 ~ 70	PT2115-25	PT2115-15	3.0
	71 ~ 85	PT2115-25	PT2115-15	3.0
	86 ~ 89	PT2115-15	PT2115-09	3.0/5.0
	90 ~ 113	PT2115-15	PT2115-09	3.0/5.0
	114 ~ 140	PT1107-15	PT1107-09	3.0/4.0
	141 ~ 200	PT1107-09		4.0
5	5	PT9415-25		8.0
	6 ~ 8	PT8407-25		6.2
	9 ~ 12	PT7315-25		6.2
	13 ~ 20	PT6307-25		6.2
	21 ~ 36	PT5215-25	PT5215-15	5.4
	37 ~ 56	PT4207-25	PT4207-15	4.6
	57 ~ 70	PT3203-25	PT3203-15	4.0
	71 ~ 85	PT3203-25	PT3203-15	4.0
	86 ~ 103	PT3203-15	PT3203-09	4.0/5.0
	104 ~ 114	PT2115-15	PT3203-09	3.0/5.0
	115 ~ 140	PT2115-15	PT2115-09	3.0/5.0
	141 ~ 167		PT2115-09	5.0
	168 ~ 200		PT2115-09	5.0
7.5	5 ~ 6	PT10507-25		8.5
	7 ~ 8	PT9415-25		8.0
	9 ~ 13	PT8407-25		6.2
	14 ~ 19	PT7315-25		6.2
	20 ~ 32	PT6307-25	PT6307-15	6.2
	33 ~ 56	PT5215-25	PT5215-15	5.4
	57 ~ 70	PT4207-25	PT4207-15	4.6
	71 ~ 85	PT4207-25	PT4207-15	4.6
	86 ~ 93	PT4207-15	PT4207-09	4.6/6.5
	94 ~ 140	PT3203-15	PT3203-09	4.0/5.0
	141 ~ 144		PT3203-09	5.0
	145 ~ 200		PT3203-09	5.0

*ADDITIONAL COOLING PROVISIONS MAY BE REQUIRED. CONSULT FACTORY WITH APPLICATION DETAILS.

SELECTION BY INPUT HORSEPOWER

CLASS III SERVICE CONT.

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
10	7 ~ 8	PT10507-25		8.5
	9 ~ 12	PT9415-25		8.0
	13 ~ 18	PT8407-25		6.2
	19 ~ 26	PT7315-25	PT7315-15	6.2
	27 ~ 45	PT6307-25	PT6307-15	6.2
	46 ~ 70	PT5215-25	PT5215-15	5.4
	71 ~ 78	PT5215-25	PT5215-15	5.4
	79 ~ 92		PT4207-15	4.6
	93 ~ 105	PT4207-15	PT4207-09	4.6/6.5
	106 ~ 141	PT4207-15	PT4207-09	4.6/6.5
	142 ~ 200		PT3203-09	5.0
15	10 ~ 13	PT10507-25		8.5
	14 ~ 19	PT9415-25		8.0
	20 ~ 28	PT8407-25	PT8407-15	6.2
	29 ~ 41	PT7315-25	PT7315-15	6.2
	42 ~ 70	PT6307-25	PT6307-15	6.2
	71 ~ 75	PT6307-25	PT6307-15	6.2
	76 ~ 93		PT5215-15	5.4
	94 ~ 115	PT5215-15	PT5215-09	5.4/7.0
	116 ~ 125	PT5215-15	PT5215-09	5.4/7.0
	126 ~ 131		PT5215-09	7.0
	132 ~ 200		PT4207-09	6.5
20	13 ~ 18	PT10507-25		8.5
	19 ~ 25	PT9415-25	PT9415-15	8.0
	26 ~ 38	PT8407-25	PT8407-15	6.2
	39 ~ 57	PT7315-25	PT7315-15	6.2
	58 ~ 70	PT6307-25	PT6307-15	6.2
	71 ~ 114	PT6307-15	PT6307-09	6.2/7.0
	115 ~ 125	PT5215-15*	PT5215-09*	5.4/7.0
	126 ~ 200		PT5215-09*	7.0
25	16 ~ 22	PT10507-25		8.5
	23 ~ 32	PT9415-25	PT9415-15	8.0
	33 ~ 49	PT8407-25	PT8407-15	6.2
	50 ~ 70	PT7315-25	PT7315-15	6.2
	71 ~ 74	PT7315-25	PT7315-15	6.2
	75 ~ 104	PT6307-15		6.2
	105 ~ 113	PT6307-15*	PT6307-09	6.2/7.0
	114 ~ 125	PT6307-15*	PT6307-09*	6.2/7.0
	126 ~ 200		PT6307-09*	7.0
30	19 ~ 27	PT10507-25		8.5
	28 ~ 39	PT9415-25	PT9415-15	8.0
	40 ~ 60	PT8407-25	PT8407-15	6.2
	61 ~ 70	PT7315-25	PT7315-15	6.2
	71 ~ 98		PT7315-15	6.2
	99 ~ 125	PT6307-15		6.2
	126 ~ 131		PT6307-09*	7.0
	132 ~ 200		PT6307-09*	7.0

HP	OUTPUT RPM	REDUCER SELECTION		MINIMUM SHEAVE DIA.
40	26 ~ 37	PT10507-25		8.5
	38 ~ 53	PT9415-25	PT9415-15	8.0
	54 ~ 70	PT8407-25	PT8407-15	6.2
	71 ~ 84		PT8407-15	6.2
	85 ~ 89	PT7315-15	PT7315-09	6.2/7.0
	90 ~ 120	PT7315-15*	PT7315-09	6.2/7.0
	121 ~ 200	PT7315-09*		7.0
50	32 ~ 46	PT10507-25		8.5
	47 ~ 69	PT9415-25	PT9415-15	8.0
	70 ~ 75	PT8407-25	PT8407-15	6.2
	76 ~ 110		PT8407-15	6.2
	111 ~ 120	PT7315-15*	PT7315-09*	6.2/7.0
	121 ~ 123		PT7315-09*	7.0
	124 ~ 200		PT7315-09*	7.0
60	39 ~ 56	PT10507-25		8.5
	57 ~ 75	PT9415-25	PT9415-15	8.0
	76 ~ 85		PT9415-15	8.0
	86 ~ 115		PT8407-15	6.2
	142 ~ 161		PT7315-09*	7.0
	162 ~ 200		PT7315-09*	7.0
75	50 ~ 72	PT10507-25		8.5
	73 ~ 75	PT9415-25*	PT9415-15*	8.0
	76 ~ 120		PT9415-15*	8.0

*ADDITIONAL COOLING PROVISIONS MAY BE REQUIRED. CONSULT FACTORY WITH APPLICATION DETAILS.

MECHANICAL RATINGS

INPUT HORSEPOWER AND OUTPUT TORQUE, 1.00 SERVICE FACTOR

9/1 NOMINAL RATIO

	PT1107		PT2115		PT3203		PT4207	
	ACTUAL RATIO 8.92:1		ACTUAL RATIO 9.25:1		ACTUAL RATIO 8.91:1		ACTUAL RATIO 9.68:1	
OUTPUT RPM	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
200	9.1	2753	11.6	3494	30.1	9118	45.0	13598
190	8.8	2802	11.0	3503	28.7	9133	42.7	13604
180	8.5	2857	10.4	3503	27.2	9150	40.6	13630
170	8.3	2954	9.9	3506	25.8	9165	38.3	13635
160	8.0	3025	9.3	3513	24.3	9178	36.1	13663
150	7.6	3066	8.7	3517	22.8	9193	33.9	13666
140	7.2	3112	8.1	3518	21.3	9205	31.7	13700
120	6.4	3227	7.0	3529	18.3	9247	27.3	13739
100	5.6	3388	5.9	3539	15.3	9281	22.8	13783

15/1 NOMINAL RATIO

	PT1107		PT2115		PT3203		PT4207		PT5215	
	ACTUAL RATIO 15.35:1		ACTUAL RATIO 14.10:1		ACTUAL RATIO 14.88:1		ACTUAL RATIO 15.13:1		ACTUAL RATIO 15.40:1	
OUTPUT RPM	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
140	7.5	3220	11.6	5013	19.7	8496	31.8	13743		
130	7.0	3235	11.0	5124	18.7	8689	30.2	14051	44.0	20464
120	6.5	3252	10.4	5249	17.7	8899	28.6	14395	41.6	20955
100	5.4	3291	9.2	5548	15.5	9402	25.1	15205	36.6	22132
80	4.4	3343	7.8	5929	13.3	10051	20.5	15497	31.3	23657
60	3.4	3398	6.4	6464	10.5	10558	15.7	15822	25.6	25805
40	2.3	3479	4.8	7306	7.2	10891	10.7	16215	18.2	27529
30	1.7	3509	3.9	7765	5.4	10951	8.2	16457	13.9	27973
20	1.2	3570	2.6	7896	3.7	11133	5.5	16760	9.6	28891

25/1 NOMINAL RATIO

	PT1107		PT2115		PT3203		PT4207		PT5215	
	ACTUAL RATIO 23.93:1		ACTUAL RATIO 23.46:1		ACTUAL RATIO 24.71:1		ACTUAL RATIO 24.38:1		ACTUAL RATIO 25.56:1	
OUTPUT RPM	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
85	4.7	3310	8.1	5787	14.2	10093	21.5	15332	32.6	23234
75	4.2	3348	7.5	6067	12.7	10245	19.3	15570	29.9	24121
65	3.7	3398	6.8	6339	11.2	10416	17.0	15824	27.1	25179
55	3.1	3454	6.1	6655	9.6	10594	14.7	16116	24.1	26468
45	2.6	3496	5.2	7018	8.0	10810	12.2	16457	20.2	27133
35	2.1	3578	4.2	7174	6.4	11029	9.7	16837	16.1	27797
25	1.5	3654	3.0	7357	4.6	11205	7.2	17328	11.8	28630
15	0.94	3792	1.9	7543	2.8	11415	4.4	17788	7.3	29244
5	0.32	3872	0.65	7866	1.0	11617	1.5	18030	2.5	30131

MECHANICAL RATINGS

INPUT HORSEPOWER AND OUTPUT TORQUE, 1.00 SERVICE FACTOR

9/1 NOMINAL RATIO

OUTPUT RPM	PT5215 ACTUAL RATIO 8.96:1		PT6307 ACTUAL RATIO 9.21:1		PT7315 ACTUAL RATIO 9.62:1	
	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
200	68.0	20577	95.3	28839	151	45535
190	64.7	20594	90.7	28895	145	46066
180	61.4	20642	86.0	28914	139	46605
170	58.1	20664	81.4	28978	132	47150
160	54.7	20681	76.7	28997	126	47700
150	51.3	20700	72.1	29066	119	48173
140	48.0	20762	67.3	29085	114	49423
120	41.3	20803	57.9	29183	99.8	50339
100	34.6	20904	48.4	29290	84.8	51313

15/1 NOMINAL RATIO

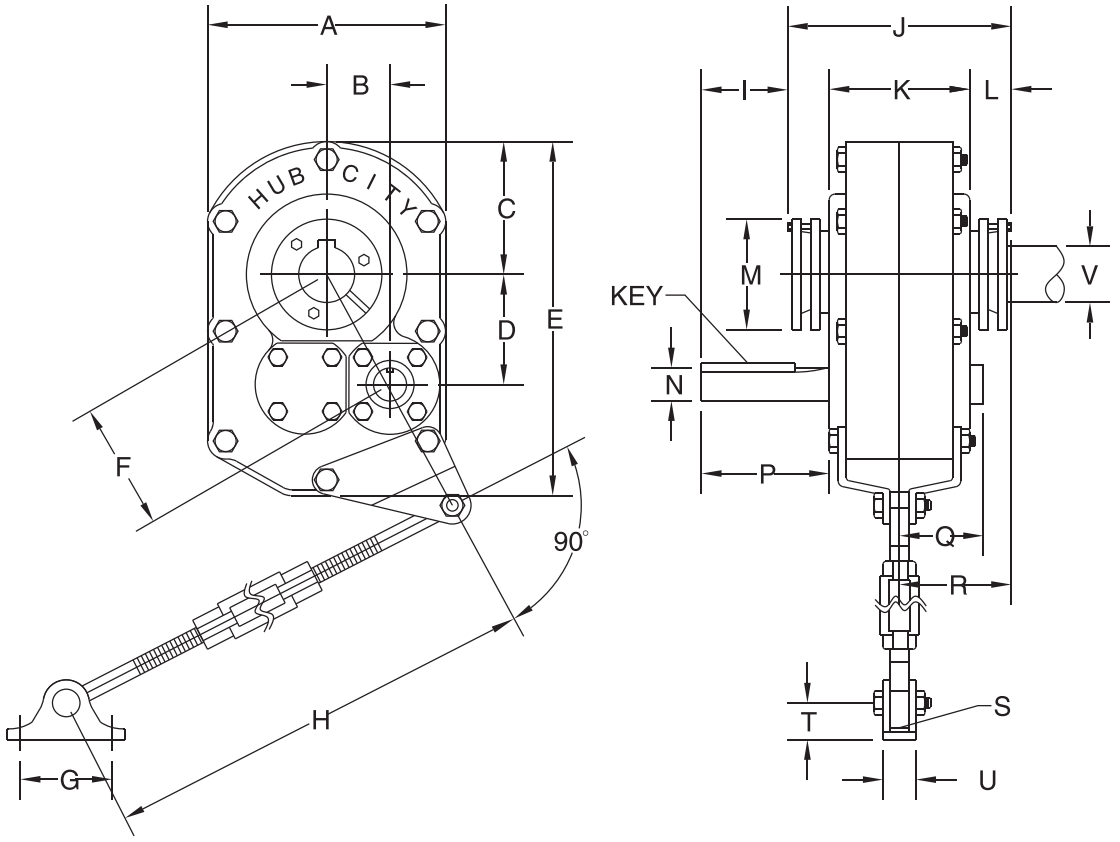
OUTPUT RPM	PT6307 ACTUAL RATIO 15.33:1		PT7315 ACTUAL RATIO 15.23:1		PT8407 ACTUAL RATIO 15.08:1		PT9415 ACTUAL RATIO 15.12:1	
	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
140								
130	82.9	38583						
120	77.1	38894	100	50596	163	82270	236	118795
100	65.4	39576	88.4	53473	139	83883	200	121208
80	53.4	40364	75.7	57222	113	85711	164	124018
60	41.0	41294	60.3	60756	87.2	87973	126.3	127391
40	28.1	42444	41.4	62561	60.0	90741	87.0	131626
30	21.4	43180	31.6	63711	45.9	92490	66.6	134258
20	15.0	45227	21.5	65072	31.3	94628	45.5	137526

25/1 NOMINAL RATIO

OUTPUT RPM	PT6307 ACTUAL RATIO 25.13:1		PT7315 ACTUAL RATIO 24.59:1		PT8407 ACTUAL RATIO 24.62:1		PT9415 ACTUAL RATIO 25.97:1		PT10507 ACTUAL RATIO 24.30:1	
	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)	INPUT HP	OUTPUT TORQUE (IN-LB)
85	56.0	39890								
75	50.3	40578	72.1	58197	105	84706	155	124800	216	174252
65	44.4	41338	63.7	59331	94.4	87908	135.8	126425	193.2	179827
55	38.4	42188	55.1	60614	81.8	90008	116.6	128290	166.0	182590
45	32.1	43160	45.2	60706	68.2	91697	97.0	130460	138.2	185801
35	25.6	44306	36.4	62838	53.4	92260	76.9	132867	109.5	189343
25	18.9	45620	26.2	63408	38.5	93128	56.1	135795	80.1	193831
15	11.8	47395	16.0	64699	23.6	94991	34.6	139563	49.5	199542
5	4.0	48282	5.4	65223	8.5	102252	12.0	145452	17.2	208497

For Additional Models of Shaft Mount Reducers See Sections F & J

DIMENSIONS



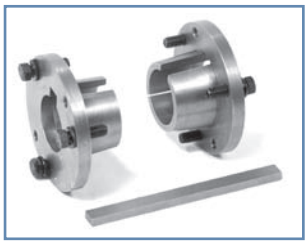
MODEL	A	B	C	D	E	F	G	H MIN/MAX	I	J	K
PT1107	7.13	1.91	3.75	3.18	9.94	3.71	2.50	23.81/29.63	2.03	7.06	4.06
PT2115	8.38	2.14	4.09	3.75	11.41	4.32	3.00	26.94/32.94	2.22	7.32	4.50
PT3203	9.25	2.33	4.84	4.17	12.88	4.78	3.00	26.94/32.94	2.34	9.22	5.63
PT4207	10.38	2.76	5.50	4.79	15.13	5.53	4.00	29.19/35.14	3.44	9.98	6.13
PT5215	13.13	3.04	6.56	5.67	18.31	6.43	4.00	29.19/35.19	3.44	10.52	6.31
PT6307	15.43	4.09	7.56	6.73	21.31	7.88	4.75	29.19/35.19	3.73	11.53	6.88
PT7315	18.75	5.11	9.38	8.30	25.94	9.74	4.75	29.44/35.44	3.75	12.85	7.75
PT8407	20.25	6.03	10.13	9.50	28.25	11.25	7.00	30.00/36.00	4.31	14.03	8.37
PT9415	22.63	6.59	11.31	10.81	31.69	12.66	7.00	30.00/36.00	3.63	14.12	8.12
PT10507	25.50	6.59	12.75	12.50	35.08	14.13	7.00	30.00/36.00	6.53	15.30	9.34

									INPUT SHAFT			APPROX.
MODEL	L	M	Q	R	S	T	U	V MAX DIA	N DIA	P	KEY	WEIGHT (LB)
PT1107	1.30	3.25	2.67	3.55	.38	.94	1.06	1-7/16	0.75	3.30	3/16x3/16x1-7/8	45
PT2115	1.40	4.06	2.89	3.68	0.44	1.06	1.25	1 15/16	1.13	3.59	1/4x1/4x2-1/2	58
PT3203	1.59	4.38	3.30	3.72	0.44	1.06	1.25	2 3/16	1.25	4.34	1/4x1/4x2-7/8	98
PT4207	1.72	4.81	3.41	3.91	0.50	1.75	1.44	2 7/16	1.44	5.57	3/8x3/8x4-1/16	139
PT5215	1.91	5.63	4.45	5.05	0.50	1.75	1.44	2 15/16	1.94	5.74	1/2x1/2x4-1/2	207
PT6307	2.30	6.13	4.57	5.73	0.63	2.00	2.75	3 7/16	2.19	6.08	1/2x1/2x4-1/2	285
PT7315	2.50	7.25	4.69	6.38	0.63	2.00	2.75	3 15/16	2.44	6.35	5/8x5/8x4-3/4	462
PT8407	2.86	7.75	5.85	7.04	0.75	3.13	4.00	4 7/16	2.44	7.11	5/8x5/8x5-3/8	633
PT9415	2.98	8.75	5.66	7.04	0.75	3.13	4.00	4 5/16	2.44	9.65	5/8x5/8x7-3/4	760
PT10507	2.99	10.13	6.96	7.66	0.75	3.13	4.00	5 7/16	2.69	9.50	5/8x5/8x7-7/8	1020

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

POWERTORQUE® ACCESSORIES

TAPERED BUSHING KITS



Flanged bushing mount
- Removal screws allow for easy demounting
- Ductile iron material for shock resistance
- Clamp fit, no setscrews
- Split design eliminates seizing problems

Kits include two bushings, key and mounting hardware

SHAFT MOUNT MODEL	BORE SIZE	PART NUMBER	WEIGHT (LBS.)	SHAFT MOUNT MODEL	BORE SIZE	PART NUMBER	WEIGHT (LBS.)
PT1107	1-7/16	0279-00001	2.8	PT6307	3-7/16	0279-00076	9
	1-3/8	0279-00002	2.9		3	0279-00077	11.4
	1-5/16	0279-00003	2.9		2-15/16	0279-00078	11.7
	1-1/4	0279-00004	3.0		2-7/16	0279-00082	12.4
PT2115	1-15/16	0279-00016	3	PT7315	3-15/16	0279-00091	12.9
	1-3/4	0279-00017	3.4		3-7/16	0279-00092	13.9
	1-11/16	0279-00018	3.5		3-3/16	0279-00093	16.8
	1-5/8	0279-00019	3.6		3	0279-00094	19.2
PT3203	2-3/16	0279-00031	3.7	PT8407	4-7/16	0279-00106	15.1
	2	0279-00032	4.3		4-3/16	0279-00107	17.4
	1-15/16	0279-00033	4.6		3-15/16	0279-00108	20.2
	1-7/8	0279-00034	4.8		3-7/16	0279-00109	25.6
PT4207	2-7/16	0279-00046	5.9	PT9415	4-15/16	0279-00120	25
	2-1/4	0279-00047	6.4		4-7/16	0279-00121	27
	2-3/16	0279-00048	6.8		3-15/16	0279-00122	28
	2-1/8	0279-00049	7.1		3-7/16	0279-00123	30
PT5215	2-15/16	0279-00061	7.8	PT10507	5-7/16	0279-00136	28
	2-11/16	0279-00062	7.9		4-15/16	0279-00137	33
	2-1/2	0279-00063	8.5		4-7/16	0279-00138	36
	2-7/16	0279-00064	8.6		3-15/16	0279-00139	40

BACKSTOP KITS

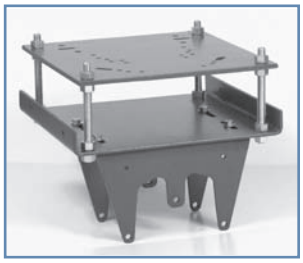


Quick installation on input shaft
- Internally installed, sealed from contamination
- Lubricated by internal gear lubricant
- Designed to operate in either direction

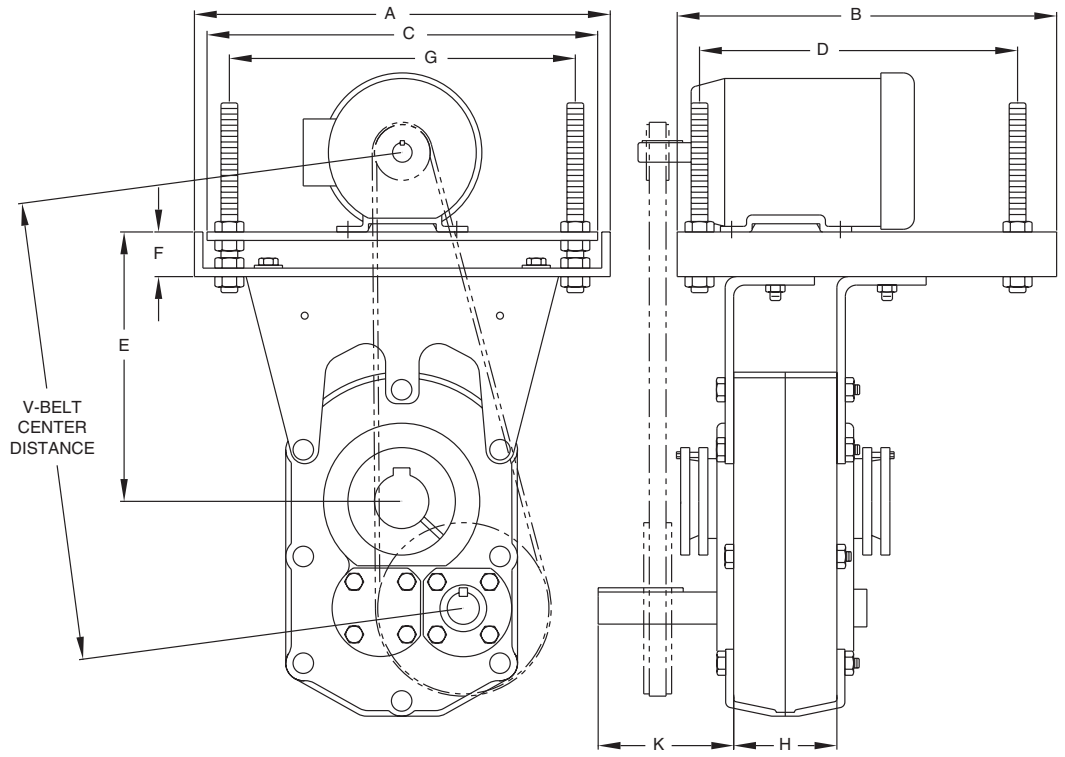
SHAFT MOUNT MODEL	PART NUMBER	WEIGHT (LBS.)
PT1107 & PT2115	0279-00166	1
PT2115*	0279-00167	1
PT3203	0279-00168	1.1
PT4207	0279-00169	1.2
PT5215	0279-00170	2.2
PT6307	0279-00171	2.5
PT7315	0279-00172	2.8
PT8407 & PT9415	0279-00173	3.8
PT10507	0279-00175	6

* USE FOR PT2115 WITHOUT END CAPS (BALL BEARING)

POWERTORQUE® ACCESSORIES
VERTICAL MOTOR MOUNTS



All-Steel construction for rigidity
Compact design eliminates need for motor base
Top plate adjusts for easy tensioning of drive belt
Mounting holes provided match NEMA standards



NOTE: SHIELDS/GUARDS NOT SHOWN FOR ILLUSTRATION PURPOSES

POWERTORQUE® ACCESSORIES

VERTICAL MOTOR MOUNTS

VERTICAL MOTOR MOUNTS																
			V-BELT CENTER DISTANCE FOR NEMA MOTOR FRAMES													
SHAFT MOUNT	PART NUMBER	NEMA MOTOR	56-140 MIN	56-140 MAX	180 MIN	180 MAX	210 MIN	210 MAX	250 MIN	250 MAX	280 MIN	280 MAX	320 MIN	320 MAX	360 MIN	360 MAX
PT1107	0279-00180	56C-215T	17.6	21.0	18.5	22.0	19.3	22.7								
PT2115	0279-00181	56C-215T	18.7	22.1	19.7	23.1	20.5	23.9								
PT3203	0279-00182	56C-215T	20.2	23.6	21.2	24.6	22.0	25.3								
PT3203	0279-00183	143T-286T	20.4	23.8	21.4	24.8	22.2	25.5	23.2	26.5	23.9	27.2				
PT4207	0279-00184	143T-286T	21.2	25.2	22.2	26.2	23.0	26.9	23.9	27.9	24.7	28.7				
PT4207	0279-00189	143T-326T	21.3	25.3	22.3	26.3	23.1	27.0	24.0	28.0	24.8	28.8	25.8	29.8		
PT5215	0279-00185	143T-286T	22.7	26.6	23.7	27.6	24.4	28.4	25.4	29.4	26.2	30.1				
PT5215	0279-00186	143T-326T	22.8	26.7	23.8	27.7	24.5	28.5	25.5	29.5	26.3	30.2	27.3	31.2		
PT6307	0279-00187	143T-326T	25.9	29.7	26.9	30.7	31.4	37.6	28.6	32.4	29.4	33.2	30.4	34.2		
PT7315	0279-00188	143T-365T	30.6	34.4	31.6	35.4	32.4	36.2	33.4	37.2	34.1	37.9	35.1	38.9	36.1	39.9
PT8407	0279-00190	143T-365T	31.9	36.4	32.9	37.4	33.7	38.2	34.7	39.2	35.4	39.9	36.4	40.9	37.4	41.9
PT9415	0279-00191	143T-365T	32.0	35.8	33.0	36.8	33.8	37.6	34.8	38.6	32.8	39.3	36.5	40.3	37.5	41.4
PT10507	0279-00193	143T-365T	33.5	37.3	34.5	38.3	35.3	39.1	36.3	40.1	34.3	40.8	38.0	41.8	39.0	42.9

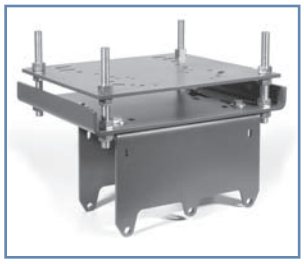
SHAFT MOUNT	PART NUMBER	WEIGHT (LBS.)	A	B	C	D	E MIN	E MAX	F	G	H	J	K
PT1107	0279-00180	35	14.63	11.00	13.50	9.25	10.0	14.2	1.59	12.00	3.38	5/8x7	3.88
PT2115	0279-00181	35	14.63	11.00	13.50	9.25	10.6	14.8	1.59	12.00	3.38	5/8x7	4.18
PT3203	0279-00182	35	14.63	11.00	13.50	9.25	11.6	15.9	1.59	12.00	4.25	5/8x8	4.88
PT3203	0279-00183	77	18.63	17.00	17.50	14.25	11.8	16.0	1.78	15.50	4.25	3/4x8	4.88
PT4207	0279-00184	87	18.63	17.00	17.50	14.25	12.0	16.7	1.78	15.50	4.63	3/4x8	6.13
PT4207	0279-00189	121	20.50	18.50	19.25	16.50	12.0	16.8	1.84	17.50	4.63	3/4x8	6.13
PT5215	0279-00185	84	18.63	17.00	17.50	14.25	12.5	17.3	1.78	15.50	4.13	3/4x8	6.65
PT5215	0279-00186	118	20.50	18.50	19.25	16.50	12.5	17.3	1.84	17.50	4.13	3/4x8	6.65
PT6307	0279-00187	118	20.50	18.50	19.25	16.50	14.6	19.3	1.84	17.50	4.50	3/4x8	7.31
PT7315	0279-00188	148	22.50	19.00	21.25	16.50	17.6	22.1	2.50	19.25	4.75	1x9	7.81
PT8407	0279-00190	148	22.50	19.00	21.25	16.50	18.3	22.8	2.50	19.25	4.75	1x9	8.81
PT9415	0279-00191	125	22.50	19.00	21.25	16.50	19.0	23.5	2.50	19.25	5.40	1x9	11.08
PT10507	0279-00193	135	22.50	19.00	21.25	16.50	20.5	25.0	2.50	19.25	6.18	1x9	11.15

VERTICAL LONG MOTOR MOUNTS

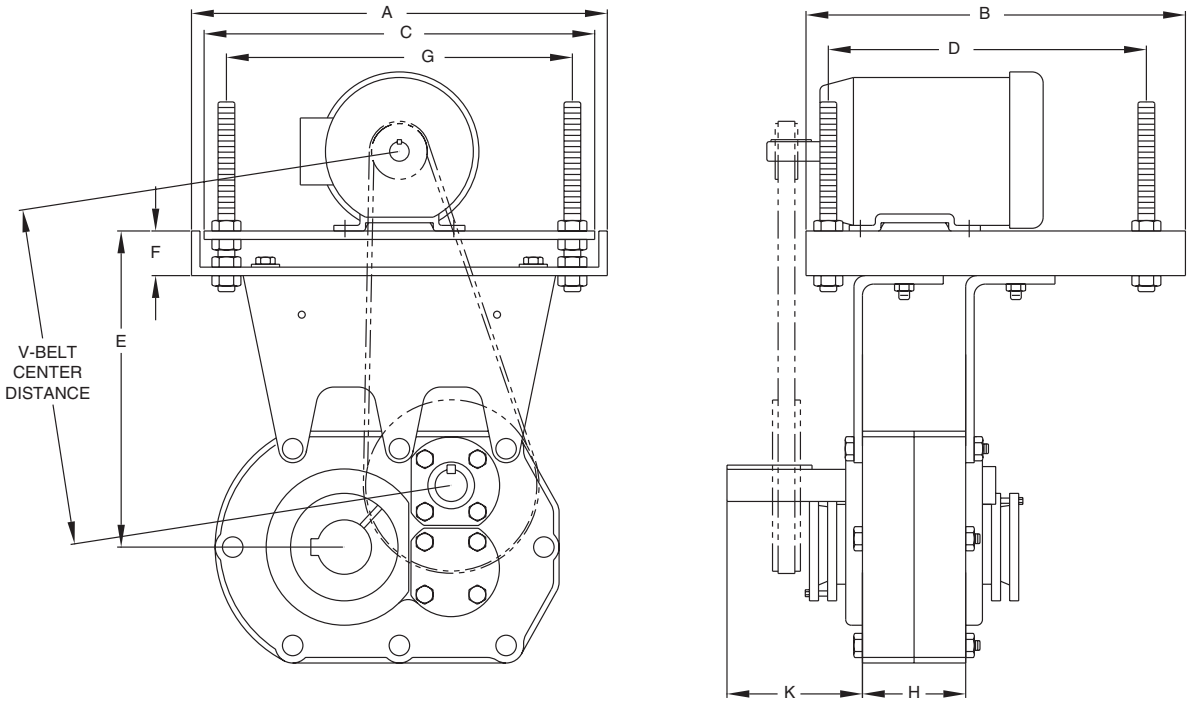
VERTICAL LONG MOTOR MOUNTS																
			V-BELT CENTER DISTANCE FOR NEMA MOTOR FRAMES													
SHAFT MOUNT	PART NUMBER	NEMA MOTOR	56-140 MIN	56-140 MAX	180 MIN	180 MAX	210 MIN	210 MAX	250 MIN	250 MAX	280 MIN	280 MAX	320 MIN	320 MAX	360 MIN	360 MAX
PT1107	0279-00196	56C-215T	20.6	24.0	21.5	25.0	22.3	25.7								
PT2115	0279-00197	56C-215T	21.7	25.1	22.7	26.1	23.5	26.9								
PT3203	0279-00198	56C-215T	23.2	26.6	24.2	27.6	25.0	28.3								
PT3203	0279-00199	143T-286T	23.4	26.8	24.4	27.8	25.2	28.5	26.2	29.5	26.9	30.2				
PT4207	0279-00200	143T-286T	25.7	29.7	26.7	30.7	27.5	31.4	28.4	32.4	29.2	33.2				
PT4207	0279-00201	143T-326T	25.8	29.8	26.8	30.8	27.6	31.5	28.5	32.5	29.3	33.3	30.3	34.3		
PT5215	0279-00202	143T-286T	29.5	33.4	30.5	34.4	31.2	35.2	32.2	36.2	33.0	36.9				
PT5215	0279-00203	143T-326T	29.5	33.4	30.5	34.4	31.2	35.2	32.2	36.2	33.0	36.9	34.0	37.9		
PT6307	0279-00204	143T-326T	39.9	43.7	40.9	44.7	45.4	51.6	42.6	46.4	43.4	47.2	44.4	48.2		
PT7315	0279-00205	143T-365T	45.6	49.4	46.6	50.4	47.4	51.2	48.4	52.2	49.1	52.9	50.1	53.9	51.1	54.9
PT8407	0279-00206	143T-365T	44.9	49.4	45.9	50.4	46.7	51.2	47.7	52.2	48.4	52.9	49.4	53.9	50.4	54.9

SHAFT MOUNT	PART NUMBER	WEIGHT (LBS.)	A	B	C	D	E MIN	E MAX	F	G	H	J	K
PT1107	0279-00196	41	14.63	11.00	13.50	9.25	13.0	17.2	1.59	12.00	3.38	5/8x7	3.88
PT2115	0279-00197	41	14.63	11.00	13.50	9.25	13.6	17.8	1.59	12.00	3.38	5/8x7	4.18
PT3203	0279-00198	41	14.63	11.00	13.50	9.25	14.6	18.8	1.59	12.00	4.25	5/8x8	4.88
PT3203	0279-00199	83	18.63	17.00	17.50	14.25	14.8	19.0	1.78	15.50	4.25	3/4x8	4.88
PT4207	0279-00200	95	18.63	17.00	17.50	14.25	16.5	21.2	1.78	15.50	4.63	3/4x8	6.13
PT4207	0279-00201	129	20.50	18.50	19.25	16.50	16.5	21.3	1.84	17.50	4.63	3/4x8	6.13
PT5215	0279-00202	106	18.63	17.00	17.50	14.25	19.3	24.0	1.78	15.50	4.13	3/4x8	6.65
PT5215	0279-00203	137	20.50	18.50	19.25	16.50	19.3	24.0	1.84	17.50	4.13	3/4x8	6.65
PT6307	0279-00204	142	20.50	18.50	19.25	16.50	28.6	33.3	1.84	17.50	4.50	3/4x8	7.31
PT7315	0279-00205	206	22.50	19.00	21.25	16.50	32.5	37.2	2.50	19.25	4.75	1x9	7.81
PT8407	0279-00206	206	22.50	19.00	21.25	16.50	31.6	36.1	2.50	19.25	4.75	1x9	8.81

POWERTORQUE® ACCESSORIES
HORIZONTAL MOTOR MOUNTS



All-Steel construction for rigidity
Compact design eliminates need for motor base
Top plate adjusts for easy tensioning of drive belt
Mounting holes provided match NEMA standards



NOTE: SHIELDS/GUARDS NOT SHOWN FOR ILLUSTRATION PURPOSES

POWERTORQUE® ACCESSORIES

HORIZONTAL MOTOR MOUNTS

HORIZONTAL MOTOR MOUNTS				V-BELT CENTER DISTANCE FOR NEMA MOTOR FRAMES													
SHAFT MOUNT	PART NUMBER	NEMA MOTOR	SCREW DIAMETERS	56-140 MIN	56-140 MAX	180 MIN	180 MAX	210 MIN	210 MAX	250 MIN	250 MAX	280 MIN	280 MAX	320 MIN	320 MAX	360 MIN	360 MAX
PT1107	0279-00270	56C-215T	6 - 12	13.5	17.0	14.5	18	15.3	19.0								
PT2115	0279-00271	56C-215T	6 - 14	14.9	18.3	15.9	19.3	16.6	20.0								
PT3203	0279-00272	56C-215T	6 - 16	15.8	19.3	16.8	20.3	17.6	21.0								
PT3203	0279-00273	143T-286T	6 - 16	16.0	19.5	17.0	20.5	17.8	21.2	18.8	22.2	19.6	22.9				
PT4207	0279-00274	143T-286T	9 - 18	16.9	21.0	17.9	22.0	18.6	22.7	19.6	23.7	20.4	24.5				
PT4207	0279-00275	143T-326T	9 - 18	16.9	21.0	17.9	22.0	18.6	22.7	19.6	23.7	20.4	24.5	21.4	25.4		
PT5215	0279-00276	143T-286T	9 - 18	16.6	20.7	17.6	21.7	18.4	22.4	19.4	23.4	20.0	24.2				
PT5215	0279-00277	143T-326T	9 - 18	16.6	20.7	17.6	21.7	18.4	22.4	19.4	23.4	20.0	24.2	21.1	25.2		
PT6307	0279-00278	143T-326T	12 - 20	17.0	21.0	18.0	22.0	18.8	22.8	19.7	23.8	20.5	24.5	21.5	25.5		
PT7315	0279-00279	143T-365T	12 - 20	22.1	25.6	23.1	26.5	23.8	27.3	24.8	28.3	25.6	29.0	26.6	30.0	27.5	31.0
PT8407	0279-00280	143T-365T	NA	16.1	20.6	17.1	21.6	17.9	22.4	18.9	23.4	19.6	24.1	20.6	25.1	21.6	26.1

SHAFT MOUNT	PART NUMBER	WEIGHT (LBS.)	A	B	C	D	E MIN	E MAX	F	G	H	J	K
PT1107	0279-00270	39	14.63	11.00	13.50	9.25	11.1	15.3	1.59	12.00	3.38	5/8x7	3.88
PT2115	0279-00271	40	14.63	11.00	13.50	9.25	12.6	16.8	1.59	12.00	3.38	5/8x7	4.18
PT3203	0279-00272	41	14.63	11.00	13.50	9.25	13.8	18.0	1.59	12.00	4.25	5/8x8	4.88
PT3203	0279-00273	83	18.63	17.00	17.50	14.25	14.0	18.2	1.78	15.50	4.25	3/4x8	4.88
PT4207	0279-00274	97	18.63	17.00	17.50	14.25	15.3	20.1	1.78	15.50	4.63	3/4x8	6.13
PT4207	0279-00275	121	20.50	18.50	19.25	16.50	15.3	20.1	1.84	17.50	4.63	3/4x8	6.13
PT5215	0279-00276	95	18.63	17.00	17.50	14.25	15.3	20.1	1.78	15.50	4.13	3/4x8	6.65
PT5215	0279-00277	122	20.50	18.50	19.25	16.50	15.3	20.1	1.84	17.50	4.13	3/4x8	6.65
PT6307	0279-00278	123	20.50	18.50	19.25	16.50	16.7	21.4	1.84	17.50	4.50	3/4x8	7.31
PT7315	0279-00279	148	22.50	19.00	21.25	16.50	17.5	21.7	2.50	19.25	4.75	1x9	7.81
PT8407	0279-00280	148	22.50	19.00	21.25	16.50	18.3	22.8	2.50	19.25	4.75	1x9	7.81

HORIZONTAL LONG MOTOR MOUNTS

HORIZONTAL LONG MOTOR MOUNTS				V-BELT CENTER DISTANCE FOR NEMA MOTOR FRAMES													
SHAFT MOUNT	PART NUMBER	NEMA MOTOR	SCREW DIAMETERS	56-140 MIN	56-140 MAX	180 MIN	180 MAX	210 MIN	210 MAX	250 MIN	250 MAX	280 MIN	280 MAX	320 MIN	320 MAX	360 MIN	360 MAX
PT1107	0279-00290	56C-215T	14 - 20	19.5	22.9	20.5	23.9	21.2	24.7								
PT2115	0279-00291	56C-215T	16 - 20	20.9	24.3	21.9	25.3	22.6	26.0								
PT3203	0279-00292	56C-215T	18 - 20	21.8	25.3	22.8	26.3	23.6	27.0								
PT3203	0279-00293	143T-286T	18 - 20	22.0	25.5	23.0	26.5	23.8	27.2	24.8	28.2	25.6	28.9				
PT4207	0279-00294	143T-286T	20 - 24	23.2	27.0	24.2	28.0	24.9	28.6	25.9	29.6	26.7	30.4				
PT4207	0279-00295	143T-326T	20 - 24	23.2	27.0	24.2	28.0	24.9	28.6	25.9	29.6	26.7	30.4	27.4	31.4		
PT5215	0279-00296	143T-286T	20 - 24	22.9	26.6	23.9	27.6	24.7	28.4	25.7	29.4	26.4	30.1				
PT5215	0279-00297	143T-326T	20 - 24	22.9	26.6	23.9	27.6	24.7	28.4	25.7	29.4	26.4	30.1	27.1	31.2		
PT6307	0279-00298	143T-326T	24	23.2	27.0	24.2	27.9	24.9	28.7	25.9	29.7	26.7	30.5	27.6	31.4		
PT7315	0279-00299	143T-365T	24	27.3	31.1	28.3	32.1	29.1	32.9	30.1	33.9	30.8	34.7	31.8	35.6	32.7	36.6
PT8407	0279-00300	143T-365T	NA	22.0	26.5	23.0	27.5	23.8	28.3	24.8	29.3	25.5	30.0	26.5	31.0	27.5	32.0

SHAFT MOUNT	PART NUMBER	WEIGHT (LBS.)	A	B	C	D	E MIN	E MAX	F	G	H	J	K
PT1107	0279-00290	49	14.63	11.00	13.50	9.25	17.1	21.3	1.59	12.00	3.38	5/8x7	3.88
PT2115	0279-00291	50	14.63	11.00	13.50	9.25	18.6	22.8	1.59	12.00	3.38	5/8x7	4.18
PT3203	0279-00292	51	14.63	11.00	13.50	9.25	19.8	24.0	1.59	12.00	4.25	5/8x8	4.88
PT3203	0279-00293	93	18.63	17.00	17.50	14.25	20.0	24.2	1.78	15.50	4.25	3/4x8	4.88
PT4207	0279-00294	113	18.63	17.00	17.50	14.25	21.3	26.1	1.78	15.50	4.63	3/4x8	6.13
PT4207	0279-00295	129	20.50	18.50	19.25	16.50	21.3	26.1	1.84	17.50	4.63	3/4x8	6.13
PT5215	0279-00296	113	18.63	17.00	17.50	14.25	21.3	26.1	1.78	15.50	4.13	3/4x8	6.65
PT5215	0279-00297	140	20.50	18.50	19.25	16.50	21.3	26.1	1.84	17.50	4.13	3/4x8	6.65
PT6307	0279-00298	143	20.50	18.50	19.25	16.50	22.7	27.4	1.84	17.50	4.50	3/4x8	7.31
PT7315	0279-00299	172	22.50	19.00	21.25	16.50	23.5	27.7	2.50	19.25	4.75	1x9	7.81
PT8407	0279-00300	172	22.50	19.00	21.25	16.50	24.3	28.8	2.50	19.25	4.75	1x9	7.81

POWERTORQUE® ACCESSORIES

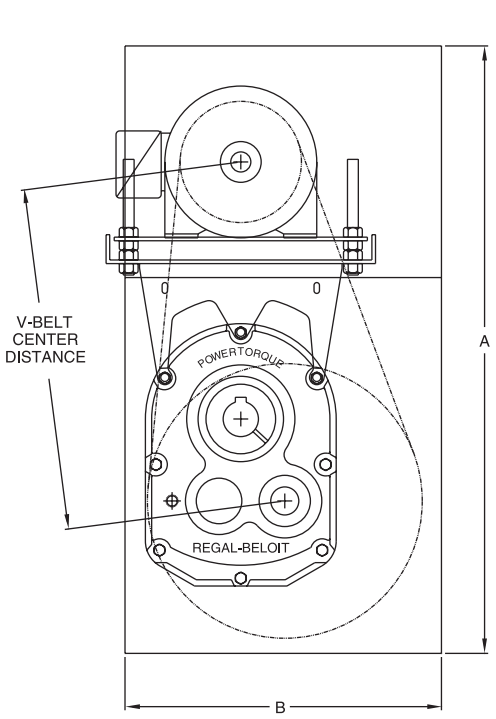
VERTICAL BELT GUARDS

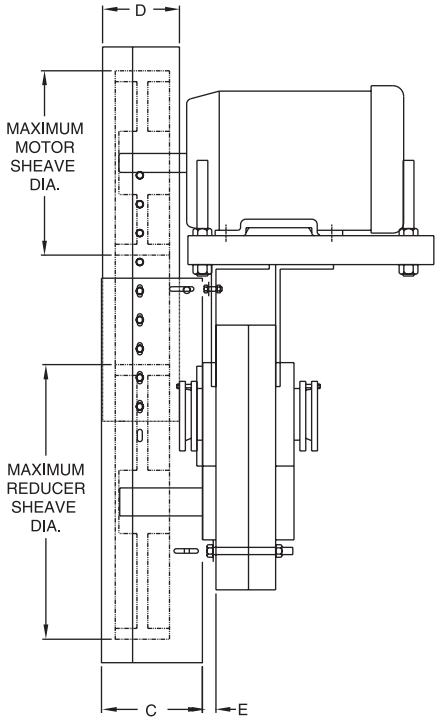


All-Steel construction

Adjustable to fit a wide range of sheaves and motor frames

Designed for easy installation, no drilling required





VERTICAL BELT GUARDS													
SHAFT MOUNT MODEL	BELT GUARD PART NUMBER	NEMA MOTOR FRAME	WEIGHT (LBS.)	V-BELT CENTER DISTANCE		MAXIMUM SHEAVE DIA.		A		B	C	D	E
				MIN	MAX	MOTOR	REDUCER	MIN.	MAX.				
PT1107	0279-00371	56C-215T	51	17.6	22.7	6.4	18.0	31.75	39.75	22.00	5.40	4.31	0.56
PT2115	0279-00375	56C-215T	54	18.7	23.9	8.6	19.0	32.75	40.75	22.00	5.40	4.31	0.56
PT3203	0279-00379	56C-286T	57	20.2	27.2	8.6	19.0	35.75	43.75	22.00	5.40	4.31	0.56
PT4207	0279-00383	143T-326T	71	21.2	29.8	12.0	19.0	40.25	48.25	23.50	6.90	5.31	0.63
PT5215	0279-00387	143T-326T	75	22.7	31.2	12.0	19.0	41.75	49.75	23.50	6.90	5.31	0.63
PT6307	0279-00391	143T-326T	104	25.9	34.2	14.0	25.0	48.25	56.25	29.25	8.70	7.44	2.00
PT7315	0279-00395	143T-365T	126	30.6	39.9	14.0	30.0	55.25	63.25	34.25	8.70	7.44	1.25
PT8407	0279-00399	143T-365T	126	31.9	41.2	14.0	30.0	55.25	63.25	34.25	8.70	7.44	1.25

VERTICAL LONG BELT GUARDS													
SHAFT MOUNT MODEL	BELT GUARD PART NUMBER	NEMA MOTOR FRAME	WEIGHT (LBS.)	V-BELT CENTER DISTANCE		MAXIMUM SHEAVE DIA.		A		B	C	D	E
				MIN	MAX	MOTOR	REDUCER	MIN.	MAX.				
PT1107	0279-00372	56C-215T	55	20.6	25.7	6.4	18.0	34.50	42.50	22.00	5.40	4.31	0.56
PT2115	0279-00376	56C-215T	57	21.7	26.9	8.6	19.0	35.50	43.50	22.00	5.40	4.31	0.56
PT3203	0279-00380	56C-286T	60	23.2	30.2	8.6	19.0	38.75	46.75	22.00	5.40	4.31	0.56
PT4207	0279-00384	143T-326T	82	25.7	34.3	12.0	19.0	44.50	52.50	23.50	6.90	5.31	0.63
PT5215	0279-00388	143T-326T	80	29.5	37.9	12.0	19.0	48.00	56.00	23.50	6.90	5.31	0.63
PT6307	0279-00392	143T-326T	123	39.9	48.2	14.0	25.0	62.25	70.25	29.25	8.70	7.44	2.00
PT7315	0279-00396	143T-365T	150	45.6	54.9	14.0	30.0	71.00	79.00	34.25	8.70	7.44	1.25
PT8407	0279-00400	143T-364T	150	44.9	54.3	14.0	30.0	71.00	79.00	34.25	8.70	7.44	1.25

POWERTORQUE® ACCESSORIES

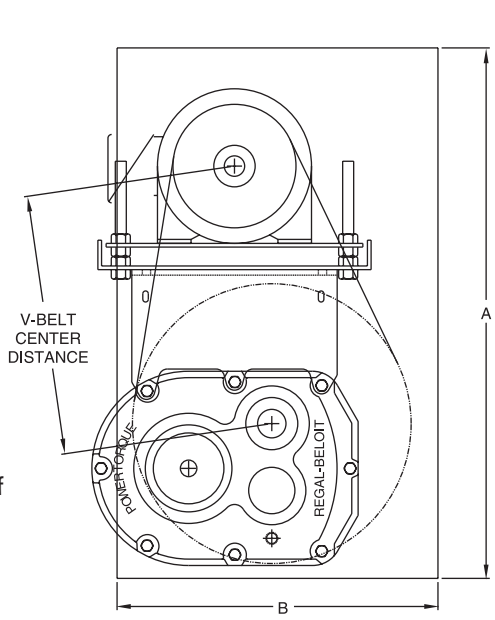
HORIZONTAL BELT GUARDS

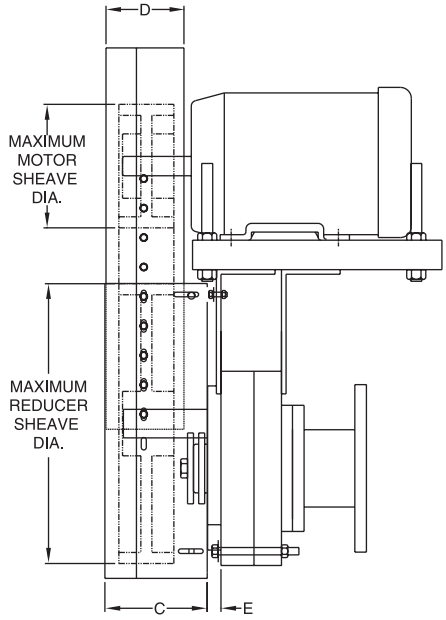


All-Steel construction

Adjustable to fit a wide range of sheaves and motor frames

Designed for easy installation, no drilling required





HORIZONTAL BELT GUARDS													
SHAFT MOUNT MODEL	BELT GUARD PART NUMBER	NEMA MOTOR FRAME	WEIGHT (LBS.)	V-BELT CENTER DISTANCE		MAXIMUM SHEAVE DIA.		A		B	C	D	E
				MIN	MAX	MOTOR	REDUCER	MIN.	MAX.				
PT1107	0279-00373	56C-215T	48	13.5	19.0	6.4	18.0	27.75	35.75	22.00	5.40	4.31	0.56
PT2115	0279-00377	56C-215T	51	14.9	20.0	8.6	19.0	28.75	36.75	22.00	5.40	4.31	0.56
PT3203	0279-00381	56C-286T	53	15.8	22.9	8.6	19.0	31.50	39.50	22.00	5.40	4.31	0.56
PT4207	0279-00385	143T-326T	67	16.9	25.4	12.0	19.0	36.25	44.25	23.50	6.90	5.31	0.63
PT5215	0279-00389	143T-326T	64	16.6	25.2	12.0	19.0	35.75	43.75	23.50	6.90	5.31	0.63
PT6307	0279-00393	143T-326T	92	17.0	25.5	14.0	25.0	39.50	47.50	29.25	8.70	7.44	2.00
PT7315	0279-00397	143T-365T	105	22.1	31.0	14.0	30.0	41.75	49.75	34.25	8.70	7.44	1.25
PT8407	0279-00401	143T-365T	105	16.1	25.4	14.0	30.0	41.75	49.75	34.25	8.70	7.44	1.25

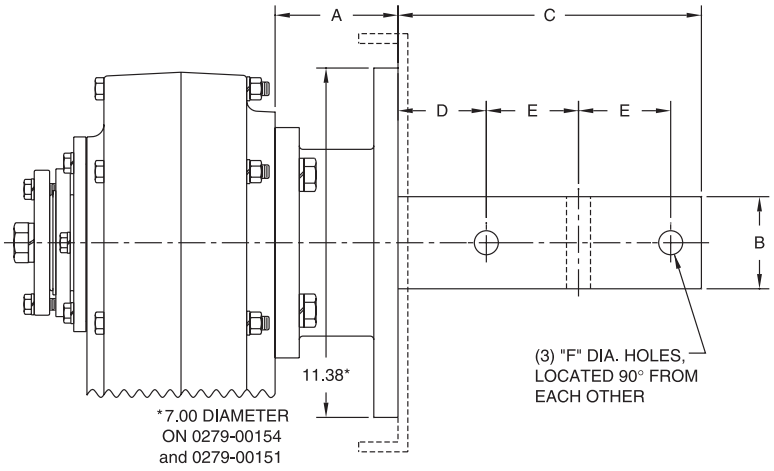
HORIZONTAL LONG BELT GUARDS													
SHAFT MOUNT MODEL	BELT GUARD PART NUMBER	NEMA MOTOR FRAME	WEIGHT (LBS.)	V-BELT CENTER DISTANCE		MAXIMUM SHEAVE DIA.		A		B	C	D	E
				MIN	MAX	MOTOR	REDUCER	MIN.	MAX.				
PT1107	0279-00374	56C-215T	53	19.5	24.7	6.4	18.0	33.75	41.75	22.00	5.40	4.31	0.56
PT2115	0279-00378	56C-215T	56	20.9	26.0	8.6	19.0	34.75	42.75	22.00	5.40	4.31	0.56
PT3203	0279-00382	56C-286T	59	21.8	28.9	8.6	19.0	37.25	45.25	22.00	5.40	4.31	0.56
PT4207	0279-00386	143T-326T	73	23.2	31.4	12.0	19.0	41.50	49.50	23.50	6.90	5.31	0.63
PT5215	0279-00390	143T-326T	73	22.9	31.2	12.0	19.0	42.00	50.00	23.50	6.90	5.31	0.63
PT6307	0279-00394	143T-326T	100	23.2	31.4	14.0	25.0	45.50	53.50	29.25	8.70	7.44	2.00
PT7315	0279-00398	143T-365T	115	27.3	36.6	14.0	30.0	48.00	56.00	34.25	8.70	7.44	1.25
PT8407	0279-00402	143T-365T	115	22.0	31.4	14.0	30.0	48.00	56.00	34.25	8.70	7.44	1.25

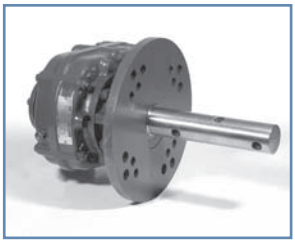
COOLING FANS

Available upon request, consult factory for details

POWERTORQUE® ACCESSORIES

SCREW CONVEYOR DRIVE

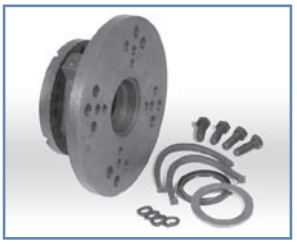




	Adaptor Flanges			Drive Shafts						
Shaft Mount Model	Part Number	Weight (lbs.)	A	Part Number	Weight (lbs.)	B	C	D	E	F	Screw Size
PT1107	0279-00151	13	3.22	0279-00211	14	1.500	9.00	2.12	3.00	17/32	6
	0279-00152	27	3.22	0279-00211	14	1.500	9.00	2.12	3.00	17/32	9
				0279-00212	17	2.000	9.00	2.12	3.00	21/32	9, 12
				0279-00213	22	2.437	9.69	2.75	3.00	21/32	12,14
				0279-00214	29	3.000	9.88	2.88	3.00	25/32	12 - 20
PT2115	0279-00154	15	3.56	0279-00215	15	1.500	9.00	2.12	3.00	17/32	6
	0279-00153	25	3.56	0279-00215	15	1.500	9.00	2.12	3.00	17/32	9
				0279-00216	18	2.000	9.00	2.12	3.00	21/32	9, 12
				0279-00217	23	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00218	30	3.000	9.88	2.88	3.00	25/32	12 - 20
PT3203	0279-00155	29	3.69	0279-00219	20	1.500	9.00	2.12	3.00	17/32	9
				0279-00220	23	2.000	9.00	2.12	3.00	21/32	9, 12
				0279-00221	28	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00222	35	3.000	9.88	2.88	3.00	25/32	12 - 20
PT4207	0279-00156	33	4.00	0279-00223	24	1.500	9.00	2.12	3.00	17/32	9
				0279-00224	27	2.000	9.00	2.12	3.00	21/32	9, 12
				0279-00225	32	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00226	39	3.000	9.88	2.88	3.00	25/32	12 - 20
				0279-00227	53	3.4375	13.13	3.88	4.00	29/32	18 - 24
PT5215	0279-00157	43	4.25	0279-00228	37	2.000	9.00	2.12	3.00	21/32	9, 12
				0279-00229	42	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00230	49	3.000	9.88	2.88	3.00	25/32	12 - 20
				0279-00231	63	3.4375	13.13	3.88	4.00	29/32	18 - 24
PT6307	0279-00158	56	5.50	0279-00232	57	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00233	64	3.000	9.88	2.88	3.00	25/32	12 - 20
				0279-00234	78	3.4375	13.13	3.88	4.00	29/32	18 - 24
PT7315	0279-00159	72	6.50	0279-00235	73	2.4375	9.69	2.75	3.00	21/32	12, 14
				0279-00236	80	3.000	9.88	2.88	3.00	25/32	12 - 20
				0279-00237	94	3.4375	13.13	3.88	4.00	29/32	18 - 24

ADAPTER FLANGES

Conform to CEMA standards.
Bolt-on design allows easy mounting.
Open center for contaminate dropout.



DRIVE SHAFTS

Conform to CEMA dimensional standards.
Machined from high strength alloy steel.
Easy installation into standard hollow bore.



AUXILIARY SEAL KITS

Available upon request, consult factory for details

ELECTRIC MOTORS

Electric Motors

- Introduction H-2
- Three Phase TEFC General Purpose Motors H-3
- Single Phase TEFC General Purpose Motors H-4
- Totally Enclosed Brakemotors H-4
- Washdown Duty Motors ..... H-5 & H-7
- Inverter Duty Motors H-6
- Permanent Magnet DC Motors H-7
- Motor Dimensions Table H-8

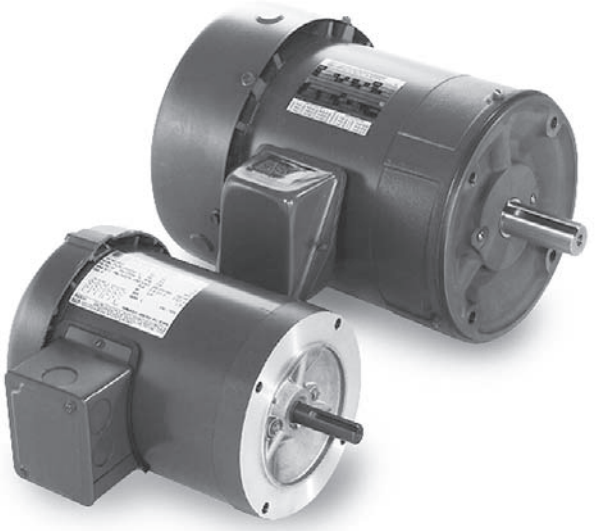
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ELECTRIC MOTORS

Performance matched to Hub City gear drives.

BASIC SPECIFICATIONS

- Power Ratings from 1/4 to 50 hp
- 1.15 Service Factor
- Operating Speed 1750 rpm
- Single Phase or Three Phase Design



STANDARD FEATURES

- Motors Produced by Regal Beloit for High Efficiency, Reliability and Durability
- UL Recognized and CSA Certified
- Ball Bearings for Endurance and Strength
- Totally Enclosed General Purpose Motors Feature Steel Frames
- Brake Motors Feature Stearns Brakes, Bolt-On Removable Bases
- Washdown Motors Feature USDA Approved White Epoxy Paint, 303 Stainless Steel Shafts, Internal Corrosion Resistant Coatings and Class F Insulation System
- Inverter Duty Motors Feature Encoder and Brake Provisions, Class F Insulation System, and Three Year Warranty
- DC Motors Feature Oversized Brushes for Long Life, Class F Insulation System, and Two Year Warranty.

OPTIONAL FEATURES

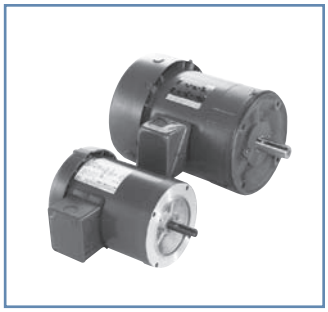
- Adjustable Speed Motor Controls Available
- Modified Standard and Custom Designs
- CleanLine™ Washdown and BISSC® Configurations
- Unique or Harsh Environment Adaptations
- Motor/Gear Drive Package Incentives Available, Consult Factory

Don't see the motor you need?
Contact Hub City.
Many more stock motors available.

THREE PHASE TEFC GENERAL PURPOSE

FEATURES:

- Ball bearings, mechanically locked on shaft end
- 1.15 Service factor
- Rolled steel 56-145T frame motors
- UL Recognized and CSA Certified



THREE PHASE TEFC 1750 RPM C-FACE MOTORS

Inverter Duty

HP	VOLTS	FRAME	CAT. NO.	NOM. EFF.	F.L. AMPS	WEIGHT LBS	"LQ" DIM.	FOOTNOTE
1/4	208-230/460	56C	G547	66.0	1.2-1.3/.65	14	7.88	20, 24
1/3	208-230/460	56C	G502	68.0	1.5-1.6/0.8	15	8.13	20, 24
1/2	208-230/460	56C	G507	68.0	2.1-2.2/1.1	17	8.63	20, 24
3/4	208-230/460	56C	G522	75.5	2.7-2.8/1.4	21	9.13	20, 24
1	208-230/460	56C	G527	77.0	3.5-3.6/1.8	27	10.26	20
1-1/2	208-230/460	56C	G541	80.0	4.8-4.8/2.4	29	10.26	20
2	208-230/460	56C	G544	82.5	6.0-5.8/2.9	39	11.75	20
3	208-230/460	182TC	C223	82.5	8.0/4.0	76	13.07	F, 24
5	208-230/460	184TC	C224	86.5	13.0/6.5	92	14.07	F, 20, 24
7-1/2	208-230/460	213TC	C225	87.5	22.0-19.4/9.7	103	16.09	F, 20, 24
10	208-230/460	215TC	C226	88.5	27.6-25.0/12.5	135	17.59	F, 20, 24
15	208-230/460	254TC	C227	88.5	41.0-38.6/19.3	179	19.24	AL, F, 24
20	208-230/460	256TC	(1) U724	91.0	51.0/25.5	225	20.99	AL, F, 20, 24
25	208-230/460	284TC	(1) U725	92.4	68.0-63.0/31.5	425	21.68	F, 20, 24
30	208-230/460	286TC	(1) U726	92.4	81.0-74.0/37.0	455	23.18	F, 20, 24
40	203/460	324TC	(1) U727	92.4	100/50.0	543	23.97	F, 20, 24
50	203/460	326TC	(1) U728	92.4	122/61.0	600	25.47	F, 20, 24

NOTES: (1) FRAME IS C FACE WITH RIGID BASE

FEATURES:

- Ball bearings, mechanically locked on shaft end
- 1.15 Service factor
- Rolled steel 56-145T frame motors
- UL Recognized and CSA Certified



575 VOLT THREE PHASE TEFC 1750 RPM C-FACE MOTORS

Inverter Duty

HP	VOLTS	FRAME	CAT. NO.	NOM. EFF.	F.L. AMPS	WEIGHT LBS	"LQ" DIM.	FOOTNOTE
1/3	575	56C	(1) G503	68.0	0.64	15	8.13	24
1/2	575	56C	(1) G508	68.0	0.90	18	8.63	24
3/4	575	56C	(1) G523	75.5	1.10	20	9.13	24
1	575	56C	(1) G528	77.0	1.45	26	10.26	
1-1/2	575	56C	(1) G548	80.0	1.90	28	10.26	
2	575	145TC	(1) G549	82.5	2.25	41	11.57	
3	575	182TC	(2) C383	87.5	3.40	77	13.07	F, 24
5	575	184TC	(2) C387	88.5	5.20	87	14.03	F, 24
7-1/2	575	213TC	(2) C391	89.5	8.00	122	16.35	F, 24
10	575	215TC	(2) C394	89.5	10.40	135	17.85	F, 24

NOTES:(1) C FACE - FOOTLESS (2) C FACE WITH REMOVABLE BASE

FOOTNOTES:

AL ALUMINUM FRAME CONSTRUCTION
F CLASS F INSULATION
20 RATED 60/50 HERTZ, 190/380 OR 380 VOLT AT NEXT LOWER HORSEPOWER
24 MOTOR WILL NOT ACCEPT BRAKE KIT

APPLICATION GUIDELINES

Guidelines for Application General Purpose,
Three Phase Motors on Variable Frequency Drives
Meets NEMA MG-1-1998 Part 30 and Part 31 Section 4.4.2

ENCLOSURE	EFFICIENCY	FRAME	10:1 VARIABLE TORQUE 2:1 C.T.	MAXIMUM INVERTER TO MOTOR CABLE LENGTH @ 3KHZ CARRIER		
				230 V	460 V	575 V
Totally Enclosed	Standard	56-326	X	600 ft	125 ft	40 ft

- CONTACT MARATHON ELECTRIC FOR GUIDELINES IN APPLYING EXPLOSION PROOF MOTORS ON INVERTERS.
- CARRIER FREQUENCY IS MEASURED PHASE-TO-PHASE, NOT PHASE-TO-BUS. HIGHER CARRIER FREQUENCIES REQUIRE SHORTER CABLE CONTACT HUB CITY FOR DETAILS.

Don't see the motor you need?
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Many more stock motors available.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

H

SINGLE PHASE TEFC GENERAL PURPOSE & TOTALLY ENCLOSED BRAKEMOTORS

SINGLE PHASE TEFC 1750 RPM C-FACE MOTORS

FEATURES:

- Ball bearings, mechanically locked on shaft end
- Heavy gauge steel frame
- Capacitor start design for high starting torque
- 1.15 Service factor
- UL Recognized and CSA Certified

HP	VOLTS	FRAME	CAT. NO.	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/4	115/208-230	56C	G511	4.2/2.1-2.1	16	7.88	N,2,17,24
1/3	115/208-230	56C	G513	6.0/3.0-3.0	18	8.38	2, 24
1/2	115/208-230	56C	G515	8.0/4.0-4.0	23	9.13	2, 24
3/4	115/208-230	56C	G517	11.0/5.4-5.5	30	10.26	2
1	115/208-230	56C	G519	13.4/6.8-6.7	31	10.76	2
1-1/2	115/208-230	56C	G531	15.2/8.2-7.6	40	11.76	1



FOOTNOTES:

N TOTALLY ENCLOSED, NON-VENTILATED
1 CAPACITOR START/CAPACITOR RUN DESIGN FOR REDUCED AMPERAGE
2 CAPACITOR START INDUCTION RUN DESIGN
17 1.0 SERVICE FACTOR
24 MOTOR WILL NOT ACCEPT A BRAKE KIT

SINGLE PHASE TEFC 1750 RPM C-FACE BRAKEMOTORS

FEATURES:

- Fail-safe, spring set Stearns brake for holding or stopping
- Brake has manual wear adjustment up to 10lb.-ft. for longer pad life
- Manual release lever on rear of brake housing
- Brake leads are terminated at the brake
- Vertical or horizontal mounting
- Brake coil voltage matches motor voltages
- Bolt-on, easily removable rigid base
- Ball bearings, mechanically locked on shaft end
- 1.15 Service factor
- Nameplated 60/50 hertz at next lowest horsepower
- UL Recognized and CSA Certified

HP	VOLTS	FRAME	CAT. NO.	BRAKE RATING	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/3	115/208-230	56C	D400	3	6.6/3.1-3.3	33	14.14	2
1/2	115/208-230	56C	D401	3	8.8/4.2-4.4	35	14.14	2
3/4	115/208-230	56C	D402	6	11.0/5.4-5.5	38	14.64	2
1	115/208-230	56C	D403	6	13.4/6.8-6.7	40	15.14	2
1-1/2	115/208-230	56C	D404	10	15.2/8.2-7.6	53	16.14	1



FOOTNOTES:

1 CAPACITOR START/CAPACITOR RUN DESIGN FOR REDUCED AMPERAGE
2 CAPACITOR START INDUCTION RUN DESIGN

THREE PHASE TEFC 1750 RPM C-FACE BRAKEMOTORS

FEATURES:

- In addition to the Single Phase Features above:
- Brake leads routed through motor conduit box (TENV only)
- Suitable for vertical mounting, 10 lb.-ft. and smaller
- CR200 Corona resistant magnet wire (motor can be operated 10:1 variable torque and 2:1 constant torque)
- 1.15 Service factor, 1.0 Service factor where footnoted
- Bolt-on, easily removable rigid base

Inverter Duty

HP	VOLTS	FRAME	CAT. NO.	BRAKE RATING	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.
1/3	208-230/460	56C	D450	3	1.8-1.6/0.8	31	13.67
1/2	208-230/460	56C	D452	3	2.3-2.4/1.2	32	14.17
3/4	208-230/460	56C	D454	6	2.9-3.0/1.5	33	14.17
1	208-230/460	56C	D456	6	3.5-3.6/1.8	35	15.17
1-1/2	208-230/460	56C	D457	10	4.8-4.8/2.4	41	15.20
2	208-230/460	145TC	C403	10	6.0-5.8/2.9	48	16.65



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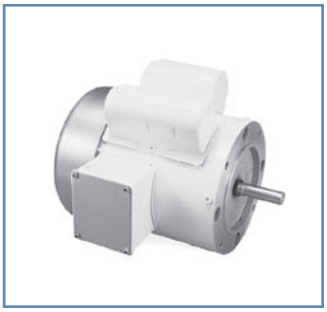
CALL: (605) 225-0360 • FAX: (605) 225-0567

WASHDOWN DUTY

SINGLE PHASE TOTALLY ENCLOSED 1750 RPM C-FACE WASHDOWN DUTY MOTORS

FEATURES:

- Double sealed ball bearings
- 303 Stainless steel shaft with spring loaded contact seals in each endshield
- Electronic encapsulated starting switch is impervious to moisture
- Cast conduit box with threaded openings, stainless steel cover
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy paint
- Plugged drain holes in each endshield for all angle mounting
- Capacitor start design for high starting torque
- Class F insulation
- 1.15 Service factor
- Capacity start/induction run design



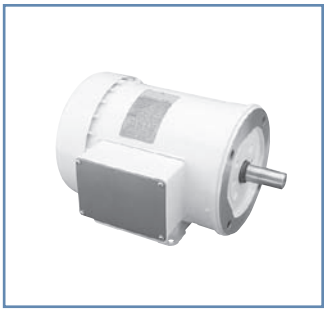
HP	VOLTS	FRAME	CAT. NO.	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.
1/3	115/208-230	56C	N531	6.4/3.2-3.2	27	8.63
1/2	115/208-230	56C	N523	8.8/4.4-4.4	29	9.13
3/4	115/208-230	56C	N525	10.8/5.4-5.4	31	9.63
1	115/208-230	56C	N527	12.8/6.4-6.4	37	10.13
1-1/2	115/208-230	56C	N529	19.0/9.5-9.5	43	11.63

THREE PHASE TOTALLY ENCLOSED 1750 RPM C-FACE WASHDOWN DUTY MOTORS

Inverter Duty

FEATURES:

- Variable torque (6-60Hz) 1.0 Service Factor on VFD
- See Inverter Duty column for constant torque capability
- Double sealed ball bearings
- 303 Stainless steel shaft with spring loaded contact seals in each endshield
- Cast conduit box with threaded openings, stainless steel cover
- Internal corrosion resistant coatings on frame, base, endshields, rotor and stator
- USDA-approved, white epoxy paint
- Plugged drain holes in each endshield for all angle mounting
- Stainless steel fan guard
- MAX GUARD® Class F insulation system
- 1.15 Service factor
- Rigid mounting base



MAX GUARD INSULATION SYSTEM

SUITABLE FOR USE ON VFD, SEE INVERTER DUTY COLUMN BELOW.

HP	VOLTS	FRAME	CAT. NO.	INVERTER DUTY	NOM. EFF.	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/4	208-230/460	56C	N564	6:1 CT	67.0	1.1-1.1/.6	21	8.63	N
1/3	208-230/460	56C	N565	6:1 CT	68.0	1.7-1.7/.9	23	8.63	N
1/2	208-230/460	56C	N567	6:1 CT	78.5	1.8-1.8/.9	27	8.00	N
3/4	208-230/460	56C	N599	6:1 CT	80.0	2.5-2.5/1.3	30	8.50	N
1	208-230/460	56C	N602	6:1 CT	80.0	3.6-3.6/1.8	31	9.50	N
1-1/2	208-230/460	56C	N606	6:1 CT	80.0	5.0-5.0/2.5	36	11.00	N
2	208-230/460	56C	N611	3:1 CT	81.5	6.2-6.2/3.1	38	10.63	

FOOTNOTES:
N TOTALLY ENCLOSED, NON-VENTILATED

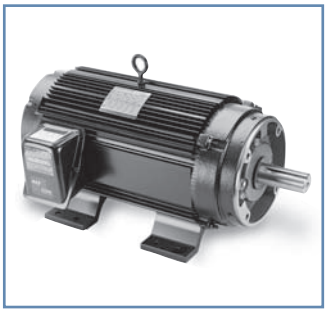
Don't see the motor you need?
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Many more stock motors available.

THREE PHASE INVERTER DUTY

THREE PHASE TOTALLY ENCLOSED NON-VENTILATED 1750 RPM C-FACE INVERTER DUTY MOTORS

FEATURES:

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on Vector Drive
- Constant horsepower to twice base RPM
- Continuous duty at 40° C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- Normally closed thermostats (one per phase)
- Removable Base on some models, as noted
- Ball bearing
- Field reversible to F2 (except where noted)
- Encoder and brake provisions included on opposite drive end (maximum 10 lb-ft brake
- UL Recognized and CSA Certified (contact factory for CE marking)
- Three year warranty
- Rigid mounting base



HP	VOLTS	RANGE	FRAME	CAT. NO.	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/4	230/460	1000:1	56C	Y592	1.2	17	9.70	S, 13
1/2	230/460	1000:1	56C	Y534	1.6/0.8	28	11.42	S, 6, 13
1	230/460	1000:1	143TC	Y536	3.0/1.5	43	12.92	S, 6, 13
2	230/460	1000:1	145TC	Y551	6.0/3.0	70	12.56	
3	230/460	1000:1	182TC	Y541	8.4/4.2	96	15.32	AL
5	230/460	1000:1	184TC	Y543	13.0/6.5	98	16.32	AL
7-1/2	230/460	1000:1	213TC	Y545	21.4/10.7	146	17.12	AL
10	230/460	1000:1	215TC	Y547	27.0/13.5	159	19.62	AL

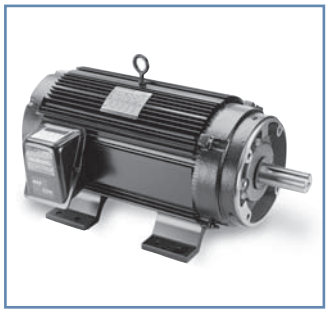
FOOTNOTES:

AL ALUMINUM FRAME CONSTRUCTION
S STEEL FRAME CONSTRUCTION
6 BOLT-ON, REMOVABLE BASE FOR FOOTLESS MOUNTING OPTION
13 F1 MOUNTING ONLY, CANNOT REASSEMBLE TO F2

THREE PHASE 575 VOLT TOTALLY ENCLOSED NON-VENTILATED 1750 RPM C-FACE INVERTER DUTY MOTORS

FEATURES:

- MAX GUARD® Class F insulation system
- Constant torque operation from 0 to base speed on Vector Drive
- Constant horsepower to twice base RPM
- Continuous duty at 40° C ambient
- Optimized for operation with IGBT inverter (NEMA Design A)
- Normally closed thermostats (one per phase)
- Removable base on some models, as noted
- Ball bearing
- Field reversible to F2 (except where noted)
- Encoder and brake provisions included on opposite drive end (maximum 10 lb-ft brake
- UL Recognized and CSA Certified (contact factory for CE marking)
- Three year warranty
- Rigid mounting base



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Many more stock motors available.

HP	VOLTS	RANGE	FRAME	CAT. NO.	F.L. AMPS	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/2	575	1000:1	56C	Y555	0.6	28	11.42	S, 6, 13
1	575	1000:1	56C	Y556	1.2	41	12.92	S, 6, 13
2	575	1000:1	145TC	Y557	2.4	70	12.56	
3	575	1000:1	182TC	Y558	3.4	96	15.32	AL
5	575	1000:1	184TC	Y559	5.4	98	16.32	AL
7-1/2	575	1000:1	213TC	Y560	7.0	146	17.12	AL
10	575	1000:1	215TC	Y561	10.8	159	19.62	AL

FOOTNOTES:

AL ALUMINUM FRAME CONSTRUCTION
S STEEL FRAME CONSTRUCTION
6 BOLT-ON, REMOVABLE BASE FOR FOOTLESS MOUNTING OPTION
13 F1 MOUNTING ONLY, CANNOT REASSEMBLE TO F2

PERMANENT MAGNET DC MOTORS

SCR RATED, TOTALLY ENCLOSED, 1750 RPM C-FACE WITH REMOVABLE BASE

FEATURES:

- Class F insulation
- NEMA C-Face with removable rigid base
- Oversized brushes for extra long life
- Permanently lubricated sealed ball bearings
- Linear speed/torque characteristics over entire speed range
- High starting torque, high peak current capability
- Usable on PWM type DC adjustable speed drives at higher HP rating
- Easy brush access with unique brush holder design
- UL Recognized and CSA Certified
- 2 year warranty



HP	DC VOLTS	FRAME	ENCL.	CAT. NO.	C.T. SPEED. RANGE	F.L. AMPS	*PWM HP RATING	WEIGHT LBS.	"LQ" DIM.	FOOTNOTES
1/4	90	56C	TEFC	Z602	2:1	2.5	0.40	19	8.75	
1/4	180	56C	TEFC	Z603	2:1	1.4	0.50	22	9.25	
1/3	90	56C	TEFC	Z604	2:1	3.5	0.50	23	9.25	
1/3	180	56C	TEFC	Z605	2:1	1.7	0.50	22	9.25	
1/2	90	56C	TEFC	Z606	2:1	5.0	0.70	24	9.75	
1/2	180	56C	TEFC	Z607	2:1	2.5	0.56	25	9.75	
3/4	90	56C	TEFC	Z610	2:1	7.6	1.00	27	11.75	
3/4	180	56C	TEFC	Z611	2:1	3.8	1.00	27	11.75	
1	90	56C	TEFC	Z612	2:1	10.0	1.25	40	13.75	
1	180	56C	TEFC	Z613	2:1	5.0	1.25	40	12.75	
1-1/2	180	56C	TEFC	Z614	2:1	7.6	1.75	51	14.75	
2	180	145TC	TEFC	Z616	2:1	9.5	2.00	78	18.03	84

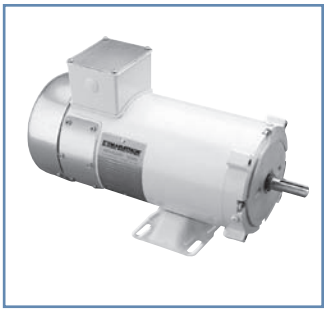
FOOTNOTES: 84 NEMA 145TC FACE MOUNTING WITH REMOVABLE 182T RIGID BASE

85 NOT TACH ADAPTABLE

WASHDOWN, SCR RATED, TOTALLY ENCLOSED, 1750 RPM C-FACE WITH REMOVABLE BASE

FEATURES:

- Class F insulation
- NEMA C-Face with removable rigid base
- Oversized brushes for extra long life
- Doubled sealed, oversized ball bearings
- Corrosion resistant 303 stainless steel shaft
- High temperature, moisture resistant lubricant
- Exterior and interior components protected with enamel & polyester compounds
- Aluminum conduit box, threaded and gasketed
- "V" ring Forsheda seals
- Drains at 3:00, 6:00, 9:00 and 12:00 locations
- Sealed machine fits
- Stainless steel nameplate
- USDA approved white epoxy paint
- UL Recognized and CSA Certified
- 2 year warranty



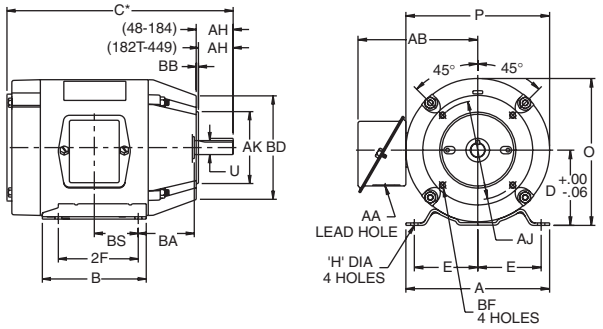
HP	DC VOLTS	FRAME	ENCL.	CAT. NO.	C.T. SPEED. RANGE	F.L. AMPS	*PWM HP RATING	WEIGHT LBS.	"LQ" DIM.
1/4	90	56C	TENV	Z630	20:1	2.7	0.30	23	8.63
1/3	90	56C	TENV	Z631	20:1	3.5	0.56	26	9.63
1/2	90	56C	TENV	Z634	20:1	4.9	0.75	38	11.63
1/2	180	56C	TENV	Z635	20:1	2.4	0.70	39	11.63
3/4	90	56C	TENV	Z636	20:1	7.0	1.25	50	13.63
3/4	180	56C	TENV	Z637	20:1	3.5	1.25	50	13.63
1	90	56C	TEFC	Z638	2:1	10.0	1.25	42	13.75
1	180	56C	TEFC	Z639	2:1	5.0	1.25	42	12.75
1-1/2	180	56C	TEFC	Z641	2:1	7.6	1.75	50	14.75

***SCR PMDC MOTORS ON PWM POWER SUPPLIES**

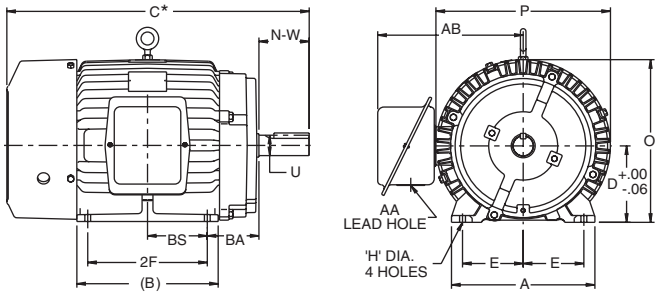
PULSE WIDTH MODULATED DC CONTROLS HAVE A VOLTAGE OUTPUT SIMILAR TO PURE DIRECT CURRENT WHICH HAS A FORM FACTOR OF 1.05. SCR THYRISTOR DRIVES HAVE A FORM FACTOR OF 1.40. MARATHON ELECTRIC'S NON-EXPLOSION PROOF PMDC, SCR-RATED MOTORS CAN ALSO BE USED WITH PWM CONTROLS, AND DUE TO THE LOWER FORM FACTOR AND THE RESULTANT LOWER HEATING IN THE MOTOR, THEIR RATING CAN BE INCREASED AS INDICATED ABOVE. OPERATION ON PWM CONTROLS WILL ALSO RESULT IN QUIETER OPERATION AND LONGER BRUSH LIFE.

ELECTRIC MOTORS

TYPICAL C-FACE MOTOR



TYPICAL RIGID BASE MOTOR



FRAME	D	E	2F	H	O (MAX)	P (MAX)	U	N-W	AA	AB (MAX)	AH	AJ	AK	BA	BB (MIN)	BD (MAX)	BF
48	3.00	2.12	2.75	.34 SLOT	5.83	5.66	.5000	1.50	1/2	–	1.69	3.750	3.000	2.50	.16	5.62	1/4-20
56	3.50	2.44	3.00	.34 SLOT	6.32	5.66	.6250	1.88	1/2	–	2.06	5.875	4.500	2.75	.16	6.50	3/8-16
56H	3.50	2.44	5.00	.34 SLOT	6.74	6.48	.6250	1.88	1/2	–	2.06	5.875	4.500	2.75	.16	6.50	3/8-16
143T	3.50	2.75	4.00	.34	7.45	7.75	.8750	2.25	3/4	7.04	2.12	5.875	4.500	2.25	.16	6.50	3/8-16
145T	3.50	2.75	5.00	.34	7.45	7.75	.8750	2.25	3/4	7.04	2.12	5.875	4.500	2.25	.16	6.50	3/8-16
182	4.50	3.75	4.50	.41	9.38	9.76	.8750	2.25	3/4	8.08	2.12	5.875	4.500	2.75	.16	6.50	3/8-16
184	4.50	3.75	5.50	.41	9.38	9.76	.8750	2.25	3/4	8.08	2.12	5.875	4.500	2.75	.16	6.50	3/8-16
182T	4.50	3.75	4.50	.41	9.38	9.76	1.1250	2.75	3/4	8.08	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
184T	4.50	3.75	5.50	.41	9.38	9.76	1.1250	2.75	3/4	8.08	2.62	7.250	8.500	2.75	.25	9.00	1/2-13
213	5.25	4.25	5.50	.41	11.00	11.50	1.1250	3.00	1	9.31	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
215	5.25	4.25	7.00	.41	11.00	11.50	1.1250	3.00	1	9.31	2.75	7.250	8.500	3.50	.25	9.00	1/2-13
213T	5.25	4.25	5.50	.41	11.00	11.50	1.3750	3.38	1	9.31	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
215T	5.25	4.25	7.00	.41	11.00	11.50	1.3750	3.38	1	9.31	3.12	7.250	8.500	3.50	.25	9.00	1/2-13
254U	6.25	5.00	8.25	.53	14.09	14.27	1.3750	3.75	1-1/4	10.96	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
256U	6.25	5.00	10.00	.53	14.09	14.27	1.3750	3.75	1-1/4	10.96	3.50	7.250	8.500	4.25	.25	10.00	1/2-13
254T	6.25	5.00	8.25	.53	14.09	14.27	1.625	4.00	1-1/4	10.96	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
256T	6.25	5.00	10.00	.53	14.09	14.27	1.625	4.00	1-1/4	10.96	3.75	7.250	8.500	4.25	.25	10.00	1/2-13
284U	7.00	5.50	9.50	.53	14.94	15.88	1.625	4.88	1-1/2	13.19	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
286U	7.00	5.50	11.00	.53	14.94	15.88	1.625	4.88	1-1/2	13.19	4.62	9.000	10.500	4.75	.25	11.25	1/2-13
284T	7.00	5.50	9.50	.53	14.94	15.88	1.875	4.62	1-1/2	13.19	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
286T	7.00	5.50	11.00	.53	14.94	15.88	1.875	4.62	1-1/2	13.19	4.38	9.000	10.500	4.75	.25	11.25	1/2-13
284TS	7.00	5.50	9.50	.53	14.94	15.88	1.625	3.25	1-1/2	13.19	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
286TS	7.00	5.50	11.00	.53	14.94	15.88	1.625	3.25	1-1/2	13.19	3.00	9.000	10.500	4.75	.25	11.25	1/2-13
324U	8.00	6.25	10.50	.66	15.93	15.88	1.875	5.62	2	13.69	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
326U	8.00	6.25	12.00	.66	15.93	15.88	1.875	5.62	2	13.69	5.38	11.000	12.500	5.25	.25	14.00	5/8-11
324T	8.00	6.25	10.50	.66	15.93	15.88	2.125	5.25	2	13.69	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
326T	8.00	6.25	12.00	.66	15.93	15.88	2.125	5.25	2	13.69	5.00	11.000	12.500	5.25	.25	14.00	5/8-11
324TS	8.00	6.25	10.50	.66	15.93	15.88	1.875	3.75	2	13.69	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
326TS	8.00	6.25	12.00	.66	15.93	15.88	1.875	3.75	2	13.69	3.50	11.000	12.500	5.25	.25	14.00	5/8-11
364U	9.00	7.00	11.25	.66	19.00	20.00	2.125	6.38	2-1/2	17.88	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
365U	9.00	7.00	12.25	.66	19.00	20.00	2.125	6.38	2-1/2	17.88	6.12	11.000	12.500	5.88	.25	14.00	5/8-11
364T	9.00	7.00	11.25	.66	19.00	20.00	2.375	5.88	2-1/2	17.88	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
365T	9.00	7.00	12.25	.66	19.00	20.00	2.375	5.88	2-1/2	17.88	5.62	11.000	12.500	5.88	.25	14.00	5/8-11
364TS	9.00	7.00	11.25	.66	19.00	20.00	1.875	3.75	2-1/2	17.88	3.50	11.000	12.500	5.88	.25	14.00	5/8-11
365TS	9.00	7.00	12.25	.66	19.00	20.00	1.875	3.75	2-1/2	17.88	3.50	11.000	12.500	5.88	.25	14.00	5/8-11

*C DIMENSIONS CAN BE CALCULATED BY ADDING THE LQ DIMENSIONS ON MOTOR PAGES H-3 TO H-7 TO THE AH DIMENSION. (C = LQ + AH)

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

Don't see the motor you need?
Contact Hub City.
Many more stock motors available.

CALL: (605) 225-0360 • FAX: (605) 225-0567

Poweratio® 4000

Spartan™

HELICAL IN-LINE DRIVES

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Descriptions I-8

Mounting Positions I-9

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Right Angle Gear Drives
See Poweratio® 2000
Helical Bevel and Helical Worm Units
Sections K & L

For High Efficiency
Parallel Gear Drives
See Poweratio® 2000
Compact Helical Parallel Units
Section J

For Sub-Fractional
Concentric Gearmotors
See Mina-Gear Gearmotors
Section P

I

SPARTAN™ ALUMINUM INLINE REDUCERS & GEAR+MOTOR™ SOLUTIONS

Four Sizes with Ratings Up to 13 hp and Ratios from 3.4 to 278.6:1

REMOVABLE INSPECTION COVER allows periodic inspection of gearing during routine maintenance.

SPARTAN REDUCERS ARE FILLED WITH PAG460 SYNTHETIC OIL as standard. All sizes are considered "lubed for life." Specify mounting position at time of order. Refer to page I-9 for available positions.

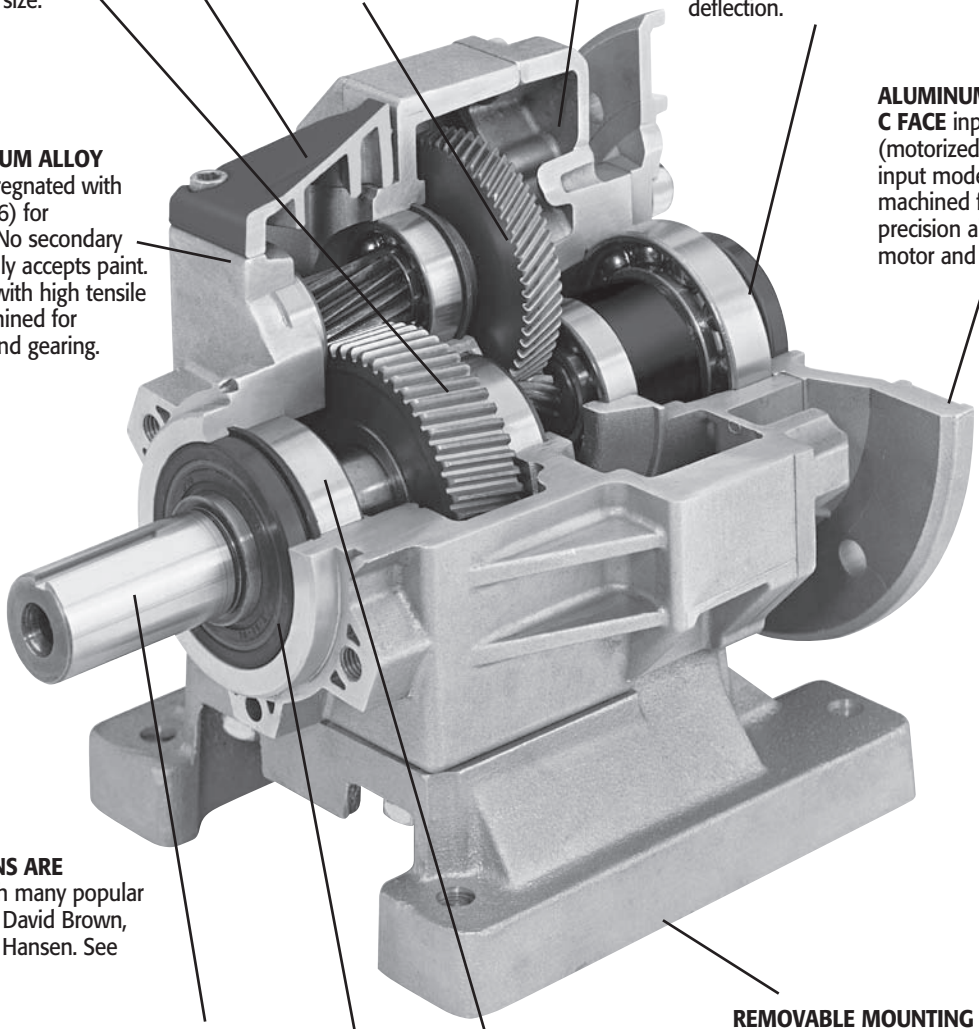
ALL GEARING IS HARDENED AND GROUND (AGMA Class 10 or better), for enhanced efficiency and noise reduction. Double reduction units are 96 – 97% efficient.

RATIOS UP TO 63:1 in two-stage units and up to 278:1 in three-stage units to maximize efficiency and reduce overall case size.

BEARING SPANS OPTIMIZED to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

ALUMINUM NEMA C FACE input flange (motorized quill input models) with machined fits for precision alignment of motor and bearings.

SINGLE-PIECE ALUMINUM ALLOY HOUSING vacuum impregnated with Resinol RT (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.



MOUNTING DIMENSIONS ARE INTERCHANGEABLE with many popular reducers, including SEW, David Brown, Nord, Dodge, and Brook Hansen. See pages 54-55 for details.

ROBUST OUTPUT SHAFT of high strength steel alloy for superior torque and overhung load capacities.

REMOVABLE MOUNTING BASE allows interchange with dozens of competitive units.

BOLT-ON OUTPUT FLANGE also available to allow interchange with many industry-standard sizes.

PREMIUM VITON® SEALS provide extra protection against entry of contaminants or loss of lubrication. Tandem seals available on input and output.

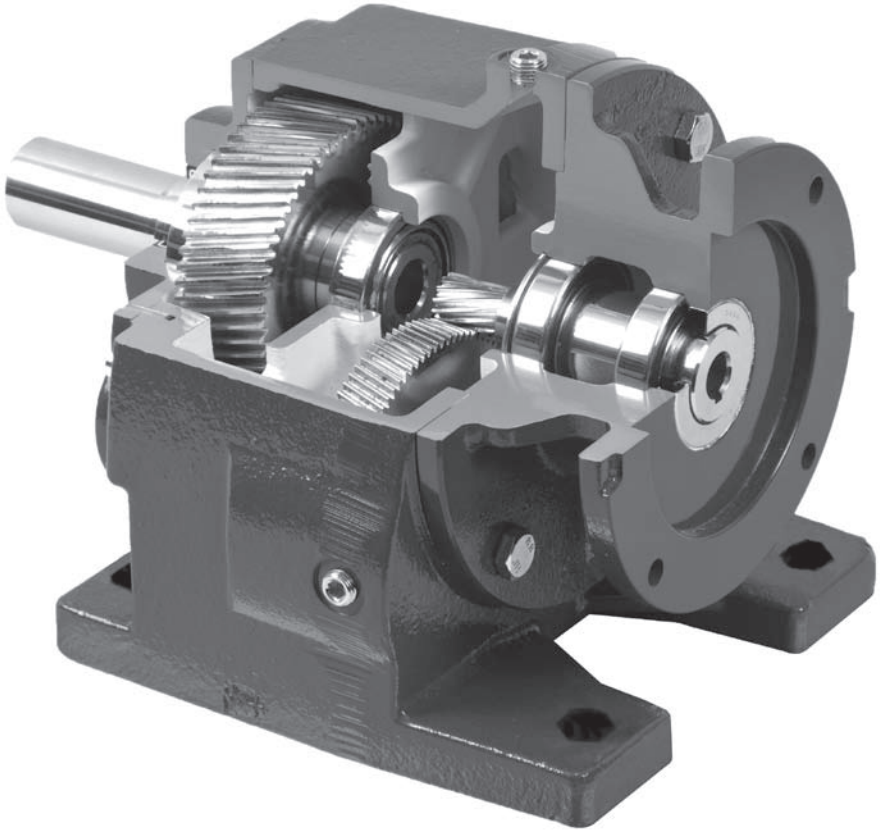
PERMANENTLY MARKED NAMEPLATE with output torque, ratio and maximum input horsepower.

OVERSIZED BALL BEARINGS on both input and output shafts.

Poweratio® 4000

HIGH EFFICIENCY HELICAL IN-LINE DRIVES

Seven sizes with ratings up to 125HP or 25,000 in-lbs., and ratios from 2.25 up to 3334:1.



RATIOS

Double reduction, triple reduction, and quad reduction (compound drives) readily assembled from stock modules. Double reduction up to 50:1, and triple reduction up to 325:1 provide greater ratio capability with fewer components.

MOUNTING

Foot mounting or flange mounting to interchange with major competitors. shaft Input, c-frame quill input, or gearmotor assemblies to provide complete drive package.

CONTEMPORARY DESIGN

Rugged cast iron housings are accurately machined for precision operation, high strength and reliability.

GEARING

Precision crowned gears for smooth operation, high strength and durability.

SHAFTS

Alloy steel shafts plunge ground for accuracy and fine surface finish.

BEARINGS

Ball and tapered roller bearings generously sized for long life and high reliability.

SEALS

Double lip seals on exposed shafts for enhanced protection and dependable sealing. Single lip seals on motor quill input for cooler running.

LUBRICATION

Filled with high quality gear lubricant at the factory.

MOTORS

Motors produced by Marathon Electric or Lincoln Motors for high efficiency, reliability and durability. See Section H.

INTEGRAL GEAR MOTORS

Seven sizes available up to 5 HP

I

STYLE SELECTION

WIDE RANGE OF STYLES:
Double or Triple Reduction, Base or Flange Mount!

Hub City Helical-Inline reducers are available in a wide range of styles to meet the ever increasing needs of the market place. To start the selection process, choose between the rugged Poweratio® 4000 cast iron designs or the lightweight Spartan™ aluminum reducers. Choose between a motorized or non-motorized basic design. Then select either a base mount or an output flange mount model.

To make your job even easier, you can order your Hub City reducers ready-to-run by selecting from any of the power-matched Marathon motors from Section H. Or create your own combination by selecting from hundreds of Marathon motors available in Marathon catalog or at www.marathonelectric.com. Your GEAR+MOTOR™ package can come with the motor mounted to the reducer or ready to install.

DIRECT INTERCHANGE CHARTS

Spartan™ reducers serve as dependable, bolt-in replacements for many popular brands.

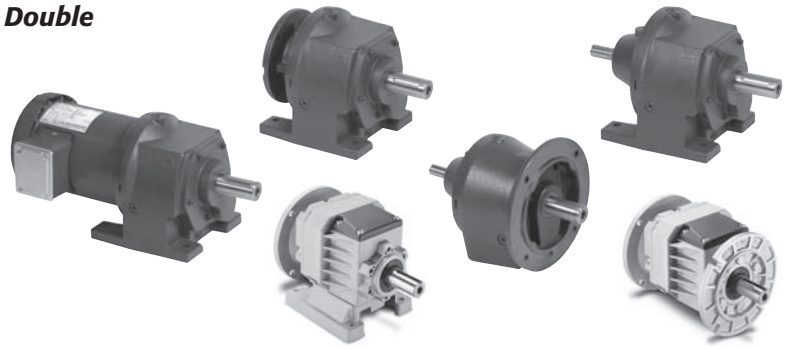
	FOOT MOUNT	FLANGE MOUNT
SEW	✓	✓
Bonfiglioli	✓ ▲	✓
Brook Hansen	✓	✓
Browning	✓	✓
David Brown	✓	✓
Dodge Quantis	✓	✓
Falk	✓	✓
Flender/Motox	✓	✓

	FOOT MOUNT	FLANGE MOUNT
Hansen	✓▲	✓
Lenze	✓	✓
Leroy Somer	✓	✓
Motovario	✓▲	✓
Nord	✓	✓
Stober	✓▲	✓
Sterlin	✓	✓
Sumitomo	✓▲	✓

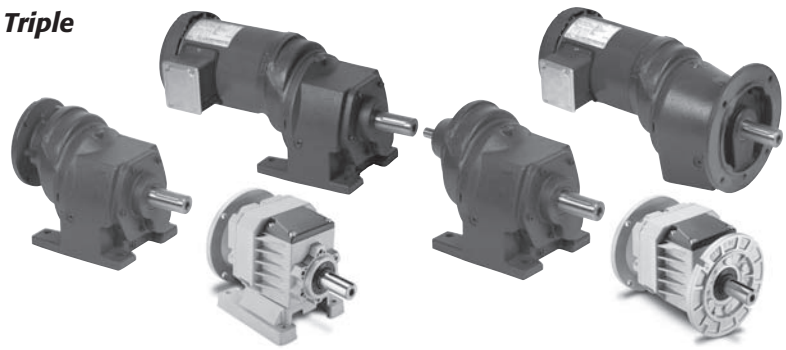
▲ ONLY SPARTAN SERIES OFFERS DIRECT BOLT-IN REPLACEMENT.

HELICAL IN-LINE REDUCERS

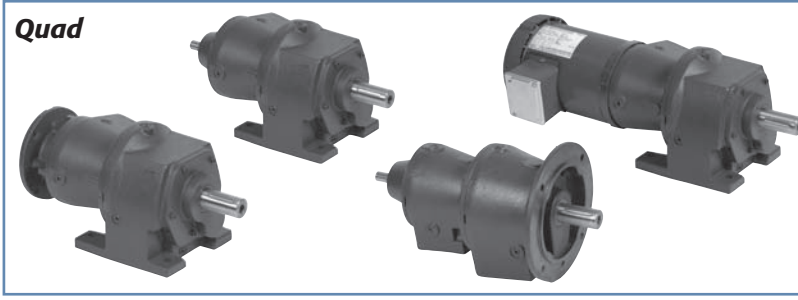
Double



Triple



Quad



FLEXIBLE CONFIGURATIONS TO FIT YOUR APPLICATION

Choose from

- *Double Reduction*
  *Ratios from 2.26 to 61.80**
- *Triple Reduction*
  *Ratios from 33/1 to 378/1**
- *Quad Reduction (Cast Iron Only)*
  *Ratios from 293/1 to 3334/1**

Choose an input mounting type

- *Integral Gearmotor*
- *C-Face Input*
- *Shaft Input*

Choose an output mounting style

- *Foot Mount*
- *Flange Mount*

* RATIOS VARY SPECIFIC TO MODEL



RATIO MULTIPLIERS

(see section F)

- Three Cast Iron Models, Two Aluminum Models, One Stainless Steel Model (See Section O)
- Ratios available from 2:1 to 7.5:1
- Can be used as reducer or increaser.
- Provides additional reduction capability when mounted onto Helical Gear Reducer or Worm Gear Reducer
- C-flange or solid input shaft.
- Helical gearing.
- Double lip seals.
- Base mounting available.
- Permanently lubricated at factory.

Cleanline™ premium washdown duty and metric versions available, See Section O or Consult Factory for details and specifications.

SELECTION PROCEDURE

Hub City provides two methods of selection for Reducers and Gearmotors.

On pages I-11 to I-47, the Selection Tables by Input H.P. can be used whenever the Input H.P. requirement is known. This method is commonly used for Gearmotors, but can also be used for Reducers.

On pages I-54 to I-57 and I-62 to I-69, the Input H.P. and Output Torque Ratings are provided for each model. These rating tables can be used for Reducers and Gearmotors.

SELECTION BY INPUT H.P.

For selection by Input H.P, determine the Input H.P., Output Speed and Load Classification (Service Factor) requirements. (See page I-7, A-2 and A-5 to A-8 for AGMA Load Classification and Service Factors.) Then refer to Selection Tables by Input H.P., locate the required H.P. and Output Speed, and read across to the required foot or flange mount unit.

These tables also list the Service Factor for the unit indicated. In many cases, more than one unit is listed, to provide different service factors. Select the unit with a service factor that meets or exceeds the requirement of the application.

Check the Output Overhung Load or Output Thrust rating and Output Torque to verify they meet the requirements. (The Output Torque listed is the actual torque obtained with the motor H.P. listed, not the rated torque.) Then refer to the dimension tables to check the unit dimensions.

If a Reducer with C-Frame input is desired, the available frame sizes for each Reducer model are shown in the dimension tables. Specify the description as shown on page I-8.

If a Motorized Reducer is desired, make the motor selection with compatible C-Frame size, from the motors listed in section H. Specify either the catalog number or the complete description of the motor, in addition to the Reducer description.

The selection tables indicate which units are available as Integral Gearmotors. if an Integral Gearmotor is desired, refer to the dimension tables on pages I-48 to I-53 for dimensions with all available motor sizes. Specify the motor H.P. in addition to the Reducer description.

Reducers may be ordered with other C-Frame sizes. The available frame sizes for each reducer model are shown in the dimension tables.

SELECTION FROM UNIT RATING TABLES BY INPUT H.P. OR OUTPUT TORQUE

Determine the actual Input H.P. or Output Torque required, Output Speed, and required Service Factor. Multiply the actual H.P. or torque by the required service factor to obtain the required rating of the Reducer. Refer to the Unit Rating Tables by Model and Output Speed, until you locate the model that meets or exceeds the required H.P. or Torque rating.

The actual service factor can be determined by dividing the unit rating by the actual H.P. or Torque.

Check the Input and Output overhung load ratings, and thrust rating to verify they meet the requirement. Then refer to the dimension tables to check the unit dimensions.

Available motor C-Frame sizes for each reducer model are shown in the dimension tables.

EFFICIENCY

Helical Gearing and Ball or Tapered Roller Bearings provide a drive with very high efficiency. The approximate efficiency is 97.5% per gear stage.

OVERHUNG LOADS AND THRUST LOADS

Overhung load and thrust ratings are listed in the Selection and Rating Tables. Note that OHL and Thrust Ratings cannot be applied simultaneously. Consult Hub City for applications with combined OHL and thrust load.

BRAKEMOTORS

Braking torque must not exceed the rated capacity of the unit.

SERVICE FACTORS

Load Classification Numbers and Service Factors are used in the selection of Gearmotors and Reducers. The relationship between load class numbers and service factors is shown in Table 2.

The Load Class Numbers are designated for Gearmotors which have a uniform power source (i.e. Electric Motor). They consider the type of load and also the duration of service.

The Service Factors are designated for Reducers and consider other power sources (such as Internal Combustion Engines), as well as the type of load and duration of service.

Table 1 and Table 2 list Service Factors and Load Classes for general use.

AGMA Load Classification and Service Factor tables on pages A-5 to A-8 provide approximate service factors for various types of machinery. The service factors are based on uniform power source (i.e. electric motor). Use the service factor conversion table on page A-2 to obtain service factors for internal combustion engines.

All the Class Number and Service Factor charts are to be used as general guidelines for assistance in determining the required service factor. Rely on past experience as well. Consult the factory for severe applications, when there are safety considerations, or a need for extra high reliability.

Refer to page A-2 for further information and cautions on the selection of proper service factors.

Occasional starting loads up to 200% of catalog rating are permissible.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.25
	Intermittent 3 hrs.	*	1.00	1.50
	3 - 10 hours	1.00	1.25	1.75
	Over 10 hours	1.25	1.50	2.00
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.75
	Intermittent 3 hrs.	1.25	1.50	2.00
	3 - 10 hours	1.50	1.75	2.25
	Over 10 hours	1.75	2.00	2.50
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

Explanatory Notes

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

TABLE 2 — LOAD CLASSIFICATION NUMBERS

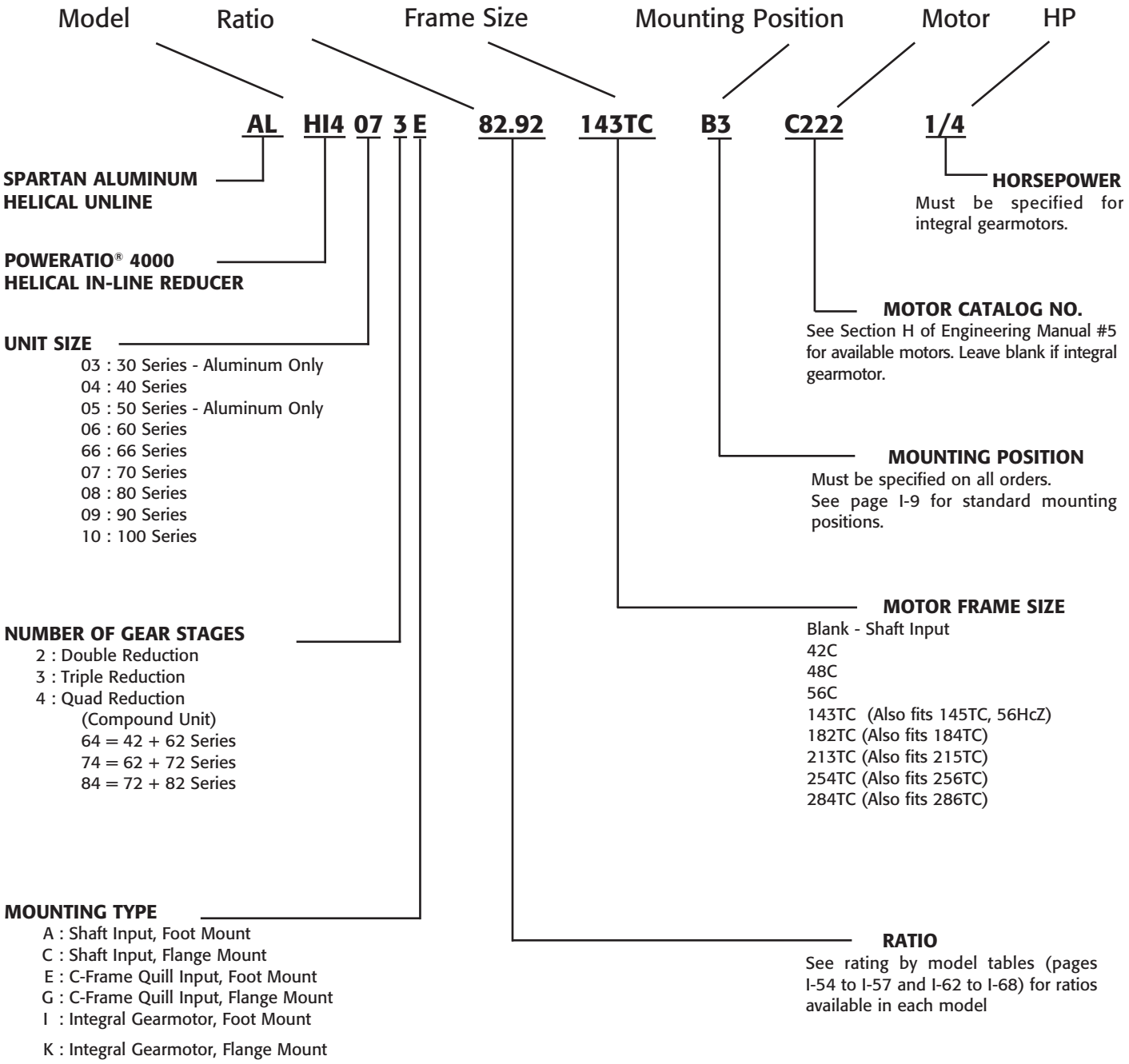
LOAD CLASS (S.F.)	UP TO 3 HRS. TOTAL OPERATION PER DAY	3 TO 10 HRS. TOTAL OPERATION PER DAY	OVER 10 HRS. TOTAL OPERATION PER DAY
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

I

DESCRIPTIONS

DESCRIPTIONS FOR ORDERING REDUCERS AND GEARMOTORS

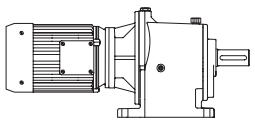
The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed 1750 rpm general purpose motors.



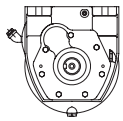
MOUNTING POSITIONS

Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the factory. (Refer to Section R for lubrication information.)

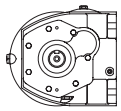
MOUNTING POSITIONS - FOOT MOUNTED REDUCERS AND GEARMOTORS



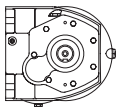
B3 - Standard Floor



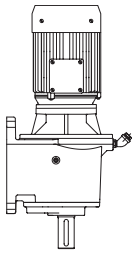
B8 - Ceiling



B7 - R.H. Wall

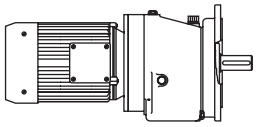


B6 - L.H. Wall

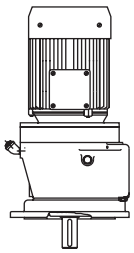


V5 - Vertical Down

MOUNTING POSITIONS - FLANGE MOUNTED REDUCERS AND GEARMOTORS



B5 - Horizontal



V1 - Vertical Down

FOR MOUNTING POSITIONS NOT SHOWN, CONTACT FACTORY.

MOTOR DESCRIPTIONS

Available motors and motor data are listed in Section H. Either specify the catalog number or the complete description: HP, RPM, VOLTS, SINGLE OR THREE PHASE, C-FRAME SIZE, ENCLOSURE GENERAL PURPOSE OR OPTIONAL TYPES: WASHDOWN DUTY, INVERTER DUTY, BRAKEMOTOR.

MOTORIZED REDUCERS & GEARMOTORS

The Reducer and Motor are assembled at the factory, and filled with the proper quantity of lubricant based on your specified mounting position. Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors. Special integral gearmotors are available. Consult the factory for details.

Standard Integral Gearmotors and Motorized Reducers are assembled at the factory with the conduit box and the conduit opening at the position illustrated in the dimensional section of this catalog. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

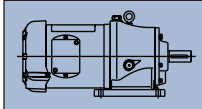
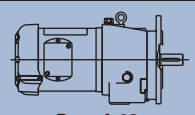
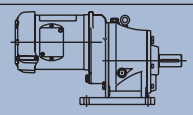
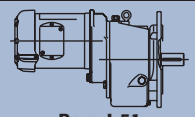
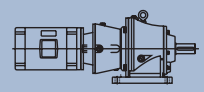
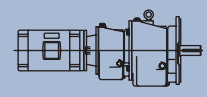
BACKSTOPS

Backstops are available as factory options. Consult the factory for details.

I

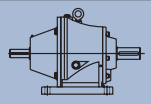
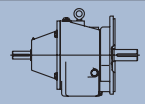
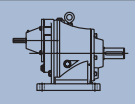
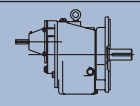
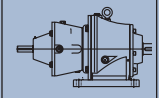
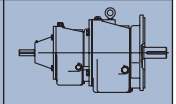
MODEL INDEX

INTEGRAL GEARMOTORS

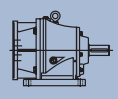
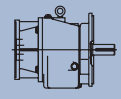
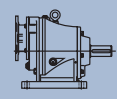
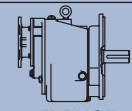
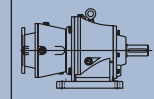
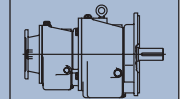
DOUBLE REDUCTION		TRIPLE REDUCTION		QUAD REDUCTION	
					
Page I-48 Foot	**Page I-49 Flange**	**Page I-50 Foot**	**Page I-51 Flange**	**Page I-52 Foot**	**Page I-53 Flange**

MOTORIZED MODELS ARE SAME AS C-FRAME QUILL MODELS. SIMPLY ORDER THE DESIRED C-FRAME REDUCER, SPECIFY THE MOTOR, AND SPECIFY "MOTORIZED ASSEMBLY".

SHAFT INPUT

	DOUBLE REDUCTION				TRIPLE REDUCTION				QUAD REDUCTION	
										
SERIES	**FOOT**		**FLANGE**		**FOOT**		**FLANGE**		**FOOT**	**FLANGE**
	ALUMINUM	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**CAST IRON**	**CAST IRON**
30	ALHI4032A **Page I-60**		ALHI4032C **Page I-61**		ALHI4033A **Page I-60**		ALHI4033C **Page I-61**			
40	ALHI4042A **Page I-60**	HI4042A **Page I-71**	ALHI4042C **Page I-61**	HI4042C **Page I-73**	ALHI4043A **Page I-60**	HI4043A **Page I-75**	ALHI4043C **Page I-61**	HI4043C **Page I-77**		
50	ALHI4052A **Page I-60**		ALHI4052C **Page I-61**		ALHI4053A **Page I-60**		ALHI4053C **Page I-61**			
60	ALHI4062A **Page I-60**	HI4062A **Page I-71**	ALHI4062C **Page I-61**	HI4062C **Page I-73**	ALHI4063A **Page I-60**	HI4063A **Page I-75**	ALHI4063C **Page I-61**	HI4063C **Page I-77**	HI4064A **Page I-79**	HI4064C **Page I-81**
66		HI4662A **Page I-71**		HI4662C **Page I-73**		HI4663A **Page I-75**		HI4663C **Page I-77**	HI4664A **Page I-79**	HI4664C **Page I-81**
70		HI4072A **Page I-71**		HI4072C **Page I-73**		HI4073A **Page I-75**		HI4073C **Page I-77**	HI4074A **Page I-79**	HI4074C **Page I-81**
80		HI4082A **Page I-71**		HI4082C **Page I-73**		HI4083A **Page I-75**		HI4083C **Page I-77**	HI4084A **Page I-79**	HI4084C **Page I-81**
90		HI4092A **Page I-71**		HI4092C **Page I-73**		HI4093A **Page I-75**		HI4093C **Page I-77**	HI4094A **Page I-79**	HI4094C **Page I-81**
100		HI4102A **Page I-71**		HI4102C **Page I-73**		HI4103A **Page I-75**		HI4103C **Page I-77**	HI4104A **Page I-79**	HI4104C **Page I-81**

C-FRAME QUILL INPUT

	DOUBLE REDUCTION				TRIPLE REDUCTION				QUAD REDUCTION	
										
SERIES	**FOOT**		**FLANGE**		**FOOT**		**FLANGE**		**FOOT**	**FLANGE**
	ALUMINUM	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**ALUMINUM**	**CAST IRON**	**CAST IRON**	**CAST IRON**
30	ALHI4032E **Page I-58**		ALHI4032G **Page I-59**		ALHI4033E **Page I-58**		ALHI4033G **Page I-59**			
40	ALHI4042E **Page I-58**	HI4042E **Page I-70**	ALHI4042G **Page I-59**	HI4042G **Page I-72**	ALHI4043E **Page I-58**	HI4043E **Page I-74**	ALHI4043G **Page I-59**	HI4043G **Page I-76**		
50	ALHI4052E **Page I-58**		ALHI4052G **Page I-59**		ALHI4053E **Page I-58**		ALHI4053G **Page I-59**			
60	ALHI4062E **Page I-58**	HI4062E **Page I-70**	ALHI4062G **Page I-59**	HI4062G **Page I-72**	ALHI4063E **Page I-58**	HI4063E **Page I-74**	ALHI4063G **Page I-59**	HI4063G **Page I-76**	HI4064E **Page I-78**	HI4064G **Page I-80**
66		HI4662E **Page I-70**		HI4662G **Page I-72**		HI4663E **Page I-74**		HI4663G **Page I-76**	HI4664E **Page I-78**	HI4664G **Page I-80**
70		HI4072E **Page I-70**		HI4072G **Page I-72**		HI4073E **Page I-74**		HI4073G **Page I-76**	HI4074E **Page I-78**	HI4074G **Page I-80**
80		HI4082E **Page I-70**		HI4082G **Page I-72**		HI4083E **Page I-74**		HI4083G **Page I-76**	HI4084E **Page I-78**	HI4084G **Page I-80**
90		HI4092E **Page I-70**		HI4092G **Page I-72**		HI4093E **Page I-74**		HI4093G **Page I-76**	HI4094E **Page I-78**	HI4094G **Page I-80**
100		HI4102E **Page I-70**		HI4102G **Page I-72**		HI4103E **Page I-74**		HI4103G **Page I-76**	HI4104E **Page I-78**	HI4104G **Page I-80**

QUICK START GUIDE TO SELECTION TABLES

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
			.47	1.70	1600	1400	4	HI4064	Available
			.50	1.57	1600	1400	4	HI4064	Available
			.52	2.64	2240	1620	3	HI4073	Available
			.09	1.89	1700	1500	3	HI4663	Available
			.84	2.49	2240	1620	4	HI4074	
			.92	2.40	2240	1620	4	HI4074	Available
			.70	1.40	1600	1400	4	HI4064	Available
			.93	1.81	1700	1500	4	HI4664	Available
	4.38	3312	399.90	1.25	1600	1400	4	HI4064	Available
	4.37	3388	400.36	2.14	2240	1620	4	HI4074	
	4.22	3433	414.47	1.56	1700	1500	4	HI4664	Available
	3.94	3683	444.68	1.46				4664	Available
	3.93	3767	445.13	1.93				4074	Available
								4084	Available
								4064	Available
	3.58	4051	489.11	1.33				4664	Available
	3.33	4347	524.75	1.24	1700	1500	4	HI4664	Available
1/4	3.26	4542	536.67	3.02	3800	2400	4	HI4084	Available
	3.20	4622	546.12	1.57	2240	1620	4	HI4074	Available
	3.05	4757	574.33	1.13	1700	1500	4	HI4664	Available
	2.70	5476	646.98	2.50	3800	2400	4	HI4084	Available
	2.69	5497						HI4074	Available
	2.18	6783						HI4084	Available
	2.18	6797						HI4074	
	2.05	7238						HI4074	
	1.76	8402						HI4084	Available
	1.50	9896						HI4084	
	1.45	10209						HI4094	
								HI4084	
								HI4094	
			1410.13	1.15	3800	2400	4	HI4084	
			1453.75	3.10	6500	53			
			1566.66	1.03	3800	24			
	1.08	13669	1615.11	2.79	6500	53			
	1.02	14501	1713.43	1.83	4460	34			
	0.92	16111	1903.62	1.65	4460	34			
	0.83	17880	2112.65	1.49	4460	34			
	0.65	22674	2679.05	1.17	4460	3440	4	HI4094	
	0.58	25398	3000.92	1.05	4460	3440	4	HI4094	

1. Determine Input Horsepower, Output Speed and Load Classification (see Section A).

2. Find appropriate Selection by Input HP page (Beginning on page I-12)

3. Locate Desired Output speed

4. Locate Required Service Factor (For Help refer to page I-7)

5. Check the Output OHL, output thrust, and Output torque ratings to verify they meet your requirements (Output torque listed is the actual torque obtained by the motor HP listed, not the rated torque).

6. Read across to select model number. Refer to Page I-8 for Mounting type and Ordering information.

IN THIS CATALOG:

HP = Horsepower

Output torque is displayed in inch pounds (in. lbs.)

OHL = Over hung load (measured at centerline of output shaft)

Service Factor is based on maximum rated torque of gear drive

* INTEGRAL GEARMOTORS - SPECIFY MOUNTING TYPE I OR K, AND MOTOR HORSEPOWER (SEE PAGE I-8).
* MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
	405	37	4.32	16.12	216	29	2	ALHI4032	
	318	48	5.50	12.66	230	31	2	ALHI4032	
	275	55	6.36	10.94	250	32	2	ALHI4032	
	241	63	7.26	9.59	260	34	2	ALHI4032	
	222	68	7.89	8.84	266	37	2	ALHI4032	
	174	87	10.04	9.18	284	43	2	ALHI4032	
	150	101	11.64	7.91	293	55	2	ALHI4032	
	132	115	13.26	6.96	305	58	2	ALHI4032	
	114	133	15.37	6.01	321	61	2	ALHI4032	
	108	140	16.20	5.70	335	63	2	ALHI4032	
	105	144	16.66	12.50	980	1250	2	HI4042	Available
	93	163	18.80	4.91	350	65	2	ALHI4032	
	81	187	21.54	4.27	374	67	2	ALHI4032	
	79	191	22.26	4.17	375	67	2	ALHI4032	
	70	216	25.04	8.41	1150	1250	2	HI4042	Available
	67	226	26.30	5.13	615	121	2	ALHI4042	
	67	226	26.30	3.53	420	76	2	ALHI4032	
	61	249	28.79	7.35	1150	1250	2	HI4042	Available
	60	252	29.40	4.72	629	135	2	ALHI4042	
	60	252	29.40	3.17	435	76	2	ALHI4032	
	52	291	33.50	4.09	645	135	3	ALHI4043	
	52	282	33.50	2.83	459	85	3	ALHI4033	
	49	315	35.90	3.68	658	135	2	ALHI4042	
	49	315	35.90	2.53	470	81	2	ALHI4032	
	48	316	36.56	5.82	1150	1250	2	HI4042	Available
1/4	46	329	38.37	3.43	663	135	2	ALHI4042	
	46	329	38.34	3.40	663	135	3	ALHI4043	
	46	329	38.37	2.43	478	81	2	ALHI4032	
	40	381	44.10	4.85	1150	1250	2	HI4042	Available
	40	378	43.69	3.14	674	135	3	ALHI4043	
	40	378	43.69	2.11	495	85	3	ALHI4033	
	37	409	46.80	2.61	674	135	2	ALHI4042	
	37	409	46.80	1.95	507	85	2	ALHI4032	
	35	436	50.47	4.06	1150	1250	2	HI4042	Available
	35	419	50.64	2.84	674	135	3	ALHI4043	
	35	419	50.67	2.69	674	135	2	ALHI4042	
	35	432	50.64	1.85	510	85	3	ALHI4033	
	33	444	54.30	2.62	674	135	3	ALHI4043	
	33	458	54.30	1.74	520	85	3	ALHI4033	
	32	458	54.73	5.23	1041	225	3	ALHI4053	
	31	472	55.79	8.73	1600	1400	3	HI4063	Available
	31	473	57.13	5.07	1050	225	3	ALHI4053	
	29.0	512	60.54	3.61	1150	1250	3	HI4043	Available
	28.6	513	61.22	2.32	674	135	3	ALHI4043	
	28.6	505	61.22	1.58	525	85	3	ALHI4033	
	28.0	523	61.80	2.04	674	135	2	ALHI4042	
	26.0	564	66.22	4.25	1075	225	3	ALHI4053	
	25.0	586	70.95	1.36	540	85	3	ALHI4033	
	25.0	586	70.95	1.15	674	135	3	ALHI4043	
	24.1	615	72.63	3.01	1150	1250	3	HI4043	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	24.0	611	73.33	1.83	674	135	3	ALHI4043	
	23.0	637	74.50	1.82	674	135	3	ALHI4043	
	22.1	670	79.17	2.76	1150	1250	3	HI4043	Available
	21.0	698	82.30	3.43	1091	225	3	ALHI4053	
	20.0	733	86.80	1.59	674	135	3	ALHI4043	
	19.0	771	92.78	3.11	1102	225	3	ALHI4053	
	18.9	785	92.74	2.36	1150	1250	3	HI4043	Available
	18.0	814	96.85	1.46	674	135	3	ALHI4043	
	17.4	853	100.76	2.17	1150	1250	3	HI4043	Available
	17.0	862	104.68	2.78	1112	225	3	ALHI4053	
	17.0	862	102.80	1.36	674	135	3	ALHI4043	
	15.2	975	115.15	1.90	1150	1250	3	HI4043	Available
	15.0	977	117.22	1.85	1124	225	3	ALHI4053	
	14.4	1026	121.28	1.80	1150	1250	3	HI4043	Available
	14.0	1047	126.65	2.29	1130	225	3	ALHI4053	
	13.1	1127	133.14	1.64	1150	1250	3	HI4043	Available
	13.0	1127	135.74	1.61	1136	225	3	ALHI4053	
	12.0	1221	145.68	2.76	1475	292	3	ALHI4063	
	12.0	1221	145.68	1.96	1150	225	3	ALHI4053	
	11.7	1263	149.23	3.28	1600	1400	3	HI4063	Available
	11.3	1306	154.35	1.42	1150	1250	3	HI4043	Available
	11.0	1350	159.46	3.07	1600	1400	3	HI4063	Available
	11.0	1332	157.40	2.53	1492	292	3	ALHI4063	
	11.0	1332	164.23	1.80	1186	225	3	ALHI4053	
	9.9	1493	176.40	1.24	1150	1250	3	HI4043	Available
	9.7	1523	180.00	2.72	1600	1400	3	HI4063	Available
	9.4	1559	185.29	2.16	1498	292	3	ALHI4063	
	9.4	1559	185.29	1.54	1186	225	3	ALHI4053	
	9.2	1618	191.13	3.32	1700	1500	3	HI4663	Available
	8.6	1704	204.12	1.98	1502	292	3	ALHI4063	
	8.6	1704	204.12	1.41	1186	225	3	ALHI4053	
	8.6	1726	203.96	1.07	1150	1250	3	HI4043	Available
	8.5	1743	206.00	2.37	1600	1400	3	HI4063	Available
	7.8	1888	223.03	2.84	1700	1500	3	HI4663	Available
	7.8	1879	224.18	1.79	1510	292	3	ALHI4063	
	7.6	1937	228.92	3.75	2240	1620	3	HI4073	Available
	7.2	2068	244.29	2.00	1600	1400	3	HI4063	Available
	6.3	2366	279.57	1.75	1600	1400	3	HI4063	Available
	6.3	2326	278.62	1.45	1510	292	3	ALHI4063	
	6.2	2400	283.56	3.03	2240	1620	3	HI4073	Available
	6.0	2478	292.80	2.17	1700	1500	3	HI4663	Available
	6.0	2431	293.47	1.70	1600	1400	4	HI4064	Available
	5.49	2638	318.50	1.57	1600	1400	4	HI4064	Available
	5.39	2747	324.52	2.64	2240	1620	3	HI4073	Available
	5.22	2836	335.09	1.89	1700	1500	3	HI4663	Available
	5.07	2919	344.84	2.49	2240	1620	4	HI4074	
	4.90	3021	356.92	2.40	2240	1620	4	HI4074	Available
	4.89	2965	357.93	1.81	1700	1500	4	HI4664	Available
	4.89	2963	357.70	1.40	1600	1400	4	HI4064	Available
	4.38	3312	399.90	1.25	1600	1400	4	HI4064	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	4.37	3388	400.36	2.14	2240	1620	4	HI4074	
	4.22	3433	414.47	1.56	1700	1500	4	HI4664	Available
	3.94	3683	444.68	1.46	1700	1500	4	HI4664	Available
	3.93	3768	445.16	3.64	3800	2400	4	HI4084	Available
	3.93	3767	445.13	1.93	2240	1620	4	HI4074	Available
	3.83	3789	457.48	1.09	1600	1400	4	HI4064	Available
	3.58	4051	489.11	1.33	1700	1500	4	HI4664	Available
	3.33	4347	524.75	1.24	1700	1500	4	HI4664	Available
	3.26	4542	536.67	3.02	3800	2400	4	HI4084	Available
	3.20	4622	546.12	1.57	2240	1620	4	HI4074	Available
	3.05	4757	574.33	1.13	1700	1500	4	HI4664	Available
	2.70	5476	646.98	2.50	3800	2400	4	HI4084	Available
	2.69	5497	649.47	1.32	2240	1620	4	HI4074	Available
	2.18	6783	801.43	2.02	3800	2400	4	HI4084	Available
	2.18	6797	803.08	1.07	2240	1620	4	HI4074	
	2.05	7238	855.21	1.00	2240	1620	4	HI4074	
	1.76	8402	992.73	1.63	3800	2400	4	HI4084	Available
	1.50	9896	1169.33	1.38	3800	2400	4	HI4084	
	1.45	10209	1206.25	2.61	4460	3440	4	HI4094	
	1.38	10704	1264.75	1.28	3800	2400	4	HI4084	
	1.26	11777	1391.56	2.26	4460	3440	4	HI4094	
	1.24	11934	1410.13	1.15	3800	2400	4	HI4084	
	1.20	12304	1453.75	3.10	6500	5350	4	HI4104	
	1.12	13259	1566.66	1.03	3800	2400	4	HI4084	
	1.08	13669	1615.11	2.79	6500	5350	4	HI4104	
	1.02	14501	1713.43	1.83	4460	3440	4	HI4094	
	0.92	16111	1903.62	1.65	4460	3440	4	HI4094	
	0.83	17880	2112.65	1.49	4460	3440	4	HI4094	
	0.65	22674	2679.05	1.17	4460	3440	4	HI4094	
	0.58	25398	3000.92	1.05	4460	3440	4	HI4094	
1/3	503	40	3.48	15.03	204	29	2	ALHI4032	
	405	50	4.32	12.10	216	29	2	ALHI4032	
	318	63	5.50	9.50	230	31	2	ALHI4032	
	275	73	6.36	8.22	250	32	2	ALHI4032	
	241	84	7.26	7.20	260	34	2	ALHI4032	
	222	91	7.89	6.63	266	37	2	ALHI4032	
	174	116	10.04	6.89	284	43	2	ALHI4032	
	150	134	11.64	5.94	293	55	2	ALHI4032	
	132	153	13.26	5.23	305	58	2	ALHI4032	
	114	177	15.37	4.52	321	61	2	ALHI4032	
	108	187	16.20	4.28	335	63	2	ALHI4032	
	105	190	16.66	9.47	980	1250	2	HI4042	Available
	99	201	17.59	3.49	420	470	2	HI4032	Available
	93	217	18.80	3.68	350	65	2	ALHI4032	
	89	224	19.67	3.19	420	470	2	HI4032	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	85	234	20.49	3.12	420	470	2	HI4032	
	84	237	20.77	7.64	1050	1250	2	HI4042	Available
	81	249	21.54	3.21	374	67	2	ALHI4032	
	79	255	22.26	3.13	375	67	2	ALHI4032	
	72	277	24.28	2.64	420	470	2	HI4032	Available
	70	286	25.04	6.37	1150	1250	2	HI4042	Available
	67	301	26.30	3.85	615	121	2	ALHI4042	
	67	301	26.30	2.65	420	76	2	ALHI4032	
	62	321	28.12	2.26	420	470	2	HI4032	
	60	336	29.40	3.54	629	135	2	ALHI4042	
	60	336	29.40	2.38	435	76	2	ALHI4032	
	53	380	33.32	1.91	420	470	2	HI4032	Available
	52	387	33.50	3.07	645	135	3	ALHI4043	
	52	387	33.50	2.06	459	85	3	ALHI4033	
	49	411	35.90	2.82	658	135	2	ALHI4042	
	49	411	35.90	1.94	470	85	2	ALHI4032	
	48	417	36.56	4.41	1150	1250	2	HI4042	Available
	46	438	38.37	2.57	663	135	2	ALHI4042	
	46	438	38.34	2.55	663	135	3	ALHI4043	
	46	438	38.37	1.82	478	85	2	ALHI4032	
	46	432	37.85	1.70	420	470	2	HI4032	Available
	41	492	43.10	1.50	420	470	2	HI4032	Available
	40	503	44.10	3.68	1150	1250	2	HI4042	Available
	40	504	43.69	2.36	674	135	3	ALHI4043	
	40	504	43.69	1.58	495	85	3	ALHI4033	
	37	545	46.80	1.96	674	135	2	ALHI4042	
	37	545	46.80	1.47	507	85	2	ALHI4032	
	35	576	50.47	3.07	1150	1250	2	HI4042	Available
	35	576	50.64	2.07	674	135	3	ALHI4043	
	35	576	50.67	1.96	674	135	2	ALHI4042	
	35	576	50.64	1.39	510	85	3	ALHI4033	
	34	593	51.93	1.23	420	470	2	HI4032	Available
	33	611	54.30	1.90	674	135	3	ALHI4043	
	33	611	54.30	1.31	520	85	3	ALHI4033	
	32	630	54.73	3.81	1041	225	3	ALHI4053	
	31	650	57.13	3.69	1050	225	3	ALHI4053	
	30	675	59.14	1.08	420	470	2	HI4032	Available
	28.9	676	60.54	2.74	1150	1250	3	HI4043	Available
	28.6	705	61.22	1.69	674	135	3	ALHI4043	
	28.6	705	61.22	1.13	525	85	3	ALHI4033	
	28.0	720	61.80	1.48	674	135	2	ALHI4042	
	26.0	775	66.22	3.09	1075	225	3	ALHI4053	
	25.7	760	68.00	5.42	1600	1400	3	HI4063	Available
	25.0	806	70.95	0.99	540	85	3	ALHI4033	
	25.0	806	70.95	0.84	674	135	3	ALHI4043	
	24.1	811	72.63	2.28	1150	1250	3	HI4043	Available
	24.0	839	73.33	1.33	674	135	3	ALHI4043	
	23.0	876	74.50	1.33	674	135	3	ALHI4043	
	22.1	884	79.17	2.09	1150	1250	3	HI4043	Available
	21.0	959	82.30	2.50	1091	225	3	ALHI4053	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	20.6	947	84.76	4.37	1600	1400	3	HI4063	Available
	20.0	1007	86.80	1.15	674	135	3	ALHI4043	
	19.0	1031	92.29	4.02	1600	1400	3	HI4063	Available
	19.0	1060	92.78	2.26	1102	225	3	ALHI4053	
	18.9	1036	92.74	1.79	1150	1250	3	HI4043	Available
	18.0	1119	96.85	1.06	674	135	3	ALHI4043	
	17.4	1126	100.76	1.64	1150	1250	3	HI4043	Available
	17.1	1142	102.22	3.63	1600	1400	3	HI4063	Available
	17.0	1185	104.68	2.02	1112	225	3	ALHI4053	
	17.0	1185	102.80	0.99	674	135	3	ALHI4043	
	15.2	1285	115.03	3.22	1600	1400	3	HI4063	Available
	15.2	1286	115.15	1.44	1150	1250	3	HI4043	Available
	15.0	1343	117.22	1.85	1124	225	3	ALHI4053	
	14.4	1355	121.28	1.37	1150	1250	3	HI4043	Available
	14.0	1439	126.65	1.66	1130	225	3	ALHI4053	
	13.8	1421	127.22	3.78	1700	1500	3	HI4663	Available
	13.1	1487	133.14	1.24	1150	1250	3	HI4043	Available
	13.0	1550	135.74	1.61	1136	225	3	ALHI4053	
	12.7	1540	137.88	3.49	1700	1500	3	HI4663	Available
	12.6	1550	138.73	2.67	1600	1400	3	HI4063	Available
	12.0	1679	145.68	2.01	1475	292	3	ALHI4063	
	12.0	1679	145.68	1.43	1150	225	3	ALHI4053	
	11.7	1667	149.23	2.48	1600	1400	3	HI4063	Available
	11.3	1724	154.35	1.07	1150	1250	3	HI4043	Available
	11.0	1781	159.46	2.32	1600	1400	3	HI4063	Available
	11.0	1832	157.40	1.84	1492	292	3	ALHI4063	
	11.0	1832	164.23	1.31	1186	225	3	ALHI4053	
	10.8	1772	161.57	3.03	1700	1500	3	HI4663	Available
	9.7	2011	180.00	2.06	1600	1400	3	HI4063	Available
	9.5	2068	185.10	3.51	2240	1620	3	HI4073	Available
	9.4	2143	185.29	1.57	1498	292	3	ALHI4063	
	9.4	2143	185.29	1.12	1186	292	3	ALHI4053	
	9.2	2120	189.79	3.42	2240	1620	3	HI4073	Available
	9.2	2135	191.13	2.51	1700	1500	3	HI4663	Available
	8.6	2343	204.12	1.44	1502	292	3	ALHI4063	
	8.6	2343	204.12	1.02	1186	292	3	ALHI4053	
	8.5	2301	206.00	1.80	1600	1400	3	HI4063	Available
	7.8	2492	223.03	2.16	1700	1500	3	HI4663	Available
	7.8	2583	224.18	1.31	1510	292	3	ALHI4063	
	7.6	2557	228.92	2.84	2240	1620	3	HI4073	Available
	7.4	2626	235.09	2.76	2240	1620	3	HI4073	Available
	7.2	2712	242.75	1.98	1700	1500	3	HI4663	Available
	7.2	2729	244.29	1.52	1600	1400	3	HI4063	Available
	6.7	2927	261.99	2.48	2240	1620	3	HI4073	Available
	6.3	3123	279.57	1.33	1600	1400	3	HI4063	Available
	6.3	3198	278.62	1.05	1510	292	3	ALHI4063	
	6.2	3168	283.56	2.29	2240	1620	3	HI4073	Available
	6.0	3271	292.80	1.64	1700	1500	3	HI4663	Available
	6.0	3209	293.47	1.29	1600	1400	4	HI4064	Available
	5.64	3466	310.23	3.95	3800	2400	4	HI4084	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	5.49	3482	318.50	1.19	1600	1400	4	HI4064	Available
	5.39	3625	324.52	2.00	2240	1620	3	HI4073	Available
	5.22	3744	335.09	1.43	1700	1500	3	HI4663	Available
	5.07	3852	344.84	1.88	2240	1620	4	HI4074	
	4.98	3924	351.29	3.49	3800	2400	4	HI4084	Available
	4.90	3987	356.92	1.82	2240	1620	4	HI4074	Available
	4.89	3914	357.93	1.37	1700	1500	4	HI4664	Available
	4.89	3911	357.70	1.06	1600	1400	4	HI4064	Available
	4.37	4472	400.30	3.06	3800	2400	4	HI4084	Available
	4.37	4473	400.36	1.62	2240	1620	4	HI4074	
	4.22	4532	414.47	1.18	1700	1500	4	HI4664	Available
	3.94	4862	444.68	1.10	1700	1500	4	HI4664	Available
	3.93	4973	445.16	2.75	3800	2400	4	HI4084	Available
	3.93	4973	445.13	1.46	2240	1620	4	HI4074	Available
	3.58	5348	489.11	1.00	1700	1500	4	HI4664	Available
	3.26	5995	536.67	2.29	3800	2400	4	HI4084	Available
	3.20	6101	546.12	1.19	2240	1620	4	HI4074	Available
	2.70	7228	646.98	1.90	3800	2400	4	HI4084	Available
	2.69	7256	649.47	1.00	2240	1620	4	HI4074	Available
	2.67	7329	656.02	3.63	4460	3440	4	HI4094	
	2.18	8953	801.43	1.53	3800	2400	4	HI4084	Available
	2.17	9024	807.76	2.95	4460	3440	4	HI4094	
	2.12	9230	826.21	4.13	6500	5350	4	HI4104	
	1.95	10018	896.70	3.80	6500	5350	4	HI4104	
	1.79	10944	979.66	2.43	4460	3440	4	HI4094	
	1.76	11090	992.73	1.24	3800	2400	4	HI4084	Available
	1.75	11149	997.98	3.42	6500	5350	4	HI4104	
	1.71	11433	1023.44	3.33	6500	5350	4	HI4104	
	1.56	12507	1119.52	3.05	6500	5350	4	HI4104	
	1.50	13063	1169.33	1.05	3800	2400	4	HI4084	
	1.45	13476	1206.25	1.97	4460	3440	4	HI4094	
	1.38	14166	1268.07	2.69	6500	5350	4	HI4104	
	1.26	15546	1391.56	1.71	4460	3440	4	HI4094	
	1.24	15739	1408.82	2.42	6500	5350	4	HI4104	
	1.20	16241	1453.75	2.35	6500	5350	4	HI4104	
	1.08	18043	1615.11	2.11	6500	5350	4	HI4104	
	1.02	19142	1713.43	1.39	4460	3440	4	HI4094	
	0.92	21267	1903.62	1.25	4460	3440	4	HI4094	
	0.83	23602	2112.65	1.13	4460	3440	4	HI4094	
1/2	593	51	2.95	20.79	550	630	2	HI4042	Available
	529	57	3.31	19.22	570	650	2	HI4042	Available
	503	60	3.48	10.01	204	29	2	ALHI4032	
	470	64	3.72	18.19	580	660	2	HI4042	Available
	416	73	4.21	17.59	590	650	2	HI4042	Available
	405	75	4.32	8.06	216	29	2	ALHI4032	
	366	83	4.78	15.49	620	690	2	HI4042	Available
	320	95	5.47	13.54	650	730	2	HI4042	Available
	318	95	5.50	6.33	230	31	2	ALHI4032	
	298	101	5.87	12.61	680	780	2	HI4042	Available

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1/2	285	106	6.13	13.59	710	840	2	HI4042	Available
	275	110	6.36	5.47	250	32	2	ALHI4032	
	255	119	6.86	12.31	740	880	2	HI4042	Available
	241	126	7.26	4.80	260	34	2	ALHI4032	
	227	133	7.70	11.12	770	920	2	HI4042	Available
	222	136	7.89	4.42	266	37	2	ALHI4032	
	179	169	9.80	9.50	820	980	2	HI4042	Available
	174	174	10.04	4.59	284	43	2	ALHI4032	
	157	193	11.14	8.83	850	1010	2	HI4042	Available
	150	202	11.64	3.96	293	55	2	ALHI4032	
	137	220	12.74	7.90	890	1060	2	HI4042	Available
	132	229	13.26	3.48	305	58	2	ALHI4032	
	128	236	13.67	7.53	920	1100	2	HI4042	Available
	114	265	15.37	3.01	321	61	2	ALHI4032	
	108	280	16.20	2.85	335	63	2	ALHI4032	
	105	288	16.66	6.25	980	1250	2	HI4042	Available
	93	325	18.80	3.56	535	108	2	ALHI4042	
	93	325	18.80	2.45	350	65	2	ALHI4032	
	84	359	20.77	5.04	1050	1250	2	HI4042	Available
	81	373	21.54	3.19	562	121	2	ALHI4042	
	81	373	21.54	2.14	374	67	2	ALHI4032	
	79	383	22.26	3.11	562	121	2	ALHI4042	
	79	383	22.26	2.08	375	67	2	ALHI4032	
	70	433	25.04	4.20	1150	1250	2	HI4042	Available
	67	452	26.30	2.56	615	121	2	ALHI4042	
	67	452	26.30	1.77	420	76	2	ALHI4032	
	61	498	28.79	3.68	1150	1250	2	HI4042	Available
	60	504	29.40	2.36	629	135	2	ALHI4042	
	60	504	29.40	1.58	435	85	2	ALHI4032	
	52	582	34.01	4.12	918	225	3	ALHI4053	
	52	582	33.50	2.04	645	135	3	ALHI4043	
	52	582	33.50	1.37	459	85	3	ALHI4033	
	49	617	35.90	1.29	470	85	2	ALHI4032	
	48	632	36.56	2.91	1150	1250	2	HI4042	Available
	46	658	38.37	1.71	663	135	2	ALHI4042	
	46	658	38.37	1.21	478	85	2	ALHI4032	
	44	688	39.79	0.06	988	225	3	ALHI4053	
	43	704	40.50	2.90	988	202	2	ALHI4052	
	40	762	44.10	2.43	1150	1250	2	HI4042	Available
	40	756	43.69	1.57	674	135	3	ALHI4043	
	40	756	43.69	1.06	495	85	3	ALHI4033	
	37	818	47.22	2.93	1028	225	3	ALHI4053	
	37	818	46.80	1.30	674	135	2	ALHI4042	
	36	840	49.00	2.86	1028	225	2	ALHI4052	
	35	872	50.47	2.03	1150	1250	2	HI4042	Available
	35	864	50.67	1.30	674	135	2	ALHI4042	
	33	917	53.40	1.27	674	135	3	ALHI4043	
	32	916	54.73	2.62	1041	225	3	ALHI4053	
	31	944	55.79	4.36	1600	1400	3	HI4063	Available
	31	945	57.13	2.53	1050	225	3	ALHI4053	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/2	29.0	1011	60.90	2.18	1050	225	2	ALHI4052	
	29.0	1011	61.22	1.18	674	135	3	ALHI4043	
	28.9	1025	60.54	1.81	1150	1250	3	HI4043	Available
	28.4	1044	61.69	3.95	1600	1400	3	HI4063	Available
	28.0	1047	62.00	1.11	674	135	3	ALHI4043	
	26.9	1101	65.07	4.88	1700	1500	3	HI4663	Available
	26.0	1127	66.22	2.13	1075	225	3	ALHI4053	
	25.7	1151	68.00	3.58	1600	1400	3	HI4063	Available
	25.0	1172	71.01	2.04	1079	225	3	ALHI4053	
	25.0	1172	70.95	1.01	674	135	3	ALHI4043	
	24.1	1229	72.63	1.50	1150	1250	3	HI4043	Available
	23.1	1282	75.71	3.23	1600	1400	3	HI4063	Available
	23.0	1274	76.69	2.65	1414	292	3	ALHI4063	
	23.0	1274	76.69	1.88	1091	225	3	ALHI4053	
	22.1	1340	79.17	1.38	1150	1250	3	HI4043	Available
	21.0	1396	82.30	2.42	1422	292	3	ALHI4063	
	21.0	1396	82.30	1.72	1091	225	3	ALHI4053	
	20.6	1435	84.76	2.89	1600	1400	3	HI4063	Available
	25.7	1151	68.00	3.58	1600	1400	3	HI4063	Available
	25.0	1172	71.01	2.04	1079	225	3	ALHI4053	
	25.0	1172	70.95	1.01	674	135	3	ALHI4043	
	24.1	1229	72.63	1.50	1150	1250	3	HI4043	Available
	23.1	1282	75.71	3.23	1600	1400	3	HI4063	Available
	23.0	1274	76.69	2.65	1414	292	3	ALHI4063	
	23.0	1274	76.69	1.88	1091	225	3	ALHI4053	
	22.1	1340	79.17	1.38	1150	1250	3	HI4043	Available
	21.0	1396	82.30	2.42	1422	292	3	ALHI4063	
	21.0	1396	82.30	1.72	1091	225	3	ALHI4053	
	20.6	1435	84.76	2.89	1600	1400	3	HI4063	Available
	19.0	1562	92.29	2.65	1600	1400	3	HI4063	Available
	19.0	1542	92.78	1.55	1102	225	3	ALHI4053	
	18.9	1570	92.74	1.18	1150	1250	3	HI4043	Available
	17.4	1706	100.76	1.08	1150	1250	3	HI4043	Available
	17.1	1730	102.22	2.39	1600	1400	3	HI4063	Available
	17.0	1724	104.68	1.39	1112	225	3	ALHI4053	
	15.8	1873	110.67	2.87	1700	1500	3	HI4663	Available
	15.2	1947	115.03	2.13	1600	1400	3	HI4063	Available
	15.0	1954	117.22	1.73	1461	292	3	ALHI4063	
	15.0	1954	117.22	1.23	1124	225	3	ALHI4053	
	14.0	2093	126.65	1.61	1468	292	3	ALHI4063	
	14.0	2093	126.65	1.14	1130	225	3	ALHI4053	
	13.8	2153	127.22	2.49	1700	1500	3	HI4663	Available
	13.1	2260	133.53	3.21	2240	1620	3	HI4073	Available
	13.0	2254	135.74	1.50	1472	292	3	ALHI4063	
	13.0	2254	135.74	1.06	1136	225	3	ALHI4053	
	12.7	2334	137.88	2.30	1700	1500	3	HI4663	Available
	12.6	2348	138.73	1.76	1600	1400	3	HI4063	Available
	12.0	2442	145.68	1.38	1475	292	3	ALHI4063	
	11.7	2529	149.43	2.87	2240	1620	3	HI4073	Available
	11.7	2526	149.23	1.64	1600	1400	3	HI4063	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/2	11.0	2699	159.46	1.53	1600	1400	3	HI4063	Available
	11.0	2664	157.40	1.27	1492	292	3	ALHI4063	
	11.0	2664	164.23	1.27	1492	292	3	ALHI4063	
	10.9	2726	161.04	2.66	2240	1620	3	HI4073	Available
	10.8	2685	161.57	2.00	1700	1500	3	HI4663	Available
	9.7	3047	180.00	1.36	1600	1400	3	HI4063	Available
	9.5	3133	185.10	2.32	2240	1620	3	HI4073	Available
	9.4	3118	185.29	1.08	1498	292	3	ALHI4063	
	9.2	3213	189.79	2.26	2240	1620	3	HI4073	Available
	9.2	3235	191.13	1.66	1700	1500	3	HI4663	Available
	8.5	3487	206.00	1.19	1600	1400	3	HI4063	Available
	7.8	3775	223.03	1.42	1700	1500	3	HI4663	Available
	7.7	3830	226.28	3.58	3800	2400	3	HI4083	
	7.6	3875	228.92	3.54	3800	2400	3	HI4083	
	7.6	3875	228.92	1.87	2240	1620	3	HI4073	Available
	7.4	3979	235.09	1.82	2240	1620	3	HI4073	Available
	7.2	4109	242.75	1.31	1700	1500	3	HI4663	Available
	7.2	4135	244.29	1.00	1600	1400	3	HI4063	Available
	6.7	4413	260.72	3.10	3800	2400	3	HI4083	
	6.7	4435	261.99	1.64	2240	1620	3	HI4073	Available
	6.2	4800	283.57	2.85	3800	2400	3	HI4083	
	6.2	4800	283.56	1.51	2240	1620	3	HI4073	Available
	6.0	4956	292.80	1.08	1700	1500	3	HI4663	Available
	5.64	5251	310.23	2.61	3800	2400	4	HI4084	
	5.42	5466	322.95	2.51	3800	2400	3	HI4083	
	5.39	5493	324.52	1.32	2240	1620	3	HI4073	Available
	5.07	5837	344.84	1.24	2240	1620	4	HI4074	
	4.98	5946	351.29	2.30	3800	2400	4	HI4084	Available
	4.90	6041	356.92	1.20	2240	1620	4	HI4074	Available
	4.37	6776	400.30	2.02	3800	2400	4	HI4084	
	4.37	6777	400.36	1.07	2240	1620	4	HI4074	
	3.93	7535	445.16	1.82	3800	2400	4	HI4084	Available
	3.57	8306	490.71	3.20	4460	3440	4	HI4094	
	3.26	9084	536.67	1.51	3800	2400	4	HI4084	Available
	3.15	9392	554.88	2.83	4460	3440	4	HI4094	
	2.77	10681	631.04	2.49	4460	3440	4	HI4094	
	2.70	10951	646.98	1.25	3800	2400	4	HI4084	Available
	2.67	11104	656.02	2.40	4460	3440	4	HI4094	
	2.18	13566	801.43	1.01	3800	2400	4	HI4084	Available
	2.17	13673	807.76	1.95	4460	3440	4	HI4094	
	2.12	13985	826.21	2.72	6500	5350	4	HI4104	
	1.95	15178	896.70	2.51	6500	5350	4	HI4104	
	1.79	16582	979.66	1.60	4460	3440	4	HI4094	
	1.75	16893	997.98	2.26	6500	5350	4	HI4104	
	1.71	17323	1023.44	2.20	6500	5350	4	HI4104	
	1.56	18950	1119.52	2.01	6500	5350	4	HI4104	
	1.45	20418	1206.25	1.30	4460	3440	4	HI4094	
	1.38	21464	1268.07	1.78	6500	5350	4	HI4104	
	1.26	23555	1391.56	1.13	4460	3440	4	HI4094	
	1.24	23847	1408.82	1.60	6500	5350	4	HI4104	
	1.20	24607	1453.75	1.55	6500	5350	4	HI4104	
	1.08	27339	1615.11	1.39	6500	5350	4	HI4104	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	665	68	2.63	14.96	530	610	2	HI4042	Available
	593	76	2.95	13.86	550	630	2	HI4042	Available
	529	86	3.31	12.82	570	650	2	HI4042	Available
	503	90	3.48	6.67	204	29	2	ALHI4032	
	470	96	3.72	12.13	580	660	2	HI4042	Available
	416	109	4.21	11.73	590	650	2	HI4042	Available
	405	112	4.32	5.37	216	29	2	ALHI4032	
	366	124	4.78	10.33	620	690	2	HI4042	Available
	320	142	5.47	9.02	650	730	2	HI4042	Available
	318	143	5.50	4.22	230	31	2	ALHI4032	
	298	152	5.87	8.41	680	780	2	HI4042	Available
	285	159	6.13	9.06	710	840	2	HI4042	Available
	275	165	6.36	3.65	250	32	2	ALHI4032	
	255	178	6.86	8.21	740	880	2	HI4042	Available
	241	188	7.26	3.20	260	34	2	ALHI4032	
	227	200	7.70	7.41	770	920	2	HI4042	Available
	222	204	7.89	2.95	266	37	2	ALHI4032	
	179	254	9.80	6.34	820	980	2	HI4042	Available
	174	261	10.04	3.06	284	43	2	ALHI4032	
	166	273	10.52	13.49	1340	1140	2	HI4062	Available
	157	289	11.14	5.89	850	1010	2	HI4042	Available
	150	303	11.64	3.93	445	91	2	ALHI4042	
	150	303	11.64	2.64	293	55	2	ALHI4032	
	137	330	12.74	5.27	890	1060	2	HI4042	Available
	132	344	13.26	3.46	476	101	2	ALHI4042	
	132	344	13.26	2.32	305	58	2	ALHI4032	
	128	354	13.67	5.02	920	1100	2	HI4042	Available
	114	398	15.37	2.99	508	101	2	ALHI4042	
	114	398	15.37	2.00	321	61	2	ALHI4032	
	108	420	16.20	2.76	520	101	2	ALHI4042	
	108	420	16.20	1.90	335	63	2	ALHI4032	
	105	432	16.66	4.17	980	1250	2	HI4042	Available
	100	454	17.50	8.84	1600	1400	2	HI4062	Available
	93	488	18.80	2.37	535	108	2	ALHI4042	
	93	488	18.80	1.64	350	65	2	ALHI4032	
	88	519	20.00	7.77	1600	1400	2	HI4062	Available
	84	539	20.77	3.36	1050	1250	2	HI4042	Available
	82	557	21.47	7.26	1600	1400	2	HI4062	Available
	81	560	21.54	2.12	562	108	2	ALHI4042	
	81	560	21.54	1.42	374	67	2	ALHI4032	
	79	574	22.26	2.07	562	108	2	ALHI4042	
	79	574	22.26	1.39	375	67	2	ALHI4032	
	70	649	25.04	2.80	1150	1250	2	HI4042	Available
	67	677	26.30	1.71	615	121	2	ALHI4042	
	67	677	26.30	1.18	420	76	2	ALHI4032	
	64	704	27.14	5.77	1600	1400	2	HI4062	
	61	747	28.79	2.45	1150	1250	2	HI4042	Available
	60	756	29.41	3.31	900	175	2	ALHI4052	
	60	756	29.40	1.57	629	135	2	ALHI4042	
	60	756	29.40	1.06	435	85	2	ALHI4032	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	54	843	32.50	4.85	1600	1400	2	HI4062	
	52	873	34.01	2.75	918	225	3	ALHI4053	
	52	873	33.50	1.36	645	135	3	ALHI4043	
	49	931	35.91	4.40	1600	1400	2	HI4062	
	49	926	35.58	2.70	922	202	2	ALHI4052	
	49	926	35.90	1.25	660	135	2	ALHI4042	
	48	948	36.56	1.94	1150	1250	2	HI4042	Available
	46	986	38.37	1.14	663	135	2	ALHI4042	
	46	986	38.34	1.13	663	135	3	ALHI4043	
	44	1031	39.79	2.32	988	225	3	ALHI4053	
	43	1055	40.50	2.28	988	202	2	ALHI4052	
	40	1134	44.23	2.03	1012	202	2	ALHI4052	
	40	1144	44.10	1.62	1150	1250	2	HI4042	Available
	40	1134	43.69	1.05	674	135	3	ALHI4043	
	39	1167	45.00	3.52	1600	1400	2	HI4062	
	37	1226	47.22	1.95	1028	225	3	ALHI4053	
	36	1261	49.00	2.20	1330	260	2	ALHI4062	
	36	1261	49.00	1.91	1028	202	2	ALHI4052	
	35	1309	50.47	1.35	1150	1250	2	HI4042	Available
	34	1329	51.25	3.10	1600	1400	2	HI4062	
	32	1418	54.73	2.38	1354	292	3	ALHI4063	
	32	1418	54.73	1.69	1041	225	3	ALHI4053	
	31	1417	55.79	2.91	1600	1400	3	HI4063	Available
	31	1464	57.13	2.30	1354	292	3	ALHI4063	
	31	1464	57.13	1.64	1050	225	3	ALHI4053	
	29.0	1534	60.40	3.50	1700	1500	3	HI4663	Available
	29.0	1565	60.90	1.79	1367	260	2	ALHI4062	
	29.0	1565	60.90	1.41	1050	202	2	ALHI4052	
	28.9	1537	60.54	1.20	1150	1250	3	HI4043	Available
	28.4	1566	61.69	2.63	1600	1400	3	HI4063	Available
	26.9	1652	65.07	3.25	1700	1500	3	HI4663	Available
	26.0	1745	66.22	1.93	1519	292	3	ALHI4063	
	26.0	1745	66.22	1.37	1075	225	3	ALHI4053	
	25.7	1727	68.00	2.39	1600	1400	3	HI4063	Available
	25.0	1815	71.01	1.86	1398	292	3	ALHI4063	
	25.0	1815	71.01	1.32	1079	225	3	ALHI4053	
	24.7	1801	70.95	4.03	2240	1620	3	HI4073	Available
	24.4	1818	71.61	3.99	2240	1620	3	HI4073	Available
	24.1	1844	72.63	1.00	1150	1250	3	HI4043	Available
	23.7	1877	73.94	2.86	1700	1500	3	HI4663	Available
	23.1	1922	75.71	2.15	1600	1400	3	HI4063	Available
	23.0	1973	76.69	1.71	1414	292	3	ALHI4063	
	23.0	1973	76.69	1.21	1091	225	3	ALHI4053	
	21.4	2080	81.92	3.49	2240	1620	3	HI4073	Available
	21.0	2161	82.30	1.56	1422	292	3	ALHI4063	
	21.0	2161	82.30	1.25	1091	225	3	ALHI4053	
	20.7	2148	84.59	2.50	1700	1500	3	HI4663	Available
	20.6	2152	84.76	1.92	1600	1400	3	HI4063	Available
	20.2	2196	86.48	3.31	2240	1620	3	HI4073	Available
	19.9	2232	87.89	3.25	2240	1620	3	HI4073	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	19.1	2330	91.77	2.30	1700	1500	3	HI4663	Available
	19.0	2343	92.29	1.77	1600	1400	3	HI4063	Available
	19.0	2388	92.78	1.00	1102	225	3	ALHI4053	
	17.1	2595	102.22	1.60	1600	1400	3	HI4063	Available
	17.0	2669	104.68	1.26	1454	292	3	ALHI4063	
	16.3	2720	107.12	2.67	2240	1620	3	HI4073	Available
	15.8	2810	110.67	1.91	1700	1500	3	HI4663	Available
	15.2	2921	115.03	1.42	1600	1400	3	HI4063	Available
	15.0	3025	117.22	1.11	1461	292	3	ALHI4063	
	14.0	3241	126.65	1.04	1468	292	3	ALHI4063	
	13.9	3200	126.03	4.28	3800	2400	3	HI4083	Available
	13.8	3230	127.22	1.66	1700	1500	3	HI4663	Available
	13.5	3301	130.00	2.20	2240	1620	3	HI4073	Available
	13.1	3390	133.53	2.14	2240	1620	3	HI4073	Available
	12.9	3435	135.30	3.99	3800	2400	3	HI4083	Available
	12.7	3506	138.08	3.91	3800	2400	3	HI4083	
	10.8	4028	161.57	1.33	1700	1500	3	HI4663	Available
	10.6	4198	165.33	3.26	3800	2400	3	HI4083	
	10.2	4343	171.04	3.15	3800	2400	3	HI4083	
	9.6	4638	182.68	2.95	3800	2400	3	HI4083	
	9.5	4700	185.10	1.54	2240	1620	3	HI4073	Available
	9.4	4738	186.62	2.89	3800	2400	3	HI4083	
	9.2	4819	189.79	1.51	2240	1620	3	HI4073	Available
	9.2	4853	191.13	1.11	1700	1500	3	HI4663	Available
	8.5	5200	204.80	2.63	3800	2400	3	HI4083	
	7.7	5745	226.28	2.38	3800	2400	3	HI4083	
	7.6	5812	228.92	2.36	3800	2400	3	HI4083	
	7.6	5812	228.92	1.25	2240	1620	3	HI4073	Available
	7.4	5969	235.09	1.22	2240	1620	3	HI4073	Available
	7.1	6297	248.00	4.22	4460	3440	3	HI4093	
	6.7	6620	260.72	2.07	3800	2400	3	HI4083	
	6.7	6652	261.99	1.09	2240	1620	3	HI4073	Available
	6.2	7177	282.68	3.71	4460	3440	3	HI4093	
	6.2	7200	283.57	1.90	3800	2400	3	HI4083	
	6.2	7200	283.56	1.01	2240	1620	3	HI4073	Available
	5.64	7877	310.23	1.74	3800	2400	4	HI4084	
	5.57	7974	314.06	3.34	4460	3440	3	HI4093	
	5.42	8200	322.95	1.67	3800	2400	3	HI4083	
	4.98	8919	351.29	1.54	3800	2400	4	HI4084	Available
	4.90	9075	357.43	2.93	4460	3440	4	HI4094	
	4.40	10104	397.95	3.77	6500	5350	4	HI4104	
	4.37	10164	400.30	1.35	3800	2400	4	HI4084	Available
	3.99	11126	438.20	2.39	4460	3440	4	HI4094	
	3.93	11303	445.16	1.21	3800	2400	4	HI4084	Available
	3.92	11334	446.41	3.36	6500	5350	4	HI4104	
	3.57	12459	490.71	2.13	4460	3440	4	HI4094	
	3.32	13400	527.77	2.84	6500	5350	4	HI4104	
	3.26	13626	536.67	1.01	3800	2400	4	HI4084	Available
	3.15	14088	554.88	1.89	4460	3440	4	HI4094	
	2.77	16022	631.04	1.66	4460	3440	4	HI4094	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	2.75	16155	636.26	2.36	6500	5350	4	HI4104	
	2.67	16656	656.02	1.60	4460	3440	4	HI4094	
	2.49	17839	702.58	2.14	6500	5350	4	HI4104	
	2.17	20509	807.76	1.30	4460	3440	4	HI4094	
	2.12	20978	826.21	1.82	6500	5350	4	HI4104	
	1.95	22767	896.70	1.67	6500	5350	4	HI4104	
	1.79	24874	979.66	1.07	4460	3440	4	HI4094	
	1.75	25339	997.98	1.50	6500	5350	4	HI4104	
	1.71	25985	1023.44	1.47	6500	5350	4	HI4104	
	1.56	28425	1119.52	1.34	6500	5350	4	HI4104	
	1.38	32196	1268.07	1.18	6500	5350	4	HI4104	
	1.24	35770	1408.82	1.07	6500	5350	4	HI4104	
	1.20	36911	1453.75	1.03	6500	5350	4	HI4104	
1	665	91	2.63	11.22	530	610	2	HI4042	Available
	593	102	2.95	10.39	550	630	2	HI4042	Available
	529	114	3.31	9.61	570	650	2	HI4042	Available
	503	120	3.48	5.02	204	29	2	ALHI4032	
	470	129	3.72	9.10	580	660	2	HI4042	Available
	416	146	4.21	8.79	590	650	2	HI4042	Available
	405	149	4.32	4.04	216	29	2	ALHI4032	
	366	165	4.78	7.75	620	690	2	HI4042	Available
	320	189	5.47	6.77	650	730	2	HI4042	Available
	318	190	5.50	3.17	230	21	2	ALHI4032	
	298	203	5.87	6.31	680	780	2	HI4042	Available
	285	212	6.13	6.79	710	840	2	HI4042	Available
	275	220	6.36	2.73	376	70	2	ALHI4042	
	275	220	6.36	2.73	250	32	2	ALHI4032	
	255	237	6.86	6.16	740	880	2	HI4042	Available
	241	251	7.26	4.24	391	74	2	ALHI4042	
	241	251	7.26	2.40	260	34	2	ALHI4032	
	227	266	7.70	5.56	770	920	2	HI4042	Available
	222	273	7.89	3.70	400	81	2	ALHI4042	
	222	273	7.89	2.21	266	37	2	ALHI4032	
	194	312	9.02	3.41	412	81	2	ALHI4042	
	194	312	9.02	2.56	277	38	2	ALHI4032	
	179	339	9.80	4.75	820	980	2	HI4042	Available
	174	348	10.04	3.42	420	81	2	ALHI4042	
	174	348	10.04	2.30	284	43	2	ALHI4032	
	157	385	11.14	4.41	850	1010	2	HI4042	Available
	150	403	11.64	2.95	445	91	2	ALHI4042	
	150	403	11.64	1.98	293	55	2	ALHI4032	
	137	440	12.74	3.95	890	1060	2	HI4042	Available
	132	458	13.26	2.60	474	91	2	ALHI4042	
	132	458	13.26	1.74	305	58	2	ALHI4032	
	128	473	13.67	3.77	920	1100	2	HI4042	Available
	114	531	15.37	2.24	510	101	2	ALHI4042	
	114	531	15.37	1.50	321	61	2	ALHI4032	
	106	571	16.48	2.03	520	108	2	ALHI4042	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	106	571	16.48	1.40	335	63	2	ALHI4032	
	105	576	16.62	4.36	711	157	2	ALHI4052	
	105	576	16.66	3.13	980	1250	2	HI4042	Available
	92	658	19.11	1.75	535	108	2	ALHI4042	
	92	658	19.11	1.21	350	65	2	ALHI4032	
	88	691	20.00	5.83	1600	1400	2	HI4062	Available
	87	695	20.10	3.60	780	157	2	ALHI4052	
	84	718	20.77	2.52	1050	1250	2	HI4042	Available
	81	747	21.54	1.60	562	108	2	ALHI4042	
	81	747	21.54	1.07	374	67	2	ALHI4032	
	79	766	22.26	1.55	562	108	2	ALHI4042	
	79	766	22.26	1.04	375	67	2	ALHI4032	
	70	864	24.98	2.66	877	175	2	ALHI4052	
	70	866	25.04	2.10	1150	1250	2	HI4042	Available
	65	931	26.77	1.25	615	121	2	ALHI4042	
	64	938	27.14	4.33	1600	1400	2	HI4062	Available
	61	995	28.79	1.84	1150	1250	2	HI4042	Available
	60	1008	29.41	2.48	900	175	2	ALHI4052	
	60	1008	29.40	1.17	629	121	2	ALHI4042	
	59	1024	29.62	3.97	1600	1400	2	HI4062	Available
	54	1124	32.50	3.64	1600	1400	2	HI4062	Available
	52	1164	34.01	2.96	1060	260	3	ALHI4063	
	52	1164	34.01	2.10	918	225	3	ALHI4053	
	52	1164	33.50	1.06	645	135	3	ALHI4043	
	49	1242	35.91	3.30	1600	1400	2	HI4062	Available
	49	1235	35.58	2.03	922	202	2	ALHI4052	
	48	1264	36.56	1.46	1150	1250	2	HI4042	
	46	1327	38.39	4.01	1700	1500	2	HI4662	
	44	1375	39.79	2.53	1192	260	3	ALHI4063	
	44	1375	39.79	1.80	988	225	3	ALHI4053	
	43	1407	40.50	1.82	1192	260	2	ALHI4062	
	43	1407	40.50	1.72	988	202	2	ALHI4052	
	40	1513	44.23	1.83	1304	260	2	ALHI4062	
	40	1513	44.23	1.50	1012	202	2	ALHI4052	
	40	1525	44.10	1.21	1150	1250	2	HI4042	
	39	1556	45.00	2.64	1600	1400	2	HI4062	Available
	38	1604	46.38	3.33	1700	1500	2	HI4662	
	37	1635	47.22	2.13	1323	292	3	ALHI4063	
	37	1635	47.22	1.51	1028	225	3	ALHI4053	
	36	1681	49.00	1.64	1330	260	2	ALHI4062	
	36	1681	49.00	1.42	1028	260	2	ALHI4052	
	35	1745	50.47	1.01	1150	1250	2	HI4042	
	34	1783	51.57	3.00	1700	1500	2	HI4662	
	34	1772	51.25	2.33	1600	1400	2	HI4062	Available
	32	1891	54.73	1.84	1354	292	3	ALHI4063	
	32	1891	54.73	1.31	1041	225	3	ALHI4053	
	31	1887	55.74	3.85	2240	1620	3	HI4073	Available
	31	1906	56.30	2.74	1700	1500	3	HI4663	Available
	31	1889	55.79	2.18	1600	1400	3	HI4063	Available
	31	1952	57.13	1.76	1354	292	3	ALHI4063	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	31	1952	57.13	1.25	1050	225	3	ALHI4053	
	30.3	1957	57.81	3.71	2240	1620	3	HI4073	Available
	29.0	2045	60.40	2.63	1700	1500	3	HI4663	Available
	29.0	2086	60.90	1.33	1367	260	2	ALHI4062	
	29.0	2086	60.90	1.04	1050	260	2	ALHI4052	
	28.4	2088	61.69	1.97	1600	1400	3	HI4063	Available
	27.8	2133	63.01	3.40	2240	1620	3	HI4073	Available
	26.9	2203	65.07	2.44	1700	1500	3	HI4663	Available
	26.5	2239	66.13	3.24	2240	1620	3	HI4073	Available
	26.0	2327	66.22	1.52	1398	292	3	ALHI4063	
	26.0	2327	66.22	1.08	1075	225	3	ALHI4053	
	25.7	2302	68.00	1.79	1600	1400	3	HI4063	Available
	25.0	2420	71.01	1.42	1398	292	3	ALHI4063	
	25.0	2420	71.01	1.01	1079	225	3	ALHI4053	
	24.7	2402	70.95	3.02	2240	1620	3	HI4073	Available
	24.4	2424	71.61	2.99	2240	1620	3	HI4073	Available
	23.7	2503	73.94	2.15	1700	1500	3	HI4663	Available
	23.1	2563	75.71	1.62	1600	1400	3	HI4063	Available
	23.0	2631	76.69	1.31	1414	292	3	ALHI4063	
	21.4	2773	81.92	2.62	2240	1620	3	HI4073	Available
	21.0	2881	82.30	1.22	1422	292	3	ALHI4063	
	20.7	2864	84.59	1.88	1700	1500	3	HI4663	Available
	20.6	2869	84.76	1.44	1600	1400	3	HI4063	Available
	20.2	2928	86.48	2.48	2240	1620	3	HI4073	Available
	19.9	2975	87.89	2.44	2240	1620	3	HI4073	Available
	19.1	3107	91.77	1.73	1700	1500	3	HI4663	Available
	19.0	3124	92.29	1.33	1600	1400	3	HI4063	Available
	19.0	3184	92.78	1.09	1430	292	3	ALHI4063	
	17.1	3460	102.22	1.20	1600	1400	3	HI4063	Available
	16.9	3505	103.53	3.91	3800	2400	3	HI4083	Available
	16.3	3626	107.12	2.00	2240	1620	3	HI4073	Available
	15.9	3733	110.28	3.67	3800	2400	3	HI4083	Available
	15.8	3747	110.67	1.43	1700	1500	3	HI4663	Available
	15.2	3894	115.03	1.06	1600	1400	3	HI4063	Available
	13.9	4267	126.03	3.21	3800	2400	3	HI4083	Available
	13.8	4307	127.22	1.25	1700	1500	3	HI4663	Available
	13.5	4401	130.00	1.65	2240	1620	3	HI4073	Available
	13.1	4520	133.53	1.61	2240	1620	3	HI4073	Available
	12.9	4580	135.30	2.99	3800	2400	3	HI4083	Available
	12.7	4674	138.08	2.93	3800	2400	3	HI4083	Available
	12.7	4668	137.88	1.15	1700	1500	3	HI4663	Available
	11.7	5059	149.43	1.44	2240	1620	3	HI4073	Available
	11.6	5100	150.66	2.69	3800	2400	3	HI4083	Available
	11.1	5333	157.54	2.57	3800	2400	3	HI4083	Available
	10.9	5452	161.04	1.33	2240	1620	3	HI4073	Available
	10.8	5370	161.57	1.00	1700	1500	3	HI4663	Available
	10.6	5597	165.33	2.45	3800	2400	3	HI4083	Available
	10.2	5790	171.04	2.37	3800	2400	3	HI4083	Available
	9.6	6184	182.68	2.22	3800	2400	3	HI4083	Available
	9.5	6266	185.10	1.16	2240	1620	3	HI4073	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	9.4	6318	186.62	2.17	3800	2400	3	HI4083	Available
	9.2	6425	189.79	1.13	2240	1620	3	HI4073	
	8.5	6933	204.80	1.98	3800	2400	3	HI4083	Available
	7.8	7557	223.22	3.52	4460	3440	3	HI4093	
	7.7	7660	226.28	1.79	3800	2400	3	HI4083	Available
	7.6	7750	228.92	1.77	3800	2400	3	HI4083	Available
	7.5	7936	234.41	3.35	4460	3440	3	HI4093	
	7.1	8396	248.00	3.17	4460	3440	3	HI4093	
	6.7	8826	260.72	1.55	3800	2400	3	HI4083	Available
	6.2	9570	282.68	2.78	4460	3440	3	HI4093	
	6.2	9600	283.57	1.43	3800	2400	3	HI4083	Available
	5.64	10502	310.23	1.30	3800	2400	4	HI4084	
	5.57	10632	314.06	2.50	4460	3440	3	HI4093	
	5.42	10933	322.95	1.25	3800	2400	3	HI4083	Available
	5.33	11107	328.09	3.43	6500	5350	3	HI4103	
	4.98	11892	351.29	1.15	3800	2400	4	HI4084	
	4.90	12100	357.43	2.20	4460	3440	4	HI4094	
	4.89	12105	357.56	3.15	6500	5350	4	HI4104	
	4.40	13472	397.95	2.83	6500	5350	4	HI4104	
	4.37	13552	400.30	1.01	3800	2400	4	HI4084	
	3.99	14835	438.20	1.79	4460	3440	4	HI4094	
	3.92	15113	446.41	2.52	6500	5350	4	HI4104	
	3.57	16612	490.71	1.60	4460	3440	4	HI4094	
	3.32	17867	527.77	2.13	6500	5350	4	HI4104	
	3.15	18785	554.88	1.42	4460	3440	4	HI4094	
	2.77	21363	631.04	1.25	4460	3440	4	HI4094	
	2.75	21540	636.26	1.77	6500	5350	4	HI4104	
	2.67	22209	656.02	1.20	4460	3440	4	HI4094	
	2.49	23785	702.58	1.60	6500	5350	4	HI4104	
	2.12	27970	826.21	1.36	6500	5350	4	HI4104	
	1.95	30356	896.70	1.26	6500	5350	4	HI4104	
	1.75	33785	997.98	1.13	6500	5350	4	HI4104	
	1.71	34647	1023.44	1.10	6500	5350	4	HI4104	
	1.56	37900	1119.52	1.01	6500	5350	4	HI4104	
1.5	681	133	2.57	12.38	960	890	2	HI4062	Available
	665	136	2.63	7.48	530	610	2	HI4042	Available
	593	153	2.95	6.93	550	630	2	HI4042	Available
	529	172	3.31	6.41	570	650	2	HI4042	Available
	503	180	3.48	3.34	204	31	2	ALHI4032	
	470	193	3.72	6.06	580	660	2	HI4042	Available
	416	218	4.21	5.86	590	650	2	HI4042	Available
	405	224	4.32	3.46	289	70	2	ALHI4042	
	405	224	4.32	2.69	216	31	2	ALHI4032	
	366	248	4.78	5.16	620	690	2	HI4042	Available
	320	284	5.47	4.51	650	730	2	HI4042	Available
	318	285	5.50	3.11	350	70	2	ALHI4042	
	318	285	5.50	2.11	230	31	2	ALHI4032	
	298	304	5.87	4.20	680	780	2	HI4042	Available
	285	318	6.13	4.53	710	840	2	HI4042	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1.5	275	330	6.36	2.88	376	72	2	ALHI4042	
	275	330	6.36	1.82	250	33	2	ALHI4032	
	255	356	6.86	4.10	740	880	2	HI4042	Available
	241	377	7.26	2.83	391	75	2	ALHI4042	
	241	377	7.26	1.60	260	33	2	ALHI4032	
	232	391	7.54	5.88	568	108	2	ALHI4052	
	227	399	7.70	3.71	770	920	2	HI4042	Available
	222	409	7.89	2.47	400	75	2	ALHI4042	
	222	409	7.89	1.47	266	33	2	ALHI4032	
	220	413	7.96	5.82	579	117	2	ALHI4052	
	202	450	8.67	3.45	790	950	2	HI4042	Available
	194	468	9.02	2.27	412	81	2	ALHI4042	
	194	468	9.02	1.71	277	42	2	ALHI4032	
	185	491	9.45	5.11	615	117	2	ALHI4052	
	179	508	9.80	3.17	820	980	2	HI4042	Available
	174	522	10.04	2.28	420	81	2	ALHI4042	
	174	522	10.04	1.53	284	42	2	ALHI4032	
	157	578	11.14	2.94	850	1010	2	HI4042	Available
	153	593	11.43	4.39	658	135	2	ALHI4052	
	150	605	11.64	1.97	445	91	2	ALHI4042	
	150	605	11.64	1.32	293	55	2	ALHI4032	
	137	661	12.74	2.63	890	1060	2	HI4042	Available
	132	688	13.26	1.73	476	91	2	ALHI4042	
	132	688	13.26	1.16	305	55	2	ALHI4032	
	128	709	13.67	2.51	920	1100	2	HI4042	Available
	123	738	14.21	3.12	693	140	2	ALHI4052	
	114	796	15.37	1.49	508	101	2	ALHI4042	
	114	796	15.37	1.00	321	60	2	ALHI4032	
	106	856	16.48	1.35	520	101	2	ALHI4042	
	105	864	16.62	2.91	711	140	2	ALHI4052	
	105	864	16.66	2.08	980	1250	2	HI4042	Available
	88	1037	20.00	3.89	1600	1400	2	HI4062	Available
	87	1043	20.10	3.65	900	190	2	ALHI4062	
	87	1043	20.10	2.40	780	157	2	ALHI4052	
	84	1077	20.77	1.68	1050	1250	2	HI4042	Available
	82	1113	21.47	3.63	1600	1400	2	HI4062	Available
	81	1120	21.54	1.07	562	108	2	ALHI4042	
	70	1297	25.00	3.12	1600	1400	2	HI4062	Available
	70	1297	24.98	2.93	944	200	2	ALHI4062	
	70	1297	24.98	1.77	877	175	2	ALHI4052	
	70	1299	25.04	1.40	1150	1250	2	HI4042	Available
	64	1407	27.14	2.88	1600	1400	2	HI4062	Available
	61	1493	28.79	1.23	1150	1250	2	HI4042	Available
	60	1513	29.41	1.97	1012	200	2	ALHI4062	
	60	1513	29.41	1.65	900	175	2	ALHI4052	
	59	1536	29.62	2.65	1600	1400	2	HI4062	Available
	54	1687	32.53	3.14	1700	1500	2	HI4662	Available
	54	1685	32.50	2.43	1600	1400	2	HI4062	Available
	52	1745	34.01	1.97	1060	260	3	ALHI4063	
	52	1745	34.01	1.40	918	202	3	ALHI4053	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1.5	49	1862	35.91	2.20	1600	1400	2	HI4062	Available
	49	1852	35.58	1.62	1079	260	2	ALHI4062	
	46	1991	38.39	2.67	1700	1500	2	HI4662	
	44	2063	39.79	1.69	1192	260	3	ALHI4063	
	44	2063	39.79	1.20	988	202	3	ALHI4053	
	43	2111	40.50	1.22	1192	260	2	ALHI4062	
	43	2111	40.50	1.15	988	202	2	ALHI4052	
	40	2269	44.23	1.22	1304	260	2	ALHI4062	
	40	2269	44.23	1.00	1012	202	2	ALHI4052	
	39	2321	44.75	3.13	2240	1620	2	HI4072	
	39	2334	45.00	1.76	1600	1400	2	HI4062	Available
	38	2405	46.38	2.22	1700	1500	2	HI4662	
	37	2453	47.22	1.42	1330	260	3	ALHI4063	
	37	2453	47.22	1.01	1028	202	3	ALHI4053	
	36	2521	49.00	1.09	1330	260	2	ALHI4062	
	35	2579	49.72	2.82	2240	1620	2	HI4072	
	34	2583	50.87	2.81	2240	1620	3	HI4073	Available
	34	2674	51.57	2.00	1700	1500	2	HI4662	
	34	2658	51.25	1.55	1600	1400	2	HI4062	Available
	32	2836	54.73	1.23	1354	292	3	ALHI4063	
	31	2830	55.74	2.56	2240	1620	3	HI4073	Available
	31	2859	56.30	1.83	1700	1500	3	HI4663	Available
	31	2833	55.79	1.45	1600	1400	3	HI4063	Available
	31	2928	57.13	1.17	1354	292	3	ALHI4063	
	30	2936	57.81	2.47	2240	1620	3	HI4073	Available
	29.0	3067	60.40	1.75	1700	1500	3	HI4663	Available
	28.4	3133	61.69	1.32	1600	1400	3	HI4063	Available
	27.8	3200	63.01	2.27	2240	1620	3	HI4073	Available
	26.9	3304	65.07	1.63	1700	1500	3	HI4663	Available
	26.5	3358	66.13	2.16	2240	1620	3	HI4073	Available
	26.0	3491	66.22	1.01	1398	292	3	ALHI4063	
	25.7	3453	68.00	1.19	1600	1400	3	HI4063	Available
	24.7	3603	70.95	2.02	2240	1620	3	HI4073	Available
	24.4	3636	71.61	2.00	2240	1620	3	HI4073	Available
	23.7	3755	73.94	1.43	1700	1500	3	HI4663	Available
	23.1	3845	75.71	1.08	1600	1400	3	HI4063	Available
	21.4	4160	81.92	1.75	2240	1620	3	HI4073	Available
	20.9	4244	83.58	3.23	3800	2400	3	HI4083	
	20.7	4295	84.59	1.25	1700	1500	3	HI4663	Available
	20.2	4400	86.65	3.11	3800	2400	3	HI4083	Available
	20.2	4391	86.48	1.65	2240	1620	3	HI4073	Available
	19.9	4463	87.89	1.63	2240	1620	3	HI4073	Available
	19.7	4521	89.03	3.03	3800	2400	3	HI4083	Available
	19.1	4660	91.77	1.15	1700	1500	3	HI4663	Available
	16.9	5257	103.53	2.61	3800	2400	3	HI4083	Available
	16.3	5440	107.12	1.33	2240	1620	3	HI4073	Available
	15.9	5600	110.28	2.45	3800	2400	3	HI4083	Available
	13.9	6400	126.03	2.14	3800	2400	3	HI4083	Available
	13.5	6601	130.00	1.10	2240	1620	3	HI4073	Available
	13.1	6767	133.26	3.93	4460	3440	3	HI4093	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1.5	13.1	6781	133.53	1.07	2240	1620	3	HI4073	Available
	12.9	6871	135.30	1.99	3800	2400	3	HI4083	Available
	12.7	7012	138.08	1.95	3800	2400	3	HI4083	Available
	11.6	7651	150.66	1.79	3800	2400	3	HI4083	Available
	11.1	7980	157.15	3.33	4460	3440	3	HI4093	Available
	11.1	8000	157.54	1.71	3800	2400	3	HI4083	Available
	10.9	8158	160.66	3.26	4460	3440	3	HI4093	Available
	10.6	8395	165.33	1.63	3800	2400	3	HI4083	Available
	10.2	8685	171.04	1.58	3800	2400	3	HI4083	Available
	9.6	9277	182.68	1.48	3800	2400	3	HI4083	Available
	9.5	9399	185.09	2.83	4460	3440	3	HI4093	
	9.4	9477	186.62	1.45	3800	2400	3	HI4083	Available
	8.8	10105	198.99	2.63	4460	3440	3	HI4093	Available
	8.5	10400	204.80	1.32	3800	2400	3	HI4083	Available
	7.8	11335	223.22	2.35	4460	3440	3	HI4093	
	7.7	11491	226.28	1.19	3800	2400	3	HI4083	Available
	7.6	11625	228.92	1.18	3800	2400	3	HI4083	Available
	7.5	11903	234.41	2.23	4460	3440	3	HI4093	
	7.1	12593	248.00	2.11	4460	3440	3	HI4093	
	6.8	13079	257.56	2.91	6500	5350	3	HI4103	
	6.7	13239	260.72	1.03	3800	2400	3	HI4083	Available
	6.2	14355	282.68	1.85	4460	3440	3	HI4093	
	6.1	14531	286.15	2.62	6500	5350	3	HI4103	
	5.93	14996	295.31	2.54	6500	5350	3	HI4103	
	5.57	15948	314.06	1.67	4460	3440	3	HI4093	
	5.33	16660	328.09	2.29	6500	5350	3	HI4103	
	4.90	18150	357.43	1.47	4460	3440	4	HI4094	
	4.89	18157	357.56	2.10	6500	5350	4	HI4104	
	4.40	20208	397.95	1.89	6500	5350	4	HI4104	
	3.99	22252	438.20	1.20	4460	3440	4	HI4094	
	3.92	22669	446.41	1.68	6500	5350	4	HI4104	
	3.57	24918	490.71	1.07	4460	3440	4	HI4094	
	3.32	26800	527.77	1.42	6500	5350	4	HI4104	
	2.75	32309	636.26	1.18	6500	5350	4	HI4104	
	2.49	35677	702.58	1.07	6500	5350	4	HI4104	
2	681	178	2.57	9.28	960	890	2	HI4062	Available
	665	182	2.63	5.61	530	610	2	HI4042	Available
	593	204	2.95	5.20	550	630	2	HI4042	Available
	568	213	3.08	8.26	1010	930	2	HI4062	Available
	529	229	3.31	4.81	570	650	2	HI4042	Available
	503	241	3.48	2.94	268	70	2	ALHI4042	
	503	241	3.48	2.50	204	31	2	ALHI4032	
	470	257	3.72	4.55	580	660	2	HI4042	Available
	449	270	3.90	6.97	1090	1000	2	HI4062	Available
	416	291	4.21	4.40	590	650	2	HI4042	Available
	405	299	4.32	2.60	289	70	2	ALHI4042	
	405	299	4.32	2.01	216	31	2	ALHI4032	
	387	313	4.52	6.30	1140	1050	2	HI4062	
	366	331	4.78	3.87	620	690	2	HI4042	Available
	320	378	5.47	3.38	650	730	2	HI4042	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
	318	381	5.50	2.34	350	70	2	ALHI4042	
	318	381	5.50	1.58	230	31	2	ALHI4032	
	298	406	5.87	3.15	680	780	2	HI4042	Available
	288	420	6.07	5.25	522	103	2	ALHI4052	
	285	424	6.13	3.40	710	840	2	HI4042	Available
	275	440	6.36	2.16	376	75	2	ALHI4042	
	275	440	6.36	1.37	250	33	2	ALHI4032	
	257	471	6.81	5.11	540	108	2	ALHI4052	
	255	474	6.86	3.08	740	880	2	HI4042	Available
	244	495	7.16	6.75	1180	990	2	HI4062	Available
	241	502	7.26	2.12	391	75	2	ALHI4042	
	241	502	7.26	1.20	260	33	2	ALHI4032	
	232	522	7.54	4.41	568	108	2	ALHI4052	
	227	532	7.70	2.78	770	920	2	HI4042	Available
	222	545	7.89	1.85	400	81	2	ALHI4042	
	222	545	7.89	1.10	266	33	2	ALHI4032	
	220	550	7.96	4.37	579	108	2	ALHI4052	
	202	600	8.67	2.59	790	950	2	HI4042	Available
	194	624	9.02	1.71	412	81	2	ALHI4042	
	194	624	9.02	1.28	277	41	2	ALHI4032	
	193	626	9.06	5.51	1290	1110	2	HI4062	Available
	185	654	9.45	3.83	615	117	2	ALHI4052	
	179	678	9.80	2.38	820	980	2	HI4042	Available
	174	695	10.04	1.71	420	81	2	ALHI4042	
	174	695	10.04	1.15	284	41	2	ALHI4032	
2	157	770	11.14	2.21	850	1010	2	HI4042	Available
	153	791	11.43	3.29	658	135	2	ALHI4052	
	150	807	11.64	1.47	445	91	2	ALHI4042	
	137	881	12.74	1.98	890	1060	2	HI4042	Available
	136	891	12.88	5.40	1700	1500	2	HI4662	Available
	132	917	13.26	1.30	476	91	2	ALHI4042	
	128	945	13.67	1.88	920	1100	2	HI4042	Available
	127	951	13.75	4.11	1470	1260	2	HI4062	Available
	123	984	14.21	3.87	850	171	2	ALHI4062	
	123	984	14.21	2.34	693	139	2	ALHI4052	
	114	1061	15.37	1.12	508	101	2	ALHI4042	
	107	1136	16.43	3.52	1560	1370	2	HI4062	Available
	106	1142	16.48	1.02	520	101	2	ALHI4042	
	105	1152	16.62	2.18	711	139	2	ALHI4052	
	105	1152	16.66	1.56	980	1250	2	HI4042	Available
	100	1210	17.50	3.31	1600	1400	2	HI4062	Available
	96	1262	18.25	4.12	1700	1500	2	HI4662	Available
	88	1383	20.00	2.91	1600	1400	2	HI4062	Available
	87	1391	20.10	2.74	900	189	2	ALHI4062	
	87	1391	20.10	1.80	780	157	2	ALHI4052	
	84	1436	20.77	1.26	1050	1250	2	HI4042	Availabl
	82	1485	21.47	2.72	1600	1400	2	HI4062	Available
	81	1497	21.65	3.49	1700	1500	2	HI4662	Available
	70	1729	25.00	2.34	1600	1400	2	HI4062	Available
	70	1729	24.98	2.20	944	200	2	ALHI4062	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
2	70	1729	24.98	1.33	877	175	2	ALHI4052	
	70	1731	25.04	1.05	1150	1250	2	HI4042	Available
	67	1811	26.19	2.90	1700	1500	2	HI4662	Available
	64	1877	27.14	2.16	1600	1400	2	HI4062	Available
	60	2017	29.41	1.48	1012	200	2	ALHI4062	
	60	2017	29.41	1.24	900	175	2	ALHI4052	
	59	2048	29.62	1.99	1600	1400	2	HI4062	Available
	56	2179	31.51	3.33	2200	1620	2	HI4072	Available
	54	2249	32.53	2.36	1700	1500	2	HI4662	Available
	54	2247	32.50	1.82	1600	1400	2	HI4062	Available
	52	2327	34.01	1.48	1060	260	3	ALHI4063	
	52	2327	34.01	1.05	918	202	3	ALHI4053	
	49	2483	35.91	1.65	1600	1400	2	HI4062	Available
	49	2470	35.58	1.01	922	202	2	ALHI4052	
	47	2566	37.11	2.83	2230	1620	2	HI4072	
	46	2655	38.39	2.00	1700	1500	2	HI4662	
	44	2750	39.79	1.27	1192	260	3	ALHI4063	
	39	3094	44.75	2.35	2240	1620	2	HI4072	
	39	3112	45.00	1.32	1600	1400	2	HI4062	Available
	38	3207	46.38	1.67	1700	1500	2	HI4662	
	37	3270	47.22	1.07	1330	260	3	ALHI4063	
	35	3438	49.72	2.11	2240	1620	2	HI4072	
	34	3444	50.87	2.11	2240	1620	3	HI4073	Available
	34	3566	51.57	1.50	1700	1500	2	HI4662	
	34	3544	51.25	1.16	1600	1400	2	HI4062	Available
	33	3622	53.50	3.78	3800	2400	3	HI4083	
	31	3867	57.11	3.54	3800	2400	3	HI4083	Available
	31	3774	55.74	1.92	2240	1620	3	HI4073	Available
	31	3812	56.30	1.37	1700	1500	3	HI4663	Available
	31	3777	55.79	1.09	1600	1400	3	HI4063	Available
	30	3914	57.81	1.85	2240	1620	3	HI4073	Available
	29.0	4089	60.40	1.31	1700	1500	3	HI4663	Available
	27.8	4266	63.01	1.70	2240	1620	3	HI4073	Available
	26.9	4406	65.07	1.22	1700	1500	3	HI4663	Available
	26.5	4477	66.13	1.62	2240	1620	3	HI4073	Available
	26.4	4487	66.27	3.05	3800	2400	3	HI4083	
	25.0	4736	69.95	2.89	3800	2400	3	HI4083	Available
	24.7	4804	70.95	1.51	2240	1620	3	HI4073	Available
	24.4	4848	71.61	1.50	2240	1620	3	HI4073	Available
	23.7	5006	73.94	1.07	1700	1500	3	HI4663	Available
	21.4	5547	81.92	1.31	2240	1620	3	HI4073	Available
	20.9	5659	83.58	2.42	3800	2400	3	HI4083	Available
	20.2	5867	86.65	2.34	3800	2400	3	HI4083	Available
	20.2	5855	86.48	1.24	2240	1620	3	HI4073	Available
	19.9	5951	87.89	1.22	2240	1620	3	HI4073	Available
	19.7	6028	89.03	2.27	3800	2400	3	HI4083	Available
	16.9	7010	103.53	1.95	3800	2400	3	HI4083	Available
	16.6	7125	105.23	3.73	4460	3440	3	HI4093	Available
	16.3	7253	107.12	1.00	2240	1620	3	HI4073	Available
	15.9	7467	110.28	1.83	3800	2400	3	HI4083	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
2	15.5	7632	112.72	3.49	4460	3440	3	HI4093	Available
	13.9	8533	126.03	1.61	3800	2400	3	HI4083	Available
	13.8	8590	126.87	3.10	4460	3440	3	HI4093	Available
	13.1	9023	133.26	2.95	4460	3440	3	HI4093	Available
	12.9	9161	135.30	1.50	3800	2400	3	HI4083	Available
	12.7	9349	138.08	1.47	3800	2400	3	HI4083	Available
	12.0	9912	146.39	3.84	6500	5350	3	HI4103	
	11.6	10201	150.66	1.34	3800	2400	3	HI4083	Available
	11.1	10640	157.15	2.50	4460	3440	3	HI4093	Available
	11.1	10667	157.54	1.28	3800	2400	3	HI4083	Available
	10.9	10878	160.66	2.45	4460	3440	3	HI4093	Available
	10.6	11194	165.33	1.22	3800	2400	3	HI4083	Available
	10.4	11365	167.85	3.35	6500	5350	3	HI4103	
	10.2	11581	171.04	1.18	3800	2400	3	HI4083	Available
	9.7	12277	181.32	3.10	6500	5350	3	HI4103	
	9.6	12369	182.68	1.11	3800	2400	3	HI4083	Available
	9.5	12532	185.09	2.12	4460	3440	3	HI4093	
	9.4	12635	186.62	1.08	3800	2400	3	HI4083	Available
	8.8	13473	198.99	1.97	4460	3440	3	HI4093	Available
	8.4	14076	207.90	2.71	6500	5350	3	HI4103	
	7.8	15114	223.22	1.76	4460	3440	3	HI4093	
	7.5	15871	234.41	1.68	4460	3440	3	HI4093	
	7.1	16791	248.00	1.58	4460	3440	3	HI4093	
	6.8	17439	257.56	2.18	6500	5350	3	HI4103	
	6.2	19139	282.68	1.39	4460	3440	3	HI4093	
	6.1	19374	286.15	1.97	6500	5350	3	HI4103	
	5.93	19995	295.31	1.91	6500	5350	3	HI4103	
	5.57	21264	314.06	1.25	4460	3440	3	HI4093	
	5.33	22214	328.09	1.72	6500	5350	3	HI4103	
	4.90	24200	357.43	1.10	4460	3440	4	HI4094	
	4.89	24209	357.56	1.57	6500	5350	4	HI4104	
	4.40	26944	397.95	1.41	6500	5350	4	HI4104	
	3.92	30225	446.41	1.26	6500	5350	4	HI4104	
	3.32	35734	527.77	1.07	6500	5350	4	HI4104	
3	732	248	2.39	9.52	1280	1400	2	HI4072	Available
	726	250	2.41	8.96	1230	1160	2	HI4662	Available
	681	267	2.57	6.19	960	890	2	HI4062	Available
	665	273	2.63	3.74	530	610	2	HI4042	Available
	593	306	2.95	3.46	550	630	2	HI4042	Available
	568	319	3.08	5.51	1010	930	2	HI4062	Available
	529	343	3.31	3.20	570	650	2	HI4042	Available
	503	361	3.48	1.96	268	70	2	ALHI4042	
	503	361	3.48	1.67	204	31	2	ALHI4032	
	485	374	3.61	3.93	450	103	2	ALHI4052	
	470	386	3.72	3.03	580	660	2	HI4042	Available
	449	405	3.90	4.65	1090	1000	2	HI4062	Available
	432	420	4.05	6.57	1420	1320	2	HI4662	Available
	416	437	4.21	2.93	590	650	2	HI4042	Available
	414	438	4.23	4.09	474	103	2	ALHI4052	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	405	448	4.32	1.73	289	70	2	ALHI4042	
	405	448	4.32	1.34	216	31	2	ALHI4032	
	387	469	4.52	4.20	1140	1050	2	HI4062	Available
	366	496	4.78	2.58	620	690	2	HI4042	Available
	349	520	5.01	4.23	491	103	2	ALHI4052	
	331	548	5.28	5.42	1540	1430	2	HI4662	Available
	320	567	5.47	2.26	650	730	2	HI4042	Available
	318	571	5.50	1.56	350	70	2	ALHI4042	
	298	609	5.87	2.10	680	780	2	HI4042	Available
	293	620	5.98	5.26	1080	870	2	HI4062	Available
	289	628	6.07	3.50	522	103	2	ALHI4052	
	285	636	6.13	2.26	710	840	2	HI4042	Available
	275	660	6.36	1.44	376	70	2	ALHI4042	
	265	686	6.61	5.47	1640	1500	2	HI4662	Available
	257	706	6.81	4.05	646	135	2	ALHI4062	
	257	706	6.81	3.41	540	108	2	ALHI4052	
	255	712	6.86	2.05	740	880	2	HI4042	Available
	244	743	7.16	4.50	1180	990	2	HI4062	Available
	241	753	7.26	1.41	391	75	2	ALHI4042	
	235	772	7.44	5.09	1690	1500	2	HI4662	Available
	232	782	7.54	2.94	568	108	2	ALHI4052	
	227	799	7.70	1.85	770	920	2	HI4042	Available
	222	818	7.89	1.23	400	75	2	ALHI4042	
	220	825	7.96	3.85	663	135	2	ALHI4062	
	220	825	7.96	2.91	579	108	2	ALHI4052	
	217	835	8.05	5.01	1700	1500	2	HI4662	
	202	899	8.67	1.72	790	950	2	HI4042	Available
	194	936	9.02	1.14	412	81	2	ALHI4042	
	193	940	9.06	3.67	1290	1110	2	HI4062	Available
	192	944	9.10	4.56	1700	1500	2	HI4662	
	185	981	9.45	3.06	674	144	2	ALHI4062	
	185	981	9.45	2.55	615	117	2	ALHI4052	
	179	1016	9.80	1.58	820	980	2	HI4042	Available
	177	1026	9.89	4.32	1700	1500	2	HI4662	Available
	174	1043	10.04	1.14	420	81	2	ALHI4042	
	166	1091	10.52	3.37	1340	1140	2	HI4062	Available
	157	1155	11.14	1.47	850	1010	2	HI4042	Available
	156	1167	11.25	3.99	1700	1500	2	HI4662	
	153	1186	11.43	2.19	658	135	2	ALHI4052	
	137	1321	12.74	1.32	890	1060	2	HI4042	Available
	136	1336	12.88	3.60	1700	1500	2	HI4662	Available
	128	1418	13.67	1.26	920	1100	2	HI4042	Available
	127	1426	13.75	2.74	1470	1260	2	HI4062	Available
	123	1476	14.21	2.58	850	170	2	ALHI4062	
	123	1476	14.21	1.56	693	139	2	ALHI4052	
	112	1619	15.61	3.11	1700	1500	2	HI4662	
	107	1704	16.43	2.35	1560	1370	2	HI4062	Available
	105	1729	16.62	2.20	872	170	2	ALHI4062	
	105	1729	16.62	1.45	711	139	2	ALHI4052	
	105	1728	16.66	1.04	980	1250	2	HI4042	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	100	1815	17.50	2.21	1600	1400	2	HI4062	Available
	98	1851	17.85	3.73	2030	1620	2	HI4072	Available
	96	1893	18.25	2.75	1700	1500	2	HI4662	Available
	88	2074	20.00	1.94	1600	1400	2	HI4062	Available
	87	2086	20.10	1.82	900	189	2	ALHI4062	
	87	2086	20.10	1.20	780	157	2	ALHI4052	
	83	2189	21.10	3.32	2120	1620	2	HI4072	Available
	82	2227	21.47	1.81	1600	1400	2	HI4062	Available
	81	2246	21.65	2.33	1700	1500	2	HI4662	Available
	70	2593	25.00	1.56	1600	1400	2	HI4062	Available
	70	2593	24.98	1.47	944	200	2	ALHI4062	
	69	2639	25.44	2.75	2150	1620	2	HI4072	Available
	67	2716	26.19	1.94	1700	1500	2	HI4662	Available
	64	2815	27.14	1.44	1600	1400	2	HI4062	Available
	59	3072	29.62	1.32	1600	1400	2	HI4062	
	56	3268	31.51	2.22	2200	1620	2	HI4072	Available
	54	3374	32.53	1.57	1700	1500	2	HI4662	Available
	54	3371	32.50	1.21	1600	1400	2	HI4062	
	49	3725	35.91	1.10	1600	1400	2	HI4062	
	47	3849	37.11	1.89	2230	1620	2	HI4072	
	46	3971	38.29	5.84	3370	3440	2	HI4092	
	46	3982	38.39	1.34	1700	1500	2	HI4662	
	39	4642	44.75	2.88	3800	2400	2	HI4082	
	39	4642	44.75	1.56	2240	1620	2	HI4072	
	38	4811	46.38	1.11	1700	1500	2	HI4662	
	35	5157	49.72	2.60	3800	2400	2	HI4082	
	35	5157	49.72	1.41	2240	1620	2	HI4072	
	34	5166	50.87	1.41	2240	1620	3	HI4073	Available
	34	5349	51.57	1.00	1700	1500	2	HI4662	
	33	5433	53.50	2.52	3800	2400	3	HI4083	Available
	31	5800	57.11	2.36	3800	2400	3	HI4083	Available
	31	5661	55.74	1.28	2240	1620	3	HI4073	Available
	30	5871	57.81	1.24	2240	1620	3	HI4073	Available
	29.2	6209	59.86	3.77	3370	3440	2	HI4092	
	28.1	6316	62.19	4.21	4460	3440	3	HI4093	Available
	27.8	6399	63.01	1.13	2240	1620	3	HI4073	Available
	27.6	6436	63.37	4.13	4460	3440	3	HI4093	Available
	26.5	6716	66.13	1.08	2240	1620	3	HI4073	Available
	26.4	6730	66.27	2.04	3800	2400	3	HI4083	Available
	26.1	6956	67.06	3.36	3370	3440	2	HI4092	
	25.0	7104	69.95	1.93	3800	2400	3	HI4083	Available
	24.9	7152	70.42	3.72	4460	3440	3	HI4093	
	24.8	7162	70.52	5.32	6300	5350	3	HI4103	Available
	24.7	7206	70.95	1.01	2240	1620	3	HI4073	Available
	24.4	7273	71.61	1.00	2240	1620	3	HI4073	Available
	23.9	7426	73.12	5.13	6300	5350	3	HI4103	Available
	21.8	8149	80.24	3.26	4460	3440	3	HI4093	Available
	20.9	8515	83.84	4.47	6500	5350	3	HI4103	Available
	20.9	8488	83.58	1.61	3800	2400	3	HI4083	Available
	20.2	8800	86.65	1.56	3800	2400	3	HI4083	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	19.7	9040	89.01	2.94	4460	3440	3	HI4093	Available
	19.7	9042	89.03	1.52	3800	2400	3	HI4083	Available
	17.0	10430	102.70	3.65	6500	5350	3	HI4103	Available
	16.9	10515	103.53	1.30	3800	2400	3	HI4083	Available
	16.6	10687	105.23	2.49	4460	3440	3	HI4093	Available
	15.9	11200	110.28	1.22	3800	2400	3	HI4083	Available
	15.5	11448	112.72	2.32	4460	3440	3	HI4093	Available
	14.9	11960	117.76	3.19	6500	5350	3	HI4103	Available
	14.4	12332	121.43	3.09	6500	5350	3	HI4103	Available
	13.9	12800	126.03	1.07	3800	2400	3	HI4083	Available
	13.8	12885	126.87	2.06	4460	3440	3	HI4093	Available
	13.1	13534	133.26	1.97	4460	3440	3	HI4093	Available
	12.9	13741	135.30	1.00	3800	2400	3	HI4083	Available
	12.6	14140	139.23	2.69	6500	5350	3	HI4103	Available
	12.0	14867	146.39	2.56	6500	5350	3	HI4103	Available
	11.1	15960	157.15	1.67	4460	3440	3	HI4093	Available
	10.9	16317	160.66	1.63	4460	3440	3	HI4093	Available
	10.4	17047	167.85	2.24	6500	5350	3	HI4103	Available
	9.7	18415	181.32	2.07	6500	5350	3	HI4103	Available
	9.5	18798	185.09	1.42	4460	3440	3	HI4093	
	8.8	20209	198.99	1.32	4460	3440	3	HI4093	Available
	8.4	21114	207.90	1.80	6500	5350	3	HI4103	Available
	7.8	22670	223.22	1.17	4460	3440	3	HI4093	
	7.5	23807	234.41	1.12	4460	3440	3	HI4093	
	7.1	25187	248.00	1.06	4460	3440	3	HI4093	
	6.8	26158	257.56	1.46	6500	5350	3	HI4103	
	6.1	29061	286.15	1.31	6500	5350	3	HI4103	
	5.93	29992	295.31	1.27	6500	5350	3	HI4103	
	5.33	33321	328.09	1.14	6500	5350	3	HI4103	
	4.89	36314	357.56	1.05	6500	5350	4	HI4104	
5	732	413	2.39	5.71	1280	1400	2	HI4072	Available
	726	417	2.41	5.38	1230	1160	2	HI4662	Available
	681	444	2.57	3.71	960	890	2	HI4062	Available
	665	455	2.63	2.24	530	610	2	HI4042	Available
	655	462	2.67	5.70	1340	1500	2	HI4072	Available
	646	468	2.71	5.04	1270	1190	2	HI4662	Available
	593	510	2.95	2.08	550	630	2	HI4042	Available
	585	517	2.99	5.44	1350	1580	2	HI4072	Available
	574	527	3.05	4.70	1310	1220	2	HI4662	Available
	568	532	3.08	3.31	1010	930	2	HI4062	Available
	543	557	3.22	5.10	1350	1580	2	HI4072	
	530	570	3.30	4.52	1330	1240	2	HI4662	
	529	572	3.31	1.92	570	650	2	HI4042	Available
	485	624	3.61	2.36	450	103	2	ALHI4052	
	483	626	3.62	4.60	1450	1580	2	HI4072	
	470	643	3.72	1.82	580	660	2	HI4042	Available
	469	645	3.73	4.17	1370	1260	2	HI4662	
	449	674	3.90	2.79	1090	1000	2	HI4062	Available
	446	678	3.92	4.37	1550	1580	2	HI4072	Available
	432	700	4.05	3.94	1420	1320	2	HI4662	Available

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
5	416	728	4.21	1.76	590	650	2	HI4042	Available
	414	731	4.23	2.45	474	103	2	ALHI4052	
	394	768	4.44	4.00	1620	1580	2	HI4072	
	387	781	4.52	2.52	1140	1050	2	HI4062	Available
	380	797	4.61	3.60	1470	1360	2	HI4662	
	366	826	4.78	1.55	620	690	2	HI4042	Available
	349	867	5.01	2.65	603	126	2	ALHI4062	
	349	867	5.01	2.65	491	103	2	ALHI4052	
	346	875	5.06	3.66	1640	1580	2	HI4072	Available
	331	913	5.28	3.25	1540	1430	2	HI4662	Available
	320	946	5.47	1.35	650	730	2	HI4042	Available
	298	1016	5.88	3.62	1550	1430	2	HI4662	Available
	298	1015	5.87	1.26	680	780	2	HI4042	Available
	293	1034	5.98	3.15	1080	870	2	HI4062	Available
	291	1039	6.01	5.03	1685	1580	2	HI4072	Available
	289	1047	6.07	2.65	629	126	2	ALHI4062	
	289	1047	6.07	2.10	522	103	2	ALHI4052	
	285	1060	6.13	1.36	710	840	2	HI4042	Available
	265	1143	6.61	3.28	1640	1500	2	HI4662	Available
	261	1160	6.71	4.66	1685	1580	2	HI4072	Available
	257	1177	6.81	2.43	646	135	2	ALHI4062	
	257	1177	6.81	2.04	540	108	2	ALHI4052	
	255	1186	6.86	1.23	740	880	2	HI4042	Available
	244	1238	7.16	2.70	1180	990	2	HI4062	Available
	235	1286	7.44	3.06	1690	1500	2	HI4662	Available
	233	1297	7.50	4.29	1685	1580	2	HI4072	Available
	232	1304	7.54	2.39	658	135	2	ALHI4062	
	232	1304	7.54	1.76	568	108	2	ALHI4052	
	227	1331	7.70	1.11	770	920	2	HI4042	Available
	220	1375	7.96	2.31	663	135	2	ALHI4062	
	220	1375	7.96	1.75	579	117	2	ALHI4052	
	217	1392	8.05	3.00	1700	1500	2	HI4662	
	216	1399	8.09	4.06	1685	1580	2	HI4072	
	202	1499	8.67	1.03	790	950	2	HI4042	Available
	193	1566	9.06	2.20	1290	1110	2	HI4062	Available
	192	1573	9.10	2.73	1700	1500	2	HI4662	
	185	1635	9.45	1.53	615	117	2	ALHI4052	
	178	1703	9.85	3.52	1710	1580	2	HI4072	Available
	177	1710	9.89	2.59	1700	1500	2	HI4662	Available
	166	1819	10.52	2.02	1340	1140	2	HI4062	Available
	157	1927	11.15	3.14	1780	1580	2	HI4072	
	156	1945	11.25	2.40	1700	1500	2	HI4662	
	153	1977	11.43	1.74	778	166	2	ALHI4062	
	153	1977	11.43	1.32	658	135	2	ALHI4052	
	138	2197	12.71	2.90	1830	1580	2	HI4072	Available
	136	2227	12.88	2.16	1700	1500	2	HI4662	Available
	127	2377	13.75	1.64	1470	1260	2	HI4062	Available
	123	2460	14.21	1.55	850	171	2	ALHI4062	
	112	2698	15.61	1.86	1700	1500	2	HI4662	
	107	2840	16.43	1.41	1560	1370	2	HI4062	Available
	105	2881	16.62	1.32	872	188	2	ALHI4062	
	100	3025	17.50	1.33	1600	1400	2	HI4062	Available
	98	3086	17.85	2.24	2030	1620	2	HI4072	Available
	96	3155	18.25	1.65	1700	1500	2	HI4662	Available
	88	3457	20.00	1.17	1600	1400	2	HI4062	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
5	87	3477	20.10	1.09	900	188	2	ALHI4062	
	83	3648	21.10	3.64	2750	1950	2	HI4082	Available
	83	3648	21.10	1.99	2120	1620	2	HI4072	Available
	82	3711	21.47	1.09	1600	1400	2	HI4062	Available
	81	3743	21.65	1.40	1700	1500	2	HI4662	Available
	69	4398	25.44	3.02	3000	2400	2	HI4082	Available
	69	4398	25.44	1.65	2150	1620	2	HI4072	Available
	67	4527	26.19	1.16	1700	1500	2	HI4662	Available
	56	5447	31.51	2.45	3400	2400	2	HI4082	Available
	56	5447	31.51	1.33	2200	1620	2	HI4072	Available
	47	6415	37.11	1.13	2230	1620	2	HI4072	
	46	6619	38.29	3.50	3370	3440	2	HI4092	
	39	7767	44.93	3.00	3370	3440	2	HI4092	
	39	7736	44.75	1.73	3800	2400	2	HI4082	
	35	8595	49.72	1.56	3800	2400	2	HI4082	
	33	9056	53.50	1.51	3800	2400	3	HI4083	Available
	32	9212	54.42	4.14	5550	5350	3	HI4103	Available
	31	9667	57.11	1.42	3800	2400	3	HI4083	Available
	30	9718	57.41	2.74	4460	3440	3	HI4093	
	29.2	10348	59.86	2.26	3370	3440	2	HI4092	
	28.1	10527	62.19	2.53	4460	3440	3	HI4093	Available
	27.6	10726	63.37	2.48	4460	3440	3	HI4093	Available
	26.4	11217	66.27	1.22	3800	2400	3	HI4083	Available
	25.0	11840	69.95	1.16	3800	2400	3	HI4083	Available
	24.9	11920	70.42	2.23	4460	3440	3	HI4093	
	24.8	11937	70.52	3.19	6300	5350	3	HI4103	Available
	23.9	12377	73.12	3.08	6300	5350	3	HI4103	Available
	21.8	13582	80.24	1.96	4460	3440	3	HI4093	Available
	20.9	14191	83.84	2.68	6500	5350	3	HI4103	Available
	19.7	15066	89.01	1.77	4460	3440	3	HI4093	Available
	17.0	17384	102.70	2.19	6500	5350	3	HI4103	Available
	16.6	17812	105.23	1.49	4460	3440	3	HI4093	Available
	15.5	19080	112.72	1.39	4460	3440	3	HI4093	Available
	14.9	19933	117.76	1.91	6500	5350	3	HI4103	Available
	14.4	20554	121.43	1.85	6500	5350	3	HI4103	Available
	13.8	21475	126.87	1.24	4460	3440	3	HI4093	Available
	13.1	22557	133.26	1.18	4460	3440	3	HI4093	Available
	12.6	23567	139.23	1.62	6500	5350	3	HI4103	Available
	12.0	24779	146.39	1.54	6500	5350	3	HI4103	Available
	12.0	24779	146.39	1.54	6500	5350	3	HI4103	Available
	11.1	26600	157.15	1.00	4460	3440	3	HI4093	Available
	10.4	28411	167.85	1.34	6500	5350	3	HI4103	Available
	9.7	30692	181.32	1.24	6500	5350	3	HI4103	Available
	8.4	35191	207.90	1.08	6500	5350	3	HI4103	Available
7.5	732	620	2.39	3.81	1280	1400	2	HI4072	
	726	625	2.41	3.58	1230	1160	2	HI4662	
	681	666	2.57	2.48	960	890	2	HI4062	
	665	682	2.63	1.50	530	610	2	HI4042	
	655	692	2.67	3.80	1340	1500	2	HI4072	
	646	703	2.71	3.36	1270	1190	2	HI4662	
	593	765	2.95	1.39	550	630	2	HI4042	
	585	775	2.99	3.62	1350	1580	2	HI4072	
	574	791	3.05	3.14	1310	1220	2	HI4662	
	568	799	3.08	2.20	1010	930	2	HI4062	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
7.5	543	835	3.22	3.40	1350	1580	2	HI4072	
	530	856	3.30	3.02	1330	1240	2	HI4662	
	529	858	3.31	1.28	570	650	2	HI4042	
	485	936	3.61	1.76	534	126	2	ALHI4062	
	485	936	3.61	1.57	450	103	2	ALHI4052	
	483	939	3.62	3.07	1450	1580	2	HI4072	
	470	965	3.72	1.21	580	660	2	HI4042	
	469	967	3.73	2.78	1370	1260	2	HI4662	
	449	1011	3.90	1.86	1090	1000	2	HI4062	
	446	1016	3.92	2.91	1550	1580	2	HI4072	
	432	1050	4.05	2.63	1420	1320	2	HI4662	
	416	1092	4.21	1.17	590	650	2	HI4042	
	414	1096	4.23	1.76	566	126	2	ALHI4062	
	414	1096	4.23	1.64	474	103	2	ALHI4052	
	394	1151	4.44	2.67	1620	1580	2	HI4072	
	387	1172	4.52	1.68	1140	1050	2	HI4062	
	380	1195	4.61	2.40	1470	1360	2	HI4662	
	366	1239	4.78	1.03	620	690	2	HI4042	
	349	1300	5.01	1.76	603	126	2	ALHI4062	
	349	1300	5.01	1.69	491	103	2	ALHI4052	
	346	1312	5.06	2.44	1640	1580	2	HI4072	
	331	1369	5.28	2.17	1540	1430	2	HI4662	
	298	1525	5.88	2.41	1550	1430	2	HI4662	
	293	1551	5.98	2.10	1080	870	2	HI4062	
	291	1558	6.01	3.36	1685	1580	2	HI4072	
	289	1570	6.07	1.76	629	126	2	ALHI4062	
	289	1570	6.07	1.40	522	103	2	ALHI4052	
	265	1714	6.61	2.19	1640	1500	2	HI4662	
	261	1740	6.71	3.10	1685	1580	2	HI4072	
	257	1766	6.81	1.62	646	135	2	ALHI4062	
	257	1766	6.81	1.36	540	108	2	ALHI4052	
	244	1857	7.16	1.80	1180	990	2	HI4062	
	235	1929	7.44	2.04	1690	1500	2	HI4662	
	233	1945	7.50	2.86	1685	1580	2	HI4072	
	232	1956	7.54	1.60	658	135	2	ALHI4062	
	232	1956	7.54	1.18	568	108	2	ALHI4052	
	220	2063	7.96	1.54	663	135	2	ALHI4062	
	220	2063	7.96	1.16	579	108	2	ALHI4052	
	217	2087	8.05	2.00	1700	1500	2	HI4662	
	216	2098	8.09	2.71	1685	1580	2	HI4072	
	193	2357	9.09	2.49	1710	1580	2	HI4072	
	193	2349	9.06	1.47	1290	1110	2	HI4062	
	192	2360	9.10	1.82	1700	1500	2	HI4662	
	185	2453	9.45	1.22	674	144	2	ALHI4062	
	185	2453	9.45	1.02	615	117	2	ALHI4052	
	178	2554	9.85	2.35	1710	1580	2	HI4072	
	177	2565	9.89	1.73	1700	1500	2	HI4662	
	166	2728	10.52	1.35	1340	1140	2	HI4062	
	157	2891	11.15	2.09	1780	1580	2	HI4072	
	156	2917	11.25	1.60	1700	1500	2	HI4662	
	153	2966	11.43	1.16	778	166	2	ALHI4062	
	138	3296	12.71	3.70	2350	1850	2	HI4082	
	138	3296	12.71	1.93	1830	1580	2	HI4072	
	136	3340	12.88	1.44	1700	1500	2	HI4662	
	127	3565	13.75	1.10	1470	1260	2	HI4062	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
7.5	123	3689	14.21	1.03	850	170	2	ALHI4062	
	112	4048	15.61	1.24	1700	1500	2	HI4662	
	98	4629	17.85	2.85	2500	1950	2	HI4082	
	98	4629	17.85	1.49	2030	1620	2	HI4072	
	96	4732	18.25	1.10	1700	1500	2	HI4662	
	83	5471	21.10	2.42	2750	1950	2	HI4082	
	83	5471	21.10	1.33	2120	1620	2	HI4072	
	69	6597	25.44	2.02	3000	2400	2	HI4082	
	69	6597	25.44	1.10	2150	1620	2	HI4072	
	64	7131	27.50	3.24	3370	3420	2	HI4092	
	56	8064	31.10	2.86	3370	3440	2	HI4092	
	56	8171	31.51	1.63	3400	2400	2	HI4082	
	46	9929	38.29	2.34	3370	3440	2	HI4092	
	41	10956	43.15	3.48	5000	5350	3	HI4103	
	39	11650	44.93	2.00	3370	3440	2	HI4092	
	39	11604	44.75	1.15	3800	2400	2	HI4082	
	38	11819	46.55	3.22	5100	5350	3	HI4103	
	35	12560	49.47	3.03	5300	5350	3	HI4103	
	35	12893	49.72	1.04	3800	2400	2	HI4082	
	33	13279	52.30	2.87	5450	5350	3	HI4103	
	33	13551	53.37	2.81	5500	5350	3	HI4103	
	33	13584	53.50	1.01	3800	2400	3	HI4083	
	32	13817	54.42	2.76	5550	5350	3	HI4103	
	30	14576	57.41	1.82	4460	3440	3	HI4093	
	29.2	15226	59.97	2.50	5750	5350	3	HI4103	
	29.2	15522	59.86	1.51	3370	3440	2	HI4092	
	28.5	15617	61.51	2.44	6000	5350	3	HI4103	
	28.1	15790	62.19	1.68	4460	3440	3	HI4093	
	28.0	15843	62.40	2.40	6000	5350	3	HI4103	
	27.6	16090	63.37	1.65	4460	3440	3	HI4093	
	26.1	17389	67.06	1.35	3370	3440	2	HI4092	
	24.9	17880	70.42	1.49	4460	3440	3	HI4093	
	24.8	17905	70.52	2.13	6300	5350	3	HI4103	
	23.9	18565	73.12	2.05	6300	5350	3	HI4103	
	21.8	20373	80.24	1.31	4460	3440	3	HI4093	
	20.9	21287	83.84	1.79	6500	5350	3	HI4103	
	19.7	22600	89.01	1.18	4460	3440	3	HI4093	
	17.0	26076	102.70	1.46	6500	5350	3	HI4103	
	16.6	26718	105.23	1.00	4460	3440	3	HI4093	
	14.9	29899	117.76	1.27	6500	5350	3	HI4103	
	14.4	30831	121.43	1.24	6500	5350	3	HI4103	
	12.6	35351	139.23	1.08	6500	5350	3	HI4103	
	12.0	37169	146.39	1.03	6500	5350	3	HI4103	
10	732	826	2.39	2.86	1280	1400	2	HI4072	
	726	833	2.41	2.69	1230	1160	2	HI4662	
	681	889	2.57	1.86	960	890	2	HI4062	
	665	909	2.63	1.12	530	610	2	HI4042	
	655	923	2.67	2.85	1340	1500	2	HI4072	
	646	937	2.71	2.52	1270	1190	2	HI4662	
	593	1020	2.95	1.04	550	630	2	HI4042	
	585	1034	2.99	2.72	1350	1580	2	HI4072	
	574	1054	3.05	2.35	1310	1220	2	HI4662	
	568	1065	3.08	1.65	1010	930	2	HI4062	

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HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
10	543	1113	3.22	2.55	1350	1580	2	HI4072	
	530	1141	3.30	2.26	1330	1240	2	HI4662	
	483	1252	3.62	2.30	1450	1580	2	HI4072	
	469	1290	3.73	2.09	1370	1260	2	HI4662	
	449	1348	3.90	1.39	1090	1000	2	HI4062	
	446	1355	3.92	2.18	1550	1580	2	HI4072	
	432	1400	4.05	1.97	1420	1320	2	HI4662	
	411	1473	4.26	3.73	1860	1850	2	HI4082	
	394	1535	4.44	2.00	1620	1580	2	HI4072	
	387	1563	4.52	1.26	1140	1050	2	HI4062	
	380	1594	4.61	1.80	1470	1360	2	HI4662	
	346	1749	5.06	3.29	1880	1850	2	HI4082	
	346	1749	5.06	1.83	1640	1580	2	HI4072	
	331	1825	5.28	1.63	1540	1430	2	HI4662	
	298	2033	5.88	1.81	1550	1430	2	HI4662	
	293	2068	5.98	1.58	1080	870	2	HI4062	
	291	2078	6.01	2.52	1685	1580	2	HI4072	
	265	2285	6.61	1.64	1640	1500	2	HI4662	
	261	2320	6.71	2.33	1685	1580	2	HI4072	
	244	2475	7.16	1.35	1180	990	2	HI4062	
	235	2572	7.44	1.53	1690	1500	2	HI4662	
	233	2593	7.50	2.14	1685	1580	2	HI4072	
	217	2783	8.05	1.50	1700	1500	2	HI4662	
	216	2797	8.09	3.80	2100	1850	2	HI4082	
	216	2797	8.09	2.03	1685	1580	2	HI4072	
	193	3132	9.06	1.10	1290	1110	2	HI4062	
	193	3143	9.09	3.53	2140	1850	2	HI4082	
	193	3143	9.09	1.86	1710	1580	2	HI4072	
	192	3146	9.10	1.37	1700	1500	2	HI4662	
	185	3271	9.46	3.42	2150	1850	2	HI4082	
	178	3406	9.85	1.76	1710	1580	2	HI4072	
	177	3419	9.89	1.30	1700	1500	2	HI4662	
	166	3637	10.52	1.01	1340	1140	2	HI4062	
	164	3696	10.69	3.15	2200	1850	2	HI4082	
	157	3855	11.15	1.57	1780	1580	2	HI4072	
	156	3890	11.25	1.20	1700	1500	2	HI4662	
	138	4394	12.71	2.77	2350	1850	2	HI4082	
	138	4394	12.71	1.45	1830	1580	2	HI4072	
	136	4453	12.88	1.08	1700	1500	2	HI4662	
	124	4899	14.17	4.16	3370	2360	2	HI4092	
	98	6171	17.85	2.14	2500	1950	2	HI4082	
	98	6171	17.85	1.12	2030	1620	2	HI4072	
	96	6310	18.25	3.50	3370	2740	2	HI4092	
	87	6925	20.03	3.34	3370	2850	2	HI4092	
	83	7295	21.10	1.82	2750	1950	2	HI4082	
	83	7295	21.10	1.00	2120	1620	2	HI4072	
	71	8488	24.55	2.95	3370	3240	2	HI4092	
	69	8796	25.44	1.51	3000	2400	2	HI4082	
	64	9508	27.50	2.43	3370	3420	2	HI4092	
	56	10752	31.10	2.15	3370	3440	2	HI4092	
	56	10894	31.51	1.22	3400	2400	2	HI4082	
	54	11230	32.48	3.39	4350	5320	2	HI4102	
	51	11700	34.56	3.26	4550	5350	3	HI4103	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
10	46	13238	38.29	1.75	3370	3440	2	HI4092	
	45	13064	38.59	2.92	4570	5350	3	HI4103	
	44	13416	39.63	2.84	4850	5350	3	HI4103	
	41	14608	43.15	2.61	5000	5350	3	HI4103	
	39	15534	44.93	1.50	3370	3440	2	HI4092	
	38	15759	46.55	2.42	5100	5350	3	HI4103	
	35	16747	49.47	2.27	5300	5350	3	HI4103	
	33	17705	52.30	2.15	5450	5350	3	HI4103	
	33	18068	53.37	2.11	5500	5350	3	HI4103	
	32	18423	54.42	2.07	5550	5350	3	HI4103	
	30	19435	57.41	1.37	4460	3440	3	HI4093	
	29.2	20696	59.86	1.13	3370	3440	2	HI4092	
	29.2	20302	59.97	1.88	5750	5350	3	HI4103	
	28.5	20823	61.51	1.83	6000	5350	3	HI4103	
	28.1	21053	62.19	1.26	4460	3440	3	HI4093	
	28.0	21125	62.40	1.80	6000	5350	3	HI4103	
	27.6	21453	63.37	1.24	4460	3440	3	HI4093	
	26.1	23185	67.06	1.01	3370	3440	2	HI4092	
	24.9	23840	70.42	1.12	4460	3440	3	HI4093	
	24.8	23873	70.52	1.60	6300	5350	3	HI4103	
	23.9	24754	73.12	1.54	6300	5350	3	HI4103	
	20.9	28383	83.84	1.34	6500	5350	3	HI4103	
	17.0	34767	102.70	1.10	6500	5350	3	HI4103	
15	732	1239	2.39	1.90	1280	1400	2	HI4072	
	731	1242	2.39	3.58	1820	1850	2	HI4082	
	726	1250	2.41	1.79	1230	1160	2	HI4662	
	681	1333	2.57	1.24	960	890	2	HI4062	
	655	1385	2.67	3.37	1830	1850	2	HI4082	
	655	1385	2.67	1.90	1340	1500	2	HI4072	
	646	1405	2.71	1.68	1270	1190	2	HI4662	
	585	1551	2.99	3.15	1840	1850	2	HI4082	
	585	1551	2.99	1.81	1350	1580	2	HI4072	
	574	1582	3.05	1.57	1310	1220	2	HI4662	
	568	1597	3.08	1.10	1010	930	2	HI4062	
	543	1670	3.22	2.99	1840	1850	2	HI4082	
	543	1670	3.22	1.70	1350	1580	2	HI4072	
	530	1711	3.30	1.51	1330	1240	2	HI4662	
	483	1877	3.62	2.79	1840	1850	2	HI4082	
	483	1877	3.62	1.53	1450	1580	2	HI4072	
	469	1934	3.73	1.39	1370	1260	2	HI4662	
	464	1955	3.77	2.70	1850	1850	2	HI4082	
	446	2033	3.92	1.46	1550	1580	2	HI4072	
	432	2100	4.05	1.31	1420	1320	2	HI4662	
	411	2209	4.26	2.48	1860	1850	2	HI4082	
	394	2303	4.44	1.33	1620	1580	2	HI4072	
	380	2391	4.61	1.20	1470	1360	2	HI4662	
	346	2624	5.06	2.19	1880	1850	2	HI4082	
	346	2624	5.06	1.22	1640	1580	2	HI4072	
	331	2738	5.28	1.08	1540	1430	2	HI4662	
	326	2780	5.36	3.78	3370	2290	2	HI4092	
	298	3049	5.88	1.21	1550	1430	2	HI4662	
	293	3101	5.98	1.05	1080	870	2	HI4062	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
15	291	3117	6.01	3.03	1900	1850	2	HI4082	
	291	3117	6.01	1.68	1685	1580	2	HI4072	
	265	3428	6.61	1.09	1640	1500	2	HI4662	
	261	3480	6.71	2.84	1980	1850	2	HI4082	
	261	3480	6.71	1.55	1685	1580	2	HI4072	
	235	3858	7.44	1.02	1690	1500	2	HI4662	
	233	3890	7.50	2.66	2080	1850	2	HI4082	
	233	3890	7.50	1.43	1685	1580	2	HI4072	
	217	4175	8.05	1.00	1700	1500	2	HI4662	
	216	4196	8.09	2.53	2100	1850	2	HI4082	
	216	4196	8.09	1.35	1685	1580	2	HI4072	
	193	4714	9.09	2.35	2140	1850	2	HI4082	
	193	4714	9.09	1.24	1710	1580	2	HI4072	
	185	4906	9.46	2.28	2150	1850	2	HI4082	
	178	5108	9.85	1.17	1710	1580	2	HI4072	
	164	5544	10.69	2.10	2200	1850	2	HI4082	
	157	5782	11.15	1.05	1780	1580	2	HI4072	
	144	6311	12.17	3.04	3370	2290	2	HI4092	
	138	6591	12.71	1.85	2350	1850	2	HI4082	
	124	7349	14.17	2.78	3370	2360	2	HI4092	
	98	9257	17.85	1.43	2500	1950	2	HI4082	
	96	9465	18.25	2.34	3370	2740	2	HI4092	
	87	10388	20.03	2.22	3370	2850	2	HI4092	
	83	10943	21.10	1.21	2750	1950	2	HI4082	
	78	11564	22.30	3.29	3700	3750	2	HI4102	
	71	12732	24.55	1.96	3370	3240	2	HI4092	
	70	12972	25.01	2.94	3900	3750	2	HI4102	
	69	13193	25.44	1.01	3000	2400	2	HI4082	
	64	14262	27.50	1.62	3370	3420	2	HI4092	
	62	14694	28.33	2.59	4200	3750	2	HI4102	
	56	16129	31.10	1.43	3370	3440	2	HI4092	
	54	16845	32.48	2.26	4350	5320	2	HI4102	
	51	17550	34.56	2.17	4550	5350	3	HI4103	
	46	19857	38.29	1.17	3370	3440	2	HI4092	
	45	19596	38.59	1.94	4570	5350	3	HI4103	
	44	20124	39.63	1.89	4850	5350	3	HI4103	
	41	21912	43.15	1.74	5000	5350	3	HI4103	
	39	23301	44.93	1.00	3370	3440	2	HI4092	
	38	23638	46.55	1.61	5100	5350	3	HI4103	
	35	25121	49.47	1.52	5300	5350	3	HI4103	
	33	26558	52.30	1.43	5450	5350	3	HI4103	
	33	27101	53.37	1.41	5500	5350	3	HI4103	
	32	27635	54.42	1.38	5550	5350	3	HI4103	
	29	30453	59.97	1.25	5750	5350	3	HI4103	
	28.5	31235	61.51	1.22	6000	5350	3	HI4103	
	28.0	31687	62.40	1.20	6000	5350	3	HI4103	
	24.8	35810	70.52	1.06	6300	5350	3	HI4103	
	23.9	37130	73.12	1.03	6300	5350	3	HI4103	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
20	732	1653	2.39	1.43	1280	1400	2	HI4072	
	731	1655	2.39	2.69	1820	1850	2	HI4082	
	726	1666	2.41	1.34	1230	1160	2	HI4662	
	655	1846	2.67	2.52	1830	1850	2	HI4082	
	655	1846	2.67	1.42	1340	1500	2	HI4072	
	646	1874	2.71	1.26	1270	1190	2	HI4662	
	585	2068	2.99	2.36	1840	1850	2	HI4082	
	585	2068	2.99	1.36	1350	1580	2	HI4072	
	574	2109	3.05	1.18	1310	1220	2	HI4662	
	543	2227	3.22	2.25	1840	1850	2	HI4082	
	543	2227	3.22	1.28	1350	1580	2	HI4072	
	530	2282	3.30	1.13	1330	1240	2	HI4662	
	486	2489	3.60	3.90	3370	2290	2	HI4092	
	483	2503	3.62	2.09	1840	1850	2	HI4082	
	483	2503	3.62	1.15	1450	1580	2	HI4072	
	469	2579	3.73	1.04	1370	1260	2	HI4662	
	464	2607	3.77	2.02	1850	1850	2	HI4082	
	446	2711	3.92	1.09	1550	1580	2	HI4072	
	411	2946	4.26	1.86	1860	1850	2	HI4082	
	394	3070	4.44	1.00	1620	1580	2	HI4072	
	380	3181	4.60	3.30	3370	2290	2	HI4092	
	346	3499	5.06	1.64	1880	1850	2	HI4082	
	326	3706	5.36	2.84	3370	2290	2	HI4092	
	291	4156	6.01	2.27	1900	1850	2	HI4082	
	291	4156	6.01	1.26	1685	1580	2	HI4072	
	262	4626	6.69	3.78	3370	2290	2	HI4092	
	261	4640	6.71	2.13	1980	1850	2	HI4082	
	261	4640	6.71	1.16	1685	1580	2	HI4072	
	233	5186	7.50	2.00	2080	1850	2	HI4082	
	233	5186	7.50	1.07	1685	1580	2	HI4072	
	216	5594	8.09	1.90	2100	1850	2	HI4082	
	216	5594	8.09	1.02	1685	1580	2	HI4072	
	210	5767	8.34	3.12	3370	2290	2	HI4092	
	193	6286	9.09	1.77	2140	1850	2	HI4082	
	185	6541	9.46	1.71	2150	1850	2	HI4082	
	184	6583	9.52	2.76	3370	2290	2	HI4092	
	164	7392	10.69	1.58	2200	1850	2	HI4082	
	144	8415	12.17	2.28	3370	2290	2	HI4092	
	138	8789	12.71	1.39	2350	1850	2	HI4082	
	124	9798	14.17	2.08	3370	2360	2	HI4092	
	121	9967	14.41	3.82	3050	3040	2	HI4102	
	98	12343	17.85	1.07	2500	1950	2	HI4082	
	97	12530	18.12	3.04	3350	3040	2	HI4102	
	96	12619	18.25	1.75	3370	2740	2	HI4092	
	87	13850	20.03	1.67	3370	2850	2	HI4092	
	87	13854	20.04	2.75	3500	3300	2	HI4102	
	78	15418	22.30	2.47	3700	3750	2	HI4102	
	71	16976	24.55	1.47	3370	3240	2	HI4092	
	70	17297	25.01	2.20	3900	3750	2	HI4102	
	64	19016	27.50	1.21	3370	3420	2	HI4092	
	62	19592	28.33	1.94	4200	3750	2	HI4102	
	56	21505	31.10	1.07	3370	3440	2	HI4092	
	54	22460	32.48	1.70	4350	5320	2	HI4102	
	51	23399	34.56	1.63	4550	5350	3	HI4103	
	45	26128	38.59	1.46	4570	5350	3	HI4103	
	44	26832	39.63	1.42	4850	5350	3	HI4103	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
20	38	31518	46.55	1.21	5100	5350	3	HI4103	
	35	33495	49.47	1.14	5300	5350	3	HI4103	
	33	35411	52.30	1.08	5450	5350	3	HI4103	
	33	36135	53.37	1.05	5500	5350	3	HI4103	
	32	36846	54.42	1.03	5550	5350	3	HI4103	
25	781	1936	2.24	4.13	3370	2200	2	HI4092	
	732	2066	2.39	1.14	1280	1400	2	HI4072	
	731	2069	2.39	2.15	1820	1850	2	HI4082	
	726	2083	2.41	1.08	1230	1160	2	HI4662	
	692	2187	2.53	3.85	3370	2270	2	HI4092	
	655	2308	2.67	2.02	1830	1850	2	HI4082	
	655	2308	2.67	1.14	1340	1500	2	HI4072	
	646	2342	2.71	1.01	1270	1190	2	HI4662	
	585	2584	2.99	1.89	1840	1850	2	HI4082	
	585	2584	2.99	1.09	1350	1580	2	HI4072	
	556	2723	3.15	3.39	3370	2290	2	HI4092	
	543	2783	3.22	1.80	1840	1850	2	HI4082	
	543	2783	3.22	1.02	1350	1580	2	HI4072	
	486	3112	3.60	3.12	3370	2290	2	HI4092	
	483	3129	3.62	1.67	1840	1850	2	HI4082	
	464	3259	3.77	1.62	1850	1850	2	HI4082	
	411	3682	4.26	1.49	1860	1850	2	HI4082	
	380	3976	4.60	2.64	3370	2290	2	HI4092	
	346	4374	5.06	1.31	1880	1850	2	HI4082	
	326	4633	5.36	2.27	3370	2290	2	HI4092	
	296	5117	5.92	3.22	3370	2290	2	HI4092	
	291	5195	6.01	1.82	1900	1850	2	HI4082	
	291	5195	6.01	1.01	1685	1580	2	HI4072	
	262	5782	6.69	3.03	3370	2290	2	HI4092	
	261	5800	6.71	1.71	1980	1850	2	HI4082	
	233	6483	7.50	1.60	2080	1850	2	HI4082	
	223	6789	7.85	4.12	2790	2790	2	HI4102	
	216	6993	8.09	1.52	2100	1850	2	HI4082	
	210	7209	8.34	2.50	3370	2290	2	HI4092	
	193	7857	9.09	1.41	2140	1850	2	HI4082	
	185	8177	9.46	1.37	2150	1850	2	HI4082	
	184	8229	9.52	2.21	3370	2290	2	HI4092	
	164	9240	10.69	1.26	2200	1850	2	HI4082	
	144	10519	12.17	1.83	3370	2290	2	HI4092	
	143	10555	12.21	3.61	2810	2790	2	HI4102	
	138	10986	12.71	1.11	2350	1850	2	HI4082	
	124	12248	14.17	1.67	3370	2360	2	HI4092	
	121	12459	14.41	3.06	3050	3040	2	HI4102	
	97	15662	18.12	2.43	3350	3040	2	HI4102	
	96	15774	18.25	1.40	3370	2740	2	HI4092	
	87	17313	20.03	1.33	3370	2850	2	HI4092	
	87	17317	20.04	2.20	3500	3300	2	HI4102	
	78	19273	22.30	1.98	3700	3750	2	HI4102	
	71	21220	24.55	1.18	3370	3240	2	HI4092	
	70	21621	25.01	1.76	3900	3750	2	HI4102	
	62	24489	28.33	1.56	4200	3750	2	HI4102	
	54	28075	32.48	1.36	4350	5320	2	HI4102	
	51	29249	34.56	1.30	4550	5350	3	HI4103	
	45	32660	38.59	1.17	4570	5350	3	HI4103	
	44	33540	39.63	1.14	4850	5350	3	HI4103	
	41	36519	43.15	1.04	5000	5350	3	HI4103	

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
30	731	2483	2.39	1.79	1820	1850	2	HI4082	
	655	2769	2.67	1.68	1830	1850	2	HI4082	
	585	3101	2.99	1.57	1840	1850	2	HI4082	
	556	3267	3.15	2.83	3370	2290	2	HI4092	
	543	3340	3.22	1.50	1840	1850	2	HI4082	
	486	3734	3.60	2.60	3370	2290	2	HI4092	
	483	3755	3.62	1.39	1840	1850	2	HI4082	
	464	3910	3.77	1.35	1850	1850	2	HI4082	
	411	4419	4.26	1.24	1860	1850	2	HI4082	
	380	4771	4.60	2.20	3370	2290	2	HI4092	
	34	5248	5.06	1.10	1880	1850	2	HI4082	
	326	5559	5.36	1.89	3370	2290	2	HI4092	
	296	6140	5.92	2.69	3370	2290	2	HI4092	
	291	6234	6.01	1.52	1900	1850	2	HI4082	
	262	6939	6.69	2.52	3370	2290	2	HI4092	
	261	6960	6.71	1.42	1980	1850	2	HI4082	
	233	7779	7.50	1.33	2080	1850	2	HI4082	
	216	8391	8.09	1.27	2100	1850	2	HI4082	
	210	8650	8.34	2.08	3370	2290	2	HI4092	
	193	9428	9.09	1.18	2140	1850	2	HI4082	
	185	9812	9.46	1.14	2150	1850	2	HI4082	
	184	9874	9.52	1.84	3370	2290	2	HI4092	
	164	11088	10.69	1.05	2200	1850	2	HI4082	
	144	12623	12.17	1.52	3370	2290	2	HI4092	
	143	12666	12.21	3.01	2810	2790	2	HI4102	
	124	14697	14.17	1.39	3370	2360	2	HI4092	
	121	14950	14.41	2.55	3050	3040	2	HI4102	
	97	18794	18.12	2.03	3350	3040	2	HI4102	
	96	18929	18.25	1.17	3370	2740	2	HI4092	
	87	20775	20.03	1.11	3370	2850	2	HI4092	
	87	20781	20.04	1.83	3500	3300	2	HI4102	
	78	23128	22.30	1.65	3700	3750	2	HI4102	
	70	25945	25.01	1.47	3900	3750	2	HI4102	
	62	29387	28.33	1.30	4200	3750	2	HI4102	
	54	33690	32.48	1.13	4350	5320	2	HI4102	
	51	35099	34.56	1.09	4550	5350	3	HI4103	
40	781	3098	2.24	2.58	3370	2200	2	HI4092	
	774	3125	2.26	3.13	2725	2790	2	HI4102	
	731	3311	2.39	1.34	1820	1850	2	HI4082	
	692	3499	2.53	2.41	3370	2270	2	HI4092	
	678	3568	2.58	3.12	2735	2790	2	HI4102	
	655	3692	2.67	1.26	1830	1850	2	HI4082	
	592	4088	2.96	3.13	2745	2790	2	HI4102	
	585	4135	2.99	1.18	1840	1850	2	HI4082	
	556	4356	3.15	2.12	3370	2290	2	HI4092	
	543	4453	3.22	1.12	1840	1850	2	HI4082	
	486	4979	3.60	1.95	3370	2290	2	HI4092	
	483	5006	3.62	1.04	1840	1850	2	HI4082	
	464	5214	3.77	1.01	1850	1850	2	HI4082	
	461	5244	3.79	3.13	2755	2790	2	HI4102	
	381	6356	4.60	3.04	2570	2790	2	HI4102	

* MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER (SEE SECTION H)
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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

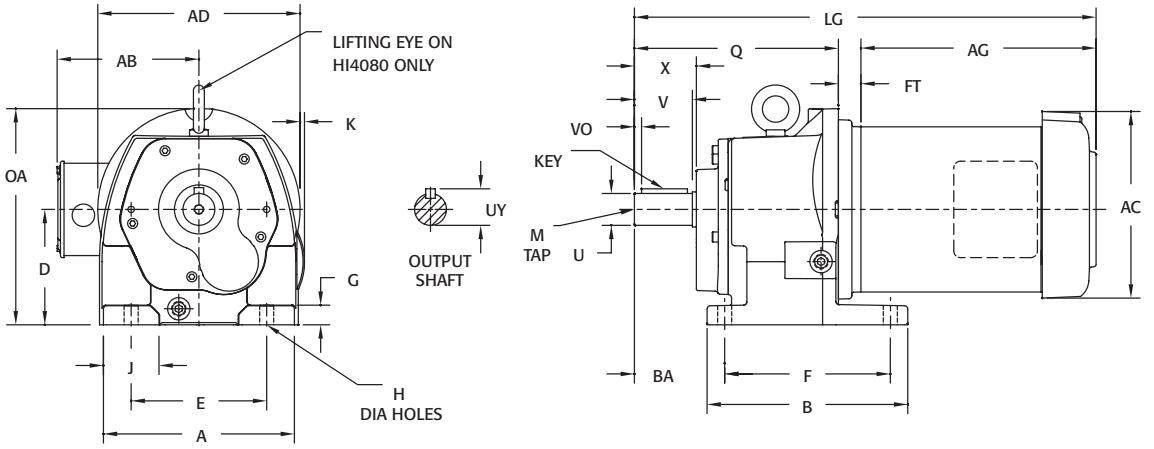
SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
40	380	6362	4.60	1.65	3370	2290	2	HI4092	
	326	7413	5.36	1.42	3370	2290	2	HI4092	
	323	7502	5.43	2.57	2700	2790	2	HI4102	
	296	8187	5.92	2.02	3370	2290	2	HI4092	
	291	8305	6.01	3.13	2750	2790	2	HI4102	
	291	8312	6.01	1.14	1900	1850	2	HI4082	
	262	9252	6.69	1.89	3370	2290	2	HI4092	
	261	9280	6.71	1.07	1980	1850	2	HI4082	
	255	9483	6.86	2.77	2785	2790	2	HI4102	
	233	10372	7.50	1.00	2080	1850	2	HI4082	
	223	10862	7.85	2.58	2790	2790	2	HI4102	
	210	11534	8.34	1.56	3370	2290	2	HI4092	
	184	13166	9.52	1.38	3370	2290	2	HI4092	
	174	13937	10.08	2.51	2800	2790	2	HI4102	
	144	16830	12.17	1.14	3370	2290	2	HI4092	
	143	16889	12.21	2.26	2810	2790	2	HI4102	
	124	19596	14.17	1.04	3370	2360	2	HI4092	
	121	19934	14.41	1.91	3050	3040	2	HI4102	
	97	25059	18.12	1.52	3350	3040	2	HI4102	
	87	27707	20.04	1.38	3500	3300	2	HI4102	
	78	30837	22.30	1.24	3700	3750	2	HI4102	
	70	34593	25.01	1.10	3900	3750	2	HI4102	
50	781	3872	2.24	2.07	3370	2200	2	HI4092	
	774	3907	2.26	2.50	2725	2790	2	HI4102	
	731	4138	2.39	1.08	1820	1850	2	HI4082	
	692	4374	2.53	1.93	3370	2270	2	HI4092	
	678	4460	2.58	2.50	2735	2790	2	HI4102	
	655	4616	2.67	1.01	1830	1850	2	HI4082	
	592	5110	2.96	2.50	2745	2790	2	HI4102	
	556	5445	3.15	1.70	3370	2290	2	HI4092	
	486	6223	3.60	1.56	3370	2290	2	HI4092	
	461	6555	3.79	2.50	2755	2790	2	HI4102	
	381	7945	4.60	2.43	2570	2790	2	HI4102	
	380	7952	4.60	1.32	3370	2290	2	HI4092	
	326	9266	5.36	1.13	3370	2290	2	HI4092	
	323	9378	5.43	2.06	2700	2790	2	HI4102	
	296	10234	5.92	1.61	3370	2290	2	HI4092	
	291	10381	6.01	2.50	2750	2790	2	HI4102	
	262	11565	6.69	1.51	3370	2290	2	HI4092	
	255	11854	6.86	2.22	2785	2790	2	HI4102	
	223	13577	7.85	2.06	2790	2790	2	HI4102	
	210	14417	8.34	1.25	3370	2290	2	HI4092	
	184	16457	9.52	1.11	3370	2290	2	HI4092	
	174	17422	10.08	2.01	2800	2790	2	HI4102	
	143	21111	12.21	1.80	2810	2790	2	HI4102	
	121	24917	14.41	1.53	3050	3040	2	HI4102	
	97	31324	18.12	1.22	3350	3040	2	HI4102	
	87	34634	20.04	1.10	3500	3300	2	HI4102	

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INTEGRAL DOUBLE REDUCTION



GEARCASE

DIMENSIONS ARE INCH/ mm

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4042I	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	$90^{+0}_{-.5}$	110	130	15	10	35	7	170	185
HI4062I	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4662I	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4072I	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4082I	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4042I	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062I	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662I	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072I	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082I	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4042I	0.25	4.58	6.38	6.99	0.55	14.83
	0.33	4.58	6.38	7.24	0.55	15.08
	0.50	4.58	6.38	7.74	0.55	15.58
	0.75	4.58	6.38	8.24	0.55	16.08
	1.00**	5.56	7.68	9.22	0.73	17.24
	1.50**	5.56	7.68	9.22	0.73	17.24
	2.00**	5.56	7.68	10.72	0.73	18.74
	3.00**	7.19	9.78	10.07	1.78	19.14
	5.00**	7.19	9.78	11.57	1.78	20.64
HI4062I	0.75	4.58	6.38	8.24	0.71	17.35
	1.00	5.56	7.68	9.22	0.88	18.50
	1.50	5.56	7.68	9.22	0.88	18.50
	2.00	5.56	7.68	10.72	0.88	20.00
	3.00**	7.19	9.78	10.07	1.94	20.41
	5.00**	7.19	9.78	11.57	1.94	21.91

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4662I	1.50	5.56	7.68	9.22	0.88	19.54
	2.00	5.56	7.68	10.72	0.88	21.04
	3.00	7.19	9.78	10.07	1.94	21.45
	5.00	7.19	9.78	11.57	1.94	22.95
HI4072I	2.00	5.56	7.68	10.72	0.57	22.08
	3.00	7.19	9.78	10.07	1.63	22.49
	5.00	7.19	9.78	11.57	1.63	23.99
HI4082I	3.00	7.19	9.78	10.07	1.47	24.53
	5.00	7.19	9.78	11.57	1.47	26.03

* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE.

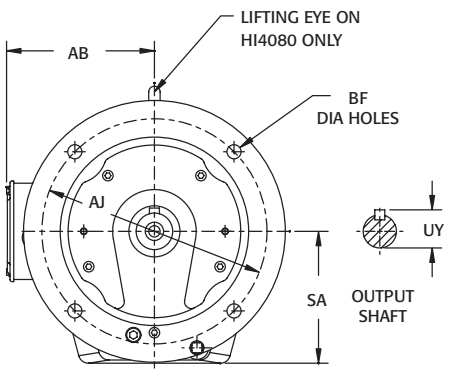
** FAN GUARD PROTRUDES BELOW MOUNTING SURFACE OF BASE

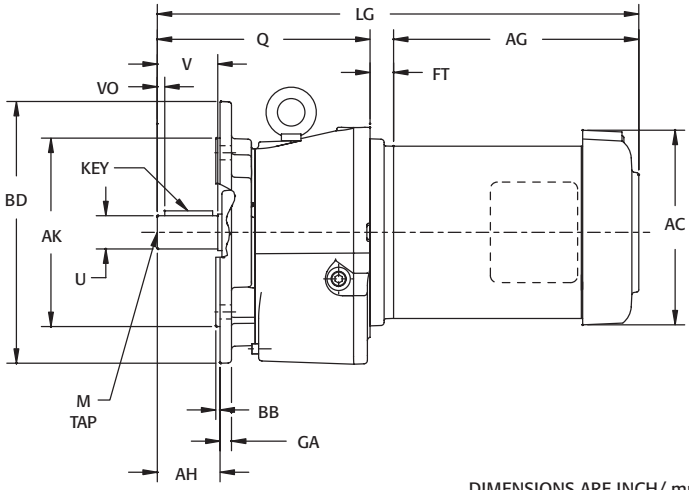
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INTEGRAL DOUBLE REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4042K	7.22	7.29	4.04
	183	185	103
HI4062K	8.92	8.40	4.96
	227	213	126
HI4662K	9.71	9.44	5.75
	247	240	146
HI4072K	10.93	10.79	5.94
	278	274	151
HI4082K	13.05	12.99	7.08
	331	330	180

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	0.43
50	165	$130^{-.003}_{-.054}$	4	200	12	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4042K	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062K	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662K	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072K	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082K	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4042K	0.25	4.58	6.38	6.99	0.55	14.83
	0.33	4.58	6.38	7.24	0.55	15.08
	0.50	4.58	6.38	7.74	0.55	15.58
	0.75	4.58	6.38	8.24	0.55	16.08
	1.00	5.56	7.68	9.22	0.73	17.24
	1.50	5.56	7.68	9.22	0.73	17.24
	2.00	5.56	7.68	10.72	0.73	18.74
	3.00	7.19	9.78	10.07	1.78	19.14
	5.00	7.19	9.78	11.57	1.78	20.64
HI4062K	0.75	4.58	6.38	8.24	0.71	17.35
	1.00	5.56	7.68	9.22	0.88	18.50
	1.50	5.56	7.68	9.22	0.88	18.50
	2.00	5.56	7.68	10.72	0.88	20.00
	3.00	7.19	9.78	10.07	1.94	20.41
	5.00	7.19	9.78	11.57	1.94	21.91

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4662K	1.50	5.56	7.68	9.22	0.88	19.54
	2.00	5.56	7.68	10.72	0.88	21.04
	3.00	7.19	9.78	10.07	1.94	21.45
	5.00	7.19	9.78	11.57	1.94	22.95
HI4072K	2.00	5.56	7.68	10.72	0.57	22.08
	3.00	7.19	9.78	10.07	1.63	22.49
	5.00	7.19	9.78	11.57	1.63	23.99
HI4082K	3.00	7.19	9.78	10.07	1.47	24.53
	5.00	7.19	9.78	11.57	1.47	26.03

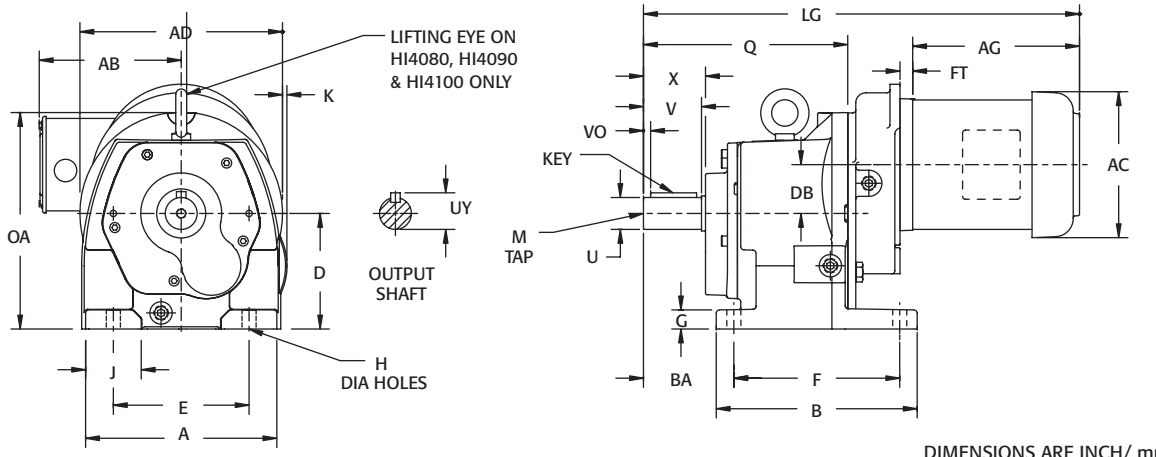
* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE.

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INTEGRAL TRIPLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	DB	E	F	G	H	J	K	OA	Q
HI4043I	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	$90^{+0}_{-.5}$	38	110	130	15	10	35	7	170	185
HI4063I	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	49	135	165	19	14	55	N/A	215	213
HI4663I	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	1.91	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	49	150	195	21	14	61	6	231	240
HI4073I	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	1.91	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	49	170	205	25	18	55	N/A	266	274
HI4083I	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	2.36	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	60	215	260	28	19	74	N/A	331	330
HI4093I	13.42	14.00	14.37	6.30	$8.86^{+0}_{-.02}$	2.87	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	$225^{+0}_{-.5}$	73	250	310	35	23	90	11	402	417
HI4103I	15.25	16.08	17.32	7.28	$9.84^{+0}_{-.02}$	3.39	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	$250^{+0}_{-.5}$	86	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4043I	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063I	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663I	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073I	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083I	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093I	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103I	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4043I	0.25	4.58	6.38	6.99	1.50	16.37
	0.33	4.58	6.38	7.24	1.50	16.62
	0.50	4.58	6.38	7.74	1.50	17.12
	0.75	4.58	6.38	8.24	1.50	17.62
HI4063I	0.25	4.58	6.38	6.99	0.55	17.99
	0.33	4.58	6.38	7.24	0.55	18.24
	0.50	4.58	6.38	7.74	0.55	18.74
	0.75	4.58	6.38	8.24	0.55	19.24
	1.00	5.56	7.68	9.22	0.73	20.40
	1.50	5.56	7.68	9.22	0.73	20.40
	2.00	5.56	7.68	10.72	0.73	21.90
HI4663I	0.25	4.58	6.38	6.99	0.55	19.03
	0.33	4.58	6.38	7.24	0.55	19.28
	0.50	4.58	6.38	7.74	0.55	19.78
	0.75	4.58	6.38	8.24	0.55	20.28
	1.00	5.56	7.68	9.22	0.73	21.44
	1.50	5.56	7.68	9.22	0.73	21.44
	2.00	5.56	7.68	10.72	0.73	22.94

MOTOR

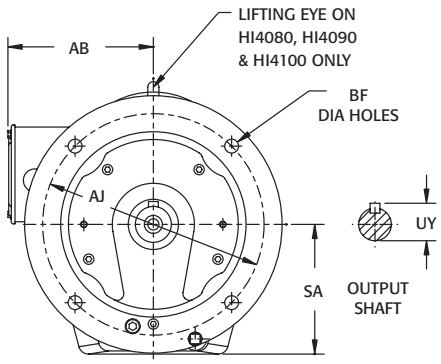
MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4073I	0.25	4.58	6.38	6.99	0.55	19.90
	0.33	4.58	6.38	7.24	0.55	20.15
	0.50	4.58	6.38	7.74	0.55	20.65
	0.75	4.58	6.38	8.24	0.55	21.15
	1.00	5.56	7.68	9.22	0.73	22.31
	1.50	5.56	7.68	9.22	0.73	22.31
	2.00	5.56	7.68	10.72	0.73	23.81
	3.00	7.19	9.78	10.07	1.78	24.21
HI4083I	0.75	4.58	6.38	8.24	0.71	23.12
	1.00	5.56	7.68	9.22	0.88	24.27
	1.50	5.56	7.68	9.22	0.88	24.27
	2.00	5.56	7.68	10.72	0.88	25.77
	3.00	7.19	9.78	10.07	1.94	26.18
	5.00	7.19	9.78	11.57	1.94	27.68
HI4093I	1.50	5.56	7.68	9.22	0.57	28.73
	2.00	5.56	7.68	10.72	0.57	30.23
	3.00	7.19	9.78	10.07	1.63	30.64
	5.00	7.19	9.78	11.57	1.63	32.14
HI4103I	3.00	7.19	9.78	10.07	1.47	34.42
	5.00	7.19	9.78	11.57	1.47	35.92

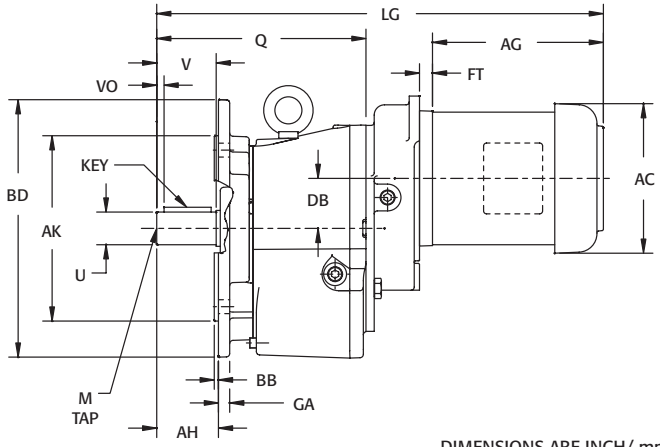
* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE. DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

INTEGRAL TRIPLE REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA	DB
HI4043K	7.22	7.29	4.04	1.50
	183	185	103	38
HI4063K	8.92	8.40	4.96	1.91
	227	213	126	49
HI4663K	9.71	9.44	5.75	1.91
	247	240	146	49
HI4073K	10.93	10.79	5.94	1.91
	278	274	151	49
HI4083K	13.05	12.99	7.08	2.36
	331	330	180	60
HI4093K	16.42	16.41	9.45	2.87
	417	417	240	73
HI4103K	17.98	19.00	11.02	3.39
	457	483	280	86

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	0.43
50	165	$130^{-.003}_{-.054}$	4	200	12	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18
4.72	15.75	$13.780^{-.0005}_{-.0032}$	0.19	17.74	0.75	1.02
120	400	$350^{+0}_{-.070}$	5	451	19	26
5.51	15.75	$13.780^{-.0005}_{-.0032}$	0.20	17.72	0.75	1.00
140	400	$350^{+0}_{-.070}$	5	450	19	25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4043K	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063K	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663K	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073K	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083K	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093K	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103K	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4043K	0.25	4.58	6.38	6.99	1.50	16.37
	0.33	4.58	6.38	7.24	1.50	16.62
	0.50	4.58	6.38	7.74	1.50	17.12
	0.75	4.58	6.38	8.24	1.50	17.62
HI4063K	0.25	4.58	6.38	6.99	0.55	17.99
	0.33	4.58	6.38	7.24	0.55	18.24
	0.50	4.58	6.38	7.74	0.55	18.74
	0.75	4.58	6.38	8.24	0.55	19.24
	1.00	5.56	7.68	9.22	0.73	20.40
	1.50	5.56	7.68	9.22	0.73	20.40
	2.00	5.56	7.68	10.72	0.73	21.90
HI4663K	0.25	4.58	6.38	6.99	0.55	19.03
	0.33	4.58	6.38	7.24	0.55	19.28
	0.50	4.58	6.38	7.74	0.55	19.78
	0.75	4.58	6.38	8.24	0.55	20.28
	1.00	5.56	7.68	9.22	0.73	21.44
	1.50	5.56	7.68	9.22	0.73	21.44
	2.00	5.56	7.68	10.72	0.73	22.94

* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE.

MOTOR

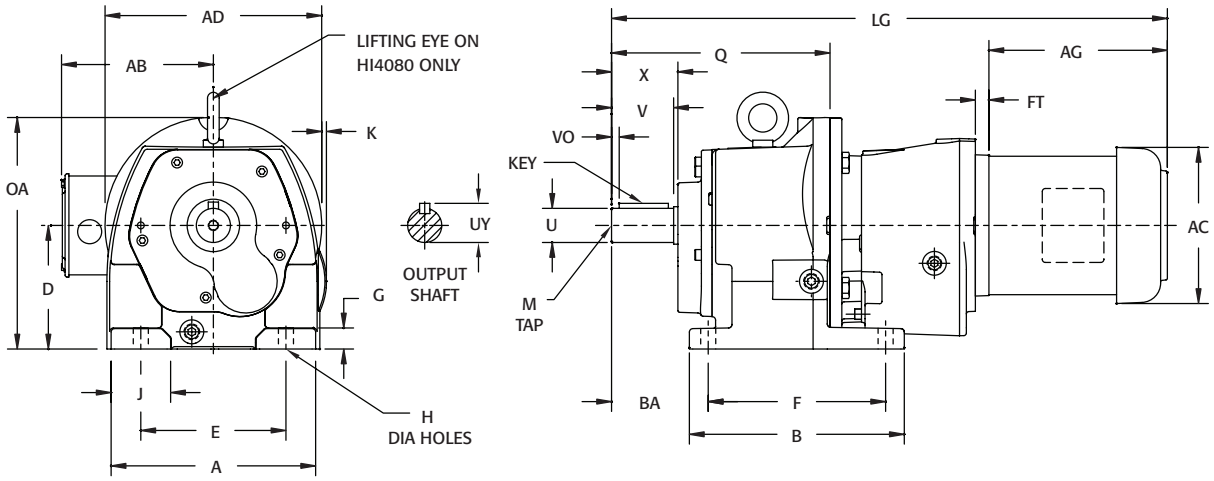
MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4073K	0.25	4.58	6.38	6.99	0.55	19.90
	0.33	4.58	6.38	7.24	0.55	20.15
	0.50	4.58	6.38	7.74	0.55	20.65
	0.75	4.58	6.38	8.24	0.55	21.15
	1.00	5.56	7.68	9.22	0.73	22.31
	1.50	5.56	7.68	9.22	0.73	22.31
	2.00	5.56	7.68	10.72	0.73	23.81
	3.00	7.19	9.78	10.07	1.78	24.21
HI4083K	0.75	4.58	6.38	8.24	0.71	23.12
	1.00	5.56	7.68	9.22	0.88	24.27
	1.50	5.56	7.68	9.22	0.88	24.27
	2.00	5.56	7.68	10.72	0.88	25.77
	3.00	7.19	9.78	10.07	1.94	26.18
	5.00	7.19	9.78	11.57	1.94	27.68
HI4093K	1.50	5.56	7.68	9.22	0.57	28.73
	2.00	5.56	7.68	10.72	0.57	30.23
	3.00	7.19	9.78	10.07	1.63	30.64
	5.00	7.19	9.78	11.57	1.63	32.14
HI4103K	3.00	7.19	9.78	10.07	1.47	34.42
	5.00	7.19	9.78	11.57	1.47	35.92

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INTEGRAL QUAD REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4064I	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4664I	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4074I	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4084I	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4064I	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664I	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074I	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084I	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4064I	0.25	4.58	6.38	6.99	0.55	21.26
	0.33	4.58	6.38	7.24	0.55	21.51
HI4664I	0.25	4.58	6.38	6.99	0.55	22.30
	0.33	4.58	6.38	7.24	0.55	22.55
HI4074I	0.25	4.58	6.38	6.99	0.71	24.13
	0.33	4.58	6.38	7.24	0.71	24.38
	0.50	4.58	6.38	7.74	0.71	24.88
HI4084I	0.25	4.58	6.38	6.99	0.39	28.01
	0.33	4.58	6.38	7.24	0.39	28.26
	0.50	4.58	6.38	7.74	0.39	28.76
	0.75	4.58	6.38	8.24	0.39	29.26

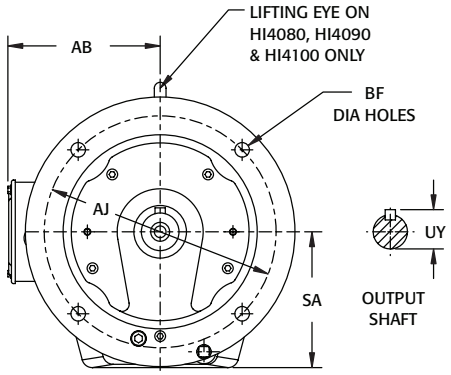
* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE.

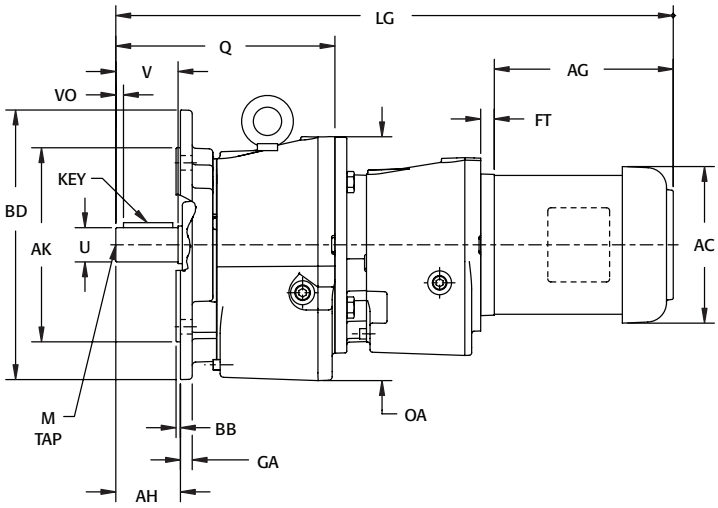
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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

INTEGRAL QUAD REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4064K	8.92	8.40	4.96
	227	213	126
HI4664K	9.71	9.44	5.75
	247	240	146
HI4074K	10.93	10.79	5.94
	278	274	151
HI4084K	13.05	12.99	7.08
	331	330	180

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
2.76	8.46		0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4064K	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664K	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074K	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084K	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61

MOTOR

MODEL	MOTOR HP	AB	AC	AG	FT	LG
HI4064K	0.25	4.58	6.38	6.99	0.55	21.26
	0.33	4.58	6.38	7.24	0.55	21.51
HI4664K	0.25	4.58	6.38	6.99	0.55	22.30
	0.33	4.58	6.38	7.24	0.55	22.55
HI4074K	0.25	4.58	6.38	6.99	0.71	24.13
	0.33	4.58	6.38	7.24	0.71	24.38
	0.50	4.58	6.38	7.74	0.71	24.88
HI4084K	0.25	4.58	6.38	6.99	0.39	28.01
	0.33	4.58	6.38	7.24	0.39	28.26
	0.50	4.58	6.38	7.74	0.39	28.76
	0.75	4.58	6.38	8.24	0.39	29.26

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

* SEE PAGE I-82 FOR ADDITIONAL OUTPUT SHAFT DIAMETERS AVAILABLE.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

SPARTAN™ ALUMINUM HELICAL INLINE RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

ALHI4032 DOUBLE REDUCTION						
RATIO	***OUTPUT SPEED***	***INPUT H.P.***	***OUTPUT TORQUE***	***OUTPUT OHL***	***INPUT OHL***	***OUTPUT THRUST***
3.48	503	5.00	602	204	112	29
4.32	405	4.03	602	216	112	29
5.50	318	2.80	602	230	112	31
6.36	275	2.74	602	250	112	32
7.26	241	2.40	602	260	112	34
7.89	222	2.21	602	266	112	37
10.04	174	2.30	798	284	112	43
11.64	150	1.98	798	293	112	55
13.26	132	1.74	798	305	112	58
15.37	114	1.50	798	321	112	61
16.20	108	1.40	798	335	112	63
18.80	93	1.21	798	350	112	65
21.54	81	1.07	798	374	112	67
22.26	79	1.04	798	375	112	67
26.30	67	0.86	798	420	112	76
29.40	60	0.79	798	435	112	76
35.90	49	0.63	798	470	112	81
38.37	46	0.60	798	478	112	81
46.80	37	0.48	798	507	112	85
50.67	35	0.46	798	510	112	85
61.80	28	0.37	798	532	112	85
ALHI4033 TRIPLE REDUCTION						
33.50	52	0.71	798	459	100	85
38.34	46	0.62	798	478	100	85
43.69	40	0.55	798	495	100	85
50.64	35	0.47	798	510	100	85
53.40	33	0.44	798	520	100	85
61.22	29	0.39	798	525	100	85
62.00	28	0.38	798	532	100	85
70.95	25	0.34	798	540	100	85
73.33	24	0.32	798	540	100	85
74.50	23	0.31	798	540	100	85
86.80	20	0.27	798	540	100	85
96.85	18	0.25	798	540	100	85
102.80	17	0.23	798	540	100	85
126.40	15	0.20	798	540	100	85
135.69	13	0.18	798	540	100	85
165.20	10	0.14	798	540	100	85

SEE PAGES I-62 TO I-69 FOR ADDITIONAL MODELS AVAILABLE.

MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER.
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

HUBCITY

SPARTAN™ ALUMINUM HELICAL INLINE RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
ALHI4042 DOUBLE REDUCTION						
3.48	503	5.88	708	268	112	70
4.32	405	5.19	775	289	112	70
5.50	318	4.67	887	350	112	70
6.36	275	4.32	949	376	112	70
7.26	241	4.24	1065	391	112	74
7.89	222	3.90	1065	400	112	81
10.04	174	3.43	1190	420	112	81
11.64	150	2.96	1190	445	112	91
13.26	132	2.60	1190	476	112	91
15.37	114	2.24	1190	508	112	91
16.20	108	2.03	1158	520	112	101
18.80	93	1.75	1158	535	112	108
21.54	81	1.60	1190	562	112	108
22.26	79	1.55	1190	562	112	108
26.30	67	1.25	1158	615	112	121
29.40	60	1.17	1190	629	112	121
35.90	49	0.92	1158	660	112	135
38.37	46	0.85	1127	663	112	135
46.80	37	0.65	1065	674	112	135
50.67	35	0.64	1127	674	112	135
61.80	28	0.49	1065	674	112	135
ALHI4043 TRIPLE REDUCTION						
33.50	52	1.06	1189	645	100	135
38.34	46	0.87	1118	663	100	135
43.69	40	0.81	1189	674	100	135
50.64	35	0.70	1189	674	100	135
53.40	33	0.64	1162	674	100	135
61.22	29	0.58	1189	674	100	135
62.00	28	0.55	1162	674	100	135
70.95	25	0.50	1189	674	100	135
73.33	24	0.46	1118	674	100	135
74.50	23	0.46	1162	674	100	135
86.80	20	0.39	1162	674	100	135
96.85	18	0.37	1189	674	100	135
102.80	17	0.34	1171	674	100	135
126.40	15	0.29	1162	674	100	135
135.69	13	0.26	1189	674	100	135
165.20	10	0.21	1162	674	100	135

SEE PAGES I-62 TO I-69 FOR ADDITIONAL MODELS AVAILABLE.

MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER.
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

HUBCITY

SPARTAN™ ALUMINUM HELICAL INLINE RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
ALHI4052 DOUBLE REDUCTION						
3.61	485	11.80	1473	450	180	103
4.23	414	12.27	1792	474	180	103
5.01	349	12.69	2200	491	180	103
6.07	288	10.49	2200	522	180	103
6.81	257	10.22	2404	540	180	108
7.96	220	8.73	2404	579	180	108
9.45	185	7.66	2502	615	180	108
11.43	153	6.58	2600	658	180	135
14.21	123	4.68	2300	693	180	139
16.62	105	4.36	2502	711	180	157
20.10	87	3.60	2502	780	180	157
24.98	70	2.66	2300	877	180	175
29.41	60	2.46	2502	900	180	175
35.58	49	2.03	2502	922	180	202
40.50	43	1.72	2404	988	180	202
44.23	40	1.50	2300	1012	180	202
49.00	36	1.42	2404	1028	180	225
60.90	29	1.04	2200	1050	180	225
ALHI4053 TRIPLE REDUCTION						
34.01	52	2.10	2396	918	135	225
39.79	44	1.80	2396	988	135	225
47.22	37	1.51	2396	1028	135	225
54.73	32	1.31	2396	1041	135	225
57.13	31	1.25	2396	1050	135	225
66.22	26	1.08	2396	1075	135	225
71.01	25	1.01	2396	1079	135	225
76.69	23	0.93	2396	1091	135	225
82.30	21	0.87	2396	1091	135	225
83.59	21	0.86	2396	1091	135	225
92.78	19	0.77	2396	1102	135	225
104.68	17	0.68	2396	1112	135	225
117.22	15	0.61	2396	1124	135	225
126.65	14	0.56	2396	1130	135	225
135.74	13	0.53	2396	1136	135	225
145.68	12	0.49	2396	1150	135	225
157.40	11	0.45	2396	1168	135	225
164.23	11	0.44	2396	1186	135	225
185.29	9	0.39	2396	1186	135	225
204.12	9	0.35	2396	1186	135	225
224.18	8	0.32	2396	1195	135	225
278.62	6	0.26	2396	1214	135	225

SEE PAGES I-62 TO I-69 FOR ADDITIONAL MODELS AVAILABLE.

MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER.
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

HUBCITY

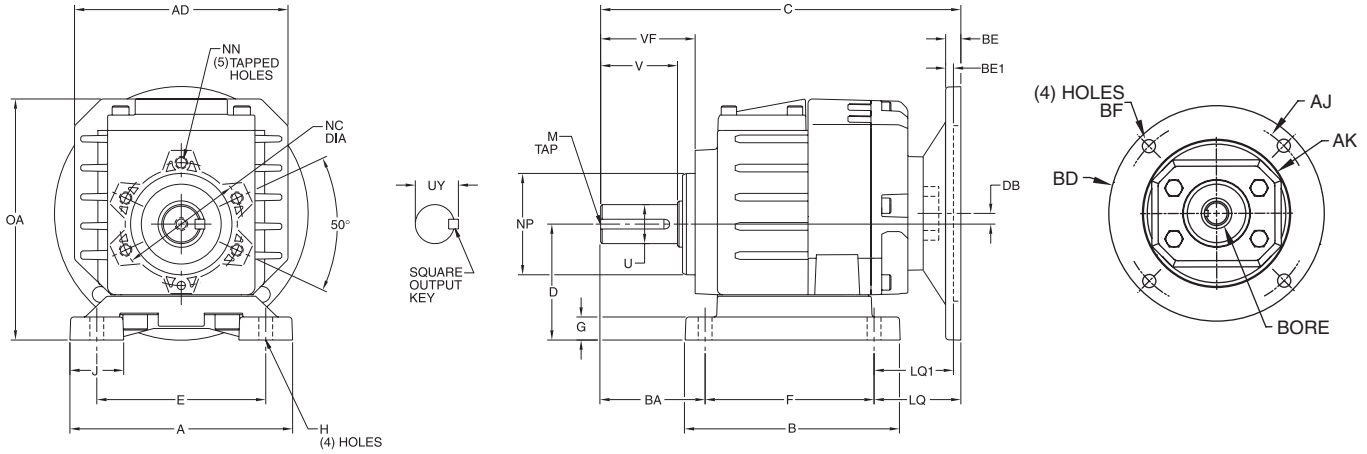
SPARTAN™ ALUMINUM HELICAL INLINE RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
ALHI4062 DOUBLE REDUCTION						
3.61	485	13.22	1651	534	180	126
4.23	414	13.23	1932	566	180	126
5.01	349	13.23	2293	603	180	126
6.07	288	13.23	2774	629	180	126
6.81	257	12.15	2860	646	180	135
7.96	220	11.55	3180	663	180	135
9.45	185	9.18	3000	674	180	144
11.43	153	8.71	3442	778	180	170
14.21	123	7.73	3800	850	180	171
16.62	105	6.61	3800	872	180	189
20.10	87	5.47	3800	900	180	190
24.98	70	4.40	3800	944	180	200
29.41	60	2.95	3000	1012	180	200
35.58	49	2.44	3000	1079	180	260
40.50	43	1.83	2567	1192	180	260
44.23	40	1.83	2800	1304	180	260
49.00	36	1.64	2777	1330	180	260
60.90	29	1.33	2800	1367	180	260
ALHI4063 TRIPLE REDUCTION						
34.01	52	2.96	3372	1060	135	292
39.79	44	2.53	3372	1192	135	292
47.22	37	2.13	3372	1330	135	292
54.73	32	1.84	3372	1354	135	292
57.13	31	1.76	3372	1354	135	292
66.22	26	1.52	3372	1398	135	292
71.01	25	1.42	3372	1398	135	292
76.69	23	1.31	3372	1414	135	292
82.30	21	1.22	3372	1422	135	292
83.59	21	1.20	3372	1422	135	292
92.78	19	1.09	3372	1430	135	292
104.68	17	0.96	3372	1454	135	292
117.22	15	0.86	3372	1461	135	292
126.65	14	0.79	3372	1468	135	292
135.74	13	0.74	3372	1472	135	292
145.68	12	0.69	3372	1475	135	292
157.40	11	0.64	3372	1492	135	292
164.23	11	0.61	3372	1492	135	292
185.29	9	0.54	3372	1498	135	292
204.12	9	0.49	3372	1502	135	292
224.18	8	0.45	3372	1510	135	292
278.62	6	0.36	3372	1510	135	292

SEE PAGES I-62 TO I-69 FOR ADDITIONAL MODELS AVAILABLE.

MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER.
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SPARTAN™ ALUMINUM HELICAL-INLINE DIMENSIONS



MOTORIZED QUILL INPUT, DOUBLE REDUCTION (B1 BASE MOUNT SHOWN)

MODEL	A	AD	B	BA	C		D	DB	E	F	G	H	J	LQ	LQ1	M	
					56/140	180								56/140	180	TAP	DEPTH
ALHI4032E	5.71	5.47	5.51	2.28	8.83	NA	2.95	0.27	4.33	4.33	0.59	0.35	1.38	2.23	NA	1/4-20	0.62
ALHI4042E	5.71	5.47	6.02	2.95	9.23	NA	3.54	0.27	4.33	5.12	0.79	0.35	1.38	1.16	NA	5/16-18	0.75
ALHI4052E	6.69	7.01	7.76	3.54	11.49	12.02	4.53	0.21	5.31	6.50	0.94	0.55	1.65	1.45	1.98	5/16-18	0.75
ALHI4062E	6.69	7.95	7.76	3.54	12.20	12.73	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.16	2.69	5/16-18	0.75

MODEL	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	OUTPUT KEY
			TAP	DEPTH						
ALHI4032E	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
ALHI4042E	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
ALHI4052E	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
ALHI4062E	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

FRAME	AJ	AK	BD	BE	BE1	BORE DIA.	KEYWAY	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

MOTORIZED QUILL INPUT, TRIPLE REDUCTION (B1 BASE MOUNT SHOWN)

MODEL	A	AD	B	BA	C	D	DB	E	F	G	H	J	LQ	M	
														TAP	DEPTH
ALHI4033E	5.71	5.47	5.51	2.28	9.60	2.95	0.13	4.33	4.33	0.59	0.35	1.38	2.99	1/4-20	0.62
ALHI4043E	5.71	5.47	6.02	2.95	10.00	3.54	0.13	4.33	5.12	0.79	0.35	1.38	1.93	5/16-18	0.75
ALHI4053E	6.69	7.01	7.76	3.54	11.83	4.53	0.59	5.31	6.50	0.94	0.55	1.65	1.83	5/16-18	0.75
ALHI4063E	6.69	7.95	7.76	3.54	12.55	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.51	5/16-18	0.75

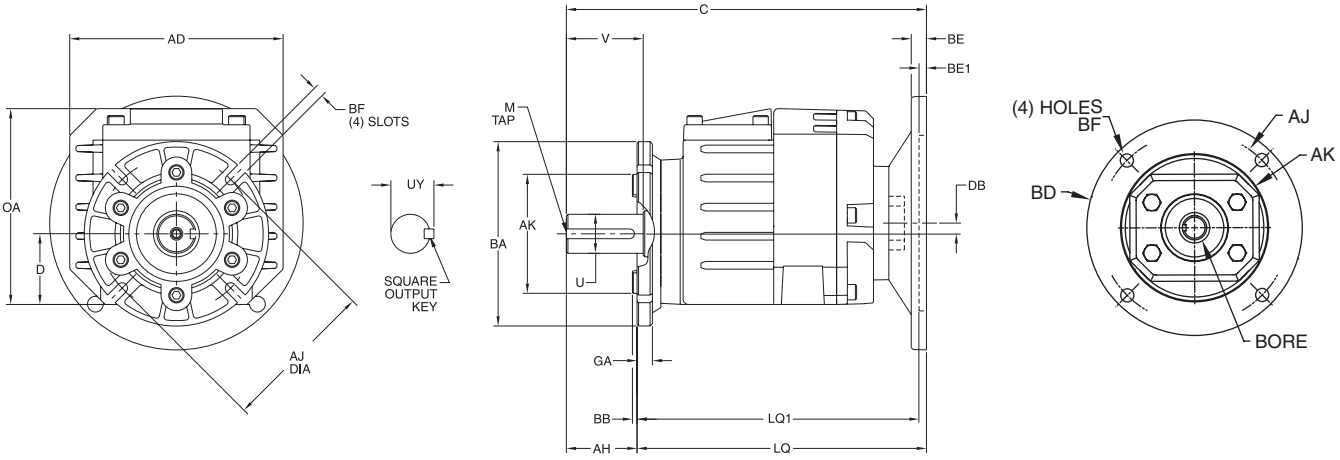
MODEL	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	OUTPUT KEY
			TAP	DEPTH						
ALHI4033E	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
ALHI4043E	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
ALHI4053E	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
ALHI4063E	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

FRAME	AJ	AK	BD	BE	BE1	BORE DIA.	KEYWAY	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

*1.375" DIAMETER SHAFT IS AVAILABLE. CONTACT FACTORY FOR AVAILABILITY.

B1 BASE MOUNT IS SHOWN. ADDITIONAL INTERCHANGE BASES ARE AVAILABLE. CONSULT FACTORY

SPARTAN™ ALUMINUM HELICAL-INLINE DIMENSIONS



MOTORIZED QUILL INPUT, DOUBLE REDUCTION (F1 FLANGE MOUNT SHOWN)

MODEL	AD	AH	AJ	AKn	BA	BB	BF	C		D	DB	GA
								56/140	180			
ALHI4032G	5.47	1.41	3.94	3.15	4.72	0.12	0.28	8.83	N/A	1.81	0.27	0.39
ALHI4042G	5.47	1.79	3.94	3.15	4.72	0.12	0.28	9.23	N/A	1.81	0.27	0.39
ALHI4052G	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.49	12.02	2.76	0.21	0.61
ALHI4062G	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.20	12.73	2.76	0.61	0.61

MODEL	LQ 56C/140TC	LQ1	M		OA	U +0.000/ -0.001	UY	V	OUTPUT KEY
			TAP	DEPTH					
ALHI4032G	7.42	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
ALHI4042G	7.44	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
ALHI4052G	9.25	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
ALHI4062G	10.00	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

FRAME	AJ	AK	BD	BE	BE1	BORE DIA.	KEYWAY	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

MOTORIZED QUILL INPUT, TRIPLE REDUCTION (F1 FLANGE MOUNT SHOWN)

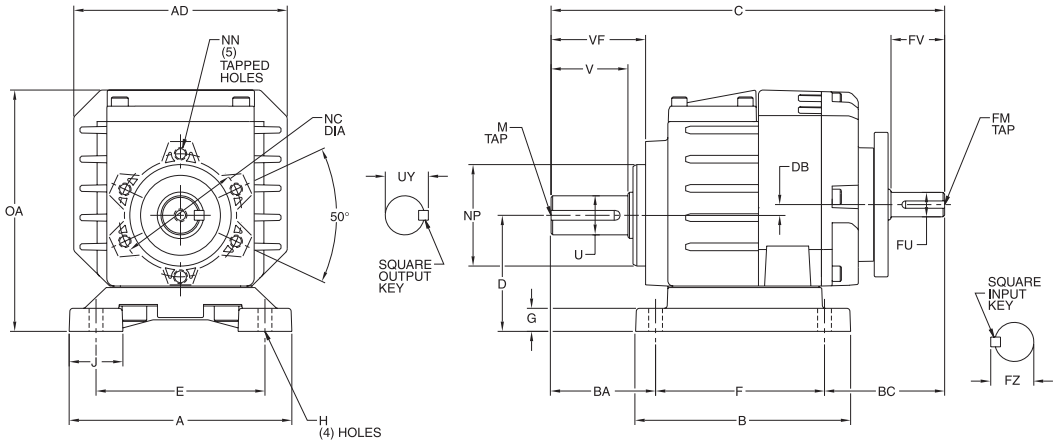
MODEL	AD	AH	AJ	AKn	BA	BB	BF	C	D	DB	GA
ALHI4033G	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.60	1.81	0.13	0.39
ALHI4043G	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.00	1.81	0.13	0.39
ALHI4053G	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.83	2.76	0.59	0.61
ALHI4063G	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.55	2.76	0.61	0.61

MODEL	LQ 56C/140TC	LQ1	M		OA	U +0.000/ -0.001	UY	V	OUTPUT KEY
			TAP	DEPTH					
ALHI4033G	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
ALHI4043G	8.21	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
ALHI4053G	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
ALHI4063G	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

FRAME	AJ	AK	BD	BE	BE1	BORE DIA.	KEYWAY	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

*1.375" DIAMETER SHAFT IS AVAILABLE. CONTACT FACTORY FOR AVAILABILITY.
N TOLERANCE OF AK ON FLANGES WITH BA DIMENSION UNDER 6.30" IS -0.0014 TO -0.0028". FLANGES WITH A BA OF 6.30" OR LARGER HAVE A AK TOLERANCE OF -0.0017 TO -0.0033".

SPARTAN™ ALUMINUM HELICAL-INLINE DIMENSIONS



NON-MOTORIZED, DOUBLE REDUCTION (B1 BASE MOUNT SHOWN)

MODEL	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ	G	H	J
ALHI4032A	5.71	5.47	5.51	2.28	3.28	9.88	2.95	0.27	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
ALHI4042A	5.71	5.47	6.02	2.95	2.20	10.26	3.54	0.27	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.79	0.35	1.38
ALHI4052A	6.69	7.01	7.76	3.54	2.96	13.00	4.53	0.21	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65
ALHI4062A	6.69	7.95	7.76	3.54	3.63	13.67	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65

MODEL	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U +0.000/ -0.001	UY	V	VF	INPUT KEY	OUTPUT KEY
ALHI4032A	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 X 1.12	3/16 X 1.12
ALHI4042A	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 X 1.12	1/4 X 1.62
ALHI4052A	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 X 1.50	1/4 X 2.00
ALHI4062A	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 X 1.50	1/4 X 2.00

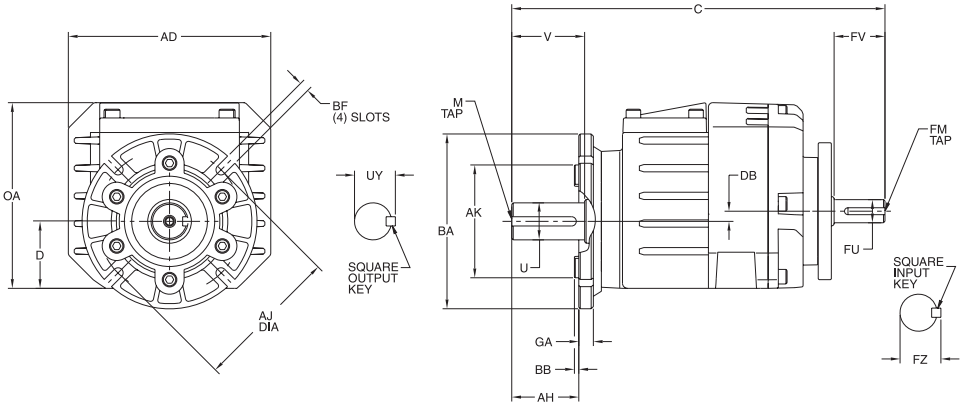
NON-MOTORIZED, TRIPLE REDUCTION (B1 BASE MOUNT SHOWN)

MODEL	A	AD	B	BA	BC	C	D	DB	E	F	FM TAP	FM DEPTH	FU +0.000/ -0.001	FV	FZ	G	H	J
ALHI4033A	5.71	5.47	5.51	2.28	3.45	10.06	2.95	0.13	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
ALHI4043A	5.71	5.47	6.02	2.95	2.38	10.44	3.54	0.13	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
ALHI4053A	6.69	7.01	7.76	3.54	2.88	12.92	4.53	0.59	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65
ALHI4063A	6.69	7.95	7.76	3.54	3.56	13.60	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65

MODEL	M TAP	M DEPTH	NC	NN TAP	NN DEPTH	NP	OA	U +0.000/ -0.001	UY	V	VF	INPUT KEY	OUTPUT KEY
ALHI4033A	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12	3/16 x 1.12
ALHI4043A	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 x 1.12	1/4 x 1.62
ALHI4053A	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00
ALHI4063A	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00

* 1.375" DIAMETER SHAFT IS AVAILABLE. CONTACT FACTORY FOR AVAILABILITY.
S 0.875" DIAMETER SHAFT IS AVAILABLE ON 2-STAGE REDUCERS ONLY. CONTACT FACTORY FOR AVAILABILITY.
B1 BASE MOUNT IS SHOWN. ADDITIONAL INTERCHANGE BASES ARE AVAILABLE. CONSULT FACTORY

SPARTAN™ ALUMINUM HELICAL-INLINE DIMENSIONS



NON-MOTORIZED, DOUBLE REDUCTION (F1 FLANGE MOUNT SHOWN)

MODEL	AD	AH	AJ	AKn	BA	BB	BF	C	D	DB	FM		FU +0.000/ -0.001	FV	FZ
											TAP	DEPTH			
ALHI4032C	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.88	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
ALHI4042C	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.26	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
ALHI4052C	7.01	2.24	5.12	4.33	6.30	0.14	0.43	13.00	2.76	0.21	5/16-18	0.75	0.750s	1.97	0.83
ALHI4062C	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.67	2.76	0.61	5/16-18	0.75	0.750s	1.97	0.83

MODEL	GA	LQ 56C/140TC		LQ1	M		OA	U +0.000/ -0.001	UY	V	INPUT KEY	OUTPUT KEY
		2-STAGE	3-STAGE	180TC	TAP	DEPTH						
ALHI4032C	0.39	7.42	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
ALHI4042C	0.39	7.44	8.21	N/A	1/4-20	0.62	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
ALHI4052C	0.61	9.25	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
ALHI4062C	0.61	10.00	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

NON-MOTORIZED, TRIPLE REDUCTION (F1 FLANGE MOUNT SHOWN)

MODEL	AD	AH	AJ	AKn	BA	BB	BF	C	D	DB	FM		FU +0.000/ -0.001	FV	FZ
											TAP	DEPTH			
ALHI4033C	5.47	1.41	3.94	3.15	4.72	0.12	0.28	10.06	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
ALHI4043C	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.44	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
ALHI4053C	7.01	2.24	5.12	4.33	6.30	0.14	0.43	12.92	2.76	0.59	5/16-18	0.75	0.750	1.57	0.83
ALHI4063C	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.60	2.76	0.61	5/16-18	0.75	0.750	1.57	0.83

MODEL	GA	LQ 56C/140TC		LQ1	M		OA	U +0.000/ -0.001	UY	V	INPUT KEY	OUTPUT KEY
		2-STAGE	3-STAGE	180TC	TAP	DEPTH						
ALHI4033C	0.39	7.42	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
ALHI4043C	0.39	7.44	8.21	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
ALHI4053C	0.61	9.25	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
ALHI4063C	0.61	10.00	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

* 1.375" DIAMETER SHAFT IS AVAILABLE. CONTACT FACTORY FOR AVAILABILITY.
s 0.875" DIAMETER SHAFT IS AVAILABLE ON 2-STAGE REDUCERS ONLY. CONTACT FACTORY FOR AVAILABILITY.
n TOLERANCE OF AK ON FLANGES WITH BA DIMENSION UNDER 6.30" IS -0.0014 TO -0.0028". FLANGES WITH A BA OF 6.30" OR LARGER HAVE A AK TOLERANCE OF -0.0017 TO -0.0033".

POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4042 DOUBLE REDUCTION						
2.63	665	11.2	1020	530	140	610
2.95	593	10.4	1060	550	140	630
3.31	529	9.61	1100	570	140	650
3.72	470	9.10	1170	580	140	660
4.21	416	8.79	1280	590	140	650
4.78	366	7.75	1280	620	140	690
5.47	320	6.77	1280	650	140	730
5.87	298	6.31	1280	680	140	780
6.13	285	6.79	1440	710	140	840
6.86	255	6.16	1460	740	140	880
7.70	227	5.56	1480	770	140	920
8.67	202	5.17	1550	790	140	950
9.80	179	4.75	1610	820	140	980
11.14	157	4.41	1700	850	140	1010
12.74	137	3.95	1740	890	140	1060
13.67	128	3.77	1780	920	140	1100
16.66	105	3.13	1800	980	140	1250
20.77	84	2.52	1810	1050	140	1250
25.04	70	2.10	1820	1150	140	1250
28.79	61	1.84	1830	1150	140	1250
36.56	48	1.46	1840	1150	140	1250
44.10	40	1.21	1850	1150	140	1250
50.47	35	1.01	1770	1150	140	1250
HI4043 TRIPLE REDUCTION						
60.54	28.9	0.90	1850	1150	105	1250
72.63	24.1	0.75	1850	1150	105	1250
79.17	22.1	0.69	1850	1150	105	1250
92.74	18.9	0.59	1850	1150	105	1250
100.76	17.4	0.54	1850	1150	105	1250
115.15	15.2	0.47	1850	1150	105	1250
121.28	14.4	0.45	1850	1150	105	1250
133.14	13.1	0.41	1850	1150	105	1250
154.35	11.3	0.35	1850	1150	105	1250
176.40	9.9	0.31	1850	1150	105	1250
203.96	8.6	0.27	1850	1150	105	1250
239.42	7.3	0.23	1850	1150	105	1250
HI4062 DOUBLE REDUCTION						
2.57	681	18.6	1650	960	200	890
3.08	568	16.5	1760	1010	200	930
3.90	449	13.9	1880	1090	200	1000
4.52	387	12.6	1970	1140	200	1050
5.98	293	15.8	3260	1080	200	870
7.16	244	13.5	3340	1180	200	990
9.06	193	11.0	3450	1290	200	1110
10.52	166	10.1	3680	1340	200	1140
13.75	127	8.22	3910	1470	200	1260
16.43	107	7.04	4000	1560	200	1370
17.50	100	6.63	4010	1600	200	1400
20.00	88	5.83	4030	1600	200	1400
21.47	82	5.44	4040	1600	200	1400
25.00	70	4.69	4050	1600	200	1400
27.14	64	4.33	4060	1600	200	1400

SEE PAGES I-54 TO I-57 FOR ADDITIONAL MODELS AVAILABLE.

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POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4062 (continued)						
29.62	59	3.97	4070	1600	200	1400
32.50	54	3.64	4090	1600	200	1400
35.91	48.7	3.30	4100	1600	200	1400
45.00	38.9	2.64	4110	1600	200	1400
51.25	34.1	2.33	4120	1600	200	1400
HI4063 TRIPLE REDUCTION						
55.79	31.4	2.18	4120	1600	140	1400
61.69	28.4	1.97	4120	1600	140	1400
68.00	25.7	1.79	4120	1600	140	1400
75.71	23.1	1.62	4140	1600	140	1400
84.76	20.6	1.44	4140	1600	140	1400
92.29	19.0	1.33	4140	1600	140	1400
102.22	17.1	1.20	4140	1600	140	1400
115.03	15.2	1.06	4140	1600	140	1400
138.73	12.6	0.88	4140	1600	140	1400
149.23	11.7	0.82	4140	1600	140	1400
159.46	11.0	0.77	4140	1600	140	1400
180.00	9.7	0.68	4140	1600	140	1400
206.00	8.5	0.59	4140	1600	140	1400
244.29	7.2	0.50	4140	1600	140	1400
279.57	6.3	0.44	4140	1600	140	1400
HI4064 QUAD REDUCTION						
293.47	5.96	0.43	4140	1600	140	1400
318.50	5.49	0.39	4140	1600	140	1400
357.70	4.89	0.35	4140	1600	140	1400
399.90	4.38	0.31	4140	1600	140	1400
457.48	3.83	0.27	4140	1600	140	1400
537.72	3.25	0.23	4140	1600	140	1400
598.25	2.93	0.21	4140	1600	140	1400
679.78	2.57	0.18	4140	1600	140	1400
785.00	2.23	0.16	4140	1600	140	1400
899.32	1.95	0.14	4140	1600	140	1400
1034	1.69	0.12	4140	1600	140	1400
1197	1.46	0.10	4140	1600	140	1400
1370	1.28	0.09	4140	1600	140	1400
1584	1.10	0.08	4140	1600	140	1400
1812	0.97	0.07	4140	1600	140	1400
1985	0.88	0.06	4140	1600	140	1400
2260	0.77	0.06	4140	1600	140	1400
2587	0.68	0.05	4140	1600	140	1400
HI4662 DOUBLE REDUCTION						
2.41	726	26.9	2240	1230	200	1160
2.71	646	25.2	2360	1270	200	1190
3.05	574	23.5	2480	1310	200	1220
3.30	530	22.6	2580	1330	200	1240
3.73	469	20.9	2690	1370	200	1260

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POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4662 (continued)						
4.05	432	19.7	2760	1420	200	1320
4.61	380	18.0	2870	1470	200	1360
5.28	331	16.3	2970	1540	200	1430
5.88	298	18.1	3680	1550	200	1430
6.61	265	16.4	3750	1640	200	1500
7.44	235	15.3	3930	1690	200	1500
8.05	217	15.0	4180	1700	200	1500
9.10	192	13.7	4300	1700	200	1500
9.89	177	13.0	4430	1700	200	1500
11.25	156	12.0	4660	1700	200	1500
12.88	136	10.8	4810	1700	200	1500
15.61	112	9.32	5030	1700	200	1500
18.25	95.9	8.24	5200	1700	200	1500
21.65	80.8	6.99	5230	1700	200	1500
26.19	66.8	5.81	5260	1700	200	1500
32.53	53.8	4.71	5300	1700	200	1500
38.39	45.6	4.01	5320	1700	200	1500
46.38	37.7	3.33	5340	1700	200	1500
51.57	33.9	3.00	5350	1700	200	1500
HI4663 TRIPLE REDUCTION						
56.30	31.1	2.74	5220	1700	140	1500
60.40	29.0	2.63	5370	1700	140	1500
65.07	26.9	2.44	5370	1700	140	1500
73.94	23.7	2.15	5370	1700	140	1500
84.59	20.7	1.88	5370	1700	140	1500
91.77	19.1	1.73	5370	1700	140	1500
110.67	15.8	1.43	5370	1700	140	1500
127.22	13.8	1.25	5370	1700	140	1500
137.88	12.7	1.15	5370	1700	140	1500
161.57	10.8	1.00	5370	1700	140	1500
191.13	9.2	0.83	5370	1700	140	1500
223.03	7.8	0.71	5370	1700	140	1500
242.75	7.2	0.65	5370	1700	140	1500
292.80	6.0	0.54	5370	1700	140	1500
335.09	5.2	0.47	5370	1700	140	1500
HI4664 QUAD REDUCTION						
357.93	4.89	0.45	5370	1700	140	1500
414.47	4.22	0.39	5370	1700	140	1500
444.68	3.94	0.36	5370	1700	140	1500
489.11	3.58	0.33	5370	1700	140	1500
524.75	3.33	0.31	5370	1700	140	1500
574.33	3.05	0.28	5370	1700	140	1500
655.84	2.67	0.25	5370	1700	140	1500
753.85	2.32	0.21	5370	1700	140	1500
797.27	2.19	0.20	5370	1700	140	1500
859.20	2.04	0.19	5370	1700	140	1500
963.16	1.82	0.17	5370	1700	140	1500
1071	1.63	0.15	5370	1700	140	1500
1189	1.47	0.14	5370	1700	140	1500
1335	1.31	0.12	5370	1700	140	1500
1485	1.18	0.11	5370	1700	140	1500

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POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4664 (continued)						
1693	1.03	0.10	5370	1700	140	1500
1886	0.93	0.09	5370	1700	140	1500
2045	0.86	0.08	5370	1700	140	1500
2341	0.75	0.07	5370	1700	140	1500
2603	0.67	0.06	5370	1700	140	1500
HI4072 DOUBLE REDUCTION						
2.39	732.2	28.6	2360	1280	385	1400
2.67	655.4	28.5	2630	1340	385	1500
2.99	585.3	27.2	2810	1350	385	1580
3.22	543.5	25.5	2840	1350	385	1580
3.62	483.4	23.0	2880	1450	385	1580
3.92	446.4	21.8	2960	1550	385	1580
4.44	394.1	20.0	3070	1620	385	1580
5.06	345.8	18.3	3200	1640	385	1580
6.01	291.2	25.2	5230	1685	385	1580
6.71	260.8	23.3	5400	1685	385	1580
7.50	233.3	21.4	5560	1685	385	1580
8.09	216.3	20.3	5680	1685	385	1580
9.09	192.5	18.6	5860	1710	385	1580
9.85	177.7	17.6	6000	1710	385	1580
11.15	157.0	15.7	6050	1780	385	1580
12.71	137.7	14.5	6370	1830	385	1580
17.85	98.0	11.2	6900	2030	385	1620
21.10	82.9	10.0	7260	2120	385	1620
25.44	68.8	8.25	7260	2150	385	1620
31.51	55.5	6.66	7260	2200	385	1620
37.11	47.2	5.66	7260	2230	385	1620
44.75	39.1	4.69	7260	2240	385	1620
49.72	35.2	4.22	7260	2240	385	1620
HI4073 TRIPLE REDUCTION						
50.87	34.4	4.22	7260	2240	140	1620
55.74	31.4	3.85	7260	2240	140	1620
57.81	30.3	3.71	7260	2240	140	1620
63.01	27.8	3.40	7260	2240	140	1620
66.13	26.5	3.24	7260	2240	140	1620
70.95	24.7	3.02	7260	2240	140	1620
71.61	24.4	2.99	7260	2240	140	1620
81.92	21.4	2.62	7260	2240	140	1620
86.48	20.2	2.48	7260	2240	140	1620
87.89	19.9	2.44	7260	2240	140	1620
107.12	16.3	2.00	7260	2240	140	1620
130.00	13.5	1.65	7260	2240	140	1620
133.53	13.1	1.61	7260	2240	140	1620
149.43	11.7	1.44	7260	2240	140	1620
161.04	10.9	1.33	7260	2240	140	1620
185.10	9.5	1.16	7260	2240	140	1620
189.79	9.2	1.13	7260	2240	140	1620
228.92	7.6	0.94	7260	2240	140	1620
235.09	7.4	0.91	7260	2240	140	1620
261.99	6.7	0.82	7260	2240	140	1620
283.56	6.2	0.76	7260	2240	140	1620
324.52	5.4	0.66	7260	2240	140	1620

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RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4074 QUAD REDUCTION						
344.84	5.1	0.62	7260	2240	200	1620
356.92	4.9	0.60	7260	2240	200	1620
400.36	4.4	0.54	7260	2240	200	1620
445.13	3.9	0.48	7260	2240	200	1620
546.12	3.2	0.39	7260	2240	200	1620
649.47	2.7	0.33	7260	2240	200	1620
803.08	2.2	0.27	7260	2240	200	1620
855.21	2.0	0.25	7260	2240	200	1620
1007.34	1.74	0.21	7260	2240	200	1620
1099.10	1.59	0.20	7260	2240	200	1620
1206.15	1.45	0.18	7260	2240	200	1620
1472.57	1.19	0.15	7260	2240	200	1620
1670.06	1.05	0.13	7260	2240	200	1620
1785.51	0.98	0.12	7260	2240	200	1620
2237.54	0.78	0.10	7260	2240	200	1620
HI4082 DOUBLE REDUCTION						
2.39	731	53.8	4450	1820	595	1850
2.67	655	50.5	4660	1830	595	1850
2.99	585	47.2	4880	1840	595	1850
3.22	543	44.9	5000	1840	595	1850
3.62	483	41.8	5230	1840	595	1850
3.77	464	40.4	5270	1850	595	1850
4.26	411	37.3	5490	1860	595	1850
5.06	346	32.9	5750	1880	595	1850
6.01	291	45.5	9450	1900	595	1850
6.71	261	42.6	9890	1980	595	1850
7.50	233	40.0	10360	2080	595	1850
8.09	216	38.0	10630	2100	595	1850
9.09	193	35.3	11100	2140	595	1850
9.46	185	34.2	11200	2150	595	1850
10.69	164	31.5	11650	2200	595	1850
12.71	138	27.7	12190	2350	595	1850
17.85	98	21.4	13200	2500	595	1950
21.10	83	18.2	13260	2750	595	1950
25.44	69	15.1	13300	3000	595	2400
31.51	56	12.2	13330	3400	595	2400
44.75	39	8.65	13380	3800	595	2400
49.72	35	7.80	13400	3800	595	2400
HI4083 TRIPLE REDUCTION						
53.50	32.7	7.56	13700	3800	200	2400
57.11	30.6	7.09	13700	3800	200	2400
66.27	26.4	6.11	13700	3800	200	2400
69.95	25.0	5.79	13700	3800	200	2400
83.58	20.9	4.84	13700	3800	200	2400
86.65	20.2	4.67	13700	3800	200	2400
89.03	19.7	4.55	13700	3800	200	2400
103.53	16.9	3.91	13700	3800	200	2400
110.28	15.9	3.67	13700	3800	200	2400
126.03	13.9	3.21	13700	3800	200	2400
135.30	12.9	2.99	13700	3800	200	2400
138.08	12.7	2.93	13700	3800	200	2400
150.66	11.6	2.69	13700	3800	200	2400
157.54	11.1	2.57	13700	3800	200	2400
165.33	10.6	2.45	13700	3800	200	2400

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

CALL: (605) 225-0360 • FAX: (605) 225-0567

POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4083 (continued)						
171.04	10.2	2.37	13700	3800	200	2400
182.68	9.6	2.22	13700	3800	200	2400
186.62	9.4	2.17	13700	3800	200	2400
204.80	8.5	1.98	13700	3800	200	2400
226.28	7.7	1.79	13700	3800	200	2400
228.92	7.6	1.77	13700	3800	200	2400
260.72	6.7	1.55	13700	3800	200	2400
283.57	6.2	1.43	13700	3800	200	2400
322.95	5.4	1.25	13700	3800	200	2400
HI4084 QUAD REDUCTION						
310.23	5.6	1.30	13700	3800	385	2400
351.29	5.0	1.15	13700	3800	385	2400
400.30	4.4	1.01	13700	3800	385	2400
445.16	3.9	0.91	13700	3800	385	2400
536.67	3.3	0.75	13700	3800	385	2400
646.98	2.7	0.63	13700	3800	385	2400
801.43	2.2	0.50	13700	3800	385	2400
992.73	1.76	0.41	13700	3800	385	2400
1169.33	1.50	0.35	13700	3800	385	2400
1264.75	1.38	0.32	13700	3800	385	2400
1410.13	1.24	0.29	13700	3800	385	2400
1566.66	1.12	0.26	13700	3800	385	2400
1845.34	0.95	0.22	13700	3800	385	2400
2225.37	0.79	0.18	13700	3800	385	2400
2472.38	0.71	0.16	13700	3800	385	2400
HI4092 DOUBLE REDUCTION						
2.24	781.3	103.3	8000	3370	950	2200
2.53	691.7	96.4	8430	3370	950	2270
3.15	555.6	84.8	9230	3370	950	2290
3.60	486.1	77.9	9700	3370	950	2290
4.60	380.4	66.1	10510	3370	950	2290
5.36	326.5	56.7	10510	3370	950	2290
5.92	295.6	80.6	16500	3370	950	2290
6.69	261.6	75.7	17500	3370	950	2290
8.34	209.8	62.4	18000	3370	950	2290
9.52	183.8	55.3	18200	3370	950	2290
12.17	143.8	45.6	19200	3370	950	2290
14.17	123.5	41.6	20400	3370	950	2360
18.25	95.9	35.0	22100	3370	950	2740
20.03	87.4	33.4	23100	3370	950	2850
24.55	71.3	29.5	25000	3370	950	3240
27.50	63.6	24.3	23100	3370	950	3420
31.10	56.3	21.5	23100	3370	950	3440
38.29	45.7	17.5	23200	3370	950	3440
44.93	38.9	15.0	23300	3370	950	3440
59.86	29.2	11.3	23400	3370	950	3440
67.06	26.1	10.1	23400	3370	950	3440

SEE PAGES I-54 TO I-57 FOR ADDITIONAL MODELS AVAILABLE.

NOTE: QUAD REDUCTION UNITS ARE MANUFACTURED TO ORDER.

* INTEGRAL GEARMOTORS - SPECIFY MOUNTING TYPE I OR K, AND MOTOR HORSEPOWER (SEE PAGE I-8).
* MOTORIZED REDUCERS - SPECIFY MOUNTING TYPE E OR G, AND MOTOR PART NUMBER.

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4093 TRIPLE REDUCTION						
57.41	30.5	13.7	26600	4460	385	3440
62.19	28.1	12.6	26600	4460	385	3440
63.37	27.6	12.4	26600	4460	385	3440
70.42	24.9	11.2	26600	4460	385	3440
80.24	21.8	9.79	26600	4460	385	3440
89.01	19.7	8.83	26600	4460	385	3440
105.23	16.6	7.47	26600	4460	385	3440
112.72	15.5	6.97	26600	4460	385	3440
126.87	13.8	6.19	26600	4460	385	3440
133.26	13.1	5.90	26600	4460	385	3440
157.15	11.1	5.00	26600	4460	385	3440
160.66	10.9	4.89	26600	4460	385	3440
185.09	9.5	4.25	26600	4460	385	3440
199.01	8.8	3.95	26600	4460	385	3440
223.22	7.8	3.52	26600	4460	385	3440
234.41	7.5	3.35	26600	4460	385	3440
248.00	7.1	3.17	26600	4460	385	3440
282.68	6.2	2.78	26600	4460	385	3440
314.06	5.6	2.50	26600	4460	385	3440
HI4094 QUAD REDUCTION						
357.43	4.9	2.20	26600	4460	595	3440
438.20	4.0	1.79	26600	4460	595	3440
490.71	3.6	1.60	26600	4460	595	3440
554.88	3.2	1.42	26600	4460	595	3440
631.04	2.8	1.25	26600	4460	595	3440
656.02	2.7	1.20	26600	4460	595	3440
807.76	2.2	0.97	26600	4460	595	3440
979.66	1.79	0.80	26600	4460	595	3440
1206.25	1.45	0.65	26600	4460	595	3440
1391.56	1.26	0.56	26600	4460	595	3440
1713.43	1.02	0.46	26600	4460	595	3440
1903.62	0.92	0.41	26600	4460	595	3440
2112.65	0.83	0.37	26600	4460	595	3440
2679.05	0.65	0.29	26600	4460	595	3440
3000.92	0.58	0.26	26600	4460	595	3440
3334.02	0.52	0.24	26600	4460	595	3440
HI4102 DOUBLE REDUCTION						
2.26	774.3	125.0	9770	2725	950	2790
2.58	678.3	125.0	11150	2735	950	2790
2.96	592.0	125.0	12780	2745	950	2790
3.79	461.5	125.1	16400	2755	950	2790
4.60	380.8	121.5	19300	2570	950	2790
5.43	322.6	102.9	19300	2700	950	2790
6.01	291.4	125.2	26000	2750	950	2790
6.86	255.2	110.9	26300	2785	950	2790
7.85	222.8	103.1	28000	2790	950	2790
10.08	173.6	100.4	35000	2800	950	2790
12.21	143.3	90.2	38100	2810	950	2790
14.41	121.4	76.5	38100	3050	950	3040
18.12	96.6	60.8	38100	3350	950	3040
20.04	87.3	55.0	38100	3500	950	3300
22.30	78.5	49.4	38100	3700	950	3750
25.01	70.0	44.1	38100	3900	950	3750
28.33	61.8	38.9	38100	4200	950	3750
32.48	53.9	33.9	38100	4350	950	5320

SEE PAGES I-54 TO I-57 FOR ADDITIONAL MODELS AVAILABLE.
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POWERATIO® 4000 HELICAL INLINE

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HI4103 TRIPLE REDUCTION						
34.56	50.6	32.6	38100	4550	385	5350
38.59	45.3	29.2	38100	4570	385	5350
39.63	44.2	28.4	38100	4850	385	5350
43.15	40.6	26.1	38100	5000	385	5350
46.55	37.6	24.2	38100	5100	385	5350
49.47	35.4	22.7	38100	5300	385	5350
52.30	33.5	21.5	38100	5450	385	5350
53.37	32.8	21.1	38100	5500	385	5350
54.42	32.2	20.7	38100	5550	385	5350
59.97	29.2	18.8	38100	5750	385	5350
61.51	28.5	18.3	38100	6000	385	5350
62.40	28.0	18.0	38100	6000	385	5350
70.52	24.8	16.0	38100	6300	385	5350
73.12	23.9	15.4	38100	6300	385	5350
83.84	20.9	13.4	38100	6500	385	5350
102.70	17.0	11.0	38100	6500	385	5350
117.76	14.9	9.56	38100	6500	385	5350
121.43	14.4	9.27	38100	6500	385	5350
139.23	12.6	8.08	38100	6500	385	5350
146.39	12.0	7.69	38100	6500	385	5350
167.85	10.4	6.71	38100	6500	385	5350
181.32	9.7	6.21	38100	6500	385	5350
207.90	8.4	5.41	38100	6500	385	5350
257.56	6.8	4.37	38100	6500	385	5350
286.15	6.1	3.93	38100	6500	385	5350
295.31	5.9	3.81	38100	6500	385	5350
328.09	5.3	3.43	38100	6500	385	5350
HI4104 QUAD REDUCTION						
357.56	4.9	3.15	38100	6500	595	5350
397.95	4.4	2.83	38100	6500	595	5350
446.41	3.9	2.52	38100	6500	595	5350
527.77	3.3	2.13	38100	6500	595	5350
636.26	2.8	1.77	38100	6500	595	5350
702.58	2.5	1.60	38100	6500	595	5350
826.21	2.1	1.36	38100	6500	595	5350
896.70	2.0	1.26	38100	6500	595	5350
997.98	1.75	1.13	38100	6500	595	5350
1023.44	1.71	1.10	38100	6500	595	5350
1119.52	1.56	1.01	38100	6500	595	5350
1268.07	1.38	0.89	38100	6500	595	5350
1408.82	1.24	0.80	38100	6500	595	5350
1453.75	1.20	0.77	38100	6500	595	5350
1615.11	1.08	0.70	38100	6500	595	5350

SEE PAGES I-54 TO I-57 FOR ADDITIONAL MODELS AVAILABLE.

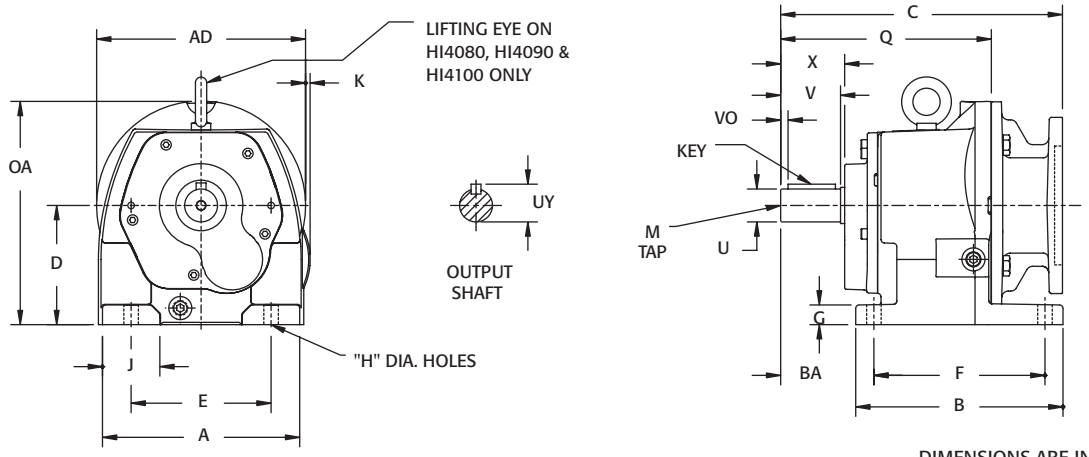
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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4042E	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	$90^{+0}_{-.5}$	110	130	15	10	35	7	170	185
HI4062E	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4662E	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4072E	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4082E	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330
HI4092E	13.42	14.00	14.37	6.30	$8.86^{+0}_{-.02}$	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	$225^{+0}_{-.5}$	250	310	35	23	90	11	402	417
HI4102E	15.25	16.08	17.32	7.28	$9.84^{+0}_{-.02}$	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	$250^{+0}_{-.5}$	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4042E	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062E	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662E	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072E	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082E	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4092E	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4102E	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

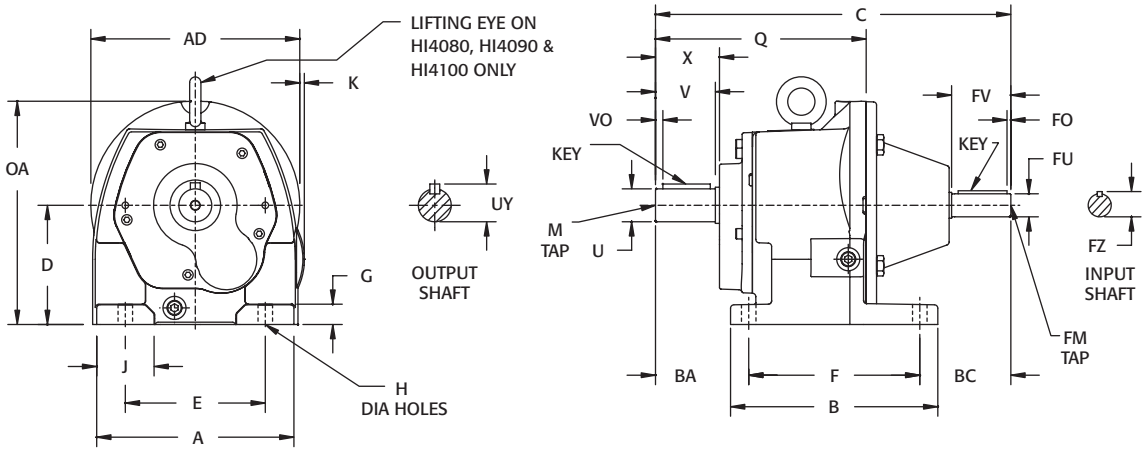
MODEL		NEMA							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 366TC
HI4042E	C	9.90	9.90	11.21	-	-	-	-	-
HI4062E	C	11.10	11.10	12.12	12.12	-	-	-	-
HI4662E	C	12.14	12.14	13.16	13.16	-	-	-	-
HI4072E	C	14.15	14.15	14.83	14.83	14.83	-	-	-
HI4082E	C	-	-	18.45	18.45	18.45	19.00	-	-
HI4092E	C	-	-	20.89	20.89	20.89	20.89	22.15	22.15
HI4102E	C	-	-	23.49	23.49	23.49	23.49	24.75	24.75

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4042A	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	$90^{+0}_{-.5}$	110	130	15	10	35	7	170	185
HI4062A	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4662A	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4072A	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4082A	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330
HI4092A	13.42	14.00	14.37	6.30	$8.86^{+0}_{-.02}$	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	$225^{+0}_{-.5}$	250	310	35	23	90	11	402	417
HI4102A	15.25	16.08	17.32	7.28	$9.84^{+0}_{-.02}$	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	$250^{+0}_{-.5}$	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4042A	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062A	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662A	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072A	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082A	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4092A	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4102A	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4042A	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4062A	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4662A	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4072A	$1.125^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
HI4082A	$1.375^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
HI4092A	$1.875^{+0}_{-.001}$	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50
HI4102A	$1.875^{+0}_{-.001}$	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50

GEARCASE/INPUT

MODEL	BC	C
HI4042A	3.56	11.63
HI4062A	3.45	13.89
HI4662A	3.31	14.93
HI4072A	5.04	17.64
HI4082A	5.82	21.57
HI4092A	6.82	25.33
HI4102A	6.07	27.92

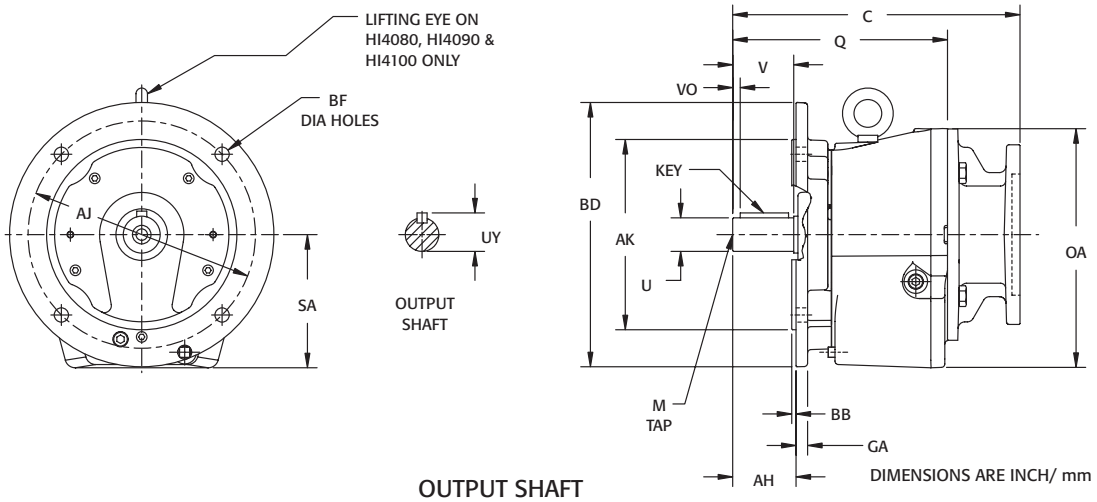
* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4042G	7.22	7.29	4.04
	183	185	103
HI4062G	8.92	8.40	4.96
	227	213	126
HI4662G	9.71	9.44	5.75
	247	240	146
HI4072G	10.93	10.79	5.94
	278	274	151
HI4082G	13.05	12.99	7.08
	331	330	180
HI4092G	16.42	16.41	9.45
	417	417	240
HI4102G	17.98	19.00	11.02
	457	483	280

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	0.43
50	165	$130^{-.003}_{-.054}$	4	200	12	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18
4.72	15.75	$13.780^{-.0005}_{-.0032}$	0.19	17.74	0.75	1.02
120	400	$350^{+0}_{-.070}$	5	451	19	26
5.51	15.75	$13.780^{-.0005}_{-.0032}$	0.20	17.72	0.75	1.00
140	400	$350^{+0}_{-.070}$	5	450	19	25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4042G	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062G	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662G	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072G	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082G	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4092G	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4102G	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 366TC
HI4042G	C	9.90	9.90	11.21	-	-	-	-	-
HI4062G	C	11.10	11.10	12.12	12.12	-	-	-	-
HI4662G	C	12.14	12.14	13.16	13.16	-	-	-	-
HI4072G	C	14.15	14.15	14.83	14.83	14.83	-	-	-
HI4082G	C	-	-	18.45	18.45	18.45	19.00	-	-
HI4092G	C	-	-	20.89	20.89	20.89	20.89	22.15	22.15
HI4102G	C	-	-	23.49	23.49	23.49	23.49	24.75	24.75

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

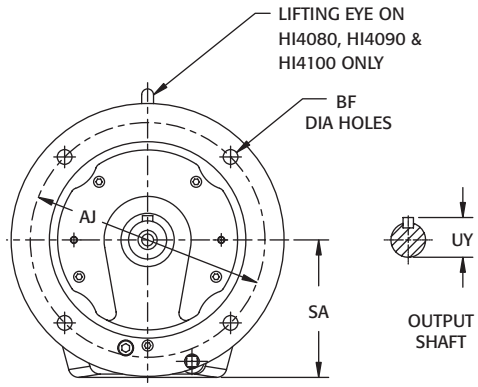
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

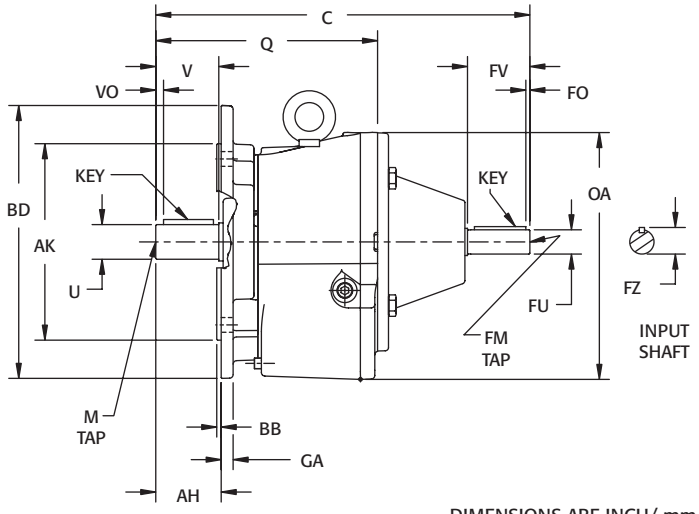
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4042C	7.22 183	7.29 185	4.04 103
HI4062C	8.92 227	8.40 213	4.96 126
HI4662C	9.71 247	9.44 240	5.75 146
HI4072C	10.93 278	10.79 274	5.94 151
HI4082C	13.05 331	12.99 330	7.08 180
HI4092C	16.42 417	16.41 417	9.45 240
HI4102C	17.98 457	19.00 483	11.02 280

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97 50	6.50 165	$5.118^{+0}_{-.002}$ $130^{-.003}_{-.054}$	0.14 4	7.90 200	0.47 12	0.43 11
2.76 70	8.46 215	$7.087^{-.0004}_{-.0029}$ $180^{+0}_{-.064}$	0.16 4	9.84 250	0.53 14	0.43 11
2.76 70	8.46 215	$7.087^{-.0004}_{-.0029}$ $180^{+0}_{-.064}$	0.16 4	9.84 250	0.53 14	0.43 11
3.15 80	10.43 265	$9.055^{+.0001}_{-.0027}$ $230^{+0}_{-.072}$	0.16 4	11.81 300	0.53 14	0.59 15
3.93 100	11.81 300	$9.843^{-.0005}_{-.0025}$ $250^{+0}_{-.051}$	0.20 5	13.78 350	0.69 18	0.70 18
4.72 120	15.75 400	$13.780^{-.0005}_{-.0032}$ $350^{+0}_{-.070}$	0.19 5	17.74 451	0.75 19	1.02 26
5.51 140	15.75 400	$13.780^{-.0005}_{-.0032}$ $350^{+0}_{-.070}$	0.20 5	17.72 450	0.75 19	1.00 25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4042C	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4062C	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4662C	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4072C	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4082C	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4092C	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4102C	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4042C	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4062C	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4662C	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4072C	$1.125^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
HI4082C	$1.375^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
HI4092C	$1.875^{+0}_{-.001}$	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50
HI4102C	$1.875^{+0}_{-.001}$	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50

GEARCASE/INPUT

MODEL	C
HI4042C	11.63
HI4062C	13.89
HI4662C	14.93
HI4072C	17.64
HI4082C	21.57
HI4092C	25.33
HI4102C	27.92

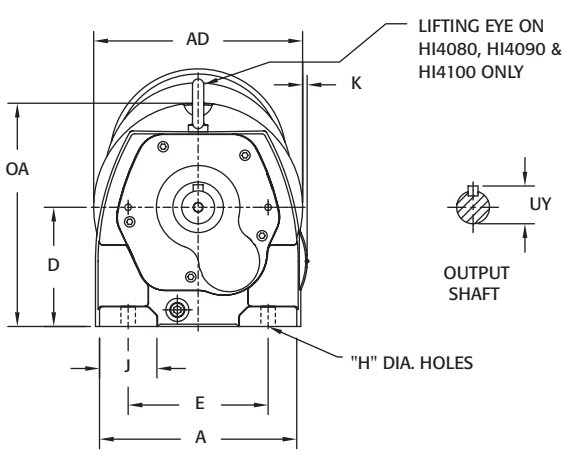
* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

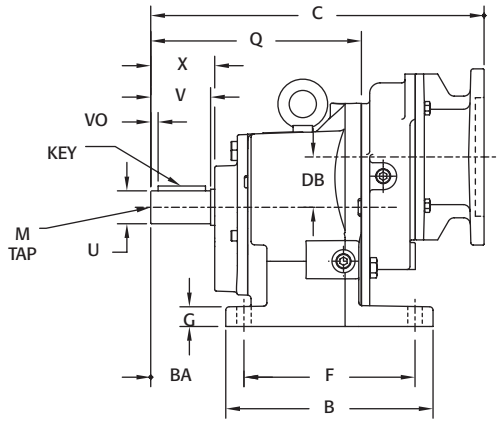
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	DB	E	F	G	H	J	K	OA	Q
HI4043E	5.72	6.61	6.30	2.95	3.54 $^{+0}_{-.02}$	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90 $^{+0}_{-.5}$	38	110	130	15	10	35	7	170	185
HI4063E	7.48	7.93	7.87	3.94	4.53 $^{+0}_{-.02}$	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115 $^{+0}_{-.5}$	49	135	165	19	14	55	N/A	215	213
HI4663E	8.14	8.50	9.13	3.94	5.12 $^{+0}_{-.02}$	1.91	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130 $^{+0}_{-.5}$	49	150	195	21	14	61	6	231	240
HI4073E	8.66	9.97	9.65	4.53	5.51 $^{+0}_{-.02}$	1.91	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140 $^{+0}_{-.5}$	49	170	205	25	18	55	N/A	266	274
HI4083E	11.34	11.96	12.59	5.51	7.09 $^{+0}_{-.02}$	2.36	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180 $^{+0}_{-.5}$	60	215	260	28	19	74	N/A	331	330
HI4093E	13.42	14.00	14.37	6.30	8.86 $^{+0}_{-.02}$	2.87	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225 $^{+0}_{-.5}$	73	250	310	35	23	90	11	402	417
HI4103E	15.25	16.08	17.32	7.28	9.84 $^{+0}_{-.02}$	3.39	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250 $^{+0}_{-.5}$	86	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4043E	1.000 $^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063E	1.375 $^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663E	1.375 $^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073E	1.625 $^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083E	2.125 $^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093E	2.375 $^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103E	2.875 $^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA					
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC
HI4043E	C	10.68	-	-	-	-	-
HI4063E	C	13.06	13.06	-	-	-	-
HI4663E	C	14.10	14.10	-	-	-	-
HI4073E	C	14.97	14.97	-	-	-	-
HI4083E	C	16.87	16.87	17.89	-	-	-
HI4093E	C	22.30	22.30	22.98	22.98	22.98	-
HI4103E	C	-	-	28.34	28.34	28.34	28.89

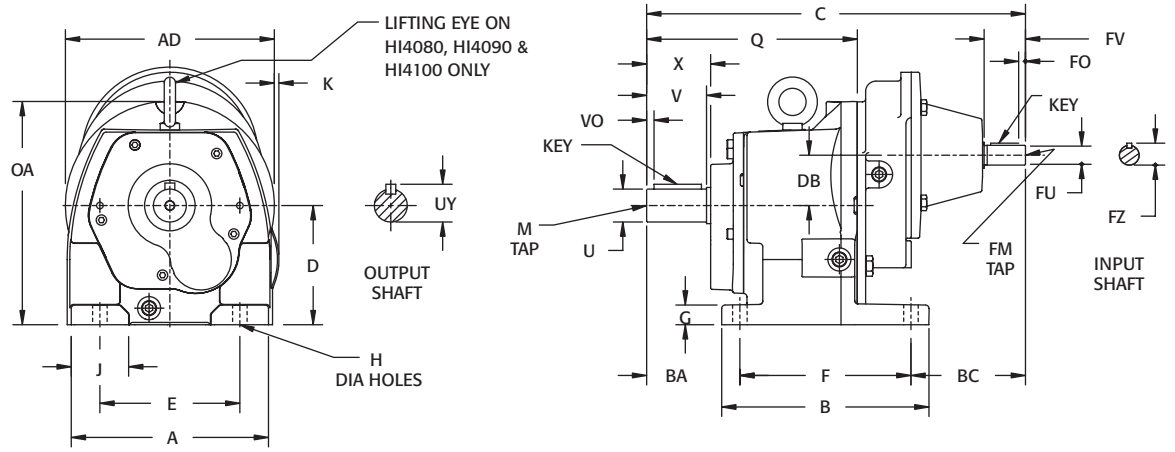
* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	DB	E	F	G	H	J	K	OA	Q
HI4043A	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	$90^{+0}_{-.5}$	38	110	130	15	10	35	7	170	185
HI4063A	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	$115^{+0}_{-.5}$	49	135	165	19	14	55	N/A	215	213
HI4663A	8.14	8.50	9.13	3.94	$5.12^{+0}_{-.02}$	1.91	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	$130^{+0}_{-.5}$	49	150	195	21	14	61	6	231	240
HI4073A	8.66	9.97	9.65	4.53	$5.51^{+0}_{-.02}$	1.91	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	$140^{+0}_{-.5}$	49	170	205	25	18	55	N/A	266	274
HI4083A	11.34	11.96	12.59	5.51	$7.09^{+0}_{-.02}$	2.36	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	$180^{+0}_{-.5}$	60	215	260	28	19	74	N/A	331	330
HI4093A	13.42	14.00	14.37	6.30	$8.86^{+0}_{-.02}$	2.87	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	$225^{+0}_{-.5}$	73	250	310	35	23	90	11	402	417
HI4103A	15.25	16.08	17.32	7.28	$9.84^{+0}_{-.02}$	3.39	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	$250^{+0}_{-.5}$	86	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4043A	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063A	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663A	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073A	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083A	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093A	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103A	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4043A	$0.625^{+0}_{-.001}$	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4063A	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4663A	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4073A	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4083A	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4093A	$1.125^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-3/8	3/8-16 x 1.00
HI4103A	$1.375^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

GEARCASE/INPUT

MODEL	BC	C
HI4043A	4.12	12.19
HI4063A	4.35	14.78
HI4663A	4.21	15.82
HI4073A	4.10	16.70
HI4083A	3.92	19.66
HI4093A	7.29	25.79
HI4103A	9.62	31.46

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

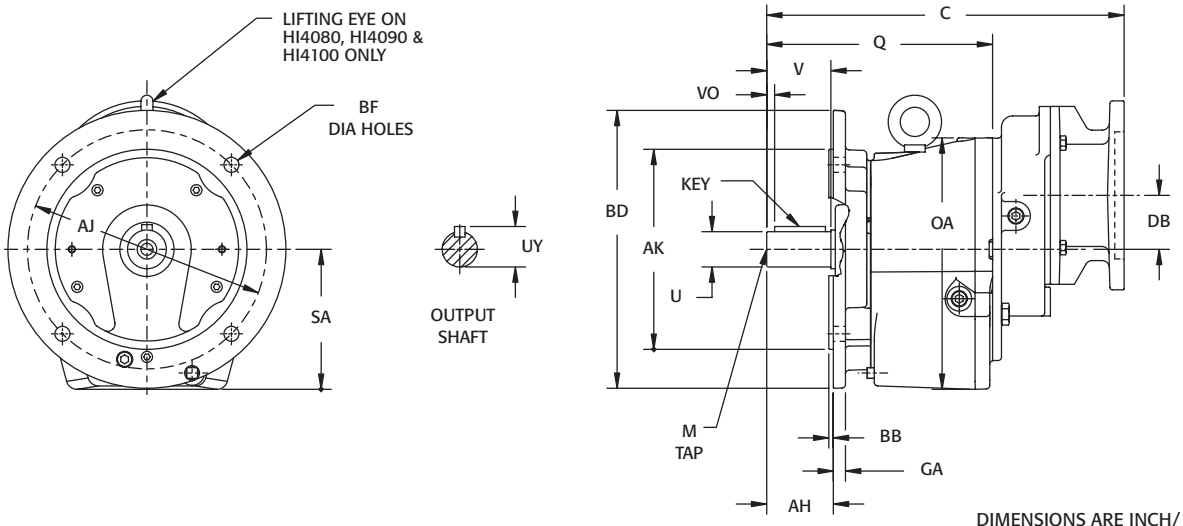
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA	DB
HI4043G	7.22	7.29	4.04	1.50
	183	185	103	38
HI4063G	8.92	8.40	4.96	1.91
	227	213	126	49
HI4663G	9.71	9.44	5.75	1.91
	247	240	146	49
HI4073G	10.93	10.79	5.94	1.91
	278	274	151	49
HI4083G	13.05	12.99	7.08	2.36
	331	330	180	60
HI4093G	16.42	16.41	9.45	2.87
	417	417	240	73
HI4103G	17.98	19.00	11.02	3.39
	457	483	280	86

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	0.43
50	165	$130^{-.003}_{-.054}$	4	200	12	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18
4.72	15.75	$13.780^{-.0005}_{-.0032}$	0.19	17.74	0.75	1.02
120	400	$350^{+0}_{-.070}$	5	451	19	26
5.51	15.75	$13.780^{-.0005}_{-.0032}$	0.20	17.72	0.75	1.00
140	400	$350^{+0}_{-.070}$	5	450	19	25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4043G	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063G	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663G	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073G	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083G	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093G	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103G	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA					
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC
HI4043G	C	10.68	-	-	-	-	-
HI4063G	C	13.06	13.06	-	-	-	-
HI4663G	C	14.10	14.10	-	-	-	-
HI4073G	C	14.97	14.97	-	-	-	-
HI4083G	C	16.87	16.87	17.89	-	-	-
HI4093G	C	22.30	22.30	22.98	22.98	22.98	-
HI4103G	C	-	-	28.34	28.34	28.34	28.89

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

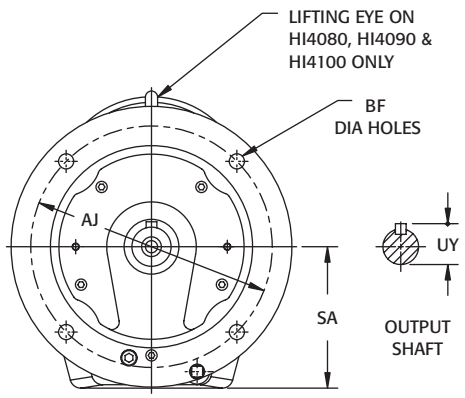
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

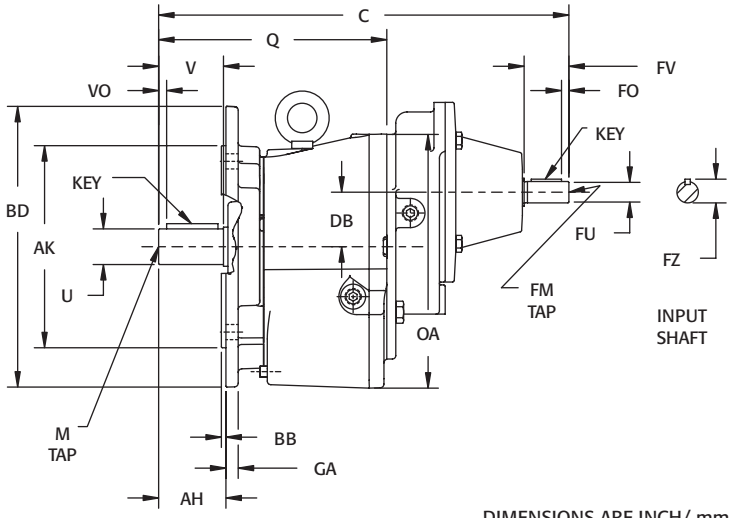
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA	DB
HI4043C	7.22	7.29	4.04	1.50
	183	185	103	38
HI4063C	8.92	8.40	4.96	1.91
	227	213	126	49
HI4663C	9.71	9.44	5.75	1.91
	247	240	146	49
HI4073C	10.93	10.79	5.94	1.91
	278	274	151	49
HI4083C	13.05	12.99	7.08	2.36
	331	330	180	60
HI4093C	16.42	16.41	9.45	2.87
	417	417	240	73
HI4103C	17.98	19.00	11.02	3.39
	457	483	280	86

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	0.43
50	165	$130^{-.003}_{-.054}$	4	200	12	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	$180^{+0}_{-.064}$	4	250	14	11
3.15	10.43	$9.055^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	$230^{+0}_{-.072}$	4	300	14	15
3.93	11.81	$9.843^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	$250^{+0}_{-.051}$	5	350	18	18
4.72	15.75	$13.780^{-.0005}_{-.0032}$	0.19	17.74	0.75	1.02
120	400	$350^{+0}_{-.070}$	5	451	19	26
5.51	15.75	$13.780^{-.0005}_{-.0032}$	0.20	17.72	0.75	1.00
140	400	$350^{+0}_{-.070}$	5	450	19	25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4043C	$1.000^{+0}_{-.001}$	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
HI4063C	$1.375^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4663C	$1.375^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4073C	$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4083C	$2.125^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4093C	$2.375^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4103C	$2.875^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4043C	$0.625^{+0}_{-.001}$	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4063C	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4663C	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4073C	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4083C	$0.875^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4093C	$1.125^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-3/8	3/8-16 x 1.00
HI4103C	$1.375^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

GEARCASE/INPUT

MODEL	C
HI4043C	12.19
HI4063C	14.78
HI4663C	15.82
HI4073C	16.70
HI4083C	19.66
HI4093C	25.79
HI4103C	31.46

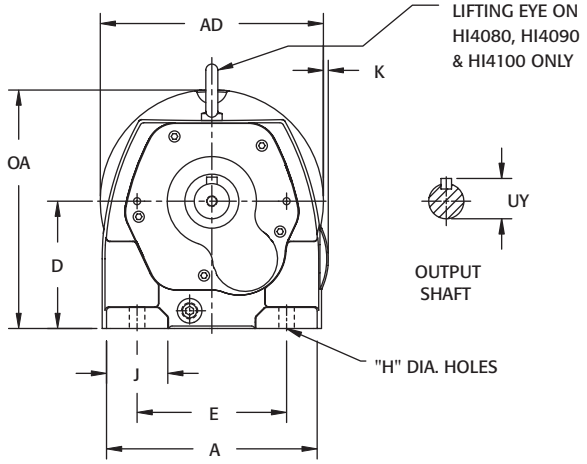
* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.
SEE PAGES I-58 TO I-61 FOR ADDITIONAL MODELS AVAILABLE.

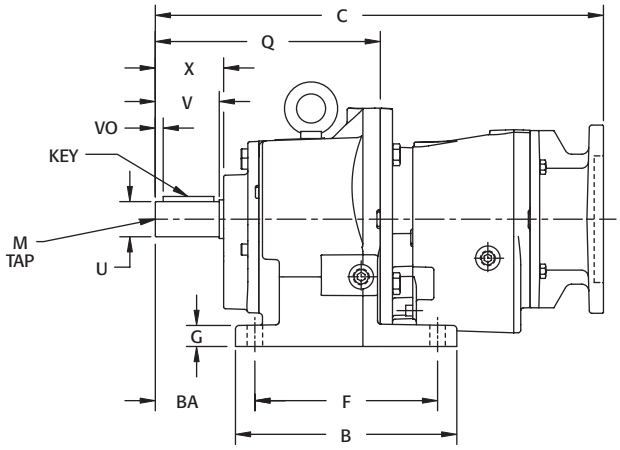
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION





DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4064E	7.48	7.93	7.87	3.94	4.53 $^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115 $^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4664E	8.14	8.50	9.13	3.94	5.12 $^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130 $^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4074E	8.66	9.97	9.65	4.53	5.51 $^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140 $^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4084E	11.34	11.96	12.59	5.51	7.09 $^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180 $^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330
HI4094E	13.42	14.00	14.37	6.30	8.86 $^{+0}_{-.02}$	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225 $^{+0}_{-.5}$	250	310	35	23	90	11	402	417
HI4104E	15.25	16.08	17.32	7.28	9.84 $^{+0}_{-.02}$	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250 $^{+0}_{-.5}$	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4064E	1.375 $^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664E	1.375 $^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074E	1.625 $^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084E	2.125 $^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4094E	2.375 $^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4104E	2.875 $^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HI4064E	C	16.33	16.33	-
HI4664E	C	17.37	17.37	-
HI4074E	C	19.13	19.13	-
HI4084E	C	23.99	23.99	-
HI4094E	C	**	**	30.93
HI4104E	C	**	**	33.52

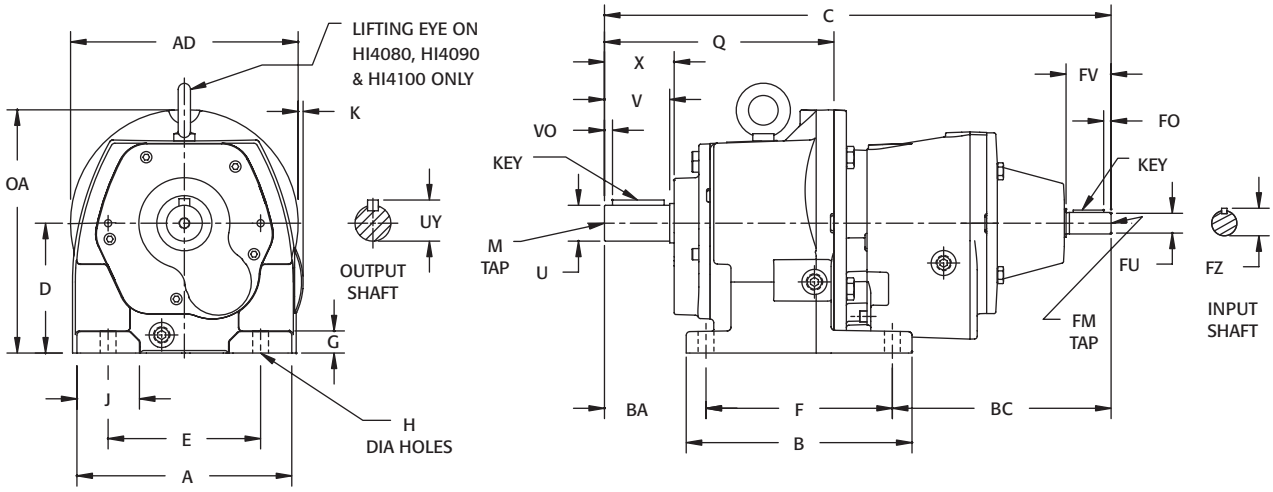
* SEE PAGE I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

** QUAD REDUCTION UNITS ARE MANUFACTURED TO ORDER. CONTACT HUB CITY FOR AVAILABILITY.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
HI4064A	7.48	7.93	7.87	3.94	4.53 $^{+0}_{-.02}$	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115 $^{+0}_{-.5}$	135	165	19	14	55	N/A	215	213
HI4664A	8.14	8.50	9.13	3.94	5.12 $^{+0}_{-.02}$	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130 $^{+0}_{-.5}$	150	195	21	14	61	6	231	240
HI4074A	8.66	9.97	9.65	4.53	5.51 $^{+0}_{-.02}$	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140 $^{+0}_{-.5}$	170	205	25	18	55	N/A	266	274
HI4084A	11.34	11.96	12.59	5.51	7.09 $^{+0}_{-.02}$	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180 $^{+0}_{-.5}$	215	260	28	19	74	N/A	331	330
HI4094A	13.42	14.00	14.37	6.30	8.86 $^{+0}_{-.02}$	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225 $^{+0}_{-.5}$	250	310	35	23	90	11	402	417
HI4104A	15.25	16.08	17.32	7.28	9.84 $^{+0}_{-.02}$	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250 $^{+0}_{-.5}$	290	370	38	26	102	9	426	483

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4064A	1.375 $^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664A	1.375 $^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074A	1.625 $^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084A	2.125 $^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4094A	2.375 $^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4104A	2.875 $^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4064A	0.750 $^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4664A	0.750 $^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4074A	0.875 $^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4084A	1.125 $^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
HI4094A	1.375 $^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
HI4104A	1.375 $^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

GEARCASE/INPUT

MODEL	BC	C
HI4064A	7.62	18.06
HI4664A	7.48	19.10
HI4074A	9.32	21.92
HI4084A	11.73	27.48
HI4094A	15.54	34.05
HI4104A	14.79	36.64

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

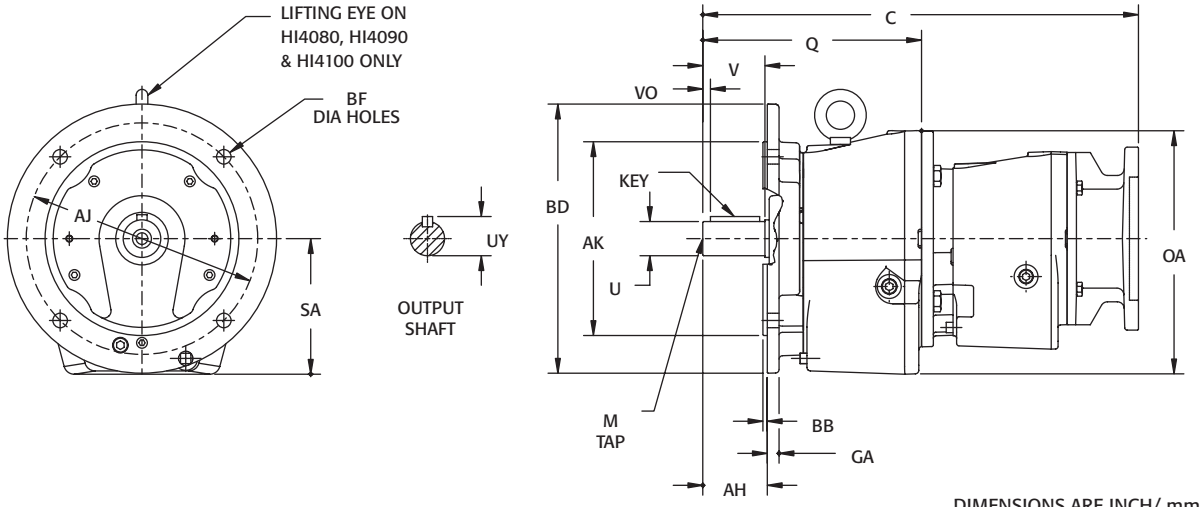
** QUAD REDUCTION UNITS ARE MANUFACTURED TO ORDER. CONTACT HUB CITY FOR AVAILABILITY.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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QUAD REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4064G	8.92	8.40	4.96
	227	213	126
HI4664G	9.71	9.44	5.75
	247	240	146
HI4074G	10.93	10.79	5.94
	278	274	151
HI4084G	13.05	12.99	7.08
	331	330	180
HI4094G	16.42	16.41	9.45
	417	417	240
HI4104G	17.98	19.00	11.02
	457	483	280

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
2.76	8.46	7.087 $^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	180 $^{+0}_{-.064}$	4	250	14	11
2.76	8.46	7.087 $^{-.0004}_{-.0029}$	0.16	9.84	0.53	0.43
70	215	180 $^{+0}_{-.064}$	4	250	14	11
3.15	10.43	9.055 $^{+.0001}_{-.0027}$	0.16	11.81	0.53	0.59
80	265	230 $^{+0}_{-.072}$	4	300	14	15
3.93	11.81	9.843 $^{-.0005}_{-.0025}$	0.20	13.78	0.69	0.70
100	300	250 $^{+0}_{-.051}$	5	350	18	18
4.72	15.75	13.780 $^{-.0005}_{-.0032}$	0.19	17.74	0.75	1.02
120	400	350 $^{+0}_{-.070}$	5	451	19	26
5.51	15.75	13.780 $^{-.0005}_{-.0032}$	0.20	17.72	0.75	1.00
140	400	350 $^{+0}_{-.070}$	5	450	19	25.4

OUTPUT SHAFT *

MODEL	U	UY	V	VO	X	KEY	M
HI4064G	1.375 $^{+0}_{-.001}$	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664G	1.375 $^{+0}_{-.001}$	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074G	1.625 $^{+0}_{-.001}$	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084G	2.125 $^{+0}_{-.001}$	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4094G	2.375 $^{+0}_{-.001}$	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4104G	2.875 $^{+0}_{-.001}$	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HI4064G	C	16.33	16.33	-
HI4664G	C	17.37	17.37	-
HI4074G	C	19.13	19.13	-
HI4084G	C	23.99	23.99	-
HI4094G	C	**	**	30.93
HI4104G	C	**	**	33.52

* See Page I-82 and I-83 For Additional Shaft Diameters Available.

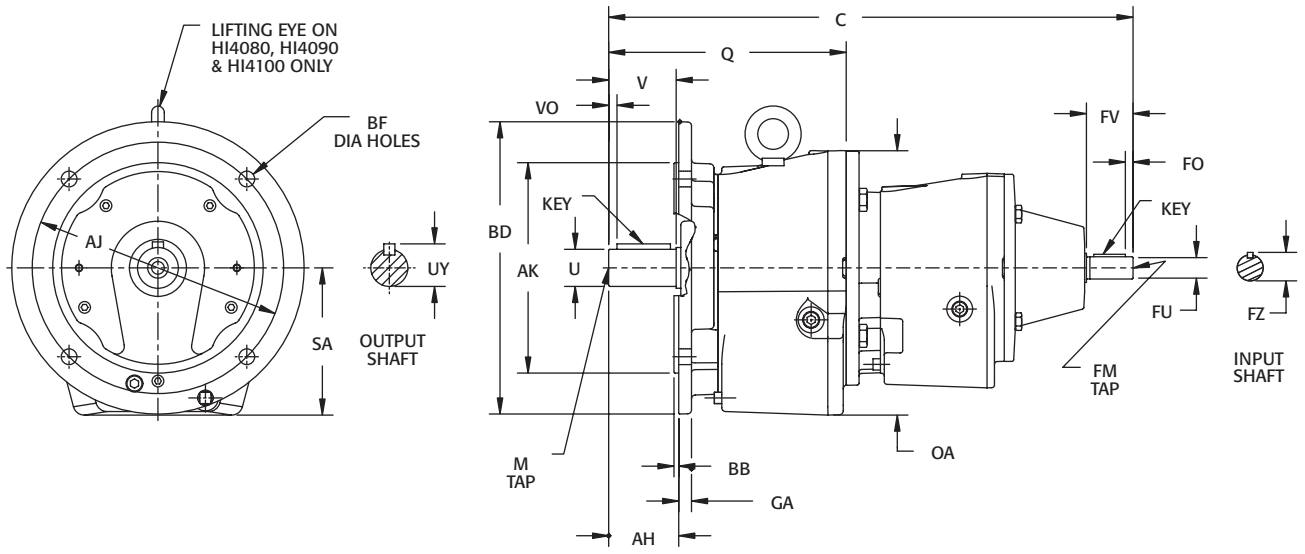
** Quad Reduction Units Are Manufactured To Order. Contact Hub City For Availability.

Dimensions subject to change without notice

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	Q	SA
HI4064C	8.92 227	8.40 213	4.96 126
HI4664C	9.71 247	9.44 240	5.75 146
HI4074C	10.93 278	10.79 274	5.94 151
HI4084C	13.05 331	12.99 330	7.08 180
HI4094C	16.42 417	16.41 417	9.45 240
HI4104C	17.98 457	19.00 483	11.02 280

OUTPUT SHAFT

AH	AJ	AK	BB	BD	BF	GA
2.76 70	8.46 215	$7.087\ ^{-.0004}_{-.0029}$ $180\ ^{+0}_{-.064}$	0.16 4	9.84 250	0.53 14	0.43 11
2.76 70	8.46 215	$7.087\ ^{-.0004}_{-.0029}$ $180\ ^{+0}_{-.064}$	0.16 4	9.84 250	0.53 14	0.43 11
3.15 80	10.43 265	$9.055\ ^{+.0001}_{-.0027}$ $230\ ^{+0}_{-.072}$	0.16 4	11.81 300	0.53 14	0.59 15
3.93 100	11.81 300	$9.843\ ^{-.0005}_{-.0025}$ $250\ ^{+0}_{-.051}$	0.20 5	13.78 350	0.69 18	0.70 18
4.72 120	15.75 400	$13.780\ ^{-.0005}_{-.0032}$ $350\ ^{+0}_{-.070}$	0.19 5	17.74 451	0.75 19	1.02 26
5.51 140	15.75 400	$13.780\ ^{-.0005}_{-.0032}$ $350\ ^{+0}_{-.070}$	0.20 5	17.72 450	0.75 19	1.00 25.4

OUTPUT SHAFT * - CONT.

MODEL	U	UY	V	VO	KEY	M
HI4064C	$1.375\ ^{+0}_{-.001}$	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4664C	$1.375\ ^{+0}_{-.001}$	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
HI4074C	$1.625\ ^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
HI4084C	$2.125\ ^{+0}_{-.001}$	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
HI4094C	$2.375\ ^{+0}_{-.001}$	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
HI4104C	$2.875\ ^{+0}_{-.001}$	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

INPUT SHAFT *

MODEL	FU	FZ	FV	FO	KEY	FM
HI4064C	$0.750\ ^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4664C	$0.750\ ^{+0}_{-.001}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
HI4074C	$0.875\ ^{+0}_{-.001}$	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
HI4084C	$1.125\ ^{+0}_{-.001}$	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
HI4094C	$1.375\ ^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
HI4104C	$1.375\ ^{+0}_{-.001}$	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

GEARCASE/INPUT

MODEL	C
HI4064C	18.06
HI4664C	19.10
HI4074C	21.92
HI4084C	27.48
HI4094C	34.05
HI4104C	36.64

* SEE PAGES I-82 AND I-83 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

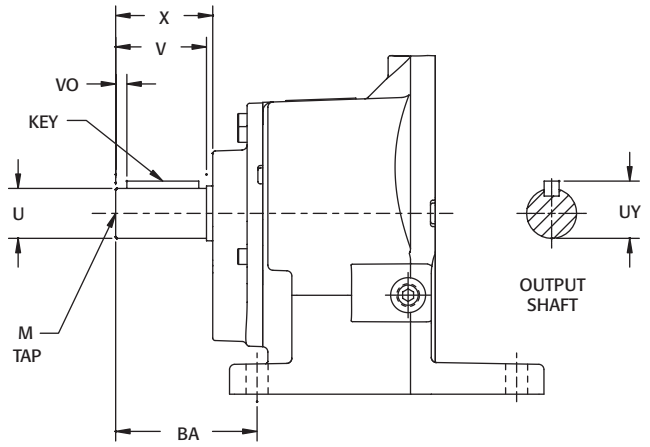
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

** QUAD REDUCTION UNITS ARE MANUFACTURED TO ORDER. CONTACT HUB CITY FOR AVAILABILITY.

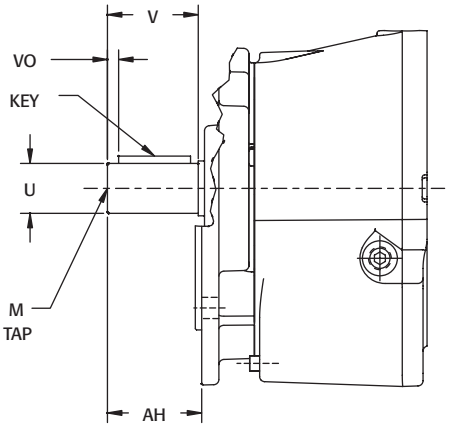
WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

OPTIONAL OUTPUT SHAFTS



Foot Mount



Flange Mount

INCH SHAFTS

DIMENSIONS ARE INCH

SERIES	U	UY	V	VO	X	BA	AH	KEY	M
HI4040	-	-	-	-	-	-	-	-	-
HI4060	$1.250^{+0}_{-.001}$	1.36	2.36	0.41	2.43	3.54	2.36	1/4 x 1/4 x 1-11/16	3/8-24 x 0.88
HI4660	-	-	-	-	-	-	-	-	-
HI4070	-	-	-	-	-	-	-	-	-
HI4080	-	-	-	-	-	-	-	-	-
HI4090	-	-	-	-	-	-	-	-	-
HI4100	-	-	-	-	-	-	-	-	-

METRIC SHAFTS

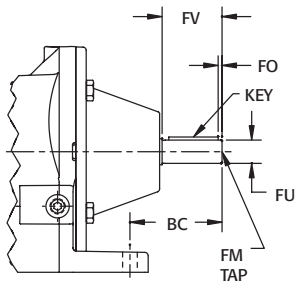
DIMENSIONS ARE mm

SERIES	U	UY	V	VO	X	BA	AH	KEY	M
HI4040	24.008 23.996	27	52	9	54	75	50	8 x 7 x 28	M8x1.25 x 20
	25.015 25.002	28	52	8	54	75	50	8 x 7 x 28	M10x1.5 x 23
HI4060	28.009 27.996	31	60	9	62	90	60	8 x 7 x 40	M10x1.5 x 24
	30.015 30.002	33	60	9	62	90	60	8 x 7 x 40	M10x1.5 x 24
	35.018 35.002	38	N/A	8	72	100	70	10 x 8 x 56	M12x1.75 x 28
HI4660	35.018 35.002	38	70	8	75	100	70	10 x 8 x 56	M12x1.75 x 28
HI4070	38.018 38.002	41	80	9	83	115	80	10 x 8 x 56	M12x1.75 x 30
	40.018 40.002	43	80	11	83	115	80	12 x 8 x 50	M16x2 x 38
HI4080	48.018 48.002	51.5	110	12	113	150	110	14 x 9 x 100	M16x2 x 36
	50.018 50.002	53.5	100	17	103	140	100	14 x 9 x 80	M16x2 x 36
HI4090	60.030 60.011	64	120	19	126	160	120	18 x 11 x 60	M20x2.5 x 43
HI4100	70.030 70.011	74.5	140	18	143	185	140	20 x 12 x 100	M20x2.5 x 42

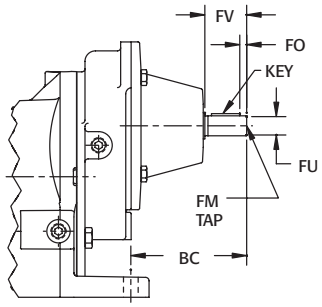
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

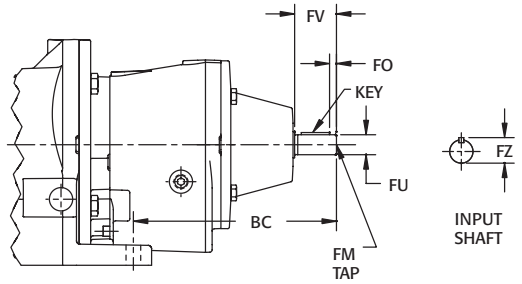
OPTIONAL INPUT SHAFTS



Double Reduction



Triple Reduction



Quadruple Reduction

INCH SHAFTS

DIMENSIONS ARE INCH

	SERIES	FU	FZ	FV	FO	BC	KEY	FM
DOUBLE REDUCTION	HI4042	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	3.87	3/16 x 3/16 x 1-1/16	N/A
	HI4062	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	2.78	3/16 x 3/16 x 1-1/16	N/A
	HI4662	-	-	-	-	-	-	-
	HI4072	$0.875^{+0}_{-.001}$	0.95	1.97	0.28	4.39	3/16 X 3/16 X 1-1/4	N/A
	HI4082	$1.125^{+0}_{-.001}$	1.23	2.36	0.32	5.04	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
	HI4092	-	-	-	-	-	-	-
	HI4102	-	-	-	-	-	-	-
TRIPLE REDUCTION	HI4043	-	-	-	-	-	-	-
	HI4063	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	4.66	3/16 x 3/16 x 1-1/16	N/A
	HI4663	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	4.52	3/16 x 3/16 x 1-1/16	N/A
	HI4073	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	4.41	3/16 x 3/16 x 1-1/16	N/A
	HI4083	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	3.24	3/16 x 3/16 x 1-1/16	N/A
	HI4093	$0.875^{+0}_{-.001}$	0.95	1.97	0.28	6.63	3/16 X 3/16 X 1-1/4	N/A
	HI4103	$1.125^{+0}_{-.001}$	1.23	2.36	0.32	8.83	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
QUADRUPLE REDUCTION	HI4064	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	7.93	3/16 x 3/16 x 1-1/16	N/A
	HI4664	$0.625^{+0}_{-.001}$	0.69	1.88	0 - 0.60	7.79	3/16 x 3/16 x 1-1/16	N/A
	HI4074	$0.750^{+0}_{-.001}$	0.82	1.57	0.25	8.64	3/16 x 3/16 x 1-1/16	N/A
	HI4084	$0.875^{+0}_{-.001}$	0.95	1.97	0.28	11.08	3/16 X 3/16 X 1-1/4	N/A
	HI4094	$1.125^{+0}_{-.001}$	1.23	2.36	0.32	14.75	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
	HI4104	$1.125^{+0}_{-.001}$	1.23	2.36	0.32	14.00	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00

METRIC SHAFTS

DIMENSIONS ARE mm

	SERIES	FU	FZ	FV	FO	BC	KEY	FM
DOUBLE REDUCTION	HI4042	$16^{+.008}_{-.003}$	18	40	7	90	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	90	6 x 6 x 25	M6x1.0 x 17
	HI4062	$24^{+.009}_{-.004}$	27	50	9	81	8 x 7 x 30	M8x1.25 x 21
	HI4662	$24^{+.009}_{-.004}$	27	50	9	77	8 x 7 x 30	M8x1.25 x 21
	HI4072	$28^{+.009}_{-.004}$	31	60	7	121	8 x 7 x 40	M10x1.5 x 24
	HI4082	$38^{+.018}_{+.002}$	41	80	5	148	10 x 8 x 70	M12x1.75 x 28
	HI4092	$48^{+.018}_{+.002}$	51.5	110	5	188	14 x 9 x 100	M16x2 x 38
	HI4102	$48^{+.018}_{+.002}$	51.5	110	5	169	14 x 9 x 100	M16x2 x 38
TRIPLE REDUCTION	HI4043	$14^{+.008}_{-.003}$	16	30	5	95	5 x 5 x 20	M5x0.8 x 13
		$16^{+.008}_{-.003}$	18	40	7	105	5 x 5 x 20	M5x0.8 x 13
	HI4063	$16^{+.008}_{-.003}$	18	40	7	110	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	110	6 x 6 x 25	M6x1.0 x 17
	HI4663	$16^{+.008}_{-.003}$	18	40	7	107	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	107	6 x 6 x 25	M6x1.0 x 17
	HI4073	$16^{+.008}_{-.003}$	18	40	7	104	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	104	6 x 6 x 25	M6x1.0 x 17
	HI4083	$24^{+.009}_{-.004}$	27	50	9	92	8 x 7 x 30	M8x1.25 x 21
	HI4093	$28^{+.009}_{-.004}$	31	60	7	178	8 x 7 x 40	M10x1.5 x 24
	HI4103	$38^{+.018}_{+.002}$	41	80	5	244	10 x 8 x 70	M12x1.75 x 28
QUADRUPLE REDUCTION	HI4064	$16^{+.008}_{-.003}$	18	40	7	194	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	194	6 x 6 x 25	M6x1.0 x 17
	HI4664	$16^{+.008}_{-.003}$	18	40	7	190	5 x 5 x 20	M5x0.8 x 13
		$19^{+.014}_{+.002}$	21.5	40	7	190	6 x 6 x 25	M6x1.0 x 17
	HI4074	$24^{+.009}_{-.004}$	27	50	9	230	8 x 7 x 30	M8x1.25 x 21
	HI4084	$28^{+.009}_{-.004}$	31	60	7	291	8 x 7 x 40	M10x1.5 x 24
	HI4094	$38^{+.018}_{+.002}$	41	80	5	395	10 x 8 x 70	M12x1.75 x 28
	HI4104	$38^{+.018}_{+.002}$	41	80	5	376	10 x 8 x 70	M12x1.75 x 28

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

SHIPPING WEIGHTS & MOTOR COMPATIBILITY

**REDUCER WEIGHTS - FOOT MOUNTED (LBS.)

UNIT SIZE	SOLID INPUT SHAFT	C-FRAME QUILL INPUT							
		56C	143TC	182TC	213TC	254TC	284TC	324TC	364TC
ALHI4032	13	13	13	-	-	-	-	-	-
ALHI4033	14	14	-	-	-	-	-	-	-
ALHI4042	20	20	20	-	-	-	-	-	-
ALHI4043	23	23	-	-	-	-	-	-	-
ALHI4052	26	26	26	28	-	-	-	-	-
ALHI4053	27	27	27	-	-	-	-	-	-
ALHI4062	33	33	33	35	-	-	-	-	-
ALHI4063	35	35	35	-	-	-	-	-	-
HI4042	27	28	28	33	-	-	-	-	-
HI4043	33	34	-	-	-	-	-	-	-
HI4062	46	46	46	61	61	-	-	-	-
HI4063	59	59	59	-	-	-	-	-	-
HI4064	59	61	61	66	-	-	-	-	-
HI4662	70	70	70	85	85	-	-	-	-
HI4663	85	85	85	-	-	-	-	-	-
HI4664	87	88	88	-	-	-	-	-	-
HI4072	92	88	88	103	103	103	-	-	-
HI4073	111	107		107	-	-	-	-	- -
HI4074	118	118	118	124	-	-	-	-	-
HI4082	142	-	-	166	166	166	174	-	-
HI4083	169	148		148	168	-	-	-	- -
HI4084	218	-	218	234	234	-	-	-	-
HI4092	241	-	-	265	265	265	280	-	-
HI4093	281	283		283	325	335	335	350	- -
HI4094	292	-	-	347	347	-	-	-	-
HI4102	380	-	-	380	380	425	425	455	470
HI4103	410	-	-	410	410	455	455	-	-
HI4104	445	-	-	445	445	480	-	-	-

**REDUCER WEIGHTS - FLANGE MOUNTED (LBS.)

UNIT SIZE	SOLID INPUT SHAFT	C-FRAME QUILL INPUT							
		56C	143TC	182TC	213TC	254TC	284TC	324TC	364TC
ALHI4032	12	12	12	-	-	-	-	-	-
ALHI4033	13	13	-	-	-	-	-	-	-
ALHI4042	20	20	20	-	-	-	-	-	-
ALHI4043	23	23	-	-	-	-		-	-
ALHI4052	26	26	26	28	-	-	-	-	-
ALHI4053	27	27	27	-	-	-	-	-	-
ALHI4062	33	33	33	35	-	-	-	-	-
ALHI4063	33	33	33	-	-	-	-	-	-
HI4042	29	30	30	35	-	-	-	-	-
HI4043	35	36	-	-	-	-	-	-	-
HI4062	51	51	51	66	66	-	-	-	-
HI4063	64	64	64	-	-	-	-	-	-
HI4064	64	66	66	71	-	-	-	-	-
HI4662	80	80	80	95	95	-	-	-	-
HI4663	95	95	95	-	-	-	-	-	-
HI4664	97	98	98	-	-	-	-	-	-
HI4072	105	101	101	116	116	116	-	-	-
HI4073	124	120	120	-	-	-	-	-	-
HI4074	131	131	131	137	-	-	-	-	-
HI4082	167	-	-	191	191	191	199	-	-
HI4083	194	173	173	193	-	-	-	-	-
HI4084	243	-	243	259	259	-	-	-	-
HI4092	281	-	-	305	305	305	320	-	-
HI4093	316	318	318	360	370	370	385	-	-
HI4094	327	-	-	382	382	-	-	-	-
HI4102	398	-	-	398	398	443	443	473	488
HI4103	428	-	-	428	428	473	473	-	-
HI4104	463	-	-	463	463	498	-	-	-

** FOR MOTORIZED REDUCER WEIGHTS, ADD MOTOR WEIGHTS FROM ELECTRIC MOTOR CHARTS IN SECTION H TO REDUCER WEIGHTS SHOWN ON THIS PAGE.

**FOR INTEGRAL GEARMOTOR WEIGHTS, FOLLOW INSTRUCTIONS ABOVE (WITH SIMILAR HP C-FACE MOTOR), AND MULTIPLY BY .93.

Poweratio® 2000 COMPACT HELICAL PARALLEL DRIVES

Compact Helical Parallel Product Features ..... J-2 to J-3
- Selection Procedure J-4
- Descriptions J-6
- Mounting Positions J-7
- Model Selection Index J-8
- Selection By Input H.P ..... J-9 to J-21
- Integral Gearmotor Dimensions ..... J-22 to J-25
- Ratings By Model ..... J-26 to J-29
- Reducer Dimensions ..... J-30 to J-40
- Shipping Weights J-40
- Factory Options ..... See Page L-47

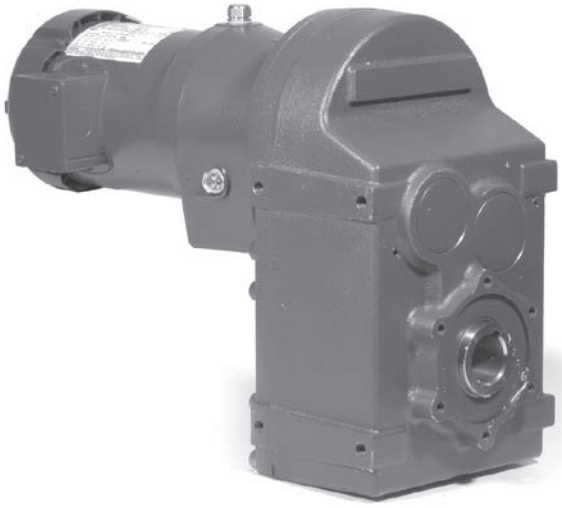
HUB CITY

Poweratio® 2000

HIGH EFFICIENCY COMPACT HELICAL PARALLEL DRIVES

BASIC SPECIFICATIONS

- Power Ratings from 1/4 to 20 hp
- Output Torque to 13,300 inch/lbs.
- Ratios from 3.42/1 through 3377:1
- Output speeds .5 rpm to 280 rpm



STANDARD FEATURES

- Universal Base, Flange and Hollow Bore Mounting with Competitive Interchange Capability
- Precision Carburized and Hardened Crowned Helical Gearing
- Double Lip Spring Loaded Seals with Precision Ground Seal Journals
- High Capacity Ball and Tapered Bearings with Splash Lubrication, Factory Filled
- Enhanced High Tensile Strength Steel Shafting with Low Notch Sensitivity
- Optimum Structural Designed Housings made of High Strength Alloy Cast Iron



OPTIONAL FEATURES

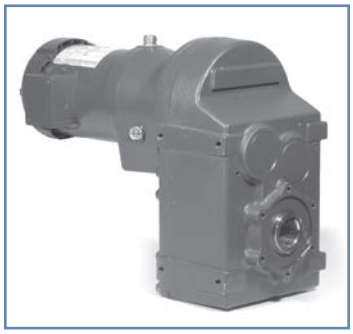
- Modified Standard and Custom Designs
- Hollow or Solid Output Shafts in Metric Sizes
- Brake or Inverter Duty Motors (50/60 hz)
- Washdown and BISSC Configurations

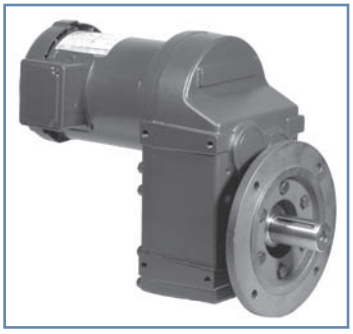
INTEGRAL GEARMOTORS

- 4 sizes available up to 5 hp.
- Motors produced by Marathon Electric for high efficiency, reliability and durability

For More Shaft Mounted Reducers See PowerTorque® Shaft Mount Reducers Sections G

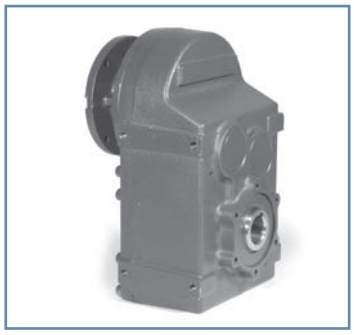
COMPACT HELICAL PARALLEL DRIVES

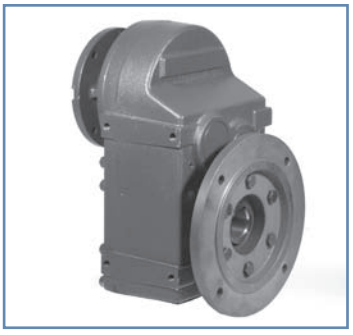




INTEGRAL GEARMOTORS

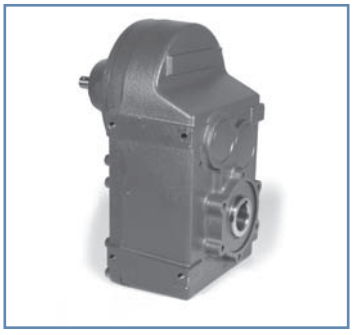
Double Reduction
Triple Reduction
Quin Reduction
- *Foot Mount*
- *Flange Mount*
- *Shaft Mount*

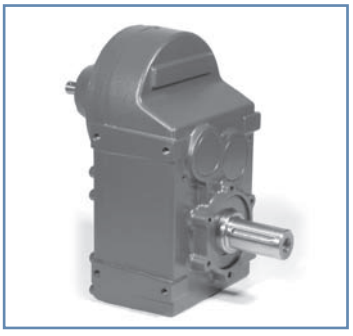




C-FACE REDUCERS

Double Reduction
Triple Reduction
Quin Reduction
- *NEMA C-Frame Quill Input*
  - *Foot Mount*
  - *Flange Mount*
  - *Shaft Mount*





SHAFT INPUT REDUCERS

Double Reduction
Triple Reduction
Quin Reduction
- *Foot Mount*
- *Flange Mount*
- *Shaft Mount*

CleanLine™ premium washdown duty and metric versions available, See Section O or Consult Factory for details and specifications.

SELECTION PROCEDURE

Hub City provides two methods of selection for Reducers and Gearmotors.

On pages J-9 to J-21, the Selection Tables by Input H.P. can be used whenever the Input H.P. requirement is known. This method is commonly used for Gearmotors, but can also be used for Reducers.

On pages J-26 to J-29, the Input H.P. and Output Torque Ratings are provided for each model. These rating tables can be used for Reducers and Gearmotors.

SELECTION BY INPUT H.P.

For selection by Input H.P, determine the Input H.P., Output Speed and Load Classification (Service Factor) requirements. (See page J-5, A-2 and A-5 to A-8 for AGMA Load Classification and Service Factors.) Then refer to Selection Tables by Input H.P., locate the required H.P. and Output Speed, and read across to the required foot or flange mount unit.

These tables also list the Service Factor for the unit indicated. In many cases, more than one unit is listed, to provide different service factors. Select the unit with a service factor that meets or exceeds the requirement of the application.

Check the Output Overhung Load or Output Thrust rating and Output Torque to verify they meet the requirements. (The Output Torque listed is the actual torque obtained with the motor H.P. listed, not the rated torque.) Then refer to the dimension tables to check the unit dimensions.

If a Reducer with C-Frame input is desired, the available frame sizes for each Reducer model are shown in the dimension tables, and also on page J-40. Specify the description as shown on page J-6.

If a Motorized Reducer is desired, make the motor selection with compatible C-Frame size, from the motors listed in section H. Specify either the catalog number or the complete description of the motor, in addition to the Reducer description.

The selection tables indicate which units are available as Integral Gearmotors. If an Integral Gearmotor is desired, refer to the dimension tables on pages J-22 to J-25 for dimensions with all available motor sizes. Specify the motor H.P. in addition to the Reducer description.

Reducers may be ordered with other C-Frame sizes. The available frame sizes for each reducer model are shown in the dimension tables, and also on page J-40.

SELECTION FROM UNIT RATING TABLES BY INPUT H.P. OR OUTPUT TORQUE

Determine the actual Input H.P. or Output Torque required, Output Speed, and required Service Factor. Multiply the actual H.P. or torque by the required service factor to obtain the required rating of the Reducer. Refer to the Unit Rating Tables by Model and Output Speed, until you locate the model that meets or exceeds the required H.P. or Torque rating.

The actual service factor can be determined by dividing the unit rating by the actual H.P. or Torque.

Check the Input and Output overhung load ratings, and thrust rating to verify they meet the requirement. Then refer to the dimension tables to check the unit dimensions.

Available motor C-Frame sizes for each reducer model are shown in the dimension tables, and also on page J-40.

EFFICIENCY

Helical Gearing and Ball or Tapered Roller Bearings provide a drive with very high efficiency. The approximate efficiency is 97.5% per gear stage.

OVERHUNG LOADS AND THRUST LOADS

Overhung load and thrust ratings are listed in the Selection and Rating Tables. Note that OHL and Thrust Ratings cannot be applied simultaneously. Consult Hub City for applications with combined OHL and thrust load.

BRAKEMOTORS

Braking torque must not exceed the rated capacity of the unit.

SERVICE FACTORS

Load Classification Numbers and Service Factors are used in the selection of Gearmotors and Reducers. The relationship between load class numbers and service factors is shown in Table 2.

The Load Class Numbers are designated for Gearmotors which have a uniform power source (i.e. Electric Motor). They consider the type of load and also the duration of service.

The Service Factors are designated for Reducers and consider other power sources (such as Internal Combustion Engines), as well as the type of load and duration of service.

Table 1 and Table 2 list Service Factors and Load Classes for general use.

AGMA Load Classification and Service Factor tables on pages A-5 to A-8 provide approximate service factors for various types of machinery. The service factors are based on uniform power source (i.e. electric motor). Use the service factor conversion table on page A-2 to obtain service factors for internal combustion engines.

All the Class Number and Service Factor charts are to be used as general guidelines for assistance in determining the required service factor. Rely on past experience as well. Consult the factory for severe applications, when there are safety considerations, or a need for extra high reliability.

Refer to page A-2 for further information and cautions on the selection of proper service factors.

Occasional starting loads up to 200% of catalog rating are permissible.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.25
	Intermittent 3 hrs.	*	1.00	1.50
	3 - 10 hours	1.00	1.25	1.75
	Over 10 hours	1.25	1.50	2.00
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.75
	Intermittent 3 hrs.	1.25	1.50	2.00
	3 - 10 hours	1.50	1.75	2.25
	Over 10 hours	1.75	2.00	2.50
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

Explanatory Notes

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

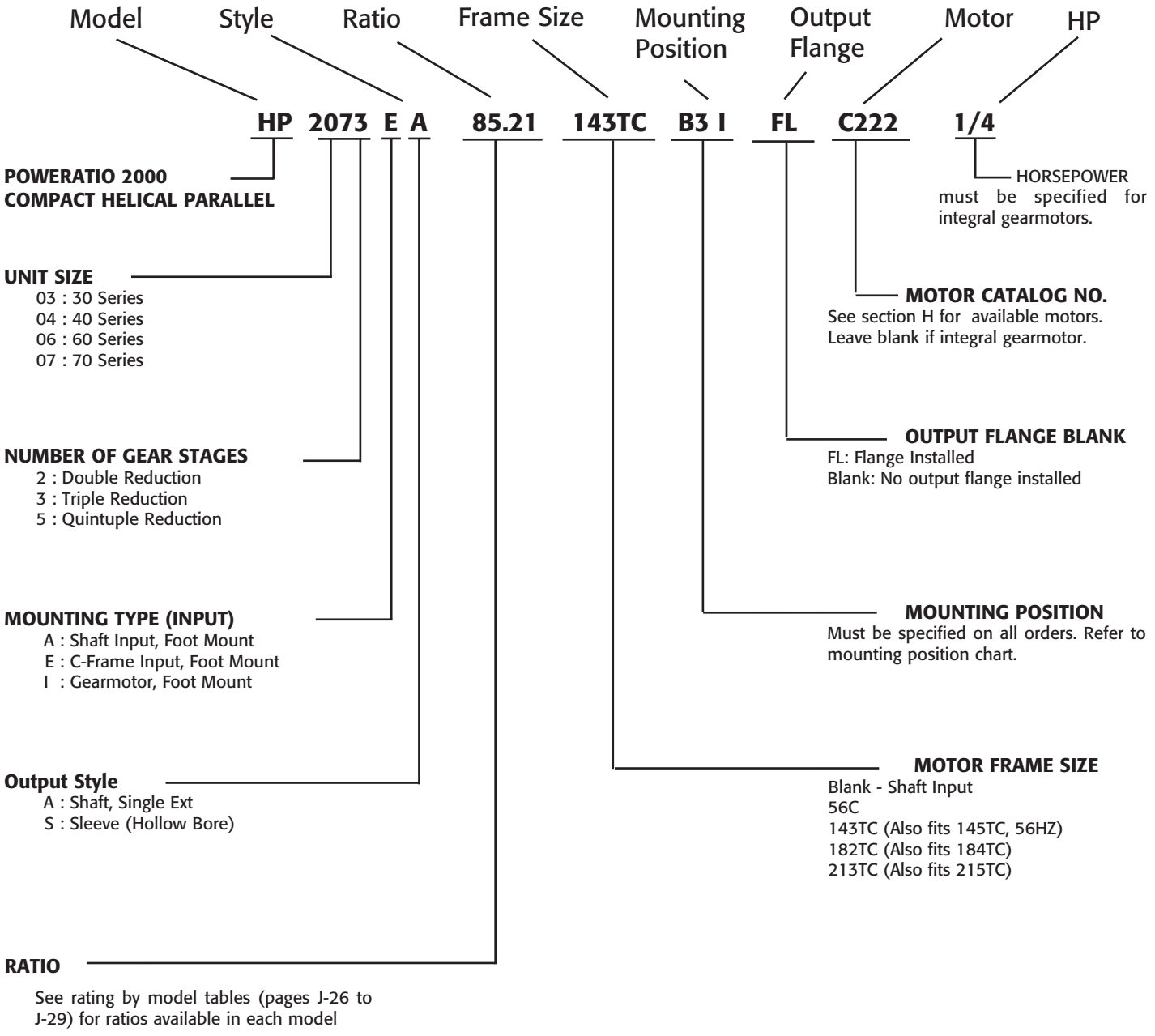
TABLE 2 — LOAD CLASSIFICATION NUMBERS

LOAD CLASS (S.F.)	UP TO 3 HRS. TOTAL OPERATION PER DAY	3 TO 10 HRS. TOTAL OPERATION PER DAY	OVER 10 HRS. TOTAL OPERATION PER DAY
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

DESCRIPTIONS

DESCRIPTIONS FOR ORDERING REDUCERS AND GEARMOTORS

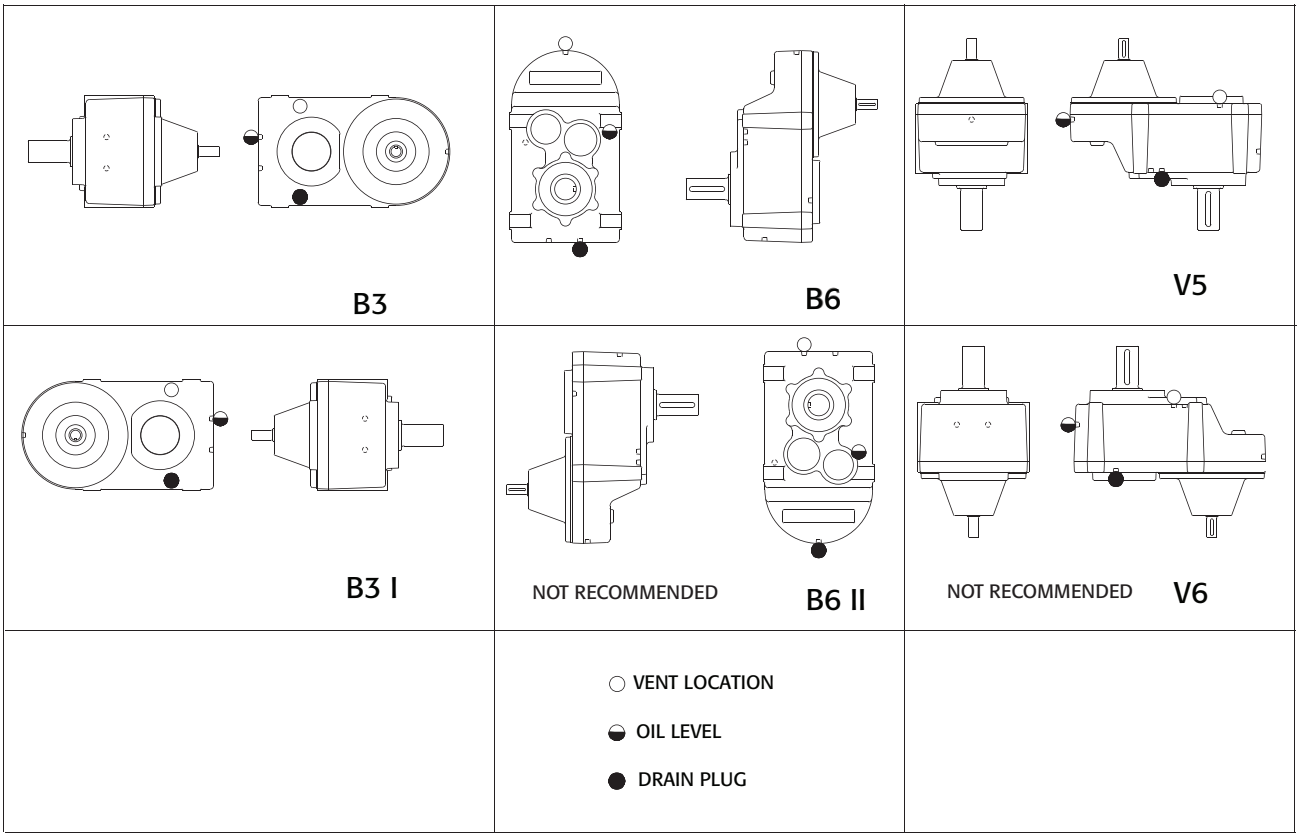
The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors.



MOUNTING POSITIONS

Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the factory. (Refer to Section R for lubrication information.)

MOUNTING POSITIONS



MOTOR DESCRIPTIONS

Available motors and motor data are listed in Section H. Either specify the catalog number or the complete description: HP, RPM, VOLTS, SINGLE OR THREE PHASE, C-FRAME SIZE, ENCLOSURE GENERAL PURPOSE OR OPTIONAL TYPES: WASHDOWN DUTY, INVERTER DUTY, BRAKEMOTOR.

MOTORIZED REDUCERS & GEARMOTORS

The Reducer and Motor are assembled at the factory, and filled with the proper quantity of lubricant based on your specified mounting position. Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors. Special integral gearmotors are available. Consult the factory for details.

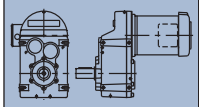
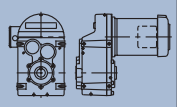
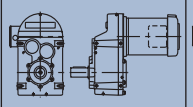
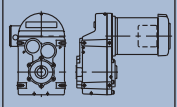
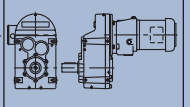
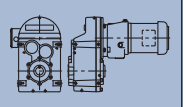
Standard Integral Gearmotors and Motorized Reducers are assembled at the factory with the conduit box and the conduit opening at the position illustrated in the dimensional section of this catalog. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

BACKSTOPS

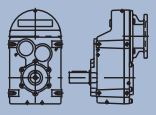
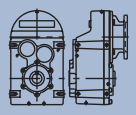
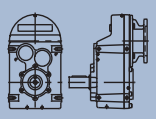
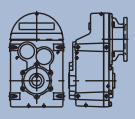
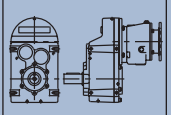
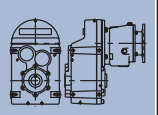
Backstops are available as factory options. Consult the factory for details.

MODEL INDEX

INTEGRAL GEARMOTORS

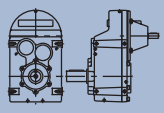
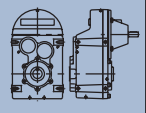
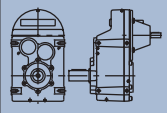
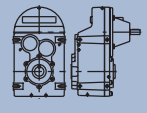
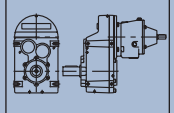
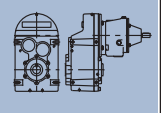
DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS
						Refer To Selection Pages J-9 to J-21
Page J-22 Shaft Output	Page J-23 Shaft Mount	Page J-22 Shaft Output	Page J-23 Shaft Mount	Page J-24 Shaft Output	Page J-25 Shaft Mount	

C-FRAME QUILL INPUT REDUCERS

	DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS		
									
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	DOUBLE REDUCTION	TRIPLE REDUCTION	QUIN REDUCTION
30	HP2032EA Page J-30	HP2032ES Page J-31	HP2033EA Page J-30	HP2033ES Page J-31	NA	NA	Page J-26	Page J-26	NA
40	HP2042EA Page J-30	HP2042ES Page J-31	HP2043EA Page J-30	HP2043ES Page J-31	NA	NA	Page J-27	Page J-27	NA
60	HP2062EA Page J-30	HP2062ES Page J-31	HP2063EA Page J-30	HP2063ES Page J-31	HP2065EA Page J-34	HP2065ES Page J-35	Page J-28	Page J-28	Page J-28
70	HP2072EA Page J-30	HP2072ES Page J-31	HP2073EA Page J-30	HP2073ES Page J-31	HP2075EA Page J-34	HP2075ES Page J-35	Page J-29	Page J-29	Page J-29

MOTORIZED MODELS ARE SAME AS C-FRAME QUILL MODELS. SIMPLY ORDER THE DESIRED C-FRAME REDUCER, SPECIFY THE MOTOR, AND SPECIFY "MOTORIZED ASSEMBLY".

SHAFT INPUT REDUCERS

	DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS		
									
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	DOUBLE REDUCTION	TRIPLE REDUCTION	QUIN REDUCTION
30	HP2032AA Page J-32	HP2032AS Page J-33	HP2033AA Page J-32	HP2033AS Page J-33	NA	NA	Page J-26	Page J-26	NA
40	HP2042AA Page J-32	HP2042AS Page J-33	HP2043AA Page J-32	HP2043AS Page J-33	NA	NA	Page J-27	Page J-27	NA
60	HP2062AA Page J-32	HP2062AS Page J-33	HP2063AA Page J-32	HP2063AS Page J-33	HP2065AA Page J-36	HP2065AS Page J-37	Page J-28	Page J-28	Page J-28
70	HP2072AA Page J-32	HP2072AS Page J-33	HP2073AA Page J-32	HP2073AS Page J-33	HP2075AA Page J-36	HP2075AS Page J-37	Page J-29	Page J-29	Page J-29

ACCESSORIES

Flange Mount Kit **Page J-38 to J-39** **&** **Torque Arm Kit** **Page J-39**

QUICK START GUIDE TO SELECTION TABLES

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
	244	479	7.17	4.79	92.5	2100	275	2400	2	HP2062	Available
	233	496	7.50	2.68	91.6	1750	350	2000	2	HP2052	Available
	233				91.0	1350	350	1800	2	HP2042	Available
	208				91.3	1750	350	2000	2	HP2052	Available
	208				90.7	1350	350	1800	2	HP2042	Available
	186				90.9	1750	350	2000	2	HP2052	Available
	186				90.4	1350	350	1800	2	HP2042	Available
	165				90.7	1750	350	2000	2	HP2052	Available
	165				90.0	1350	350	1800	2	HP2042	Available
	161				91.3	2100	275	2400	2	HP2062	Available
	146	779	12.00	2.11	90.3	1750	350	2000	2	HP2052	Available
	146	776	12.00	1.17	89.6	1350	350	1800	2	HP2042	Available
	139	827	12.62	3.79					2	HP2062	Available
									2	HP2052	Available
									2	HP2042	Available
	112	1006	15.60	1.79					2	HP2052	Available
	112	970	15.60	1.00	88.7	1350	350	1800	2	HP2042	
	106	1070	16.50	3.24	90.1	2100	275	2400	2	HP2062	Available
	105	1076	16.74	1.70	89.2	1750	350	2000	2	HP2052	Available
	98	1127	17.93	2.76	87.4	2100	350	2400	2	HP2062	Available
	93	1134						2000	2	HP2052	Available
	89	1273						2400	2	HP2062	Available
	83	1227						2000	2	HP2052	Available
	83	1353						2400	2	HP2062	Available
	74	1424						2000	2	HP2052	Available
	73	1528						2400	2	HP2062	Available
	68	1643						2400	2	HP2062	Available
	66	1592						2000	2	HP2052	Available
	64	1677	27.19	2.32	85.5	2100	350				
	58	1789	30.00	1.19	82.6	1750	350				
					86.0	3050	525				
					88.2	2100	275				
					87.9	2100	275				
					85.4	3050	525				
					81.9	1750	350	2000	2	HP2052	Available
	49	2051	35.85	1.58	79.3	2100	350	2400	2	HP2062	Available
	45	2361	38.7								lable
	45	2234	39.0								lable
	42	2474	41.2								lable
	42	2320	41.8								lable

1. Determine Input Horsepower, Output Speed and Load Classification (see Section A).

2

2. Find appropriate Selection by Input HP page (Beginning on Page J-10)

3. Locate Desired Output speed

4. Locate Required Service Factor (For Help See Page J-5)

5. Check the Output OHL, output thrust, and Output torque ratings to verify they meet your requirements (Output torque listed is the actual torque obtained by the motor HP listed, not the rated torque).

6. Read across to select model number. Refer to Page J-6 for Mounting type and Ordering information.

IN THIS CATALOG:
HP = Horsepower
Output torque is displayed in inch pounds (in. lbs.)
OHL = Over hung load (measured at centerline of output shaft)
Service Factor is based on maximum rated torque of gear drive

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	511	30	3.42	28.72	380	1150	2	HP2032	Available
	456	33	3.83	28.36	400	1150	2	HP2032	Available
	407	37	4.30	26.34	410	1150	2	HP2032	Available
	361	42	4.85	25.31	420	1150	2	HP2032	Available
	319	47	5.48	24.29	430	1150	2	HP2032	Available
	281	54	6.23	22.30	450	1150	2	HP2032	Available
	246	62	7.12	19.98	560	1150	2	HP2032	Available
	229	66	7.64	18.93	580	1150	2	HP2032	Available
	185	82	9.46	24.09	700	1730	2	HP2042	
	176	86	9.93	17.47	525	1400	2	HP2032	Available
	156	97	11.23	17.00	530	1400	2	HP2032	Available
	137	110	12.76	15.86	550	1400	2	HP2032	Available
	120	126	14.60	14.03	580	1400	2	HP2032	Available
	112	135	15.66	13.07	620	1400	2	HP2032	Available
	92	165	19.09	10.73	680	1400	2	HP2032	Available
	74	206	23.80	8.60	760	1400	2	HP2032	Available
	61	248	28.70	7.13	850	1400	2	HP2032	Available
	53	285	32.99	6.21	900	1400	2	HP2032	Available
	51	290	34.29	6.10	960	1400	3	HP2033	Available
	44	335	39.63	5.28	960	1400	3	HP2033	Available
	41	362	42.79	4.89	960	1400	3	HP2033	Available
	36	411	48.59	8.61	1250	1950	3	HP2043	
	29	509	60.16	3.48	960	1400	3	HP2033	Available
	25	588	69.52	3.01	960	1400	3	HP2033	Available
	25	604	71.40	5.86	1250	1950	3	HP2043	
	23	635	75.07	2.79	960	1400	3	HP2033	Available
	22	664	78.40	5.34	1250	1950	3	HP2043	
	21	712	84.11	4.97	1250	1950	3	HP2043	Available
	21	722	85.34	2.45	960	1400	3	HP2033	Available
	19.0	780	92.16	2.27	960	1400	3	HP2033	Available
	17.2	863	101.94	2.05	960	1400	3	HP2033	Available
	17.1	868	102.52	4.08	1250	1950	3	HP2043	Available
	14.9	997	117.80	1.78	960	1400	3	HP2033	Available
	13.8	1077	127.21	1.64	960	1400	3	HP2033	Available
	13.7	1082	127.79	3.27	1250	1950	3	HP2043	Available
	11.4	1304	154.12	2.71	1250	1950	3	HP2043	Available
	9.9	1500	177.15	2.36	1250	1950	3	HP2043	Available
	9.4	1573	185.82	4.62	2050	2850	3	HP2063	Available
	8.6	1716	202.75	4.23	2050	2850	3	HP2063	Available
	7.9	1883	222.50	3.86	2050	2850	3	HP2063	Available
	6.5	2263	267.36	5.88	3300	3370	3	HP2073	Available
	6.3	2241	275.81	3.24	2050	2850	5	HP2065	Available
	5.8	2445	302.64	5.44	3300	3370	5	HP2075	Available
	5.2	2748	338.43	4.84	3300	3370	5	HP2075	Available
	4.9	2881	354.30	2.52	2050	2850	5	HP2065	Available
	4.1	3425	424.65	2.12	2050	2850	5	HP2065	Available
	3.9	3614	444.42	3.68	3300	3370	5	HP2075	Available
	3.4	4209	519.18	3.16	3300	3370	5	HP2075	Available
	3.3	4321	537.33	1.68	2050	2850	5	HP2065	Available
	2.8	5186	634.64	1.40	2050	2850	5	HP2065	Available

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	2.7	5195	636.89	2.56	3300	3370	5	HP2075	Available
	2.2	6520	805.67	2.04	3300	3370	5	HP2075	Available
	2.2	6482	807.73	1.12	2050	2850	5	HP2065	Available
	1.8	7917	966.32	1.68	3300	3370	5	HP2075	Available
	1.5	9779	1205.25	1.36	3300	3370	5	HP2075	Available
	1.2	11875	1453.00	1.12	3300	3370	5	HP2075	Available
1/3	511	39	3.42	21.56	380	1150	2	HP2032	Available
	456	44	3.83	21.29	400	1150	2	HP2032	Available
	407	50	4.30	19.78	410	1150	2	HP2032	Available
	361	56	4.85	19.00	420	1150	2	HP2032	Available
	319	63	5.48	18.23	430	1150	2	HP2032	Available
	281	72	6.23	16.74	450	1150	2	HP2032	Available
	246	82	7.12	15.00	560	1150	2	HP2032	Available
	229	88	7.64	14.21	580	1150	2	HP2032	Available
	185	109	9.46	18.08	700	1730	2	HP2042	
	176	114	9.93	13.11	525	1400	2	HP2032	Available
	156	129	11.23	12.76	530	1400	2	HP2032	Available
	137	147	12.76	11.91	550	1400	2	HP2032	Available
	120	168	14.60	10.53	580	1400	2	HP2032	Available
	112	180	15.66	9.81	620	1400	2	HP2032	Available
	92	220	19.09	8.05	680	1400	2	HP2032	Available
	74	274	23.80	6.46	760	1400	2	HP2032	Available
	61	330	28.70	5.36	850	1400	2	HP2032	Available
	53	380	32.99	4.66	900	1400	2	HP2032	Available
	51	387	34.29	4.58	960	1400	3	HP2033	Available
	44	447	39.63	3.96	960	1400	3	HP2033	Available
	41	482	42.79	3.67	960	1400	3	HP2033	Available
	36	548	48.59	6.46	1250	1950	3	HP2043	
	29	678	60.16	2.61	960	1400	3	HP2033	Available
	26	773	68.53	4.58	1250	1950	3	HP2043	Available
	25	784	69.52	2.26	960	1400	3	HP2033	Available
	25	805	71.40	4.40	1250	1950	3	HP2043	Available
	23	846	75.07	2.09	960	1400	3	HP2033	Available
	22	884	78.40	4.01	1250	1950	3	HP2043	Available
	21	948	84.11	3.73	1250	1950	3	HP2043	Available
	21	962	85.34	1.84	960	1400	3	HP2033	Available
	19.0	1039	92.16	1.70	960	1400	3	HP2033	Available
	17.2	1149	101.94	1.54	960	1400	3	HP2033	Available
	17.1	1156	102.52	3.06	1250	1950	3	HP2043	Available
	14.9	1328	117.80	1.33	960	1400	3	HP2033	Available
	13.8	1434	127.21	1.23	960	1400	3	HP2033	Available
	13.7	1441	127.79	2.46	1250	1950	3	HP2043	Available
	12.8	1544	136.92	4.70	2050	2850	3	HP2063	Available
	11.9	1657	146.99	4.38	2050	2850	3	HP2063	Available
	11.4	1737	154.12	2.04	1250	1950	3	HP2043	Available
	10.2	1929	171.15	3.76	2050	2850	3	HP2063	Available
	9.9	1998	177.15	1.77	1250	1950	3	HP2043	Available
	9.4	2095	185.82	3.47	2050	2850	3	HP2063	Available
	7.9	2508	222.50	2.89	2050	2850	3	HP2063	Available

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THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	6.5	3014	267.36	4.41	3300	3370	3	HP2073	Available
	6.3	2985	275.81	2.43	2050	2850	5	HP2065	Available
	5.8	3257	302.64	4.08	3300	3370	5	HP2075	Available
	5.2	3660	338.43	3.63	3300	3370	5	HP2075	Available
	4.9	3837	354.30	1.89	2050	2850	5	HP2065	Available
	4.1	4561	424.65	1.59	2050	2850	5	HP2065	Available
	3.9	4814	444.42	2.76	3300	3370	5	HP2075	Available
	3.4	5606	519.18	2.37	3300	3370	5	HP2075	Available
	3.3	5756	537.33	1.26	2050	2850	5	HP2065	Available
	2.8	6907	634.64	1.05	2050	2850	5	HP2065	Available
	2.7	6920	636.89	1.92	3300	3370	5	HP2075	Available
	2.2	8684	805.67	1.53	3300	3370	5	HP2075	Available
	1.8	10545	966.32	1.26	3300	3370	5	HP2075	Available
	1.5	13026	1205.25	1.02	3300	3370	5	HP2075	Available
1/2	511	59	3.42	14.36	380	1150	2	HP2032	Available
	456	66	3.83	14.18	400	1150	2	HP2032	Available
	407	74	4.30	13.17	410	1150	2	HP2032	Available
	361	84	4.85	12.65	420	1150	2	HP2032	Available
	319	95	5.48	12.14	430	1150	2	HP2032	Available
	281	108	6.23	11.15	450	1150	2	HP2032	Available
	246	123	7.12	9.99	560	1150	2	HP2032	Available
	229	132	7.64	9.46	580	1150	2	HP2032	Available
	185	164	9.46	12.04	700	1730	2	HP2042	
	176	172	9.93	8.73	525	1400	2	HP2032	Available
	156	194	11.23	8.50	530	1400	2	HP2032	Available
	137	221	12.76	7.93	550	1400	2	HP2032	Available
	120	252	14.60	7.01	580	1400	2	HP2032	Available
	112	271	15.66	6.54	620	1400	2	HP2032	Available
	92	330	19.09	5.36	680	1400	2	HP2032	Available
	74	411	23.80	4.30	760	1400	2	HP2032	Available
	61	496	28.70	3.57	850	1400	2	HP2032	Available
	53	570	32.99	3.10	900	1400	2	HP2032	Available
	51	580	34.29	3.05	960	1400	3	HP2033	Available
	44	671	39.63	2.64	960	1400	3	HP2033	Available
	41	724	42.79	2.44	960	1400	3	HP2033	Available
	41	730	43.15	4.85	1250	1950	3	HP2043	Available
	36	822	48.59	4.30	1250	1950	3	HP2043	Available
	32	930	54.92	3.81	1250	1950	3	HP2043	Available
	29	1018	60.16	1.74	960	1400	3	HP2033	Available
	28	1056	62.41	3.35	1250	1950	3	HP2043	Available
	26	1160	68.53	3.05	1250	1950	3	HP2043	Available
	25	1177	69.52	1.50	960	1400	3	HP2033	Available
	25	1209	71.40	2.93	1250	1950	3	HP2043	Available
	23	1271	75.07	1.39	960	1400	3	HP2033	Available
	22	1327	78.40	2.67	1250	1950	3	HP2043	Available
	21	1424	84.11	2.49	1250	1950	3	HP2043	Available
	21	1444	85.34	1.23	960	1400	3	HP2033	Available

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/2	19.0	1560	92.16	1.13	960	1400	3	HP2033	Available
	18.8	1577	93.17	4.60	2050	2850	3	HP2063	Available
	17.2	1726	101.94	1.03	960	1400	3	HP2033	Available
	17.1	1735	102.52	2.04	1250	1950	3	HP2043	Available
	16.4	1802	106.48	4.03	2050	2850	3	HP2063	Available
	15.6	1904	112.47	3.81	2050	2850	3	HP2063	Available
	14.6	2028	119.81	3.58	2050	2850	3	HP2063	Available
	13.7	2163	127.79	1.64	1250	1950	3	HP2043	Available
	12.8	2318	136.92	3.13	2050	2850	3	HP2063	Available
	11.9	2488	146.99	2.92	2050	2850	3	HP2063	Available
	11.4	2609	154.12	1.36	1250	1950	3	HP2043	Available
	10.2	2897	171.15	2.51	2050	2850	3	HP2063	Available
	9.9	3000	177.15	1.18	1250	1950	3	HP2043	Available
	9.4	3145	185.82	2.31	2050	2850	3	HP2063	Available
	8.6	3432	202.75	2.12	2050	2850	3	HP2063	Available
	8.1	3653	215.84	3.64	3300	3370	3	HP2073	Available
	7.9	3766	222.50	1.93	2050	2850	3	HP2063	Available
	6.5	4526	267.36	2.94	3300	3370	3	HP2073	Available
	6.3	4481	275.81	1.62	2050	2850	5	HP2065	Available
	5.8	4890	302.64	2.72	3300	3370	5	HP2075	Available
	5.2	5496	338.43	2.42	3300	3370	5	HP2075	Available
	4.9	5762	354.30	1.26	2050	2850	5	HP2065	Available
	4.1	6849	424.65	1.06	2050	2850	5	HP2065	Available
	3.9	7228	444.42	1.84	3300	3370	5	HP2075	Available
	3.4	8418	519.18	1.58	3300	3370	5	HP2075	Available
	2.7	10391	636.89	1.28	3300	3370	5	HP2075	Available
	2.2	13039	805.67	1.02	3300	3370	5	HP2075	Available
3/4	511	89	3.42	9.57	380	1150	2	HP2032	Available
	456	99	3.83	9.45	400	1150	2	HP2032	Available
	407	112	4.30	8.78	410	1150	2	HP2032	Available
	361	126	4.85	8.44	420	1150	2	HP2032	Available
	319	142	5.48	8.10	430	1150	2	HP2032	Available
	281	161	6.23	7.43	450	1150	2	HP2032	Available
	246	185	7.12	6.66	560	1150	2	HP2032	Available
	229	198	7.64	6.31	580	1150	2	HP2032	Available
	185	245	9.46	8.03	700	1730	2	HP2042	
	176	258	9.93	5.82	525	1400	2	HP2032	Available
	156	291	11.23	5.67	530	1400	2	HP2032	Available
	137	331	12.76	5.29	550	1400	2	HP2032	Available
	120	379	14.60	4.68	580	1400	2	HP2032	Available
	112	406	15.66	4.36	620	1400	2	HP2032	Available
	92	495	19.09	3.58	680	1400	2	HP2032	Available
	74	617	23.80	2.87	760	1400	2	HP2032	Available
	63	719	27.75	4.92	1100	1950	2	HP2042	Available
	61	744	28.70	2.38	850	1400	2	HP2032	Available
	54	838	32.31	4.23	1200	1950	2	HP2042	Available
	53	855	32.99	2.07	900	1400	2	HP2032	Available

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	51	871	34.29	2.03	960	1400	3	HP2033	Available
	51	872	34.33	4.06	1200	1950	3	HP2043	Available
	46	976	38.45	3.63	1250	1950	3	HP2043	Available
	44	1006	39.63	1.76	960	1400	3	HP2033	Available
	41	1087	42.79	1.63	960	1400	3	HP2033	Available
	41	1096	43.15	3.23	1250	1950	3	HP2043	Available
	36	1234	48.59	2.87	1250	1950	3	HP2043	Available
	32	1395	54.92	2.54	1250	1950	3	HP2043	Available
	29	1527	60.16	1.16	960	1400	3	HP2033	Available
	28	1585	62.41	2.23	1250	1950	3	HP2043	Available
	26	1740	68.53	2.03	1250	1950	3	HP2043	Available
	25	1765	69.52	1.00	960	1400	3	HP2033	Available
	25	1813	71.40	1.95	1250	1950	3	HP2043	Available
	24	1859	73.21	3.91	2050	2850	3	HP2063	
	22	1991	78.40	1.78	1250	1950	3	HP2043	Available
	21	2136	84.11	1.66	1250	1950	3	HP2043	Available
	20	2221	87.47	3.27	2050	2850	3	HP2063	Available
	18.8	2366	93.17	3.07	2050	2850	3	HP2063	Available
	17.1	2603	102.52	1.36	1250	1950	3	HP2043	Available
	16.4	2704	106.48	2.69	2050	2850	3	HP2063	Available
	15.6	2856	112.47	2.54	2050	2850	3	HP2063	Available
	14.6	3042	119.81	2.39	2050	2850	3	HP2063	Available
	13.7	3245	127.79	1.09	1250	1950	3	HP2043	Available
	12.8	3476	136.92	2.09	2050	2850	3	HP2063	Available
	11.9	3732	146.99	1.95	2050	2850	3	HP2063	Available
	11.6	3845	151.44	3.46	3300	3370	3	HP2073	
	10.2	4346	171.15	1.67	2050	2850	3	HP2063	Available
	9.8	4546	179.04	2.93	3300	3370	3	HP2073	Available
	9.4	4718	185.82	1.54	2050	2850	3	HP2063	Available
	8.6	5148	202.75	1.41	2050	2850	3	HP2063	Available
	8.1	5480	215.84	2.43	3300	3370	3	HP2073	Available
	7.9	5649	222.50	1.29	2050	2850	3	HP2063	Available
	6.5	6788	267.36	1.96	3300	3370	3	HP2073	Available
	6.3	6722	275.81	1.08	2050	2850	5	HP2065	Available
	5.8	7335	302.64	1.81	3300	3370	5	HP2075	Available
	5.2	8244	338.43	1.61	3300	3370	5	HP2075	Available
	3.9	10842	444.42	1.23	3300	3370	5	HP2075	Available
	3.4	12627	519.18	1.05	3300	3370	5	HP2075	Available
1	511	118	3.42	7.18	380	1150	2	HP2032	Available
	456	133	3.83	7.09	400	1150	2	HP2032	Available
	407	149	4.30	6.59	410	1150	2	HP2032	Available
	361	168	4.85	6.33	420	1150	2	HP2032	Available
	319	189	5.48	6.07	430	1150	2	HP2032	Available
	281	215	6.23	5.58	450	1150	2	HP2032	Available
	246	246	7.12	5.00	560	1150	2	HP2032	Available
	229	264	7.64	4.73	580	1150	2	HP2032	Available
	185	327	9.46	6.02	700	1730	2	HP2042	
	176	343	9.93	4.37	525	1400	2	HP2032	Available

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FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	156	388	11.23	4.25	530	1400	2	HP2032	Available
	137	441	12.76	3.97	550	1400	2	HP2032	Available
	120	505	14.60	3.51	580	1400	2	HP2032	Available
	112	542	15.66	3.27	620	1400	2	HP2032	Available
	92	660	19.09	2.68	680	1400	2	HP2032	Available
	82	734	21.23	4.82	930	1950	2	HP2042	Available
	77	782	22.62	4.53	930	1950	2	HP2042	Available
	74	823	23.80	2.15	760	1400	2	HP2032	Available
	68	894	25.85	3.96	1050	1950	2	HP2042	Available
	63	959	27.75	3.69	1100	1950	2	HP2042	Available
	61	992	28.70	1.78	850	1400	2	HP2032	Available
	54	1117	32.31	3.17	1200	1950	2	HP2042	Available
	53	1141	32.99	1.55	900	1400	2	HP2032	Available
	51	1161	34.29	1.52	960	1400	3	HP2033	Available
	51	1162	34.33	3.05	1200	1950	3	HP2043	Available
	46	1302	38.45	2.72	1250	1950	3	HP2043	Available
	44	1342	39.63	1.32	960	1400	3	HP2033	Available
	41	1449	42.79	1.22	960	1400	3	HP2033	Available
	41	1461	43.15	2.42	1250	1950	3	HP2043	Available
	36	1633	48.25	4.29	2050	2850	3	HP2063	Available
	36	1645	48.59	2.15	1250	1950	3	HP2043	Available
	32	1859	54.92	1.90	1250	1950	3	HP2043	Available
	31	1896	55.99	3.83	2050	2850	3	HP2063	Available
	28	2113	62.41	1.68	1250	1950	3	HP2043	Available
	26	2320	68.53	1.53	1250	1950	3	HP2043	Available
	25	2417	71.40	1.46	1250	1950	3	HP2043	Available
	24	2478	73.21	2.93	2050	2850	3	HP2063	Available
	22	2654	78.40	1.33	1250	1950	3	HP2043	Available
	21	2848	84.11	1.24	1250	1950	3	HP2043	Available
	20	2961	87.47	2.45	2050	2850	3	HP2063	Available
	18.8	3154	93.17	2.30	2050	2850	3	HP2063	Available
	17.1	3471	102.52	1.02	1250	1950	3	HP2043	Available
	16.4	3605	106.48	2.01	2050	2850	3	HP2063	Available
	16.2	3650	107.81	3.64	3300	3370	3	HP2073	Available
	15.6	3808	112.47	1.91	2050	2850	3	HP2063	Available
	14.6	4056	119.81	1.79	2050	2850	3	HP2063	Available
	12.8	4635	136.92	1.57	2050	2850	3	HP2063	Available
	11.9	4976	146.99	1.46	2050	2850	3	HP2063	Available
	11.6	5127	151.44	2.59	3300	3370	3	HP2073	Available
	10.2	5794	171.15	1.25	2050	2850	3	HP2063	Available
	9.8	6061	179.04	2.19	3300	3370	3	HP2073	Available
	9.4	6291	185.82	1.15	2050	2850	3	HP2063	Available
	8.6	6864	202.75	1.06	2050	2850	3	HP2063	Available
	8.1	7307	215.84	1.82	3300	3370	3	HP2073	Available
	6.5	9051	267.36	1.47	3300	3370	3	HP2073	Available
	5.8	9779	302.64	1.36	3300	3370	5	HP2075	Available
	5.2	10992	338.43	1.21	3300	3370	5	HP2075	Available

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1-1/2	511	178	3.42	4.79	380	1150	2	HP2032	Available
	456	199	3.83	4.73	400	1150	2	HP2032	Available
	407	223	4.30	4.39	410	1150	2	HP2032	Available
	361	251	4.85	4.22	420	1150	2	HP2032	Available
	319	284	5.48	4.05	430	1150	2	HP2032	Available
	281	323	6.23	3.72	450	1150	2	HP2032	Available
	246	369	7.12	3.33	560	1150	2	HP2032	Available
	229	396	7.64	3.15	580	1150	2	HP2032	Available
	185	491	9.46	4.01	700	1730	2	HP2042	
	176	515	9.93	2.91	525	1400	2	HP2032	Available
	156	582	11.23	2.83	530	1400	2	HP2032	Available
	137	662	12.76	2.64	550	1400	2	HP2032	Available
	129	705	13.59	5.02	770	1950	2	HP2042	Available
	120	757	14.60	2.34	580	1400	2	HP2032	Available
	112	812	15.66	2.18	620	1400	2	HP2032	Available
	98	922	17.77	3.84	830	1950	2	HP2042	Available
	92	990	19.09	1.79	680	1400	2	HP2032	Available
	82	1101	21.23	3.22	930	1950	2	HP2042	Available
	77	1173	22.62	3.02	930	1950	2	HP2042	Available
	74	1234	23.80	1.43	760	1400	2	HP2032	Available
	68	1340	25.85	2.64	1050	1950	2	HP2042	Available
	64	1413	27.24	4.52	2050	2850	2	HP2062	Available
	63	1439	27.75	2.46	1100	1950	2	HP2042	Available
	61	1488	28.70	1.19	850	1400	2	HP2032	Available
	54	1675	32.31	2.11	1200	1950	2	HP2042	Available
	53	1703	32.85	3.90	2050	2850	2	HP2062	Available
	53	1711	32.99	1.03	900	1400	2	HP2032	Available
	51	1741	34.29	1.02	960	1400	3	HP2033	Available
	51	1743	34.33	2.03	1200	1950	3	HP2043	Available
	46	1936	38.13	3.46	2050	2850	3	HP2063	Available
	46	1952	38.45	1.81	1250	1950	3	HP2043	Available
	41	2191	43.15	1.62	1250	1950	3	HP2043	Available
	36	2450	48.25	2.86	2050	2850	3	HP2063	Available
	36	2467	48.59	1.43	1250	1950	3	HP2043	Available
	32	2789	54.92	1.27	1250	1950	3	HP2043	Available
	31	2843	55.99	2.55	2050	2850	3	HP2063	Available
	28	3169	62.41	1.12	1250	1950	3	HP2043	Available
	26	3480	68.53	1.02	1250	1950	3	HP2043	Available
	25	3569	70.28	3.73	3300	3370	3	HP2073	
	24	3717	73.21	1.95	2050	2850	3	HP2063	Available
	23	3916	77.12	3.40	3300	3370	3	HP2073	
	21	4243	83.55	3.13	3300	3370	3	HP2073	
	20	4442	87.47	1.63	2050	2850	3	HP2063	Available
	18.8	4731	93.17	1.53	2050	2850	3	HP2063	Available
	18.5	4804	94.61	2.77	3300	3370	3	HP2073	
	16.4	5407	106.48	1.34	2050	2850	3	HP2063	Available
	16.2	5474	107.81	2.43	3300	3370	3	HP2073	Available
	15.6	5711	112.47	1.27	2050	2850	3	HP2063	Available

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1-1/2	14.6	6084	119.81	1.19	2050	2850	3	HP2063	Available
	12.8	6953	136.92	1.04	2050	2850	3	HP2063	Available
	11.6	7690	151.44	1.73	3300	3370	3	HP2073	Available
	9.8	9092	179.04	1.46	3300	3370	3	HP2073	Available
	8.1	10960	215.84	1.21	3300	3370	3	HP2073	Available
2	511	237	3.42	3.59	380	1150	2	HP2032	Available
	456	265	3.83	3.54	400	1150	2	HP2032	Available
	424	285	4.13	4.49	650	1730	2	HP2042	Available
	407	298	4.30	3.29	410	1150	2	HP2032	Available
	361	335	4.85	3.16	420	1150	2	HP2032	Available
	335	361	5.22	4.16	650	1730	2	HP2042	Available
	319	379	5.48	3.04	430	1150	2	HP2032	Available
	289	419	6.06	3.94	650	1730	2	HP2042	Available
	281	430	6.23	2.79	450	1150	2	HP2032	Available
	246	492	7.12	2.50	560	1150	2	HP2032	Available
	229	528	7.64	2.37	580	1150	2	HP2032	Available
	221	548	7.92	3.51	650	1730	2	HP2042	Available
	185	654	9.46	3.01	700	1730	2	HP2042	Available
	176	687	9.93	2.18	525	1400	2	HP2032	Available
	156	777	11.23	2.12	530	1400	2	HP2032	Available
	149	810	11.71	4.37	800	1730	2	HP2042	Available
	137	882	12.76	1.98	550	1400	2	HP2032	Available
	129	940	13.59	3.77	770	1950	2	HP2042	Available
	120	1010	14.60	1.75	580	1400	2	HP2032	Available
	112	1083	15.66	1.63	620	1400	2	HP2032	Available
	107	1134	16.41	4.84	2050	2850	2	HP2062	Available
	98	1229	17.77	2.88	830	1950	2	HP2042	Available
	92	1320	19.09	1.34	680	1400	2	HP2032	Available
	82	1468	21.23	2.41	930	1950	2	HP2042	Available
	77	1564	22.62	2.26	930	1950	2	HP2042	Available
	76	1593	23.04	3.77	2050	2850	2	HP2062	Available
	74	1646	23.80	1.08	760	1400	2	HP2032	Available
	68	1787	25.85	1.98	1050	1950	2	HP2042	Available
	64	1884	27.24	3.39	2050	2850	2	HP2062	Available
	63	1919	27.75	1.85	1100	1950	2	HP2042	Available
	54	2234	32.31	1.58	1200	1950	2	HP2042	Available
	53	2271	32.85	2.93	2050	2850	2	HP2062	Available
	51	2324	34.33	1.52	1200	1950	3	HP2043	Available
	46	2582	38.13	2.60	2050	2850	3	HP2063	Available
	46	2603	38.45	1.36	1250	1950	3	HP2043	Available
	41	2922	43.15	1.21	1250	1950	3	HP2043	Available
	36	3267	48.25	2.14	2050	2850	3	HP2063	Available
	36	3290	48.59	1.08	1250	1950	3	HP2043	Available
	34	3452	50.98	3.85	3300	3370	3	HP2073	
	31	3791	55.99	1.91	2050	2850	3	HP2063	Available
	31	3879	57.29	3.43	3300	3370	3	HP2073	
	28	4202	62.06	3.17	3300	3370	3	HP2073	
	25	4758	70.28	2.80	3300	3370	3	HP2073	

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OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
2	24	4957	73.21	1.46	2050	2850	3	HP2063	Available
	23	5222	77.12	2.55	3300	3370	3	HP2073	
	21	5657	83.55	2.35	3300	3370	3	HP2073	
	20	5922	87.47	1.23	2050	2850	3	HP2063	Available
	18.8	6308	93.17	1.15	2050	2850	3	HP2063	Available
	18.5	6406	94.61	2.08	3300	3370	3	HP2073	
	16.4	7210	106.48	1.01	2050	2850	3	HP2063	Available
	16.2	7299	107.81	1.82	3300	3370	3	HP2073	Available
	11.6	10253	151.44	1.30	3300	3370	3	HP2073	Available
	9.8	12122	179.04	1.10	3300	3370	3	HP2073	Available
3	511	355	3.42	2.39	380	1150	2	HP2032	
	456	398	3.83	2.36	400	1150	2	HP2032	
	424	428	4.13	2.99	650	1730	2	HP2042	Available
	407	446	4.30	2.20	410	1150	2	HP2032	
	361	503	4.85	2.11	420	1150	2	HP2032	
	349	520	5.01	3.69	2050	2400	2	HP2062	Available
	335	541	5.22	2.77	650	1730	2	HP2042	Available
	324	561	5.41	3.67	2050	2400	2	HP2062	Available
	319	568	5.48	2.02	430	1150	2	HP2032	
	289	628	6.06	2.63	650	1730	2	HP2042	Available
	288	630	6.08	3.41	2050	2400	2	HP2062	Available
	281	646	6.23	1.86	450	1150	2	HP2032	
	266	683	6.58	3.30	2050	2850	2	HP2062	Available
	246	739	7.12	1.67	560	1150	2	HP2032	
	235	773	7.45	3.30	2050	2850	2	HP2062	Available
	229	793	7.64	1.58	580	1150	2	HP2032	
	221	821	7.92	2.34	650	1730	2	HP2042	Available
	206	881	8.49	2.89	2050	2850	2	HP2062	Available
	185	981	9.46	2.01	700	1730	2	HP2042	Available
	181	1004	9.68	3.98	2050	2850	2	HP2062	Available
	176	1030	9.93	1.46	525	1400	2	HP2032	
	168	1083	10.44	3.88	2050	2850	2	HP2062	Available
	156	1165	11.23	1.42	530	1400	2	HP2032	
	149	1215	11.71	2.91	800	1730	2	HP2042	Available
	138	1319	12.71	3.79	2050	2850	2	HP2062	Available
	137	1324	12.76	1.32	550	1400	2	HP2032	
	129	1410	13.59	2.51	770	1950	2	HP2042	Available
	122	1493	14.40	3.55	2050	2850	2	HP2062	Available
	120	1514	14.60	1.17	580	1400	2	HP2032	
	112	1625	15.66	1.09	620	1400	2	HP2032	
	107	1702	16.41	3.23	2050	2850	2	HP2062	Available
	98	1843	17.77	1.92	830	1950	2	HP2042	Available
	82	2202	21.23	1.61	930	1950	2	HP2042	Available
	77	2346	22.62	1.51	930	1950	2	HP2042	Available
	76	2390	23.04	2.51	2050	2850	2	HP2062	Available
	68	2681	25.85	1.32	1050	1950	2	HP2042	Available
	64	2826	27.24	2.26	2050	2850	2	HP2062	Available
	63	2878	27.75	1.23	1100	1950	2	HP2042	Available

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OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	62	2921	28.16	3.68	3300	3370	2	HP2072	Available
	54	3351	32.31	1.06	1200	1950	2	HP2042	
	53	3407	32.85	1.95	2050	2850	2	HP2062	Available
	52	3522	33.95	2.77	3300	3370	2	HP2072	Available
	51	3486	34.33	1.02	1200	1950	3	HP2043	
	46	3845	37.86	3.46	3300	3370	3	HP2073	Available
	46	3873	38.13	1.73	2050	2850	3	HP2063	Available
	41	4292	42.26	3.10	3300	3370	3	HP2073	Available
	37	4799	47.25	2.77	3300	3370	3	HP2073	Available
	36	4900	48.25	1.43	2050	2850	3	HP2063	Available
	34	5178	50.98	2.57	3300	3370	3	HP2073	Available
	31	5687	55.99	1.28	2050	2850	3	HP2063	Available
	31	5818	57.29	2.29	3300	3370	3	HP2073	Available
	28	6303	62.06	2.11	3300	3370	3	HP2073	Available
	25	7137	70.28	1.86	3300	3370	3	HP2073	Available
	23	7833	77.12	1.70	3300	3370	3	HP2073	Available
	21	8485	83.55	1.57	3300	3370	3	HP2073	Available
	18.5	9609	94.61	1.38	3300	3370	3	HP2073	Available
	16.2	10949	107.81	1.21	3300	3370	3	HP2073	Available
5	511	592	3.42	1.44	380	1150	2	HP2032	
	456	663	3.83	1.42	400	1150	2	HP2032	
	436	694	4.02	2.41	2050	2400	2	HP2062	Available
	424	713	4.13	1.79	650	1730	2	HP2042	Available
	407	744	4.30	1.32	410	1150	2	HP2032	
	397	763	4.41	4.01	2750	3100	2	HP2072	Available
	390	775	4.48	2.40	2050	2400	2	HP2062	Available
	361	838	4.85	1.27	420	1150	2	HP2032	
	349	866	5.01	2.22	2050	2400	2	HP2062	Available
	335	902	5.22	1.66	650	1730	2	HP2042	Available
	329	920	5.32	3.80	2750	3100	2	HP2072	Available
	324	935	5.41	2.20	2050	2400	2	HP2062	Available
	319	947	5.48	1.21	430	1150	2	HP2032	
	289	1047	6.06	1.58	650	1730	2	HP2042	Available
	288	1051	6.08	2.05	2050	2400	2	HP2062	Available
	281	1076	6.22	3.44	2750	3100	2	HP2072	Available
	281	1076	6.23	1.12	450	1150	2	HP2032	
	266	1138	6.58	1.98	2050	2850	2	HP2062	Available
	249	1216	7.04	3.17	2830	3370	2	HP2072	Available
	246	1231	7.12	1.00	560	1150	2	HP2032	
	235	1289	7.45	1.98	2050	2850	2	HP2062	Available
	221	1369	7.92	1.40	650	1730	2	HP2042	Available
	209	1445	8.36	2.77	2950	3370	2	HP2072	Available
	206	1468	8.49	1.74	2050	2850	2	HP2062	Available
	185	1636	9.46	1.20	700	1730	2	HP2042	Available
	181	1673	9.68	2.39	2050	2850	2	HP2062	Available
	168	1805	10.44	2.33	2050	2850	2	HP2062	Available
	162	1866	10.80	3.91	3000	3370	2	HP2072	Available
	149	2025	11.71	1.75	800	1730	2	HP2042	Available
	149	2029	11.74	2.27	2050	2850	2	HP2062	Available

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THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.
FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
5	139	2182	12.62	3.51	3200	3370	2	HP2072	Available
	138	2198	12.71	2.27	2050	2850	2	HP2062	Available
	129	2350	13.59	1.51	770	1950	2	HP2042	Available
	123	2467	14.27	3.24	3100	3370	2	HP2072	Available
	122	2489	14.40	2.13	2050	2850	2	HP2062	Available
	107	2836	16.41	1.94	2050	2850	2	HP2062	Available
	103	2932	16.96	2.90	3200	3370	2	HP2072	Available
	98	3072	17.77	1.15	830	1950	2	HP2042	Available
	76	3984	23.04	1.51	2050	2850	2	HP2062	Available
	73	4118	23.82	2.43	3300	3370	2	HP2072	Available
	64	4710	27.24	1.35	2050	2850	2	HP2062	Available
	62	4869	28.16	2.21	3300	3370	2	HP2072	Available
	53	5678	32.85	1.17	2050	2850	2	HP2062	Available
	52	5869	33.95	1.66	3300	3370	2	HP2072	Available
	46	6408	37.86	2.08	3300	3370	3	HP2073	Available
	46	6455	38.13	1.04	2050	2850	3	HP2063	Available
	41	7153	42.26	1.86	3300	3370	3	HP2073	Available
	37	7998	47.25	1.66	3300	3370	3	HP2073	Available
	34	8629	50.98	1.54	3300	3370	3	HP2073	Available
	31	9697	57.29	1.37	3300	3370	3	HP2073	Available
	28	10505	62.06	1.27	3300	3370	3	HP2073	Available
	25	11896	70.28	1.12	3300	3370	3	HP2073	Available
	23	13055	77.12	1.02	3300	3370	3	HP2073	Available
7-1/2	436	1041	4.02	1.60	2050	2400	2	HP2062	
	424	1070	4.13	1.20	650	1730	2	HP2042	
	397	1144	4.41	2.67	2750	3100	2	HP2072	
	390	1162	4.48	1.60	2050	2400	2	HP2062	
	349	1300	5.01	1.48	2050	2400	2	HP2062	
	335	1354	5.22	1.11	650	1730	2	HP2042	
	329	1380	5.32	2.54	2750	3100	2	HP2072	
	324	1402	5.41	1.47	2050	2400	2	HP2062	
	289	1571	6.06	1.05	650	1730	2	HP2042	
	288	1576	6.08	1.36	2050	2400	2	HP2062	
	281	1614	6.22	2.29	2750	3100	2	HP2072	
	266	1707	6.58	1.32	2050	2850	2	HP2062	
	249	1824	7.04	2.11	2830	3370	2	HP2072	
	235	1933	7.45	1.32	2050	2850	2	HP2062	
	209	2168	8.36	1.84	2950	3370	2	HP2072	
	206	2203	8.49	1.16	2050	2850	2	HP2062	
	181	2510	9.68	1.59	2050	2850	2	HP2062	
	168	2708	10.44	1.55	2050	2850	2	HP2062	
	162	2799	10.80	2.61	3000	3370	2	HP2072	
	149	3037	11.71	1.17	800	1730	2	HP2042	
	149	3043	11.74	1.51	2050	2850	2	HP2062	
	139	3273	12.62	2.34	3200	3370	2	HP2072	
	138	3297	12.71	1.52	2050	2850	2	HP2062	
	129	3524	13.59	1.00	770	1950	2	HP2042	
	123	3700	14.27	2.16	3100	3370	2	HP2072	

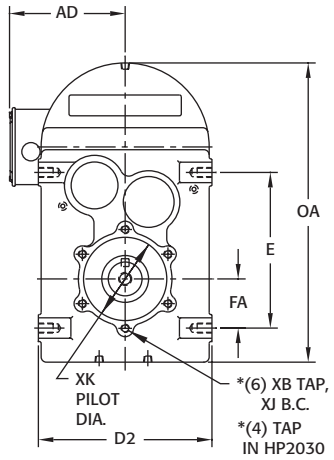
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FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE J-6). FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

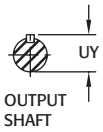
SELECTION BY INPUT H.P. @ 1750 RPM

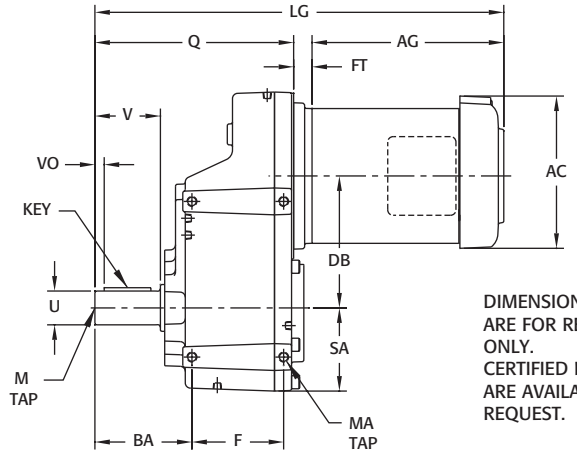
HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
7-1/2	122	3733	14.40	1.42	2050	2850	2	HP2062	
	107	4254	16.41	1.29	2050	2850	2	HP2062	
	103	4397	16.96	1.93	3200	3370	2	HP2072	
	76	5976	23.04	1.00	2050	2850	2	HP2062	
	73	6177	23.82	1.62	3300	3370	2	HP2072	
	62	7303	28.16	1.47	3300	3370	2	HP2072	
	52	8804	33.95	1.11	3300	3370	2	HP2072	
	46	9612	37.86	1.38	3300	3370	3	HP2073	
	41	10729	42.26	1.24	3300	3370	3	HP2073	
	37	11998	47.25	1.11	3300	3370	3	HP2073	
	34	12944	50.98	1.03	3300	3370	3	HP2073	
10	436	1388	4.02	1.20	2050	2400	2	HP2062	
	397	1525	4.41	2.01	2750	3100	2	HP2072	
	390	1550	4.48	1.20	2050	2400	2	HP2062	
	349	1733	5.01	1.11	2050	2400	2	HP2062	
	329	1840	5.32	1.90	2750	3100	2	HP2072	
	324	1870	5.41	1.10	2050	2400	2	HP2062	
	288	2101	6.08	1.02	2050	2400	2	HP2062	
	281	2152	6.22	1.72	2750	3100	2	HP2072	
	249	2432	7.04	1.58	2830	3370	2	HP2072	
	209	2891	8.36	1.38	2950	3370	2	HP2072	
	181	3347	9.68	1.20	2050	2850	2	HP2062	
	168	3611	10.44	1.16	2050	2850	2	HP2062	
	162	3733	10.80	1.96	3000	3370	2	HP2072	
	149	4058	11.74	1.13	2050	2850	2	HP2062	
	139	4365	12.62	1.75	3200	3370	2	HP2072	
	138	4396	12.71	1.14	2050	2850	2	HP2062	
	123	4933	14.27	1.62	3100	3370	2	HP2072	
	122	4978	14.40	1.06	2050	2850	2	HP2062	
	103	5863	16.96	1.45	3200	3370	2	HP2072	
	73	8236	23.82	1.21	3300	3370	2	HP2072	
	62	9737	28.16	1.10	3300	3370	2	HP2072	
	46	12816	37.86	1.04	3300	3370	3	HP2073	
15	397	2288	4.41	1.34	2750	3100	2	HP2072	
	329	2760	5.32	1.27	2750	3100	2	HP2072	
	281	3228	6.22	1.15	2750	3100	2	HP2072	
	249	3649	7.04	1.06	2830	3370	2	HP2072	
	162	5599	10.80	1.30	3000	3370	2	HP2072	
	139	6547	12.62	1.17	3200	3370	2	HP2072	
	123	7400	14.27	1.08	3100	3370	2	HP2072	

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INTEGRAL DOUBLE & TRIPLE REDUCTION







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DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*IA	2.85	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	6.46	3.10
	72.4	165	115.8	115	77	31	M8x1.25 x 12	268	164	79
HP204*IA	3.58	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	7.87	3.45
	91	180	135.4	145	93	43	M10x1.5 x 15	310	200	88
HP206*IA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP207*IA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP203*IA	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*IA	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*IA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*IA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.000^{+0}_{-.001}$	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
-	-	-	-	-	-
$1.250^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	-	-	-	-
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP203*IA	0.25	6.38	4.58	6.99	0.71	14.16
	0.33	6.38	4.58	7.24	0.71	14.41
	0.50	6.38	4.58	7.74	0.71	14.91
	0.75	6.38	4.58	8.24	0.71	15.41
	1.00	7.68	5.56	9.22	0.88	16.56
	1.50	7.68	5.56	9.22	0.88	16.56
	2.00	7.68	5.56	10.72	0.88	18.06
HP204*IA	0.25	6.38	4.58	6.99	0.55	15.41
	0.33	6.38	4.58	7.24	0.55	15.66
	0.50	6.38	4.58	7.74	0.55	16.16
	0.75	6.38	4.58	8.24	0.55	16.66
	1.00	7.68	5.56	9.22	0.73	17.82
	1.50	7.68	5.56	9.22	0.73	17.82
	2.00	7.68	5.56	10.72	0.73	19.32
	3.00	9.78	7.19	10.07	1.78	19.72
	5.00	9.78	7.19	11.57	1.78	21.22

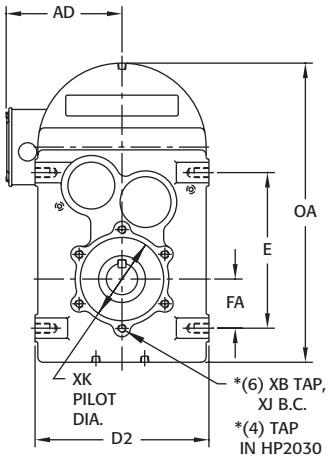
MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP206*IA	0.25	6.38	4.58	6.99	0.71	17.26
	0.33	6.38	4.58	7.24	0.71	17.51
	0.50	6.38	4.58	7.74	0.71	18.01
	0.75	6.38	4.58	8.24	0.71	18.51
	1.00	7.68	5.56	9.22	0.88	19.66
	1.50	7.68	5.56	9.22	0.88	19.66
	2.00	7.68	5.56	10.72	0.88	21.16
	3.00	9.78	7.19	10.07	1.94	21.57
	5.00	9.78	7.19	11.57	1.94	23.07
HP207*IA	0.25	6.38	4.58	6.99	0.39	18.97
	0.33	6.38	4.58	7.24	0.39	19.22
	0.50	6.38	4.58	7.74	0.39	19.72
	0.75	6.38	4.58	8.24	0.39	20.22
	1.00	7.68	5.56	9.22	0.57	21.38
	1.50	7.68	5.56	9.22	0.57	21.38
	2.00	7.68	5.56	10.72	0.57	22.88
	3.00	9.78	7.19	10.07	1.63	23.29
	5.00	9.78	7.19	11.57	1.63	24.79

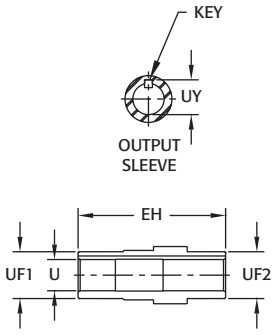
* SPECIFY "2" FOR DOUBLE REDUCTION OR "3" FOR TRIPLE REDUCTION

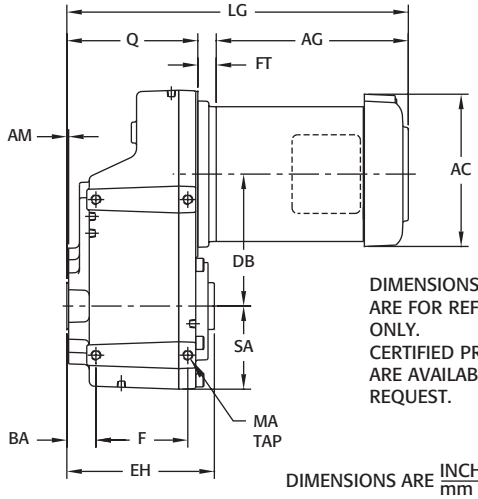
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INTEGRAL DOUBLE & TRIPLE REDUCTION







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DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*IS	.10	0.89	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	4.50	3.10
	2.5	22.6	165	115.8	115	77	31	M8x1.25 x 12	268	114	79
HP204*IS	.10	1.22	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	5.51	3.45
	2.6	31	180	135.4	145	93	43	M10x1.5 x 15	310	140	88
HP206*IS	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP207*IS	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP203*IS	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*IS	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*IS	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*IS	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
4.72	$1.250^{+.0025}_{-0}$	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	$1.375^{+.0025}_{-0}$	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP203*IS	0.25	6.38	4.58	6.99	0.71	12.20
	0.33	6.38	4.58	7.24	0.71	12.45
	0.50	6.38	4.58	7.74	0.71	12.95
	0.75	6.38	4.58	8.24	0.71	13.45
	1.00	7.68	5.56	9.22	0.88	14.60
	1.50	7.68	5.56	9.22	0.88	14.60
	2.00	7.68	5.56	10.72	0.88	16.10
HP204*IS	0.25	6.38	4.58	6.99	0.55	13.05
	0.33	6.38	4.58	7.24	0.55	13.30
	0.50	6.38	4.58	7.74	0.55	13.80
	0.75	6.38	4.58	8.24	0.55	14.30
	1.00	7.68	5.56	9.22	0.73	15.46
	1.50	7.68	5.56	9.22	0.73	15.46
	2.00	7.68	5.56	10.72	0.73	16.96
	3.00	9.78	7.19	10.07	1.78	17.36
	5.00	9.78	7.19	11.57	1.78	18.86

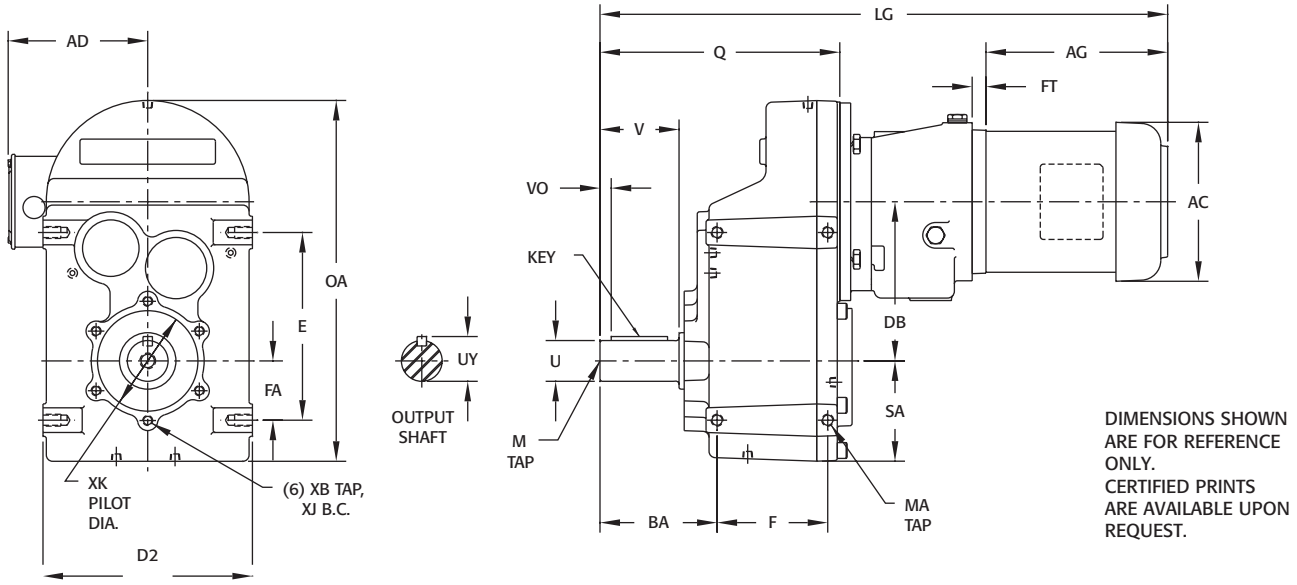
MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP206*IS	0.25	6.38	4.58	6.99	0.71	13.99
	0.33	6.38	4.58	7.24	0.71	14.24
	0.50	6.38	4.58	7.74	0.71	14.74
	0.75	6.38	4.58	8.24	0.71	15.24
	1.00	7.68	5.56	9.22	0.88	16.39
	1.50	7.68	5.56	9.22	0.88	16.39
	2.00	7.68	5.56	10.72	0.88	17.89
	3.00	9.78	7.19	10.07	1.94	18.30
	5.00	9.78	7.19	11.57	1.94	19.80
HP207*IS	0.25	6.38	4.58	6.99	0.39	15.00
	0.33	6.38	4.58	7.24	0.39	15.25
	0.50	6.38	4.58	7.74	0.39	15.75
	0.75	6.38	4.58	8.24	0.39	16.25
	1.00	7.68	5.56	9.22	0.57	17.41
	1.50	7.68	5.56	9.22	0.57	17.41
	2.00	7.68	5.56	10.72	0.57	18.91
	3.00	9.78	7.19	10.07	1.63	19.32
	5.00	9.78	7.19	11.57	1.63	20.82

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INTEGRAL QUIN REDUCTION



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DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065IA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP2075IA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP2065IA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075IA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

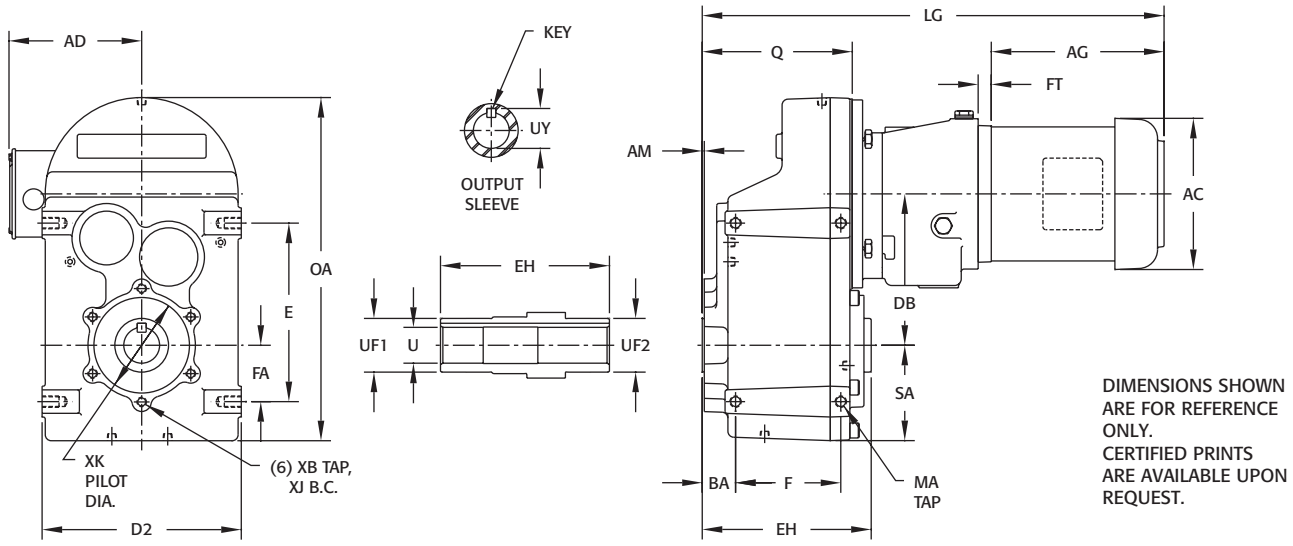
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP2065IA	0.25	6.38	4.58	6.99	0.55	22.42
	0.33	6.38	4.58	7.24	0.55	22.67
	0.50	6.38	4.58	7.74	0.55	23.17
	0.75	6.38	4.58	8.24	0.55	23.67
HP2075IA	0.25	6.38	4.58	6.99	0.71	24.93
	0.33	6.38	4.58	7.24	0.71	25.18
	0.50	6.38	4.58	7.74	0.71	25.68
	0.75	6.38	4.58	8.24	0.71	26.18
	1.00	7.68	5.56	9.22	0.88	27.34

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

INTEGRAL QUIN REDUCTION



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065IS	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP2075IS	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP2065IS	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075IS	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HP2065IS	0.25	6.38	4.58	6.99	0.55	19.15
	0.33	6.38	4.58	7.24	0.55	19.40
	0.50	6.38	4.58	7.74	0.55	19.90
	0.75	6.38	4.58	8.24	0.55	20.40
HP2075IS	0.25	6.38	4.58	6.99	0.71	20.96
	0.33	6.38	4.58	7.24	0.71	21.21
	0.50	6.38	4.58	7.74	0.71	21.71
	0.75	6.38	4.58	8.24	0.71	22.21
	1.00	7.68	5.56	9.22	0.88	23.37

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

EXACT RATIO	OUTPUT RPM	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HP2032						
3.42	511	7.18	850	380	105	1150
3.83	456	7.09	940	400	105	1150
4.30	407	6.59	980	410	105	1150
4.85	361	6.33	1060	420	105	1150
5.48	319	6.07	1150	430	105	1150
6.23	281	5.58	1200	450	105	1150
7.12	246	5.00	1230	560	105	1150
7.64	229	4.73	1250	580	105	1150
9.93	176	4.37	1500	525	105	1400
11.23	156	4.25	1650	530	105	1400
12.76	137	3.97	1750	550	105	1400
14.60	120	3.51	1770	580	105	1400
15.66	112	3.27	1770	620	105	1400
19.09	92	2.68	1770	680	105	1400
23.80	74	2.15	1770	760	105	1400
28.70	61	1.78	1770	850	105	1400
32.99	53	1.55	1770	900	105	1400
HP2033						
34.29	51	1.52	1770	960	105	1400
39.63	44.2	1.32	1770	960	105	1400
42.79	40.9	1.22	1770	960	105	1400
60.16	29.1	0.87	1770	960	105	1400
69.52	25.2	0.75	1770	960	105	1400
75.07	23.3	0.70	1770	960	105	1400
85.34	20.5	0.61	1770	960	105	1400
92.16	19.0	0.57	1770	960	105	1400
101.94	17.2	0.51	1770	960	105	1400
117.80	14.9	0.44	1770	960	105	1400
127.21	13.8	0.41	1770	960	105	1400

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

EXACT RATIO	OUTPUT RPM	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HP2042						
4.13	424	8.97	1280	650	140	1730
5.22	335	8.31	1500	650	140	1730
6.06	289	7.88	1650	650	140	1730
7.92	221	7.01	1920	650	140	1730
9.46	185	6.02	1970	700	140	1730
11.71	149	8.74	3540	800	140	1730
13.59	129	7.53	3540	770	140	1950
17.77	98	5.76	3540	830	140	1950
21.23	82	4.82	3540	930	140	1950
22.62	77	4.53	3540	930	140	1950
25.85	68	3.96	3540	1050	140	1950
27.75	63	3.69	3540	1100	140	1950
32.31	54	3.17	3540	1200	140	1950
HP2043						
34.33	51	3.05	3540	1200	140	1950
38.45	45.5	2.72	3540	1250	140	1950
43.15	40.6	2.42	3540	1250	140	1950
48.59	36.0	2.15	3540	1250	140	1950
54.92	31.9	1.90	3540	1250	140	1950
62.41	28.0	1.68	3540	1250	140	1950
68.53	25.5	1.53	3540	1250	140	1950
71.40	24.5	1.46	3540	1250	140	1950
78.40	22.3	1.33	3540	1250	140	1950
84.11	20.8	1.24	3540	1250	140	1950
102.52	17.1	1.02	3540	1250	140	1950
127.79	13.7	0.82	3540	1250	140	1950
154.12	11.4	0.68	3540	1250	140	1950
177.15	9.9	0.59	3540	1250	140	1950

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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RATINGS @1750 RPM INPUT 1.00 SERVICE FACTOR

EXACT RATIO	OUTPUT RPM	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HP2062						
4.02	436	12.03	1670	2050	200	2400
4.48	390	12.00	1860	2050	200	2400
5.01	349	11.08	1920	2050	200	2400
5.41	324	11.02	2060	2050	200	2400
6.08	288	10.23	2150	2050	200	2400
6.58	266	9.89	2250	2050	200	2850
7.45	235	9.89	2550	2050	200	2850
8.49	206	8.68	2550	2050	200	2850
9.68	181	11.95	4000	2050	200	2850
10.44	168	11.63	4200	2050	200	2850
1.74	149	11.34	4600	2050	200	2850
12.71	138	11.37	5000	2050	200	2850
14.40	122	10.65	5300	2050	200	2850
16.41	107	9.68	5490	2050	200	2850
23.04	76	7.53	6000	2050	200	2850
27.24	64	6.77	6380	2050	200	2850
32.85	53	5.86	6650	2050	200	2850
HP2063						
38.13	45.9	5.19	6700	2050	200	2850
48.25	36.3	4.29	7000	2050	200	2850
55.99	31.3	3.83	7260	2050	200	2850
73.21	23.9	2.93	7260	2050	200	2850
87.47	20.0	2.45	7260	2050	200	2850
93.17	18.8	2.30	7260	2050	200	2850
106.48	16.4	2.01	7260	2050	200	2850
112.47	15.6	1.91	7260	2050	200	2850
119.81	14.6	1.79	7260	2050	200	2850
136.92	12.8	1.57	7260	2050	200	2850
146.99	11.9	1.46	7260	2050	200	2850
171.15	10.2	1.25	7260	2050	200	2850
185.82	9.42	1.15	7260	2050	200	2850
202.75	8.63	1.06	7260	2050	200	2850
222.50	7.87	0.96	7260	2050	200	2850
HP2065						
275.81	6.3	0.81	7260	2050	140	2850
354.30	4.9	0.63	7260	2050	140	2850
424.65	4.1	0.53	7260	2050	140	2850
537.33	3.3	0.42	7260	2050	140	2850
634.64	2.8	0.35	7260	2050	140	2850
807.73	2.2	0.28	7260	2050	140	2850
974.07	1.8	0.23	7260	2050	140	2850
1187.01	1.5	0.19	7260	2050	140	2850
1482.28	1.2	0.15	7260	2050	140	2850
1841	1.0	0.12	7260	2050	140	2850
2333	0.7	0.10	7260	2050	140	2850
2863	0.6	0.08	7260	2050	140	2850
3333	0.5	0.07	7260	2050	140	2850

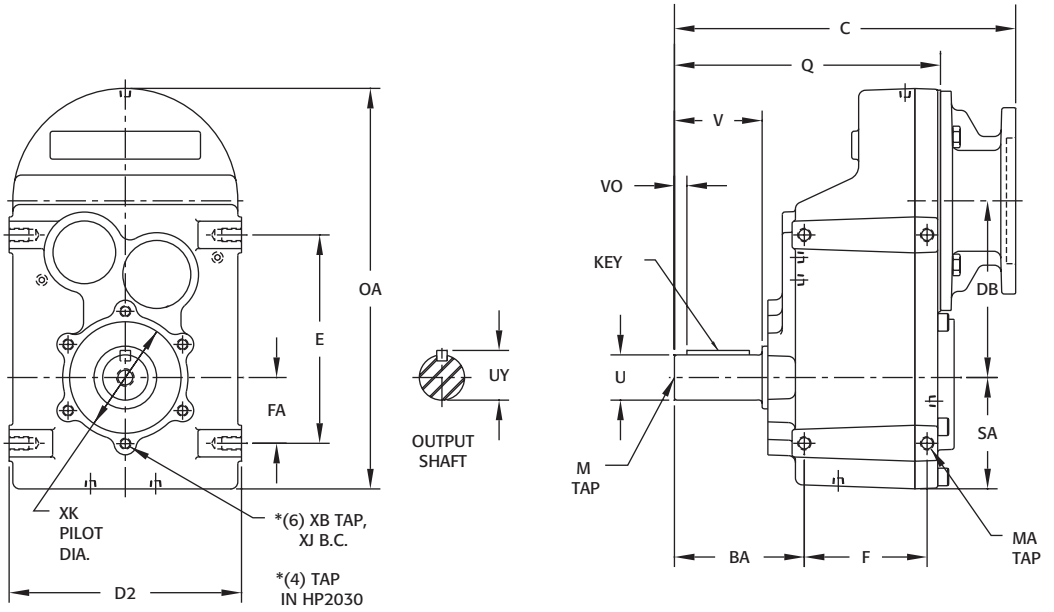
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RATINGS @1750 RPM INPUT 1.00 SERVICE FACTOR

EXACT RATIO	OUTPUT RPM	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HP2072						
4.41	397	20.06	3060	2750	385	3100
5.32	329	19.02	3500	2750	385	3100
6.22	281	17.19	3700	2750	385	3100
7.04	249	15.83	3850	2830	385	3370
8.36	209	13.84	4000	2950	385	3370
10.80	162	19.56	7300	3000	385	3370
12.62	139	17.53	7650	3200	385	3370
14.27	123	16.22	8000	3100	385	3370
16.96	103	14.50	8500	3200	385	3370
23.82	73	12.14	10000	3300	385	3370
28.16	62	11.04	10750	3300	385	3370
33.95	52	8.31	9750	3300	385	3370
HP2073						
37.86	46.2	10.38	13300	3300	385	3370
42.26	41.4	9.30	13300	3300	385	3370
47.25	37.0	8.31	13300	3300	385	3370
50.98	34.3	7.71	13300	3300	385	3370
57.29	30.5	6.86	13300	3300	385	3370
62.06	28.2	6.33	13300	3300	385	3370
70.28	24.9	5.59	13300	3300	385	3370
77.12	22.7	5.09	13300	3300	385	3370
83.55	20.9	4.70	13300	3300	385	3370
94.61	18.5	4.15	13300	3300	385	3370
107.81	16.2	3.64	13300	3300	385	3370
151.44	11.6	2.59	13300	3300	385	3370
179.04	9.77	2.19	13300	3300	385	3370
215.84	8.11	1.82	13300	3300	385	3370
267.36	6.55	1.47	13300	3300	385	3370
HP2075						
302.64	5.8	1.36	13300	3300	200	3370
338.43	5.2	1.21	13300	3300	200	3370
444.42	3.9	0.92	13300	3300	200	3370
519.18	3.4	0.79	13300	3300	200	3370
636.89	2.7	0.64	13300	3300	200	3370
805.67	2.2	0.51	13300	3300	200	3370
966.32	1.8	0.42	13300	3300	200	3370
1205.25	1.5	0.34	13300	3300	200	3370
1453.00	1.2	0.28	13300	3300	200	3370
1829	1.0	0.22	13300	3300	200	3370
2205	0.8	0.19	13300	3300	200	3370
2806	0.6	0.15	13300	3300	200	3370
3325	0.5	0.12	13300	3300	200	3370

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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DOUBLE & TRIPLE REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*EA	2.85	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	6.46	3.10
	72.4	165	115.8	115	77	31	M8x1.25 x 12	268	164	79
HP204*EA	3.58	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	7.87	3.45
	91	180	135.4	145	93	43	M10x1.5 x 15	310	200	88
HP206*EA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP207*EA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP203*EA	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*EA	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*EA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*EA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.000^{+0}_{-.001}$	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
-	-	-	-	-	-
$1.250^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	-	-	-	-
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
HP203*EA	C	9.26	9.26	-	-
		235	235	-	-
HP204*EA	C	10.48	10.48	-	-
		266	266	-	-
HP206*EA	C	12.26	12.26	13.28	-
		311	311	337	-
HP207*EA	C	14.95	14.95	15.64	15.64
		380	380	397	397

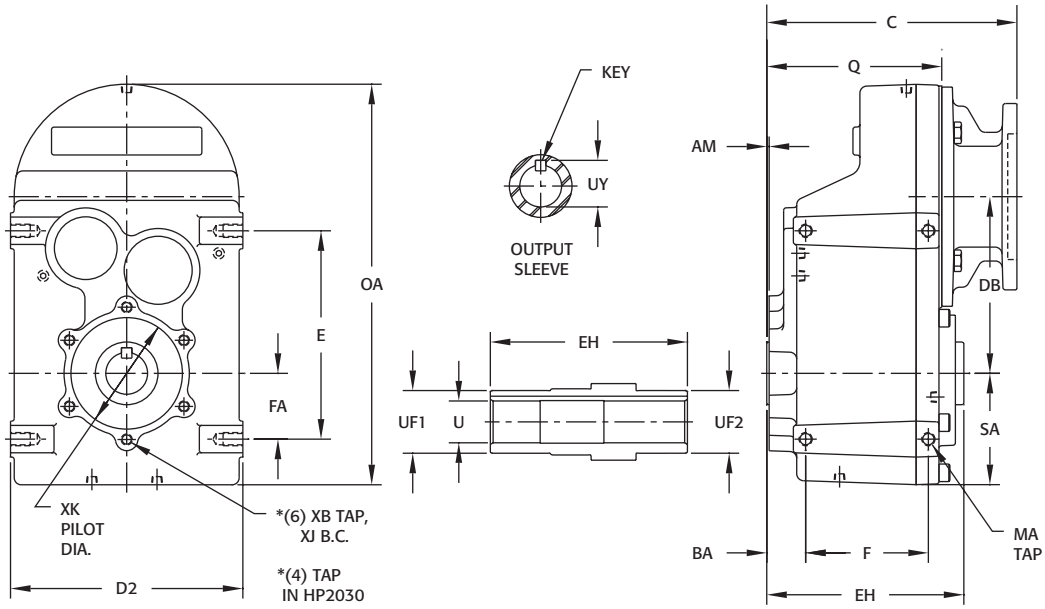
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

* SPECIFY "2" FOR DOUBLE REDUCTION OR "3" FOR TRIPLE REDUCTION

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DOUBLE & TRIPLE REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*ES	.10	0.89	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	4.50	3.10
	2.5	22.6	165	115.8	115	77	31	M8x1.25 x 12	268	114	79
HP204*ES	.10	1.22	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	5.51	3.45
	2.6	31	180	135.4	145	93	43	M10x1.5 x 15	310	140	88
HP206*ES	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP207*ES	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP203*ES	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*ES	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*ES	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*ES	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
4.72	$1.250^{+.0025}_{-0}$	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	$1.375^{+.0025}_{-0}$	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC	NEMA 213TC 215TC
HP203*ES	C	7.30	7.30	-	-
		185	185	-	-
HP204*ES	C	8.12	8.12	-	-
		206	206	-	-
HP206*ES	C	8.99	8.99	10.01	-
		228	228	254	-
HP207*ES	C	10.98	10.98	11.66	11.66
		279	279	296	296

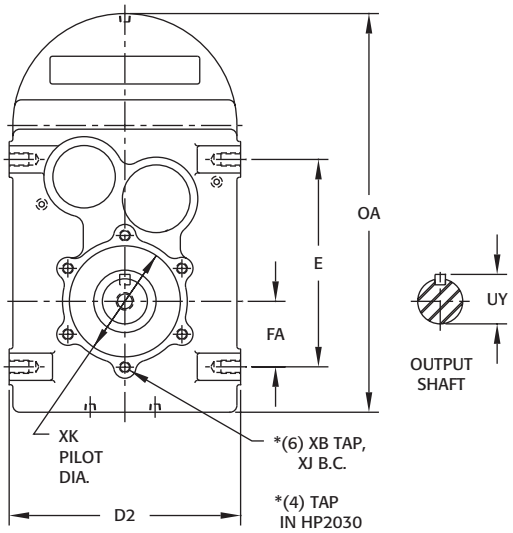
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

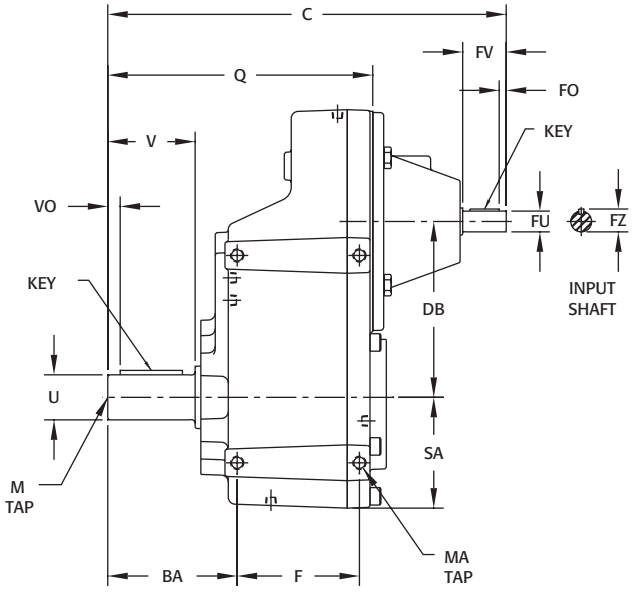
* SPECIFY "2" FOR DOUBLE REDUCTION OR "3" FOR TRIPLE REDUCTION

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DOUBLE & TRIPLE REDUCTION





DIMENSIONS ARE $\frac{\text{INCH}}{\text{mm}}$

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*AA	2.85	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	6.46	3.10
	72.4	165	115.8	115	77	31	M8x1.25 x 12	268	164	79
HP204*AA	3.58	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	7.87	3.45
	91	180	135.4	145	93	43	M10x1.5 x 15	310	200	88
HP206*AA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP207*AA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP203*AA	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*AA	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*AA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*AA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.000^{+0}_{-.001}$	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
-	-	-	-	-	-
$1.250^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	-	-	-	-
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HP203*AA	$0.625^{+0}_{-.0005}$	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP204*AA	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP206*AA	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP207*AA	$0.875^{+0}_{-.0005}$	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

INPUT/ GEARCASE

C
10.77
274
12.21
310
14.37
365
17.79
452

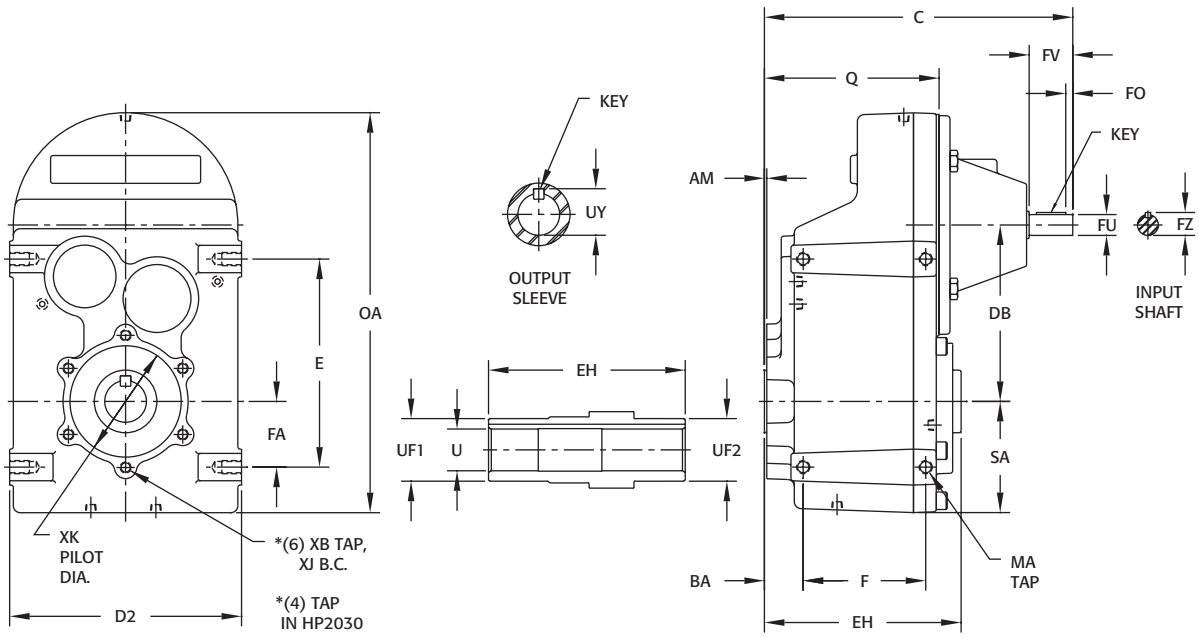
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

* SPECIFY "2" FOR DOUBLE REDUCTION OR "3" FOR TRIPLE REDUCTION

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DOUBLE & TRIPLE REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP203*AS	.10	0.89	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	4.50	3.10
	2.5	22.6	165	115.8	115	77	31	M8x1.25 x 12	268	114	79
HP204*AS	.10	1.22	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	5.51	3.45
	2.6	31	180	135.4	145	93	43	M10x1.5 x 15	310	140	88
HP206*AS	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP207*AS	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP203*AS	M8x1.25 x .63	3.875	$3.1255^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$79.388^{-0}_{+.051}$
HP204*AS	M8x1.25 x .63	3.875	$3.2288^{-0}_{+.002}$
	M8x1.25 x 16.0	98.43	$82.012^{-0}_{+.051}$
HP206*AS	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP207*AS	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
4.72	$1.250^{+.0025}_{-0}$	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	$1.375^{+.0025}_{-0}$	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HP203*AS	$0.625^{+0}_{-.0005}$	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP204*AS	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP206*AS	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP207*AS	$0.875^{+0}_{-.0005}$	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

INPUT/ GEARCASE

C
8.81
224
9.85
250
11.10
282
13.81
351

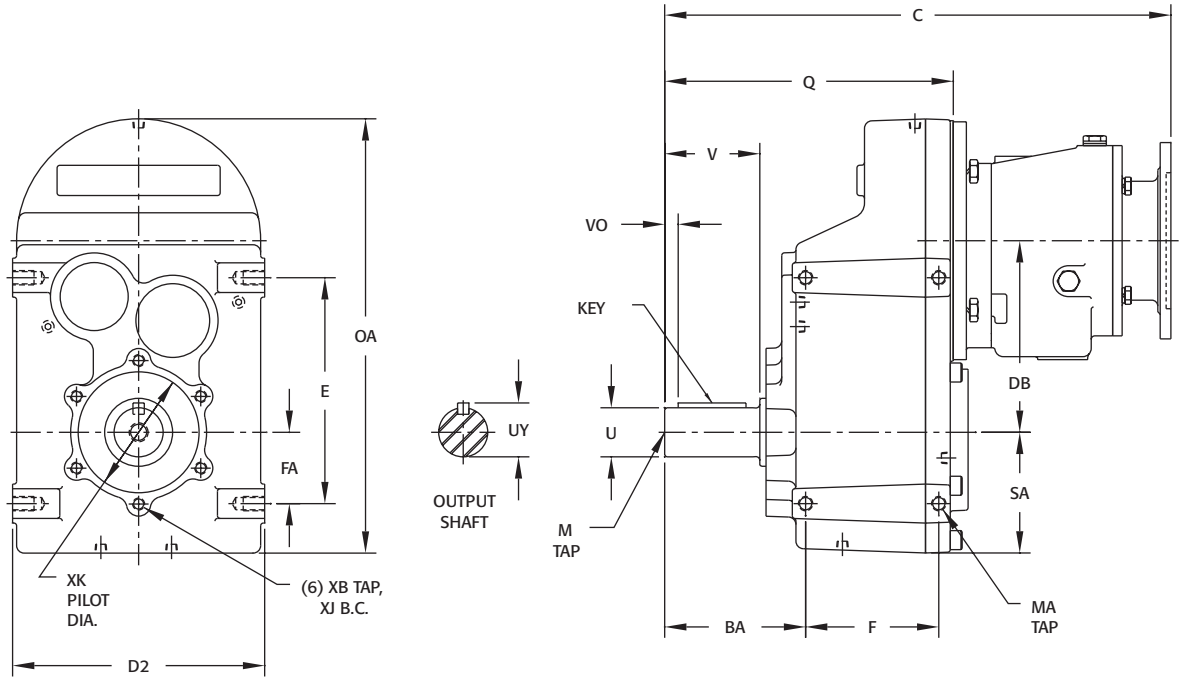
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QUIN REDUCTION



DIMENSIONS ARE $\frac{\text{INCH}}{\text{mm}}$

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065EA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP2075EA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP2065EA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075EA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

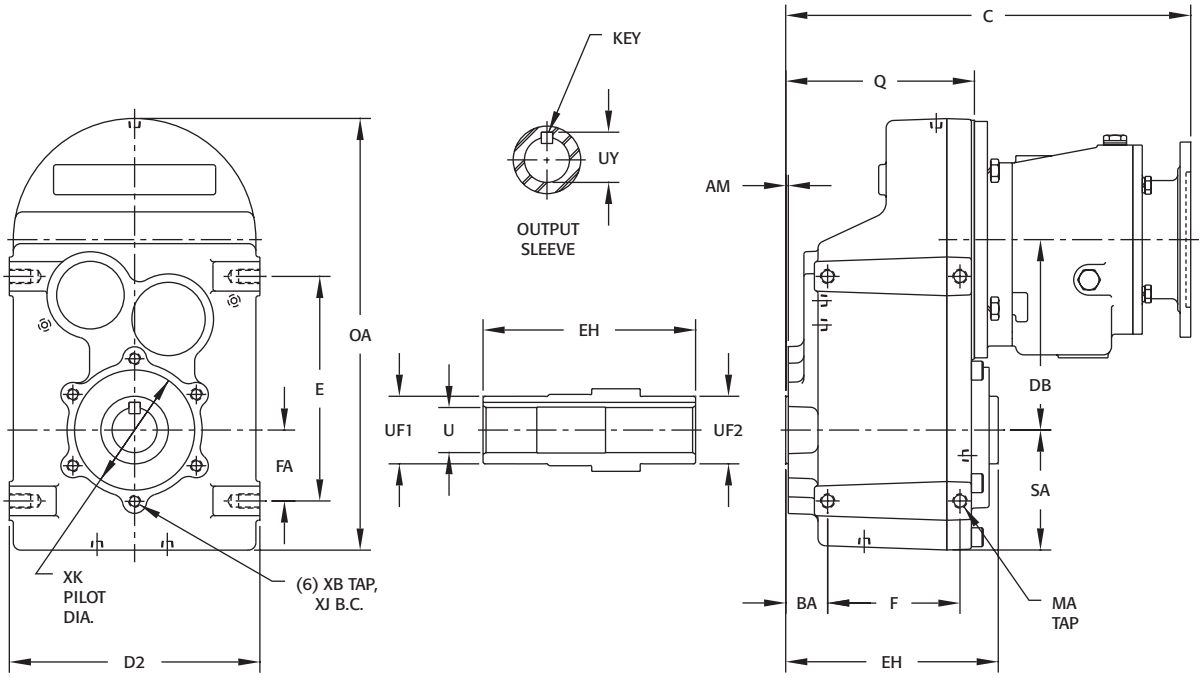
MODEL		NEMA 56C	NEMA 143TC 145TC
HP2065EA	C	17.49	17.49
		444	444
HP2075EA	C	19.93	19.93
		506	506

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
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DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

QUIN REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065ES	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP2075ES	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP2065ES	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075ES	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 2-5/8
-	-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

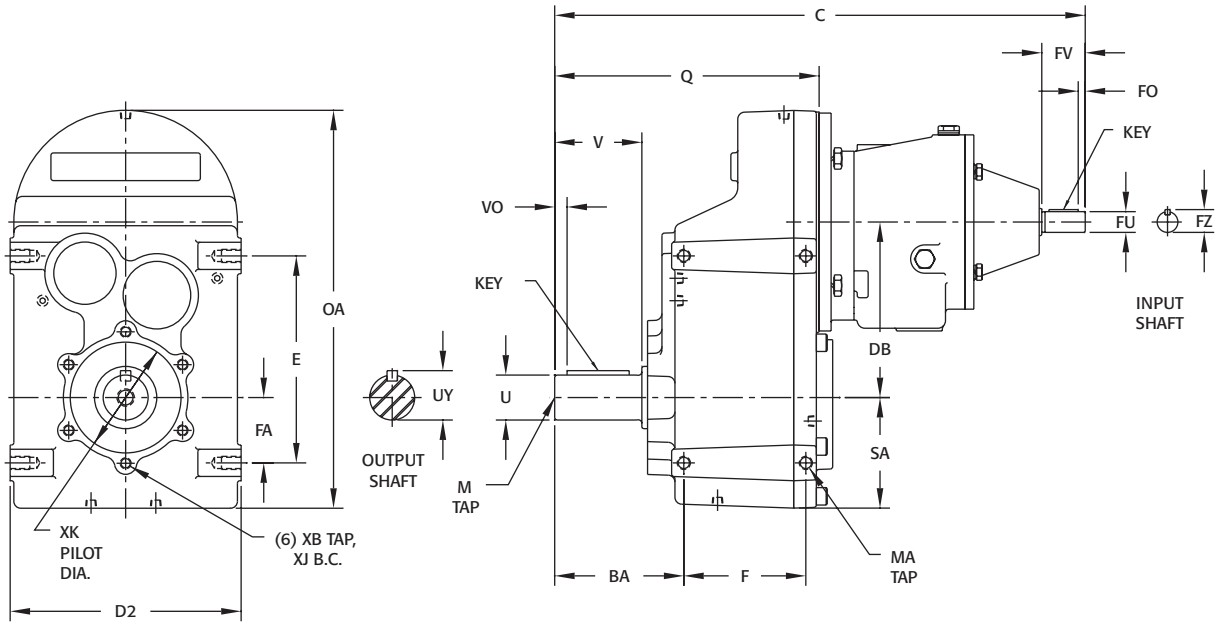
MODEL		NEMA 56C	NEMA 143TC 145TC
HP2065ES	C	14.22	14.22
		361	361
HP2075ES	C	15.96	15.96
		405	405

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

QUIN REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065AA	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
HP2075AA	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

GEARCASE

MODEL	XB	XJ	XK
HP2065AA	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075AA	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HP2065AA	$0.625^{+0}_{-.0005}$	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP2075AA	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

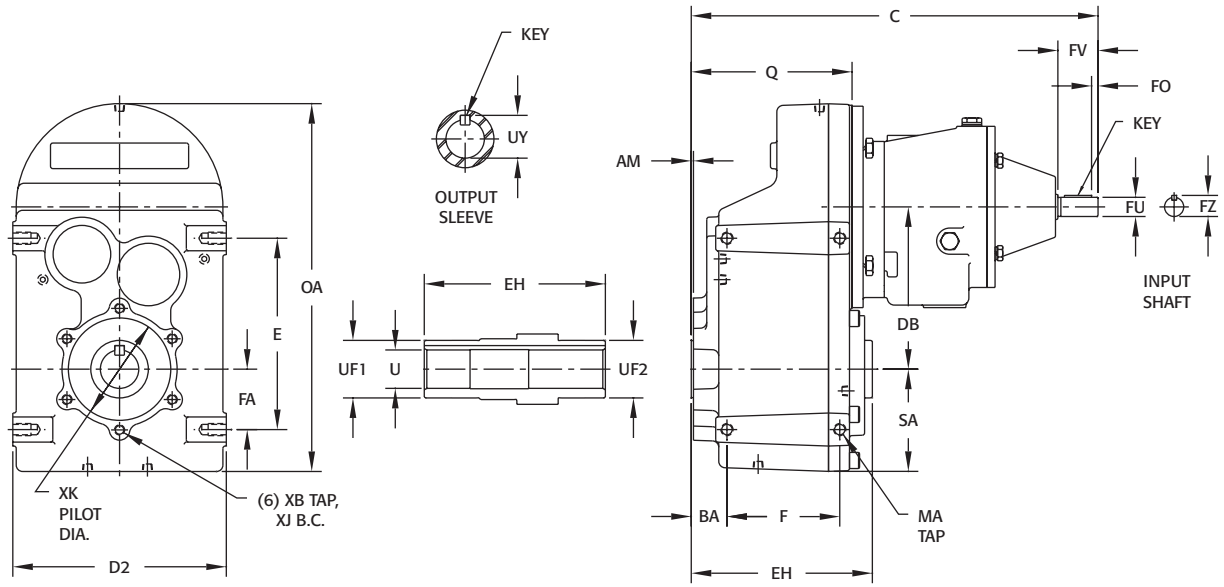
INPUT/ GEARCASE

C
19.53
496
22.05
560

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

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DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
HP2065AS	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
HP2075AS	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

GEARCASE

MODEL	XB	XJ	XK
HP2065AS	M10x1.5 x .66	4.750	$4.0020^{-0}_{+.002}$
	M10x1.5 x 16.7	120.65	$101.651^{-0}_{+.051}$
HP2075AS	M12x1.75 x .95	5.375	$4.3310^{-0}_{+.002}$
	M12x1.75 x 24.1	136.53	$110.007^{-0}_{+.051}$

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
7.08	$1.500^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	$2.000^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HP2065AS	$0.625^{+0}_{-.0005}$	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HP2075AS	$0.750^{+0}_{-.0005}$	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

INPUT/ GEARCASE

C
16.26
413
18.07
459

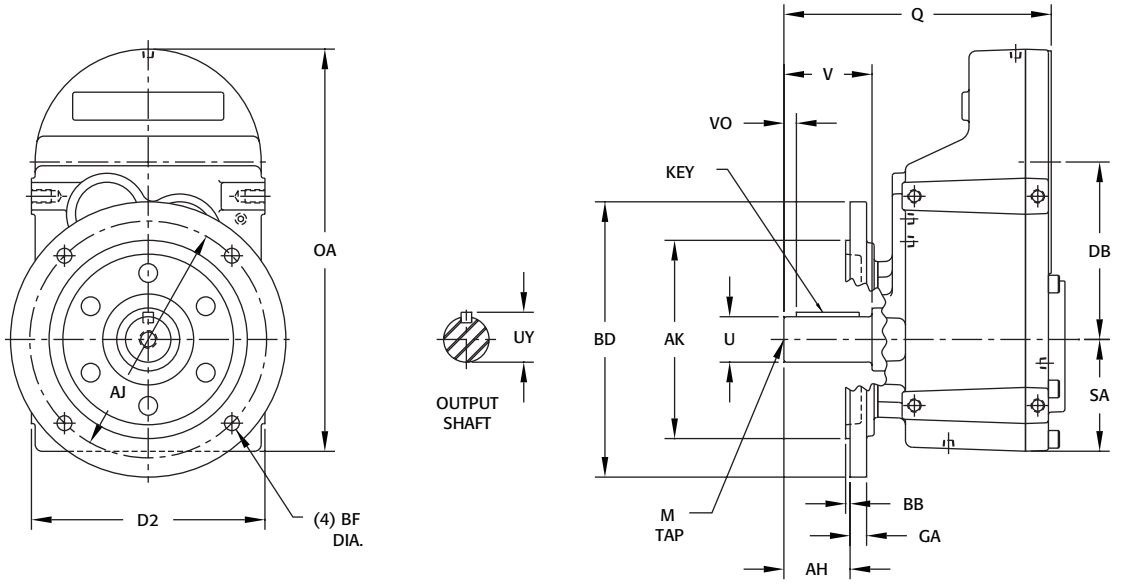
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ACCESSORY KITS

FLANGE MOUNT WITH OUTPUT SHAFT



DIMENSIONS ARE INCH / mm

GEARCASE

SERIES	D2	DB	OA	Q	SA
HP2030	6.50	4.56	10.55	6.46	3.10
	165	115.8	268	164	79
HP2040	7.09	5.33	12.22	7.87	3.45
	180	135.4	310	200	88
HP2060	8.35	6.34	14.37	9.56	4.00
	212	161.1	365	243	101
HP2070	10.63	7.71	17.82	11.59	4.94
	270	195.8	453	294	125

FLANGE

AH	AJ	AK	BB	BD	BF	GA
1.02	5.12	4.331 $^{-.0003}_{-.0024}$	0.14	6.30	0.35	0.39
26	130	110 $^{+0}_{-.054}$	3.5	160	9	10
1.38	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.47
35	165	130 $^{-.003}_{-.054}$	3.5	200	11	12
2.37	8.46	7.087 $^{+0}_{-.002}$	0.16	9.84	0.53	0.59
60	215	180 $^{+.010}_{-.041}$	4	250	13.5	15
2.52	10.43	9.055 $^{+0}_{-.002}$	0.16	11.81	0.53	0.63
64	265	230 $^{-.003}_{-.054}$	4	300	13.5	16

OUTPUT SHAFT

SERIES	U	UY	V	VO	KEY	M
HP2030	1.000 $^{+0}_{-.001}$	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
	-	-	-	-	-	-
HP2040	1.250 $^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
	-	-	-	-	-	-
HP2060	1.625 $^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
	-	-	-	-	-	-
HP2070	2.000 $^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
	-	-	-	-	-	-

FLANGE MOUNT KIT

SERIES	KIT NUMBER	WT. LBS.
HP2030	0259-00040	7
HP2040	0259-00010	11
HP2060	0259-00005	15
HP2070	0259-00006	18

FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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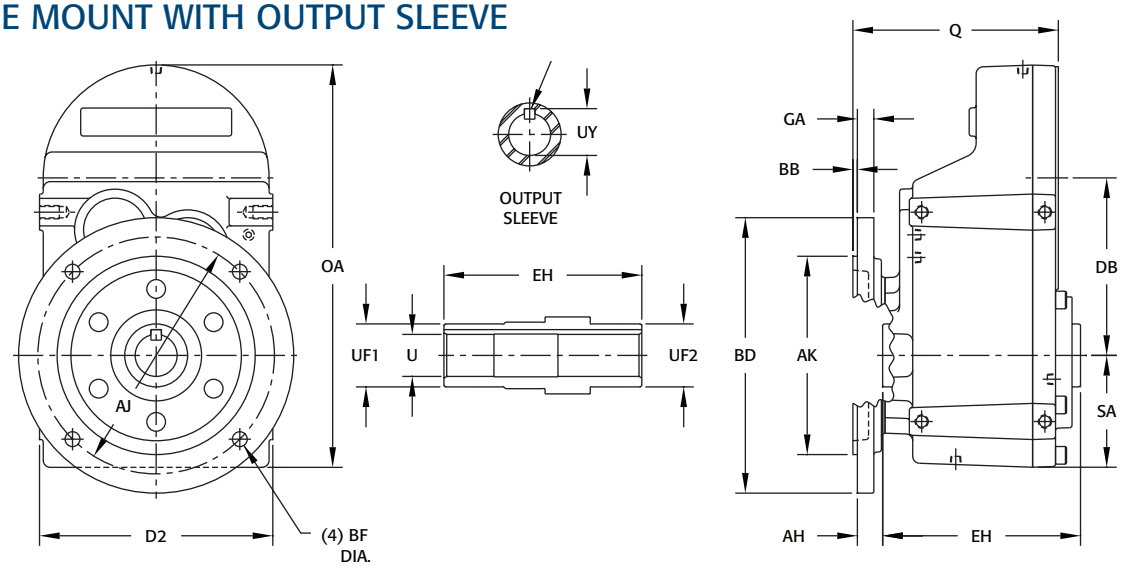
WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

HUB CITY

ACCESSORY KITS

FLANGE MOUNT WITH OUTPUT SLEEVE



DIMENSIONS ARE INCH / mm

GEARCASE

SERIES	D2	DB	OA	Q	SA
HP2030	6.50	4.56	10.55	5.58	3.10
	165	115.8	268	142	79
HP2040	7.09	5.33	12.22	6.63	3.45
	180	135.4	310	168	88
HP2060	8.35	6.34	14.37	7.35	4.00
	212	161.1	365	187	101
HP2070	10.63	7.71	17.82	9.23	4.94
	270	195.8	453	234	125

OUTPUT SLEEVE

EH	U	UF1	UF2	UY	KEY
4.72	1.250 $^{+.0025}_{-0}$	1.77	1.75	1.37	(2)1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	1.375 $^{+.0025}_{-0}$	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	1.500 $^{+.0025}_{-0}$	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	2.000 $^{+.0025}_{-0}$	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

FLANGE

SERIES	AH	AJ	AK	BB	BD	BF	GA
HP2030	0.94	5.12	4.331 $^{-.0003}_{-.0024}$	0.14	6.30	0.35	0.39
	24	130	110 $^{+0}_{-.054}$	3.5	160	9	10
HP2040	0.98	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.47
	25	165	130 $^{-.003}_{-.054}$	3.5	200	11	12
HP2060	0.90	8.46	7.087 $^{+0}_{-.002}$	0.16	9.84	0.53	0.59
	23	215	180 $^{+.010}_{-.041}$	4	250	13.5	15
HP2070	1.45	10.43	9.055 $^{+0}_{-.002}$	0.16	11.81	0.53	0.63
	37	265	230 $^{-.003}_{-.054}$	4	300	13.5	16

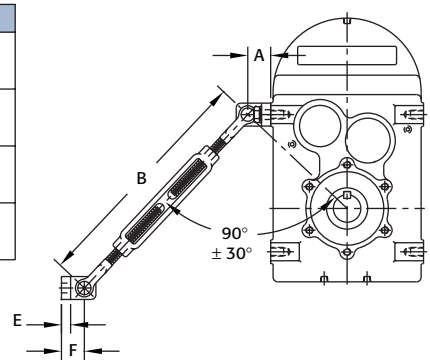
FLANGE MOUNT KIT

SERIES	KIT NUMBER	WT. LBS.
HP2030	0259-00040	7
HP2040	0259-00010	11
HP2060	0259-00005	15
HP2070	0259-00006	18

FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

TORQUE ARM KIT

SERIES	KIT NUMBER	A	B	C	D	E	F	G	WT. LBS.
HP2030	0259-00018	1.00	11.13 MIN. 17.00 MAX.	1.52	3.03	0.38	1.00	0.35	4
HP2040	0259-00019	1.13	12.50 MIN. 18.38 MAX.	1.83	3.66	0.38	1.13	0.43	4
HP2060	0259-00020	1.25	12.50 MIN. 18.38 MAX.	2.20	4.41	0.50	1.25	0.53	6
HP2070	0259-00021	1.25	12.50 MIN. 18.38 MAX.	2.76	5.51	0.50	1.25	0.69	12



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS ANDDEVICES MOUNTED THEREON.

SHIPPING WEIGHTS & MOTOR COMPATIBILITY

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

**REDUCER WEIGHTS - STYLES A & S

MODEL	SOLID INPUT SHAFT (MOUNTING TYPE A)	C-FRAME QUILL INPUT (MOUNTING TYPE E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
HP2032	48	50	50		
HP2033	50	52	52		
HP2042	65	67	67		
HP2043	67	69	69		
HP2062	95	97	97	105	
HP2063	98	100	100	108	
HP2065	126	128	128		
HP2072	143	146	146	155	155
HP2073	148	151	151	160	160
HP2075	183	186	186		

MOTOR COMPATIBILITY - C-FRAME QUILL REDUCERS

MODEL	56C	143TC 145TC	182TC 184TC	213TC 215TC
HP2032	X	X	-	-
HP2033	X	X	-	-
HP2042	X	X	-	-
HP2043	X	X	-	-
HP2062	X	X	X	-
HP2063	X	X	X	-
HP2065	X	X	-	-
HP2072	X	X	X	X
HP2073	X	X	X	X
HP2075	X	X	-	-

FOR FACTORY OPTIONS SEE PAGE L-53

** FOR MOTORIZED REDUCER WEIGHTS, ADD MOTOR WEIGHTS FROM ELECTRIC MOTOR CHARTS IN SECTION H TO REDUCER WEIGHTS SHOWN ON THIS PAGE.

** FOR INTEGRAL GEARMOTOR WEIGHTS, FOLLOW INSTRUCTIONS ABOVE (WITH SIMILAR HP C-FACE MOTOR), AND MULTIPLY BY .95.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

Poweratio® 2000 HELICAL BEVEL DRIVES

K

Helical Bevel Product Features ..... K-2 to K-3
- Selection Procedure ..... K-4 to K-5
- Descriptions K-6
- Mounting Positions K-7
- Model Selection Index K-8
- Selection By Input HP ..... K-9 to K-21
- Integral Gearmotor Dimensions ..... K-22 to K-25
- Ratings By Model ..... K-26 to K-29
- Reducer Dimensions ..... K-30 to K-37
- Accessories ..... K-38 to K-39
- Shipping Weights & Motor Capability K-40
- Factory Options ..... See Page L-47

Poweratio® 2000 HELICAL BEVEL DRIVES

HIGH EFFICIENCY HELICAL BEVEL RIGHT ANGLE DRIVES

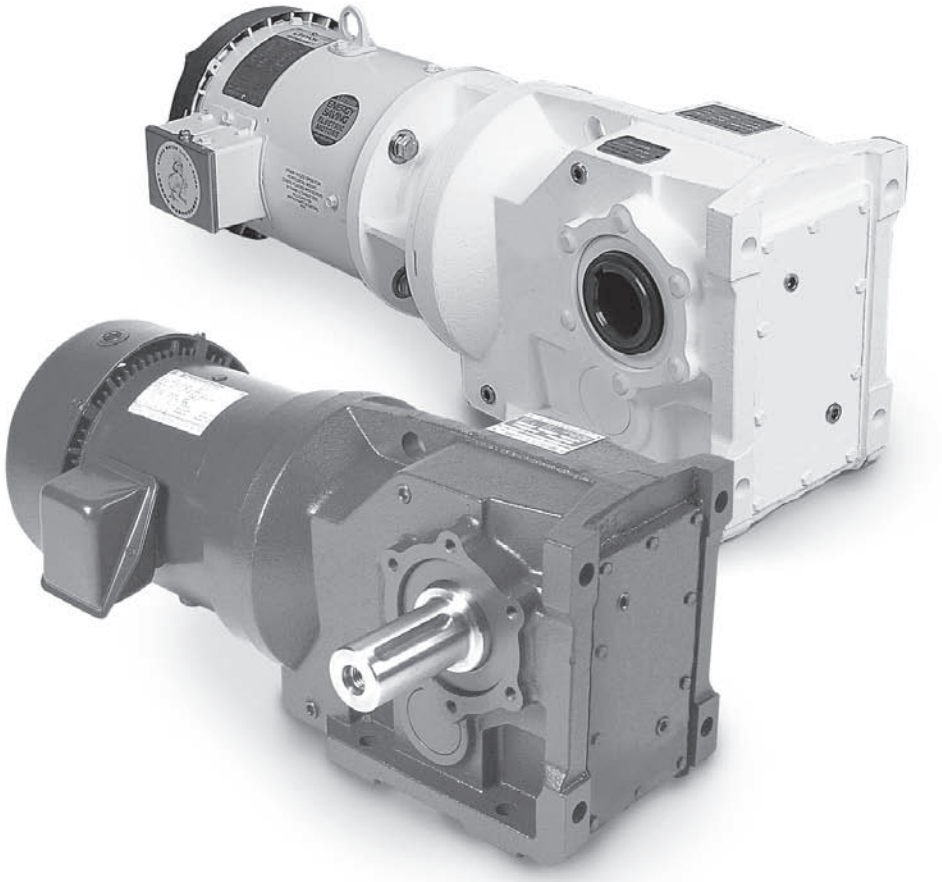
Advanced design with competitive interchangeability.

BASIC SPECIFICATIONS

- Power Ratings from 1/4 to 130 hp
- Output Torque 70,000 inch/lbs.
- Ratios from 6.1 through 3413:1
- Output speeds .5 rpm to 280 rpm

STANDARD FEATURES

- Universal Base, Flange and Hollow Bore Mounting with Competitive Interchange Capability
- Precision Carburized and Hardened Spiral Bevel and Crowned Helical Gearing
- Double Lip Spring Loaded Seals with Precision Ground Seal Journals
- High Capacity Ball and Tapered Bearings with Splash Lubrication, Factory Filled
- Enhanced High Tensile Strength Steel Shafting with Low Notch Sensitivity
- Optimum Structural Designed Housings made of High Strength Alloy Cast Iron



OPTIONAL FEATURES

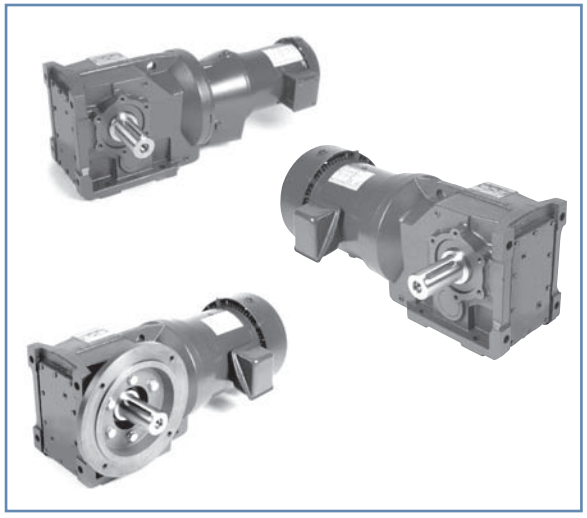
- Modified Standard and Custom Designs
- Hollow or Solid Output Shafts in Metric Sizes
- Brake or Inverter Duty Motors (50/60 hz)
- Washdown and BISSC Configurations

INTEGRAL GEARMOTORS

- 6 Sizes Available Up To 5 hp.
- Motors Produced By Marathon Electric for High Efficiency, Reliability and Durability

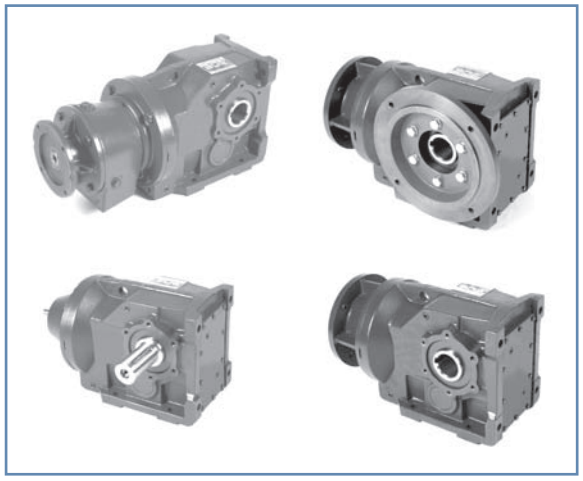
CALL: (605) 225-0360 • FAX: (605) 225-0567

HELICAL BEVEL DRIVES



INTEGRAL GEARMOTORS

Triple Reduction
Quin Reduction
- *Foot Mount*
- *Flange Mount*
- *Shaft Mount*



REDUCERS

Triple Reduction
Quin Reduction
- *NEMA C-Frame Quill Input*
- *Shaft Input*
  - *Foot Mount*
  - *Flange Mount*
  - *Shaft Mount*

Cleanline™ premium washdown duty and metric versions available, See Section O or Consult Factory for details and specifications.

SELECTION PROCEDURE

Hub City provides two methods of selection for Reducers and Gearmotors.

On pages K-9 to K-21, the Selection Tables by Input H.P. can be used whenever the Input H.P. requirement is known. This method is commonly used for Gearmotors, but can also be used for Reducers.

On pages K-26 to K-29, the Input H.P. and Output Torque Ratings are provided for each model. These rating tables can be used for Reducers and Gearmotors.

SELECTION BY INPUT H.P.

For selection by Input H.P, determine the Input H.P., Output Speed and Load Classification (Service Factor) requirements. (See pages K-5, A-2 and A-5 to A-8 for AGMA Load Classification and Service Factors.) Then refer to Selection Tables by Input H.P., locate the required H.P. and Output Speed, and read across to the required foot or flange mount unit.

These tables also list the Service Factor for the unit indicated. In many cases, more than one unit is listed, to provide different service factors. Select the unit with a service factor that meets or exceeds the requirement of the application.

Check the Output Overhung Load or Output Thrust rating and Output Torque to verify they meet the requirements. (The Output Torque listed is the actual torque obtained with the motor H.P. listed, not the rated torque.) Then refer to the dimension tables to check the unit dimensions.

If a Reducer with C-Frame input is desired, the available frame sizes for each Reducer model are shown in the dimension tables, and also on page K-40. Specify the description as shown on page K-6.

If a Motorized Reducer is desired, make the motor selection with compatible C-Frame size, from the motors listed in Section H. Specify either the catalog number or the complete description of the motor, in addition to the Reducer description.

The selection tables indicate which units are available as Integral Gearmotors. if an Integral Gearmotor is desired, refer to the dimension tables on pages K-22 to K-25 for dimensions with all available motor sizes. Specify the motor H.P. in addition to the Reducer description.

Reducers may be ordered with other C-Frame sizes. The available frame sizes for each reducer model are shown in the dimension tables, and also on page K-40.

SELECTION FROM UNIT RATING TABLES BY INPUT H.P. OR OUTPUT TORQUE

Determine the actual Input H.P. or Output Torque required, Output Speed, and required Service Factor. Multiply the actual H.P. or torque by the required service factor to obtain the required rating of the Reducer. Refer to the Unit Rating Tables by Model and Output Speed, until you locate the model that meets or exceeds the required H.P. or Torque rating.

The actual service factor can be determined by dividing the unit rating by the actual H.P. or Torque.

Check the Input and Output overhung load ratings, and thrust rating to verify they meet the requirement. Then refer to the dimension tables to check the unit dimensions.

Available motor C-Frame sizes for each reducer model are shown in the dimension tables, and also on page K-40.

EFFICIENCY

Helical Gearing and Ball or Tapered Roller Bearings provide a drive with very high efficiency. The approximate efficiency is 97.5% per gear stage.

OVERHUNG LOADS AND THRUST LOADS

Overhung Load and Thrust ratings are listed in the Selection and Rating Tables. Note that OHL and Thrust Ratings cannot be applied simultaneously. Consult Hub City for applications with combined OHL and thrust load.

BRAKEMOTORS

Braking torque must not exceed the rated capacity of the unit.

SERVICE FACTORS

Load Classification Numbers and Service Factors are used in the selection of Gearmotors and Reducers. The relationship between load class numbers and service factors is shown in Table 2.

The Load Class Numbers are designated for Gearmotors which have a uniform power source (i.e. Electric Motor). They consider the type of load and also the duration of service.

The Service Factors are designated for Reducers and consider other power sources (such as Internal Combustion Engines), as well as the type of load and duration of service.

Table 1 and Table 2 list Service Factors and Load Classes for general use.

AGMA Load Classification and Service Factor tables on pages A-5 to A-8 provide approximate service factors for various types of machinery. The service factors are based on uniform power source (i.e. electric motor). Use the service factor conversion table on page A-2 to obtain service factors for internal combustion engines.

All the Class Number and Service Factor charts are to be used as general guidelines for assistance in determining the required service factor. Rely on past experience as well. Consult the factory for severe applications, when there are safety considerations, or a need for extra high reliability.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.25
	Intermittent 3 hrs.	*	1.00	1.50
	3 - 10 hours	1.00	1.25	1.75
	Over 10 hours	1.25	1.50	2.00
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.50
	Intermittent 3 hrs.	1.00	1.25	1.75
	3 - 10 hours	1.25	1.50	2.00
	Over 10 hours	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.75
	Intermittent 3 hrs.	1.25	1.50	2.00
	3 - 10 hours	1.50	1.75	2.25
	Over 10 hours	1.75	2.00	2.50
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

Explanatory Notes

1. Time specified for intermittent and occasional service refers to total operating time per day.
2. Term "frequent starts and stops" refers to more than 10 starts per hour.

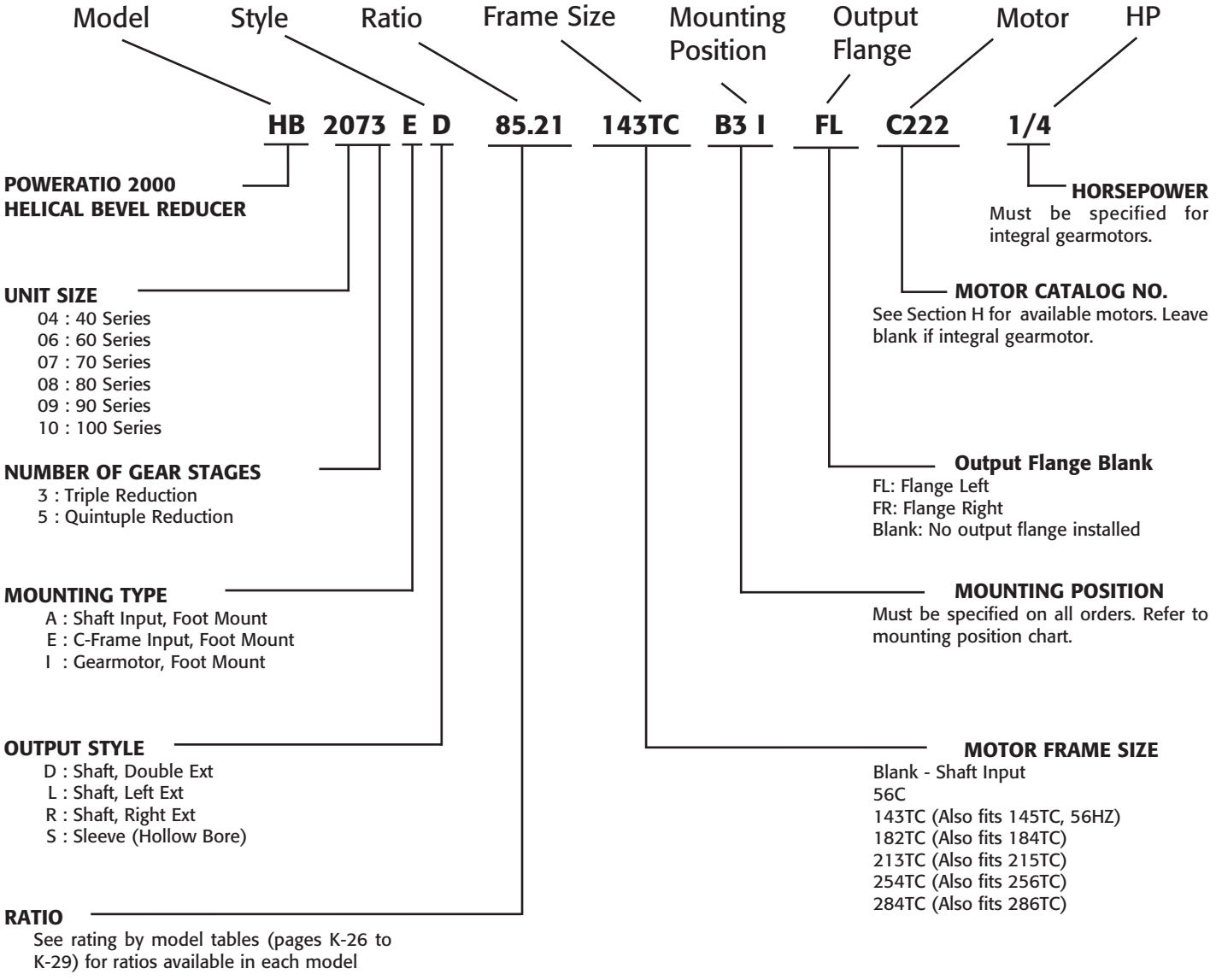
TABLE 2 — LOAD CLASSIFICATION NUMBERS

LOAD CLASS (S.F.)	UP TO 3 HRS. TOTAL OPERATION PER DAY	3 TO 10 HRS. TOTAL OPERATION PER DAY	OVER 10 HRS. TOTAL OPERATION PER DAY
I (1.0)	Moderate Shock Load	Uniform Load	
II (1.4)	Heavy Shock Load	Moderate Shock Load	Uniform Load
III (2.0)		Heavy Shock Load	Moderate Shock Load

DESCRIPTIONS

DESCRIPTIONS FOR ORDERING REDUCERS AND GEARMOTORS

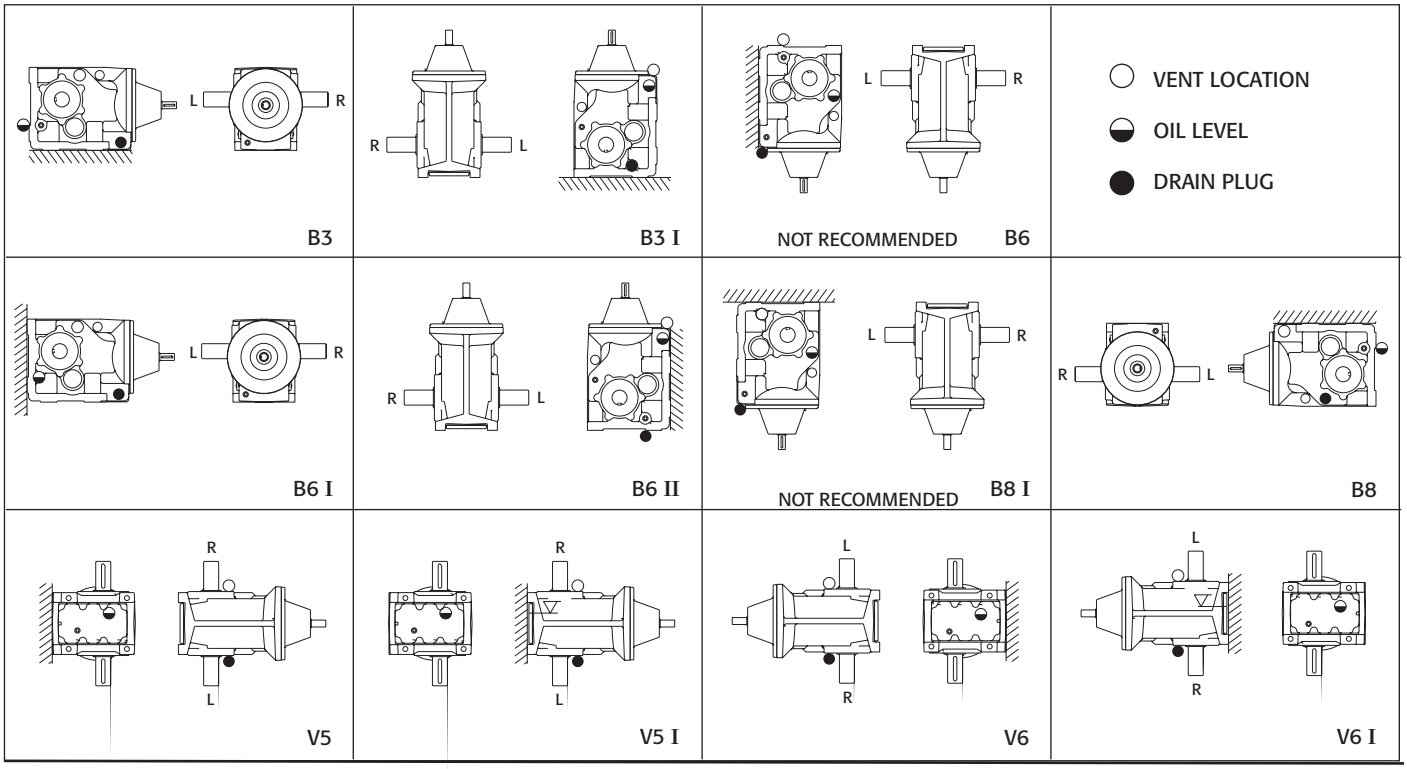
The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors.



MOUNTING POSITIONS

Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the factory. (Refer to Section R for lubrication information.)

MOUNTING POSITIONS



MOTOR DESCRIPTIONS

Available motors and motor data are listed in Section H. Either specify the catalog number or the complete description: HP, RPM, VOLTS, SINGLE OR THREE PHASE, C-FRAME SIZE, ENCLOSURE GENERAL PURPOSE OR OPTIONAL TYPES: WASHDOWN DUTY, INVERTER DUTY, BRAKEMOTOR.

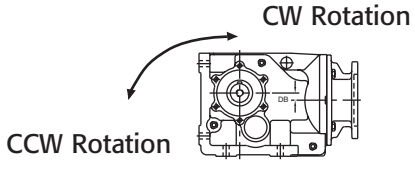
MOTORIZED REDUCERS & GEARMOTORS

The Reducer and Motor are assembled at the factory, and filled with the proper quantity of lubricant based on your specified mounting position. Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors. Special integral gearmotors are available. Consult the factory for details.

Standard Integral Gearmotors and Motorized Reducers are assembled at the factory with the conduit box and the conduit opening at the position illustrated in the dimensional section of this catalog. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

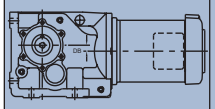
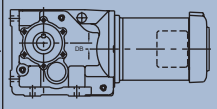
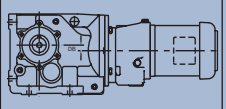
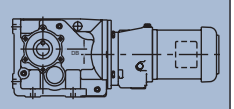
BACKSTOPS

Backstops are available as factory options. Consult the factory for details. Output rotation must be specified as CCW or CW. Refer to drawing below:

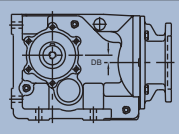
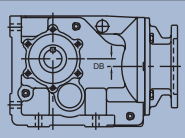
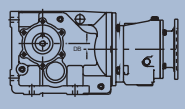
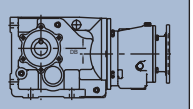


MODEL INDEX

INTEGRAL GEARMOTORS

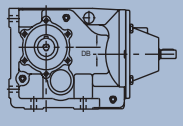
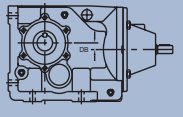
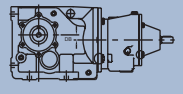
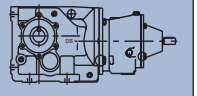
TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS
				Refer To Selection Pages K-9 to K-21
Page K-22 Shaft Output	Page K-23 Shaft Mount	Page K-24 Shaft Output	Page K-25 Shaft Mount	

C-FRAME QUILL INPUT REDUCERS

	TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS	
						
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	TRIPLE REDUCTION	QUIN REDUCTION
40	HB2043E* **Page K-30**	HB2043ES **Page K-31**	NA	NA	**Page K-26**	**NA**
60	HB2063E* **Page K-30**	HB2063ES **Page K-31**	HB2065E* **Page K-34**	HB2065ES **Page K-35**	**Page K-26**	**Page K-26**
70	HB2073E* **Page K-30**	HB2073ES **Page K-31**	HB2075E* **Page K-34**	HB2075ES **Page K-35**	**Page K-27**	**Page K-27**
80	HB2083E* **Page K-30**	HB2083ES **Page K-31**	HB2085E* **Page K-34**	HB2085ES **Page K-35**	**Page K-27**	**Page K-28**
90	HB2093E* **Page K-30**	HB2093ES **Page K-31**	HB2095E* **Page K-34**	HB2095ES **Page K-35**	**Page K-28**	**Page K-28**
100	HB2103E* **Page K-30**	HB2103ES **Page K-31**	HB2105E* **Page K-34**	HB2105ES **Page K-35**	**Page K-29**	**Page K-29**

MOTORIZED MODELS ARE SAME AS C-FRAME QUILL MODELS. SIMPLY ORDER THE DESIRED C-FRAME REDUCER, SPECIFY THE MOTOR, AND SPECIFY "MOTORIZED ASSEMBLY".

SHAFT INPUT REDUCERS

	TRIPLE REDUCTION DIMENSIONS		QUIN REDUCTION DIMENSIONS		RATINGS	
						
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	TRIPLE REDUCTION	QUIN REDUCTION
40	HB2043A* **Page K-32**	HB2043AS **Page K-33**	NA	NA	**Page K-26**	**NA**
60	HB2063A* **Page K-32**	HB2063AS **Page K-33**	HB2065A* **Page K-36**	HB2065AS **Page K-37**	**Page K-26**	**Page K-26**
70	HB2073A* **Page K-32**	HB2073AS **Page K-33**	HB2075A* **Page K-36**	HB2075AS **Page K-37**	**Page K-27**	**Page K-27**
80	HB2083A* **Page K-32**	HB2083AS **Page K-33**	HB2085A* **Page K-36**	HB2085AS **Page K-37**	**Page K-27**	**Page K-28**
90	HB2093A* **Page K-32**	HB2093AS **Page K-33**	HB2095A **Page K-36**	HB2095AS **Page K-37**	**Page K-28**	**Page K-28**
100	HB2103A* **Page K-32**	HB2103AS **Page K-33**	HB2105A* **Page K-36**	HB2105AS **Page K-37**	**Page K-29**	**Page K-29**

* SHAFT OUTPUT STYLES D (DOUBLE), L (LEFT), R (RIGHT)

QUICK START GUIDE TO SELECTION TABLES

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
	189	78	9.24	30.05	700	1730	3	HB2043	Available
	145	102	12.07	30.35	800	1950	3	HB2043	Available
			51	27.55	770	1950	3	HB2043	Available
			08	23.17	830	1950	3	HB2043	Available
			94	19.06	930	1950	3	HB2043	Available
			.1	16.66	1050	1950	3	HB2043	Available
			37	13.77	1150	1950	3	HB2043	Available
			38	10.9	1250	1950	3	HB2043	Available
	35	417	49.31	8.48	1250	1950	3	HB2043	Available
	31	477	56.41	7.41	1250	1950	3	HB2043	Available
	24	624	73.76	5.67	1250	1950	3	HB2043	Available
	19	778	91.94	4.55	1250	1950	3	HB2043	Available
	16	938	110.88	3.77				2043	Available
								2063	Available
								2043	Available
	13	1172	138.46	6.2	2050	2850	3	HB2063	Available
	11	1317	155.64	5.51	2050	2850	5	HB2065	Available
1/4	9.1	1629	192.47	8.41	3300	3370	5	HB2075	Available
	8.9	1656	195.7	4.38	2050	2850	5	HB2065	Available
	7.5	1979	233.82	3.67	2050	2850	5	HB2065	Available
	7.2	2061						HB2075	Available
	6.1	2409						HB2065	Available
	5.9	2490						HB2075	Available
	5	2984						HB2075	Available
	4.9	3011						HB2065	Available
								HB2065	Available
								HB2075	Available
								HB2065	
			534.85	3.03	3300	3370	5	HB2075	
	2.7	5457	644.79	2.51	3300	33			
	2.6	5607	662.48	1.29	2050	28			
	2.2	6815	805.21	1.07	2050	28			
	2.1	6928	818.53	1.98	3300	33			
	1.8	8352	986.79	1.64	3300	33			
	1.5	9902	1170	2.41	4800	3540	5	HB2085	
	1.5	10173	1202	1.35	3300	3370	5	HB2075	
	1.2								
	1.2								
	1								

1. Determine Input Horsepower, Output Speed and Load Classification (see Section A).

2. Find appropriate Selection by Input HP page (Beginning on Page K-10)

3. Locate Desired Output speed

4. Locate Required Service Factor (For Help refer to page K-5)

5. Check the Output OHL, output thrust, and Output torque ratings to verify they meet your requirements (Output torque listed is the actual torque obtained by the motor HP listed, not the rated torque).

6. Read across to select model number. Refer to Page K-6 for Mounting type and Ordering information.

IN THIS CATALOG:

HP = Horsepower
Output torque is displayed in inch pounds (in. lbs.)
OHL = Over hung load (measured at centerline of output shaft)
Service Factor is based on maximum rated torque of gear drive

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE K-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	189	78	9.24	30.05	700	1730	3	HB2043	Available
	145	102	12.07	30.35	800	1950	3	HB2043	Available
	130	114	13.51	27.55	770	1950	3	HB2043	Available
	102	145	17.08	23.17	830	1950	3	HB2043	Available
	80	186	21.94	19.06	930	1950	3	HB2043	Available
	70	212	25.1	16.66	1050	1950	3	HB2043	Available
	58	257	30.37	13.77	1150	1950	3	HB2043	Available
	46	325	38.38	10.9	1250	1950	3	HB2043	Available
	35	417	49.31	8.48	1250	1950	3	HB2043	Available
	31	477	56.41	7.41	1250	1950	3	HB2043	Available
	24	624	73.76	5.67	1250	1950	3	HB2043	Available
	19	778	91.94	4.55	1250	1950	3	HB2043	Available
	16	938	110.88	3.77	1250	1950	3	HB2043	Available
	15	979	115.64	7.42	2050	2850	3	HB2063	Available
	14	1079	127.45	3.28	1250	1950	3	HB2043	Available
	13	1172	138.46	6.2	2050	2850	3	HB2063	Available
	12	1271	150.16	5.71	2050	2850	5	HB2065	Available
	11.2	1320	155.99	10.38	3300	3370	5	HB2075	Available
	9.2	1608	190	4.51	2050	2850	5	HB2065	Available
	9.1	1620	191.38	8.46	3300	3370	5	HB2075	Available
	7.6	1956	231.14	7.00	3300	3370	5	HB2075	Available
	7.5	1977	233.62	3.67	2050	2850	5	HB2065	Available
	6.2	2406	284.24	3.02	2050	2850	5	HB2065	Available
	6.0	2457	290.33	5.58	3300	3370	5	HB2075	Available
	5.0	2967	350.55	4.62	3300	3370	5	HB2075	Available
	4.9	2999	354.30	2.42	2050	2850	5	HB2065	Available
	4.9	3025	357.41	7.90	4800	3540	5	HB2085	Available
	4.1	3616	427.28	2.01	2050	2850	5	HB2065	Available
	4.1	3639	430.02	3.76	3300	3370	5	HB2075	Available
	3.9	3807	449.80	6.28	4800	3540	5	HB2085	Available
	3.3	4501	531.79	5.31	4800	3540	5	HB2085	Available
	3.3	4474	528.68	1.62	2050	2850	5	HB2065	Available
	3.3	4501	531.87	3.04	3300	3370	5	HB2075	Available
	2.7	5444	643.23	1.33	2050	2850	5	HB2065	Available
	2.7	5522	652.45	2.48	3300	3370	5	HB2075	Available
	2.7	5426	641.10	4.40	4800	3540	5	HB2085	Available
	2.2	6786	801.79	1.07	2050	2850	5	HB2065	Available
	2.2	6721	794.13	3.56	4800	3540	5	HB2085	Available
	2.2	6887	813.78	1.99	3300	3370	5	HB2075	Available
	1.8	8303	981.05	1.65	3300	3370	5	HB2075	Available
	1.8	8355	987.16	2.86	4800	3540	5	HB2085	Available
	1.5	10072	1190	2.37	4800	3540	5	HB2085	Available
	1.4	10285	1215	1.33	3300	3370	5	HB2075	Available
	1.4	10170	1255	3.74	8000	5350	5	HB2095	
	1.2	12476	1474	1.92	4800	3540	5	HB2085	Available
	1.2	12598	1488	1.09	3300	3370	5	HB2075	Available
	1.2	12260	1513	3.10	8000	5350	5	HB2095	
	1.0	14375	1774	2.64	8000	5350	5	HB2095	
	0.9	15810	1868	1.51	4800	3540	5	HB2085	Available
	0.82	17325	2138	2.19	8000	5350	5	HB2095	
	0.78	19060	2252	1.25	4800	3540	5	HB2085	Available
	0.67	21247	2622	1.79	8000	5350	5	HB2095	
	0.65	21854	2697	3.24	13000	6500	5	HB2105	
	0.63	23619	2791	1.01	4800	3540	5	HB2085	Available
	0.53	26903	3320	1.41	8000	5350	5	HB2095	
	0.52	27073	3341	2.62	13000	6500	5	HB2105	
1/3	268	74	6.53	30.02	650	1730	3	HB2043	Available
	239	82	7.31	27.06	675	1730	3	HB2043	Available
	189	104	9.24	22.56	700	1730	3	HB2043	Available
	145	136	12.07	22.78	800	1950	3	HB2043	Available
	130	152	13.51	20.68	770	1950	3	HB2043	Available
	102	193	17.08	17.4	830	1950	3	HB2043	Available
	80	247	21.94	14.31	930	1950	3	HB2043	Available
	70	283	25.10	12.51	1050	1950	3	HB2043	Available
	58	342	30.37	10.34	1150	1950	3	HB2043	Available
	46	433	38.38	8.18	1250	1950	3	HB2043	Available
	35	556	49.31	6.37	1250	1950	3	HB2043	Available
	31	636	56.41	5.57	1250	1950	3	HB2043	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	24	832	73.76	4.26	1250	1950	3	HB2043	Available
	21	961	85.21	7.56	2050	2850	3	HB2063	
	19	1036	91.94	3.42	1250	1950	3	HB2043	Available
	16	1250	110.88	2.83	1250	1950	3	HB2043	Available
	15	1304	115.64	5.57	2050	2850	3	HB2063	Available
	14	1437	127.45	2.46	1250	1950	3	HB2043	Available
	13	1561	138.46	4.65	2050	2850	3	HB2063	Available
	12	1693	150.16	4.29	2050	2850	5	HB2065	Available
	11.2	1759	155.99	7.79	3300	3370	5	HB2075	Available
	9.2	2142	190	3.39	2050	2850	5	HB2065	Available
	9.1	2157	191.38	6.35	3300	3370	5	HB2075	Available
	7.6	2606	231.14	5.26	3300	3370	5	HB2075	Available
	7.5	2634	233.62	2.76	2050	2850	5	HB2065	Available
	6.2	3204	284.24	2.27	2050	2850	5	HB2065	Available
	6.0	3273	290.33	4.19	3300	3370	5	HB2075	Available
	5.0	3952	350.55	3.47	3300	3370	5	HB2075	Available
	4.9	3994	354.30	1.82	2050	2850	5	HB2065	Available
	4.9	3993	357.41	5.99	4800	3540	5	HB2085	Available
	4.1	4817	427.28	1.51	2050	2850	5	HB2065	Available
	4.1	4848	430.02	2.83	3300	3370	5	HB2075	Available
	3.9	5025	449.80	4.76	4800	3540	5	HB2085	Available
	3.3	5941	531.79	4.02	4800	3540	5	HB2085	Available
	3.3	5960	528.68	1.22	2050	2850	5	HB2065	Available
	3.3	5996	531.87	2.28	3300	3370	5	HB2075	Available
	2.7	7251	643.23	1.00	2050	2850	5	HB2065	Available
	2.7	7355	652.45	1.86	3300	3370	5	HB2075	Available
	2.7	7162	641.10	3.34	4800	3540	5	HB2085	Available
	2.2	8872	794.13	2.69	4800	3540	5	HB2085	Available
	2.2	9174	813.78	1.49	3300	3370	5	HB2075	Available
	1.8	11060	981.05	1.24	3300	3370	5	HB2075	Available
	1.8	11128	987.16	2.15	4800	3540	5	HB2085	Available
	1.6	11526	1077.55	3.30	8000	5350	5	HB2095	
	1.5	13416	1190	1.78	4800	3540	5	HB2085	Available
	1.4	13424	1255	2.83	8000	5350	5	HB2095	
	1.4	13700	1215	1.00	3300	3370	5	HB2075	Available
	1.2	16183	1513	2.35	8000	5350	5	HB2095	
	1.2	16618	1474	1.44	4800	3540	5	HB2085	Available
	1.0	18975	1774	2.00	8000	5350	5	HB2095	
	1.0	19168	1792	3.69	13000	6500	5	HB2105	
	0.9	21059	1868	1.13	4800	3540	5	HB2085	Available
	0.82	22869	2138	1.66	8000	5350	5	HB2095	
	0.81	23104	2160	3.06	13000	6500	5	HB2105	
	0.67	28046	2622	1.35	8000	5350	5	HB2095	
	0.65	28848	2697	2.45	13000	6500	5	HB2105	
	0.53	35512	3320	1.07	8000	5350	5	HB2095	
	0.52	35736	3341	1.98	13000	6500	5	HB2105	
1/2	281	105	6.22	24.03	2050	2850	3	HB2063	
	268	111	6.53	19.99	650	1730	3	HB2043	Available
	239	124	7.31	18.02	675	1730	3	HB2043	Available
	189	156	9.24	15.03	700	1730	3	HB2043	Available
	156	190	11.25	21.32	2050	2850	3	HB2063	
	145	204	12.07	15.17	800	1950	3	HB2043	Available
	130	229	13.51	13.77	770	1950	3	HB2043	Available
	102	289	17.08	11.59	830	1950	3	HB2043	Available
	80	371	21.94	9.53	930	1950	3	HB2043	Available
	70	425	25.10	8.33	1050	1950	3	HB2043	Available
	58	514	30.37	6.89	1150	1950	3	HB2043	Available
	46	650	38.38	5.45	1250	1950	3	HB2043	Available
	35	835	49.31	4.24	1250	1950	3	HB2043	Available
	31	955	56.41	3.71	1250	1950	3	HB2043	Available
	25	1185	69.99	6.13	2050	2850	3	HB2063	
	24	1249	73.76	2.84	1250	1950	3	HB2043	Available
	23	1262	74.56	5.75	2050	2850	3	HB2063	Available
	21	1442	85.21	5.03	2050	2850	3	HB2063	Available
	19	1548	91.47	4.69	2050	2850	3	HB2063	
	19	1556	91.94	2.27	1250	1950	3	HB2043	Available
	16	1803	106.51	4.03	2050	2850	3	HB2063	
	16	1877	110.88	1.89	1250	1950	3	HB2043	Available

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/2	15	1957	115.64	3.71	2050	2850	3	HB2063	Available
	14	2136	126.17	3.4	2050	2850	3	HB2063	Available
	14	2157	127.45	1.64	1250	1950	3	HB2043	Available
	13	2344	138.46	3.1	2050	2850	3	HB2063	Available
	12	2542	150.16	2.86	2050	2850	5	HB2065	Available
	11.2	2640	155.99	5.19	3300	3370	5	HB2075	Available
	9.2	3216	190	2.26	2050	2850	5	HB2065	Available
	9.1	3239	191.38	4.23	3300	3370	5	HB2075	Available
	7.6	3912	231.14	3.50	3300	3370	5	HB2075	Available
	7.5	3954	233.62	1.84	2050	2850	5	HB2065	Available
	6.2	4811	284.24	1.51	2050	2850	5	HB2065	Available
	6.0	4914	290.33	2.79	3300	3370	5	HB2075	Available
	5.8	5090	300.73	4.70	4800	3540	5	HB2085	Available
	5.0	5934	350.55	2.31	3300	3370	5	HB2075	Available
	4.9	5997	354.30	1.21	2050	2850	5	HB2065	Available
	4.9	6050	357.41	3.95	4800	3540	5	HB2085	Available
	4.1	7232	427.28	1.00	2050	2850	5	HB2065	Available
	4.1	7279	430.02	1.88	3300	3370	5	HB2075	Available
	3.9	7614	449.80	3.14	4800	3540	5	HB2085	Available
	3.3	9001	531.79	2.66	4800	3540	5	HB2085	Available
	3.3	9003	531.87	1.52	3300	3370	5	HB2075	Available
	2.8	10129	624.98	3.75	8000	5350	5	HB2095	
	2.7	11044	652.45	1.24	3300	3370	5	HB2075	Available
	2.7	10852	641.10	2.20	4800	3540	5	HB2085	Available
	2.2	13442	794.13	1.78	4800	3540	5	HB2085	Available
	2.1	13660	842.88	2.78	8000	5350	5	HB2095	
	1.8	16709	987.16	1.43	4800	3540	5	HB2085	Available
	1.6	17463	1077.55	2.18	8000	5350	5	HB2095	
	1.5	19464	1201	3.64	13000	6500	5	HB2105	
	1.5	20144	1190	1.19	4800	3540	5	HB2085	Available
	1.4	20339	1255	1.87	8000	5350	5	HB2095	
	1.2	24520	1513	1.55	8000	5350	5	HB2095	
	1.2	24569	1516	2.88	13000	6500	5	HB2105	
	0.99	28750	1774	1.32	8000	5350	5	HB2095	
	0.98	29042	1792	2.44	13000	6500	5	HB2105	
	0.82	34649	2138	1.10	8000	5350	5	HB2095	
	0.81	35006	2160	2.02	13000	6500	5	HB2105	
	0.65	43709	2697	1.62	13000	6500	5	HB2105	
	0.52	54146	3341	1.31	13000	6500	5	HB2105	
3/4	281	158	6.22	16.02	2050	2850	3	HB2063	
	268	166	6.53	13.33	650	1730	3	HB2043	Available
	239	186	7.31	12.01	675	1730	3	HB2043	Available
	189	235	9.24	10.02	700	1730	3	HB2043	Available
	156	286	11.25	14.21	2050	2850	3	HB2063	
	145	306	12.07	10.12	800	1950	3	HB2043	Available
	130	343	13.51	9.18	770	1950	3	HB2043	Available
	102	434	17.08	7.72	830	1950	3	HB2043	Available
	80	557	21.94	6.35	930	1950	3	HB2043	Available
	70	637	25.10	5.55	1050	1950	3	HB2043	Available
	58	771	30.37	4.59	1150	1950	3	HB2043	Available
	46	974	38.38	3.63	1250	1950	3	HB2043	Available
	35	1252	49.31	2.83	1250	1950	3	HB2043	Available
	31	1432	56.41	2.47	1250	1950	3	HB2043	Available
	25	1777	69.99	4.09	2050	2850	3	HB2063	
	24	1873	73.76	1.89	1250	1950	3	HB2043	Available
	23	1893	74.56	3.84	2050	2850	3	HB2063	
	21	2163	85.21	3.36	2050	2850	3	HB2063	
	19	2322	91.47	3.13	2050	2850	3	HB2063	
	19	2334	91.94	1.52	1250	1950	3	HB2043	Available
	16	2704	106.51	2.68	2050	2850	3	HB2063	
	16	2815	110.88	1.26	1250	1950	3	HB2043	Available
	15	2936	115.64	2.47	2050	2850	3	HB2063	Available
	14	3203	126.17	2.27	2050	2850	3	HB2063	Available
	14	3236	127.45	1.09	1250	1950	3	HB2043	Available
	13	3405	134.10	4.02	3300	3370	3	HB2073	
	13	3516	138.46	2.07	2050	2850	3	HB2063	Available
	12	3813	150.16	1.90	2050	2850	5	HB2065	Available
	11.2	3961	155.99	3.46	3300	3370	5	HB2075	Available

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE K-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	9.2	4824	190	1.50	2050	2850	5	HB2065	Available
	9.1	4859	191.38	2.82	3300	3370	5	HB2075	Available
	8.6	5154	202.99	4.64	4800	3540	5	HB2085	Available
	7.7	5753	226.57	4.15	4800	3540	5	HB2085	Available
	7.6	5869	231.14	2.33	3300	3370	5	HB2075	Available
	7.5	5932	233.62	1.22	2050	2850	5	HB2065	Available
	6.2	7217	284.24	1.01	2050	2850	5	HB2065	Available
	6.0	7371	290.33	1.86	3300	3370	5	HB2075	Available
	5.8	7636	300.73	3.13	4800	3540	5	HB2085	Available
	5.0	8900	350.55	1.54	3300	3370	5	HB2075	Available
	4.9	9075	357.41	2.63	4800	3540	5	HB2085	Available
	4.1	10918	430.02	1.25	3300	3370	5	HB2075	Available
	3.9	11420	449.80	2.09	4800	3540	5	HB2085	Available
	3.5	12186	501.29	3.12	8000	5350	5	HB2095	
	3.3	13502	531.79	1.77	4800	3540	5	HB2085	Available
	3.3	13504	531.87	1.01	3300	3370	5	HB2075	Available
	2.8	15193	624.98	2.50	8000	5350	5	HB2095	
	2.7	16278	641.10	1.47	4800	3540	5	HB2085	Available
	2.3	18872	776.32	3.75	13000	6500	5	HB2105	
	2.2	20163	794.13	1.19	4800	3540	5	HB2085	Available
	2.1	20490	842.88	1.85	8000	5350	5	HB2095	
	1.8	23724	975.92	2.98	13000	6500	5	HB2105	
	1.6	26195	1077.55	1.45	8000	5350	5	HB2095	
	1.5	29196	1201	2.42	13000	6500	5	HB2105	
	1.2	36853	1516	1.92	13000	6500	5	HB2105	
	0.98	43563	1792	1.63	13000	6500	5	HB2105	
	0.81	52509	2160	1.35	13000	6500	5	HB2105	
1	281	211	6.22	12.02	2050	2850	3	HB2063	
	268	221	6.53	10	650	1730	3	HB2043	Available
	239	247	7.31	9.01	675	1730	3	HB2043	Available
	189	313	9.24	7.51	700	1730	3	HB2043	Available
	156	381	11.25	10.66	2050	2850	3	HB2063	
	145	409	12.07	7.59	800	1950	3	HB2043	Available
	130	457	13.51	6.89	770	1950	3	HB2043	Available
	102	578	17.08	5.79	830	1950	3	HB2043	Available
	80	743	21.94	4.77	930	1950	3	HB2043	Available
	70	850	25.10	4.17	1050	1950	3	HB2043	Available
	58	1028	30.37	3.44	1150	1950	3	HB2043	Available
	46	1299	38.38	2.72	1250	1950	3	HB2043	Available
	39	1517	44.81	4.78	2050	2850	3	HB2063	Available
	35	1669	49.31	2.12	1250	1950	3	HB2043	Available
	31	1910	56.41	1.85	1250	1950	3	HB2043	Available
	30	1983	58.58	3.66	2050	2850	3	HB2063	Available
	25	2369	69.99	3.06	2050	2850	3	HB2063	Available
	24	2497	73.76	1.42	1250	1950	3	HB2043	Available
	23	2524	74.56	2.88	2050	2850	3	HB2063	Available
	21	2885	85.21	2.52	2050	2850	3	HB2063	Available
	19	3097	91.47	2.34	2050	2850	3	HB2063	Available
	19	3112	91.94	1.14	1250	1950	3	HB2043	Available
	16	3606	106.51	2.01	2050	2850	3	HB2063	Available
	16	3665	108.25	3.74	3300	3370	3	HB2073	Available
	15	3915	115.64	1.85	2050	2850	3	HB2063	Available
	14	4271	126.17	1.7	2050	2850	3	HB2063	Available
	13	4540	134.10	3.02	3300	3370	3	HB2073	Available
	13	4687	138.46	1.55	2050	2850	3	HB2063	Available
	12	5083	150.16	1.43	2050	2850	5	HB2065	Available
	11.2	5281	155.99	2.59	3300	3370	5	HB2075	Available
	11	5460	161.29	4.38	4800	3540	5	HB2085	Available
	9.2	6432	190.00	1.13	2050	2850	5	HB2065	Available
	9.1	6479	191.38	2.11	3300	3370	5	HB2075	Available
	8.6	6872	202.99	3.48	4800	3540	5	HB2085	Available
	7.6	7825	231.14	1.75	3300	3370	5	HB2075	Available
	7.7	7670	226.57	3.12	4800	3540	5	HB2085	Available
	6.0	9829	290.33	1.39	3300	3370	5	HB2075	Available
	5.8	10181	300.73	2.35	4800	3540	5	HB2085	Available
	5.0	11867	350.55	1.15	3300	3370	5	HB2075	Available

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ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	4.9	11567	356.87	3.29	8000	5350	5	HB2095	
	4.9	12100	357.41	1.98	4800	3540	5	HB2085	Available
	3.9	14421	444.92	2.64	8000	5350	5	HB2095	
	3.9	15227	449.80	1.57	4800	3540	5	HB2085	Available
	3.5	16248	501.29	2.34	8000	5350	5	HB2095	
	3.3	18003	531.79	1.33	4800	3540	5	HB2085	Available
	2.8	20257	624.98	1.88	8000	5350	5	HB2095	
	2.7	21318	657.70	3.32	13000	6500	5	HB2105	
	2.7	21703	641.10	1.10	4800	3540	5	HB2085	Available
	2.3	25163	776.32	2.81	13000	6500	5	HB2105	
	2.1	27320	842.88	1.39	8000	5350	5	HB2095	
	1.8	31632	975.92	2.24	13000	6500	5	HB2105	
	1.6	34926	1077.55	1.09	8000	5350	5	HB2095	
	1.5	38928	1201	1.82	13000	6500	5	HB2105	
	1.2	49138	1516	1.44	13000	6500	5	HB2105	
	1.0	58084	1792	1.22	13000	6500	5	HB2105	
1-1/2	281	316	6.22	8.01	2050	2850	3	HB2063	
	268	332	6.53	6.66	650	1730	3	HB2043	Available
	239	371	7.31	6.01	675	1730	3	HB2043	Available
	189	469	9.24	5.01	700	1730	3	HB2043	Available
	156	571	11.25	7.11	2050	2850	3	HB2063	
	145	613	12.07	5.06	800	1950	3	HB2043	Available
	130	686	13.51	4.59	770	1950	3	HB2043	Available
	102	867	17.08	3.86	830	1950	3	HB2043	Available
	80	1114	21.94	3.18	930	1950	3	HB2043	Available
	70	1275	25.10	2.78	1050	1950	3	HB2043	Available
	58	1542	30.37	2.3	1150	1950	3	HB2043	Available
	46	1949	38.38	1.82	1250	1950	3	HB2043	Available
	45	1961	38.61	3.65	2050	2850	3	HB2063	Available
	39	2275	44.81	3.19	2050	2850	3	HB2063	Available
	35	2504	49.31	1.41	1250	1950	3	HB2043	Available
	31	2865	56.41	1.24	1250	1950	3	HB2043	Available
	30	2975	58.58	2.44	2050	2850	3	HB2063	Available
	25	3554	69.99	2.04	2050	2850	3	HB2063	Available
	23	3786	74.56	1.92	2050	2850	3	HB2063	Available
	21	4327	85.21	1.68	2050	2850	3	HB2063	Available
	19	4560	89.80	3	3300	3370	3	HB2073	Available
	19	4645	91.47	1.56	2050	2850	3	HB2063	Available
	16	5409	106.51	1.34	2050	2850	3	HB2063	Available
	16	5497	108.25	2.49	3300	3370	3	HB2073	Available
	15	5872	115.64	1.24	2050	2850	3	HB2063	Available
	14	6407	126.17	1.13	2050	2850	3	HB2063	Available
	13	6714	132.22	3.56	4800	3540	3	HB2083	
	13	6810	134.10	2.01	3300	3370	3	HB2073	Available
	13	7031	138.46	1.03	2050	2850	3	HB2063	Available
	11.2	7921	155.99	1.73	3300	3370	5	HB2075	Available
	11	8190	161.29	2.92	4800	3540	5	HB2085	Available
	9.1	9718	191.38	1.41	3300	3370	5	HB2075	Available
	8.6	10308	202.99	2.32	4800	3540	5	HB2085	Available
	7.7	11505	226.57	2.08	4800	3540	5	HB2085	Available
	7.6	11737	231.14	1.17	3300	3370	5	HB2075	Available
	7.2	11846	243.65	3.21	8000	5350	5	HB2095	
	5.8	14599	300.28	2.60	8000	5350	5	HB2095	
	5.8	15271	300.73	1.57	4800	3540	5	HB2085	Available
	4.9	17351	356.87	2.19	8000	5350	5	HB2095	
	4.9	18149	357.41	1.32	4800	3540	5	HB2085	Available
	3.9	21632	444.92	1.76	8000	5350	5	HB2095	
	3.9	22841	449.80	1.05	4800	3540	5	HB2085	Available
	3.8	22205	456.72	3.19	13000	6500	5	HB2105	
	3.5	24372	501.29	1.56	8000	5350	5	HB2095	
	3.2	26390	542.79	2.68	13000	6500	5	HB2105	
	2.8	30386	624.98	1.25	8000	5350	5	HB2095	
	2.7	31977	657.70	2.21	13000	6500	5	HB2105	
	2.3	37744	776.32	1.88	13000	6500	5	HB2105	
	1.8	47449	975.92	1.49	13000	6500	5	HB2105	
	1.5	58392	1201	1.21	13000	6500	5	HB2105	

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
2	281	421	6.22	6.01	2050	2850	3	HB2063	
	268	442	6.53	5	650	1730	3	HB2043	Available
	239	495	7.31	4.51	675	1730	3	HB2043	Available
	189	626	9.24	3.76	700	1730	3	HB2043	Available
	156	762	11.25	5.33	2050	2850	3	HB2063	
	145	817	12.07	3.79	800	1950	3	HB2043	Available
	130	915	13.51	3.44	770	1950	3	HB2043	Available
	102	1156	17.08	2.9	830	1950	3	HB2043	Available
	80	1485	21.94	2.38	930	1950	3	HB2043	Available
	70	1699	25.10	2.08	1050	1950	3	HB2043	Available
	58	2056	30.37	1.72	1150	1950	3	HB2043	Available
	57	2066	30.51	3.39	2050	2850	3	HB2063	
	46	2599	38.38	1.36	1250	1950	3	HB2043	Available
	45	2614	38.61	2.74	2050	2850	3	HB2063	Available
	39	3034	44.81	2.39	2050	2850	3	HB2063	Available
	35	3339	49.31	1.06	1250	1950	3	HB2043	Available
	32	3661	54.07	3.74	3300	3370	3	HB2073	
	30	3966	58.58	1.83	2050	2850	3	HB2063	Available
	25	4739	69.99	1.53	2050	2850	3	HB2063	Available
	23	5048	74.56	1.44	2050	2850	3	HB2063	Available
	23	5142	75.95	2.66	3300	3370	3	HB2073	Available
	21	5769	85.21	1.26	2050	2850	3	HB2063	Available
	19	6080	89.80	2.25	3300	3370	3	HB2073	Available
	19	6193	91.47	1.17	2050	2850	3	HB2063	Available
	16	7211	106.51	1.01	2050	2850	3	HB2063	Available
	16	7329	108.25	1.87	3300	3370	3	HB2073	Available
	13	8952	132.22	2.67	4800	3540	3	HB2083	
	13	9079	134.10	1.51	3300	3370	3	HB2073	Available
	11.2	10562	155.99	1.30	3300	3370	5	HB2075	Available
	11	10324	159.26	3.68	8000	5350	5	HB2095	
	11	10920	161.29	2.19	4800	3540	5	HB2085	Available
	9.1	12958	191.38	1.06	3300	3370	5	HB2075	Available
	8.8	12872	198.56	2.95	8000	5350	5	HB2095	
	8.6	13744	202.99	1.74	4800	3540	5	HB2085	Available
	7.7	15340	226.57	1.56	4800	3540	5	HB2085	Available
	7.2	15795	243.65	2.41	8000	5350	5	HB2095	
	5.8	19466	300.28	1.95	8000	5350	5	HB2095	
	5.8	20361	300.73	1.17	4800	3540	5	HB2085	Available
	5.6	20144	310.74	3.51	13000	6500	5	HB2105	
	4.9	23134	356.87	1.64	8000	5350	5	HB2095	
	4.9	24199	357.41	1.00	4800	3540	5	HB2085	Available
	4.7	23940	369.30	2.96	13000	6500	5	HB2105	
	3.9	28842	444.92	1.32	8000	5350	5	HB2095	
	3.8	29607	456.72	2.39	13000	6500	5	HB2105	
	3.5	32496	501.29	1.17	8000	5350	5	HB2095	
	3.2	35187	542.79	2.01	13000	6500	5	HB2105	
	2.7	42636	657.70	1.66	13000	6500	5	HB2105	
	2.3	50325	776.32	1.41	13000	6500	5	HB2105	
	1.8	63265	975.92	1.12	13000	6500	5	HB2105	
3	281	632	6.22	4.01	2050	2850	3	HB2063	Available
	268	663	6.53	3.33	650	1730	3	HB2043	Available
	239	742	7.31	3	675	1730	3	HB2043	Available
	189	938	9.24	2.5	700	1730	3	HB2043	Available
	156	1143	11.25	3.55	2050	2850	3	HB2063	Available
	145	1226	12.07	2.53	800	1950	3	HB2043	Available
	130	1372	13.51	2.3	770	1950	3	HB2043	Available
	103	1733	17.06	3.3	2050	2850	3	HB2063	Available
	102	1735	17.08	1.93	830	1950	3	HB2043	Available
	83	2144	21.11	4.63	3300	3370	3	HB2073	Available
	80	2228	21.94	1.59	930	1950	3	HB2043	Available
	70	2549	25.10	1.39	1050	1950	3	HB2043	Available
	68	2629	25.89	2.47	2050	2850	3	HB2063	Available
	58	3084	30.37	1.15	1150	1950	3	HB2043	Available
	57	3099	30.51	2.26	2050	2850	3	HB2063	Available
	55	3240	31.9	3.7	3300	3370	3	HB2073	Available
	51	3496	34.42	3.46	3300	3370	3	HB2073	Available

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THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	45	3921	38.61	1.82	2050	2850	3	HB2063	Available
	45	3928	38.68	3.11	3300	3370	3	HB2073	Available
	42	4255	41.90	3.22	3300	3370	3	HB2073	Available
	39	4551	44.81	1.59	2050	2850	3	HB2063	Available
	37	4819	47.45	2.84	3300	3370	3	HB2073	Available
	32	5491	54.07	2.49	3300	3370	3	HB2073	Available
	30	5949	58.58	1.22	2050	2850	3	HB2063	Available
	25	7108	69.99	1.02	2050	2850	3	HB2063	Available
	23	7606	74.89	3.14	4800	3540	3	HB2083	Available
	23	7714	75.95	1.78	3300	3370	3	HB2073	Available
	20	8992	88.54	2.66	4800	3540	3	HB2083	Available
	19	9120	89.80	1.5	3300	3370	3	HB2073	Available
	16	10841	106.74	2.2	4800	3540	3	HB2083	Available
	16	10994	108.25	1.25	3300	3370	3	HB2073	Available
	13	13428	132.22	1.78	4800	3540	3	HB2083	Available
	13	13619	134.10	1.01	3300	3370	3	HB2073	Available
	11	15486	159.26	2.45	8000	5350	5	HB2095	Available
	11	16381	161.29	1.46	4800	3540	5	HB2085	Available
	8.8	19308	198.56	1.97	8000	5350	5	HB2095	Available
	8.6	20616	202.99	1.16	4800	3540	5	HB2085	Available
	7.7	23011	226.57	1.04	4800	3540	5	HB2085	Available
	7.2	23555	242.24	3.01	13000	6500	5	HB2105	Available
	7.2	23692	243.65	1.60	8000	5350	5	HB2095	Available
	5.8	29199	300.28	1.30	8000	5350	5	HB2095	Available
	5.6	30216	310.74	2.34	13000	6500	5	HB2105	Available
	4.9	34702	356.87	1.10	8000	5350	5	HB2095	Available
	4.7	35910	369.30	1.97	13000	6500	5	HB2105	Available
	3.8	44411	456.72	1.59	13000	6500	5	HB2105	Available
	3.2	52780	542.79	1.34	13000	6500	5	HB2105	Available
	2.7	63954	657.70	1.11	13000	6500	5	HB2105	Available
5	281	1053	6.22	2.4	2050	2850	3	HB2063	Available
	268	1105	6.53	2	650	1730	3	HB2043	Available
	241	1231	7.27	3.74	2830	3370	3	HB2073	
	239	1237	7.31	1.8	675	1730	3	HB2043	Available
	189	1564	9.24	1.5	700	1730	3	HB2043	Available
	185	1598	9.44	2.03	2050	2850	3	HB2063	Available
	156	1904	11.25	2.13	2050	2850	3	HB2063	Available
	154	1925	11.37	3.48	3100	3370	3	HB2073	
	145	2043	12.07	1.52	800	1950	3	HB2043	Available
	130	2282	13.48	2.33	2050	2850	3	HB2063	Available
	130	2287	13.51	1.38	770	1950	3	HB2043	Available
	103	2888	17.06	1.98	2050	2850	3	HB2063	Available
	102	2891	17.08	1.16	830	1950	3	HB2043	Available
	102	2913	17.21	3.25	3300	3370	3	HB2073	Available
	83	3573	21.11	2.78	3300	3370	3	HB2073	Available
	73	4073	24.06	2.76	3300	3370	3	HB2073	Available
	68	4382	25.89	1.48	2050	2850	3	HB2063	Available
	57	5164	30.51	1.36	2050	2850	3	HB2063	Available
	55	5400	31.90	2.22	3300	3370	3	HB2073	Available
	51	5826	34.42	2.08	3300	3370	3	HB2073	Available
	45	6535	38.61	1.09	2050	2850	3	HB2063	Available
	45	6547	38.68	1.86	3300	3370	3	HB2073	Available
	44	6718	39.69	3.35	4700	3540	3	HB2083	
	42	7092	41.9	1.93	3300	3370	3	HB2073	Available
	39	7593	44.86	3.09	4800	3540	3	HB2083	
	37	8032	47.45	1.71	3300	3370	3	HB2073	Available
	33	9024	53.31	2.65	4800	3540	3	HB2083	Available
	32	9152	54.07	1.5	3300	3370	3	HB2073	Available
	23	12676	74.89	1.89	4800	3540	3	HB2083	Available
	23	12856	75.95	1.07	3300	3370	3	HB2073	Available
	23	12968	76.61	2.93	7550	5350	3	HB2093	
	21	14230	84.07	2.67	8000	5350	3	HB2093	
	20	14987	88.54	1.59	4800	3540	3	HB2083	Available
	17	17446	103.07	2.18	8000	5350	3	HB2093	
	16	18068	106.74	1.32	4800	3540	3	HB2083	Available

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE K-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
5	15	20332	120.12	3.48	12500	6250	3	HB2103	
	15	19537	115.42	1.95	8000	5350	3	HB2093	
	13	23310	137.71	3.04	13000	6500	3	HB2103	
	13	22093	130.52	1.72	8000	5350	3	HB2093	
	13	22381	132.22	1.07	4800	3540	3	HB2083	Available
	11	25810	159.26	1.47	8000	5350	5	HB2095	Available
	11	26710	164.81	2.65	13000	6500	5	HB2105	Available
	9.3	30593	188.77	2.31	13000	6500	5	HB2105	Available
	8.8	32179	198.56	1.18	8000	5350	5	HB2095	Available
	7.2	39258	242.24	1.80	13000	6500	5	HB2105	Available
	5.6	50360	310.74	1.41	13000	6500	5	HB2105	Available
	4.7	59850	369.30	1.18	13000	6500	5	HB2105	Available
7-1/2	281	1579	6.22	1.6	2050	2850	3	HB2063	
	269	1653	6.51	2.63	2750	3370	3	HB2073	
	268	1658	6.53	1.33	650	1730	3	HB2043	
	241	1846	7.27	2.49	2830	3370	3	HB2073	
	239	1856	7.31	1.2	675	1730	3	HB2043	
	235	1894	7.46	1.52	2050	2850	3	HB2063	
	215	2064	8.13	2.29	2950	3370	3	HB2073	
	200	2227	8.77	2.23	2970	3370	3	HB2073	
	189	2346	9.24	1	700	1730	3	HB2043	
	185	2397	9.44	1.36	2050	2850	3	HB2063	
	177	2503	9.86	2.09	3070	3370	3	HB2073	
	156	2856	11.25	1.42	2050	2850	3	HB2063	
	154	2887	11.37	2.32	3100	3370	3	HB2073	
	145	3065	12.07	1.01	800	1950	3	HB2043	
	138	3225	12.7	2.18	3200	3370	3	HB2073	
	130	3423	13.48	1.55	2050	2850	3	HB2063	
	123	3605	14.2	2.4	3100	3370	3	HB2073	
	114	3890	15.32	2.32	3200	3370	3	HB2073	
	103	4332	17.06	1.32	2050	2850	3	HB2063	
	102	4370	17.21	2.17	3300	3370	3	HB2073	
	94	4735	18.65	2.03	3300	3370	3	HB2073	
	88	5027	19.8	1.23	2050	2850	3	HB2063	
	83	5360	21.11	1.85	3300	3370	3	HB2073	
	73	6109	24.06	2.95	4000	3540	3	HB2083	
	73	6109	24.06	1.84	3300	3370	3	HB2073	
	56	7988	31.46	2.57	4500	3540	3	HB2083	
	55	8099	31.9	1.48	3300	3370	3	HB2073	
	52	8617	33.94	2.44	4500	3540	3	HB2083	
	51	8739	34.42	1.38	3300	3370	3	HB2073	
	46	9684	38.14	2.27	4600	3540	3	HB2083	
	45	9821	38.68	1.24	3300	3370	3	HB2073	
	44	10077	39.69	2.23	4700	3540	3	HB2083	
	42	10638	41.9	1.29	3300	3370	3	HB2073	
	39	11390	44.86	2.06	4800	3540	3	HB2083	
	37	12048	47.45	1.14	3300	3370	3	HB2073	
	34	12967	51.07	2.93	6250	5350	3	HB2093	
	33	13535	53.31	1.77	4800	3540	3	HB2083	
	32	13728	54.07	1	3300	3370	3	HB2073	
	29	15102	59.48	2.52	6750	5350	3	HB2093	
	23	19015	74.89	1.26	4800	3540	3	HB2083	
	23	19451	76.61	1.95	7550	5350	3	HB2093	
	21	21566	84.94	3.28	10900	5450	3	HB2103	
	21	21345	84.07	1.78	8000	5350	3	HB2093	
	20	22480	88.54	1.06	4800	3540	3	HB2083	
	19	24001	94.53	2.95	11300	5650	3	HB2103	
	17	26926	106.05	2.63	11900	5950	3	HB2103	
	17	26170	103.07	1.45	8000	5350	3	HB2093	
	15	30499	120.12	2.32	12500	6250	3	HB2103	
	15	29305	115.42	1.3	8000	5350	3	HB2093	
	13	34965	137.71	2.02	13000	6500	3	HB2103	
	13	33139	130.52	1.15	8000	5350	3	HB2093	
	11	40065	164.81	1.77	13000	6500	5	HB2105	
	9.3	45889	188.77	1.54	13000	6500	5	HB2105	
	7.2	58888	242.24	1.20	13000	6500	5	HB2105	

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE K-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*
10	281	2106	6.22	1.2	2050	2850	3	HB2063
	269	2204	6.51	1.97	2750	3370	3	HB2073
	268	2211	6.53	1	650	1730	3	HB2043
	265	2234	6.6	3.36	3100	3540	3	HB2083
	241	2461	7.27	1.87	2830	3370	3	HB2073
	237	2495	7.37	3.21	3200	3540	3	HB2083
	235	2525	7.46	1.14	2050	2850	3	HB2063
	230	2576	7.61	5.28	3750	5350	3	HB2093
	215	2752	8.13	1.71	2950	3370	3	HB2073
	212	2790	8.24	2.87	3200	3540	3	HB2083
	200	2969	8.77	1.67	2970	3370	3	HB2073
	197	3010	8.89	2.72	3300	3540	3	HB2083
	185	3196	9.44	1.02	2050	2850	3	HB2063
	185	3209	9.48	5.23	3900	5350	3	HB2093
	177	3338	9.86	1.57	3070	3370	3	HB2073
	175	3382	9.99	2.66	3400	3540	3	HB2083
	162	3663	10.82	5.32	4000	5350	3	HB2093
	156	3809	11.25	1.07	2050	2850	3	HB2063
	154	3849	11.37	2.6	3500	3540	3	HB2083
	154	3849	11.37	1.74	3100	3370	3	HB2073
	140	4245	12.54	5.3	4250	5350	3	HB2093
	138	4299	12.7	3.3	3400	3540	3	HB2083
	138	4299	12.7	1.64	3200	3370	3	HB2073
	130	4563	13.48	1.17	2050	2850	3	HB2063
	123	4807	14.2	3.12	3500	3540	3	HB2083
	123	4807	14.2	1.8	3100	3370	3	HB2073
	114	5186	15.32	2.99	3600	3540	3	HB2083
	114	5186	15.32	1.74	3200	3370	3	HB2073
	112	5291	15.63	4.99	4500	5350	3	HB2093
	102	5826	17.21	2.75	3700	3540	3	HB2083
	102	5826	17.21	1.63	3300	3370	3	HB2073
	98	6036	17.83	4.54	4750	5350	3	HB2093
	98	6063	17.91	2.67	3800	3540	3	HB2083
	94	6314	18.65	1.52	3300	3370	3	HB2073
	86	6852	20.24	2.48	3900	3540	3	HB2083
	83	7146	21.11	1.39	3300	3370	3	HB2073
	77	7715	22.79	3.67	5000	5350	3	HB2093
	73	8145	24.06	2.21	4000	3540	3	HB2083
	73	8145	24.06	1.38	3300	3370	3	HB2073
	66	8988	26.55	3.34	5250	5350	3	HB2093
	56	10650	31.46	1.92	4500	3540	3	HB2083
	55	10799	31.9	1.11	3300	3370	3	HB2073
	52	11490	33.94	1.83	4500	3540	3	HB2083
	51	11652	34.42	1.04	3300	3370	3	HB2073
	50	11855	35.02	2.7	5750	5350	3	HB2093
	46	12912	38.14	1.7	4600	3540	3	HB2083
	44	13436	39.69	1.67	4700	3540	3	HB2083
	44	13524	39.95	2.81	5950	5350	3	HB2093
	39	15187	44.86	1.55	4800	3540	3	HB2083
	34	17289	51.07	2.2	6250	5350	3	HB2093
	33	18047	53.31	1.32	4800	3540	3	HB2083
	29	20688	61.11	3.42	9500	4750	3	HB2103
	29	20136	59.48	1.89	6750	5350	3	HB2093
	23	26006	76.82	2.72	10200	5100	3	HB2103
	23	25935	76.61	1.47	7550	5350	3	HB2093
	21	28755	84.94	2.46	10900	5450	3	HB2103
	21	28461	84.07	1.34	8000	5350	3	HB2093
	19	32002	94.53	2.21	11300	5650	3	HB2103
	17	35902	106.05	1.97	11900	5950	3	HB2103
	17	34893	103.07	1.09	8000	5350	3	HB2093
	15	40665	120.12	1.74	12500	6250	3	HB2103
	13	46620	137.71	1.52	13000	6500	3	HB2103
	11	53420	164.81	1.33	13000	6500	5	HB2105
	9.3	61186	188.77	1.16	13000	6500	5	HB2105

* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*
15	269	3306	6.51	1.32	2750	3370	3	HB2073
	265	3351	6.6	2.24	3100	3540	3	HB2083
	241	3692	7.27	1.25	2830	3370	3	HB2073
	237	3742	7.37	2.14	3200	3540	3	HB2083
	230	3864	7.61	3.52	3750	5350	3	HB2093
	215	4128	8.13	1.14	2950	3370	3	HB2073
	212	4184	8.24	1.91	3200	3540	3	HB2083
	200	4453	8.77	1.12	2970	3370	3	HB2073
	197	4514	8.89	1.82	3300	3540	3	HB2083
	185	4814	9.48	3.49	3900	5350	3	HB2093
	177	5007	9.86	1.04	3070	3370	3	HB2073
	175	5073	9.99	1.77	3400	3540	3	HB2083
	162	5494	10.82	3.55	4000	5350	3	HB2093
	154	5774	11.37	1.73	3500	3540	3	HB2083
	154	5774	11.37	1.16	3100	3370	3	HB2073
	140	6368	12.54	3.53	4250	5350	3	HB2093
	138	6449	12.7	2.2	3400	3540	3	HB2083
	138	6449	12.7	1.09	3200	3370	3	HB2073
	123	7211	14.2	2.08	3500	3540	3	HB2083
	123	7211	14.2	1.2	3100	3370	3	HB2073
	114	7780	15.32	1.99	3600	3540	3	HB2083
	114	7780	15.32	1.16	3200	3370	3	HB2073
	112	7937	15.63	3.33	4500	5350	3	HB2093
	102	8739	17.21	1.83	3700	3540	3	HB2083
	102	8739	17.21	1.08	3300	3370	3	HB2073
	98	9054	17.83	3.03	4750	5350	3	HB2093
	98	9095	17.91	1.78	3800	3540	3	HB2083
	94	9470	18.65	1.02	3300	3370	3	HB2073
	86	10278	20.24	1.65	3900	3540	3	HB2083
	77	11573	22.79	2.45	5000	5350	3	HB2093
	73	12218	24.06	1.47	4000	3540	3	HB2083
	66	13482	26.55	2.23	5250	5350	3	HB2093
	56	15975	31.46	1.28	4500	3540	3	HB2083
	52	17235	33.94	1.22	4500	3540	3	HB2083
	50	17783	35.02	1.8	5750	5350	3	HB2093
	46	19368	38.14	1.14	4600	3540	3	HB2083
	44	20155	39.69	1.12	4700	3540	3	HB2083
	44	20287	39.95	1.87	5950	5350	3	HB2093
	41	21698	42.73	3.00	8200	4100	3	HB2103
	39	22780	44.86	1.03	4800	3540	3	HB2083
	34	26289	51.77	2.64	8600	4300	3	HB2103
	34	25933	51.07	1.47	6250	5350	3	HB2093
	29	31032	61.11	2.28	9500	4750	3	HB2103
	29	30204	59.48	1.26	6750	5350	3	HB2093
	23	39009	76.82	1.81	10200	5100	3	HB2103
	21	43133	84.94	1.64	10900	5450	3	HB2103
	19	48002	94.53	1.47	11300	5650	3	HB2103
	17	53852	106.05	1.31	11900	5950	3	HB2103
	15	60997	120.12	1.16	12500	6250	3	HB2103
	13	69929	137.71	1.01	13000	6500	3	HB2103
20	265	4469	6.6	1.68	3100	3540	3	HB2083
	237	4990	7.37	1.6	3200	3540	3	HB2083
	230	5152	7.61	2.64	3750	5350	3	HB2093
	212	5579	8.24	1.43	3200	3540	3	HB2083
	197	6019	8.89	1.36	3300	3540	3	HB2083
	185	6419	9.48	2.62	3900	5350	3	HB2093
	175	6764	9.99	1.33	3400	3540	3	HB2083
	162	7326	10.82	2.66	4000	5350	3	HB2093
	154	7698	11.37	1.3	3500	3540	3	HB2083
	140	8490	12.54	2.65	4250	5350	3	HB2093
	138	8599	12.7	1.65	3400	3540	3	HB2083
	123	9614	14.2	1.56	3500	3540	3	HB2083
	114	10373	15.32	1.49	3600	3540	3	HB2083
	112	10583	15.63	2.49	4500	5350	3	HB2093
	102	11652	17.21	1.37	3700	3540	3	HB2083
	98	12072	17.83	2.27	4750	5350	3	HB2093
	98	12126	17.91	1.34	3800	3540	3	HB2083

* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*
20	86	13704	20.24	1.24	3900	3540	3	HB2083
	77	15430	22.79	1.83	5000	5350	3	HB2093
	73	16290	24.06	1.1	4000	3540	3	HB2083
	66	17976	26.55	1.67	5250	5350	3	HB2093
	64	18457	27.26	3.45	7400	3700	3	HB2103
	60	19682	29.07	3.24	7700	3850	3	HB2103
	53	22546	33.30	2.83	8100	4050	3	HB2103
	50	23711	35.02	1.35	5750	5350	3	HB2093
	44	27049	39.95	1.4	5950	5350	3	HB2093
	41	28931	42.73	2.25	8200	4100	3	HB2103
	34	35052	51.77	1.98	8600	4300	3	HB2103
	34	34578	51.07	1.1	6250	5350	3	HB2093
	29	41376	61.11	1.71	9500	4750	3	HB2103
	23	52012	76.82	1.36	10200	5100	3	HB2103
	21	57510	84.94	1.23	10900	5450	3	HB2103
	19	64003	94.53	1.11	11300	5650	3	HB2103
25	265	5586	6.6	1.34	3100	3540	3	HB2083
	237	6237	7.37	1.28	3200	3540	3	HB2083
	230	6441	7.61	2.11	3750	5350	3	HB2093
	212	6974	8.24	1.15	3200	3540	3	HB2083
	197	7524	8.89	1.09	3300	3540	3	HB2083
	185	8023	9.48	2.09	3900	5350	3	HB2093
	175	8455	9.99	1.06	3400	3540	3	HB2083
	162	9157	10.82	2.13	4000	5350	3	HB2093
	154	9623	11.37	1.04	3500	3540	3	HB2083
	140	10613	12.54	2.12	4250	5350	3	HB2093
	138	10748	12.7	1.32	3400	3540	3	HB2083
	135	10977	12.97	3.47	6000	3000	3	HB2103
	123	12018	14.2	1.25	3500	3540	3	HB2083
	118	12577	14.86	4.62	6850	3425	3	HB2103
	114	12966	15.32	1.2	3600	3540	3	HB2083
	112	13228	15.63	2	4500	5350	3	HB2093
	102	14565	17.21	1.1	3700	3540	3	HB2083
	98	15090	17.83	1.82	4750	5350	3	HB2093
	98	15158	17.91	1.07	3800	3540	3	HB2083
	92	16131	19.06	3.89	6350	3175	3	HB2103
	77	19288	22.79	1.47	5000	5350	3	HB2093
	76	19550	23.10	3.26	6900	3450	3	HB2103
	66	22470	26.55	1.34	5250	5350	3	HB2093
	64	23071	27.26	2.76	7400	3700	3	HB2103
	60	24603	29.07	2.59	7700	3850	3	HB2103
	53	28183	33.30	2.26	8100	4050	3	HB2103
	50	29639	35.02	1.08	5750	5350	3	HB2093
	44	33811	39.95	1.12	5950	5350	3	HB2093
	41	36164	42.73	1.80	8200	4100	3	HB2103
	34	43815	51.77	1.59	8600	4300	3	HB2103
	29	51720	61.11	1.37	9500	4750	3	HB2103
	23	65016	76.82	1.09	10200	5100	3	HB2103
30	265	6703	6.6	1.12	3100	3540	3	HB2083
	237	7485	7.37	1.07	3200	3540	3	HB2083
	230	7729	7.61	1.76	3750	5350	3	HB2093
	185	9628	9.48	1.74	3900	5350	3	HB2093
	162	10989	10.82	1.77	4000	5350	3	HB2093
	154	11537	11.36	3.26	5750	2875	3	HB2103
	140	12736	12.54	1.77	4250	5350	3	HB2093
	138	12898	12.7	1.1	3400	3540	3	HB2083
	135	13172	12.97	2.89	6000	3000	3	HB2103
	123	14422	14.2	1.04	3500	3540	3	HB2083
	118	15092	14.86	3.85	6850	3425	3	HB2103
	114	15559	15.32	1	3600	3540	3	HB2083
	112	15874	15.63	1.66	4500	5350	3	HB2093
	98	18108	17.83	1.51	4750	5350	3	HB2093
	92	19357	19.06	3.24	6350	3175	3	HB2103
	77	23146	22.79	1.22	5000	5350	3	HB2093
	76	23460	23.10	2.72	6900	3450	3	HB2103
	66	26964	26.55	1.11	5250	5350	3	HB2093
	64	27685	27.26	2.30	7400	3700	3	HB2103
	60	29524	29.07	2.16	7700	3850	3	HB2103

* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

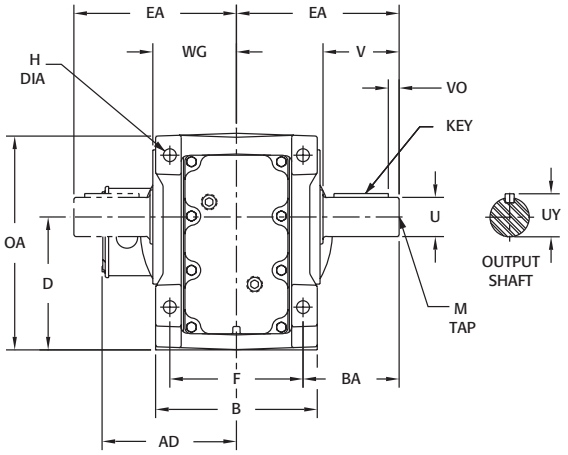
SELECTION BY INPUT H.P. @ 1750 RPM

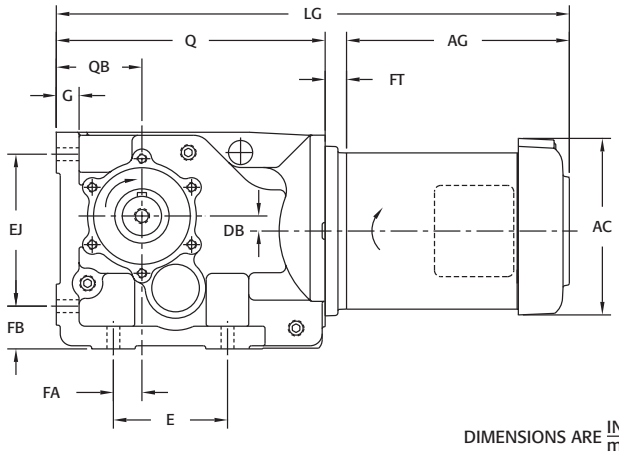
HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	OUTPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*
30	53	33820	33.30	1.88	8100	4050	3	HB2103
	41	43397	42.73	1.50	8200	4100	3	HB2103
	34	52578	51.77	1.32	8600	4300	3	HB2103
	29	62063	61.11	1.14	9500	4750	3	HB2103
40	245	9655	7.13	3.26	5550	2775	3	HB2103
	230	10305	7.61	1.32	3750	5350	3	HB2093
	215	11023	8.14	3.08	5600	2800	3	HB2103
	188	12634	9.33	2.89	5650	2825	3	HB2103
	185	12837	9.48	1.31	3900	5350	3	HB2093
	162	14652	10.82	1.33	4000	5350	3	HB2093
	154	15383	11.36	2.44	5750	2875	3	HB2103
	140	16981	12.54	1.33	4250	5350	3	HB2093
	135	17563	12.97	2.17	6000	3000	3	HB2103
	118	20122	14.86	2.89	6850	3425	3	HB2103
	112	21165	15.63	1.25	4500	5350	3	HB2093
	98	24144	17.83	1.13	4750	5350	3	HB2093
	92	25810	19.06	2.43	6350	3175	3	HB2103
	76	31281	23.10	2.04	6900	3450	3	HB2103
	64	36914	27.26	1.73	7400	3700	3	HB2103
	60	39365	29.07	1.62	7700	3850	3	HB2103
	53	45093	33.30	1.41	8100	4050	3	HB2103
	41	57862	42.73	1.13	8200	4100	3	HB2103
50	245	12069	7.13	2.61	5550	2775	3	HB2103
	230	12881	7.61	1.06	3750	5350	3	HB2093
	215	13778	8.14	2.47	5600	2800	3	HB2103
	188	15793	9.33	2.31	5650	2825	3	HB2103
	185	16047	9.48	1.05	3900	5350	3	HB2093
	162	18315	10.82	1.06	4000	5350	3	HB2093
	154	19229	11.36	1.96	5750	2875	3	HB2103
	140	21226	12.54	1.06	4250	5350	3	HB2093
	135	21954	12.97	1.74	6000	3000	3	HB2103
	118	25153	14.86	2.31	6850	3425	3	HB2103
	112	26456	15.63	1.00	4500	5350	3	HB2093
	92	32262	19.06	1.94	6350	3175	3	HB2103
	76	39101	23.10	1.63	6900	3450	3	HB2103
	64	46142	27.26	1.38	7400	3700	3	HB2103
	60	49206	29.07	1.29	7700	3850	3	HB2103
	53	56366	33.30	1.13	8100	4050	3	HB2103

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INTEGRAL TRIPLE REDUCTION





DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043I*	5.71	2.95	4.41 +0 -.02	0.47	5.12	5.31	5.12	4.72	1.38	1.46	0.71	0.43
	145	75	112 +0 -.5	12.0	130	135	130	120	35	37	18	11.0
HB2063I*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2073I*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2083I*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22

GEARCASE

MODEL	OA	Q	QB	WG
HB2043I*	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063I*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073I*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083I*	13.54	16.61	5.20	4.57
	344	422	132	116

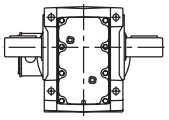
OUTPUT SHAFT

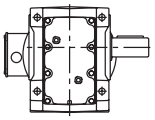
U	UY	V	VO	KEY	M
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-

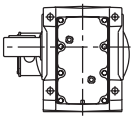
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HB2043I*	0.25	6.38	4.58	6.99	0.55	17.36
	0.33	6.38	4.58	7.24	0.55	17.61
	0.50	6.38	4.58	7.74	0.55	18.11
	0.75	6.38	4.58	8.24	0.55	18.61
	1.00	7.68	5.56	9.22	0.73	19.77
	1.50	7.68	5.56	9.22	0.73	19.77
	2.00	7.68	5.56	10.72	0.73	21.27
	3.00	9.78	7.19	10.07	1.78	21.67
	5.00	9.78	7.19	11.57	1.78	23.17
HB2063I*	0.25	6.38	4.58	6.99	0.71	18.83
	0.33	6.38	4.58	7.24	0.71	19.08
	0.50	6.38	4.58	7.74	0.71	19.58
	0.75	6.38	4.58	8.24	0.71	20.08
	1.00	7.68	5.56	9.22	0.88	21.23
	1.50	7.68	5.56	9.22	0.88	21.23
	2.00	7.68	5.56	10.72	0.88	22.73
	3.00	9.78	7.19	10.07	1.94	23.14
	5.00	9.78	7.19	11.57	1.94	24.64
HB2073I*	1.00	7.68	5.56	9.22	0.57	23.00
	1.50	7.68	5.56	9.22	0.57	23.00
	2.00	7.68	5.56	10.72	0.57	24.50
	3.00	9.78	7.19	10.07	1.63	24.90
	5.00	9.78	7.19	11.57	1.63	26.40
HB2083I*	3.00	9.78	7.19	10.07	1.47	28.15
	5.00	9.78	7.19	11.57	1.47	29.65

*OUTPUT STYLES


D: Double Ext.


L: Left Ext.

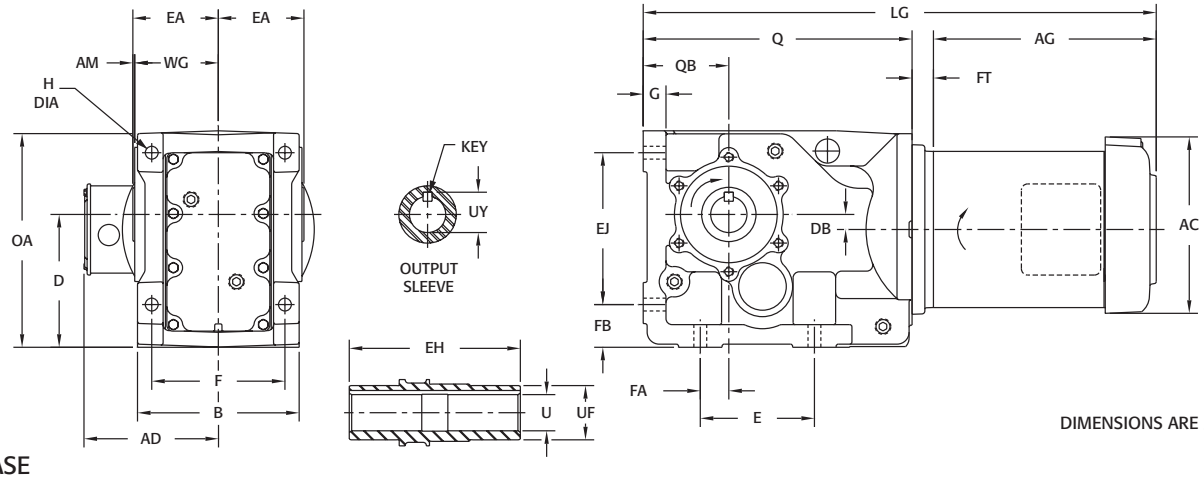

R: Right Ext.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INTEGRAL TRIPLE REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043IS	0.10	5.71	4.41 +0 -.02	0.47	5.12	2.95	5.12	4.72	1.38	1.46	0.71	0.43
	2.5	145	112 +0 -.5	12.0	130	75	130	120	35	37	18	11.0
HB2063IS	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2073IS	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2083IS	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22

GEARCASE

MODEL	OA	Q	QB	WG
HB2043IS	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063IS	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073IS	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083IS	13.54	16.61	5.20	4.57
	344	422	132	116

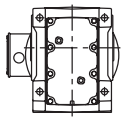
OUTPUT SLEEVE

EH	U	UF	UY	KEY
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500 +.0025 -0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HB2043IS	0.25	6.38	4.58	6.99	0.55	17.36
	0.33	6.38	4.58	7.24	0.55	17.61
	0.50	6.38	4.58	7.74	0.55	18.11
	0.75	6.38	4.58	8.24	0.55	18.61
	1.00	7.68	5.56	9.22	0.73	19.77
	1.50	7.68	5.56	9.22	0.73	19.77
	2.00	7.68	5.56	10.72	0.73	21.27
	3.00	9.78	7.19	10.07	1.78	21.67
	5.00	9.78	7.19	11.57	1.78	23.17
HB2063IS	0.25	6.38	4.58	6.99	0.71	18.83
	0.33	6.38	4.58	7.24	0.71	19.08
	0.50	6.38	4.58	7.74	0.71	19.58
	0.75	6.38	4.58	8.24	0.71	20.08
	1.00	7.68	5.56	9.22	0.88	21.23
	1.50	7.68	5.56	9.22	0.88	21.23
	2.00	7.68	5.56	10.72	0.88	22.73
	3.00	9.78	7.19	10.07	1.94	23.14
	5.00	9.78	7.19	11.57	1.94	24.64
HB2073IS	1.00	7.68	5.56	9.22	0.57	23.00
	1.50	7.68	5.56	9.22	0.57	23.00
	2.00	7.68	5.56	10.72	0.57	24.50
	3.00	9.78	7.19	10.07	1.63	24.90
	5.00	9.78	7.19	11.57	1.63	26.40
HB2083IS	3.00	9.78	7.19	10.07	1.47	28.15
	5.00	9.78	7.19	11.57	1.47	29.65

OUTPUT STYLE



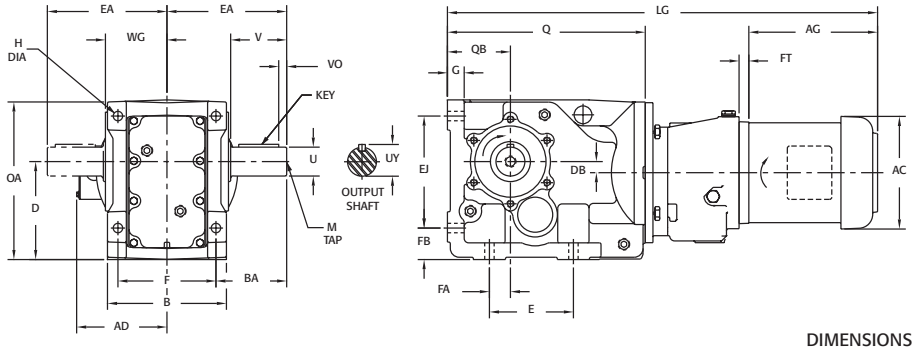
S: Sleeve
(Hollow Bore)

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INTEGRAL QUIN REDUCTION

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GEARCASE

DIMENSIONS ARE INCH / mm

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065I*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2075I*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2085I*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22
HB2095I*	11.42	6.73	10.43 +0 -.04	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265 +0 -1	29.2	240	291	295	240	75	75	36	26
HB2105I*	13.38	8.34	12.40 +0 -.04	1.65	11.02	13.65	14.17	10.63	3.74	3.74	1.57	1.31
	340	212	315 +0 -1	42	280	347	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065I*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075I*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085I*	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095I*	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105I*	19.82	23.66	7.87	6.81
	503	601	200	173

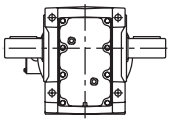
OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875 +0 -.001	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.81
-	-	-	-	-	-
3.625 +0 -.001	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

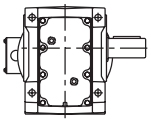
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HB2065I*	0.25	6.38	4.58	6.99	0.55	23.99
	0.33	6.38	4.58	7.24	0.55	24.24
	0.50	6.38	4.58	7.74	0.55	24.74
	0.75	6.38	4.58	8.24	0.55	25.24
	1.00	7.68	5.56	9.22	0.73	26.40
HB2075I*	0.25	6.38	4.58	6.99	0.71	26.55
	0.33	6.38	4.58	7.24	0.71	26.80
	0.50	6.38	4.58	7.74	0.71	27.30
	0.75	6.38	4.58	8.24	0.71	27.80
	1.00	7.68	5.56	9.22	0.88	28.95
	1.50	7.68	5.56	9.22	0.88	28.95
	2.00	7.68	5.56	10.72	0.88	30.45
HB2085I*	0.25	6.38	4.58	6.99	0.39	31.63
	0.33	6.38	4.58	7.24	0.39	31.88
	0.50	6.38	4.58	7.74	0.39	32.38
	0.75	6.38	4.58	8.24	0.39	32.88
	1.00	7.68	5.56	9.22	0.57	34.04
	1.50	7.68	5.56	9.22	0.57	34.04
	2.00	7.68	5.56	10.72	0.57	35.54
	3.00	9.78	7.19	10.07	1.63	35.95
HB2095I*	3.00	9.78	7.19	10.07	1.47	40.88
	5.00	9.78	7.19	11.57	1.47	42.38
HB2105I*	3.00	9.78	7.19	10.07	1.47	44.25
	5.00	9.78	7.19	11.57	1.47	45.75

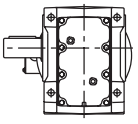
*OUTPUT STYLES



D: Double Ext.



L: Left Ext.



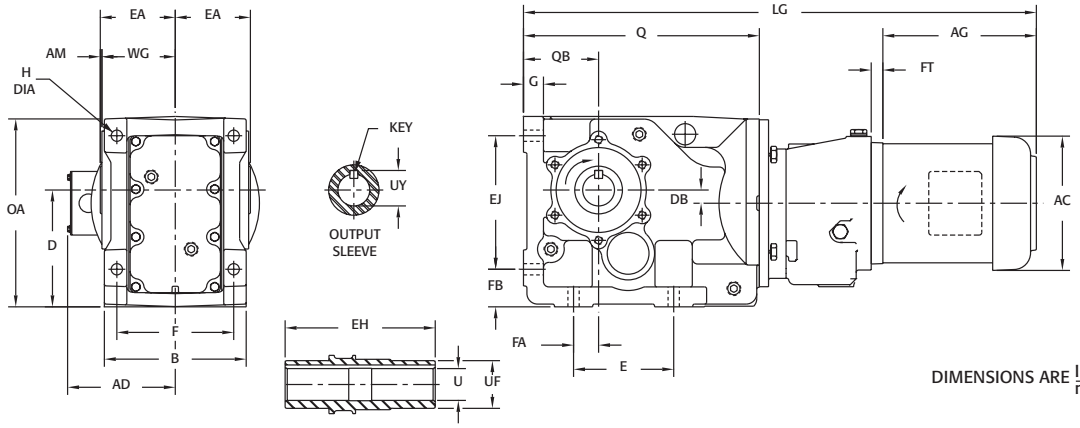
R: Right Ext.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INTEGRAL QUIN REDUCTION

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065IS	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2075IS	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2085IS	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22
HB2095IS	0.16	11.42	10.43 +0 -.04	1.15	9.45	4.73	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265 +0 -1	29.2	240	120	295	240	75	75	36	26
HB2105IS	0.08	13.38	12.40 +0 -.04	1.65	11.02	6.89	14.17	10.63	3.74	3.74	1.57	1.31
	2	340	315 +0 -1	42	280	175	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065IS	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075IS	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085IS	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095IS	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105IS	19.82	23.66	7.87	6.81
	503	601	200	173

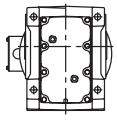
OUTPUT SLEEVE

EH	U	UF	UY	KEY
7.08	1.500 +.0025 -.0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -.0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -.0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 +.0025 -.0	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 +.0025 -.0	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HB2065IS	0.25	6.38	4.58	6.99	0.55	23.99
	0.33	6.38	4.58	7.24	0.55	24.24
	0.50	6.38	4.58	7.74	0.55	24.74
	0.75	6.38	4.58	8.24	0.55	25.24
	1.00	7.68	5.56	9.22	0.73	26.40
HB2075IS	0.25	6.38	4.58	6.99	0.71	26.55
	0.33	6.38	4.58	7.24	0.71	26.80
	0.50	6.38	4.58	7.74	0.71	27.30
	0.75	6.38	4.58	8.24	0.71	27.80
	1.00	7.68	5.56	9.22	0.88	28.95
	1.50	7.68	5.56	9.22	0.88	28.95
	2.00	7.68	5.56	10.72	0.88	30.45
HB2085IS	0.25	6.38	4.58	6.99	0.39	31.63
	0.33	6.38	4.58	7.24	0.39	31.88
	0.50	6.38	4.58	7.74	0.39	32.38
	0.75	6.38	4.58	8.24	0.39	32.88
	1.00	7.68	5.56	9.22	0.57	34.04
	1.50	7.68	5.56	9.22	0.57	34.04
	2.00	7.68	5.56	10.72	0.57	35.54
	3.00	9.78	7.19	10.07	1.63	35.95
HB2095IS	3.00	9.78	7.19	10.07	1.47	40.88
	5.00	9.78	7.19	11.57	1.47	42.38
HB2105IS	3.00	9.78	7.19	10.07	1.47	44.25
	5.00	9.78	7.19	11.57	1.47	45.75

OUTPUT STYLE



S: Sleeve
(Hollow Bore)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

FOR MOTOR SELECTION REFER TO SECTION H

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HB2043						
6.53	268	10	2210	650	140	1730
7.31	239	9.0	2230	675	140	1730
9.24	189	7.5	2350	700	140	1730
12.07	145	7.6	3100	800	140	1950
13.51	130	6.9	3150	770	140	1950
17.08	102	5.8	3350	830	140	1950
21.94	80	4.8	3540	930	140	1950
25.10	70	4.2	3540	1050	140	1950
30.37	58	3.4	3540	1150	140	1950
38.38	46	2.7	3540	1250	140	1950
49.31	35	2.1	3540	1250	140	1950
56.41	31	1.9	3540	1250	140	1950
73.76	24	1.4	3540	1250	140	1950
91.94	19	1.1	3540	1250	140	1950
110.88	16	0.9	3540	1250	140	1950
127.45	14	0.8	3540	1250	140	1950
HB2063						
6.22	281	12	2530	2050	200	2850
7.46	235	11	2880	2050	200	2850
9.44	185	10	3250	2050	200	2850
11.25	156	11	4060	2050	200	2850
13.48	130	12	5320	2050	200	2850
17.06	103	9.9	5720	2050	200	2850
19.80	88	9.2	6200	2050	200	2850
25.89	68	7.4	6500	2050	200	2850
30.51	57	6.8	7000	2050	200	2850
38.61	45	5.5	7150	2050	200	2850
44.81	39	4.8	7250	2050	200	2850
58.58	30	3.7	7260	2050	200	2850
69.99	25	3.1	7260	2050	200	2850
74.56	23	2.9	7260	2050	200	2850
85.21	21	2.5	7260	2050	200	2850
91.47	19	2.3	7260	2050	200	2850
106.51	16	2.0	7260	2050	200	2850
115.64	15	1.9	7260	2050	200	2850
126.17	14	1.7	7260	2050	200	2850
138.46	13	1.5	7260	2050	200	2850
HB2065						
150.16	12	1.4	7260	2050	140	2850
190.00	9.2	1.1	7260	2050	140	2850
233.62	7.5	0.92	7260	2050	140	2850
284.24	6.2	0.75	7260	2050	140	2850
354.30	4.9	0.61	7260	2050	140	2850
427.28	4.1	0.50	7260	2050	140	2850
528.68	3.3	0.41	7260	2050	140	2850
643.23	2.7	0.33	7260	2050	140	2850
801.79	2.2	0.27	7260	2050	140	2850
975.94	1.8	0.22	7260	2050	140	2850
1217	1.4	0.18	7260	2050	140	2850
1467	1.2	0.15	7260	2050	140	2850
1867	0.94	0.11	7260	2050	140	2850
2212	0.79	0.10	7260	2050	140	2850
2667	0.66	0.08	7260	2050	140	2850
3329	0.53	0.06	7260	2050	140	2850

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

FOR MOTOR SELECTION
REFER TO SECTION H

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HB2073						
6.51	269	20	4350	2750	385	3370
7.27	241	19	4600	2830	385	3370
8.13	215	17	4720	2950	385	3370
8.77	200	17	4970	2970	385	3370
9.86	177	16	5230	3070	385	3370
11.37	154	17	6700	3100	385	3370
12.70	138	16	7040	3200	385	3370
14.20	123	18	8670	3100	385	3370
15.32	114	17	9030	3200	385	3370
17.21	102	16	9480	3300	385	3370
18.65	94	15	9620	3300	385	3370
21.11	83	14	9930	3300	385	3370
24.06	73	14	11220	3300	385	3370
31.90	55	11	12000	3300	385	3370
34.42	51	10	12100	3300	385	3370
38.68	45	9.3	12200	3300	385	3370
41.90	42	9.7	13700	3300	385	3370
47.45	37	8.5	13700	3300	385	3370
54.07	32	7.5	13700	3300	385	3370
75.95	23	5.3	13700	3300	385	3370
89.80	19	4.5	13700	3300	385	3370
108.25	16	3.7	13700	3300	385	3370
134.10	13	3.0	13700	3300	385	3370
HB2075						
155.99	11.2	2.6	13700	3300	200	3370
191.38	9.1	2.1	13700	3300	200	3370
231.14	7.6	1.8	13700	3300	200	3370
290.33	6.0	1.4	13700	3300	200	3370
350.55	5.0	1.2	13700	3300	200	3370
430.02	4.1	0.94	13700	3300	200	3370
531.87	3.3	0.76	13700	3300	200	3370
652.45	2.7	0.62	13700	3300	200	3370
813.78	2.2	0.50	13700	3300	200	3370
981.05	1.8	0.41	13700	3300	200	3370
1215	1.4	0.33	13700	3300	200	3370
1488	1.2	0.27	13700	3300	200	3370
1778	1.0	0.23	13700	3300	200	3370
2324	0.75	0.17	13700	3300	200	3370
2706	0.65	0.15	13700	3300	200	3370
3352	0.52	0.12	13700	3300	200	3370
HB2083						
6.60	265	34	7500	3100	595	3540
7.37	237	32	8000	3200	595	3540
8.24	212	29	8000	3200	595	3540
8.89	197	27	8200	3300	595	3540
9.99	175	27	9000	3400	595	3540
11.37	154	26	10000	3500	595	3540
12.70	138	33	14200	3400	595	3540
14.20	123	31	15000	3500	595	3540
15.32	114	30	15500	3600	595	3540
17.21	102	27	16000	3700	595	3540
17.91	98	27	16200	3800	595	3540
20.24	86	25	17000	3900	595	3540

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RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

FOR MOTOR SELECTION
REFER TO SECTION H

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HB2083 (continued)						
24.06	73	22	18000	4000	595	3540
31.46	56	19	20500	4500	595	3540
33.94	52	18	21000	4500	595	3540
38.14	46	17	22000	4600	595	3540
39.69	44	17	22500	4700	595	3540
44.86	39	15	23500	4800	595	3540
53.31	33	13	23900	4800	595	3540
74.89	23	9.4	23900	4800	595	3540
88.54	20	8.0	23900	4800	595	3540
106.74	16	6.6	23900	4800	595	3540
132.22	13	5.3	23900	4800	595	3540
HB2085						
161.29	11	4.4	23900	4800	385	3540
202.99	8.6	3.5	23900	4800	385	3540
226.57	7.7	3.1	23900	4800	385	3540
300.73	5.8	2.3	23900	4800	385	3540
357.41	4.9	2.0	23900	4800	385	3540
449.80	3.9	1.57	23900	4800	385	3540
531.79	3.3	1.33	23900	4800	385	3540
641.10	2.7	1.10	23900	4800	385	3540
794.13	2.2	0.89	23900	4800	385	3540
987.16	1.8	0.72	23900	4800	385	3540
1190	1.5	0.59	23900	4800	385	3540
1474	1.2	0.48	23900	4800	385	3540
1868	0.9	0.38	23900	4800	385	3540
2252	0.78	0.31	23900	4800	385	3540
2791	0.63	0.25	23900	4800	385	3540
3363	0.52	0.21	23900	4800	385	3540
HB2093						
7.61	230	53	13600	3750	950	5350
9.48	185	52	16800	3900	950	5350
10.82	162	53	19500	4000	950	5350
12.54	140	53	22500	4250	950	5350
15.63	112	50	26400	4500	950	5350
17.83	98	45	27400	4750	950	5350
22.79	77	37	28300	5000	950	5350
26.55	66	33	30000	5250	950	5350
35.02	50	27	32000	5750	950	5350
39.95	44	28	38000	5950	950	5350
51.07	34	22	38000	6250	950	5350
59.48	29	19	38000	6750	950	5350
76.61	23	15	38000	7550	950	5350
84.07	21	13	38000	8000	950	5350
103.07	17	11	38000	8000	950	5350
115.42	15	9.7	38000	8000	950	5350
130.52	13	8.6	38000	8000	950	5350
HB2095						
159.26	11	7.4	38000	8000	595	5350
198.56	9	5.9	38000	8000	595	5350
243.65	7.2	4.8	38000	8000	595	5350
300.28	5.8	3.9	38000	8000	595	5350
356.87	4.9	3.3	38000	8000	595	5350

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FOR MOTOR SELECTION
REFER TO SECTION H

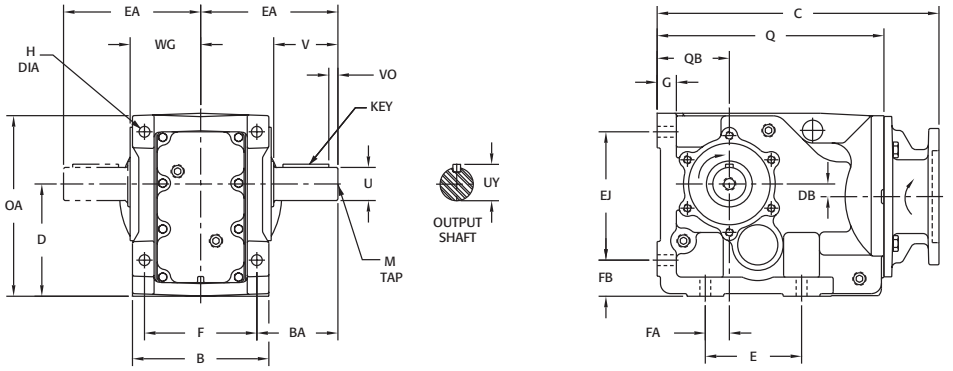
RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HB2095 (continued)						
444.92	3.9	2.6	38000	8000	595	5350
501.29	3.5	2.3	38000	8000	595	5350
624.98	2.8	1.9	38000	8000	595	5350
842.88	2.1	1.4	38000	8000	595	5350
1077.55	1.6	1.1	38000	8000	595	5350
1255	1.4	0.93	38000	8000	595	5350
1513	1.2	0.77	38000	8000	595	5350
1774	1.0	0.66	38000	8000	595	5350
2138	0.82	0.55	38000	8000	595	5350
2622	0.67	0.45	38000	8000	595	5350
3320	0.53	0.35	38000	8000	595	5350
HB2103						
7.13	245	130.5	31500	5550	950	2775
8.14	215	123.4	34000	5600	950	2800
9.33	188	115.6	36500	5650	950	2825
11.36	154	97.8	37600	5750	950	2875
12.97	135	86.8	38100	6000	950	3000
14.86	118	115.5	58100	6850	950	3425
19.06	92	97.2	62700	6350	950	3175
23.10	76	81.5	63700	6900	950	3450
27.26	64	69.0	63700	7400	950	3700
29.07	60	64.7	63700	7700	950	3850
33.30	53	56.5	63700	8100	950	4050
42.73	41	45.0	65100	8200	950	4100
51.77	34	39.7	69500	8600	950	4300
61.11	29	34.2	70800	9500	950	4750
76.82	23	27.2	70800	10200	950	5100
84.94	21	24.6	70800	10900	950	5450
94.53	19	22.1	70800	11300	950	5650
106.05	17	19.7	70800	11900	950	5950
120.12	15	17.4	70800	12500	950	6250
137.71	13	15.2	70800	13000	950	6500
HB2105						
164.81	11	13.3	70800	13000	595	6500
188.77	9.3	11.6	70800	13000	595	6500
242.24	7.2	9.0	70800	13000	595	6500
310.74	5.6	7.0	70800	13000	595	6500
369.30	4.7	5.9	70800	13000	595	6500
456.72	3.8	4.8	70800	13000	595	6500
542.79	3.2	4.0	70800	13000	595	6500
657.70	2.7	3.3	70800	13000	595	6500
776.32	2.3	2.8	70800	13000	595	6500
975.92	1.8	2.2	70800	13000	595	6500
1201	1.5	1.8	70800	13000	595	6500
1516	1.2	1.4	70800	13000	595	6500
1792	0.98	1.2	70800	13000	595	6500
2160	0.81	1.0	70800	13000	595	6500
2697	0.65	0.81	70800	13000	595	6500
3341	0.52	0.65	70800	13000	595	6500

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043E*	5.71	2.95	4.41 +0 -.02	0.47	5.12	5.31	5.12	4.72	1.38	1.46	0.71	0.43
	145	75	112 +0 -.5	12.0	130	135	130	120	35	37	18	11.0
HB2063E*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2073E*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2083E*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22
HB2093E*	11.42	6.73	10.43 +0 -.04	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265 +0 -1	29.2	240	291	295	240	75	75	36	26
HB2103E*	13.38	8.34	12.40 +0 -.04	1.65	11.02	13.65	14.17	10.63	3.74	3.74	1.57	1.31
	340	212	315 +0 -1	42	280	347	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2043E*	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063E*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073E*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083E*	13.54	16.61	5.20	4.57
	344	422	132	116
HB2093E*	16.56	20.29	6.30	5.75
	421	515	160	146
HB2103E*	19.82	23.66	7.87	6.81
	503	601	200	173

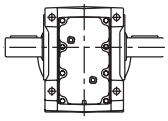
OUTPUT SHAFT

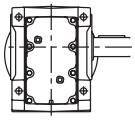
U	UY	V	VO	KEY	M
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875 +0 -.001	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.81
-	-	-	-	-	-
3.625 +0 -.001	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

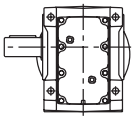
MOTOR COMPATIBILITY - NEMA

MODEL		NEMA							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 365TC
HB2043E*	C	12.43	12.43	13.74	-	-	-	-	-
		316	316	349	-	-	-	-	-
HB2063E*	C	13.83	13.83	14.85	-	-	-	-	-
		351	351	377	-	-	-	-	-
HB2073E*	C	16.57	16.57	17.25	17.25	-	-	-	-
		421	421	438	438	-	-	-	-
HB2083E*	C	-	-	22.07	22.07	22.07	22.63	-	-
		-	-	561	561	561	575	-	-
HB2093E*	C	-	-	24.78	24.78	24.78	24.78	-	-
		-	-	629	629	629	629	-	-
HB2103E*	C	-	-	28.15	28.15	28.15	28.15	29.41	29.41
		-	-	715	715	715	715	747	747

*OUTPUT STYLES


D: Double Ext.


L: Left Ext.

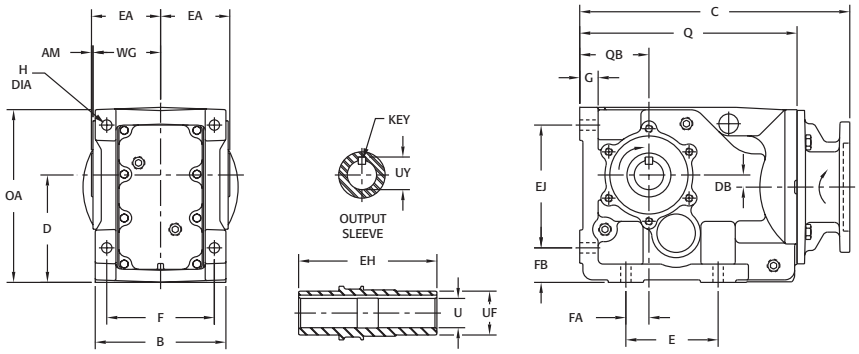

R: Right Ext.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION



GEARCASE

DIMENSIONS ARE INCH / mm

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043ES	0.10	5.71	4.41 +0 -.02	0.47	5.12	2.95	5.12	4.72	1.38	1.46	0.71	0.43
	2.5	145	112 +0 -.5	12.0	130	75	130	120	35	37	18	11.0
HB2063ES	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2073ES	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2083ES	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22
HB2093ES	0.16	11.42	10.43 +0 -.04	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265 +0 -1	29.2	240	150	295	240	75	75	36	26
HB2103ES	0.08	13.38	12.40 +0 -.04	1.65	11.02	6.89	14.17	10.63	3.74	3.74	1.57	1.31
	2	340	315 +0 -1	42	280	175	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2043ES	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063ES	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073ES	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083ES	13.54	16.61	5.20	4.57
	344	422	132	116
HB2093ES	16.56	20.29	6.30	5.75
	421	515	160	146
HB2103ES	19.82	23.66	7.87	6.81
	503	601	200	173

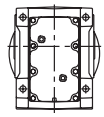
OUTPUT SLEEVE

EH	U	UF	UY	KEY
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500 +.0025 -0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 +.0025 -0	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 +.0025 -0	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 365TC
HB2043ES	C	12.43	12.43	13.74	-	-	-	-	-
		316	316	349	-	-	-	-	-
HB2063ES	C	13.83	13.83	14.85	-	-	-	-	-
		351	351	377	-	-	-	-	-
HB2073ES	C	16.57	16.57	17.25	17.25	-	-	-	-
		421	421	438	438	-	-	-	-
HB2083ES	C	-	-	22.07	22.07	22.07	22.63	-	-
		-	-	561	561	561	575	-	-
HB2093ES	C	-	-	24.78	24.78	24.78	24.78	-	-
		-	-	629	629	629	629	-	-
HB2103ES	C	-	-	28.15	28.15	28.15	28.15	29.41	29.41
		-	-	715	715	715	715	747	747

OUTPUT STYLE



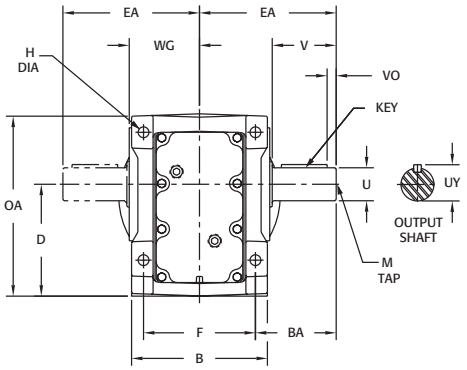
S: Sleeve
(Hollow Bore)

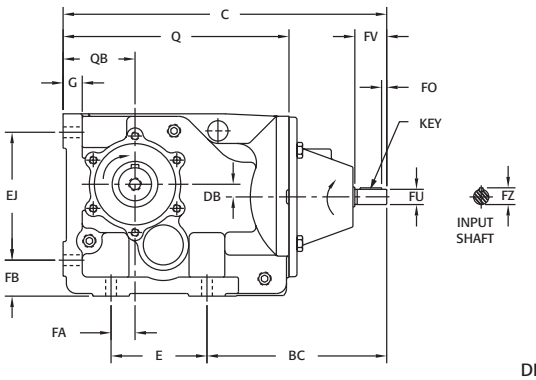
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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TRIPLE REDUCTION





DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043A*	5.71	2.95	4.41 +0 -.02	0.47	5.12	5.31	5.12	4.72	1.38	1.46	0.71	0.43
	145	75	112 +0 -.5	12.0	130	135	130	120	35	37	18	11.0
HB2063A*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2073A*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2083A*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22
HB2093A*	11.42	6.73	10.43 +0 -.04	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265 +0 -1	29.2	240	291	295	240	75	75	36	26
HB2103A*	13.38	8.34	12.40 +0 -.04	1.65	11.02	13.65	14.17	10.63	3.74	3.74	1.57	1.31
	340	212	315 +0 -1	42	280	347	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2043A*	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063A*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073A*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083A*	13.54	16.61	5.20	4.57
	344	422	132	116
HB2093A*	16.56	20.29	6.30	5.75
	421	515	160	146
HB2103A*	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875 +0 -.001	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.81
-	-	-	-	-	-
3.625 +0 -.001	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

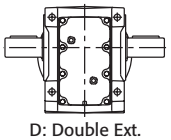
INPUT SHAFT

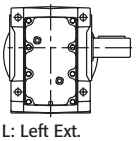
MODEL	FU	FZ	FV	FO	KEY
HB2043A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2063A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2073A*	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
HB2083A*	1.125 +0 -.001	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16
	-	-	-	-	-
HB2093A*	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-
HB2103A*	1.875 +0 -.001	2.08	3.75	NA	1/2 x 1/2 x 3-1/4
	-	-	-	-	-

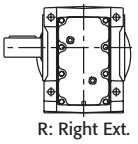
INPUT/GEARCASE

BC	C
7.62	14.16
194	360
8.85	15.94
225	405
10.66	19.40
271	493
14.29	24.40
363	620
15.82	28.62
402	727
17.44	32.59
443	828

*OUTPUT STYLES


D: Double Ext.


L: Left Ext.

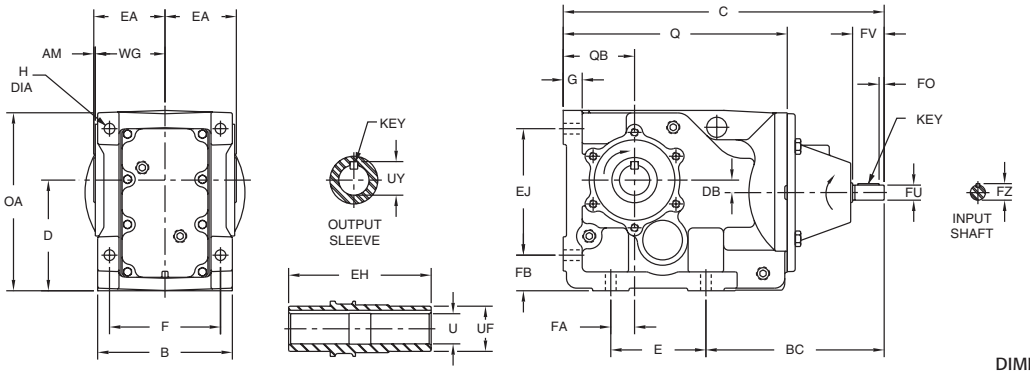

R: Right Ext.

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TRIPLE REDUCTION



GEARCASE

DIMENSIONS ARE INCH / mm

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2043AS	0.10	5.71	4.41 +0 -.02	0.47	5.12	2.95	5.12	4.72	1.38	1.46	0.71	0.43
	2.5	145	112 +0 -.5	12.0	130	75	130	120	35	37	18	11.0
HB2063AS	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2073AS	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2083AS	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22
HB2093AS	0.16	11.42	10.43 +0 -.04	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265 +0 -1	29.2	240	150	295	240	75	75	36	26
HB2103AS	0.08	13.38	12.40 +0 -.04	1.65	11.02	6.89	14.17	10.63	3.74	3.74	1.57	1.31
	2	340	315 +0 -1	42	280	175	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2043AS	7.48	9.82	2.80	2.85
	190	249	71	72.5
HB2063AS	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2073AS	11.34	13.21	4.41	3.98
	288	335	112	101
HB2083AS	13.54	16.61	5.20	4.57
	344	422	132	116
HB2093AS	16.56	20.29	6.30	5.75
	421	515	160	146
HB2103AS	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SLEEVE

EH	U	UF	UY	KEY
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500 +.0025 -0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 +.0025 -0	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 +.0025 -0	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

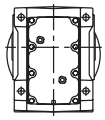
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HB2043AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2063AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2073AS	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
HB2083AS	1.125 +0 -.001	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16
	-	-	-	-	-
HB2093AS	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	▪	▪	▪	▪	▪
HB2103AS	1.875 +0 -.001	2.08	3.75	NA	1/2 x 1/2 x 3-1/4
	-	-	-	-	-

INPUT/GEARCASE

BC	C
7.62	14.16
194	360
8.85	15.94
225	405
10.66	19.40
271	493
14.29	24.40
363	620
15.82	28.62
402	727
17.44	32.59
443	828

OUTPUT STYLE



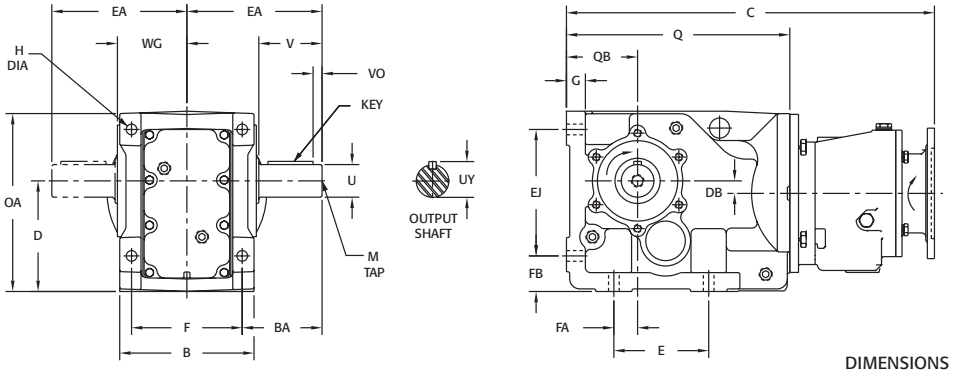
S: Sleeve
(Hollow Bore)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUIN REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065E*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2075E*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2085E*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22
HB2095E*	11.42	6.73	10.43 +0 -.04	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265 +0 -1	29.2	240	291	295	240	75	75	36	26
HB2105E*	13.38	8.34	12.40 +0 -.04	1.65	11.02	13.65	14.17	10.63	3.74	3.74	1.57	1.31
	340	212	315 +0 -1	42	280	347	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065E*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075E*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085E*	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095E*	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105E*	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SHAFT

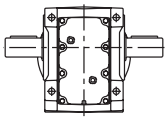
U	UY	V	VO	KEY	M
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875 +0 -.001	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.81
-	-	-	-	-	-
3.625 +0 -.001	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

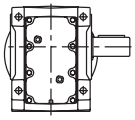
MOTOR COMPATIBILITY - NEMA

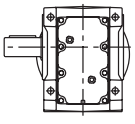
MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HB2065E*	C	19.06	19.06	-
		484	484	-
HB2075E*	C	21.55	21.55	22.57
		547	547	573
HB2085E*	C	27.61	27.61	28.29
		701	701	719
HB2095E*	C	-	-	34.81
		-	-	881
HB2105E*	C	-	-	38.18
		-	-	970

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

*OUTPUT STYLES


D: Double Ext.

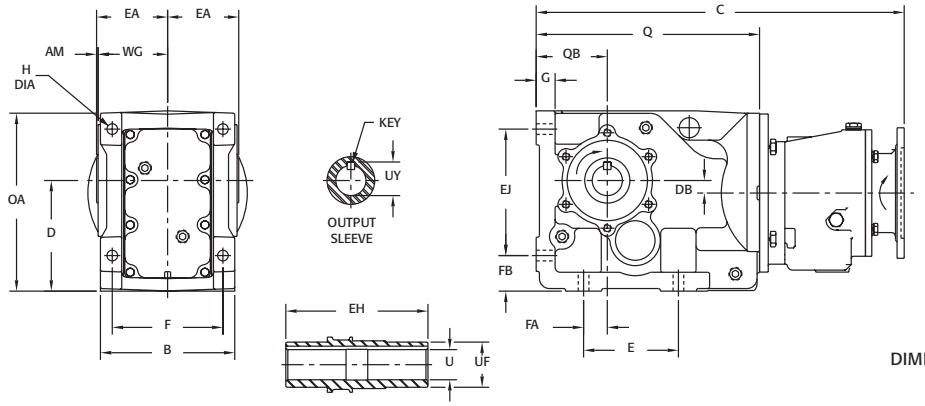

L: Left Ext.


R: Right Ext.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

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QUIN REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065ES	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2075ES	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2085ES	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22
HB2095ES	0.16	11.42	10.43 +0 -.04	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265 +0 -1	29.2	240	150	295	240	75	75	36	26
HB2105ES	0.08	13.38	12.40 +0 -.04	1.65	11.02	6.89	14.17	10.63	3.74	3.74	1.57	1.31
	2	340	315 +0 -1	42	280	175	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065ES	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075ES	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085ES	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095ES	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105ES	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SLEEVE

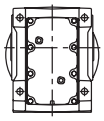
EH	U	UF	UY	KEY
7.08	1.500 +.0025 -0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 +.0025 -0	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 +.0025 -0	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HB2065ES	C	19.06	19.06	-
		484	484	-
HB2075ES	C	21.55	21.55	22.57
		547	547	573
HB2085ES	C	27.61	27.61	28.29
		701	701	719
HB2095ES	C	-	-	34.81
		-	-	881
HB2105ES	C	-	-	38.18
		-	-	970

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

OUTPUT STYLE

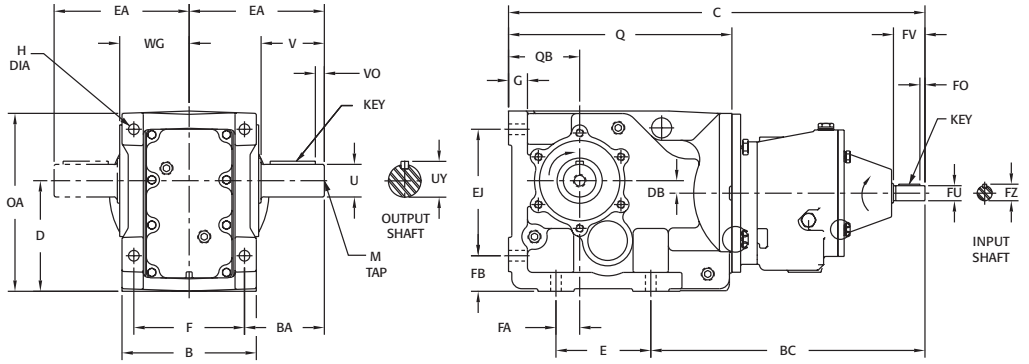


S: Sleeve
(Hollow Bore)

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QUIN REDUCTION



GEARCASE

DIMENSIONS ARE INCH / mm

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065A*	6.69	3.98	5.51 +0 -.02	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140 +0 -.5	15.8	120	171	160	140	30	45	24	13.5
HB2075A*	7.87	4.86	7.09 +0 -.02	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180 +0 -.5	27.3	150	206	200	165	40	55	27	17.5
HB2085A*	9.06	5.91	8.35 +0 -.04	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212 +0 -1	30.9	180	240	233	180	55	70	32	22
HB2095A*	11.42	6.73	10.43 +0 -.04	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265 +0 -1	29.2	240	291	295	240	75	75	36	26
HB2105A*	13.38	8.34	12.40 +0 -.04	1.65	11.02	13.65	14.17	10.63	3.74	3.74	1.57	1.31
	340	212	315 +0 -1	42	280	347	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065A*	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075A*	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085A*	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095A*	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105A*	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.625 +0 -.001	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000 +0 -.001	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375 +0 -.001	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875 +0 -.001	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.81
-	-	-	-	-	-
3.625 +0 -.001	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

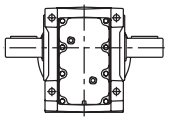
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HB2065A*	0.625 +0 -.0005	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2075A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2085A*	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
HB2095A*	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-
HB2105A*	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-

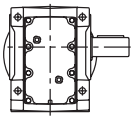
INPUT/ GEARCASE

BC	C
14.01	21.10
356	536
14.92	23.66
379	601
20.33	30.45
516	773
25.13	37.93
638	963
26.15	41.30
664	1050

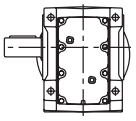
*OUTPUT STYLES



D: Double Ext.



L: Left Ext.



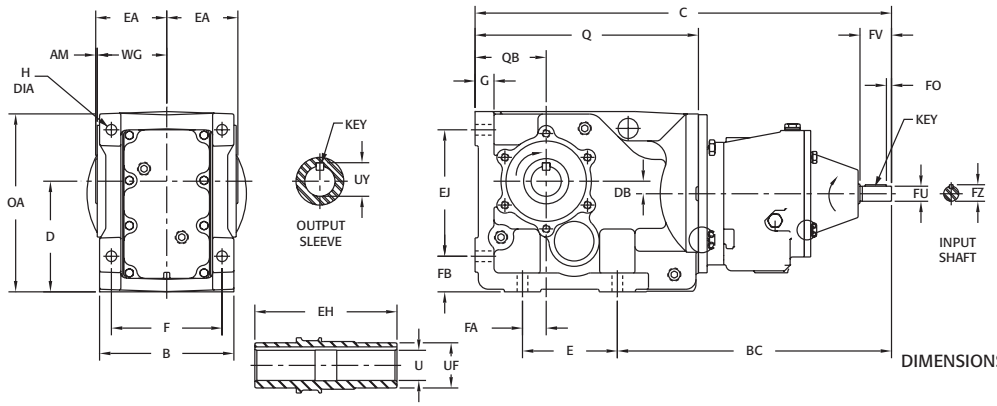
R: Right Ext.

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QUIN REDUCTION



DIMENSIONS ARE INCH / mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
HB2065AS	0.08	6.69	5.51 +0 -.02	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140 +0 -.5	15.8	120	90	160	140	30	45	24	13.5
HB2075AS	0.16	7.87	7.09 +0 -.02	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180 +0 -.5	27.3	150	105	200	165	40	55	27	17.5
HB2085AS	0.16	9.06	8.35 +0 -.04	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212 +0 -1	30.9	180	120	233	180	55	70	32	22
HB2095AS	0.16	11.42	10.43 +0 -.04	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265 +0 -1	29.2	240	150	295	240	75	75	36	26
HB2105AS	0.08	13.38	12.40 +0 -.04	1.65	11.02	6.89	14.17	10.63	3.74	3.74	1.57	1.31
	2	340	315 +0 -1	42	280	175	360	270	95	95	10	33

GEARCASE

MODEL	OA	Q	QB	WG
HB2065AS	8.98	11.13	3.54	3.46
	228	283	90	87.9
HB2075AS	11.34	13.21	4.41	3.98
	288	335	112	101
HB2085AS	13.54	16.61	5.20	4.57
	344	422	132	116
HB2095AS	16.56	20.29	6.30	5.75
	421	515	160	146
HB2105AS	19.82	23.66	7.87	6.81
	503	601	200	173

OUTPUT SLEEVE

EH	U	UF	UY	KEY
7.08	1.500 +.0025 -0	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 +.0025 -0	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 +.0025 -0	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 +.0025 -0	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

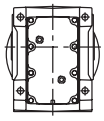
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HB2065AS	0.625 +0 -.0005	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2075AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HB2085AS	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
HB2095AS	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-
HB2105AS	1.375 +0 -.001	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-

INPUT/ GEARCASE

BC	C
14.01	21.10
356	536
14.92	23.66
379	601
20.33	30.45
516	773
25.13	37.93
638	963
26.15	41.30
664	1050

OUTPUT STYLE



S: Sleeve
(Hollow Bore)

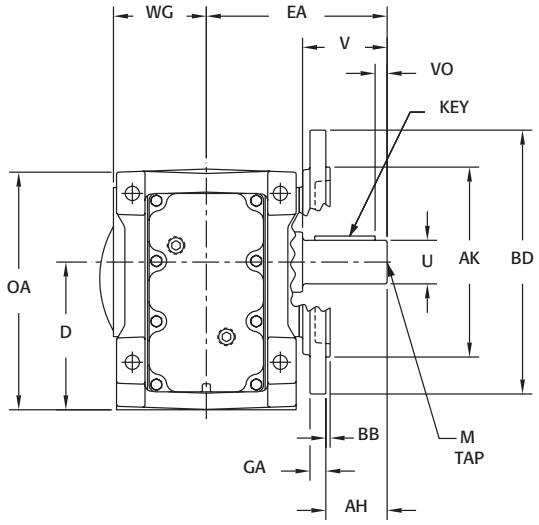
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

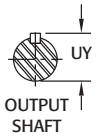
WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

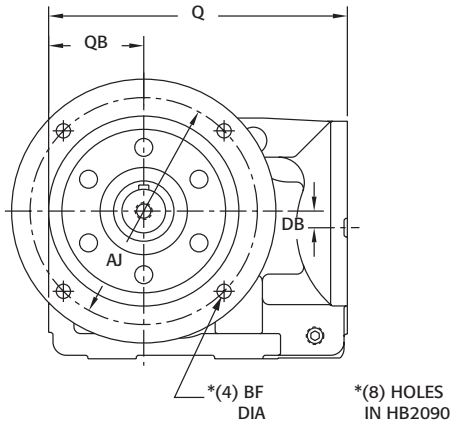
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

ACCESSORIES

FLANGE MOUNT KIT (SHOWN WITH OUTPUT SHAFT)







DIMENSIONS ARE INCH / mm

GEARCASE

SERIES	D	DB	EA	OA	Q	QB	WG
HB2040	4.41	0.47	5.31	7.48	9.82	2.80	2.85
	112	12.0	135	190	249	71	72.5
HB2060	5.51	0.62	6.73	8.98	11.13	3.54	3.46
	140	15.8	171	228	283	90	87.9
HB2070	7.09	1.08	8.11	11.34	13.21	4.41	3.98
	180	27.3	206	288	335	112	101
HB2080	8.35	1.22	9.45	13.54	16.61	5.20	4.57
	212	30.9	240	344	422	132	116
HB2090	10.43	1.15	11.46	16.56	20.29	6.30	5.75
	265	29.2	291	421	515	160	146
HB2100	12.40	1.65	13.65	19.82	23.66	7.87	6.81
	315	42	347	503	601	200	173

OUTPUT SHAFT

U	UY	V	VO	KEY	M
$1.250^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
$1.625^{+0}_{-.001}$	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
$2.000^{+0}_{-.001}$	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
$2.375^{+0}_{-.001}$	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
$2.875^{+0}_{-.001}$	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61
-	-	-	-	-	-
$3.625^{+0}_{-.001}$	4.00	6.69	0.19	7/8 x 7/8 x 6-5/16	1-8 x 2.13
-	-	-	-	-	-

FLANGE

SERIES	AH	AJ	AK	BB	BD	BF	GA
HB2040	1.38	6.50	$5.118^{+0}_{-.002}$	0.14	7.87	0.43	0.47
	35	165	$130^{-.003}_{-.054}$	3.5	200	11	12
HB2060	2.28	8.46	$7.087^{+0}_{-.002}$	0.16	9.84	0.53	0.59
	58	215	$180^{+.010}_{-.041}$	4	250	13.5	15
HB2070	2.52	10.43	$9.055^{+0}_{-.002}$	0.16	11.81	0.53	0.63
	64	265	$230^{-.003}_{-.054}$	4	300	13.5	16
HB2080	3.55	11.81	$9.843^{+0}_{-.002}$	0.20	13.78	0.69	0.71
	90	300	$250^{+0}_{-.051}$	5	350	17.5	18
HB2090	3.92	15.75	$13.78^{+0}_{-.002}$	0.20	17.72	0.69	0.87
	99	400	$350^{+0}_{-.051}$	5	450	17.5	22
HB2100	3.73	15.75	$13.78^{+0}_{-.002}$	0.20	17.72	0.69	0.87
	95	400	$350^{+0}_{-.051}$	5	450	17.5	22

FLANGE MOUNT KIT

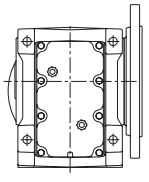
SERIES	KIT NUMBER	WT. LBS.
HB2040	0259-00010	11
HB2060	0259-00005	15
HB2070	0259-00006	18
HB2080	0259-00007	25
HB2090	0259-00008	45
HB2100	Factory Assembled	

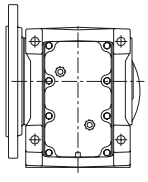
FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

CONSULT FACTORY IF FLANGE MOUNT KIT IS GOING TO BE INSTALLED ON NON-SHAFT EXTENSION SIDE.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

IF FLANGE MOUNT KIT IS TO BE FACTORY ASSEMBLED TO UNIT A MOUNTING LOCATION MUST BE SPECIFIED AS SHOWN:


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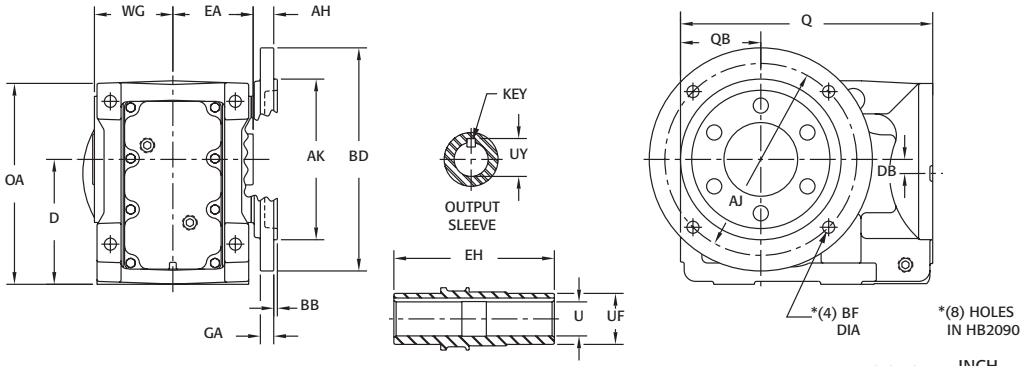

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WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

ACCESSORIES

FLANGE MOUNT KIT (SHOWN WITH OUTPUT SLEEVE)



DIMENSIONS ARE INCH / mm

GEARCASE

SERIES	D	DB	EA	OA	Q	QB	WG
HB2040	4.41	0.47	2.95	7.48	9.82	2.80	2.85
	112	12.0	75	190	249	71	72.5
HB2060	5.51	0.62	3.54	8.98	11.13	3.54	3.46
	140	15.8	90	228	283	90	87.9
HB2070	7.09	1.08	4.14	11.34	13.21	4.41	3.98
	180	27.3	105	288	335	112	101
HB2080	8.35	1.22	4.73	13.54	16.61	5.20	4.57
	212	30.9	120	344	422	132	116
HB2090	10.43	1.15	5.91	16.56	20.29	6.30	5.75
	265	29.2	150	421	515	160	146
HB2100	12.40	1.65	6.89	19.82	23.66	7.87	6.81
	315	42	175	503	601	200	173

OUTPUT SLEEVE

EH	U	UF	UY	KEY
5.91	1.375 $^{+.0025}_{-0}$	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500 $^{+.0025}_{-0}$	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 $^{+.0025}_{-0}$	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375 $^{+.0025}_{-0}$	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750 $^{+.0025}_{-0}$	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.78	3.625 $^{+.0025}_{-0}$	5.25	4.02	(2) 7/8 x 7/8 x 5-3/8
-	-	-	-	-

FLANGE

SERIES	AH	AJ	AK	BB	BD	BF	GA
HB2040	0.98	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.47
	25	165	130 $^{-.003}_{-.054}$	3.5	200	11	12
HB2060	0.91	8.46	7.087 $^{+0}_{-.002}$	0.16	9.84	0.53	0.59
	23	215	180 $^{+.010}_{-.041}$	4	250	13.5	15
HB2070	1.46	10.43	9.055 $^{+0}_{-.002}$	0.16	11.81	0.53	0.63
	37	265	230 $^{-.003}_{-.054}$	4	300	13.5	16
HB2080	1.18	11.81	9.843 $^{+0}_{-.002}$	0.20	13.78	0.69	0.71
	30	300	250 $^{+0}_{-.051}$	5	350	17.5	18
HB2090	1.63	15.75	13.78 $^{+0}_{-.002}$	0.20	17.72	0.69	0.87
	41	400	350 $^{+0}_{-.051}$	5	450	17.5	22
HB2100	2.963	15.75	13.78 $^{+0}_{-.002}$	0.20	17.72	0.69	0.87
	75.26	400	350 $^{+0}_{-.051}$	5	450	17.5	22

FLANGE MOUNT KIT

SERIES	KIT NUMBER	WT. LBS.
HB2040	0259-00010	11
HB2060	0259-00005	15
HB2070	0259-00006	18
HB2080	0259-00007	25
HB2090	0259-00008	45
HB2100	Factory Assembled	

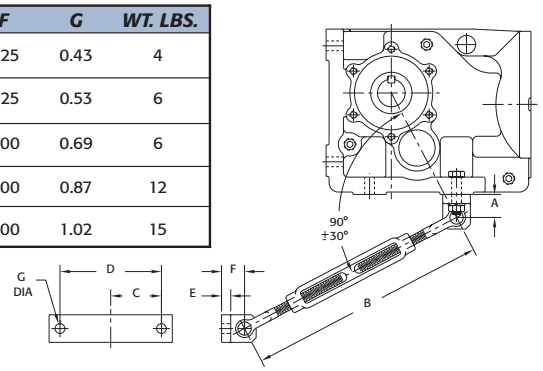
FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

IF FLANGE MOUNT KIT IS TO BE FACTORY ASSEMBLED TO UNIT A MOUNTING LOCATION MUST BE SPECIFIED AS SHOWN ON P.K-38.

TORQUE ARM KIT

SERIES	KIT NUMBER	A	B	C	D	E	F	G	WT. LBS.
HB2040	0259-00009	1.25	12.50 MIN. 18.38 MAX.	2.36	4.72	0.50	1.25	0.43	4
HB2060	0259-00001	1.25	12.50 MIN. 18.38 MAX.	2.76	5.51	0.50	1.25	0.53	6
HB2070	0259-00002	2.00	14.88 MIN. 20.88 MAX.	3.25	6.50	0.75	2.00	0.69	6
HB2080	0259-00003	2.00	17.69 MIN. 23.69 MAX.	3.54	7.09	0.75	2.00	0.87	12
HB2090	0259-00004	2.00	17.69 MIN. 23.69 MAX.	4.73	9.45	0.75	2.00	1.02	15

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE



WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

SHIPPING WEIGHTS & MOTOR COMPATIBILITY

**REDUCER WEIGHTS - SHAFT OUTPUT STYLES D, L, & R

MODEL	SOLID INPUT SHAFT (MOUNTING TYPE A)	C-FRAME QUILL INPUT (MOUNTING TYPE E)							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 365TC
HB2043	59	61	61	66	-	-	-	-	-
HB2063	93	94	94	100	-	-	-	-	-
HB2073	163	170	170	170	170	-	-	-	-
HB2083	280	-	-	283	283	292	292	-	-
HB2093	434	-	-	430	430	434	434	-	-
HB2103	670	-	-	650	650	670	670	710	710
HB2065	122	122	122	-	-	-	-	-	-
HB2075	198	200	200	204	-	-	-	-	-
HB2085	378	385	385	385	-	-	-	-	-
HB2095	601	-	-	625	-	-	-	-	-
HB2105	837	-	-	861	-	-	-	-	-

**REDUCER WEIGHTS - SHAFT MOUNT (HOLLOW OUTPUT BORE) STYLE S

MODEL	SOLID INPUT SHAFT (MOUNTING TYPE A)	C-FRAME QUILL INPUT (MOUNTING TYPE E)							
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 365TC
HB2043	56	58	58	63	-	-	-	-	-
HB2063	89	90	90	96	-	-	-	-	-
HB2073	154	161	161	161	161	-	-	-	-
HB2083	265	-	-	268	268	277	277	-	-
HB2093	407	-	-	403	403	407	407	-	-
HB2103	630	-	-	600	600	620	620	660	660
HB2065	118	118	118	-	-	-	-	-	-
HB2075	189	191	191	195	-	-	-	-	-
HB2085	363	370	370	370	-	-	-	-	-
HB2095	561	-	-	585	-	-	-	-	-
HB2105	777	-	-	800	-	-	-	-	-

** FOR MOTORIZED REDUCER WEIGHTS, ADD MOTOR WEIGHTS FROM ELECTRIC MOTOR CHARTS IN SECTION H TO REDUCER WEIGHTS SHOWN ON THIS PAGE.

**FOR INTEGRAL GEARMOTOR WEIGHTS, FOLLOW INSTRUCTIONS ABOVE (WITH SIMILAR HP C-FACE MOTOR), AND MULTIPLY BY .95.

MOTOR COMPATIBILITY - C-FRAME QUILL REDUCERS

MODEL	56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC 326TC	364TC 365TC
HB2043	X	X	X	-	-	-	-	-
HB2063	X	X	X	-	-	-	-	-
HB2073	X	X	X	X	-	-	-	-
HB2083	-	-	X	X	X	X	-	-
HB2093	-	-	X	X	X	X	-	-
HB2103	-	-	X	X	X	X	X	X
HB2065	X	X	-	-	-	-	-	-
HB2075	X	X	X	-	-	-	-	-
HB2085	X	X	X	-	-	-	-	-
HB2095	-	-	X	-	-	-	-	-
HB2105	-	-	X	-	-	-	-	-

FOR FACTORY OPTIONS SEE PAGE L-47

Poweratio® 2000 HELICAL WORM DRIVES

Helical Worm Product Features ..... L-1 to L-3
Selection Procedure ..... L-4 to L-5
Descriptions L-6
Mounting Positions L-7
Model Selection Index L-8
Selection By Input H.P. ..... L-9 to L-21
Integral Gearmotor Dimensions ..... L-22 to L-27
Ratings By Model ..... L-28 to L-31
Reducer Dimensions ..... L-32 to L-43
Accessories ..... L-44 to L-45
Shipping Weights & Motor Compatibility L-46
Factory Options L-47

L

HUB CITY

Poweratio® 2000

HIGH EFFICIENCY HELICAL WORM RIGHT ANGLE DRIVES

Advanced design with competitive interchangeability.

BASIC SPECIFICATIONS

- Power Ratings from 1/4 to 18 hp
- Output Torque to 12,000 inch/lbs.
- Ratios from 7:1 through 3460:1
- Output speeds 0.5 rpm to 244 rpm

STANDARD FEATURES

- Universal Base, Flange and Hollow Bore Mounting with Competitive Interchange Capability
- Precision Crowned Helical Gearing
- Hardened and Ground Steel Worm Shaft, High Capacity Bronze Alloy Worm Gear
- Double Lip Spring Loaded Seals with Precision Ground Seal Journals
- High Capacity Ball and Tapered Bearings with Splash Lubrication, Factory Filled
- Enhanced High Tensile Strength Steel Shafting with Low Notch Sensitivity
- Optimum Structural Designed Housings made of High Strength Alloy Cast Iron



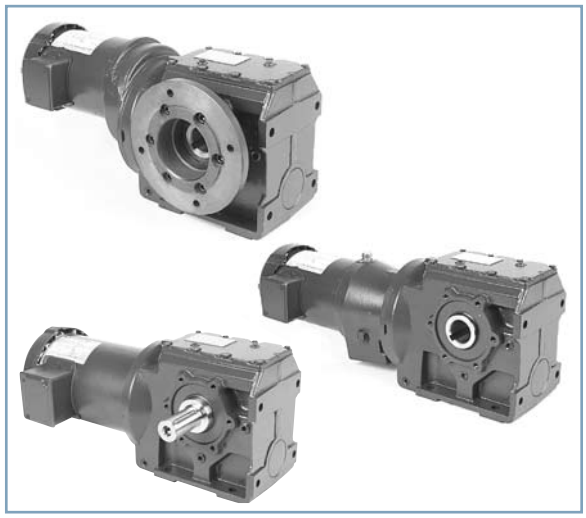
INTEGRAL GEARMOTORS

- 4 Sizes Available Up to 5 hp.
- Motors Produced by Marathon Electric for High Efficiency, Reliability and Durability

OPTIONAL FEATURES

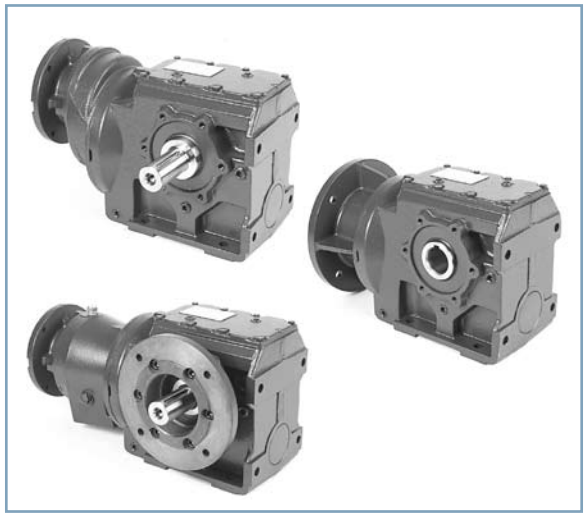
- Modified Standard and Custom Designs
- Hollow or Solid Output Shafts in Metric Sizes
- Brake or Inverter Duty Motors (50/60 hz)
- Washdown and BISSC Configurations

HELICAL WORM DRIVES



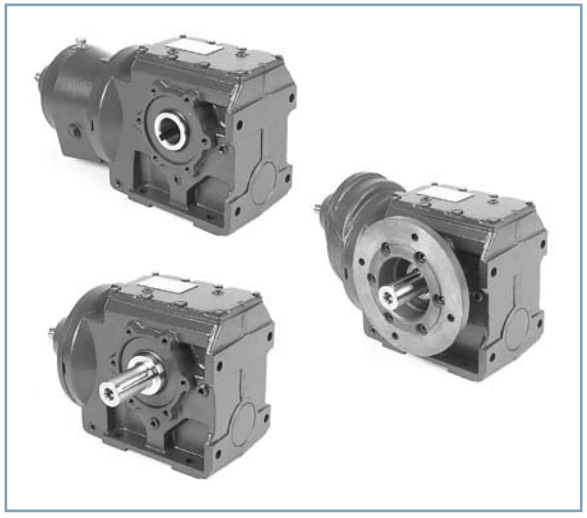
INTEGRAL GEARMOTORS

Double Reduction
Triple Reduction
Quad Reduction
Foot Mount
Flange Mount
Shaft Mount



C-FACE REDUCERS

Double Reduction
Triple Reduction
Quad Reduction
NEMA C-Frame Quill Input
Foot Mount
Flange Mount
Shaft Mount



SHAFT INPUT REDUCERS

Double Reduction
Triple Reduction
Quad Reduction
Foot Mount
Flange Mount
Shaft Mount

Cleanline™ premium washdown duty and metric versions available, See Section O or Consult Factory for details and specifications.

SELECTION PROCEDURE

HUB CITY provides two methods of selection for Reducers and Gearmotors.

On pages L-9 to L-21, the Selection Tables by Input H.P. can be used whenever the Input H.P. requirement is known. This method is commonly used for Gearmotors, but can also be used for Reducers.

On pages L-28 to L-31, the Input H.P. and Output Torque Ratings are provided for each model. These rating tables can be used for Reducers and Gearmotors.

SELECTION BY INPUT H.P.

For selection by Input H.P. determine the Input H.P., Output Speed and Service Factor requirements. (See pages L-5 and A-2 to A-4 for AGMA Service Factors.) Then refer to Selection Tables by Input H.P., locate the required H.P. and Output Speed, and read across to the required foot or flange mount unit.

These tables also list the Service Factor for the unit indicated. In many cases, more than one unit is listed, to provide different service factors. Select the unit with a service factor that meets or exceeds the requirement of the application.

Check the Output Overhung Load or Output Thrust rating and Output Torque to verify they meet the requirements. (The Output Torque listed is the actual torque obtained with the motor H.P. listed, not the rated torque.) Then refer to the dimension tables to check the unit dimensions.

If a Reducer with C-Frame input is desired, the available frame sizes for each Reducer model are shown in the dimension tables, and also on page L-46. Specify the description as shown on page L-6.

If a Motorized Reducer is desired, make the motor selection with compatible C-Frame size, from the motors listed in Section H. Specify either the catalog number or the complete description of the motor, in addition to the Reducer description.

The selection tables indicate which units are available as Integral Gearmotors. if an Integral Gearmotor is desired, refer to the dimension tables on pages L-22 to L-27 for dimensions with all available motor sizes. Specify the motor H.P. in addition to the Reducer description.

Reducers may be ordered with other C-Frame sizes. The available frame sizes for each reducer model are shown in the dimension tables, and also on page L-46.

SELECTION FROM UNIT RATING TABLES BY INPUT H.P. OR OUTPUT TORQUE

Determine the actual Input H.P. or Output Torque required, Output Speed, and required Service Factor. Multiply the actual H.P. or torque by the required service factor to obtain the required rating of the Reducer. Refer to the Unit Rating Tables by Model and Output Speed, until you locate the model that meets or exceeds the required H.P. or Torque rating.

The actual service factor can be determined by dividing the unit rating by the actual H.P. or Torque.

Check the Input and Output overhung load ratings, and thrust rating to verify they meet the requirement. Then refer to the dimension tables to check the unit dimensions.

Available motor C-Frame sizes for each reducer model are shown in the dimension tables, and also on page L-46.

EFFICIENCY

The efficiency of Helical Worm drives is determined by the ratio and speed of the worm gear output stage. HUB CITY uses the highest practical ratios in the helical gear input stages to optimize efficiency and torque capacity. Helical Worm efficiencies are generally higher than worm gear drives. Triple and quad reduction drives provide maximum efficiency for higher ratios.

To obtain maximum efficiency, Helical Worm drives should be run-in properly, use the correct worm gear lubricant, and operate within rated torque capacity.

OVERHUNG LOADS & THRUST LOADS

Overhung load and Thrust ratings are listed in the Selection and Rating Tables. Note that OHL and Thrust Ratings cannot be applied simultaneously. Consult HUB CITY for applications with combined OHL and thrust load.

BRAKEMOTORS

Braking torque must not exceed the rated capacity of the unit.

SERVICE FACTORS

Service Factors are designated for Gearmotors and Reducers and also consider other power sources (such as Internal Combustion Engines), as well as the type of load and duration of service.

Table 1 lists approximate Service Factors for general use.

AGMA Service Factors tables on pages A-3 to A-4 provide approximate service factors for various types of machinery. The service factors are based on uniform power source (i.e. electric motor). Use the service factor conversion table on page A-2 to obtain service factors for internal combustion engines.

All the Class Number and Service Factor charts are to be used as general guidelines for assistance in determining the required service factor. Rely on past experience as well. Consult the factory for severe applications, when there are safety considerations, or a need for extra high reliability.

Refer to page A-2 for further information and Cautions on the selection of proper service factors.

Occasional starting loads up to 200% of catalog rating are permissible.

TABLE 1 — SERVICE FACTORS

		DRIVEN MACHINE LOAD CLASSIFICATION		
PRIME MOVER	DURATION OF SERVICE PER DAY (1)	UNIFORM	MEDIUM SHOCK	HEAVY SHOCK
Electric Motor	Occasional 1/2 hr.	*	*	1.00
	Intermittent 3 hrs.	*	1.00	1.25
	3 - 10 hours	1.00	1.25	1.50
	Over 10 hours	1.25	1.50	1.75
Electric Motor With Frequent Starts and Stops (2)	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Multi-Cylinder Internal Combustion Engine	Occasional 1/2 hr.	*	1.00	1.25
	Intermittent 3 hrs.	1.00	1.25	1.50
	3 - 10 hours	1.25	1.50	1.75
	Over 10 hours	1.50	1.75	2.00
Single Cylinder Internal Combustion Engine	Occasional 1/2 hr.	1.00	1.25	1.50
	Intermittent 3 hrs.	1.25	1.50	1.75
	3 - 10 hours	1.50	1.75	2.00
	Over 10 hours	1.75	2.00	2.25
Reversing Service Application		Consult Factory		

* UNSPECIFIED SERVICE FACTORS SHOULD BE 1.0 OR AS AGREED UPON BY USER AND MANUFACTURER.

EXPLANATORY NOTES

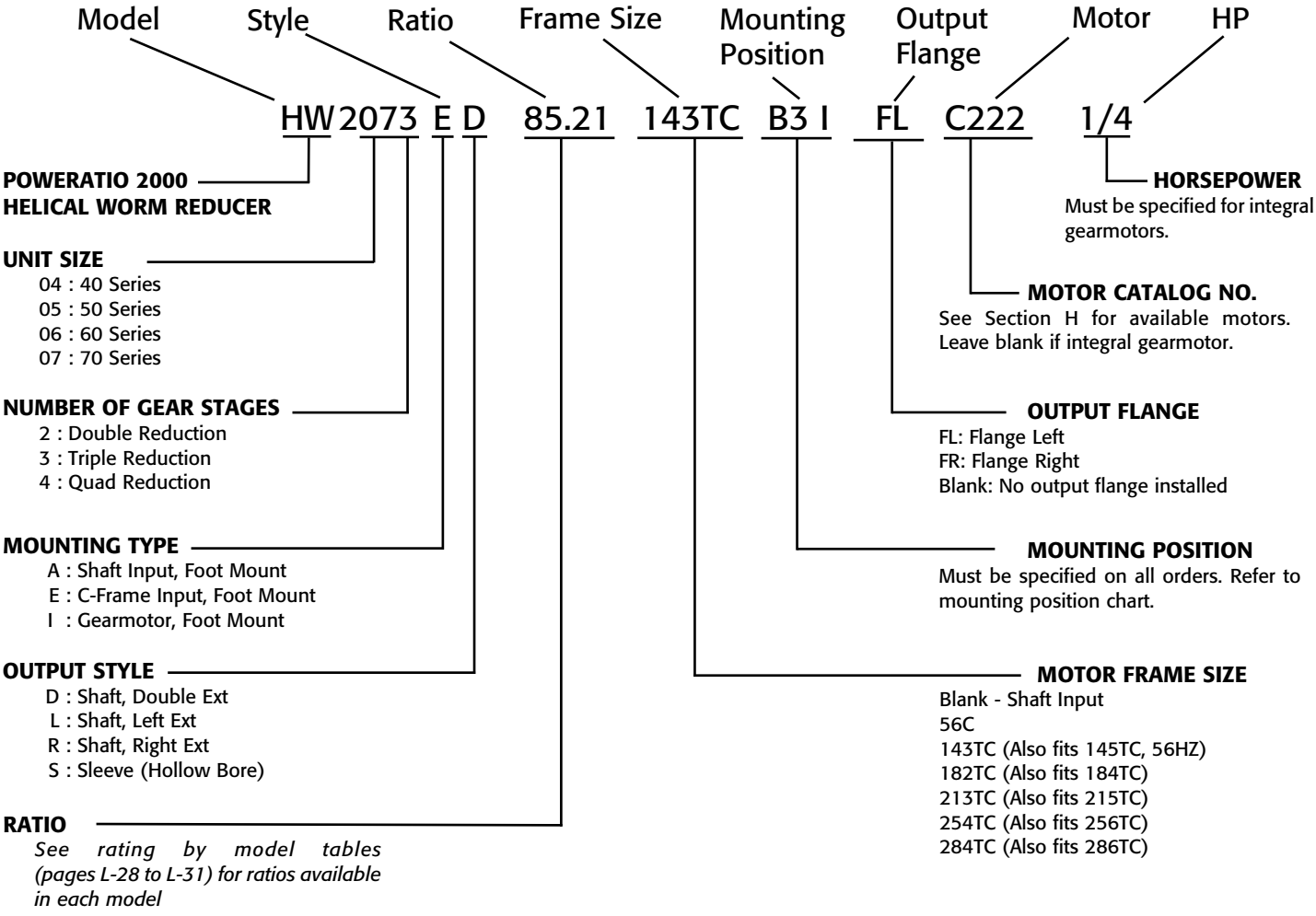
1. Time specified for intermittent and occasional service refers to total operating time per day.

2. Term "frequent starts and stops" refers to more than 10 starts per hour.

DESCRIPTIONS

DESCRIPTIONS FOR ORDERING REDUCERS AND GEARMOTORS

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors.



MOTOR DESCRIPTIONS

Available motors and motor data are listed on pages in Section H. Either specify the catalog number or the complete description: HP, RPM, VOLTS, SINGLE OR THREE PHASE, C-FRAME SIZE, ENCLOSURE GENERAL PURPOSE OR OPTIONAL TYPES: WASHDOWN DUTY, INVERTER DUTY, BRAKEMOTOR.

MOTORIZED REDUCERS & GEARMOTORS

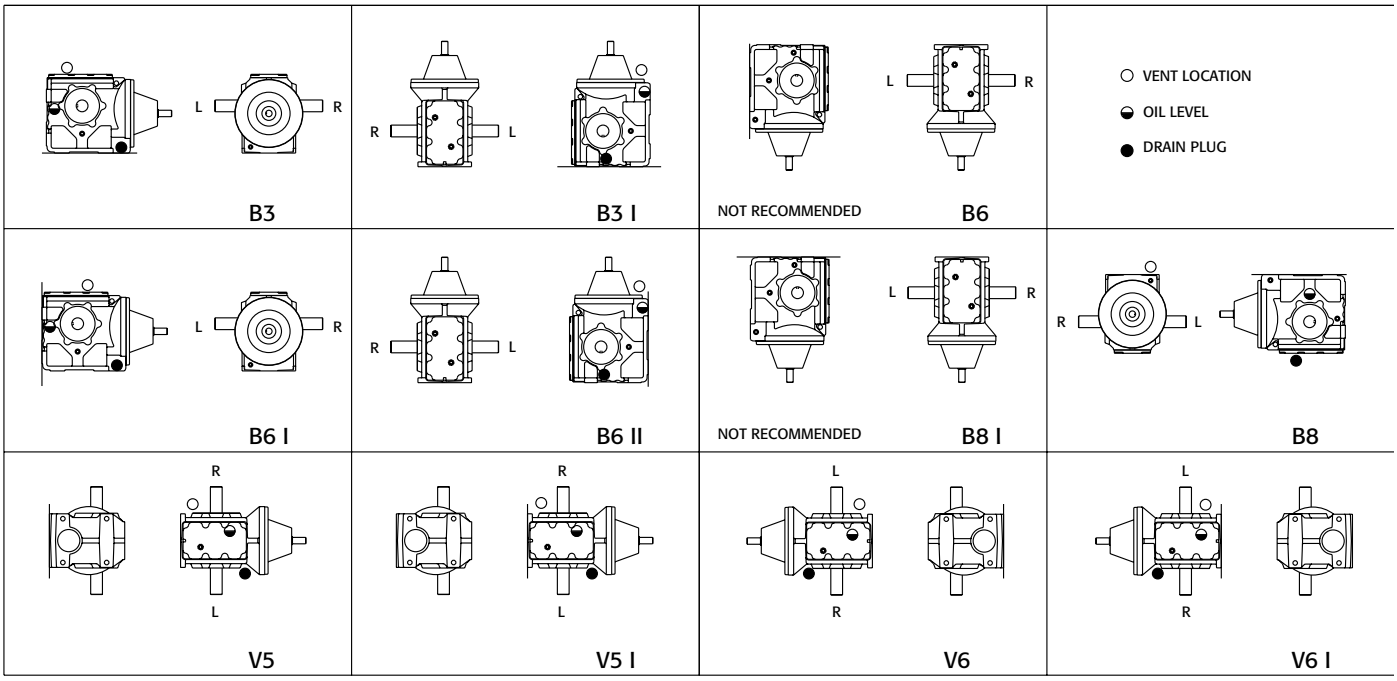
The Reducer and Motor are assembled at the factory, and filled with the proper quantity of lubricant based on your specified mounting position. Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed, fan cooled (TEFC) 1750 rpm general purpose motors. Special integral gearmotors are available. Consult the factory for details.

Standard Integral Gearmotors and Motorized Reducers are assembled at the factory with the conduit box and the conduit opening at the position illustrated in the dimensional section of this catalog. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

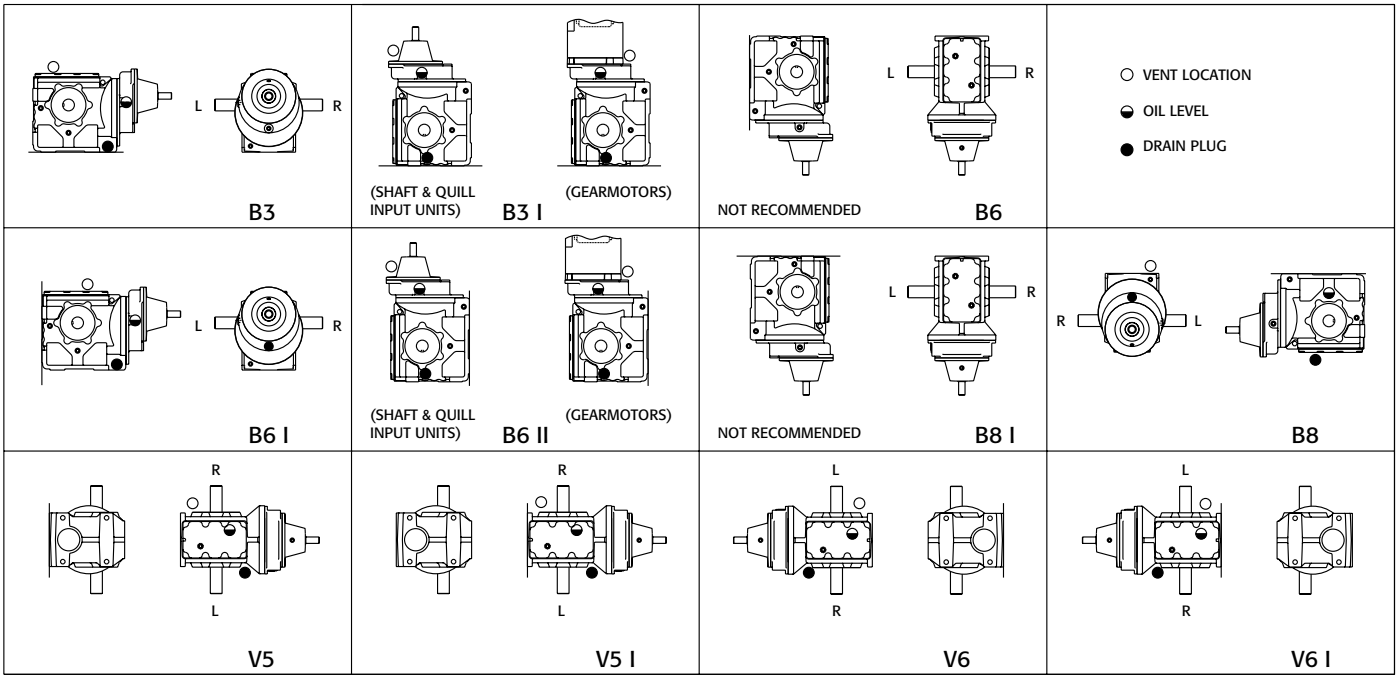
MOUNTING POSITIONS

Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the factory. (Refer Section R for lubrication information.)

DOUBLE REDUCTION MOUNTING POSITIONS



TRIPLE REDUCTION MOUNTING POSITIONS

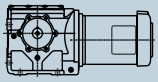
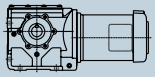
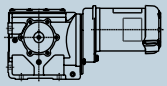
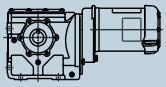
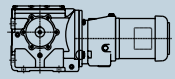
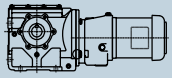


QUAD REDUCTION MOUNTING POSITIONS

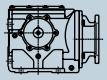
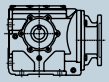
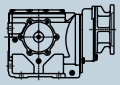
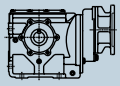
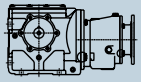
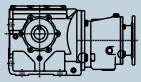
For mounting position refer to double reduction chart above. For lubrication of primary unit, refer to Section R.

MODEL INDEX

INTEGRAL GEARMOTORS

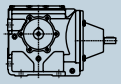
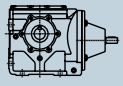
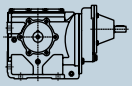
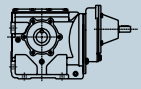
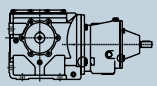
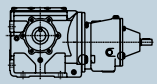
DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUAD REDUCTION DIMENSIONS		RATINGS
						
Page L-22 Shaft Output	Page L-23 Shaft Mount	Page L-24 Shaft Output	Page L-25 Shaft Mount	Page L-26 Shaft Output	Page L-27 Shaft Mount	Refer To Selection Pages L-10 to L-21

C-FRAME QUILL INPUT REDUCERS

	DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUAD REDUCTION DIMENSIONS		RATINGS		
									
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	DOUBLE REDUC-TION	TRIPLE REDUC-TION	QUAD REDUC-TION
40	HW2042E* Page L-32	HW2042ES Page L-33	HW2043E* Page L-36	HW2043ES Page L-37	NA	NA	Page L-28	Page L-28	NA
50	HW2052E* Page L-32	HW2052ES Page L-33	HW2053E* Page L-36	HW2053ES Page L-37	NA	NA	Page L-29	Page L-29	NA
60	HW2062E* Page L-32	HW2062ES Page L-33	HW2063E* Page L-36	HW2063ES Page L-37	HW2064E* Page L-40	HW2064ES Page L-41	Page L-30	Page L-31	Page L-31
70	HW2072E* Page L-32	HW2072ES Page L-33	HW2073E* Page L-36	HW2073ES Page L-37	HW2074E* Page L-40	HW2074ES Page L-41	Page L-32	Page L-33	Page L-33

MOTORIZED MODELS ARE SAME AS C-FRAME QUILL MODELS. SIMPLY ORDER THE DESIRED C-FRAME REDUCER, SPECIFY THE MOTOR, AND SPECIFY "MOTORIZED ASSEMBLY".

SHAFT INPUT REDUCERS

	DOUBLE REDUCTION DIMENSIONS		TRIPLE REDUCTION DIMENSIONS		QUAD REDUCTION DIMENSIONS		RATINGS		
									
SERIES	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	SHAFT OUTPUT	SHAFT MOUNT	DOUBLE REDUC-TION	TRIPLE REDUC-TION	QUAD REDUC-TION
40	HW2042A* Page L-34	HW2042AS Page L-35	HW2043A* Page L-38	HW2043AS Page L-39	NA	NA	Page L-28	Page L-28	NA
50	HW2052A* Page L-34	HW2052AS Page L-35	HW2053A* Page L-38	HW2053AS Page L-39	NA	NA	Page L-29	Page L-29	NA
60	HW2062A* Page L-34	HW2062AS Page L-35	HW2063A* Page L-38	HW2063AS Page L-39	HW2064A* Page L-42	HW2064AS Page L-43	Page L-30	Page L-31	Page L-31
70	HW2072A* Page L-34	HW2072AS Page L-35	HW2073A* Page L-38	HW2073AS Page L-39	HW2074A* Page L-42	HW2074AS Page L-43	Page L-32	Page L33	Page L-33

* SHAFT OUTPUT STYLES D (DOUBLE), L (LEFT), R (RIGHT)

ACCESSORIES

Flange Mount Kit Page L-44 to L-45 & Torque Arm Kit Page L-45

QUICK START GUIDE TO SELECTION TABLES

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
	244	479	7.17	4.79	92.5	2100	275	2400	2	HW2062	Available
	233	496	7.50	2.68	91.6	1750	350	2000	2	HW2052	Available
	233				91.0	1350	350	1800	2	HW2042	Available
	208				91.3	1750	350	2000	2	HW2052	Available
	208				90.7	1350	350	1800	2	HW2042	Available
	186				90.9	1750	350	2000	2	HW2052	Available
	186				90.4	1350	350	1800	2	HW2042	Available
	165				90.7	1750	350	2000	2	HW2052	Available
	165				90.0	1350	350	1800	2	HW2042	Available
	161	714	10.88	4.09	91.3	2100	275	2400	2	HW2062	Available
	146	779	12.00	2.11	90.3	1750	350	2000	2	HW2052	Available
	146	776	12.00	1.17	89.6	1350	350	1800	2	HW2042	Available
	139	827	12.62	3.79					2	HW2062	Available
									2	HW2052	Available
									2	HW2042	Available
	112	1006	15.60	1.79	89.4	1750	350	2000	2	HW2052	Available
	112	970	15.60	1.00	88.7	1350	350	1800	2	HW2042	
	106	1070	16.50	3.24	90.1	2100	275	2400	2	HW2062	Available
	105	1076	16.74	1.70	89.2	1750	350	2000	2	HW2052	Available
	98	1127	17.93	2.76	87.4	2100	350	2400	2	HW2062	Available
2											
	93	1134						2000	2	HW2052	Available
	89	1273						2400	2	HW2062	Available
	83	1227						2000	2	HW2052	Available
	83	1353						2400	2	HW2062	Available
	74	1424						2000	2	HW2052	Available
	73	1528						2400	2	HW2062	Available
	68	1643						2400	2	HW2062	Available
	66	1592						2000	2	HW2052	Available
	64	1677	27.19	2.32	85.5	2100	350				
	58	1789	30.00	1.19	82.6	1750	350				
					86.0	3050	525				
					88.2	2100	275				
					87.9	2100	275				
					85.4	3050	525				
					81.9	1750	350	2000	2	HW2052	Available
	49	2051	35.85	1.58	79.3	2100	350	2400	2	HW2062	Available
	45	2361	38.7								lable
	45	2234	39.0								lable
	42	2474	41.2								lable
	42	2320	41.8								lable

1. Determine Input Horsepower, Output Speed and Load Classification (see Section A).

3. Locate Desired Output speed

4. Locate Required Service Factor (see page L-5)

5. Check the Output OHL, output thrust, and Output torque ratings to verify they meet your requirements (Output torque listed is the actual torque obtained by the motor HP listed, not the rated torque).

2. Find appropriate Selection by Input HP page (Beginning on Page L-10)

6. Read across to select model number. Refer to Page L-6 for Mounting type and Ordering information.

IN THIS CATALOG:

HP = Horsepower

Output torque is displayed in inch pounds (in. lbs.)

OHL = Over hung load (measured at centerline of output shaft)

Service Factor is based on maximum rated torque of gear drive

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE L-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.

THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.

AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	233	62	7.50	12.35	91.0	1350	350	1800	2	HW2042	Available
	208	67	8.40	12.00	90.7	1350	350	1800	2	HW2042	Available
	186	77	9.43	10.92	90.4	1350	350	1800	2	HW2042	Available
	165	86	10.62	10.16	90.0	1350	350	1800	2	HW2042	Available
	146	97	12.00	9.39	89.6	1350	350	1800	2	HW2042	Available
	128	109	13.64	8.60	89.2	1350	350	1800	2	HW2042	Available
	112	121	15.60	8.00	88.7	1350	350	1800	2	HW2042	Available
	105	134	16.74	7.41	88.5	1350	350	1800	2	HW2042	Available
	93	142	18.75	7.12	84.2	1350	350	1800	2	HW2042	Available
	86	162	20.40	6.37	87.8	1350	350	1800	2	HW2042	Available
	74	177	23.57	6.29	82.9	1350	350	1800	2	HW2042	Available
	69	199	25.43	5.33	87.1	1350	350	1800	2	HW2042	Available
	66	199	26.54	10.20	83.3	1750	350	2000	2	HW2052	Available
	58	220	30.00	5.41	81.5	1350	350	1800	2	HW2042	Available
	51	248	34.09	4.96	80.9	1350	350	1800	2	HW2042	Available
	45	281	39.00	4.51	80.1	1350	350	1800	2	HW2042	Available
	42	301	41.84	4.29	79.7	1350	350	1800	2	HW2042	Available
	37	308	47.14	3.70	72.3	1350	350	1800	2	HW2042	Available
	33	340	53.08	3.47	71.3	1350	350	1800	2	HW2042	Available
	29	379	60.00	3.22	70.4	1350	350	1800	2	HW2042	Available
	28	445	63.57	3.10	77.4	1350	350	1800	2	HW2042	Available
	26	420	68.18	3.00	69.3	1350	350	1800	2	HW2042	Available
	22	488	78.00	4.80	69.7	1750	350	2000	2	HW2052	Available
	22	479	78.00	2.71	68.2	1350	350	1800	2	HW2042	Available
	21	520	83.68	4.60	69.1	1750	350	2000	2	HW2052	Available
	21	510	83.68	2.59	67.6	1350	350	1800	2	HW2042	Available
	19.3	535	90.91	4.24	65.4	1750	350	2000	2	HW2052	Available
	19.3	527	90.91	2.35	64.5	1350	350	1800	2	HW2042	Available
	17.2	619	102.00	4.04	67.5	1750	350	2000	2	HW2052	Available
	17.2	610	102.00	2.25	66.2	1350	350	1800	2	HW2042	Available
	15.7	642	111.58	3.72	63.6	1750	350	2000	2	HW2052	Available
	15.7	633	111.58	2.06	62.8	1350	350	1800	2	HW2042	Available
	13.8	753	127.14	3.44	65.9	1750	350	2000	2	HW2052	Available
	13.8	705	127.14	2.00	64.6	1350	350	1800	2	HW2042	Available
	12.9	762	136.00	3.28	61.8	1750	350	2000	2	HW2052	Available
	12.9	748	136.00	1.79	61.2	1350	350	1800	2	HW2042	Available
	11.7	921	150.00	5.68	68.4	2100	350	2400	2	HW2062	
	10.7	996	162.86	5.32	67.8	2100	350	2400	2	HW2062	
	10.3	925	169.52	2.80	60.1	1750	350	2000	2	HW2052	Available
	10.3	907	169.52	1.52	59.5	1350	350	1800	2	HW2042	Available
	9.5	958	183.74	2.74	57.9	1750	125	2000	3	HW2053	Available
	9.5	950	183.74	1.46	57.4	1350	125	1800	3	HW2043	Available
	8.8	1124	200.00	4.60	62.3	2100	350	2400	2	HW2062	
	8.4	1133	209.40	2.44	60.1	1750	125	2000	3	HW2053	Available
	8.4	1115	209.40	1.33	59.1	1350	125	1800	3	HW2043	Available
	8.1	1200	217.14	4.36	61.6	2100	350	2400	2	HW2062	
	7.6	1233	230.09	2.25	59.5	1750	125	2000	3	HW2053	Available
	7.6	1211	230.09	1.23	58.5	1350	125	1800	3	HW2043	Available
	6.9	1670	254.28	3.41	73.0	2100	350	2400	3	HW2063	Available
	6.8	1470	256.00	7.26	63.8	3050	525	3100	2	HW2072	
	6.5	1410	267.38	1.99	58.6	1750	125	2000	3	HW2053	Available
	6.5	1387	267.38	1.08	57.6	1350	125	1800	3	HW2043	Available
	6.0	1531	292.85	1.85	58.1	1750	125	2000	3	HW2053	Available
	6.0	1509	292.85	1.00	57.2	1350	125	1800	3	HW2043	Available
	5.9	1900	298.63	3.00	70.3	2100	350	2400	4	HW2064	Available
	5.7	1983	306.66	2.87	71.8	2100	350	2400	3	HW2063	Available
	5.0	1804	349.64	1.59	57.3	1750	125	2000	3	HW2053	Available
	5.0	2245	352.50	2.54	70.8	2100	350	2400	3	HW2063	Available
	4.9	2227	357.86	2.56	69.3	2100	350	2400	4	HW2064	Available

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE L-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/4	4.5	1833	390.46	1.54	52.1	1750	125	2000	3	HW2053	Available
	4.3	2222	408.00	2.62	60.5	2100	350	2400	3	HW2063	Available
	3.9	2206	446.24	2.55	54.9	2100	350	2400	3	HW2063	Available
	4.6	2381	380.74	4.88	69.5	3050	350	3100	4	HW2074	Available
	3.9	2740	452.82	2.08	67.9	2100	350	2400	4	HW2064	Available
	3.8	2156	466.18	1.32	51.4	1750	125	2000	3	HW2053	Available
	3.8	2793	454.91	4.16	68.3	3050	350	3100	4	HW2074	Available
	3.4	2730	508.56	2.14	59.6	2100	350	2400	3	HW2063	Available
	3.6	3026	492.77	3.84	67.9	3050	350	3100	4	HW2074	Available
	3.3	3167	525.54	1.80	67.3	2100	350	2400	4	HW2064	Available
	3.2	2643	544.00	2.15	54.0	2100	350	2400	3	HW2063	Available
	3.0	2955	576.43	3.92	56.9	3050	350	3100	3	HW2073	Available
	2.9	3586	594.56	3.24	67.2	3050	350	3100	4	HW2074	Available
	2.9	2692	593.32	1.07	50.4	1750	125	2000	3	HW2053	Available
	2.9	3101	597.26	1.88	57.0	2100	350	2400	4	HW2064	Available
	2.8	3162	615.80	3.76	57.2	3050	350	3100	4	HW2074	Available
	2.7	3441	656.93	3.46	58.2	3050	350	3100	3	HW2073	Available
	2.6	3235	678.08	1.78	53.0	2100	350	2400	3	HW2063	Available
	2.5	4071	687.23	1.40	66.4	2100	350	2400	4	HW2064	Available
	2.5	3553	702.71	3.29	56.2	3050	350	3100	3	HW2073	Available
	2.5	3614	705.00	1.61	56.9	2100	350	2400	3	HW2063	Available
	2.3	3811	761.48	3.12	55.9	3050	350	3100	4	HW2074	Available
	2.1	4914	821.17	1.16	65.9	2100	350	2400	4	HW2064	Available
	2.2	4201	792.26	2.83	58.9	3050	350	3100	3	HW2073	Available
	2.1	3796	817.76	1.52	51.6	2100	350	2400	3	HW2063	Available
	2.1	5009	849.38	2.32	66.0	3050	350	3100	4	HW2074	Available
	2.0	5112	860.42	2.27	66.0	3050	350	3100	4	HW2074	Available
	1.9	4565	910.68	2.60	55.7	3050	350	3100	3	HW2073	Available
	1.9	4257	940.00	1.35	50.3	2100	350	2400	3	HW2063	Available
	1.9	4555	905.64	1.28	54.1	2100	350	2400	4	HW2064	Available
	1.8	4794	985.55	2.48	54.1	3050	350	3100	4	HW2074	Available
	1.7	4976	1056	2.35	52.3	3050	350	3100	3	HW2073	Available
	1.5	5716	1189	2.08	52.9	3050	350	3100	4	HW2074	Available
	1.4	5625	1214	2.08	51.5	3050	350	3100	3	HW2073	Available
	1.2	6913	1459	1.72	52.1	3050	350	3100	4	HW2074	Available
	1.0	8257	1787	1.44	51.4	3050	350	3100	4	HW2074	Available
	0.8	9908	2175	1.20	50.9	3050	350	3100	4	HW2074	Available
	0.7	11433	2547	1.04	50.7	3050	350	3100	4	HW2074	Available
1/3	233	81	7.50	9.35	91.0	1350	350	1800	2	HW2042	Available
	208	88	8.40	9.09	90.7	1350	350	1800	2	HW2042	Available
	186	102	9.43	8.27	90.4	1350	350	1800	2	HW2042	Available
	165	113	10.62	7.70	90.0	1350	350	1800	2	HW2042	Available
	146	128	12.00	7.11	89.6	1350	350	1800	2	HW2042	Available
	128	144	13.64	6.51	89.2	1350	350	1800	2	HW2042	Available
	112	160	15.60	6.06	88.7	1350	350	1800	2	HW2042	Available
	105	176	16.74	5.62	88.5	1350	350	1800	2	HW2042	Available
	93	187	18.75	5.40	84.2	1350	350	1800	2	HW2042	Available
	86	214	20.40	4.82	87.8	1350	350	1800	2	HW2042	Available
	74	233	23.57	4.76	82.9	1350	350	1800	2	HW2042	Available
	69	263	25.43	4.04	87.1	1350	350	1800	2	HW2042	Available
	66	263	26.54	7.73	83.3	1750	350	2000	2	HW2052	Available
	58	290	30.00	4.10	81.5	1350	350	1800	2	HW2042	Available
	51	327	34.09	3.76	80.9	1350	350	1800	2	HW2042	Available
	45	371	39.00	3.42	80.1	1350	350	1800	2	HW2042	Available
	42	397	41.84	3.25	79.7	1350	350	1800	2	HW2042	Available
	37	406	47.14	2.81	72.3	1350	350	1800	2	HW2042	Available
	33	458	53.08	4.55	72.9	1750	350	2000	2	HW2052	Available

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* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	33	449	53.08	2.63	71.3	1350	350	1800	2	HW2042	Available
	29	512	60.00	4.24	71.8	1750	350	2000	2	HW2052	Available
	29	501	60.00	2.44	70.4	1350	350	1800	2	HW2042	Available
	28	592	63.57	4.27	78.4	1750	350	2000	2	HW2052	Available
	28	587	63.57	2.35	77.4	1350	350	1800	2	HW2042	Available
	26	574	68.18	3.94	70.9	1750	350	2000	2	HW2052	Available
	26	554	68.18	2.27	69.3	1350	350	1800	2	HW2042	Available
	22	644	78.00	3.64	69.7	1750	350	2000	2	HW2052	Available
	22	632	78.00	2.06	68.2	1350	350	1800	2	HW2042	Available
	21	686	83.68	3.48	69.1	1750	350	2000	2	HW2052	Available
	21	673	83.68	1.96	67.6	1350	350	1800	2	HW2042	Available
	19.3	707	90.91	3.21	65.4	1750	350	2000	2	HW2052	Available
	19.3	696	90.91	1.78	64.5	1350	350	1800	2	HW2042	Available
	17.2	817	102.00	3.06	67.5	1750	350	2000	2	HW2052	Available
	17.2	805	102.00	1.70	66.2	1350	350	1800	2	HW2042	Available
	15.7	848	111.58	2.82	63.6	1750	350	2000	2	HW2052	Available
	15.7	835	111.58	1.56	62.8	1350	350	1800	2	HW2042	Available
	13.8	994	127.14	2.61	65.9	1750	350	2000	2	HW2052	Available
	13.8	931	127.14	1.52	64.6	1350	350	1800	2	HW2042	Available
	12.9	1006	136.00	2.48	61.8	1750	350	2000	2	HW2052	Available
	12.9	988	136.00	1.36	61.2	1350	350	1800	2	HW2042	Available
	11.7	1215	150.00	4.30	68.4	2100	350	2400	2	HW2062	
	10.3	1221	169.52	2.12	60.1	1750	350	2000	2	HW2052	Available
	10.3	1198	169.52	1.15	59.5	1350	350	1800	2	HW2042	Available
	10.2	1299	171.76	3.88	63.5	2100	350	2400	2	HW2062	
	9.5	1264	183.74	2.07	57.9	1750	125	2000	3	HW2053	Available
	9.5	1254	183.74	1.11	57.4	1350	125	1800	3	HW2043	Available
	8.8	1484	200.00	3.48	62.3	2100	350	2400	2	HW2062	
	8.4	1496	209.40	1.85	60.1	1750	125	2000	3	HW2053	Available
	8.4	1472	209.40	1.01	59.1	1350	125	1800	3	HW2043	Available
	8.1	1583	217.14	3.30	61.6	2100	350	2400	2	HW2062	
	7.6	1628	230.09	1.71	59.5	1750	125	2000	3	HW2053	Available
	6.9	2205	254.28	2.59	73.0	2100	350	2400	3	HW2063	Available
	6.5	1861	267.38	1.51	58.6	1750	125	2000	3	HW2053	Available
	6.0	2021	292.85	1.40	58.1	1750	125	2000	3	HW2053	Available
	5.9	2531	298.63	2.25	70.3	2100	350	2400	4	HW2064	Available
	5.7	2615	307.90	4.44	70.7	3050	350	3100	4	HW2074	Available
	5.7	2617	306.66	2.18	71.8	2100	350	2400	3	HW2063	Available
	5.0	2381	349.64	1.20	57.3	1750	125	2000	3	HW2053	Available
	5.0	2964	352.50	1.92	70.8	2100	350	2400	3	HW2063	Available
	4.9	2966	357.86	1.92	69.3	2100	350	2400	4	HW2064	Available
	4.6	3172	380.74	3.66	69.5	3050	350	3100	4	HW2074	Available
	4.5	2419	390.46	1.17	52.1	1750	125	2000	3	HW2053	Available
	4.3	2933	408.00	1.99	60.5	2100	350	2400	3	HW2063	Available
	3.9	2912	446.24	1.93	54.9	2100	350	2400	3	HW2063	Available
	3.9	3650	452.82	1.56	67.9	2100	350	2400	4	HW2064	Available
	3.8	3721	454.91	3.12	68.3	3050	350	3100	4	HW2074	Available
	3.8	3684	456.68	1.55	67.9	2100	350	2400	4	HW2064	Available
	3.8	2846	466.18	1.00	51.4	1750	125	2000	3	HW2053	Available
	3.6	4031	492.77	2.88	67.9	3050	350	3100	4	HW2074	Available
	3.7	3232	469.78	3.53	57.9	3050	350	3100	3	HW2073	Available
	3.4	3603	508.56	1.62	59.6	2100	350	2400	3	HW2063	Available
	3.3	3776	527.03	3.15	60.3	3050	350	3100	3	HW2073	Available
	3.3	4218	525.54	1.35	67.3	2100	350	2400	4	HW2064	Available
	3.2	3488	544.00	1.63	54.0	2100	350	2400	3	HW2063	Available
	3.0	3900	576.43	2.97	56.9	3050	350	3100	3	HW2073	Available
	2.9	4777	594.56	2.43	67.2	3050	350	3100	4	HW2074	Available
	2.9	4131	597.26	1.41	57.0	2100	350	2400	4	HW2064	Available
	2.9	4241	613.32	1.37	58.2	2100	350	2400	3	HW2063	Available
	2.8	4212	615.80	2.82	57.2	3050	350	3100	4	HW2074	Available

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/3	2.7	4542	656.93	2.62	58.2	3050	350	3100	3	HW2073	Available
	2.6	4271	678.08	1.35	53.0	2100	350	2400	3	HW2063	Available
	2.5	4690	702.71	2.49	56.2	3050	350	3100	3	HW2073	Available
	2.5	4770	705.00	1.22	56.9	2100	350	2400	3	HW2063	Available
	2.5	5423	687.23	1.05	66.4	2100	350	2400	4	HW2064	Available
	2.3	5076	761.48	2.34	55.9	3050	350	3100	4	HW2074	Available
	2.2	5546	792.26	2.14	58.9	3050	350	3100	3	HW2073	Available
	2.1	6671	849.38	1.74	66.0	3050	350	3100	4	HW2074	Available
	2.1	5010	817.76	1.15	51.6	2100	350	2400	3	HW2063	Available
	1.9	6026	910.68	1.97	55.7	3050	350	3100	3	HW2073	Available
	1.9	5620	940.00	1.02	50.3	2100	350	2400	3	HW2063	Available
	1.8	6386	985.55	1.86	54.1	3050	350	3100	4	HW2074	Available
	1.7	6568	1056	1.78	52.3	3050	350	3100	3	HW2073	Available
	1.5	7614	1189	1.56	52.9	3050	350	3100	4	HW2074	Available
	1.4	7426	1214	1.58	51.5	3050	350	3100	3	HW2073	Available
	1.2	9208	1459	1.29	52.1	3050	350	3100	4	HW2074	Available
	1.0	10998	1787	1.08	51.4	3050	350	3100	4	HW2074	Available
1/2	233	123	7.50	6.17	91.0	1350	350	1800	2	HW2042	Available
	208	133	8.40	6.00	90.7	1350	350	1800	2	HW2042	Available
	186	154	9.43	5.46	90.4	1350	350	1800	2	HW2042	Available
	165	171	10.62	5.08	90.0	1350	350	1800	2	HW2042	Available
	146	194	12.00	4.69	89.6	1350	350	1800	2	HW2042	Available
	128	219	13.64	4.30	89.2	1350	350	1800	2	HW2042	Available
	112	243	15.60	4.00	88.7	1350	350	1800	2	HW2042	Available
	105	267	16.74	3.71	88.5	1350	350	1800	2	HW2042	Available
	93	284	18.75	3.56	84.2	1350	350	1800	2	HW2042	Available
	86	324	20.40	3.18	87.8	1350	350	1800	2	HW2042	Available
	74	353	23.57	3.14	82.9	1350	350	1800	2	HW2042	Available
	69	398	25.43	2.66	87.1	1350	350	1800	2	HW2042	Available
	66	398	26.54	5.10	83.3	1750	350	2000	2	HW2052	Available
	58	440	30.00	2.71	81.5	1350	350	1800	2	HW2042	Available
	51	502	34.09	4.38	81.9	1750	350	2000	2	HW2052	Available
	51	496	34.09	2.48	80.9	1350	350	1800	2	HW2042	Available
	45	559	39.00	4.10	81.1	1750	350	2000	2	HW2052	Available
	45	563	39.00	2.26	80.1	1350	350	1800	2	HW2042	Available
	42	580	41.84	4.00	80.8	1750	350	2000	2	HW2052	Available
	42	602	41.84	2.14	79.7	1350	350	1800	2	HW2042	Available
	37	630	47.14	3.16	73.9	1750	350	2000	2	HW2052	Available
	37	616	47.14	1.85	72.3	1350	350	1800	2	HW2042	Available
	33	693	53.08	3.00	72.9	1750	350	2000	2	HW2052	Available
	33	681	53.08	1.73	71.3	1350	350	1800	2	HW2042	Available
	29	775	60.00	2.80	71.8	1750	350	2000	2	HW2052	Available
	29	758	60.00	1.61	70.4	1350	350	1800	2	HW2042	Available
	28	897	63.57	2.82	78.4	1750	350	2000	2	HW2052	Available
	28	889	63.57	1.55	77.4	1350	350	1800	2	HW2042	Available
	26	869	68.18	2.60	70.9	1750	350	2000	2	HW2052	Available
	26	840	68.18	1.50	69.3	1350	350	1800	2	HW2042	Available
	22	975	78.00	2.40	69.7	1750	350	2000	2	HW2052	Available
	22	958	78.00	1.36	68.2	1350	350	1800	2	HW2042	Available
	22	1167	81.43	4.42	79.8	2100	350	2400	2	HW2062	Available
	21	1039	83.68	2.30	69.1	1750	350	2000	2	HW2052	Available
	21	1019	83.68	1.29	67.6	1350	350	1800	2	HW2042	Available
	19.3	1071	90.91	2.12	65.4	1750	350	2000	2	HW2052	Available
	19.3	1054	90.91	1.18	64.5	1350	350	1800	2	HW2042	Available
	17.8	1271	98.57	3.80	71.5	2100	350	2400	2	HW2062	Available
	17.2	1238	102.00	2.02	67.5	1750	350	2000	2	HW2052	Available
	17.2	1219	102.00	1.12	66.2	1350	350	1800	2	HW2042	Available
	16.7	1343	105.00	3.64	71.1	2100	350	2400	2	HW2062	Available
	15.7	1285	111.58	1.86	63.6	1750	350	2000	2	HW2052	Available

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1/2	15.7	1265	111.58	1.03	62.8	1350	350	1800	2	HW2042	Available
	14.6	1515	120.00	3.32	70.1	2100	350	2400	2	HW2062	Available
	13.8	1506	127.14	1.72	65.9	1750	350	2000	2	HW2052	Available
	13.8	1410	127.14	1.00	64.6	1350	350	1800	2	HW2042	Available
	13.6	1614	128.82	3.16	69.6	2100	350	2400	2	HW2062	Available
	12.9	1524	136.00	1.64	61.8	1750	350	2000	2	HW2052	Available
	12.5	1613	140.00	3.00	65.2	2100	350	2400	2	HW2062	Available
	11.7	1842	150.00	2.84	68.4	2100	350	2400	2	HW2062	Available
	10.7	1992	162.86	2.66	67.8	2100	350	2400	2	HW2062	Available
	10.3	1850	169.52	1.40	60.1	1750	350	2000	2	HW2052	Available
	10.2	1969	171.76	2.56	63.5	2100	350	2400	2	HW2062	Available
	9.5	1915	183.74	1.37	57.9	1750	125	2000	3	HW2053	Available
	8.8	2248	200.00	2.30	62.3	2100	350	2400	2	HW2062	Available
	8.4	2266	209.40	1.22	60.1	1750	125	2000	3	HW2053	Available
	8.1	2399	217.14	2.18	61.6	2100	350	2400	2	HW2062	Available
	7.6	2466	230.09	1.13	59.5	1750	125	2000	3	HW2053	Available
	6.9	3341	254.28	1.71	73.0	2100	350	2400	3	HW2063	Available
	6.8	2940	256.00	3.63	63.8	3050	525	3100	2	HW2072	Available
	6.5	2819	267.38	1.00	58.6	1750	125	2000	3	HW2053	Available
	5.9	3800	298.63	1.50	70.3	2100	350	2400	4	HW2064	Available
	5.7	3926	307.90	2.96	70.7	3050	350	3100	4	HW2074	Available
	5.7	3965	306.66	1.44	71.8	2100	350	2400	3	HW2063	Available
	5.6	3510	310.02	3.26	62.9	3050	350	3100	3	HW2073	Available
	5.0	3941	352.34	2.94	62.1	3050	350	3100	3	HW2073	Available
	5.0	4491	352.50	1.27	70.8	2100	350	2400	3	HW2063	Available
	4.9	4453	357.86	1.28	69.3	2100	350	2400	4	HW2064	Available
	4.6	4762	380.74	2.44	69.5	3050	350	3100	4	HW2074	Available
	4.3	4452	403.03	2.63	61.3	3050	350	3100	3	HW2073	Available
	4.3	4443	408.00	1.31	60.5	2100	350	2400	3	HW2063	Available
	4.0	4753	432.32	2.47	61.1	3050	350	3100	3	HW2073	Available
	3.9	4412	446.24	1.27	54.9	2100	350	2400	3	HW2063	Available
	3.9	5481	452.82	1.04	67.9	2100	350	2400	4	HW2064	Available
	3.8	5587	454.91	2.08	68.3	3050	350	3100	4	HW2074	Available
	3.7	4897	469.78	2.33	57.9	3050	350	3100	3	HW2073	Available
	3.6	6052	492.77	1.92	67.9	3050	350	3100	4	HW2074	Available
	3.4	5459	508.56	1.07	59.6	2100	350	2400	3	HW2063	Available
	3.3	5722	527.03	2.08	60.3	3050	350	3100	3	HW2073	Available
	3.2	5285	544.00	1.08	54.0	2100	350	2400	3	HW2063	Available
	3.0	5909	576.43	1.96	56.9	3050	350	3100	3	HW2073	Available
	2.9	7173	594.56	1.62	67.2	3050	350	3100	4	HW2074	Available
	2.8	6324	615.80	1.88	57.2	3050	350	3100	4	HW2074	Available
	2.7	6882	656.93	1.73	58.2	3050	350	3100	3	HW2073	Available
	2.5	7106	702.71	1.65	56.2	3050	350	3100	3	HW2073	Available
	2.3	7622	761.48	1.56	55.9	3050	350	3100	4	HW2074	Available
	2.2	8403	792.26	1.41	58.9	3050	350	3100	3	HW2073	Available
	2.1	10017	849.38	1.16	66.0	3050	350	3100	4	HW2074	Available
	1.9	9131	910.68	1.30	55.7	3050	350	3100	3	HW2073	Available
	1.8	9589	985.55	1.24	54.1	3050	350	3100	4	HW2074	Available
	1.7	9952	1056	1.18	52.3	3050	350	3100	3	HW2073	Available
	1.5	11433	1189	1.04	52.9	3050	350	3100	4	HW2074	Available
	1.4	11251	1214	1.04	51.5	3050	350	3100	3	HW2073	Available
3/4	233	185	7.50	4.12	91.0	1350	350	1800	2	HW2042	Available
	208	200	8.40	4.00	90.7	1350	350	1800	2	HW2042	Available
	186	231	9.43	3.64	90.4	1350	350	1800	2	HW2042	Available
	165	257	10.62	3.39	90.0	1350	350	1800	2	HW2042	Available
	146	291	12.00	3.13	89.6	1350	350	1800	2	HW2042	Available
	128	328	13.64	2.87	89.2	1350	350	1800	2	HW2042	Available
	112	377	15.60	4.77	89.4	1750	350	2000	2	HW2052	Available

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE L-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	112	364	15.60	2.67	88.7	1350	350	1800	2	HW2042	Available
	105	404	16.74	4.53	89.2	1750	350	2000	2	HW2052	Available
	105	401	16.74	2.47	88.5	1350	350	1800	2	HW2042	Available
	93	425	18.75	4.07	85.2	1750	350	2000	2	HW2052	Available
	93	425	18.75	2.37	84.2	1350	350	1800	2	HW2042	Available
	86	485	20.40	2.12	87.8	1350	350	1800	2	HW2042	Available
	83	460	21.00	4.00	84.6	1750	350	2000	2	HW2052	Available
	74	534	23.57	3.61	84.0	1750	350	2000	2	HW2052	Available
	74	530	23.57	2.10	82.9	1350	350	1800	2	HW2042	Available
	69	597	25.43	1.78	87.1	1350	350	1800	2	HW2042	Available
	66	597	26.54	3.40	83.3	1750	350	2000	2	HW2052	Available
	58	671	30.00	3.16	82.6	1750	350	2000	2	HW2052	Available
	58	660	30.00	1.80	81.5	1350	350	1800	2	HW2042	Available
	51	753	34.09	2.92	81.9	1750	350	2000	2	HW2052	Available
	51	744	34.09	1.65	80.9	1350	350	1800	2	HW2042	Available
	45	838	39.00	2.73	81.1	1750	350	2000	2	HW2052	Available
	45	844	39.00	1.50	80.1	1350	350	1800	2	HW2042	Available
	42	870	41.84	2.67	80.8	1750	350	2000	2	HW2052	Available
	42	903	41.84	1.43	79.7	1350	350	1800	2	HW2042	Available
	37	945	47.14	2.11	73.9	1750	350	2000	2	HW2052	Available
	37	924	47.14	1.23	72.3	1350	350	1800	2	HW2042	Available
	36	1095	49.29	4.29	82.3	2100	350	2400	2	HW2062	
	33	1040	53.08	2.00	72.9	1750	350	2000	2	HW2052	Available
	33	1021	53.08	1.16	71.3	1350	350	1800	2	HW2042	Available
	32	1119	54.38	3.57	76.1	2100	350	2400	2	HW2062	Available
	29	1163	60.00	1.87	71.8	1750	350	2000	2	HW2052	Available
	29	1138	60.00	1.07	70.4	1350	350	1800	2	HW2042	Available
	29	1320	60.00	3.72	81.3	2100	350	2400	2	HW2062	Available
	28	1346	63.57	1.88	78.4	1750	350	2000	2	HW2052	Available
	28	1334	63.57	1.03	77.4	1350	350	1800	2	HW2042	Available
	27	1407	64.41	3.53	80.9	2100	350	2400	2	HW2062	Available
	26	1304	68.18	1.73	70.9	1750	350	2000	2	HW2052	Available
	26	1260	68.18	1.00	69.3	1350	350	1800	2	HW2042	Available
	23	1624	75.00	3.15	80.2	2100	350	2400	2	HW2062	Available
	22	1463	78.00	1.60	69.7	1750	350	2000	2	HW2052	Available
	22	1751	81.43	2.95	79.8	2100	350	2400	2	HW2062	Available
	21	1559	83.68	1.53	69.1	1750	350	2000	2	HW2052	Available
	19.3	1606	90.91	1.41	65.4	1750	350	2000	2	HW2052	Available
	17.8	1907	98.57	2.53	71.5	2100	350	2400	2	HW2062	Available
	17.2	1856	102.00	1.35	67.5	1750	350	2000	2	HW2052	Available
	16.7	2015	105.00	2.43	71.1	2100	350	2400	2	HW2062	Available
	15.7	1927	111.58	1.24	63.6	1750	350	2000	2	HW2052	Available
	14.6	2273	120.00	2.21	70.1	2100	350	2400	2	HW2062	Available
	13.8	2259	127.14	1.15	65.9	1750	350	2000	2	HW2052	Available
	13.6	2483	128.57	4.00	71.1	3050	525	3100	2	HW2072	Available
	13.6	2421	128.82	2.11	69.6	2100	350	2400	2	HW2062	Available
	12.9	2287	136.00	1.09	61.8	1750	350	2000	2	HW2052	Available
	12.5	2420	140.00	2.00	65.2	2100	350	2400	2	HW2062	Available
	12.1	2678	145.00	3.57	68.4	3050	525	3100	2	HW2072	
	11.7	2762	150.00	1.89	68.4	2100	350	2400	2	HW2062	Available
	11.3	2918	155.00	3.54	69.7	3050	525	3100	2	HW2072	Available
	10.7	2989	162.86	1.77	67.8	2100	350	2400	2	HW2062	Available
	10.2	3105	171.43	3.20	67.0	3050	525	3100	2	HW2072	Available
	10.2	2953	171.76	1.71	63.5	2100	350	2400	2	HW2062	Available
	9.1	3528	192.00	3.05	68.0	3050	525	3100	2	HW2072	Available
	8.8	3372	200.00	1.53	62.3	2100	350	2400	2	HW2062	Available
	8.5	3662	206.67	2.82	65.6	3050	525	3100	2	HW2072	Available
	8.1	3599	217.14	1.45	61.6	2100	350	2400	2	HW2062	Available
	6.9	5011	254.28	1.14	73.0	2100	350	2400	3	HW2063	Available

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ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3/4	6.8	4410	256.00	2.42	63.8	3050	525	3100	2	HW2072	Available
	5.9	5700	298.63	1.00	70.3	2100	350	2400	4	HW2064	Available
	5.7	5889	307.90	1.97	70.7	3050	350	3100	4	HW2074	Available
	5.6	5265	310.02	2.17	62.9	3050	350	3100	3	HW2073	Available
	5.0	5911	352.34	1.96	62.1	3050	350	3100	3	HW2073	Available
	4.6	7143	380.74	1.63	69.5	3050	350	3100	4	HW2074	Available
	4.3	6678	403.03	1.75	61.3	3050	350	3100	3	HW2073	Available
	4.0	7130	432.32	1.65	61.1	3050	350	3100	3	HW2073	Available
	3.8	8380	454.91	1.39	68.3	3050	350	3100	4	HW2074	Available
	3.7	7346	469.78	1.55	57.9	3050	350	3100	3	HW2073	Available
	3.6	9078	492.77	1.28	67.9	3050	350	3100	4	HW2074	Available
	3.3	8582	527.03	1.39	60.3	3050	350	3100	3	HW2073	Available
	3.0	8864	576.43	1.31	56.9	3050	350	3100	3	HW2073	Available
	2.9	10759	594.56	1.08	67.2	3050	350	3100	4	HW2074	Available
	2.8	9487	615.80	1.25	57.2	3050	350	3100	4	HW2074	Available
	2.7	10323	656.93	1.15	58.2	3050	350	3100	3	HW2073	Available
	2.5	10660	702.71	1.10	56.2	3050	350	3100	3	HW2073	Available
	2.3	11433	761.48	1.04	55.9	3050	350	3100	4	HW2074	Available
1	233	246	7.50	3.09	91.0	1350	350	1800	2	HW2042	Available
	208	267	8.40	3.00	90.7	1350	350	1800	2	HW2042	Available
	186	308	9.43	2.73	90.4	1350	350	1800	2	HW2042	Available
	165	347	10.62	4.53	90.7	1750	350	2000	2	HW2052	Available
	165	343	10.62	2.54	90.0	1350	350	1800	2	HW2042	Available
	146	390	12.00	4.21	90.3	1750	350	2000	2	HW2052	Available
	146	388	12.00	2.35	89.6	1350	350	1800	2	HW2042	Available
	128	440	13.64	3.91	89.8	1750	350	2000	2	HW2052	Available
	128	437	13.64	2.15	89.2	1350	350	1800	2	HW2042	Available
	112	503	15.60	3.58	89.4	1750	350	2000	2	HW2052	Available
	112	485	15.60	2.00	88.7	1350	350	1800	2	HW2042	Available
	105	538	16.74	3.40	89.2	1750	350	2000	2	HW2052	Available
	105	534	16.74	1.85	88.5	1350	350	1800	2	HW2042	Available
	93	567	18.75	3.05	85.2	1750	350	2000	2	HW2052	Available
	93	567	18.75	1.78	84.2	1350	350	1800	2	HW2042	Available
	86	647	20.40	1.59	87.8	1350	350	1800	2	HW2042	Available
	83	613	21.00	3.00	84.6	1750	350	2000	2	HW2052	Available
	74	712	23.57	2.71	84.0	1750	350	2000	2	HW2052	Available
	74	706	23.57	1.57	82.9	1350	350	1800	2	HW2042	Available
	69	796	25.43	1.33	87.1	1350	350	1800	2	HW2042	Available
	68	822	25.76	4.71	88.7	2100	275	2400	2	HW2062	Available
	66	796	26.54	2.55	83.3	1750	350	2000	2	HW2052	Available
	58	895	30.00	2.37	82.6	1750	350	2000	2	HW2052	Available
	58	880	30.00	1.35	81.5	1350	350	1800	2	HW2042	Available
	58	955	30.00	4.18	88.2	2100	275	2400	2	HW2062	Available
	54	1031	32.57	3.93	87.9	2100	275	2400	2	HW2062	Available
	51	1005	34.09	2.19	81.9	1750	350	2000	2	HW2052	Available
	51	992	34.09	1.24	80.9	1350	350	1800	2	HW2042	Available
	49	1025	35.85	3.15	79.3	2100	350	2400	2	HW2062	Available
	45	1117	39.00	2.05	81.1	1750	350	2000	2	HW2052	Available
	45	1125	39.00	1.13	80.1	1350	350	1800	2	HW2042	Available
	42	1237	41.25	3.63	83.3	2100	350	2400	2	HW2062	Available
	42	1160	41.84	2.00	80.8	1750	350	2000	2	HW2052	Available
	42	1204	41.84	1.07	79.7	1350	350	1800	2	HW2042	Available
	37	1259	47.14	1.58	73.9	1750	350	2000	2	HW2052	Available
	36	1460	49.29	3.22	82.3	2100	350	2400	2	HW2062	Available
	33	1387	53.08	1.50	72.9	1750	350	2000	2	HW2052	Available
	32	1493	54.38	2.68	76.1	2100	350	2400	2	HW2062	Available
	29	1550	60.00	1.40	71.8	1750	350	2000	2	HW2052	Available
	29	1760	60.00	2.79	81.3	2100	350	2400	2	HW2062	Available

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* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

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SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1	28	1794	63.57	1.41	78.4	1750	350	2000	2	HW2052	Available
	27	1875	64.41	2.65	80.9	2100	350	2400	2	HW2062	Available
	26	1738	68.18	1.30	70.9	1750	350	2000	2	HW2052	Available
	23	2165	75.00	2.36	80.2	2100	350	2400	2	HW2062	Available
	23	2263	77.50	4.45	81.0	3050	525	3100	2	HW2072	Available
	22	1950	78.00	1.20	69.7	1750	350	2000	2	HW2052	Available
	22	2335	81.43	2.21	79.8	2100	350	2400	2	HW2062	Available
	21	2078	83.68	1.15	69.1	1750	350	2000	2	HW2052	Available
	19.3	2142	90.91	1.06	65.4	1750	350	2000	2	HW2052	Available
	18.2	2762	96.00	3.80	79.9	3050	525	3100	2	HW2072	Available
	17.8	2542	98.57	1.90	71.5	2100	350	2400	2	HW2062	Available
	17.2	2475	102.00	1.01	67.5	1750	350	2000	2	HW2052	Available
	16.7	2687	105.00	1.82	71.1	2100	350	2400	2	HW2062	Available
	16.1	2835	108.75	3.35	72.4	3050	525	3100	2	HW2072	Available
	14.6	3030	120.00	1.66	70.1	2100	350	2400	2	HW2062	Available
	13.6	3310	128.57	3.00	71.1	3050	525	3100	2	HW2072	Available
	13.6	3228	128.82	1.58	69.6	2100	350	2400	2	HW2062	Available
	12.5	3227	140.00	1.50	65.2	2100	350	2400	2	HW2062	Available
	12.1	3571	145.00	2.67	68.4	3050	525	3100	2	HW2072	Available
	11.7	3683	150.00	1.42	68.4	2100	350	2400	2	HW2062	Available
	11.3	3891	155.00	2.66	69.7	3050	525	3100	2	HW2072	Available
	10.7	3985	162.86	1.33	67.8	2100	350	2400	2	HW2062	Available
	10.2	4140	171.43	2.40	67.0	3050	525	3100	2	HW2072	Available
	10.2	3938	171.76	1.28	63.5	2100	350	2400	2	HW2062	Available
	9.1	4705	192.00	2.28	68.0	3050	525	3100	2	HW2072	Available
	8.8	4496	200.00	1.15	62.3	2100	350	2400	2	HW2062	Available
	8.5	4882	206.67	2.11	65.6	3050	525	3100	2	HW2072	Available
	8.1	4798	217.14	1.09	61.6	2100	350	2400	2	HW2062	Available
	6.8	5880	256.00	1.81	63.8	3050	525	3100	2	HW2072	Available
	5.7	7851	307.90	1.48	70.7	3050	350	3100	4	HW2074	Available
	5.6	7021	310.02	1.63	62.9	3050	350	3100	3	HW2073	Available
	5.0	7882	352.34	1.47	62.1	3050	350	3100	3	HW2073	Available
	4.6	9525	380.74	1.22	69.5	3050	350	3100	4	HW2074	Available
	4.3	8904	403.03	1.31	61.3	3050	350	3100	3	HW2073	Available
	4.0	9506	432.32	1.24	61.1	3050	350	3100	3	HW2073	Available
	3.8	11173	454.91	1.04	68.3	3050	350	3100	4	HW2074	Available
	3.7	9794	469.78	1.16	57.9	3050	350	3100	3	HW2073	Available
	3.3	11443	527.03	1.04	60.3	3050	350	3100	3	HW2073	Available
	3.0	11818	576.43	0.98	56.9	3050	350	3100	3	HW2073	Available
1.5	244	359	7.17	6.38	92.5	2100	275	2400	2	HW2062	Available
	233	372	7.50	3.57	91.6	1750	350	2000	2	HW2052	Available
	233	369	7.50	2.06	91.0	1350	350	1800	2	HW2042	Available
	208	416	8.40	3.39	91.3	1750	350	2000	2	HW2052	Available
	208	400	8.40	2.00	90.7	1350	350	1800	2	HW2042	Available
	186	447	9.43	3.33	90.9	1750	350	2000	2	HW2052	Available
	186	462	9.43	1.82	90.4	1350	350	1800	2	HW2042	Available
	165	520	10.62	3.02	90.7	1750	350	2000	2	HW2052	Available
	165	514	10.62	1.69	90.0	1350	350	1800	2	HW2042	Available
	146	584	12.00	2.81	90.3	1750	350	2000	2	HW2052	Available
	146	582	12.00	1.56	89.6	1350	350	1800	2	HW2042	Available
	128	660	13.64	2.61	89.8	1750	350	2000	2	HW2052	Available
	128	656	13.64	1.43	89.2	1350	350	1800	2	HW2042	Available
	112	754	15.60	2.39	89.4	1750	350	2000	2	HW2052	Available
	112	728	15.60	1.33	88.7	1350	350	1800	2	HW2042	Available
	105	807	16.74	2.27	89.2	1750	350	2000	2	HW2052	Available
	105	801	16.74	1.24	88.5	1350	350	1800	2	HW2042	Available

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE L-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
1.5	98	845	17.93	3.68	87.4	2100	350	2400	2	HW2062	Available
	93	851	18.75	2.03	85.2	1750	350	2000	2	HW2052	Available
	93	851	18.75	1.19	84.2	1350	350	1800	2	HW2042	Available
	89	955	19.71	3.81	89.6	2100	275	2400	2	HW2062	Available
	86	971	20.40	1.06	87.8	1350	350	1800	2	HW2042	Available
	83	920	21.00	2.00	84.6	1750	350	2000	2	HW2052	Available
	83	1015	21.00	3.65	89.4	2100	275	2400	2	HW2062	Available
	74	1068	23.57	1.81	84.0	1750	350	2000	2	HW2052	Available
	74	1059	23.57	1.05	82.9	1350	350	1800	2	HW2042	Available
	73	1146	24.00	3.33	88.9	2100	275	2400	2	HW2062	Available
	68	1232	25.76	3.14	88.7	2100	275	2400	2	HW2062	Available
	66	1194	26.54	1.70	83.3	1750	350	2000	2	HW2052	Available
	64	1258	27.19	3.09	85.5	2100	350	2400	2	HW2062	Available
	58	1342	30.00	1.58	82.6	1750	350	2000	2	HW2052	Available
	58	1432	30.00	2.79	88.2	2100	275	2400	2	HW2062	Available
	54	1546	32.57	2.62	87.9	2100	275	2400	2	HW2062	Available
	52	1558	33.97	5.00	85.4	3050	525	3100	2	HW2072	
	51	1507	34.09	1.46	81.9	1750	350	2000	2	HW2052	Available
	49	1538	35.85	2.10	79.3	2100	350	2400	2	HW2062	Available
	45	1771	38.71	4.65	84.7	3050	525	3100	2	HW2072	Available
	45	1676	39.00	1.37	81.1	1750	350	2000	2	HW2052	Available
	42	1855	41.25	2.42	83.3	2100	350	2400	2	HW2062	Available
	42	1740	41.84	1.33	80.8	1750	350	2000	2	HW2052	Available
	38	1932	45.68	3.33	79.1	3050	525	3100	2	HW2072	Available
	37	1889	47.14	1.05	73.9	1750	350	2000	2	HW2052	Available
	36	2189	49.29	2.15	82.3	2100	350	2400	2	HW2062	Available
	33	2080	53.08	1.00	72.9	1750	350	2000	2	HW2052	Available
	32	2437	54.38	3.80	82.9	3050	525	3100	2	HW2072	Available
	32	2239	54.38	1.79	76.1	2100	350	2400	2	HW2062	Available
	29	2640	60.00	1.86	81.3	2100	350	2400	2	HW2062	Available
	27	2850	64.29	3.40	82.0	3050	525	3100	2	HW2072	Available
	27	2813	64.41	1.77	80.9	2100	350	2400	2	HW2062	Available
	23	3248	75.00	1.57	80.2	2100	350	2400	2	HW2062	Available
	23	3394	77.50	2.97	81.0	3050	525	3100	2	HW2072	Available
	22	3502	81.43	1.47	79.8	2100	350	2400	2	HW2062	Available
	18.2	4143	96.00	2.53	79.9	3050	525	3100	2	HW2072	Available
	17.8	3813	98.57	1.27	71.5	2100	350	2400	2	HW2062	Available
	16.7	4030	105.00	1.21	71.1	2100	350	2400	2	HW2062	Available
	16.1	4253	108.75	2.23	72.4	3050	525	3100	2	HW2072	Available
	14.6	4545	120.00	1.11	70.1	2100	350	2400	2	HW2062	Available
	13.6	4965	128.57	2.00	71.1	3050	525	3100	2	HW2072	Available
	13.6	4842	128.82	1.05	69.6	2100	350	2400	2	HW2062	Available
	12.5	4840	140.00	1.00	65.2	2100	350	2400	2	HW2062	Available
	12.1	5356	145.00	1.78	68.4	3050	525	3100	2	HW2072	Available
	11.3	5837	155.00	1.77	69.7	3050	525	3100	2	HW2072	Available
	10.2	6210	171.43	1.60	67.0	3050	525	3100	2	HW2072	Available
	9.1	7057	192.00	1.52	68.0	3050	525	3100	2	HW2072	Available
	8.5	7323	206.67	1.41	65.6	3050	525	3100	2	HW2072	Available
	6.8	8820	256.00	1.21	63.8	3050	525	3100	2	HW2072	Available
	5.6	10531	310.02	1.09	62.9	3050	350	3100	3	HW2073	Available
	5.0	11822	352.34	0.98	62.1	3050	350	3100	3	HW2073	Available

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* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
2	244	479	7.17	4.79	92.5	2100	275	2400	2	HW2062	Available
	233	496	7.50	2.68	91.6	1750	350	2000	2	HW2052	Available
	233	492	7.50	1.54	91.0	1350	350	1800	2	HW2042	Available
	208	554	8.40	2.55	91.3	1750	350	2000	2	HW2052	Available
	208	533	8.40	1.50	90.7	1350	350	1800	2	HW2042	Available
	186	596	9.43	2.50	90.9	1750	350	2000	2	HW2052	Available
	186	616	9.43	1.36	90.4	1350	350	1800	2	HW2042	Available
	165	693	10.62	2.27	90.7	1750	350	2000	2	HW2052	Available
	165	685	10.62	1.27	90.0	1350	350	1800	2	HW2042	Available
	161	714	10.88	4.09	91.3	2100	275	2400	2	HW2062	Available
	146	779	12.00	2.11	90.3	1750	350	2000	2	HW2052	Available
	146	776	12.00	1.17	89.6	1350	350	1800	2	HW2042	Available
	139	827	12.62	3.79	90.9	2100	275	2400	2	HW2062	Available
	128	880	13.64	1.96	89.8	1750	350	2000	2	HW2052	Available
	128	875	13.64	1.07	89.2	1350	350	1800	2	HW2042	Available
	112	1006	15.60	1.79	89.4	1750	350	2000	2	HW2052	Available
	112	970	15.60	1.00	88.7	1350	350	1800	2	HW2042	
	106	1070	16.50	3.24	90.1	2100	275	2400	2	HW2062	Available
	105	1076	16.74	1.70	89.2	1750	350	2000	2	HW2052	Available
	98	1127	17.93	2.76	87.4	2100	350	2400	2	HW2062	Available
	93	1134	18.75	1.53	85.2	1750	350	2000	2	HW2052	Available
	89	1273	19.71	2.86	89.6	2100	275	2400	2	HW2062	Available
	83	1227	21.00	1.50	84.6	1750	350	2000	2	HW2052	Available
	83	1353	21.00	2.74	89.4	2100	275	2400	2	HW2062	Available
	74	1424	23.57	1.36	84.0	1750	350	2000	2	HW2052	Available
	73	1528	24.00	2.50	88.9	2100	275	2400	2	HW2062	Available
	68	1643	25.76	2.36	88.7	2100	275	2400	2	HW2062	Available
	66	1592	26.54	1.28	83.3	1750	350	2000	2	HW2052	Available
	64	1677	27.19	2.32	85.5	2100	350	2400	2	HW2062	Available
	58	1789	30.00	1.19	82.6	1750	350	2000	2	HW2052	Available
	58	1858	30.00	3.95	86.0	3050	525	3100	2	HW2072	
	58	1909	30.00	2.09	88.2	2100	275	2400	2	HW2062	Available
	54	2061	32.57	1.97	87.9	2100	275	2400	2	HW2062	Available
	52	2077	33.97	3.75	85.4	3050	525	3100	2	HW2072	
	51	2009	34.09	1.10	81.9	1750	350	2000	2	HW2052	Available
	49	2051	35.85	1.58	79.3	2100	350	2400	2	HW2062	Available
	45	2361	38.71	3.49	84.7	3050	525	3100	2	HW2072	Available
	45	2234	39.00	1.03	81.1	1750	350	2000	2	HW2052	Available
	42	2474	41.25	1.82	83.3	2100	350	2400	2	HW2062	Available
	42	2320	41.84	1.00	80.8	1750	350	2000	2	HW2052	Available
	38	2576	45.68	2.50	79.1	3050	525	3100	2	HW2072	Available
	36	2919	49.29	1.61	82.3	2100	350	2400	2	HW2062	Available
	32	3249	54.38	2.85	82.9	3050	525	3100	2	HW2072	Available
	32	2985	54.38	1.34	76.1	2100	350	2400	2	HW2062	Available
	29	3520	60.00	1.40	81.3	2100	350	2400	2	HW2062	Available
	27	3799	64.29	2.55	82.0	3050	525	3100	2	HW2072	Available
	27	3751	64.41	1.33	80.9	2100	350	2400	2	HW2062	Available
	23	4331	75.00	1.18	80.2	2100	350	2400	2	HW2062	Available
	23	4526	77.50	2.23	81.0	3050	525	3100	2	HW2072	Available
	22	4670	81.43	1.11	79.8	2100	350	2400	2	HW2062	Available
	18.2	5524	96.00	1.90	79.9	3050	525	3100	2	HW2072	Available
	16.1	5671	108.75	1.68	72.4	3050	525	3100	2	HW2072	Available
	13.6	6620	128.57	1.50	71.1	3050	525	3100	2	HW2072	Available
	12.1	7142	145.00	1.34	68.4	3050	525	3100	2	HW2072	Available
	11.3	7782	155.00	1.33	69.7	3050	525	3100	2	HW2072	Available
	10.2	8281	171.43	1.20	67.0	3050	525	3100	2	HW2072	Available
	9.1	9409	192.00	1.14	68.0	3050	525	3100	2	HW2072	Available
	8.5	9764	206.67	1.06	65.6	3050	525	3100	2	HW2072	Available

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* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
3	244	718	7.17	3.19	92.5	2100	275	2400	2	HW2062	Available
	233	744	7.50	1.79	91.6	1750	350	2000	2	HW2052	Available
	233	739	7.50	1.03	91.0	1350	350	1800	2	HW2042**	Available
	214	820	8.17	5.60	92.8	3050	525	3100	2	HW2072	Available
	208	831	8.40	1.70	91.3	1750	350	2000	2	HW2052	Available
	208	800	8.40	1.00	90.7	1350	350	1800	2	HW2042**	Available
	204	853	8.59	3.01	92.0	2100	275	2400	2	HW2062	Available
	192	913	9.14	5.19	92.5	3050	525	3100	2	HW2072	Available
	186	894	9.43	1.67	90.9	1750	350	2000	2	HW2052	Available
	165	1040	10.62	1.51	90.7	1750	350	2000	2	HW2052	Available
	161	1071	10.88	2.73	91.3	2100	275	2400	2	HW2062	Available
	146	1169	12.00	1.40	90.3	1750	350	2000	2	HW2052	Available
	139	1240	12.62	2.52	90.9	2100	275	2400	2	HW2062	Available
	129	1342	13.59	4.52	91.4	3050	525	3100	2	HW2072	Available
	128	1320	13.64	1.30	89.8	1750	350	2000	2	HW2052	Available
	113	1523	15.48	4.24	91.0	3050	525	3100	2	HW2072	Available
	112	1508	15.60	1.19	89.4	1750	350	2000	2	HW2052	Available
	106	1604	16.50	2.16	90.1	2100	275	2400	2	HW2062	Available
	105	1615	16.74	1.13	89.2	1750	350	2000	2	HW2052	Available
	98	1690	17.93	1.84	87.4	2100	350	2400	2	HW2062	Available
	96	1674	18.30	3.33	88.3	3050	525	3100	2	HW2072	Available
	93	1702	18.75	1.02	85.2	1750	350	2000	2	HW2052	Available
	89	1909	19.71	1.91	89.6	2100	275	2400	2	HW2062	Available
	83	1840	21.00	1.00	84.6	1750	350	2000	2	HW2052	Available
	83	2029	21.00	1.82	89.4	2100	275	2400	2	HW2062	Available
	80	2116	21.75	3.46	90.1	3050	525	3100	2	HW2072	Available
	73	2292	24.00	1.67	88.9	2100	275	2400	2	HW2062	Available
	68	2487	25.71	3.10	89.5	3050	525	3100	2	HW2072	Available
	68	2465	25.76	1.57	88.7	2100	275	2400	2	HW2062	Available
	64	2515	27.19	1.55	85.5	2100	350	2400	2	HW2062	Available
	63	2586	27.69	2.71	86.4	3050	525	3100	2	HW2072	Available
	58	2787	30.00	2.63	86.0	3050	525	3100	2	HW2072	Available
	58	2864	30.00	1.39	88.2	2100	275	2400	2	HW2062	Available
	54	3092	32.57	1.31	87.9	2100	275	2400	2	HW2062	Available
	52	3116	33.97	2.50	85.4	3050	525	3100	2	HW2072	Available
	49	3076	35.85	1.05	79.3	2100	350	2400	2	HW2062	Available
	45	3542	38.71	2.33	84.7	3050	525	3100	2	HW2072	Available
	42	3711	41.25	1.21	83.3	2100	350	2400	2	HW2062	Available
	38	3864	45.68	1.67	79.1	3050	525	3100	2	HW2072	Available
	36	4379	49.29	1.07	82.3	2100	350	2400	2	HW2062	Available
	32	4873	54.38	1.90	82.9	3050	525	3100	2	HW2072	Available
	27	5699	64.29	1.70	82.0	3050	525	3100	2	HW2072	Available
	23	6789	77.50	1.48	81.0	3050	525	3100	2	HW2072	Available
	18.2	8287	96.00	1.27	79.9	3050	525	3100	2	HW2072	Available
	16.1	8506	108.75	1.12	72.4	3050	525	3100	2	HW2072	Available
	13.6	9930	128.57	1.00	71.1	3050	525	3100	2	HW2072	Available
5	244	1196	7.17	1.91	92.5	2100	275	2400	2	HW2062	Available
	239	1227	7.32	3.51	93.0	3050	525	3100	2	HW2072	
	233	1241	7.50	1.07	91.6	1750	350	2000	2	HW2052**	Available
	214	1366	8.17	3.36	92.8	3050	525	3100	2	HW2072	Available
	208	1385	8.40	1.02	91.3	1750	350	2000	2	HW2052**	Available
	204	1421	8.59	1.81	92.0	2100	275	2400	2	HW2062	Available
	192	1521	9.14	3.12	92.5	3050	525	3100	2	HW2072	Available
	186	1490	9.43	1.00	90.9	1750	350	2000	2	HW2052**	Available
	161	1785	10.88	1.64	91.3	2100	275	2400	2	HW2062	Available

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ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

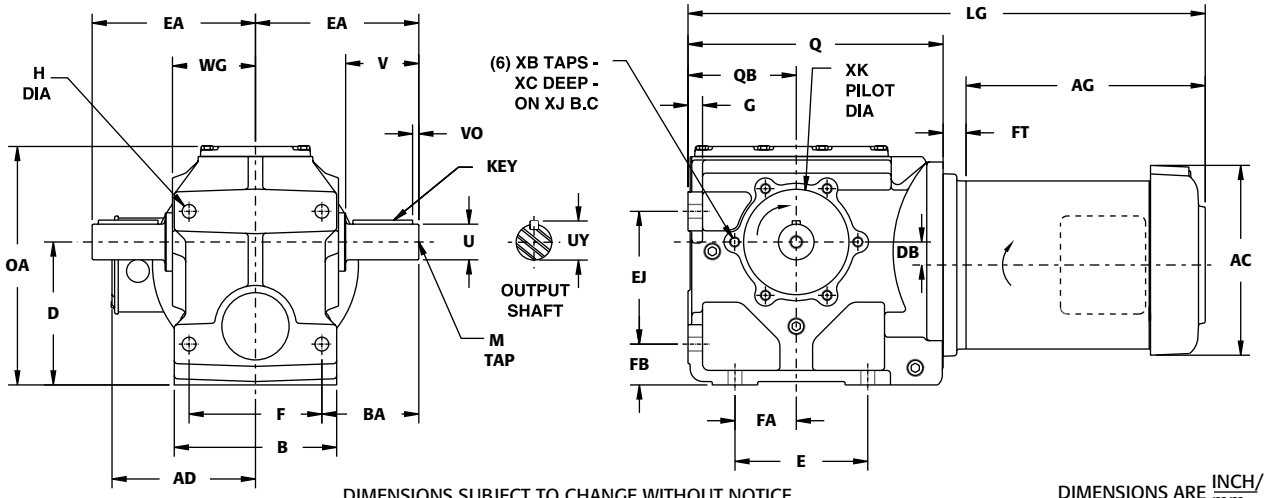
SELECTION BY INPUT H.P. @ 1750 RPM

HP	OUTPUT SPEED	OUTPUT TORQUE	RATIO	SERVICE FACTOR	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST	GEAR STAGES	MODEL*	INTEGRAL GEARMOTOR
5	158	1803	11.08	3.00	92.0	3050	525	3100	2	HW2072	Available
	139	2067	12.62	1.51	90.9	2100	275	2400	2	HW2062	Available
	129	2236	13.59	2.71	91.4	3050	525	3100	2	HW2072	Available
	113	2539	15.48	2.54	91.0	3050	525	3100	2	HW2072	Available
	106	2674	16.50	1.29	90.1	2100	275	2400	2	HW2062	Available
	98	2817	17.93	1.10	87.4	2100	350	2400	2	HW2062	Available
	96	2790	18.30	2.00	88.3	3050	525	3100	2	HW2072	Available
	89	3182	19.71	1.14	89.6	2100	275	2400	2	HW2062	Available
	83	3382	21.00	1.09	89.4	2100	275	2400	2	HW2062	Available
	80	3526	21.75	2.08	90.1	3050	525	3100	2	HW2072	Available
	73	3820	24.00	1.00	88.9	2100	275	2400	2	HW2062	Available
	68	4145	25.71	1.86	89.5	3050	525	3100	2	HW2072	Available
	63	4310	27.69	1.63	86.4	3050	525	3100	2	HW2072	Available
	58	4645	30.00	1.58	86.0	3050	525	3100	2	HW2072	Available
	52	5193	33.97	1.50	85.4	3050	525	3100	2	HW2072	Available
	45	5903	38.71	1.40	84.7	3050	525	3100	2	HW2072	Available
	38	6440	45.68	1.00	79.1	3050	525	3100	2	HW2072	Available
	32	8122	54.38	1.14	82.9	3050	525	3100	2	HW2072	Available
	27	9498	64.29	1.02	82.0	3050	525	3100	2	HW2072	Available
7.5	244	1795	7.17	1.28	92.5	2100	275	2400	2	HW2062	
	239	1841	7.32	2.34	93.0	3050	525	3100	2	HW2072	
	214	2050	8.17	2.24	92.8	3050	525	3100	2	HW2072	
	204	2132	8.59	1.21	92.0	2100	275	2400	2	HW2062	
	192	2282	9.14	2.08	92.5	3050	525	3100	2	HW2072	
	161	2677	10.88	1.09	91.3	2100	275	2400	2	HW2062	
	158	2705	11.08	2.00	92.0	3050	525	3100	2	HW2072	
	139	3101	12.62	1.01	90.9	2100	275	2400	2	HW2062	
	129	3354	13.59	1.81	91.4	3050	525	3100	2	HW2072	
	113	3809	15.48	1.70	91.0	3050	525	3100	2	HW2072	
	96	4185	18.30	1.33	88.3	3050	525	3100	2	HW2072	
	80	5290	21.75	1.39	90.1	3050	525	3100	2	HW2072	
	68	6217	25.71	1.24	89.5	3050	525	3100	2	HW2072	
	63	6465	27.69	1.09	86.4	3050	525	3100	2	HW2072	
	58	6968	30.00	1.05	86.0	3050	525	3100	2	HW2072	
	52	7790	33.97	1.00	85.4	3050	525	3100	2	HW2072	
10	239	2454	7.32	1.76	93.0	3050	525	3100	2	HW2072	
	214	2733	8.17	1.68	92.8	3050	525	3100	2	HW2072	
	192	3042	9.14	1.56	92.5	3050	525	3100	2	HW2072	
	158	3607	11.08	1.50	92.0	3050	525	3100	2	HW2072	
	129	4472	13.59	1.36	91.4	3050	525	3100	2	HW2072	
	113	5078	15.48	1.27	91.0	3050	525	3100	2	HW2072	
	96	5580	18.30	1.00	88.3	3050	525	3100	2	HW2072	
	80	7053	21.75	1.04	90.1	3050	525	3100	2	HW2072	
15	239	3681	7.32	1.17	93.0	3050	525	3100	2	HW2072	
	214	4099	8.17	1.12	92.8	3050	525	3100	2	HW2072	
	192	4564	9.14	1.04	92.5	3050	525	3100	2	HW2072	
	158	5410	11.08	1.00	92.0	3050	525	3100	2	HW2072	

* FOR INTEGRAL GEARMOTORS SPECIFY MOUNTING TYPE I AND MOTOR HORSEPOWER (SEE PAGE L-6).
* FOR MOTORIZED REDUCERS SPECIFY MOUNTING TYPE E AND MOTOR PART NUMBER (SEE SECTION H)
ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

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INTEGRAL DOUBLE REDUCTION



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042I*	4.72	2.56	$3.94^{+0}_{-.02}$	0.23	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	$100^{+0}_{-.5}$	5.8	80	115	80	100	35	35	13	11.0	171	196
HW2052I*	5.34	3.15	$4.41^{+0}_{-.02}$	0.72	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	$112^{+0}_{-.5}$	18.2	100	135	100	110	45	35	12.7	11.0	189	211
HW2062I*	6.26	3.17	$5.51^{+0}_{-.02}$	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	$140^{+0}_{-.5}$	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2072I*	7.28	4.04	$7.09^{+0}_{-.04}$	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180^{+0}_{-1}	35.0	135	195	135	150	75	70	24	17.5	299	319

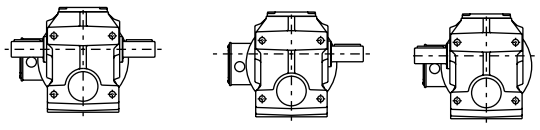
GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042I*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052I*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062I*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072I*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SHAFT

MODEL	U	UY	V	VO	KEY	M
HW2042I*	$1.000^{+0}_{-.001}$	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8-16 x .87
	-	-	50.0	6.4	-	-
HW2052I*	$1.250^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
	-	-	59.9	7.4	-	-
HW2062I*	$1.375^{+0}_{-.001}$	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
	-	-	71.6	10.2	-	-
HW2072I*	$1.750^{+0}_{-.001}$	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
	-	-	89.9	10.9	-	-

* OUTPUT STYLES



D: DOUBLE EXT. L: LEFT EXT. R: RIGHT EXT.

MOTOR

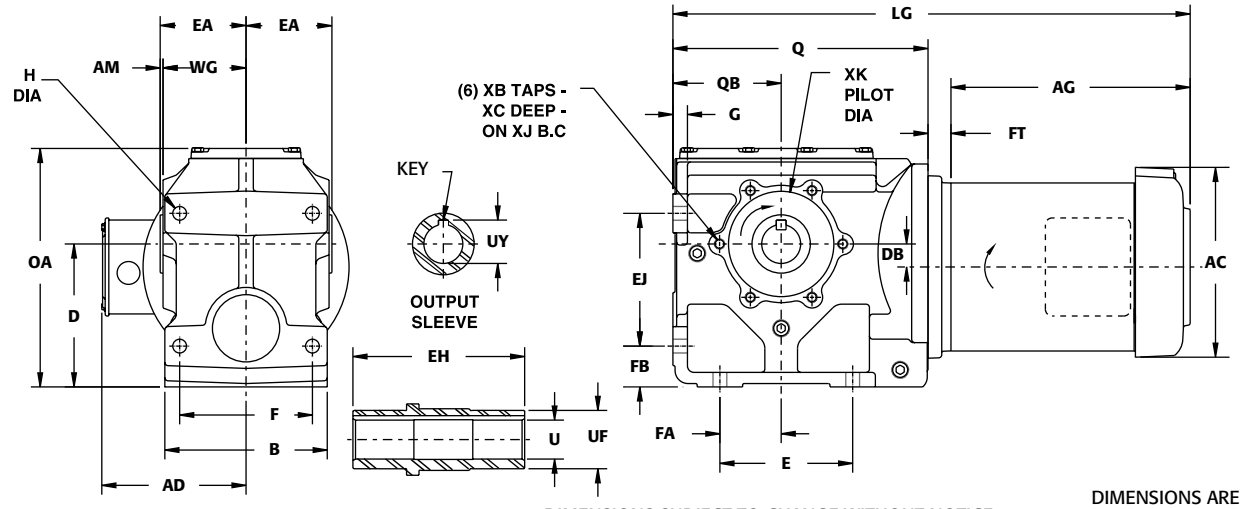
MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2042I*	0.25	6.38	4.58	6.99	0.55	15.26
	0.33	6.38	4.58	7.24	0.55	15.51
	0.50	6.38	4.58	7.74	0.55	16.01
	0.75	6.38	4.58	8.24	0.55	16.51
	1.00	7.68	5.56	9.22	0.73	17.67
	1.50	7.68	5.56	9.22	0.73	17.67
	2.00	7.68	5.56	10.72	0.73	19.17
	3.00	9.78	7.19	10.07	1.78	19.57
	5.00	9.78	7.19	11.57	1.78	21.07
HW2052I*	0.25	6.38	4.58	6.99	0.55	15.86
	0.33	6.38	4.58	7.24	0.55	16.11
	0.50	6.38	4.58	7.74	0.55	16.61
	0.75	6.38	4.58	8.24	0.55	17.11
	1.00	7.68	5.56	9.22	0.73	18.27
	1.50	7.68	5.56	9.22	0.73	18.27
	2.00	7.68	5.56	10.72	0.73	19.77
	3.00	9.78	7.19	10.07	1.78	20.17
	5.00	9.78	7.19	11.57	1.78	21.67
HW2062I*	0.25	6.38	4.58	6.99	0.71	17.53
	0.33	6.38	4.58	7.24	0.71	17.78
	0.50	6.38	4.58	7.74	0.71	18.28
	0.75	6.38	4.58	8.24	0.71	18.78
	1.00	7.68	5.56	9.22	0.88	19.93
	1.50	7.68	5.56	9.22	0.88	19.93
	2.00	7.68	5.56	10.72	0.88	21.43
	3.00	9.78	7.19	10.07	1.94	21.84
	5.00	9.78	7.19	11.57	1.94	23.34
HW2072I*	0.25	6.38	4.58	6.99	0.39	19.95
	0.33	6.38	4.58	7.24	0.39	20.20
	0.50	6.38	4.58	7.74	0.39	20.70
	0.75	6.38	4.58	8.24	0.39	21.20
	1.00	7.68	5.56	9.22	0.57	22.36
	1.50	7.68	5.56	9.22	0.57	22.36
	2.00	7.68	5.56	10.72	0.57	23.86
	3.00	9.78	7.19	10.07	1.63	24.27
	5.00	9.78	7.19	11.57	1.63	25.77

⚠WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

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INTEGRAL DOUBLE REDUCTION



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042IS	0.07	4.72	3.94 +0 -.02	0.23	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	5.8	80	60	80	100	35	35	13	11.0	171	196
HW2052IS	0.10	5.34	4.41 +0 -.02	0.72	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	18.2	100	75	100	110	45	35	12.7	11.0	189	211
HW2062IS	0.11	6.26	5.51 +0 -.02	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2072IS	0.16	7.28	7.09 +0 -.04	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	35.0	135	105	135	150	75	70	24	17.5	299	319

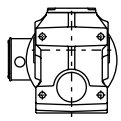
GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042IS	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052IS	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062IS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072IS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SLEEVE

MODEL	EH	U	UF	UY	KEY
HW2042IS	4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 11-1/16
	-	-	-	-	-
HW2052IS	5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
	-	-	-	-	-
HW2062IS	6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
	-	-	-	-	-
HW2072IS	8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
	-	-	-	-	-

OUTPUT STYLE



S: SLEEVE
(HOLLOW BORE)

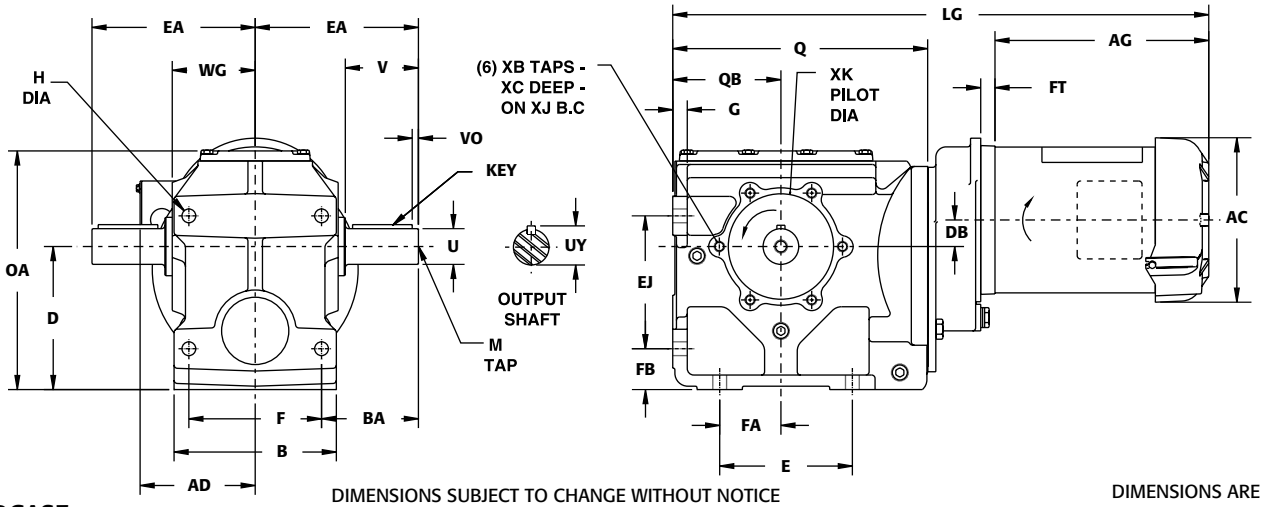
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2042IS	0.25	6.38	4.58	6.99	0.55	15.26
	0.33	6.38	4.58	7.24	0.55	15.51
	0.50	6.38	4.58	7.74	0.55	16.01
	0.75	6.38	4.58	8.24	0.55	16.51
	1.00	7.68	5.56	9.22	0.73	17.67
	1.50	7.68	5.56	9.22	0.73	17.67
	2.00	7.68	5.56	10.72	0.73	19.17
	3.00	9.78	7.19	10.07	1.78	19.57
	5.00	9.78	7.19	11.57	1.78	21.07
HW2052IS	0.25	6.38	4.58	6.99	0.55	15.86
	0.33	6.38	4.58	7.24	0.55	16.11
	0.50	6.38	4.58	7.74	0.55	16.61
	0.75	6.38	4.58	8.24	0.55	17.11
	1.00	7.68	5.56	9.22	0.73	18.27
	1.50	7.68	5.56	9.22	0.73	18.27
	2.00	7.68	5.56	10.72	0.73	19.77
	3.00	9.78	7.19	10.07	1.78	20.17
	5.00	9.78	7.19	11.57	1.78	21.67
HW2062IS	0.25	6.38	4.58	6.99	0.71	17.53
	0.33	6.38	4.58	7.24	0.71	17.78
	0.50	6.38	4.58	7.74	0.71	18.28
	0.75	6.38	4.58	8.24	0.71	18.78
	1.00	7.68	5.56	9.22	0.88	19.93
	1.50	7.68	5.56	9.22	0.88	19.93
	2.00	7.68	5.56	10.72	0.88	21.43
	3.00	9.78	7.19	10.07	1.94	21.84
	5.00	9.78	7.19	11.57	1.94	23.34
HW2072IS	0.25	6.38	4.58	6.99	0.39	19.95
	0.33	6.38	4.58	7.24	0.39	20.20
	0.50	6.38	4.58	7.74	0.39	20.70
	0.75	6.38	4.58	8.24	0.39	21.20
	1.00	7.68	5.56	9.22	0.57	22.36
	1.50	7.68	5.56	9.22	0.57	22.36
	2.00	7.68	5.56	10.72	0.57	23.86
	3.00	9.78	7.19	10.07	1.63	24.27
	5.00	9.78	7.19	11.57	1.63	25.77

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GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043I*	4.72	2.56	3.94 +0 -.02	1.27	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100 +0 -.5	32.2	80	115	80	100	35	35	13	11.0	171	196
HW2053I*	5.34	3.15	4.41 +0 -.02	0.78	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112 +0 -.5	19.8	100	135	100	110	45	35	12.7	11.0	189	211
HW2063I*	6.26	3.17	5.51 +0 -.02	1.02	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	25.9	130	160	130	130	60	40	14	13.5	233	250
HW2073I*	7.28	4.04	7.09 +0 -.04	.53	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -.1	13.5	135	195	135	150	75	70	24	17.5	299	319

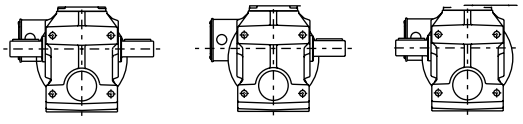
GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043I*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053I*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063I*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073I*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SHAFT

MODEL	U	UY	V	VO	KEY	M
HW2043I*	1.000 +0 -.001	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8-16 x .87
	-	-	50.0	6.4	-	-
HW2053I*	1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
	-	-	59.9	7.4	-	-
HW2063I*	1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
	-	-	71.6	10.2	-	-
HW2073I*	1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
	-	-	89.9	10.9	-	-

* OUTPUT STYLES



D: DOUBLE EXT. L: LEFT EXT. R: RIGHT EXT.

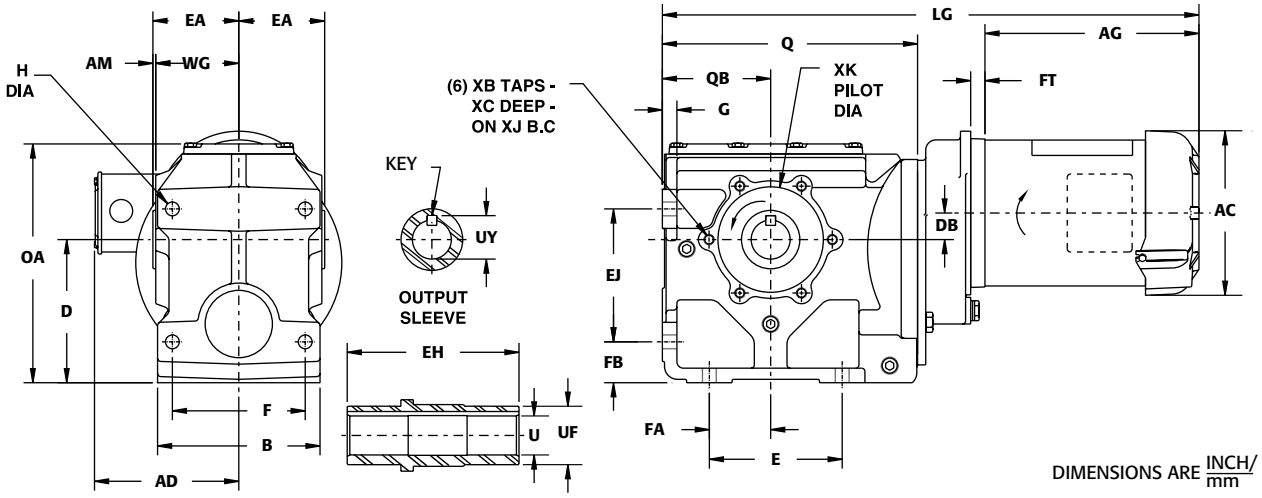
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2043I*	0.25	6.38	4.58	6.99	1.50	16.80
	0.33	6.38	4.58	7.24	1.50	17.05
	0.50	6.38	4.58	7.74	1.50	17.55
	0.75	6.38	4.58	8.24	1.50	18.05
	1.00	7.68	5.56	9.22	1.68	19.21
	1.50	7.68	5.56	9.22	1.68	19.21
HW2053I*	0.25	6.38	4.58	6.99	1.50	17.40
	0.33	6.38	4.58	7.24	1.50	17.65
	0.50	6.38	4.58	7.74	1.50	18.15
	0.75	6.38	4.58	8.24	1.50	18.65
	1.00	7.68	5.56	9.22	1.68	19.81
	1.50	7.68	5.56	9.22	1.68	19.81
HW2063I*	0.25	6.38	4.58	6.99	0.55	19.10
	0.33	6.38	4.58	7.24	0.55	19.35
	0.50	6.38	4.58	7.74	0.55	19.85
	0.75	6.38	4.58	8.24	0.55	20.73
	1.00	7.68	5.56	9.22	0.73	21.51
	1.50	7.68	5.56	9.22	0.73	21.51
	2.00	7.68	5.56	10.72	0.73	23.01
	3.00	9.78	7.19	10.07	1.78	23.41
	5.00	9.78	7.19	11.57	1.78	24.91
HW2073I*	0.25	6.38	4.58	6.99	0.55	21.69
	0.33	6.38	4.58	7.24	0.55	21.94
	0.50	6.38	4.58	7.74	0.55	22.44
	0.75	6.38	4.58	8.24	0.55	22.94
	1.00	7.68	5.56	9.22	0.73	24.10
	1.50	7.68	5.56	9.22	0.73	24.10
	2.00	7.68	5.56	10.72	0.73	25.60
	3.00	9.78	7.19	10.07	1.78	26.00
	5.00	9.78	7.19	11.57	1.78	27.50

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DIMENSIONS ARE INCH/mm

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043IS	0.07	4.72	3.94 +0 -.02	1.27	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	32.2	80	60	80	100	35	35	13	11.0	171	196
HW2053IS	0.10	5.34	4.41 +0 -.02	0.78	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	19.8	100	75	100	110	45	35	12.7	11.0	189	211
HW2063IS	0.11	6.26	5.51 +0 -.02	1.02	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	25.9	130	84	130	130	60	40	14	13.5	233	250
HW2073IS	0.16	7.28	7.09 +0 -.04	.53	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	13.5	135	105	135	150	75	70	24	17.5	299	319

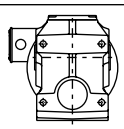
GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043IS	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053IS	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063IS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073IS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SLEEVE

MODEL	EH	U	UF	UY	KEY
HW2043IS	4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
	-	-	-	-	-
HW2053IS	5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
	-	-	-	-	-
HW2063IS	6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
	-	-	-	-	-
HW2073IS	8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
	-	-	-	-	-

OUTPUT STYLE



S: SLEEVE
(HOLLOW BORE)

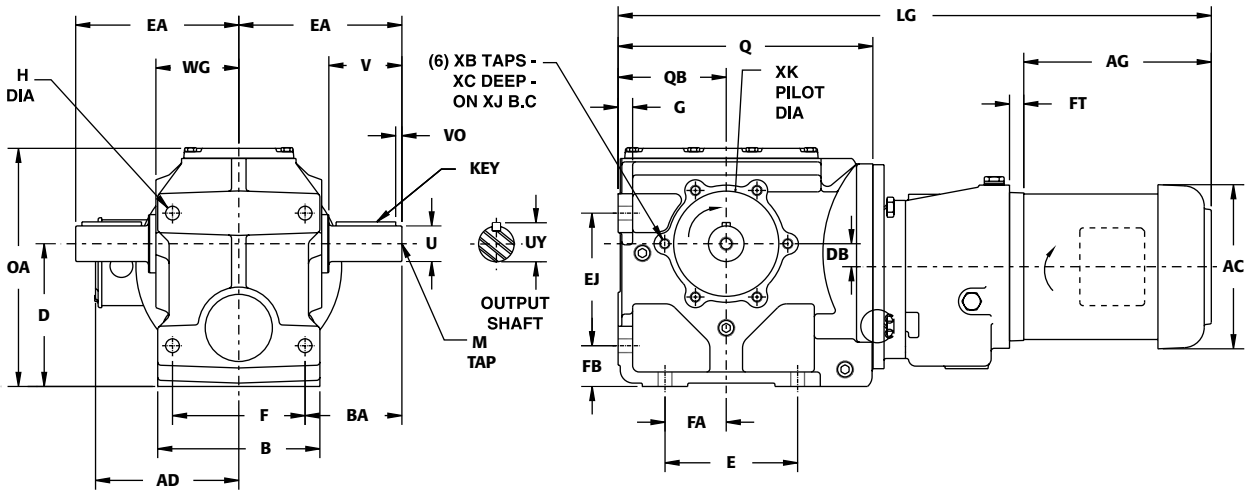
MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2043IS	0.25	6.38	4.58	6.99	1.50	16.80
	0.33	6.38	4.58	7.24	1.50	17.05
	0.50	6.38	4.58	7.74	1.50	17.55
	0.75	6.38	4.58	8.24	1.50	18.05
	1.00	7.68	5.56	9.22	1.68	19.21
	1.50	7.68	5.56	9.22	1.68	19.21
HW2053IS	0.25	6.38	4.58	6.99	1.50	17.40
	0.33	6.38	4.58	7.24	1.50	17.65
	0.50	6.38	4.58	7.74	1.50	18.15
	0.75	6.38	4.58	8.24	1.50	18.65
	1.00	7.68	5.56	9.22	1.68	19.81
	1.50	7.68	5.56	9.22	1.68	19.81
HW2063IS	0.25	6.38	4.58	6.99	0.55	19.10
	0.33	6.38	4.58	7.24	0.55	19.35
	0.50	6.38	4.58	7.74	0.55	19.85
	0.75	6.38	4.58	8.24	0.55	20.73
	1.00	7.68	5.56	9.22	0.73	21.51
	1.50	7.68	5.56	9.22	0.73	21.51
	2.00	7.68	5.56	10.72	0.73	23.01
	3.00	9.78	7.19	10.07	1.78	23.41
	5.00	9.78	7.19	11.57	1.78	24.91
HW2073IS	0.25	6.38	4.58	6.99	0.55	21.69
	0.33	6.38	4.58	7.24	0.55	21.94
	0.50	6.38	4.58	7.74	0.55	22.44
	0.75	6.38	4.58	8.24	0.55	22.94
	1.00	7.68	5.56	9.22	0.73	24.10
	1.50	7.68	5.56	9.22	0.73	24.10
	2.00	7.68	5.56	10.72	0.73	25.60
	3.00	9.78	7.19	10.07	1.78	26.00
	5.00	9.78	7.19	11.57	1.78	27.50

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

INTEGRAL QUAD REDUCTION



DIMENSIONS ARE INCH/mm

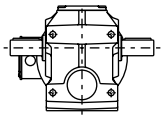
GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064I*	6.26	3.17	5.51 $^{+0}_{-.02}$	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 $^{+0}_{-.5}$	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2074I*	7.28	4.04	7.09 $^{+0}_{-.04}$	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 $^{+0}_{-1}$	35.0	135	195	135	150	75	70	24	17.5	299	319

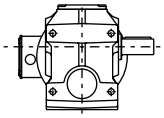
GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064I*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074I*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

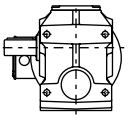
OUTPUT STYLES



D: DOUBLE EXT.



L: LEFT EXT.



R: RIGHT EXT.

OUTPUT SHAFT

MODEL	U	UY	V	VO	KEY	M
HW2064I*	1.375 $^{+0}_{-.001}$	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
	-	-	71.6	10.2	-	-
HW2074I*	1.750 $^{+0}_{-.001}$	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
	-	-	89.9	10.9	-	-

MOTOR

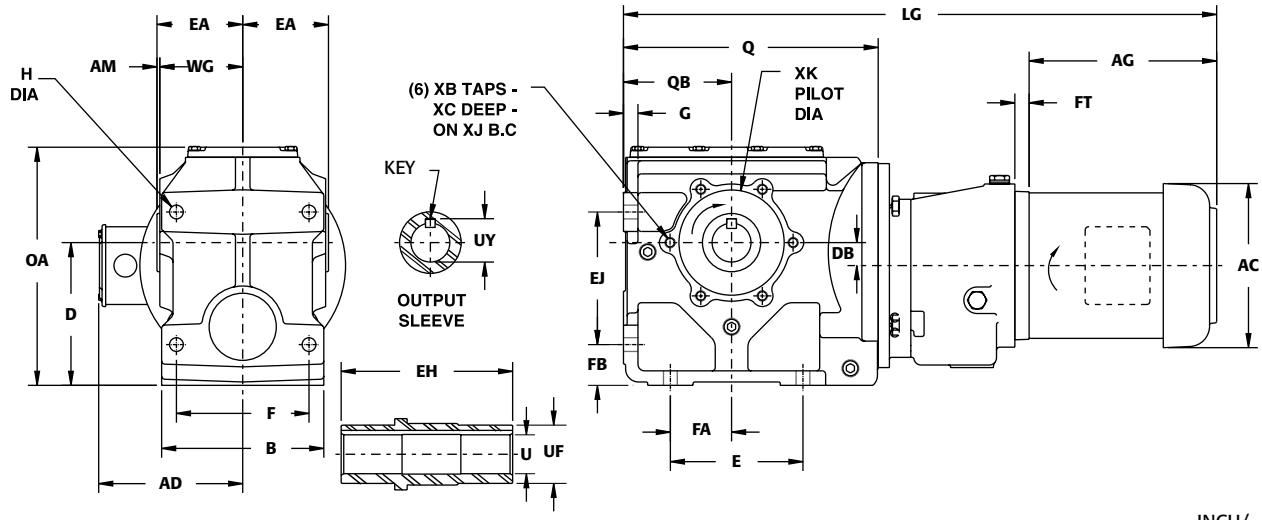
MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2064I*	0.25	6.38	4.58	6.99	0.55	22.69
	0.33	6.38	4.58	7.24	0.55	22.94
	0.50	6.38	4.58	7.74	0.55	23.44
	0.75	6.38	4.58	8.24	0.55	23.94
HW2074I*	0.25	6.38	4.58	6.99	0.71	25.91
	0.33	6.38	4.58	7.24	0.71	26.16
	0.50	6.38	4.58	7.74	0.71	26.66
	0.75	6.38	4.58	8.24	0.71	27.16
	1.00	7.68	5.56	9.22	0.88	28.31

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INTEGRAL QUAD REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064IS	0.11	6.26	5.51 $^{+0}_{-.02}$	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 $^{+0}_{-.5}$	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2074IS	0.16	7.28	7.09 $^{+0}_{-.04}$	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 $^{+0}_{-1}$	35.0	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064IS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074IS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

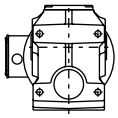
OUTPUT SLEEVE

MODEL	EH	U	UF	UY	KEY
HW2064IS	6.62	1.500 $^{+.0025}_{-0}$	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
	-	-	-	-	-
HW2074IS	8.27	2.000 $^{+.0025}_{-0}$	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
	-	-	-	-	-

MOTOR

MODEL	MOTOR HP	AC	AD	AG	FT	LG
HW2064IS	0.25	6.38	4.58	6.99	0.55	22.69
	0.33	6.38	4.58	7.24	0.55	22.94
	0.50	6.38	4.58	7.74	0.55	23.44
	0.75	6.38	4.58	8.24	0.55	23.94
HW2074IS	0.25	6.38	4.58	6.99	0.71	25.91
	0.33	6.38	4.58	7.24	0.71	26.16
	0.50	6.38	4.58	7.74	0.71	26.66
	0.75	6.38	4.58	8.24	0.71	27.16
	1.00	7.68	5.56	9.22	0.88	28.31

OUTPUT STYLE



S: SLEEVE
(HOLLOW BORE)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

WORM RATIO	RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HW2042		**(2.140 C.D.)**						
6	7.50	233	3.09	760	91.0	1350	350	1800
6	8.40	208	3.00	800	90.7	1350	350	1800
6	9.43	186	2.73	840	90.4	1350	350	1800
6	10.62	165	2.54	870	90.0	1350	350	1800
6	12.00	146	2.35	910	89.6	1350	350	1800
6	13.64	128	2.15	940	89.2	1350	350	1800
6	15.60	112	2.00	970	88.7	1350	350	1800
6	16.74	105	1.85	990	88.5	1350	350	1800
15	18.75	93	1.78	1010	84.2	1350	350	1800
6	20.40	86	1.59	1030	87.8	1350	350	1800
15	23.57	74	1.57	1110	82.9	1350	350	1800
6	25.43	69	1.33	1060	87.1	1350	350	1800
15	30.00	58	1.35	1190	81.5	1350	350	1800
15	34.09	51	1.24	1230	80.9	1350	350	1800
15	39.00	45	1.13	1270	80.1	1350	350	1800
15	41.84	42	1.07	1290	79.7	1350	350	1800
30	47.14	37	0.93	1140	72.3	1350	350	1800
30	53.08	33	0.87	1180	71.3	1350	350	1800
30	60.00	29	0.80	1220	70.4	1350	350	1800
15	63.57	28	0.78	1380	77.4	1350	350	1800
30	68.18	26	0.75	1260	69.3	1350	350	1800
30	78.00	22	0.68	1300	68.2	1350	350	1800
30	83.68	21	0.65	1320	67.6	1350	350	1800
40	90.91	19.3	0.59	1240	64.5	1350	350	1800
30	102.00	17.2	0.56	1370	66.2	1350	350	1800
40	111.58	15.7	0.51	1300	62.8	1350	350	1800
30	127.14	13.8	0.50	1410	64.6	1350	350	1800
40	136.00	12.9	0.45	1340	61.2	1350	350	1800
40	169.52	10.3	0.38	1380	59.5	1350	350	1800
HW2043		**(2.140 C.D.)**						
	183.74	9.5	0.37	1390	57.4	1350	125	1800
	209.40	8.4	0.33	1480	59.1	1350	125	1800
	230.09	7.6	0.31	1490	58.5	1350	125	1800
	267.38	6.5	0.27	1500	57.6	1350	125	1800
	292.85	6.0	0.25	1510	57.2	1350	125	1800
	349.64	5.0	0.21	1530	56.5	1350	125	1800
	390.46	4.5	0.20	1480	52.1	1350	125	1800
	466.18	3.8	0.17	1490	51.4	1350	125	1800
	593.32	2.9	0.14	1510	50.5	1350	125	1800
HW2052		**(2.625 C.D.)**						
6	7.50	233	5.36	1330	91.6	1750	350	2000
6	8.40	208	5.09	1410	91.3	1750	350	2000
6	9.43	186	5.00	1490	90.9	1750	350	2000
6	10.62	165	4.53	1570	90.7	1750	350	2000
6	12.00	146	4.21	1640	90.3	1750	350	2000
6	13.64	128	3.91	1720	89.8	1750	350	2000
6	15.60	112	3.58	1800	89.4	1750	350	2000
6	16.74	105	3.40	1830	89.2	1750	350	2000
15	18.75	93	3.05	1730	85.2	1750	350	2000
15	21.00	83	3.00	1840	84.6	1750	350	2000

NOTE: HW2042 THERMAL RATINGS ARE LIMITED TO 2.1 H.P.
HW2052 THERMAL RATINGS ARE LIMITED TO 3.8 H.P.

FOR MOTOR SELECTION
REFER TO SECTION H

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

WORM RATIO	RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HW2052 CONT.		(2.625 C.D.)						
15	23.57	74	2.71	1930	84.0	1750	350	2000
15	26.54	66	2.55	2030	83.3	1750	350	2000
15	30.00	58	2.37	2120	82.6	1750	350	2000
15	34.09	51	2.19	2200	81.9	1750	350	2000
15	39.00	45	2.05	2290	81.1	1750	350	2000
15	41.84	42	2.00	2320	80.8	1750	350	2000
30	47.14	37	1.58	1990	73.9	1750	350	2000
30	53.08	33	1.50	2080	72.9	1750	350	2000
30	60.00	29	1.40	2170	71.8	1750	350	2000
15	63.57	28	1.41	2530	78.4	1750	350	2000
30	68.18	26	1.30	2260	70.9	1750	350	2000
30	78.00	22	1.20	2340	69.7	1750	350	2000
30	83.68	21	1.15	2390	69.1	1750	350	2000
40	90.91	19.3	1.06	2270	65.4	1750	350	2000
30	102.00	17.2	1.01	2500	67.5	1750	350	2000
40	111.58	15.7	0.93	2390	63.6	1750	350	2000
30	127.14	13.8	0.86	2590	65.9	1750	350	2000
40	136.00	12.9	0.82	2500	61.8	1750	350	2000
40	169.52	10.3	0.70	2590	60.1	1750	350	2000
HW2053		(2.625 C.D.)						
	183.74	9.5	0.68	2620	57.9	1750	125	2000
	209.40	8.4	0.61	2760	60.1	1750	125	2000
	230.09	7.6	0.56	2780	59.5	1750	125	2000
	267.38	6.5	0.50	2810	58.6	1750	125	2000
	292.85	6.0	0.46	2830	58.1	1750	125	2000
	349.64	5.0	0.40	2860	57.3	1750	125	2000
	390.46	4.5	0.38	2820	52.1	1750	125	2000
	466.18	3.8	0.33	2850	51.4	1750	125	2000
	593.32	2.9	0.27	2880	50.4	1750	125	2000
HW2062		(3.250 C.D.)						
6	7.17	244	9.57	2290	92.5	2100	275	2400
6	8.59	204	9.04	2570	92.0	2100	275	2400
6	10.88	161	8.18	2920	91.3	2100	275	2400
6	12.62	139	7.57	3130	90.9	2100	275	2400
6	16.50	106	6.47	3460	90.1	2100	275	2400
15	17.93	98	5.52	3110	87.4	2100	350	2400
6	19.71	89	5.72	3640	89.6	2100	275	2400
6	21.00	83	5.47	3700	89.4	2100	275	2400
6	24.00	73	5.00	3820	88.9	2100	275	2400
6	25.76	68	4.71	3870	88.7	2100	275	2400
15	27.19	64	4.64	3890	85.5	2100	350	2400
6	30.00	58	4.18	3990	88.2	2100	275	2400
6	32.57	54	3.93	4050	87.9	2100	275	2400
30	35.85	49	3.15	3230	79.3	2100	350	2400
15	41.25	42	3.63	4490	83.3	2100	350	2400
15	49.29	36	3.22	4700	82.3	2100	350	2400
30	54.38	32	2.68	4000	76.1	2100	350	2400
15	60.00	29	2.79	4910	81.3	2100	350	2400
15	64.41	27	2.65	4970	80.9	2100	350	2400
15	75.00	23	2.36	5110	80.2	2100	350	2400

NOTE: HW2062 THERMAL RATINGS ARE LIMITED TO 7.5 H.P.

FOR MOTOR SELECTION
REFER TO SECTION H

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

WORM RATIO	RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HW2062 CONT. (3.250 C.D.)								
15	81.43	22	2.21	5160	79.8	2100	350	2400
30	98.57	17.8	1.90	4830	71.5	2100	350	2400
30	105.00	16.7	1.82	4890	71.1	2100	350	2400
30	120.00	14.6	1.66	5030	70.1	2100	350	2400
30	128.82	13.6	1.58	5100	69.6	2100	350	2400
40	140.00	12.5	1.50	4840	65.2	2100	350	2400
30	150.00	11.7	1.42	5230	68.4	2100	350	2400
30	162.86	10.7	1.33	5300	67.8	2100	350	2400
40	171.76	10.2	1.28	5040	63.5	2100	350	2400
40	200.00	8.8	1.15	5170	62.3	2100	350	2400
40	217.14	8.1	1.09	5230	61.6	2100	350	2400
HW2063 (3.250 C.D.)								
	254.28	6.9	0.85	5700	73.0	2100	350	2400
	306.66	5.7	0.72	5700	71.8	2100	350	2400
	352.50	5.0	0.63	5700	70.8	2100	350	2400
	408.00	4.3	0.66	5830	60.5	2100	350	2400
	446.24	3.9	0.64	5620	54.9	2100	350	2400
	508.56	3.4	0.53	5830	59.6	2100	350	2400
	544.00	3.2	0.54	5690	54.0	2100	350	2400
	613.32	2.9	0.45	5830	58.2	2100	350	2400
	678.08	2.6	0.45	5760	53.0	2100	350	2400
	705.00	2.5	0.40	5830	56.9	2100	350	2400
	817.76	2.1	0.38	5760	51.6	2100	350	2400
	940.00	1.9	0.34	5760	50.3	2100	350	2400
HW2064 (3.250 C.D.) HI2042 PRIMARY UNIT								
	298.63	5.9	0.75	5700	70.3	2100	350	2400
	357.86	4.9	0.64	5700	69.3	2100	350	2400
	452.82	3.9	0.52	5700	67.9	2100	350	2400
	525.54	3.3	0.45	5700	67.3	2100	350	2400
	597.26	2.9	0.47	5830	57.0	2100	350	2400
	687.23	2.5	0.35	5700	66.4	2100	350	2400
	821.17	2.1	0.29	5700	65.9	2100	350	2400
	905.64	1.9	0.32	5830	54.1	2100	350	2400
	999.60	1.8	0.24	5700	65.3	2100	350	2400
	1250	1.4	0.20	5700	65.0	2100	350	2400
	1374	1.3	0.22	5830	52.2	2100	350	2400
	1749	1.0	0.18	5830	51.3	2100	350	2400
	1999	0.9	0.16	5830	50.9	2100	350	2400
	2181	0.8	0.14	5830	50.7	2100	350	2400
	2675	0.7	0.12	5830	50.4	2100	350	2400
	3455	0.5	0.09	5830	49.8	2100	350	2400
HW2072 (4.250 C.D.)								
6	7.32	239	17.6	4310	93.0	3050	525	3100
6	8.17	214	16.8	4590	92.8	3050	525	3100
6	9.14	192	15.6	4740	92.5	3050	525	3100
6	11.08	158	15.0	5410	92.0	3050	525	3100
6	13.59	129	13.6	6070	91.4	3050	525	3100

NOTE: HW2072 THERMAL RATINGS ARE LIMITED TO 12 H.P.

FOR MOTOR SELECTION
REFER TO SECTION H

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AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

RATINGS @ 1750 RPM INPUT 1.00 SERVICE FACTOR

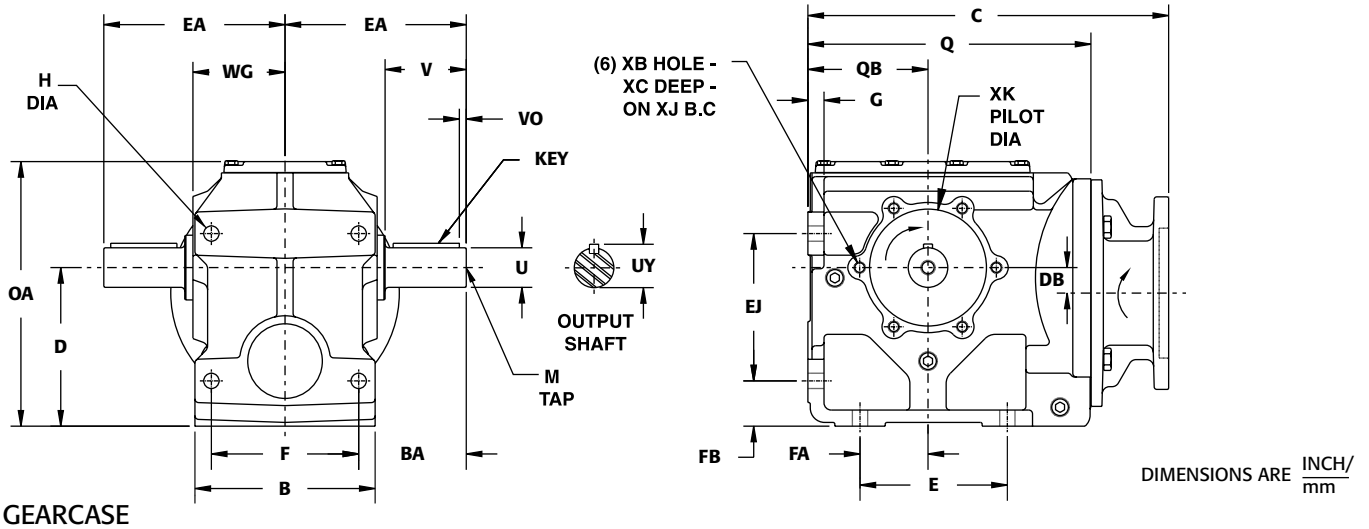
WORM RATIO	RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	EFFICIENCY (%)	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
HW2072 CONT.	(4.250 C.D.)							
6	15.48	113	12.7	6460	91.0	3050	525	3100
15	18.30	96	10.0	5580	88.3	3050	525	3100
6	21.75	80	10.4	7330	90.1	3050	525	3100
6	25.71	68	9.30	7710	89.5	3050	525	3100
15	27.69	63	8.14	7020	86.4	3050	525	3100
15	30.00	58	7.89	7330	86.0	3050	525	3100
15	33.97	52	7.50	7790	85.4	3050	525	3100
15	38.71	45	6.98	8240	84.7	3050	525	3100
30	45.68	38	5.00	6440	79.1	3050	525	3100
15	54.38	32	5.70	9260	82.9	3050	525	3100
15	64.29	27	5.10	9680	82.0	3050	525	3100
15	77.50	23	4.45	10080	81.0	3050	525	3100
15	96.00	18.2	3.80	10490	79.9	3050	525	3100
30	108.75	16.1	3.35	9500	72.4	3050	525	3100
30	128.57	13.6	3.00	9930	71.1	3050	525	3100
40	145.00	12.1	2.67	9550	68.4	3050	525	3100
30	155.00	11.3	2.66	10340	69.7	3050	525	3100
40	171.43	10.2	2.40	9950	67.0	3050	525	3100
30	192.00	9.1	2.28	10750	68.0	3050	525	3100
40	206.67	8.5	2.11	10320	65.6	3050	525	3100
40	256.00	6.8	1.81	10670	63.8	3050	525	3100
HW2073	(4.250 C.D.)							
	310.02	5.6	1.63	11430	62.9	3050	350	3100
	352.34	5.0	1.47	11570	62.1	3050	350	3100
	403.03	4.3	1.31	11700	61.3	3050	350	3100
	432.32	4.0	1.24	11750	61.1	3050	350	3100
	469.78	3.7	1.16	11410	57.9	3050	350	3100
	527.03	3.3	1.04	11890	60.3	3050	350	3100
	576.43	3.0	0.98	11580	56.9	3050	350	3100
	656.93	2.7	0.86	11890	58.2	3050	350	3100
	702.71	2.5	0.82	11700	56.2	3050	350	3100
	792.26	2.2	0.71	11890	58.9	3050	350	3100
	910.68	1.9	0.65	11890	55.7	3050	350	3100
	1056	1.7	0.59	11700	52.3	3050	350	3100
	1214	1.4	0.52	11700	51.5	3050	350	3100
HW2074	(4.250 C.D.) HI2062 PRIMARY UNIT							
	307.90	5.7	1.48	11620	70.7	3050	350	3100
	380.74	4.6	1.22	11620	69.5	3050	350	3100
	454.91	3.8	1.04	11620	68.3	3050	350	3100
	492.77	3.6	0.96	11620	67.9	3050	350	3100
	594.56	2.9	0.81	11620	67.2	3050	350	3100
	615.80	2.8	0.94	11890	57.2	3050	350	3100
	761.48	2.3	0.78	11890	55.9	3050	350	3100
	849.38	2.1	0.58	11620	66.0	3050	350	3100
	985.55	1.8	0.62	11890	54.1	3050	350	3100
	1189	1.5	0.52	11890	52.9	3050	350	3100
	1459	1.2	0.43	11890	52.1	3050	350	3100
	1787	1.0	0.36	11890	51.4	3050	350	3100
	2175	0.8	0.30	11890	50.9	3050	350	3100
	2547	0.7	0.26	11890	50.7	3050	350	3100
	2713	0.6	0.24	11890	50.5	3050	350	3100
	2952	0.6	0.22	11890	50.3	3050	350	3100
	3490	0.5	0.19	11890	49.9	3050	350	3100

FOR MOTOR SELECTION
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CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042E*	4.72	2.56	3.94 +0 -.02	0.23	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100 +0 -.5	5.8	80	115	80	100	35	35	13	11.0	171	196
HW2052E*	5.34	3.15	4.41 +0 -.02	0.72	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112 +0 -.5	18.2	100	135	100	110	45	35	12.7	11.0	189	211
HW2062E*	6.26	3.17	5.51 +0 -.02	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2072E*	7.28	4.04	7.09 +0 -.04	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -1	35.0	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042E*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052E*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062E*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072E*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

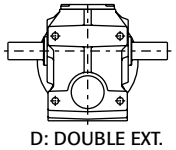
OUTPUT SHAFT

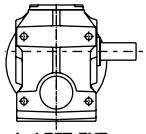
U	UY	V	VO	KEY	M
1.000 +0 -.001	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	7.16	10.2	-	-
1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

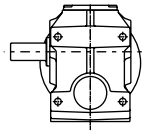
MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC	NEMA 213TC 215TC
HW2042E*	C	10.33	10.33	11.64	-
		262	262	296	-
HW2052E*	C	10.93	10.93	12.24	-
		278	278	311	-
HW2062E*	C	12.53	12.53	13.55	-
		318	318	344	-
HW2072E*	C	15.93	15.93	16.64	16.64
		405	405	423	423

* OUTPUT STYLES


D: DOUBLE EXT.


L: LEFT EXT.

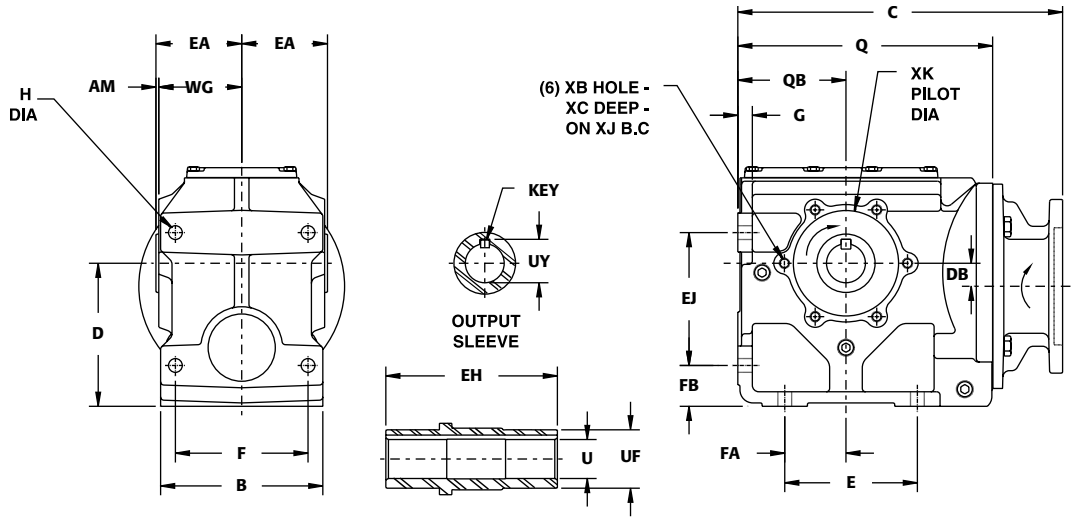

R: RIGHT EXT.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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DOUBLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042ES	0.07	4.72	3.94 +0 -.02	0.23	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	5.8	80	60	80	100	35	35	13	11.0	171	196
HW2052ES	0.10	5.34	4.41 +0 -.02	0.72	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	18.2	100	75	100	110	45	35	12.7	11.0	189	211
HW2062ES	0.11	6.26	5.51 +0 -.02	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2072ES	0.16	7.28	7.09 +0 -.04	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	35.0	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042ES	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052ES	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062ES	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072ES	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

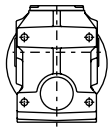
OUTPUT SLEEVE

EH	U	UF	UY	KEY
4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC	NEMA 213TC 215TC
HW2042ES	C	10.33	10.33	11.64	-
		262	262	296	-
HW2052ES	C	10.93	10.93	12.24	-
		278	278	311	-
HW2062ES	C	12.53	12.53	13.55	-
		318	318	344	-
HW2072ES	C	15.93	15.93	16.64	16.64
		405	405	423	423

OUTPUT STYLE



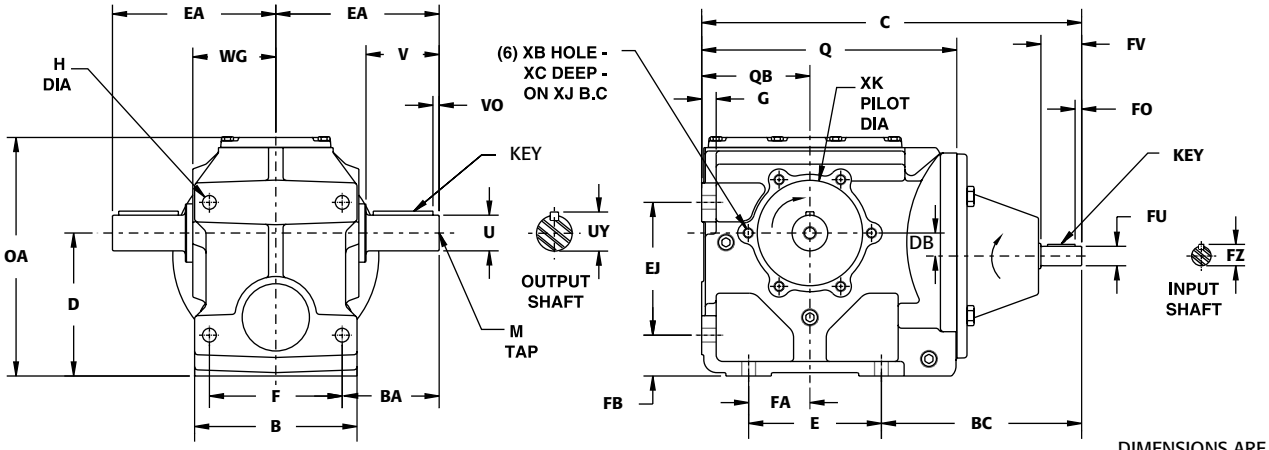
S: SLEEVE
(HOLLOW BORE)

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DOUBLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042A*	4.72	2.56	3.94 +0 -.02	0.23	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100 +0 -.5	5.8	80	115	80	100	35	35	13	11.0	171	196
HW2052A*	5.34	3.15	4.41 +0 -.02	0.72	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112 +0 -.5	18.2	100	135	100	110	45	35	12.7	11.0	189	211
HW2062A*	6.26	3.17	5.51 +0 -.02	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2072A*	7.28	4.04	7.09 +0 -.04	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -1	35.0	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042A*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052A*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062A*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072A*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.000 +0 -.001	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 - 16 x .87
-	-	50.0	6.4	-	-
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	59.9	7.4	-	-
1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 - 13 x 1.13
-	-	71.6	10.2	-	-
1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	89.9	10.9	-	-

INPUT SHAFT

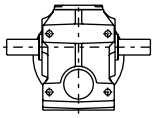
MODEL	FU	FZ	FV	FO	KEY
HW2042A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2052A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2062A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2072A*	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

INPUT/GEARCASE

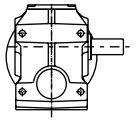
BC	C
7.34	12.06
186	306
7.34	12.66
186	322
7.72	14.65
196	372
11.42	18.76
290	477

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

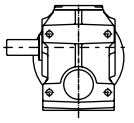
*OUTPUT STYLES



D: DOUBLE EXT.



L: LEFT EXT.

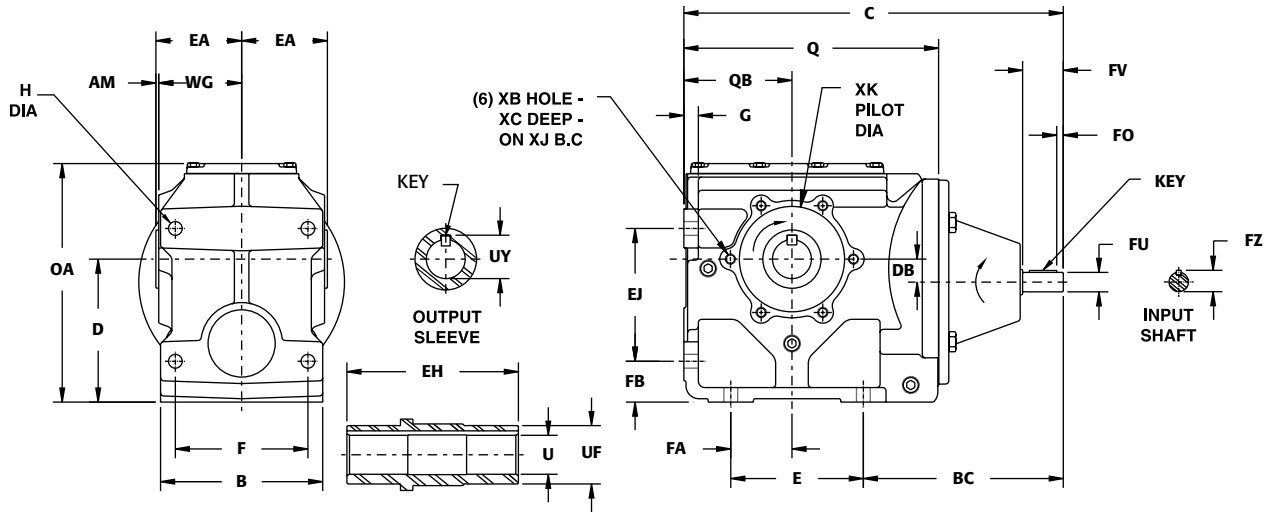


R: RIGHT EXT.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

DOUBLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2042AS	0.07	4.72	3.94 +0 -.02	0.23	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	5.8	80	60	80	100	35	35	13	11.0	171	196
HW2052AS	0.10	5.34	4.41 +0 -.02	0.72	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	18.2	100	75	100	110	45	35	12.7	11.0	189	211
HW2062AS	0.11	6.26	5.51 +0 -.02	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2072AS	0.16	7.28	7.09 +0 -.04	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	35.0	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2042AS	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2052AS	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2062AS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2072AS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SLEEVE

EH	U	UF	UY	KEY
4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

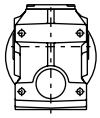
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HW2042AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2052AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2062AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2072AS	0.875 +0 -.0005	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

INPUT/GEARCASE

BC	C
7.34	12.06
186	306
7.34	12.66
186	322
7.72	14.65
196	372
11.42	18.76
290	477

OUTPUT STYLE



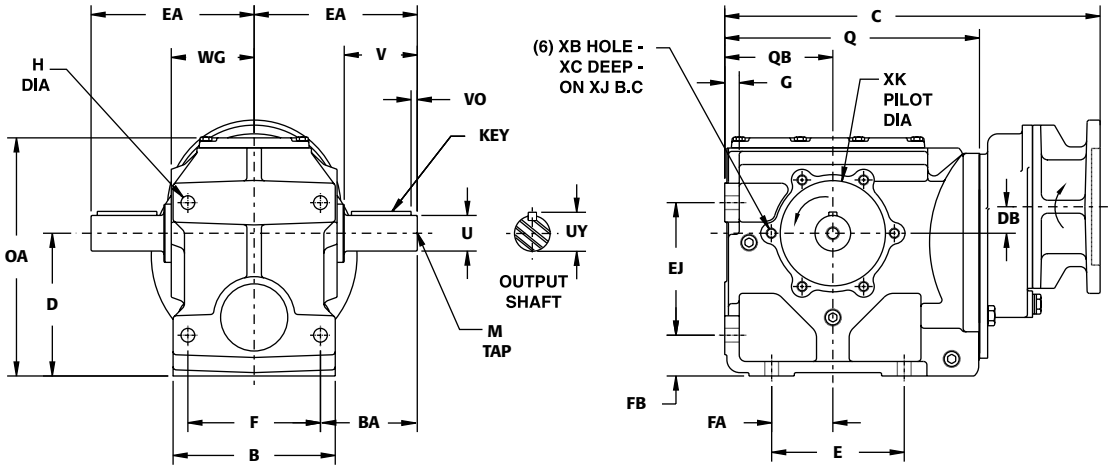
S: SLEEVE
(HOLLOW BORE)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

TRIPLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043E*	4.72	2.56	3.94 +0 -.02	1.27	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100 +0 -.5	32.2	80	115	80	100	35	35	13	11.0	171	196
HW2053E*	5.34	3.15	4.41 +0 -.02	0.78	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112 +0 -.5	19.8	100	135	100	110	45	35	12.7	11.0	189	211
HW2063E*	6.26	3.17	5.51 +0 -.02	1.02	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	25.9	130	160	130	130	60	40	14	13.5	233	250
HW2073E*	7.28	4.04	7.09 +0 -.04	.53	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -1	13.5	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043E*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053E*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063E*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073E*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

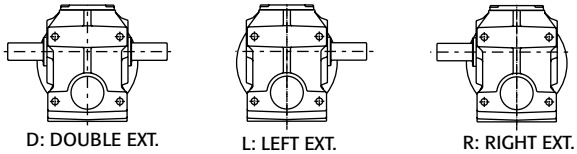
OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.000 +0 -.001	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	7.16	10.2	-	-
1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HW2043E*	C	11.11	-	-
		282	-	-
HW2053E*	C	11.71	-	-
		297	-	-
HW2063E*	C	14.49	14.49	15.80
		368	368	401
HW2073E*	C	16.75	16.75	18.06
		425	425	459

*OUTPUT STYLES



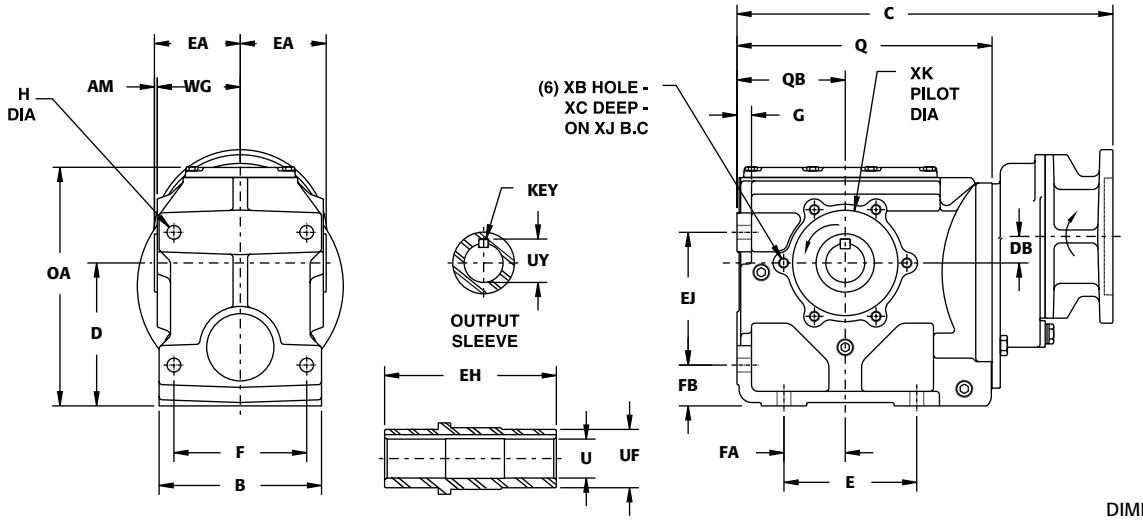
D: DOUBLE EXT. L: LEFT EXT. R: RIGHT EXT.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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TRIPLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043ES	0.07	4.72	3.94 +0 -.02	1.27	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	32.2	80	60	80	100	35	35	13	11.0	171	196
HW2053ES	0.10	5.34	4.41 +0 -.02	0.78	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	19.8	100	75	100	110	45	35	12.7	11.0	189	211
HW2063ES	0.11	6.26	5.51 +0 -.02	1.02	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	25.9	130	84	130	130	60	40	14	13.5	233	250
HW2073ES	0.16	7.28	7.09 +0 -.04	.53	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	13.5	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043ES	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053ES	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063ES	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073ES	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

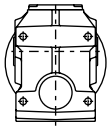
OUTPUT SLEEVE

EH	U	UF	UY	KEY
4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
HW2043ES	C	11.11	-	-
		282	-	-
HW2053ES	C	11.71	-	-
		297	-	-
HW2063ES	C	14.49	14.49	15.80
		368	368	401
HW2073ES	C	16.75	16.75	18.06
		425	425	459

OUTPUT STYLE



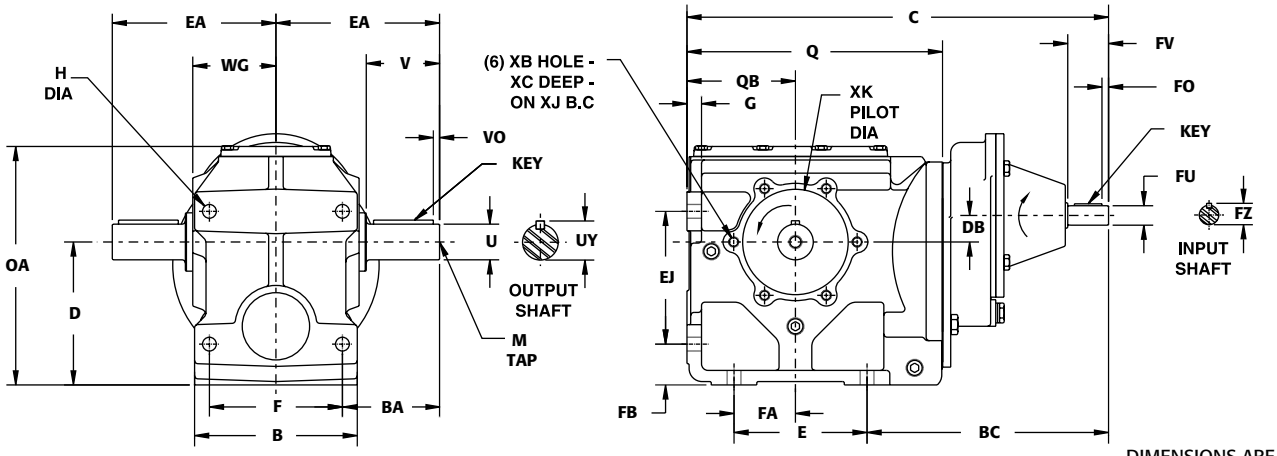
S: SLEEVE
(HOLLOW BORE)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

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TRIPLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043A*	4.72	2.56	3.94 +0 -.02	1.27	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100 +0 -.5	32.2	80	115	80	100	35	35	13	11.0	171	196
HW2053A*	5.34	3.15	4.41 +0 -.02	0.78	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112 +0 -.5	19.8	100	135	100	110	45	35	12.7	11.0	189	211
HW2063A*	6.26	3.17	5.51 +0 -.02	1.02	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	25.9	130	160	130	130	60	40	14	13.5	233	250
HW2073A*	7.28	4.04	7.09 +0 -.04	.53	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -1	13.5	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043A*	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053A*	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063A*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073A*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.000 +0 -.001	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250 +0 -.001	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	71.6	10.2	-	-
1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

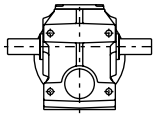
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HW2043A*	0.500 +0 -.0005	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
HW2053A*	0.500 +0 -.0005	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
HW2063A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2073A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

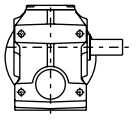
INPUT/GEARCASE

BC	C
7.32	12.04
186	306
7.32	12.64
186	321
9.29	16.22
236	412
11.20	18.48
284	469

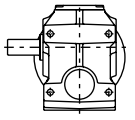
*OUTPUT STYLES



D: DOUBLE EXT.



L: LEFT EXT.



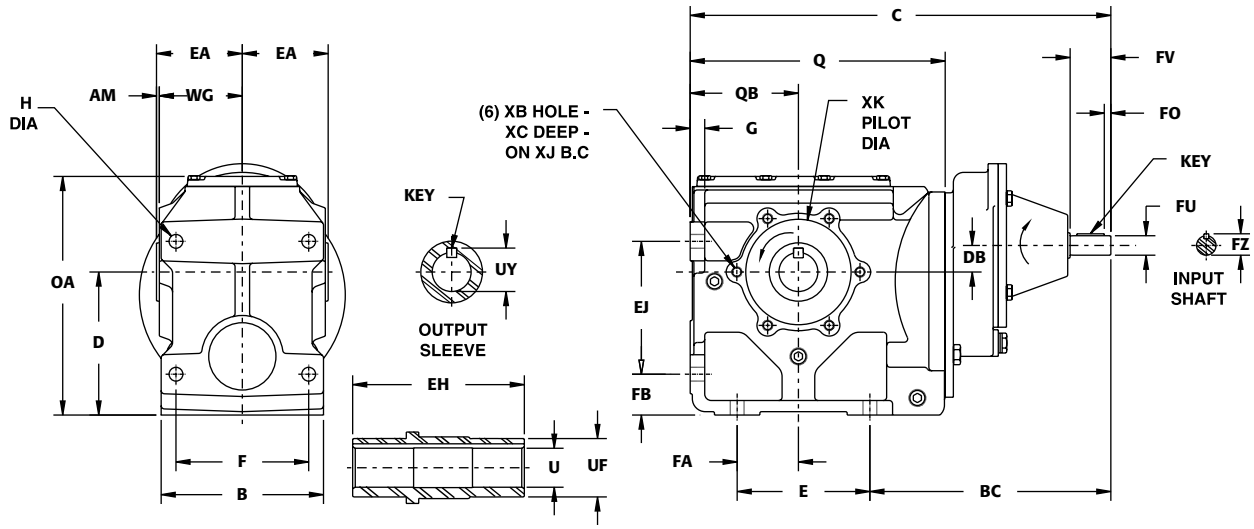
R: RIGHT EXT.

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TRIPLE REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2043AS	0.07	4.72	3.94 +0 -.02	1.27	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100 +0 -.5	32.2	80	60	80	100	35	35	13	11.0	171	196
HW2053AS	0.10	5.34	4.41 +0 -.02	0.78	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112 +0 -.5	19.8	100	75	100	110	45	35	12.7	11.0	189	211
HW2063AS	0.11	6.26	5.51 +0 -.02	1.02	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	25.9	130	84	130	130	60	40	14	13.5	233	250
HW2073AS	0.16	7.28	7.09 +0 -.04	.53	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	13.5	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2043AS	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
HW2053AS	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
HW2063AS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2073AS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SLEEVE

EH	U	UF	UY	KEY
4.72	1.250 +.0025 -0	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375 +.0025 -0	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

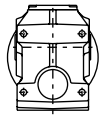
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HW2043AS	0.500 +0 -.0005	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
HW2053AS	0.500 +0 -.0005	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
HW2063AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 11/16
	-	-	-	-	-
HW2073AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

INPUT/GEARCASE

BC	C
7.32	12.04
186	306
7.32	12.64
186	321
9.29	16.22
236	412
11.20	18.48
284	469

OUTPUT STYLE



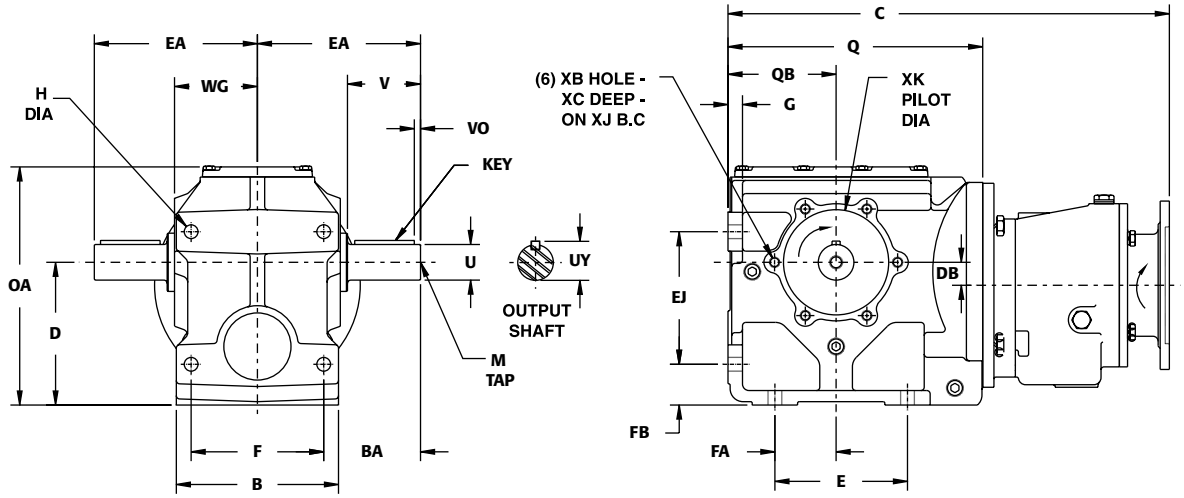
S: SLEEVE
(HOLLOW BORE)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064E_*	6.26	3.17	5.51 $^{+0}_{-.02}$	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 $^{+0}_{-.5}$	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2074E_*	7.28	4.04	7.09 $^{+0}_{-.04}$	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 $^{+0}_{-1}$	35.0	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064E_*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074E_*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

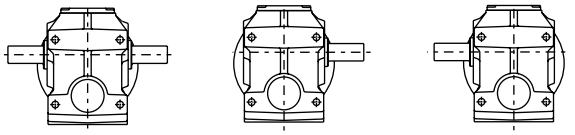
OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.375 $^{+0}_{-.001}$	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	7.16	10.2	-	-
1.750 $^{+0}_{-.001}$	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC
HW2064E_*	C	17.77	17.77
		451	451
HW2074E_*	C	20.91	20.91
		531	531

*OUTPUT STYLES



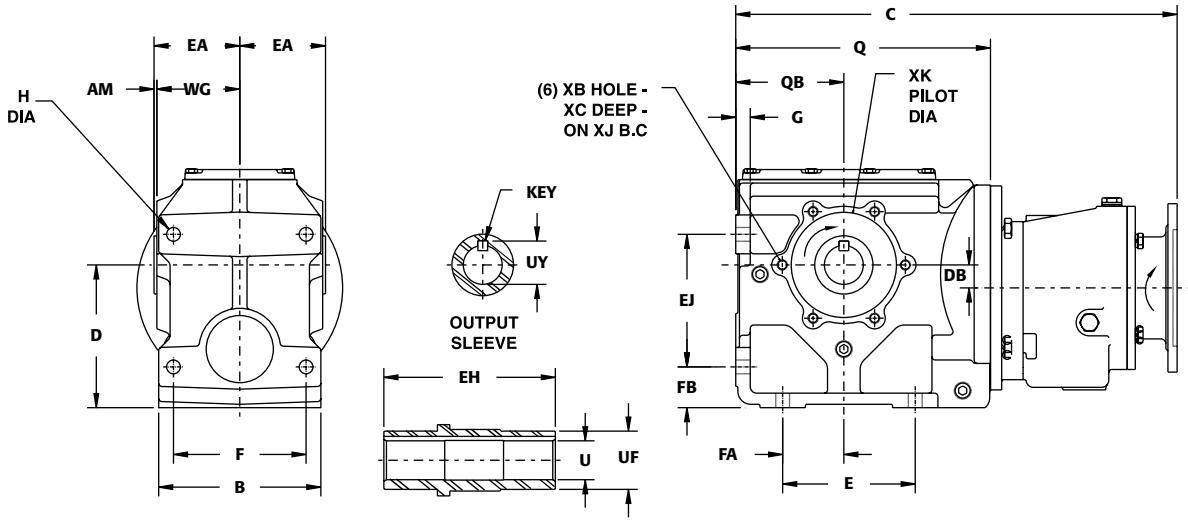
D: DOUBLE EXT. L: LEFT EXT. R: RIGHT EXT.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064ES	0.11	6.26	5.51 $^{+0}_{-.02}$	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 $^{+0}_{-.5}$	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2074ES	0.16	7.28	7.09 $^{+0}_{-.04}$	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 $^{+0}_{-1}$	35.0	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064ES	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074ES	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

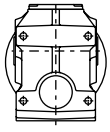
OUTPUT SLEEVE

EH	U	UF	UY	KEY
6.62	1.500 $^{+.0025}_{-0}$	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 $^{+.0025}_{-0}$	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC
HW2064ES	C	17.77	17.77
		451	451
HW2074ES	C	20.91	20.91
		531	531

*OUTPUT STYLE



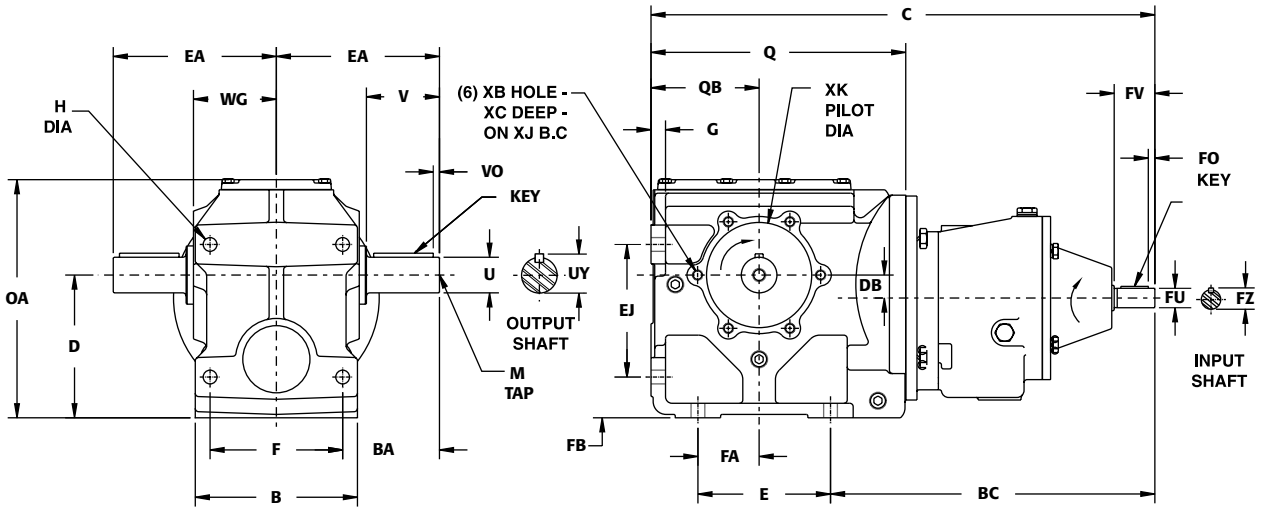
S: SLEEVE
(HOLLOW BORE)

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064A*	6.26	3.17	5.51 +0 -.02	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140 +0 -.5	22.6	130	160	130	130	60	40	14	13.5	233	250
HW2074A*	7.28	4.04	7.09 +0 -.04	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180 +0 -1	35.0	135	195	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064A*	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074A*	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.375 +0 -.001	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	71.6	10.2	-	-
1.750 +0 -.001	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

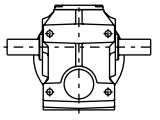
INPUT SHAFT

MODEL	FU	FZ	FV	FO	KEY
HW2064A*	0.625 +0 -.0005	NA	1.88	NA	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2074A*	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

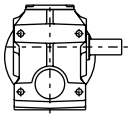
INPUT/GEARCASE

BC	C
12.87	19.80
327	503
15.74	23.02
400	585

*OUTPUT STYLES

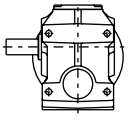


D: DOUBLE EXT.



L: LEFT EXT.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

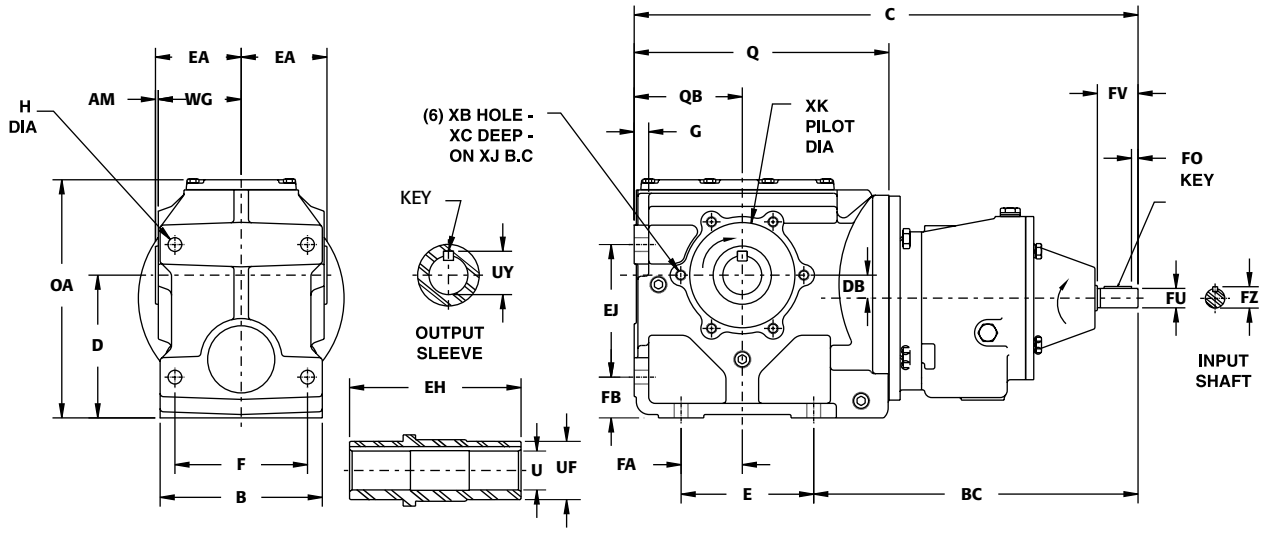


R: RIGHT EXT.

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.

QUAD REDUCTION



DIMENSIONS ARE INCH/mm

GEARCASE

MODEL	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
HW2064AS	0.11	6.26	5.51 +0 -.02	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140 +0 -.5	22.6	130	84	130	130	60	40	14	13.5	233	250
HW2074AS	0.16	7.28	7.09 +0 -.04	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180 +0 -1	35.0	135	105	135	150	75	70	24	17.5	299	319

GEARCASE

MODEL	QB	WG	XB	XC	XJ	XK
HW2064AS	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
HW2074AS	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

OUTPUT SLEEVE

EH	U	UF	UY	KEY
6.62	1.500 +.0025 -0	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 +.0025 -0	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

INPUT SHAFT

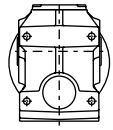
MODEL	FU	FZ	FV	FO	KEY
HW2064AS	0.625 +0 -.0005	NA	1.88	NA	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
HW2074AS	0.750 +0 -.0005	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

INPUT/GEARCASE

BC	C
12.87	19.80
327	503
15.74	23.02
400	585

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

OUTPUT STYLE

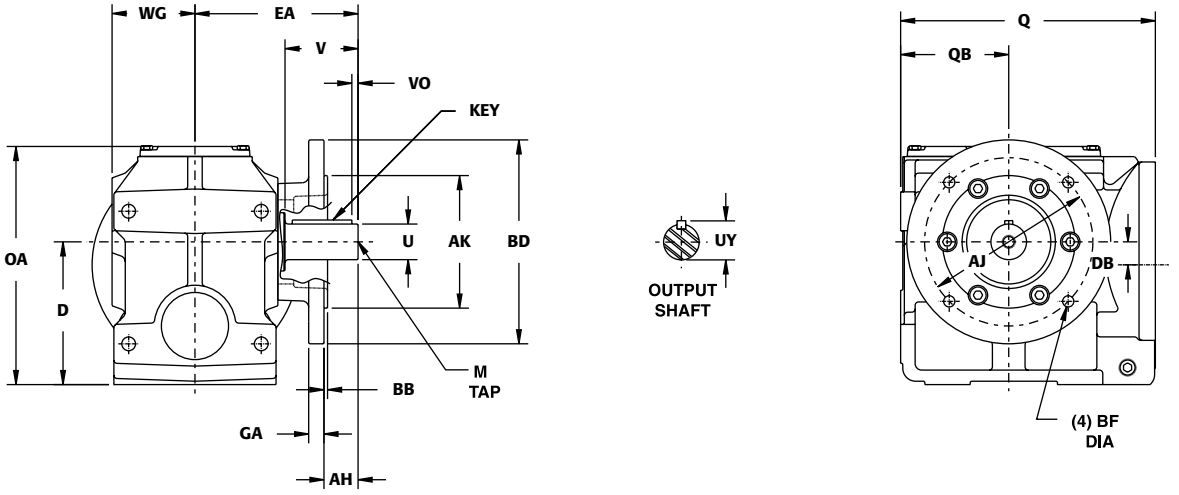


S: SLEEVE
(HOLLOW BORE)

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

ACCESSORY KITS

FLANGE MOUNT KIT (SHOWN WITH OUTPUT SHAFT)



DIMENSIONS ARE INCH/mm

GEARCASE

SERIES	D	DB	EA	OA	Q	QB	WG
HW2040	3.94	0.23	4.53	6.72	7.72	2.95	2.30
	100	5.8	115	171	196	75	58.4
HW2050	4.41	0.72	5.31	7.45	8.32	3.15	2.85
	112	18.2	135	189	211	80	72.4
HW2060	5.51	0.89	6.30	9.18	9.83	4.17	3.20
	140	22.6	160	233	250	106	81.2
HW2070	7.09	1.38	7.68	11.79	12.57	4.92	3.98
	180	35.0	195	299	319	125	101

OUTPUT SHAFT

U	UY	V	VO	KEY	M
1.000 $^{+0}_{-.001}$	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8-16 x .87
-	-	50.0	6.4	-	-
1.250 $^{+0}_{-.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	59.9	7.4	-	-
1.375 $^{+0}_{-.001}$	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	7.16	10.2	-	-
1.750 $^{+0}_{-.001}$	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

FLANGE

SERIES	AH	AJ	AK	BB	BD	BF	GA
HW2040	1.23	5.12	4.331 $^{+0}_{-.002}$	0.14	6.30	0.34	0.37
	31	130	110 $^{-.003}_{-.054}$	3.5	160	8.6	9.4
HW2050	1.38	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.47
	35	165	130 $^{-.003}_{-.054}$	3.5	200	11	12
HW2060	1.32	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.59
	34	165	130 $^{-.003}_{-.054}$	3.5	200	11	15
HW2070	1.76	8.46	7.087 $^{+0}_{-.002}$	0.16	9.84	0.53	0.59
	45	215	180 $^{+.010}_{-.041}$	4	250	13.5	15

FLANGE MOUNT KIT

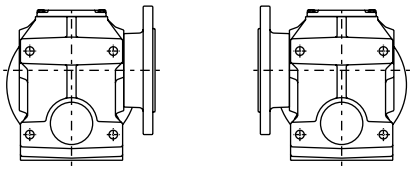
SERIES	KIT NUMBER	WEIGHT
HW2040	0259-00013	7 lbs.
HW2050	0259-00010	11 lbs.
HW2060	0259-00012	11 lbs.
HW2070	0259-00014	17 lbs.

FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

CONSULT FACTORY IF FLANGE MOUNT KIT IS GOING TO BE INSTALLED ON NON-SHAFT EXTENSION SIDE.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

IF FLANGE MOUNT KIT IS TO BE FACTORY ASSEMBLED TO UNIT A MOUNTING LOCATION MUST BE SPECIFIED AS SHOWN:

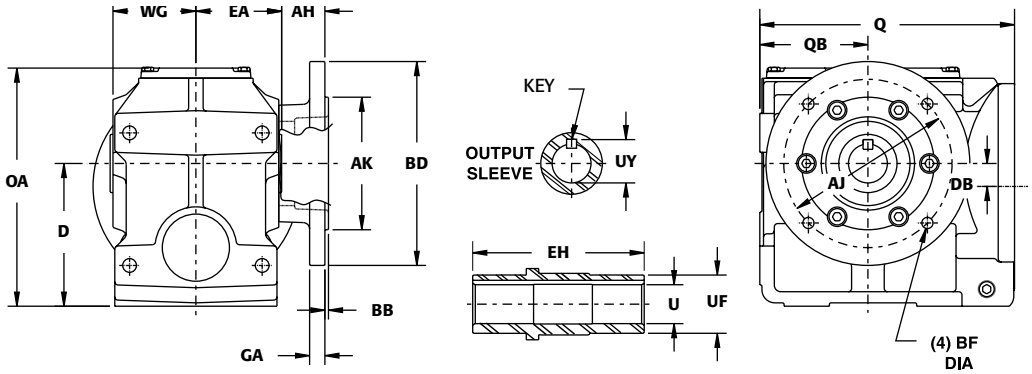


FL FR

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

ACCESSORY KITS

FLANGE MOUNT KIT (SHOWN WITH OUTPUT SLEEVE)



DIMENSIONS ARE INCH/mm

GEARCASE

SERIES	D	DB	EA	OA	Q	QB	WG
HW2040	3.94	0.23	2.36	6.72	7.72	2.95	2.30
	100	5.8	60	171	196	75	58.4
HW2050	4.41	0.72	2.96	7.45	8.32	3.15	2.85
	112	18.2	75	189	211	80	72.4
HW2060	5.51	0.89	3.31	9.18	9.83	4.17	3.20
	140	22.6	84	233	250	106	81.2
HW2070	7.09	1.38	4.14	11.79	12.57	4.92	3.98
	180	35.0	105	299	319	125	101

OUTPUT SLEEVE

EH	U	UF	UY	KEY
4.72	1.250 $^{+.0025}_{-0}$	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375 $^{+.0025}_{-0}$	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500 $^{+.0025}_{-0}$	2.25	2.25	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000 $^{+.0025}_{-0}$	2.75	2.75	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

FLANGE

SERIES	AH	AJ	AK	BB	BD	BF	GA
HW2040	.94	5.12	4.331 $^{+0}_{-.002}$	0.14	6.30	0.34	0.37
	24	130	110 $^{-.003}_{-.054}$	3.5	160	8.6	9.4
HW2050	.97	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.47
	25	165	130 $^{-.003}_{-.054}$	3.5	200	11	12
HW2060	1.67	6.50	5.118 $^{+0}_{-.002}$	0.14	7.87	0.43	0.59
	42	165	130 $^{-.003}_{-.054}$	3.5	200	11	15
HW2070	1.78	8.46	7.087 $^{+0}_{-.002}$	0.16	9.84	0.53	0.59
	45	215	180 $^{+.010}_{-.041}$	4	250	13.5	15

FLANGE MOUNT KIT

SERIES	KIT NO.	WEIGHT
HW2040	0259-00013	7 lbs.
HW2050	0259-00010	11lbs.
HW2060	0259-00012	11 lbs.
HW2070	0259-00014	17 lbs.

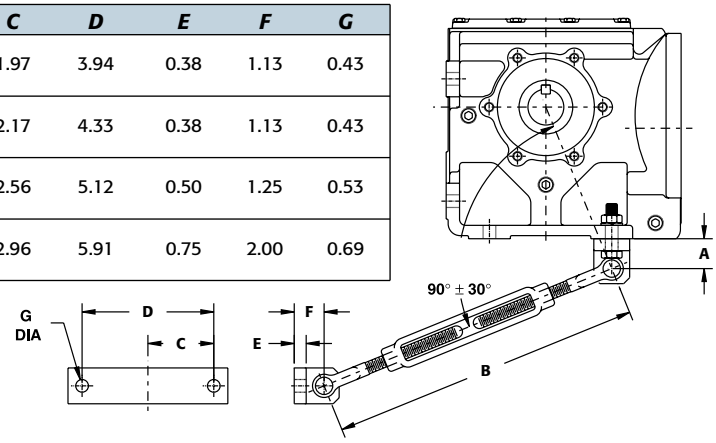
FLANGE MOUNT KITS ARE DESIGNED TO BE INSTALLED BY THE CUSTOMER.

IF FLANGE MOUNT KIT IS TO BE FACTORY ASSEMBLED TO UNIT A MOUNTING LOCATION MUST BE SPECIFIED AS SHOWN ON P. L44.

TORQUE ARM KIT

TORQUE ARM KIT

SERIES	KIT NUMBER	WEIGHT	A	B	C	D	E	F	G
HW2040	0259-00015	4 lbs.	1.13	12.50 MIN. 18.38 MAX.	1.97	3.94	0.38	1.13	0.43
HW2050	0259-00016	4 lbs.	1.13	12.50 MIN. 18.38 MAX.	2.17	4.33	0.38	1.13	0.43
HW2060	0259-00011	5.6 lbs.	1.25	12.50 MIN. 18.38 MAX.	2.56	5.12	0.50	1.25	0.53
HW2070	0259-00017	12.8 lbs.	2.00	14.88 MIN. 20.88 MAX.	2.96	5.91	0.75	2.00	0.69



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

WARNING FOR SAFETY AND TO COMPLY WITH LOCAL AND NATIONAL SAFETY CODES, THE PURCHASER OR USER MUST PROVIDE PROTECTIVE GUARDS OVER ALL SHAFT EXTENSIONS AND DEVICES MOUNTED THEREON.

SHIPPING WEIGHTS & MOTOR COMPATIBILITY

**REDUCER WEIGHTS - SHAFT OUTPUT STYLES D, L, & R

MODEL	SOLID INPUT SHAFT (MOUNTING TYPE A)	C-FRAME QUILL INPUT (MOUNTING TYPE E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
HW2042	45	47	47	52	--
HW2043	51	55	--	--	--
HW2052	51	53	53	58	--
HW2053	57	61	61	--	--
HW2062	84	87	87	93	--
HW2063	97	99	99	104	--
HW2064	103	105	105	--	--
HW2072	173	180	180	180	180
HW2073	192	194	194	200	--
HW2074	197	200	200	206	--

**REDUCER WEIGHTS - SHAFT MOUNT (HOLLOW OUTPUT BORE) STYLE S

MODEL	SOLID INPUT SHAFT (MOUNTING TYPE A)	C-FRAME QUILL INPUT (MOUNTING TYPE E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
HW2042	43	45	45	50	--
HW2043	49	53	--	--	--
HW2052	48	50	50	55	--
HW2053	54	58	--	--	--
HW2062	81	84	84	90	--
HW2063	94	96	96	101	--
HW2064	100	102	102	--	--
HW2072	166	173	173	173	173
HW2073	185	187	187	192	--
HW2074	190	193	193	200	--

** FOR MOTORIZED REDUCER WEIGHTS, ADD MOTOR WEIGHTS FROM ELECTRIC MOTOR CHARTS IN SECTION H TO REDUCER WEIGHTS SHOWN ON THIS PAGE.

**FOR INTEGRAL GEARMOTOR WEIGHTS, FOLLOW INSTRUCTIONS ABOVE (WITH SIMILAR HP C-FACE MOTOR), AND MULTIPLY BY .95.

MOTOR COMPATIBILITY - C-FRAME QUILL REDUCERS

MODEL	56C	143TC 145TC	182TC 184TC	213TC 215TC
HW2042	X	X	X	-
HW2043	X	-	-	-
HW2052	X	X	X	-
HW2053	X	-	-	-
HW2062	X	X	X	-
HW2063	X	X	X	-
HW2064	X	X	-	-
HW2072	X	X	X	X
HW2073	X	X	X	-
HW2074	X	X	X	-

FACTORY OPTIONS

The following factory options are available for gear drives in this catalog. Contact the factory for details on price, availability, and specifications.

CLEANLINE™ (SEE SECTION O)

When application conditions demand premium washdown duty gear drives.

FEATURES
FDA approved white acrylic paint
Corrosion resistant shaft treatment or stainless steel shafts
Stainless steel hardware and nameplate

OPTIONS
Motorized versions
BISSC Standards

METRIC VERSIONS

FEATURES
Metric motor flanges
Metric shaft dimensions
Metric mounting dimensions

OPTIONS
Motorized versions
Modified and Custom Designs

BACKSTOPS

Backstops are available for applications that require the prevention of reverse rotation. Backstops must be factory assembled.

MODIFIED AND CUSTOM DESIGNS

If you have looked through this catalog and do not see exactly what you need, Hub City has the capability and engineering expertise to design and produce a special drive. Capabilities range from flange and shaft modifications, to custom housing dimensions. Consult the factory or your Hub City representative with your specifications.

NOTES

INDUSTRIALINE™ MOUNTED BEARINGS

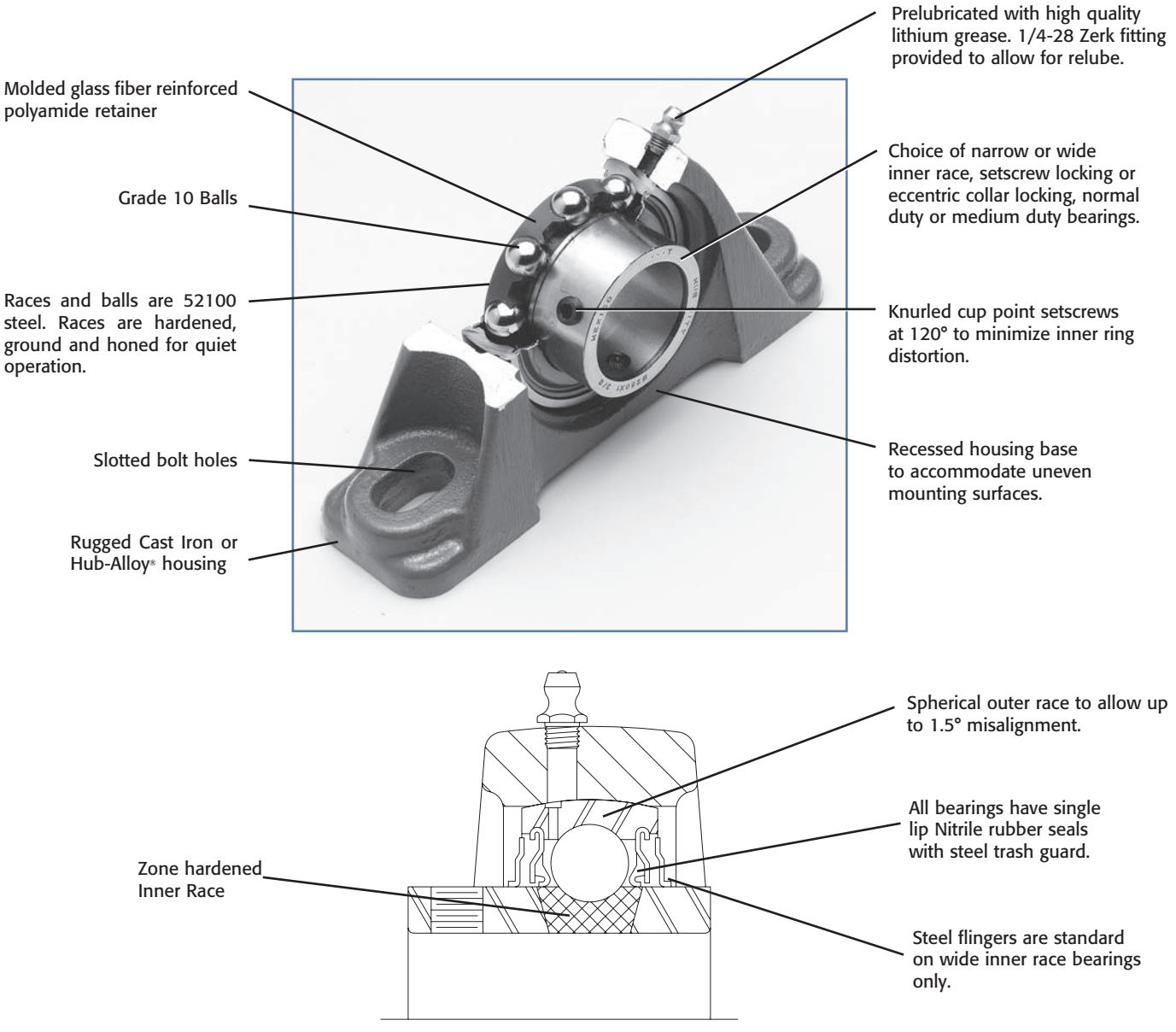
Mounted Bearing Features Index M-1
Features Index M-4
Engineering and Selection — Ball Bearing Units M-6
100 Series Pillow Blocks M-8
100 Series Flange Blocks M-10
100 & 200 Series Load Ratings M-12
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Take-Up Frames — Ball Bearing Units M-27
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M

For Stainless Steel & Thermoplastic Composite Bearings, See Section O

INDUSTRIALINE™ MOUNTED BEARINGS

Hub City offers a wide range of products in the IndustriaLine™ mounted ball bearing product line. These include pillow blocks, 2, 3 and 4 hole flange blocks, 4 hole piloted flange cartridges, and wide slot and narrow slot take-up units. Ball bearing units are available with setscrew locking or eccentric locking collar, with narrow inner race or wide inner race, with normal duty or medium duty bearings. Housings are available in gray cast iron or Hub-Alloy®. Refer to Features Index for description of specific units.



TYPICAL CROSS SECTION

(Continued on next page)

FEATURES

BEARINGS

Bearings have spherical outer races to accommodate up to 1.5° misalignment. Races and balls are made of SAE 52100 vacuum degassed bearing quality steel. Ball retainers are made of molded, glass fiber reinforced polyamide. Races are hardened, ground and honed for quiet operation, and Grade 10 balls are used. Inner races are zone hardened in the ball raceway and seal contact areas. The setscrew end is unhardened to prevent cracking at the setscrew threads. Setscrews are located at 120° to minimize inner ring distortion, and have knurled cup point to resist loosening under vibration. Seals have a nitrile rubber lip bonded to a steel trash guard.. The positive contact, low friction seal rides on the precision ground surface of the inner race. Wide inner race bearings also have steel flingers that rotate with the inner race to provide extra protection. All ball bearings are prelubricated with high quality lithium grease. Hub City bearings have an operating temperature range of -25° F to 225° F.

HOUSINGS

Housings for Hub City bearing units are precision machined from rugged cast iron or high strength Hub-Alloy® castings.

Hub-Alloy® is a cast ferrous material this is manufactured in a carefully controlled process to produce properties exceeding the specifications listed below. Hub-Alloy® can be used to replace malleable iron or ductile iron. It is recommended for severe applications where the stronger material is required to withstand heavy loads imposed on the housing. Hub-Alloy® has tensile strength properties in the range 50-65,000 psi, yield strength in the range 32-45,000 psi, and elongation in the range 10-12%. Specific properties of particular housings vary according to the configuration of the housing.

Cast iron housings meet or exceed the requirements of SAE G3000 gray iron. Typical tensile strength is 30,000 psi.

The nickel-plated bearing housings have an electroplated nickel base, with a finish plating of chrome. Tests conducted at Hub City show that plating of this type will provide excellent durability and optimum performance under normal washdown conditions.

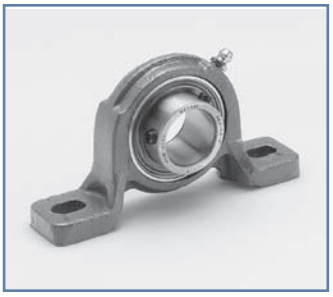
SPECIAL MODIFICATIONS

Hub City can furnish modified or special units to suit customer requirements. Typical modifications include:

- Housing modifications
- Nickel plating of housings in addition to those cataloged
- Special grease types
- Dust caps
- Auxiliary anti-rotation devices
- Custom bearing units with special housings and/or bearings

Modified or special units may be subject to increased lead time and minimum production order quantities.

FEATURES INDEX

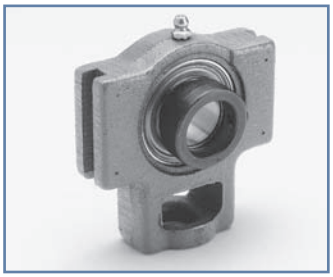




BALL BEARING PILLOW BLOCKS

SERIES	RATING TABLES	OUTLINE DIMENSIONS	SHAFT LOCKING	BEARING LUBRICATION	BACKING HEIGHT	HOUSING MATERIAL	SIZE RANGE	INTERCHANGE REFERENCE
PB100	Page M-12	Page M-8	Setscrew	Non-Relube	High	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
PB100L	Page M-12	Page M-8	Setscrew	Non-Relube	Low	HUB-ALLOY®	1/2 - 1-7/16	–
PB150	Page M-12	Page M-9	Setscrew	Relube	High	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
PB150L	Page M-12	Page M-9	Setscrew	Relube	Low	HUB-ALLOY®	1/2 - 1-7/16	–
PB220	Page M-12	Page M-13	Eccentric Collar	Relube	Low	Cast Iron	1/2 - 2-7/16	Page M-37
PB221	Page M-12	Page M-13	Eccentric Collar	Relube	High	Cast Iron	1/2 - 2-7/16	Page M-37
PB220W	Page M-12	Page M-14	Eccentric Collar	Relube	Low	Cast Iron	3/4 - 2-7/16	Page M-37
PB221W	Page M-12	Page M-14	Eccentric Collar	Relube	High	Cast Iron	3/4 - 2-7/16	Page M-37
PB220HW	Page M-12	Page M-15	Eccentric Collar	Relube	Low	HUB-ALLOY®	3/4 - 2-7/16	Page M-37
PB221HW	Page M-12	Page M-15	Eccentric Collar	Relube	High	HUB-ALLOY®	3/4 - 2-7/16	Page M-37
PB250	Page M-12	Page M-16	Setscrew	Relube	Low	Cast Iron	1/2 - 2-15/16	Page M-37
PB251	Page M-12	Page M-16	Setscrew	Relube	High	Cast Iron	1/2 - 2-15/16	Page M-37
PB250W	Page M-12	Page M-17	Setscrew	Relube	Low	Cast Iron	5/8 - 2-7/16	Page M-37
PB251W	Page M-12	Page M-17	Setscrew	Relube	High	Cast Iron	5/8 - 2-7/16	Page M-37
PB250HW	Page M-12	Page M-18	Setscrew	Relube	Low	HUB-ALLOY®	5/8 - 2-7/16	Page M-37
PB251HW	Page M-12	Page M-18	Setscrew	Relube	High	HUB-ALLOY®	5/8 - 2-7/16	Page M-37
TPB250	Page M-12	Page M-19	Setscrew	Relube	Tapped Base	Cast Iron	1/2 - 2-3/16	Page M-36
TPB250W	Page M-12	Page M-19	Setscrew	Relube	Tapped Base	Cast Iron	5/8 - 2-3/16	Page M-36
PB350	Page M-31	Page M-32	Setscrew	Relube	High	Cast Iron	1 - 3-1/2	Page M-39
PB350H	Page M-31	Page M-33	Setscrew	Relube	High	HUB-ALLOY®	1 - 3-1/2	Page M-39





FEATURES INDEX

BALL BEARING FLANGE BLOCKS & FLANGE CARTRIDGES

SERIES	RATING TABLES	OUTLINE DIMENSIONS	SHAFT LOCKING	BEARING LUBRICATION	FLANGE STYLE	HOUSING MATERIAL	SHAFT SIZE RANGE	INTERCHANGE REFERENCE
FB100	Page M-12	Page M-10	Setscrew	Non-Relube	3-Hole	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
FB110	Page M-12	Page M-10	Setscrew	Non-Relube	2-Hole	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
FB150	Page M-12	Page M-11	Setscrew	Relube	3-Hole	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
FB 160	Page M-12	Page M-11	Setscrew	Relube	2-Hole	HUB-ALLOY®	1/2 - 1-7/16	Page M-36
FB220	Page M-12	Page M-20	Eccentric Collar	Relube	4-Hole	Cast Iron	1/2 - 2-7/16	Page M-38
FB220HW	Page M-12	Page M-21	Eccentric Collar	Relube	4-Hole	HUB-ALLOY®	3/4 - 2-7/16	Page M-38
FB230	Page M-12	Page M-20	Eccentric Collar	Relube	2-Hole	Cast Iron	1/2 - 2-3/16	Page M-38
FB230HW	Page M-12	Page M-21	Eccentric Collar	Relube	2-Hole	HUB-ALLOY®	3/4 - 2-7/16	Page M-38
FB250	Page M-12	Page M-22	Setscrew	Relube	4-Hole	Cast Iron	1/2 - 2-15/16	Page M-38
FB250HW	Page M-12	Page M-23	Setscrew	Relube	4-Hole	HUB-ALLOY®	5/8 - 2-7/16	Page M-38
FB260	Page M-12	Page M-22	Setscrew	Relube	2-Hole	Cast Iron	1/2 - 2-3/16	Page M-38
FB260HW	Page M-12	Page M-23	Setscrew	Relube	2-Hole	HUB-ALLOY®	5/8 - 2-7/16	Page M-38
FB350	Page M-31	Page M-32	Setscrew	Relube	4-Hole	Cast Iron	1 - 3-1/2	Page M-40
FB350H	Page M-31	Page M-33	Setscrew	Relube	4-Hole	HUB-ALLOY®	1 - 3-1/2	Page M-40
FC350	Page M-31	Page M-34	Setscrew	Relube	4-Hole Piloted	Cast Iron	1-1/4 - 3-1/2	Page M-40

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

BALL BEARING TAKE-UP UNITS

SERIES	RATING TABLES	OUTLINE DIMENSIONS	SHAFT LOCKING	BEARING LUBRICATION	SLOT WIDTH	HOUSING MATERIAL	SHAFT SIZE RANGE	INTERCHANGE REFERENCE
TU220	Page M-12	Page M-24	Eccentric Collar	Relube	Standard	HUB-ALLOY®	1/2 - 2-7/16	–
TU220W	Page M-12	Page M-25	Eccentric Collar	Relube	Standard	HUB-ALLOY®	3/4 - 2-7/16	–
TU250	Page M-12	Page M-24	Setscrew	Relube	Standard	HUB-ALLOY®	1/2 - 2-7/16	–
TU250W	Page M-12	Page M-25	Setscrew	Relube	Standard	HUB-ALLOY®	5/8 - 2-7/16	–
WSTU220	Page M-12	Page M-26	Eccentric Collar	Relube	Wide Slot	HUB-ALLOY®	3/4 - 2-7/16	Page M-39
WSTU250	Page M-12	Page M-26	Setscrew	Relube	Wide Slot	HUB-ALLOY®	3/4 - 2-7/16	Page M-39
TU350	Page M-31	Page M-34	Setscrew	Relube	Standard*	HUB-ALLOY®	1-7/16 - 3	–

* WIDE SLOT UNITS AVAILABLE ON MADE-TO-ORDER BASIS.

ENGINEERING AND SELECTION INFORMATION

MAXIMUM SPEED

Maximum speed limits listed for the ball bearing products described in this catalog should be used as a guide and considered along with other factors affecting bearing operation. Load characteristics, bearing lubrication, and temperature factors all influence bearing operation. It is possible that cataloged speed limits may be exceeded after a complete application analysis is completed by factory engineers.

BEARING LIFE

Bearing life is commonly referred to in terms of the number of hours of operation at a given speed, that 90% of the bearings in a lot can equal or exceed before the onset of fatigue failure. This is called the L-10 life of a bearing.

The ball bearing unit load ratings published in this catalog are based upon AFBMA Standard Section 9, Load Ratings and Fatigue Life Ratings for Ball Bearings and are the steady radial loads at which the bearings will endure at various speeds for 500 hours L-10 life, or 2,500 hours average life (average life is considered to be 5 times L-10 life).

BEARING LOADS

Radial loads and thrust force in combination are the principal load components of bearing applied loads. Hub City ball bearing unit ratings are based upon the radial load capacity of the bearing. For applications where bearings are required to absorb thrust forces in addition to normal radial loads, the following considerations must be made concerning the magnitude of the thrust force.

1. When thrust loads are less than 1/2 of the radial load – the equivalent load should be considered the same as the radial load and the selection made based upon the applied radial load.

2. When thrust loads are equal to or greater than 1/2 of the radial load – the equivalent load is determined by adding the radial and thrust loads together. The bearing selection is based upon using this total load as the equivalent applied radial load.

If thrust loads are equal to or exceed the radial loads, consult the factory.

BEARING SELECTION

Selection of the proper Hub City bearing unit for a determined speed and load can be made by referring to the load rating tables. Proper selection is made by finding a bearing having the desired bore size which has a load rating equal to or greater than the radial or equivalent radial load required for the application.

ENGINEERING DATA

Bearing reaction loads are caused by forces acting on the shaft supported by the bearings. These forces are a result of the weight of the shafting and components mounted on the shafting, bending loads due to belt or chain pull, gear reaction loads, and off center or unbalanced loads. These loads must be combined into a single resultant load of known magnitude and direction for each bearing.

Whether the load is applied between bearings on a shaft supported by two bearings or outboard of one of the bearings is important to proper bearing selection. The magnitude and direction of the load for either case may be calculated by taking moments about the other bearing.

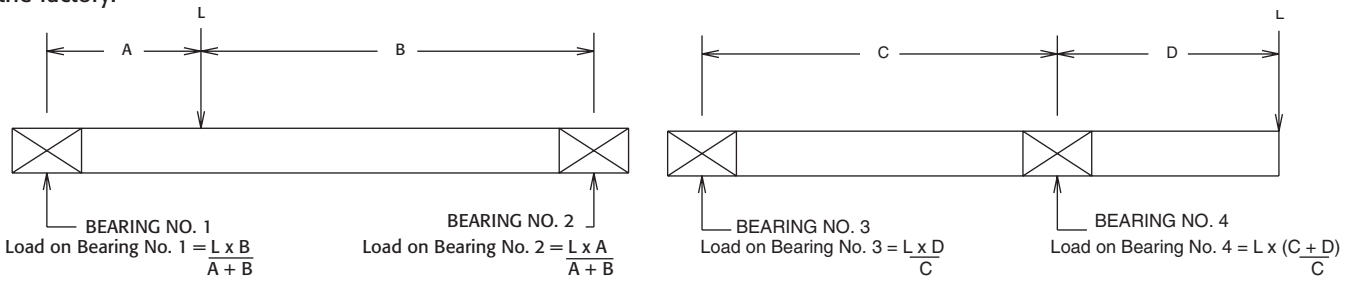
SELECTION EXAMPLE 1:

Radial Load Service Life Expectancy Selection

Select a mounted bearing pillow block unit to meet the following application requirements:

a. Shaft diameter of 1 inch
b. Shaft speed is 1500 RPM.
c. Radial load requirement is 850 Lbs.
d. Life requirement is 1000 hours L-10
   (5000 hours average life)

Step 1.
From the rating tables on pages M-12 and M-31, locate the one inch shaft diameter line and follow that line to the right to the 1500 RPM column. Note that the radial load capacity for 100 Series bearings and 200 Series bearings (ratings, page M-12) is 890 pounds. The radial load capacity for 350 Series bearings (ratings, page M-31) is 1230 pounds.



WHEN COMBINATION FORCES OR UNBALANCED LOADS ARE PRESENT, BEARING REACTION LOAD CALCULATIONS SHOULD BE REVIEWED WITH FACTORY ENGINEERING.

L = APPLIED EQUIVALENT LOAD

ENGINEERING AND SELECTION INFORMATION

SELECTION EXAMPLE 1:

Radial Load Service Life Expectancy Selection (Cont.)

Step 2.
The published radial load capacities are based on an L-10 life of 500 hours and must be modified to suit the application requirement of 1000 hours L-10 life by using the proper multiplier from the chart below each rating table. Calculate the equivalent radial load capacity for 1000 hours L-10 life expectancy as follows:

For 100 or 200 Series Units

890	Lbs. radial capacity
x .794	1000 hours L-10 life factor
707	Lbs. radial capacity for 1000 hours L-10 life

For 350 Series: Units

1230	Lbs. radical capacity
x .794	1000 hours L-10 life factor
977	Lbs. radical capacity for 1000 hours L-10 life

Step 3.
The application radial load requirement of 850 pounds is greater than the radial load capacity for 1000 hours L-10 life for the 100 or 200 Series bearing units. The radial load capacity of the 350 Series bearing unit is 977 pounds and is greater than the application requirement of 650 pounds. A 350 Series bearing unit is the proper selection.

Since a mounted bearing pillow block is required, a 350 Series pillow block with 1 inch bore should be specified.

SELECTION EXAMPLE 2:

Combination Radial and Thrust Load Requirement

Select a Hub City mounted bearing flange block to meet the following conditions:

a. Shaft diameter is 1-3/16.
b. A combination load is applied consisting of:
   Radial load 400 pounds
   Thrust load is 250 pounds
c. Shaft speed is 500 RPM
d. The L-10 life requirement is 500 hours (2500 hours average life)

Step 1.
From the load rating tables, M-12 and M-31, locate the 1-3/16 inch shaft size line and follow this line to the right to the 500 RPM column. The radial load capacity for 100 Series (page M-12) and 200 Series (page M-12) bearing units is 1780 pounds.

The radial load capacity for 350 Series (page M-31) bearing units is 2330 pounds.

Step 2.
Since the application L-10 life requirement of 500 hours is what the catalog rating charts are based on there's no need to apply further modifying factors.

Step 3.
Because the applied thrust load of 250 pounds is more than half of the applied radial load of 400 pounds, these loads must be added together to obtain the equivalent radial load requirement.

Equivalent Radial Load = 400 Lbs. + 250 Lbs. = 650 Lbs.

Step 4.
The equivalent radial load requirement of 650 pounds is less than the catalog radial load capacity for 100 Series, 200 Series, or 350 Series bearing units.

The application requirement is for a flange block unit. A choice must be made as to whether a 2-bolt, 3-bolt, or 4-bolt flange is desired.

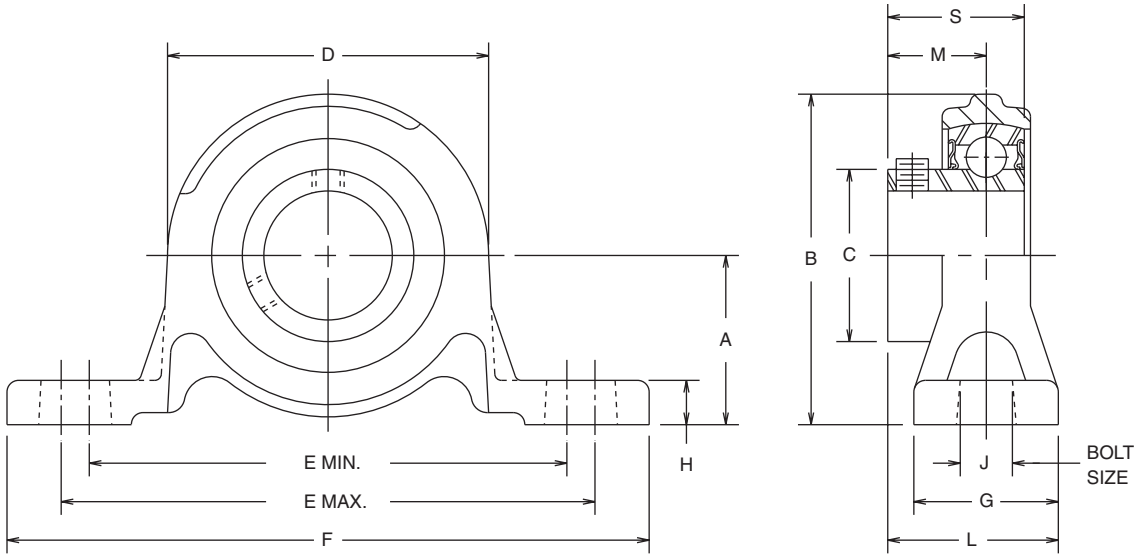
The proper selection can then be made based on the preference for housing material (gray iron, or HUB-ALLOY®) and type of shaft locking preference (setscrew or eccentric collar locking) and whether a non-relube or relube type bearing is required.

FOR LUBRICATION AND MOUNTING INSTRUCTIONS, REFER TO SECTION R

HUB-ALLOY® PILLOW BLOCKS

SERIES PB100, PB100L

- Non-relube type. Prelubricated at the factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing



PB100 SERIES— FOR HIGH SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX	F	G	H	J	L	M	S	
1/2, 5/8	1-3/16	2-5/32	.953	1-15/16	3-7/32	3-21/32	4-7/16	1	11/32	3/8	1-1/8	.630	.886	.6
3/4	1-5/16	2-7/16	1.110	2-1/4	3-17/32	3-31/32	4-3/4	1-1/16	3/8	3/8	1-1/4	.720	1.004	.8
7/8, 15/16, 1	1-7/16	2-11/16	1.328	2-1/2	3-23/32	4-5/32	5	1-1/8	13/32	3/8	1-21/64	.768	1.071	1.0
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-5/32	1.563	2-15/16	4-7/16	5	5-15/16	1-5/16	13/32	1/2	1-33/64	.866	1.220	1.4
1-1/4, 1-3/8, 1-7/16	1-7/8	3-9/16	1.815	3-3/8	4-23/32	5-9/32	6-1/4	1-3/8	7/16	1/2	1-11/16	1.004	1.378	1.9

PART NUMBERS ARE SPECIFIED BY "PB100" AND BORE SIZE; EXAMPLE: PB100 X 1-1/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

PB100L SERIES — FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX	F	G	H	J	L	M	S	
1/2, 5/8	1-1/16	2-1/32	.953	1-15/16	3-7/32	3-21/32	4-7/16	1	9/32	3/8	1-1/8	.630	.886	.6
3/4	1-1/4	2-3/8	1.110	2-1/4	3-17/32	3-31/32	4-3/4	1-1/16	5/16	3/8	1-1/4	.720	1.004	.8
7/8, 15/16, 1	1-5/16	2-9/16	1.328	2-1/2	3-23/32	4-5/32	5	1-1/8	11/32	3/8	1-21/64	.768	1.071	.9
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/32	1.563	2-15/16	4-7/16	5	5-15/16	1-5/16	3/8	1/2	1-33/64	.866	1.220	1.3
1-1/4, 1-3/8, 1-7/16	1-13/16	3-1/2	1.815	3-3/8	4-23/32	5-9/32	6-1/4	1-3/8	13/32	1/2	1-11/16	1.004	1.378	1.9

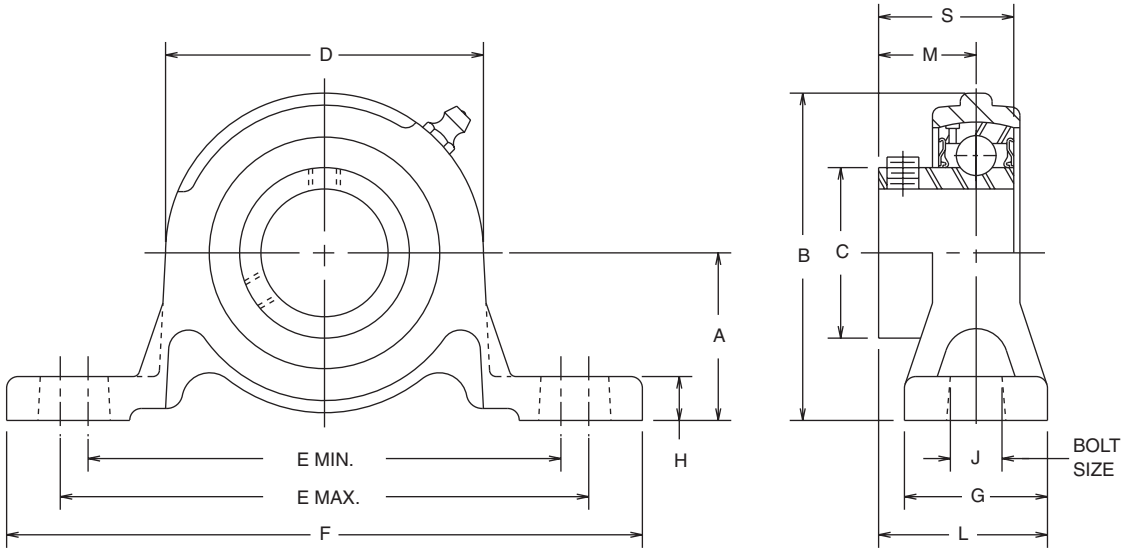
PART NUMBERS ARE SPECIFIED BY "PB100L" AND BORE SIZE; EXAMPLE: PB100L X 7/8. FOR LOAD RATINGS, SEE PAGE M-12.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

HUB-ALLOY® PILLOW BLOCKS

SERIES PB150, PB150L

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB ALLOY® housing



PB150 SERIES– FOR HIGH SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1/2, 5/8	1-3/16	2-5/32	.953	1-15/16	3-7/32	3-21/32	4-7/16	1	11/32	3/8	1-1/8	.630	.886	.6
3/4	1-5/16	2-7/16	1.110	2-1/4	3-17/32	3-31/32	4-3/4	1-1/16	3/8	3/8	1-1/4	.720	1.004	.8
7/8, 15/16, 1	1-7/16	2-11/16	1.328	2-1/2	3-23/32	4-5/32	5	1-1/8	13/32	3/8	1-21/64	.768	1.071	1.0
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-5/32	1.563	2-15/16	4-7/16	5	5-15/16	1-5/16	13/32	1/2	1-33/64	.866	1.220	1.4
1-1/4, 1-3/8, 1-7/16	1-7/8	3-9/16	1.815	3-3/8	4-23/32	5-9/32	6-1/4	1-3/8	7/16	1/2	1-11/16	1.004	1.378	2.0

PART NUMBERS ARE SPECIFIED BY "PB150" AND BORE SIZE; EXAMPLE: PB150 X 1-1/8.
FOR LOAD RATINGS, SEE PAGE M-12.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

PB150L SERIES– FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1/2, 5/8	1-1/16	2-1/32	.953	1-15/16	3-7/32	3-21/32	4-7/16	1	9/32	3/8	1-1/8	.630	.886	.6
3/4	1-1/4	2-3/8	1.110	2-1/4	3-17/32	3-31/32	4-3/4	1-1/16	5/16	3/8	1-1/4	.720	1.004	.8
7/8, 15/16, 1	1-5/16	2-9/16	1.328	2-1/2	3-23/32	4-5/32	5	1-1/8	11/32	3/8	1-21/64	.768	1.071	.9
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/32	1.563	2-15/16	4-7/6	5	5-15/16	1-5/16	3/8	1/2	1-33/64	.866	1.220	1.3
1-1/4, 1-3/8, 1-7/16	1-13/16	3-1/2	1.815	3-3/8	4-23/32	5-9/32	6-1/4	1-3/8	13/32	1/2	1-11/16	1.004	1.378	1.9

PART NUMBERS ARE SPECIFIED BY "PB150L" AND BORE SIZE; EXAMPLE: PB150L X 1-1/8.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

FOR LOAD RATINGS, SEE PAGE M-12.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

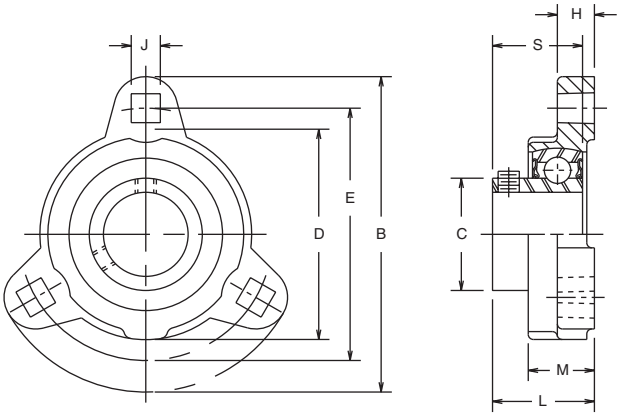
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUB-ALLOY® FLANGE BLOCKS

SERIES FB100, FB110

FB100 THREE-HOLE FLANGE BLOCK

- Non-relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing

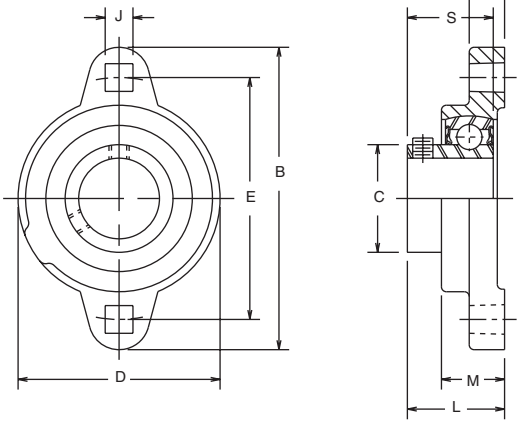


SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J‡	L	M	S	
1/2, 5/8	3-3/16	.953	1-15/16	2-1/2	27/64	9/32	1-1/16	3/4	.886	.6
3/4	3-9/16	1.110	2-1/4	2-13/16	7/16	11/32	1-5/32	25/32	1.004	.8
7/8, 15/16, 1	3-3/4	1.328	2-1/2	3	7/16	11/32	1-13/64	25/32	1.071	.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.563	2-15/16	3-9/16	15/32	13/32	1-11/32	27/32	1.220	1.1
1-1/4, 1-3/8, 1-7/16	4-13/16	1.815	3-3/8	3-15/16	1/2	13/32	1-1/2	29/32	1.378	1.7

PART NUMBERS ARE SPECIFIED BY "FB100" AND BORE SIZE; EXAMPLE: FB100 X 1/2.‡
‡ HOLES ARE CAST, SOME VARIATION MAY BE EXPECTED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

FB110 TWO-HOLE FLANGE BLOCK

- Non-relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing



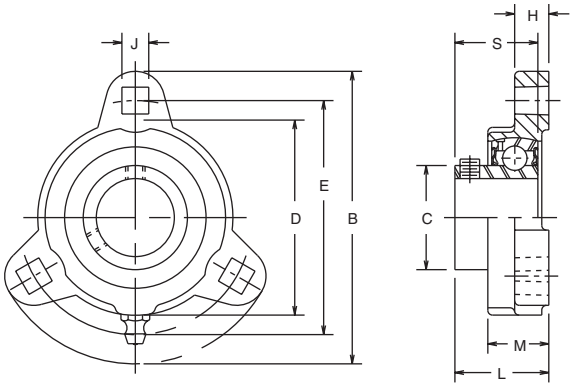
SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J‡	L	M	S	
1/2, 5/8	3-3/16	.953	1-15/16	2-1/2	27/64	9/32	1-1/16	3/4	.886	.6
3/4	3-9/16	1.110	2-1/4	2-13/16	7/16	11/32	1-5/32	25/32	1.004	.8
7/8, 15/16, 1	3-3/4	1.328	2-1/2	3	7/16	11/32	1-13/64	25/32	1.071	.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.563	2-15/16	3-9/16	15/32	13/32	1-11/32	27/32	1.220	1.1
1-1/4, 1-3/8, 1-7/16	4-13/16	1.815	3-3/8	3-15/16	1/2	13/32	1-1/2	29/32	1.378	1.5

PART NUMBERS ARE SPECIFIED BY "FB110" AND BORE SIZE; EXAMPLE: FB110 X 1/2.
‡ HOLES ARE CAST, SOME VARIATION MAY BE EXPECTED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

HUB-ALLOY® FLANGE BLOCKS

SERIES FB150, FB160



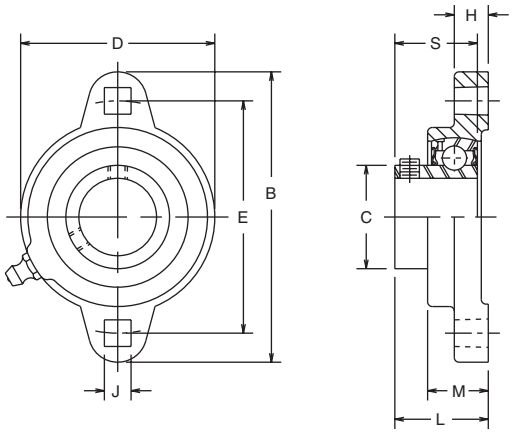
FB150 THREE-HOLE FLANGE BLOCK

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing

M

SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J‡	L	M	S	
1/2, 5/8	3-3/16	.953	1-15/16	2-1/2	27/64	9/32	1-1/16	3/4	.886	.5
3/4	3-9/16	1.110	2-1/4	2-13/16	7/16	11/32	1-5/32	25/32	1.004	.7
7/8, 15/16, 1	3-3/4	1.328	2-1/2	3	7/16	11/32	1-13/64	25/32	1.071	.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.563	2-15/16	3-9/16	15/32	13/32	1-11/32	27/32	1.220	1.2
1-1/4, 1-3/8, 1-7/16	4-13/16	1.815	3-3/8	3-15/16	1/2	13/32	1-1/2	29/32	1.378	1.6

PART NUMBERS ARE SPECIFIED BY "FB150" AND BORE SIZE; EXAMPLE: FB150 X 3/4.
‡ HOLES ARE CAST, SOME VARIATION MAY BE EXPECTED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.



FB160 TWO-HOLE FLANGE BLOCK

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing

SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J‡	L	M	S	
1/2, 5/8	3-3/16	.953	1-15/16	2-1/2	27/64	9/32	1-1/16	3/4	.886	.6
3/4	3-9/16	1.110	2-1/4	2-13/16	7/16	11/32	1-5/32	25/32	1.004	.7
7/8, 15/16, 1	3-3/4	1.328	2-1/2	3	7/16	11/32	1-13/64	25/32	1.071	.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.563	2-15/16	3-9/16	15/32	13/32	1-11/32	27/32	1.220	1.2
1-1/4, 1-3/8, 1-7/16	4-13/16	1.815	3-3/8	3-15/16	1/2	13/32	1-1/2	29/32	1.378	1.5

PART NUMBERS ARE SPECIFIED BY "FB160" AND BORE SIZE; EXAMPLE: FB160 X 3/4.
‡ HOLES ARE CAST, SOME VARIATION MAY BE EXPECTED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

SERIES 100, 200 - RATINGS

SHAFT SIZE (INCHES)	BEARING RADIAL LOAD CAPACITY IN POUNDS BASED ON L-10 LIFE OF 500 HOURS AND STEADY LOAD CONDITIONS (2500 HOURS AVERAGE LIFE)							
	BEARING SPEED – REVOLUTIONS PER MINUTE (RPM)							
	100	500	1,000	1,500	2,000	2,500	3,000	3,500
1/2, 5/8	1,490	870	690	600	550	510	480	460
3/4	1,980	1,160	920	800	730	680	640	610
7/8, 15/16, 1	2,180	1,280	1,010	890	800	750	700	670
1-1/8, 1-3/16, 1-1/4S	3,040	1,780	1,410	1,230	1,120	1,040	980	930
1-1/4, 1-3/8, 1-7/16	3,980	2,330	1,850	1,610	1,470	1,360	1,280	–
1-1/2	4,790	2,800	2,220	1,940	1,760	1,640	1,540	–
1-5/8, 1-11/16, 1-3/4	5,180	3,030	2,400	2,100	1,910	1,770	–	–
1-15/16, 2S	5,480	3,200	2,540	2,220	2,020	1,870	–	–
2, 2-3/16	6,800	3,980	3,160	2,760	2,510	–	–	–
2-1/4, 2-7/16	8,250	4,830	3,830	3,350	3,040	–	–	–
2-15/16	9,710	5,680	4,510	3,940	–	–	–	–

FOR ULTIMATE LIFE, SNUG FIT OR LIGHT PRESS ON SHAFT SHOULD BE USED.
RECOMMENDED OPERATING TEMPERATURE RANGE: -25° TO +225°F.

Maximum Recommended Speeds:*
1-7/16 and smaller – 3,500 R.P.M.
1-1/2 – 1-3/4 – 3,000 R.P.M.
1-7/8 – 2-7/16 – 2,500 R.P.M.
2-15/16 – 1,800 R.P.M.

FOR APPLICATIONS NOT COVERED IN THE TABLE ABOVE, CONSULT THE FACTORY.

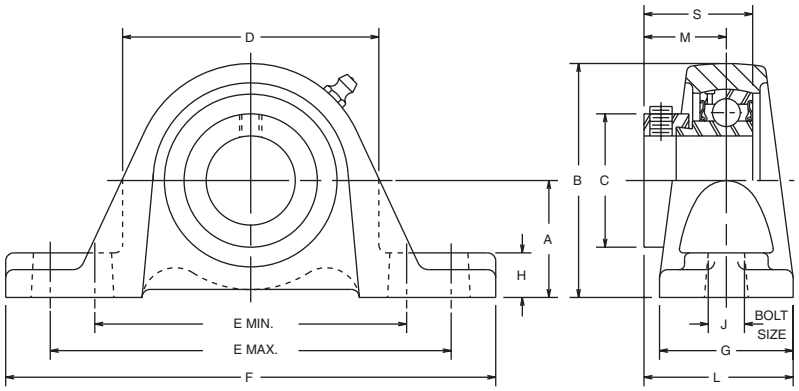
TO MODIFY THE ABOVE RATINGS FOR OTHER L-10 LIFE REQUIREMENTS OR FOR SHOCK LOADS MULTIPLY THE ABOVE RATINGS BY THE FACTOR FROM THIS CHART													
MODIFICATION FACTORS FOR L-10 SERVICE LIFE AND LOAD CONDITIONS:													
LOAD CONDITIONS	L-10 LIFE (HOURS)												
	500	700	1,000	1,500	2,000	3,000	4,000	5,000	7,000	10,000	15,000	20,000	30,000	50,000
Steady Load	1.00	.894	.794	.694	.630	.550	.500	.464	.415	.368	.322	.292	.255	.215
Light Shock	.90	.804	.715	.624	.567	.495	.450	.418	.373	.331	.290	.263	.230	.194
Moderate Shock	.70	.626	.556	.485	.441	.385	.350	.325	.290	.258	.225	.205	.179	.151

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CAST IRON PILLOW BLOCKS

SERIES PB220, PB221



- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing

M

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

PB220 SERIES – FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX	F	G	H	J	L	M	S	
1/2, 5/8	1-1/16	2-1/8	1.101	1-15/16	3	3-15/16	4-7/8	1-1/4	1/2	3/8	1-35/64	.915	1.126	1.1
3/4	1-1/4	2-1/2	1.273	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	1/2	3/8	1-39/64	.925	1.220	1.8
1	1-5/16	2-5/8	1.460	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	1/2	3/8	1-43/64	.925	1.220	2.3
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.710	3	4-1/4	5-1/8	6-3/8	1-3/4	5/8	1/2	1-59/64	1.051	1.406	2.8
1-1/4, 1-3/8, 1-7/16	1-13/16	3-5/8	2.148	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	5/8	1/2	2-3/32	1.157	1.531	3.7
1-1/2	1-15/16	3-15/16	2.335	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	3/4	1/2	2-13/64	1.268	1.720	4.2
1-11/16, 1-3/4	2-1/16	4-3/16	2.483	4-1/8	5-3/8	6-1/4	7-3/8	2	3/4	1/2	2-9/32	1.287	1.720	4.8
1-15/16	2-3/16	4-7/16	2.733	4-5/16	5-13/16	6-3/4	8-3/8	2	3/4	5/8	2-9/32	1.287	1.720	5.9
2, 2-3/16	2-7/16	4-15/16	2.983	4-3/4	6-7/16	7-3/8	9	2-1/4	7/8	5/8	2-9/16	1.439	1.906	8.3
2-7/16	2-11/16	5-1/2	3.296	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-1/8	5/8	2-13/16	1.559	2.091	10.9

PART NUMBERS ARE SPECIFIED BY "PB220" AND BORE SIZE; EXAMPLE: PB220 X 1-7/16.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

PB221 SERIES – FOR HIGH SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX	F	G	H	J	L	M	S	
1/2, 5/8	1-3/16	2-1/4	1.101	1-15/16	3	3-15/16	4-7/8	1-1/4	5/8	3/8	1-35/64	.915	1.126	1.2
3/4	1-5/16	2-9/16	1.273	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	9/16	3/8	1-39/64	.925	1.220	1.9
1	1-7/16	2-3/4	1.460	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	5/8	3/8	1-43/64	.925	1.220	2.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-1/4	1.710	3	4-1/4	5-1/8	6-3/8	1-3/4	3/4	1/2	1-59/64	1.051	1.406	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-11/16	2.148	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	11/16	1/2	2-3/32	1.157	1.531	4.1
1-1/2	2	4	2.335	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	13/16	1/2	2-13/64	1.268	1.720	4.3
1-11/16, 1-3/4	2-1/8	4-1/4	2.483	4-1/8	5-3/8	6-1/4	7-3/8	2	13/16	1/2	2-9/32	1.287	1.720	4.9
1-15/16	2-1/4	4-1/2	2.733	4-5/16	5-13/16	6-3/4	8-3/8	2	13/16	5/8	2-9/32	1.287	1.720	6.1
2, 2-3/16	2-1/2	5	2.983	4-3/4	6-7/16	7-3/8	9	2-1/4	15/16	5/8	2-9/16	1.439	1.906	9.0
2-7/16	2-3/4	5-9/16	3.296	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-3/16	5/8	2-13/16	1.559	2.091	11.1

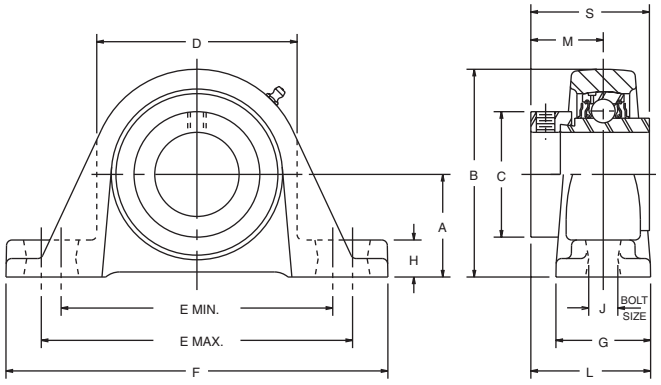
PART NUMBERS ARE SPECIFIED BY "PB221" AND BORE SIZE; EXAMPLE: PB221 X 1-1/2.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CAST IRON PILLOW BLOCKS
SERIES PB220W, PB221W

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- Wide inner race.



NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

PB220W SERIES – FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-5/16	2-5/8	1.460	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	1/2	3/8	1-13/16	1.059	1.748	2.3
1-3/16	1-9/16	3-1/8	1.710	3	4-1/4	5-1/8	6-3/8	1-3/4	5/8	1/2	2-1/16	1.185	1.906	2.8
1-1/4, 1-3/8, 1-7/16	1-13/16	3-5/8	2.148	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	5/8	1/2	2-7/32	1.272	2.012	3.7
1-1/2	1-15/16	3-15/16	2.335	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	3/4	1/2	2-5/16	1.374	2.217	4.2
1-11/16, 1-3/4	2-1/16	4-3/16	2.483	4-1/8	5-3/8	6-1/4	7-3/8	2	3/4	1/2	2-3/8	1.374	2.217	4.8
1-15/16	2-3/16	4-7/16	2.733	4-5/16	5-13/16	6-3/4	8-3/8	2	3/4	5/8	2-1/2	1.500	2.469	5.9
2, 2-3/16	2-7/16	4-15/16	2.983	4-3/4	6-7/16	7-3/8	9	2-1/4	7/8	5/8	2-27/32	1.717	2.811	8.3
2-7/16	2-11/16	5-1/2	3.296	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-1/8	5/8	3-3/32	1.838	3.063	10.9

PART NUMBERS ARE SPECIFIED BY "PB220W" AND BORE SIZE; EXAMPLE: PB220W X 1-7/16.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

PB221W SERIES – FOR HIGH SHAFT HEIGHTS

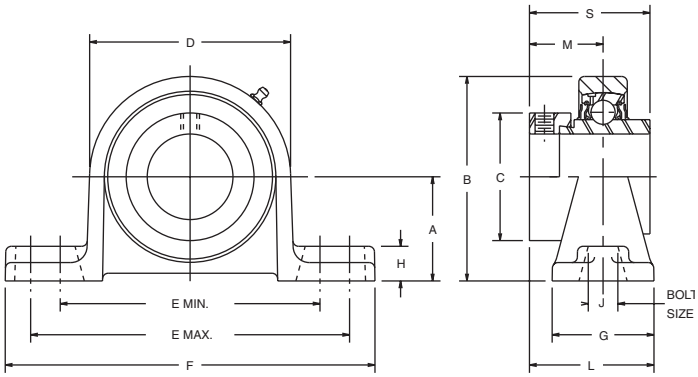
SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-7/16	2-3/4	1.460	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	5/8	3/8	1-13/16	1.059	1.748	2.4
1-3/16	1-11/16	3-1/4	1.710	3	4-1/4	5-1/8	6-3/8	1-3/4	3/4	1/2	2-1/16	1.185	1.906	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-11/16	2.148	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	11/16	1/2	2-7/32	1.272	2.012	4.1
1-1/2	2	4	2.335	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	13/16	1/2	2-5/16	1.374	2.217	4.3
1-11/16, 1-3/4	2-1/8	4-1/4	2.483	4-1/8	5-3/8	6-1/4	7-3/8	2	13/16	1/2	2-3/8	1.374	2.217	4.9
1-15/16	2-1/4	4-1/2	2.733	4-5/16	5-13/16	6-3/4	8-3/8	2	13/16	5/8	2-1/2	1.500	2.469	6.1
2, 2-3/16	2-1/2	5	2.983	4-3/4	6-7/16	7-3/8	9	2-1/4	15/16	5/8	2-27/32	1.717	2.811	9.0
2-7/16	2-3/4	5-9/16	3.296	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-3/16	5/8	3-3/32	1.838	3.063	11.1

PART NUMBERS ARE SPECIFIED BY "PB221W" AND BORE SIZE; EXAMPLE: PB221W X 1-1/2.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

HUB-ALLOY® PILLOW BLOCKS

SERIES PB220HW, PB221HW



- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

M

PB220HW SERIES – FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-5/16	2-5/8	1.460	2-1/2	3-5/8	4-1/2	5-3/8	1-1/2	1/2	3/8	1-13/16	1.059	1.748	1.6
1-3/16	1-9/16	3-3/32	1.710	2-15/16	4-1/4	5-1/8	6-1/16	1-1/2	9/16	1/2	1-15/16	1.185	1.906	2.5
1-1/4, 1-3/8, 1-7/16	1-13/16	3-17/32	2.148	3-3/8	4-5/8	5-1/2	6-7/16	1-3/4	9/16	1/2	2-9/64	1.272	2.012	3.2
1-1/2	1-15/16	3-13/16	2.335	3-3/4	4-15/16	5-13/16	6-7/8	1-3/4	5/8	1/2	2-1/4	1.374	2.217	3.6
1-11/16, 1-3/4	2-1/16	4-1/16	2.483	4	5-5/16	6-3/16	7-1/4	1-7/8	3/4	1/2	2-5/16	1.374	2.217	4.3
1-15/16	2-3/16	4-5/16	2.733	4-1/4	5-13/16	6-11/16	7-7/8	2-1/8	3/4	5/8	2-9/16	1.500	2.469	5.3
2, 2-3/16	2-7/16	4-25/32	2.983	4-11/16	6-1/16	7-7/16	8-5/8	2-3/8	13/16	5/8	2-29/32	1.717	2.811	6.8
2-7/16	2-11/16	5-9/32	3.296	5-3/16	6-15/16	8-1/16	9-1/4	2-3/8	7/8	5/8	3-1/32	1.838	3.063	9.1

PART NUMBERS ARE SPECIFIED BY "PB220HW" AND BORE SIZE; EXAMPLE: PB220HW X 1-7/16.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

PB221HW SERIES – FOR HIGH SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-7/16	2-3/4	1.460	2-1/2	3-5/8	4-1/2	5-3/8	1-1/2	5/8	3/8	1-13/16	1.059	1.748	1.9
1-3/16	1-11/16	3-7/32	1.710	2-15/16	4-1/4	5-1/8	6-1/16	1-1/2	11/16	1/2	1-15/16	1.185	1.906	2.6
1-1/4, 1-3/8, 1-7/16	1-7/8	3-19/32	2.148	3-3/8	4-5/8	5-1/2	6-7/16	1-3/4	5/8	1/2	2-9/64	1.272	2.012	3.3
1-1/2	2	3-7/8	2.335	3-3/4	4-15/16	5-13/16	6-7/8	1-3/4	11/16	1/2	2-1/4	1.374	2.217	3.9
1-11/16, 1-3/4	2-1/8	4-1/4	2.483	4	5-5/16	6-3/16	7-1/4	1-7/8	13/16	1/2	2-5/16	1.374	2.217	4.6
1-15/16	2-1/4	4-3/8	2.733	4-1/4	5-13/16	6-11/16	7-7/8	2-1/8	13/16	5/8	2-9/16	1.500	2.469	5.6
2, 2-3/16	2-1/2	4-27/32	2.983	4-11/16	6-1/16	7-7/16	8-5/8	2-3/8	7/8	5/8	2-29/32	1.717	2.811	6.8
2-7/16	2-3/4	5-11/32	3.296	5-3/16	6-15/16	8-1/16	9-1/4	2-3/8	15/16	5/8	3-1/32	1.838	3.063	9.6

PART NUMBERS ARE SPECIFIED BY "PB221HW" AND BORE SIZE; EXAMPLE: PB221HW X 1-1/2.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

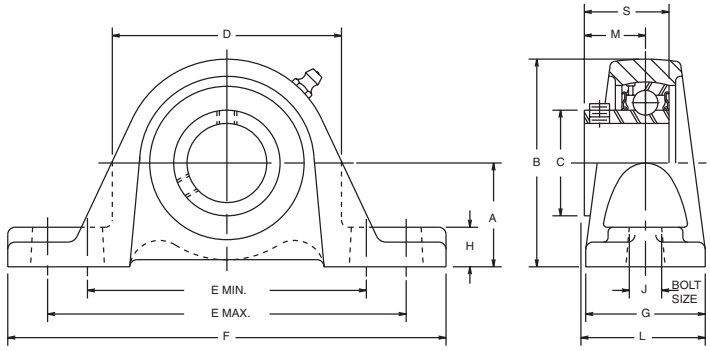
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CAST IRON AND NICKEL PLATED PILLOW BLOCKS

SERIES PB250, PB251 - SERIES PB250N, PB251N

(Cast Iron) **(Nickel Plated)**

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- All sizes available with Nickel Plating



PB250 SERIES – FOR LOW SHAFT HEIGHTS — PB250N SERIES – NICKEL PLATED

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1/2, 5/8	1-1/16	2-1/8	.953	1-15/16	3	3-15/16	4-7/8	1-1/4	1/2	3/8	1-19/64	.675	.886	1.2
3/4	1-1/4	2-1/2	1.110	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	1/.2	3/8	1-13/32	.720	1.004	1.8
7/8, 15/16, 1	1-5/16	2-5/8	1.328	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	1/2	3/8	1-33/64	.768	1.071	2.3
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.563	3	4-1/4	5-1/8	6-3/8	1-3/4	5/8	1/2	1-47/64	.866	1.220	2.8
1-1/4, 1-3/8, 1-7/16	1-13/16	3-5/8	1.815	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	5/8	1/2	1-15/16	1.004	1.378	3.6
1-1/2	1-15/16	3-15/16	2.039	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	3/4	1/2	2-1/16	1.122	1.575	4.5
1-5/8, 1-11/16, 1-3/4	2-1/16	4-3/16	2.236	4-1/8	5-3/8	6-1/4	7-3/8	2	3/4	1/2	2-13/64	1.201	1.634	5.1
1-15/16, 2S	2-3/16	4-7/16	2.461	4-5/16	5-13/16	6-3/4	8-3/8	2	3/4	5/8	2-17/64	1.260	1.693	6.0
2, 2-3/16	2-7/16	4-15/16	2.719	4-3/4	6-7/16	7-3/8	9	2-1/4	7/8	5/8	2-13/32	1.280	1.772	8.2
2-1/4, 2-7/16	2-11/16	5-1/2	2.978	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-1/8	5/8	2-5/8	1.378	1.909	10.9
2-15/16	3-1/4	6-1/2	3.624	6-1/4	7-7/8	9-5/8	11-1/4	3	1-1/8	3/4	3-1/32	1.535	2.106	16.9

PART NUMBERS ARE SPECIFIED BY "PB250" AND BORE SIZE.
EXAMPLE: PB250 X 1-11/16 OR PB250N X 1-11/16 FOR NICKEL PLATED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

PB251 SERIES – FOR HIGH SHAFT HEIGHTS — PB251N SERIES – NICKEL PLATED

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1/2, 5/8	1-3/16	2-1/4	.953	1-15/16	3	3-15/16	4-7/8	1-1/4	5/8	3/8	1-19/64	.675	.886	1.3
3/4	1-5/16	2-9/16	1.110	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	9/16	3/8	1-13/32	.720	1.004	1.9
7/8, 15/16, 1	1-7/16	2-3/4	1.328	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	5/8	3/8	1-33/64	.768	1.071	2.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-1/4	1.563	3	4-1/4	5-1/8	6-3/8	1-3/4	3/4	1/2	1-47/64	.866	1.220	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-11/16	1.815	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	11/16	1/2	1-15/16	1.004	1.378	4.0
1-1/2	2, 2-1/8*	4	2.039	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	13/16	1/2	2-1/16	1.122	1.575	4.6
1-5/8, 1-11/16, 1-3/4	2-1/8	4-1/4	2.236	4-1/8	5-3/8	6-1/4	7-3/8	2	13/16	1/2	2-13/64	1.201	1.634	5.2
1-15/16, 2S	2-1/4	4-1/2	2.461	4-5/16	5-13/16	6-3/4	8-3/8	2	13/16	5/8	2-17/64	1.260	1.693	6.2
2, 2-3/16	2-1/2	5	2.719	4-3/4	6-7/16	7-3/8	9	2-1/4	15/16	5/8	2-13/32	1.280	1.772	8.4
2-1/4, 2-7/16	2-3/4	5-9/16	2.978	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-3/16	5/8	2-5/8	1.378	1.909	11.1
2-15/16	3-5/16	6-1/2	3.624	6-1/4	7-7/8	9-5/8	11-1/4	3	1-3/16	3/4	3-1/32	1.535	2.106	17.1

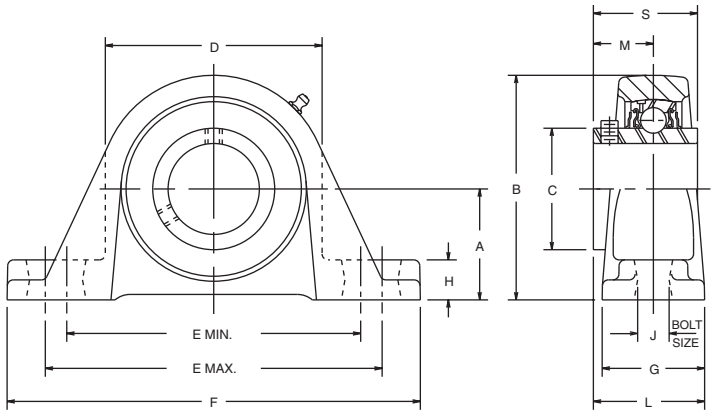
PART NUMBERS ARE SPECIFIED BY "PB251" AND BORE SIZE. EXAMPLE: PB251 X 1-5/8 OR PB251N X 1-5/16 FOR NICKEL PLATED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.
* PB251 X 1-1/2 WITH 2-1/8" "A" DIMENSION AVAILABLE AS SPECIAL.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CAST IRON PILLOW BLOCKS

SERIES PB250W, PB251W



- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- Wide inner race

M

PB250W SERIES – FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
5/8	1-1/16	2-1/8	.953	1-15/16	3	3-15/16	4-7/8	1-1/4	1/2	3/8	1-17/64	.670	1.079	1.2
3/4	1-1/4	2-1/2	1.110	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	1/2	3/8	1-13/32	.720	1.220	1.8
1	1-5/16	2-5/8	1.328	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	1/2	3/8	1-17/32	.780	1.343	2.3
1-3/16, 1-1/4S	1-9/16	3-1/8	1.563	3	4-1/4	5-1/8	6-3/8	1-3/4	5/8	1/2	1-3/4	.874	1.500	2.8
1-1/4, 1-7/16	1-13/16	3-5/8	1.815	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	5/8	1/2	1-15/16	1.000	1.689	3.5
1-1/2	1-15/16	3-15/16	2.039	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	3/4	1/2	2-1/8	1.189	1.937	4.5
1-3/4	2-1/16	4-3/16	2.236	4-1/8	5-3/8	6-1/4	7-3/8	2	3/4	1/2	2-3/16	1.189	1.937	5.1
1-15/16	2-3/16	4-7/16	2.461	4-5/16	5-13/16	6-3/4	8-3/8	2	3/4	5/8	2-9/32	1.283	2.031	6.0
2	2-7/16	4-15/16	2.719	4-3/4	6-7/16	7-3/8	9	2-1/4	7/8	5/8	2-7/16	1.315	2.189	8.2
2-1/4, 2-7/16	2-11/16	5-1/2	2.978	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-1/8	5/8	2-13/16	1.566	2.566	10.9

PART NUMBERS ARE SPECIFIED BY "PB250W" AND BORE SIZE. EXAMPLE: PB250W X 1-11/16.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

PB251W SERIES – FOR HIGH SHAFT HEIGHTS

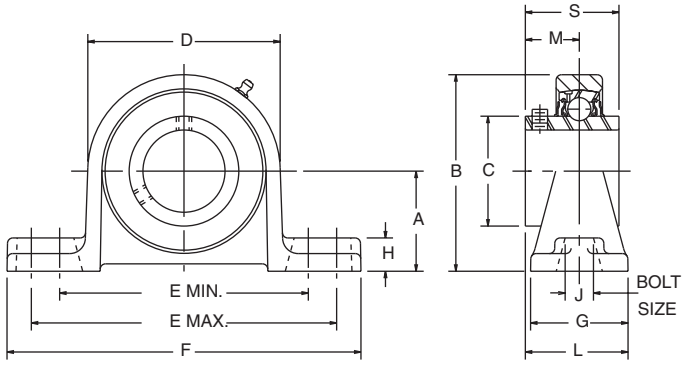
SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
5/8	1-3/16	2-1/4	.953	1-15/16	3	3-15/16	4-7/8	1-1/4	5/8	3/8	1-17/64	.670	1.079	1.3
3/4	1-5/16	2-9/16	1.110	2-1/4	3-1/4	4-1/8	5-1/8	1-3/8	9/16	3/8	1-13/32	.720	1.220	1.9
1	1-7/16	2-3/4	1.328	2-1/2	3-1/2	4-1/2	5-1/2	1-1/2	5/8	3/8	1-17/32	.780	1.343	2.4
1-3/16, 1-1/4S	1-11/16	3-1/4	1.563	3	4-1/4	5-1/8	6-3/8	1-3/4	3/4	1/2	1-3/4	.874	1.500	2.9
1-1/4, 1-7/16	1-7/8	3-11/16	1.815	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	11/16	1/2	1-15/16	1.000	1.689	4.0
1-1/2	2, 2-1/8*	4	2.039	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	13/16	1/2	2-1/8	1.189	1.937	4.6
1-3/4	2-1/8	4-1/4	2.236	4-1/8	5-3/8	6-1/4	7-3/8	2	13/16	1/2	2-3/16	1.189	1.937	5.2
1-15/16	2-1/4	4-1/2	2.461	4-5/16	5-13/16	6-3/4	8-3/8	2	13/16	5/8	2-9/32	1.283	2.031	6.2
2	2-1/2	5	2.719	4-3/4	6-7/16	7-3/8	9	2-1/4	15/16	5/8	2-7/16	1.315	2.189	8.4
2-1/4, 2-7/16	2-3/4	5-9/16	2.978	5-1/4	6-3/4	8-1/8	9-5/8	2-1/2	1-3/16	5/8	2-13/16	1.566	2.566	11.1

PART NUMBERS ARE SPECIFIED BY "PB251W" AND BORE SIZE. EXAMPLE: PB251W X 1-5/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.
* PB251W X 1-1/2 WITH 2-1/8" "A" DIMENSION AVAILABLE AS SPECIAL.
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

HUB-ALLOY® PILLOW BLOCKS

SERIES PB250HW, PB251HW

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race



PB250HW SERIES - FOR LOW SHAFT HEIGHTS

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
5/8	1-1/16	2-5/23	.953	1-15/16	2-15/16	3-13/16	4-5/8	1-3/16	7/16	3/8	1-15/64	.646	1.079	.8
3/4	1-1/4	2-15/32	1.110	2-1/4	3-5/16	4-3/16	5	1-3/8	7/16	3/8	1-13/32	.720	1.220	1.0
1	1-5/16	2-5/8	1.328	2-1/2	3-5/8	4-1/2	5-3/8	1-1/2	1/2	3/8	1-17/32	.780	1.343	1.6
1-3/16, 1-1/4S	1-9/16	3-3/32	1.563	2-15/16	4-1/4	5-1/8	6-1/16	1-1/2	9/16	1/2	1-5/8	.874	1.500	2.1
1-1/4, 1-7/16	1-13/16	3-17/32	1.815	3-3/8	4-5/8	5-1/2	6-7/16	1-3/4	9/16	1/2	1-7/8	1.000	1.689	2.9
1-1/2	1-15/16	3-13/16	2.039	3-3/4	4-15/16	5-13/16	6-7/8	1-3/4	5/8	1/2	2-1/16	1.189	1.937	3.5
1-3/4	2-1/16	4-1/16	2.236	4	5-5/16	6-3/16	7-1/4	1-7/8	3/4	1/2	2-1/8	1.189	1.937	4.2
1-15/16	2-3/16	4-5/16	2.461	4-1/4	5-13/16	6-11/16	7-7/8	2-1/8	3/4	5/8	2-11/32	1.283	2.031	5.1
2	2-7/16	4-25/32	2.719	4-11/16	6-1/16	7-7/16	8-5/8	2-3/8	13/16	5/8	2-1/2	1.315	2.189	6.1
2-1/4, 2-7/16	2-11/16	5-9/32	2.978	5-3/16	6-15/16	8-1/16	9-1/4	2-3/8	7/8	5/8	2-3/4	1.566	2.566	9.4

PART NUMBERS ARE SPECIFIED BY "PB250HW" AND BORE SIZE. EXAMPLE: PB250HW X 1 11/16.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

PB251HW SERIES - FOR HIGH SHAFT HEIGHTS

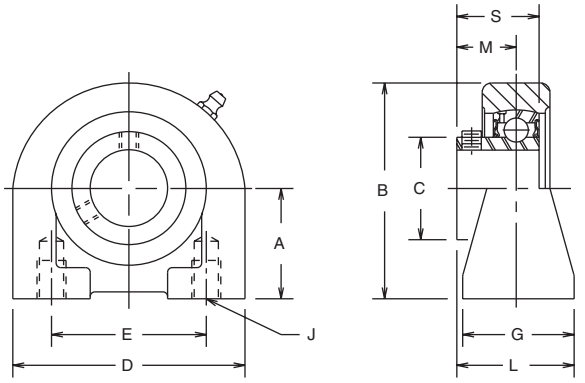
SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
5/8	1-3/16	2-9/32	.953	1-15/16	2-15/16	3-13/16	4-5/8	1-3/16	9/16	3/8	1-15/64	.646	1.079	.9
3/4	1-5/16	2-17/32	1.110	2-1/4	3-5/16	4-3/16	5	1-3/8	1/2	3/8	1-13/32	.720	1.220	1.1
1	1-7/16	2-3/4	1.328	2-1/2	3-5/8	4-1/2	5-3/8	1-1/2	5/8	3/8	1-17/32	.780	1.343	1.7
1-3/16, 1-1/4S	1-11/16	3-7/32	1.563	2-15/16	4-1/4	5-1/8	6-1/16	1-1/2	11/16	1/2	1-5/8	.874	1.500	2.5
1-1/4, 1-7/16	1-7/8	3-19/32	1.815	3-3/8	4-5/8	5-1/2	6-7/16	1-3/4	5/8	1/2	1-7/8	1.000	1.689	2.9
1-1/2	2	3-7/8	2.039	3-3/4	4-15/16	5-13/16	6-7/8	1-3/4	11/16	1/2	2-1/16	1.189	1.937	3.6
1-3/4	2-1/8	4-1/8	2.236	4	5-5/16	6-3/16	7-1/4	1-7/8	13/16	1/2	2-1/8	1.189	1.937	4.2
1-15/16	2-1/4	4-3/8	2.461	4-1/4	5-13/16	6-11/16	7-7/8	2-1/8	13/16	5/8	2-11/32	1.283	2.031	5.2
2	2-1/2	4-27/32	2.719	4-11/16	6-1/16	7-7/16	8-5/8	2-3/8	7/8	5/8	2-1/2	1.315	2.189	6.1
2-1/4, 2-7/16	2-3/4	5-11/32	2.978	5-3/16	6-15/16	8-1/16	9-1/4	2-3/8	15/16	5/8	2-3/4	1.566	2.566	9.4

PART NUMBERS ARE SPECIFIED BY "PB251HW" AND BORE SIZE.
EXAMPLE: PB251HW X 1 5/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-37.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

CAST IRON TAPPED BASE PILLOW BLOCKS

SERIES TPB250, TPB250W



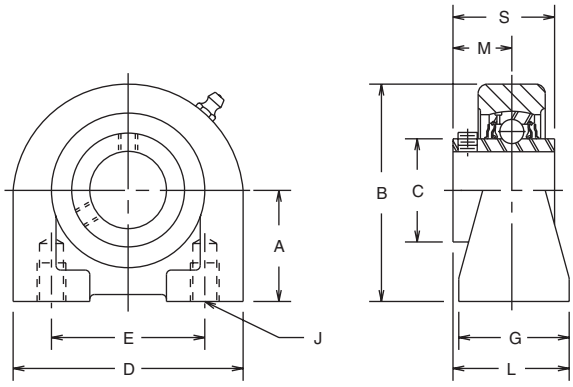
TPB250 SERIES

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- Space saving tapped base design

M

SHAFT SIZE	DIMENSIONS										WT. LBS.
	A	B	C	D	E	G	J – TAPPED HOLES	L	M	S	
1/2, 5/8	1-5/16	2-9/16	.953	2-7/8	2	1-1/2	3/8 - 16 NC x 1/2	1-13/32	.650	.886	.8
3/4	1-5/16	2-9/16	1.110	2-7/8	2	1-1/2	3/8 - 16 NC x 1/2	1-15/32	.720	1.004	.9
7/8, 15/16, 1	1-7/16	2-13/16	1.328	3	2	1-1/2	3/8 - 16 NC x 1/2	1-33/64	.768	1.071	1.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-3/8	1.563	4	3	1-1/2	7/16 - 14 NC x 11/16	1-39/64	.866	1.220	2.0
1-1/4, 1-3/8, 1-7/16	1-7/8	3-3/4	1.815	4-1/4	3-1/4	1-7/8	1/2 - 13 NC x 3/4	1-15/16	1.004	1.378	2.6
1-1/2	1-15/16	3-15/16	2.039	4-5/8	3-1/2	1-7/8	1/2 - 13 NC x 3/4	2-1/16	1.122	1.575	3.5
1-5/8, 1-11/16, 1-3/4	2-1/8	4-1/4	2.236	5	3-3/4	2	1/2 - 13 NC x 3/4	2-13/64	1.201	1.634	4.9
1-15/16, 2S	2-1/4	4-5/8	2.461	5-1/2	4	2	5/8 - 11 NC x 7/8	2-17/64	1.260	1.693	5.1
2, 2-3/16	2-1/4	4-5/8	2.719	5-1/2	4	2	5/8 - 11 NC x 7/8	2-9/32	1.280	1.772	5.2

PART NUMBERS ARE SPECIFIED BY "TPB250" AND BORE SIZE. EXAMPLE: TPB250 X 5/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.



TPB250W SERIES

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- Space saving tapped base design
- Wide inner race

SHAFT SIZE	DIMENSIONS										WT. LBS.
	A	B	C	D	E	G	J – TAPPED HOLES	L	M	S	
5/8	1-5/16	2-9/16	.953	2-7/8	2	1-1/2	3/8 - 16 NC x 1/2	1-25/64	.646	1.079	.8
3/4	1-5/16	2-9/16	1.110	2-7/8	2	1-1/2	3/8 - 16 NC x 1/2	1-15/32	.720	1.220	.9
1	1-7/16	2-13/16	1.328	3	2	1-1/2	3/8 - 16 NC x 1/2	1-17/32	.780	1.343	1.5
1-3/16, 1-1/4S	1-11/16	3-3/8	1.563	4	3	1-1/2	7/16 - 14 NC x 11/16	1-5/8	.874	1.500	2.1
1-1/4, 1-7/16	1-7/8	3-3/4	1.815	4-1/4	3-1/4	1-7/8	1/2 - 13 NC x 3/4	1-15/16	1.000	1.689	2.7
1-1/2	1-15/16	3-15/16	2.039	4-5/8	3-1/2	1-7/8	1/2 - 13 NC x 3/4	2-1/8	1.189	1.937	3.5
1-3/4	2-1/8	4-1/4	2.236	5	3-3/4	2	1/2 - 13 NC x 3/4	2-3/16	1.189	1.937	4.8
1-15/16	2-1/4	4-5/8	2.461	5-1/2	4	2	5/8 - 11 NC x 7/8	2-9/32	1.283	2.031	5.1
2	2-1/4	4-5/8	2.719	5-1/2	4	2	5/8 - 11 NC x 7/8	2-5/16	1.315	2.189	5.3

PART NUMBERS ARE SPECIFIED BY "TPB250W" AND BORE SIZE. EXAMPLE: TPB250W X 5/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-36.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

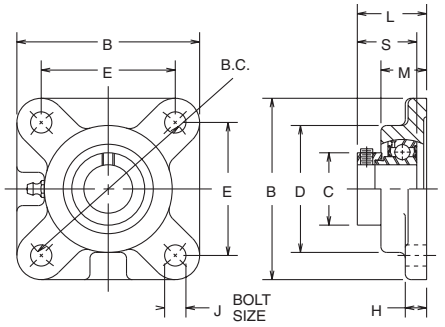
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CAST IRON FLANGE BLOCKS

SERIES FB220, FB230

FB220 FOUR-HOLE FLANGE BLOCKS

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing



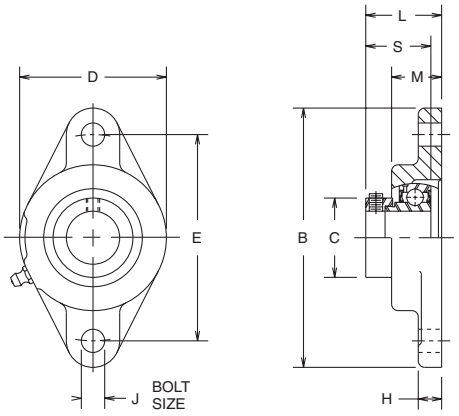
SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
1/2, 5/8	3	3	1.101	2	2-1/8	15/32	3/8	1-25/64	27/32	1.126	1.0
3/4	3-3/8	3-17/32	1.273	2-3/8	2-1/2	3/8	3/8	1-25/64	7/8	1.220	1.4
1	3-3/4	3-57/64	1.460	2-5/8	2-3/4	7/16	7/16	1-27/64	15/16	1.220	1.8
1-1/8, 1-3/16, 1-1/4S	4-1/4	4-19/32	1.710	3-1/8	3-1/4	7/16	7/16	1-37/64	1	1.406	2.6
1-1/4, 1-3/8, 1-7/16	4-3/4	5-1/8	2.148	3-5/8	3-5/8	1/2	1/2	1-25/32	1-3/16	1.531	4.3
1-1/2	5-1/8	5-21/32	2.335	4	4	1/2	1/2	1-61/64	1-3/8	1.720	5.3
1-11/16, 1-3/4	5-1/4	5-53/64	2.483	4-1/4	4-1/8	15/32	1/2	2	1-11/32	1.720	5.6
1-15/16	5-1/2	6-3/16	2.733	4-1/2	4-3/8	1/2	1/2	2-1/32	1-1/2	1.720	6.5
2, 2-3/16	6-1/2	7-1/4	2.983	5	5-1/8	5/8	5/8	2-3/16	1-1/2	1.911	9.1
2-7/16	7	7-15/16	3.296	5-1/2	5-5/8	5/8	5/8	2-7/16	1-3/4	2.091	11.9

PART NUMBERS ARE SPECIFIED BY "FB220" AND BORE SIZE. EXAMPLE: FB220 X 1/2.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

FB230 TWO-HOLE FLANGE BLOCKS

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing



SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J	L	M	S	
1/2, 5/8	3-7/8	1.101	2-9/32	3	15/32	3/8	1-25/64	27/32	1.126	.8
3/4	4-13/32	1.273	2-35/64	3-17/32	3/8	3/8	1-25/64	7/8	1.220	1.0
1	4-57/64	1.460	2-3/4	3-57/64	7/16	7/16	1-27/64	15/16	1.220	1.5
1-1/8, 1-3/16, 1-1/4S	5-9/16	1.710	3-1/4	4-19/32	13/32	7/16	1-9/16	15/16	1.406	1.9
1-1/4, 1-3/8, 1-7/16	6-7/32	2.148	3-3/4	5-1/8	15/32	1/2	1-3/4	1-1/16	1.531	3.1
1-1/2	6-25/32	2.335	4-1/8	5-21/32	1/2	1/2	1-61/64	1-3/8	1.720	3.7
1-11/16, 1-3/4	6-61/64	2.483	4-27/64	5-53-64	1/2	1/2	2-1/32	1-1/2	1.720	4.3
1-15/16	7-5/16	2.733	4-39/64	6-3/16	1/2	1/2	2-1/32	1-1/2	1.720	4.8
2, 2-3/16	8-5/8	2.983	5	7-1/4	5/8	5/8	2-3/16	1-1/2	1.911	6.5

PART NUMBERS ARE SPECIFIED BY "FB230" AND BORE SIZE. EXAMPLE: FB230 X 7/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

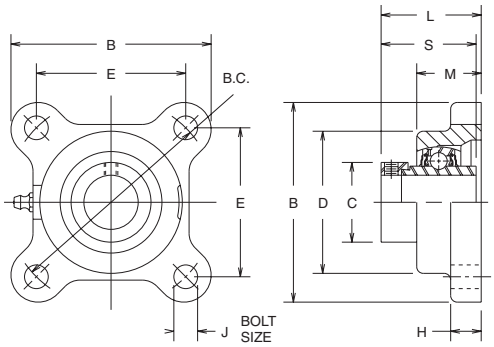
NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUB-ALLOY® FLANGE BLOCKS

SERIES FB220HW, FB230HW



FB220HW FOUR-HOLE FLANGE BLOCKS

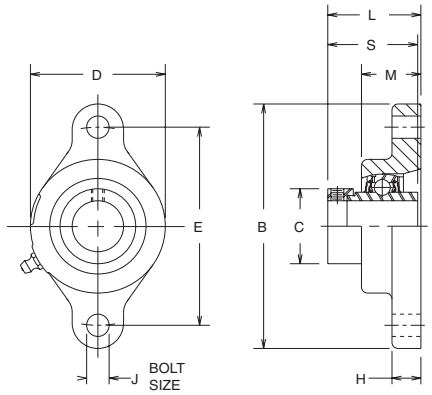
- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

M

SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
1	3-11/16	3-57/64	1.460	2-5/8	2-3/4	9/16	7/16	1-27/32	1-3/16	1.748	1.5
1-3/16	4-3/16	4-19/32	1.710	3	3-1/4	5/8	7/16	1-63/64	1-3/16	1.906	2.2
1-1/4, 1-3/8, 1-7/16	4-11/16	5-1/8	2.148	3-1/2	3-5/8	21/32	1/2	2-5/64	1-1/4	2.012	3.1
1-1/2	5-1/16	5-21/32	2.335	3-7/8	4	11/16	1/2	2-5/16	1-7/16	2.217	3.7
1-11/16, 1-3/4	5-1/4	5-53/64	2.483	4-1/8	4-1/8	11/16	1/2	2-5/16	1-7/16	2.217	4.1
1-15/16	5-1/2	6-3/16	2.733	4-3/8	4-3/8	23/32	1/2	2-19/32	1-19/32	2.469	4.7
2, 2-3/16	6-3/8	7-1/4	2.983	4-3/4	5-1/8	25/32	5/8	2-15/16	1-25/32	2.811	6.2
2-7/16	6-7/8	7-15/16	3.296	5-5/16	5-5/8	13/16	5/8	3-3/16	1-15/16	3.063	8.4

PART NUMBERS ARE SPECIFIED BY "FB220HW" AND BORE SIZE. EXAMPLE: FB220HW X 3/4.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.



FB230HW TWO-HOLE FLANGE BLOCKS

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J	L	M	S	
1	4-53/64	1.460	2-5/8	3-57/64	9/16	7/16	1-13/16	1-5/32	1.748	1.3
1-3/16	5-17/32	1.710	3	4-19/32	9/16	7/16	1-63/64	1-3/16	1.906	1.9
1-1/4, 1-3/8, 1-7/16	6-3/16	2.148	3-1/2	5-1/8	9/16	1/2	2-3/32	1-1/4	2.012	2.7
1-1/2	6-23/32	2.335	3-7/8	5-21/32	9/16	1/2	2-5/16	1-7/16	2.217	3.1
1-11/16, 1-3/4	6-61/64	2.483	4-1/8	5-53/64	9/16	1/2	2-5/16	1-7/16	2.217	3.6
1-15/16	7-5/16	2.733	4-3/8	6-3/16	5/8	1/2	2-19/32	1-19/32	2.469	4.3
2, 2-3/16	8-1/2	2.983	4-3/4	7-1/4	25/32	5/8	2-15/16	1-25/32	2.811	5.3
2-7/16	9-11/16	3.296	5-5/16	7-15/16	13/16	3/4	3-3/16	1-15/16	3.063	7.6

PART NUMBERS ARE SPECIFIED BY "FB230HW" AND BORE SIZE. EXAMPLE: FB230HW X 7/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-30.

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

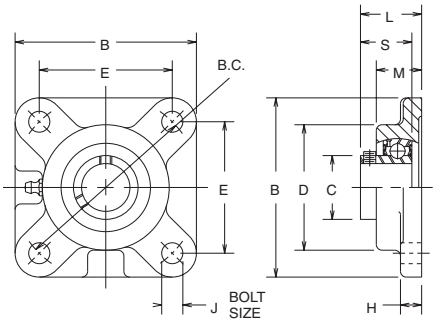
CAST IRON & NICKEL PLATED FLANGE BLOCKS

SERIES FB250, FB260 - SERIES FB250N, FB260N

(Cast Iron) (Nickel Plated)

FB250, FB250N FOUR-HOLE FLANGE BLOCKS

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- All sizes available with Nickel Plating

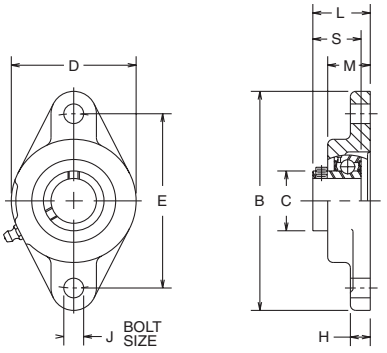


SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
1/2, 5/8	3	3	.953	2	2-1/8	15/32	3/8	1-5/32	27/32	.886	1.0
3/4	3-3/8	3-17/32	1.110	2-3/8	2-1/2	3/8	3/8	1-13/64	7/8	1.004	1.4
7/8, 15/16, 1	3-3/4	3-57/64	1.328	2-5/8	2-3/4	7/16	7/16	1-9/32	15/16	1.071	1.8
1-1/8, 1-3/16, 1-1/4S	4-1/4	4-19/32	1.563	3-1/8	3-1/4	7/16	7/16	1-13/32	1	1.220	2.6
1-1/4, 1-3/8, 1-7/16	4-3/4	5-1/8	1.815	3-5/8	3-5/8	1;2	1/2	1-5/8	1-3/16	1.378	4.2
1-1/2	5-1/8	5-21/32	2.039	4	4	1/2	1/2	1-13/16	1-3/8	1.575	5.3
1-5/8, 1-11/16, 1-3/4	5-1/4	5-53/64	2.236	4-1/4	4-1/8	15/32	1/2	1-59/64	1-11/32	1.634	5.7
1-15/16, 2S	5-1/2	6-3/16	2.461	4-1/2	4-3/8	1/2	1/2	2	1-1/2	1.693	6.6
2, 2-3/16	6-1/2	7-1/4	2.719	5	5-1/8	5/8	5/8	2-1/32	1-1/2	1.772	9.0
2-1/4, 2-7/16	7	7-15/16	2.978	5-1/2	5-5/8	5/8	5/8	2-1/4	1-3/4	1.909	11.9
2-15/16	7-5/8	8-31/64	3.624	6-1/2	6	3/4	3/4	2-1/2	1-15/16	2.106	17.6

PART NUMBERS ARE SPECIFIED BY "FB250" AND BORE SIZE. EXAMPLE: FB250 X 3/4 OR FB250N X 3/4 FOR NICKEL PLATED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

FB260, FB260N TWO-HOLE FLANGE BLOCKS

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron housing
- All sizes available with Nickel Plating



SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J	L	M	S	
1/2, 5/8	3-7/8	.953	2-9/32	3	15/32	3/8	1-5/32	27/32	.886	.8
3/4	4-13/32	1.110	2-35/64	3-17/32	3/8	3/8	1-13/64	7/8	1.004	1.0
7/8, 15/16, 1	4-57/64	1.328	2-3/4	3-57/64	7/16	7/16	1-9/32	15/16	1.071	1.4
1-1/8, 1-3/16, 1-1/4S	5-9/16	1.563	3-1/4	4-19/32	13/32	7/16	1-3/8	15/16	1.220	1.9
1-1/4, 1-3/8, 1-7/16	6-7/32	1.815	3-3/4	5-1/8	15/32	1/2	1-19/32	1-1/16	1.378	2.9
1-1/2	6-25/32	2.039	4-1/8	5-21/32	1/2	1/2	1-13/16	1-3/8	1.575	3.9
1-5/8, 1-11/16, 1-3/4	6-61/64	2.236	4-27/64	5-53/64	1/2	1/2	1-61/64	1-1/2	1.634	4.5
1-15/16, 2S	7-5/16	2.461	4-39/64	6-3/16	1/2	1/2	2	1-1/2	1.693	4.9
2, 2-3/16	8-5/8	2.719	5	7-1/4	5/8	5/8	2-1/32	1-1/2	1.772	6.5

PART NUMBERS ARE SPECIFIED BY "FB260" AND BORE SIZE. EXAMPLE: FB260 X 1-1/8 OR FB260N X 1-1/8 FOR NICKEL PLATED.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

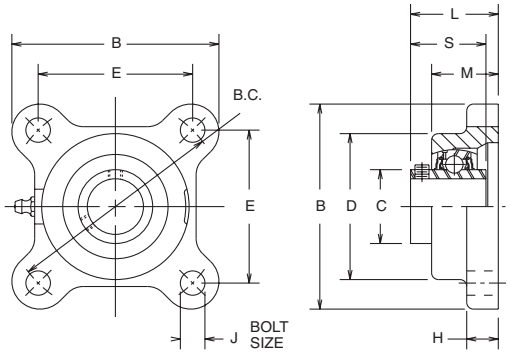
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUB-ALLOY® FLANGE BLOCKS

SERIES FB250HW, FB260HW

FB250HW FOUR-HOLE FLANGE BLOCKS

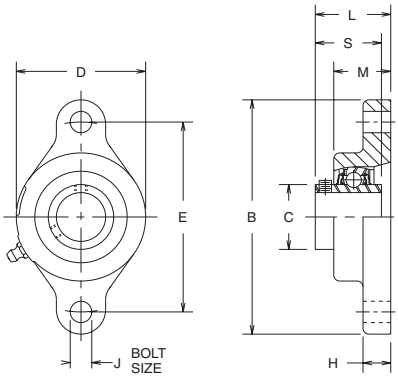


- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
5/8	2-15/16	3	.953	2	2-1/8	7/16	3/8	1-3/16	29/32	1.079	.7
3/4	3-5/16	3-17/32	1.110	2-5/16	2-1/2	7/16	3/8	1-15/32	1-1/8	1.220	.8
1	3-11/16	3-57/64	1.328	2-5/8	2-3/4	9/16	7/16	1-9/16	1-3/16	1.343	1.4
1-3/16, 1-1/4S	4-3/16	4-19/32	1.563	3	3-1/4	5/8	7/16	1-43/64	1-3/16	1.500	2.0
1-1/4, 1-7/16	4-11/16	5-1/8	1.815	3-1/2	3-5/8	21/32	1/2	1-13/16	1-1/4	1.689	2.6
1-1/2	5-1/16	5-21/32	2.039	3-7/8	4	11/16	1/2	2-1/8	1-7/16	1.937	3.4
1-3/4	5-1/4	5-53/64	2.236	4-1/8	4-1/8	11/16	1/2	2-1/8	1-7/16	1.937	3.8
1-15/16	5-1/2	6-3/16	2.461	4-3/8	4-3/8	23/32	1/2	2-3/8	1-19/32	2.031	4.3
2	6-3/8	7-1/4	2.719	4-3/4	5-1/8	25/32	5/8	2-17/32	1-25/32	2.189	5.8
2-1/4, 2-7/16	6-7/8	7-15/16	2.978	5-5/16	5-5/8	13/16	5/8	2-29/32	1-15/16	2.566	8.1

PART NUMBERS ARE SPECIFIED BY "FB250HW" AND BORE SIZE. EXAMPLE: FB250HW X 3/4.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

FB260HW TWO-HOLE FLANGE BLOCKS



- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

SHAFT SIZE	DIMENSIONS									WT. LBS.
	B	C	D	E	H	J	L	M	S	
5/8	3-13/16	.953	1-15/16	3	7/16	3/8	1-3/16	29/32	1.079	.6
3/4	4-11/32	1.110	2-5/16	3-17/32	7/16	3/8	1-15/32	1-1/8	1.220	.7
1	4-53/64	1.328	2-5/8	3-57/64	9/16	7/16	1-17/32	1-5/32	1.343	1.1
1-3/16, 1-1/4S	5-17/32	1.563	3	4-19/32	9/16	7/16	1-43/64	1-3/16	1.500	1.6
1-1/4, 1-7/16	6-3/16	1.815	3-1/2	5-1/8	9/16	1/2	1-13/16	1-1/4	1.689	2.2
1-1/2	6-23/32	2.039	3-7/8	5-21/32	9/16	1/2	2-1/8	1-7/16	1.937	2.8
1-3/4	6-61/64	2.236	4-1/8	5-53/64	9/16	1/2	2-1/8	1-7/16	1.937	3.3
1-15/16	7-5/16	2.461	4-3/8	6-3/16	5/8	1/2	2-3/8	1-19/32	2.031	3.7
2	8-1/2	2.719	4-3/4	7-1/4	25/32	5/8	2-17/32	1-25/32	2.189	4.8
2-1/4, 2-7/16	9-11/16	2.978	5-5/16	7-15/16	13/16	3/4	2-29/32	1-15/16	2.566	7.3

PART NUMBERS ARE SPECIFIED BY "FB260HW" AND BORE SIZE. EXAMPLE: FB260HW X 1-1/8.
FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-38.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-30.

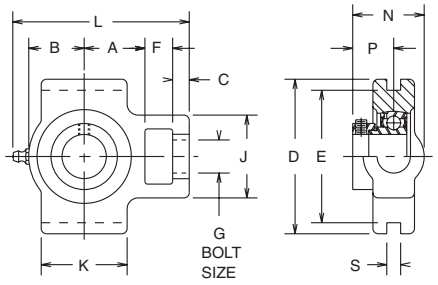
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

HUB ALLOY STANDARD SLOT TAKE-UP UNITS

SERIES TU220, TU250 AND SERIES TU250N

(Nickel Plated)

TU220 STANDARD SLOT TAKE-UP UNITS



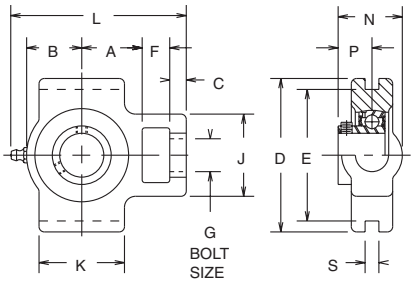
- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

SHAFT SIZE	USE WITH FRAME NO. ★	DIMENSIONS													WT. LBS.
		A	B	C	D	E	F	G	J	K	L	N	P	S§	
1/2, 5/8	1T200A	1-1/16	1-5/64	3/8	3	2-1/2	1/2	1/2	1-5/8	1-1/2	3-25/64	1-29/64	.890	5/16	1.1
3/4	3 thru 9T200BC	1-3/8	1-3/16	3/8	3-1/2	3	5/8	5/8	1-7/8	1-7/8	3-15/16	1-39/64	.925	5/16	1.6
1	3 thru 9T200BC	1-3/8	1-1/4	3/8	3-1/2	3	5/8	5/8	1-7/8	1-15/16	4	1-39/64	.925	5/16	1.9
1-1/8, 1-3/16, 1-1/4S	3 thru 12T200DE	1-17/32	1-17/23	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-11/16	1-53/64	1.051	5/16	2.5
1-1/4, 1-3/8, 1-7/16	3 thru 12T200DE	1-11/16	1-11/16	1/2	4	3-1/2	3/4	3/4	2-1/8	2-5/8	5	1-15/16	1.157	5/16	2.9
1-1/2	3 thru 18T200FH	1-7/8	1-7/8	5/8	4-1/2	4	3/4	1	2-5/8	2-15/16	5-1/2	2-11/64	1.268	5/16	4.1
1-11/16, 1-3/4	3 thru 18T200FH	2-1/16	2	5/8	4-1/2	4	3/4	1	2-5/8	3-1/8	5-13/16	2-3/16	1.287	5/16	4.6
1-15/16	3 thru 18T200FH	2-3/16	2-1/8	5/8	4-1/2	4	3/4	1	2-5/8	3-5/16	6-1/16	2-3/16	1.287	5/16	4.6
2, 2-3/16	9 thru 18T200JK	2-3/8	2-11/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	3-11/16	6-27/32	2-1/2	1.439	5/16	8.3
2-7/16	9 thru 18T200JK	2-11/16	2-19/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4-1/16	7-13/32	2-5/8	1.559	5/16	8.6

PART NUMBERS ARE SPECIFIED BY "TU220" AND BORE SIZE. EXAMPLE: TU220 X 1-1/2.
★ TAKE-UP FRAMES SHOWN ON PAGE M-28.
§ TAKE-UP UNITS WITH WIDER SLOTS ARE SHOWN ON PAGE M-26.
FOR LOAD RATINGS, SEE PAGE M-12.
FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

TU250, TU250N STANDARD SLOT TAKE-UP UNITS



- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored high strength HUB-ALLOY® housing
- All sizes available with Nickel Plating

SHAFT SIZE	USE WITH FRAME NO. ★	DIMENSIONS													WT. LBS.
		A	B	C	D	E	F	G	J	K	L	N	P	S§	
1/2, 5/8	1T200A	1-1/16	1-5/64	3/8	3	2-1/2	1/2	1/2	1-5/8	1-1/2	3-25/64	1-7/32	.650	5/16	1.1
3/4	3 thru 9T200BC	1-3/8	1-3/16	3/8	3-1/2	3	5/8	5/8	1-7/8	1-7/8	3-15/16	1-13/32	.720	5/16	1.6
7/8, 15/16, 1	3 thru 9T200BC	1-3/8	1-1/4	3/8	3-1/2	3	5/8	5/8	1-7/8	1-15/16	4	1-29/64	.768	5/16	1.9
1-1/8, 1-3/16, 1-1/4S	3 thru 12T200DE	1-17/32	1-17/23	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-11/16	1-41/64	.866	5/16	2.5
1-1/4, 1-3/8, 1-7/16	3 thru 12T200DE	1-11/16	1-11/16	1/2	4	3-1/2	3/4	3/4	2-1/8	2-5/8	5	1-25/32	1.004	5/16	2.9
1-1/2	3 thru 18T200FH	1-7/8	1-7/8	5/8	4-1/2	4	3/4	1	2-5/8	2-15/16	5-1/2	2-1/32	1.122	5/16	4.1
1-5/8, 1-11/16, 1-3/4	3 thru 18T200FH	2-1/16	2	5/8	4-1/2	4	3/4	1	2-5/8	3-1/8	5-13/16	2-7/64	1.201	5/16	4.6
1-15/16, 2S	3 thru 18T200FH	2-3/16	2-1/8	5/8	4-1/2	4	3/4	1	2-5/8	3-5/16	6-1/16	2-11/64	1.260	5/16	4.6
2, 2-3/16	9 thru 18T200JK	2-3/8	2-11/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	3-11/16	6-27/32	2-11/32	1.280	5/16	8.3
2-1/4, 2-7/16	9 thru 18T200JK	2-11/16	2-19/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4-1/16	7-13/32	2-7/16	1.378	5/16	8.6

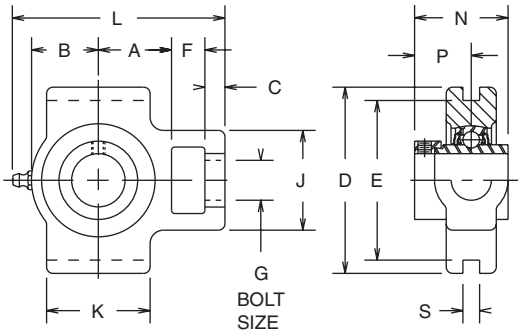
PART NUMBERS ARE SPECIFIED BY "TU250" AND BORE SIZE. EXAMPLE: TU250 X 1-1/2 OR TU250N X 1-1/2 FOR NICKEL PLATED.
★ TAKE-UP FRAMES SHOWN ON PAGE M-28.
§ TAKE-UP UNITS WITH WIDER SLOTS ARE SHOWN ON PAGE M-26.
FOR LOAD RATINGS, SEE PAGE M-12.
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUB-ALLOY® STANDARD SLOT TAKE-UP UNITS

SERIES TU220W, TU250W



TU220W STANDARD SLOT TAKE-UP UNITS

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

M

SHAFT SIZE	USE WITH FRAME NO. ★	DIMENSIONS													WT. LBS.
		A	B	C	D	E	F	G	J	K	L	N	P	S§	
1	3 thru 9T200BC	1-3/8	1-1/4	3/8	3-1/2	3	5/8	5/8	1-7/8	1-15/16	4	1-3/4	1.059	5/16	2.0
1-3/16	3 thru 12T200DE	1-17/32	1-1732	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-11/16	1-31/32	1.185	5/16	2.7
1-1/4, 1-3/8, 1-7/16	3 thru 12T200DE	1-11/16	1-11/16	1/2	4	3-1/2	3/4	3/4	2-1/8	2-5/8	5	2-3/64	1.272	5/16	3.2
1-1/2	3 thru 18T200FH	1-7/8	1-7/8	5/8	4-1/2	4	3/4	1	2-5/8	2-15/16	5-1/2	2-9/32	1.376	5/16	4.4
1-11/16, 1-3/4	3 thru 18T200FH	2-1/16	2	5/8	4-1/2	4	3/4	1	3-5/8	3-1/8	5-13/16	2-9/32	1.376	5/16	4.8
1-15/16	3 thru 18T200FH	2-3/16	2-1/8	5/8	4-1/2	4	3/4	1	2-5/8	3-5/16	6-1/16	*2-13/32	1.500	5/16	4.9
2, 2-3/16	9 thru 18T200JK	2-3/8	2-11/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	3-11/16	6-27/32	*2-25/32	1.717	5/16	8.6
2-7/16	9 thru 18T200JK	2-11/16	2-19/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4-1/16	7-13/32	*2-29/32	1.838	5/16	9.6

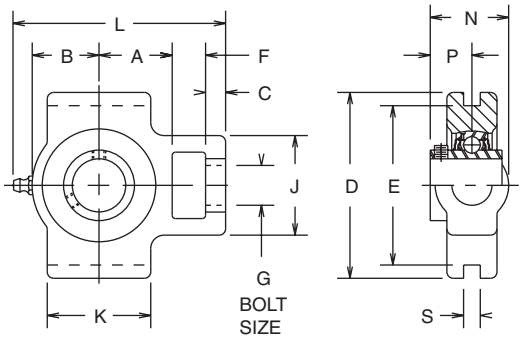
PART NUMBERS ARE SPECIFIED BY "TU220W" AND BORE SIZE. EXAMPLE: TU220W X 1-1/2.

★ TAKE-UP FRAMES SHOWN ON PAGE M-28.

§ TAKE-UP UNITS WITH WIDER SLOTS ARE SHOWN ON PAGE M-26.
FOR REPLACEMENT INSERTS USE YW220 BEARING INSERTS, SEE PAGE M-29.

FOR LOAD RATINGS, SEE PAGE M-12.

* BEARING PROTRUDES BEYOND EDGE OF HOUSING.



TU250W STANDARD SLOT TAKE-UP UNITS

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads
- Wide inner race

SHAFT SIZE	USE WITH FRAME NO. ★	DIMENSIONS													WT. LBS.
		A	B	C	D	E	F	G	J	K	L	N	P	S§	
5/8	1T200A	1-1/16	1-5/64	3/8	3	2-1/2	1/2	1/2	1-5/8	1-1/2	3-25/64	1-7/32	.646	5/16	1.1
3/4	3 thru 9T200BC	1-3/8	1-3/16	3/8	3-1/2	3	5/8	5/8	1-7/8	1-7/8	3-15/16	1-13/32	.720	5/16	1.6
1	3 thru 9T200BC	1-3/8	1-1/4	3/8	3-1/2	3	5/8	5/8	1-7/8	1-15/16	4	1-15/32	.780	5/16	2.0
1-3/16, 1-1/4S	3 thru 12T200DE	1-17/32	1-17/23	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-11/16	1-21/32	.874	5/16	2.6
1-1/4, 1-7/16	3 thru 12T200DE	1-11/16	1-11/16	1/2	4	3-1/2	3/4	3/4	2-1/8	2-5/8	5	1-25/32	1.000	5/16	3.0
1-1/2	3 thru 18T200FH	1-7/8	1-7/8	5/8	4-1/2	4	3/4	1	2-5/8	2-15/16	5-1/2	2-3/32	1.189	5/16	4.0
1-3/4	3 thru 18T200FH	2-1/16	2	5/8	4-1/2	4	3/4	1	2-5/8	3-1/8	5-13/16	2-3/32	1.189	5/16	4.5
1-15/16	3 thru 18T200FH	2-3/16	2-1/8	5/8	4-1/2	4	3/4	1	2-5/8	3-5/16	6-1/16	2-3/16	1.283	5/16	4.5
2	9 thru 18T200JK	2-3/8	2-11/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	3-11/16	6-27/32	2-3/8	1.315	5/16	8.1
2-1/4, 2-7/16	9 thru 18T200JK	2-11/16	2-19/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4-1/16	7-13/32	2-5/8	1.566	5/16	9.4

PART NUMBERS ARE SPECIFIED BY "TU250W" AND BORE SIZE. EXAMPLE: TU250W X 1-1/2.

★ TAKE-UP FRAMES SHOWN ON PAGE M-28.

§ TAKE-UP UNITS WITH WIDER SLOTS ARE SHOWN ON PAGE M-26.

FOR LOAD RATINGS, SEE PAGE M-12.
FOR REPLACEMENT INSERTS USE YW250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

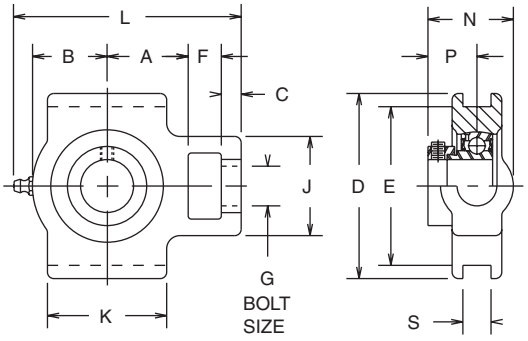
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUB-ALLOY® WIDE SLOT TAKE-UP UNITS

SERIES WSTU220, WSTU250

WSTU220 WIDE SLOT TAKE-UP UNITS

- Relube type. Prelubricated at factory
- Eccentric locking collar
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads



NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E	F	G	J	K	L	N	P	S§	
3/4	1-3/8	1-3/16	3/8	3-1/2	3	5/8	5/8	1-7/8	1-7/8	3-15/16	1-39/64	.925	17/32	1.6
1	1-17/32	1-13/32	3/8	3-1/2	3	5/8	5/8	1-7/8	2-1/4	4-9/32	1-39/64	.925	17/32	1.9
1-1/8, 1-3/16, 1-1/4S	1-17/32	1-17/32	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-11/16	1-53/64	1.051	17/32	2.5
1-1/4, 1-3/8, 1-7/16	1-3/4	1-3/4	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/4	5-1/8	1-15/16	1.157	17/32	2.9
1-1/2	2-1/32	2-1/32	5/8	4-1/2	4	3/4	1	2-5/8	3-1/4	5-13/16	2-11/64	1.268	11/16	4.1
1-11/16, 1-3/4	2-1/8	2-1/16	5/8	4-1/2	4	3/4	1	2-5/8	3-1/4	5-15/16	2-3/16	1.287	11/16	4.6
1-15/16	2-7/32	2-5/32	5/8	4-1/2	4	3/4	1	2-5/8	3-3/8	6-1/8	2-3/16	1.287	11/16	4.8
2, 2-3/16	2-17/32	2-1/2	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4	7-5/32	2-1/2	1.439	1-1/16	8.3
2-7/16	2-21/32	2-9/16	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4	7-11/32	2-5/8	1.559	1-1/16	8.8

PART NUMBERS ARE SPECIFIED BY "WSTU220" AND BORE SIZE. EXAMPLE: WSTU220 X 3/4.

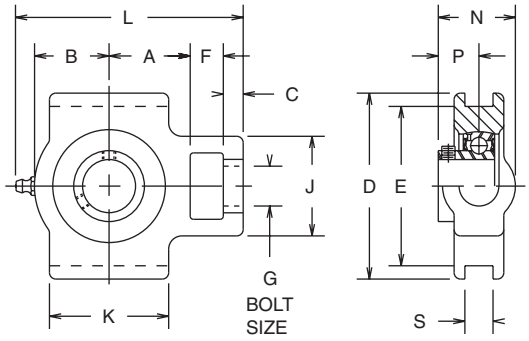
§ TAKE-UP UNITS WITH NARROWER SLOTS ARE SHOWN ON PAGE M-24.

FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-39.

FOR REPLACEMENT INSERTS USE B220 BEARING INSERTS, SEE PAGE M-29.

WSTU250 WIDE SLOT TAKE-UP UNITS

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads



SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E	F	G	J	K	L	N	P	S§	
3/4	1-3/8	1-3/16	3/8	3-1/2	3	5/8	5/8	1-7/8	1-7/8	3-15/16	1-13/32	.720	17/32	1.5
7/8, 15/16, 1	1-17/32	1-13/32	3/8	3-1/2	3	5/8	5/8	1-7/8	2-1/4	4-9/32	1-29/64	.768	17/32	1.8
1-1/8, 1-3/16, 1-1/4S	1-17/32	1-17/32	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/8	4-3/4	1-41/64	.866	17/32	2.4
1-1/4, 1-7/16	1-3/4	1-3/4	1/2	4	3-1/2	3/4	3/4	2-1/8	2-3/4	5-1/8	1-25/32	1.004	17/32	2.8
1-1/2	2-1/32	2-1/32	5/8	4-1/2	4	3/4	1	2-5/8	3-1/4	5-13/16	2-1/32	1.122	11/16	4.0
1-5/8, 1-11/16, 1-3/4	2-1/8	2-1/16	5/8	4-1/2	4	3/4	1	2-5/8	3-1/4	5-15/16	2-7/64	1.201	11/16	4.5
1-15/16, 2S	2-7/32	2-5/32	5/8	4-1/2	4	3/4	1	2-5/8	3-3/8	6-1/8	2-11/64	1.260	11/16	4.7
2, 2-3/16	2-17/32	2-9/16	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4	7-5/32	2-11/32	1.280	1-1/16	8.2
2-1/4, 2-7/16	2-21/32	2-9/16	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4	7-11/32	2-7/16	1.378	1-1/16	8.7

PART NUMBERS ARE SPECIFIED BY "WSTU250" AND BORE SIZE. EXAMPLE: WSTU250 X 3/4.

§ TAKE-UP UNITS WITH NARROWER SLOTS ARE SHOWN ON PAGE M-24.

FOR LOAD RATINGS, SEE PAGE M-12. FOR COMPARISON CHARTS, SEE PAGE M-39.

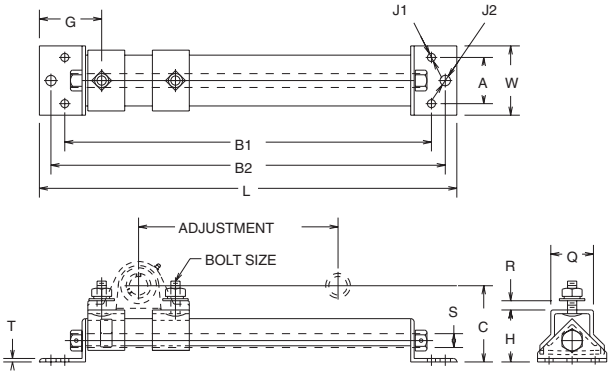
FOR REPLACEMENT INSERTS USE B250 BEARING INSERTS, SEE PAGE M-29.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

PROTECTED SCREW TAKE-UP FRAME

SERIES T210



- Three bolt base mounting
- Welded steel construction
- Plated adjusting screw

M

PART NUMBER	SHAFT SIZE	DIMENSIONS													BOLT SIZE	WT. LBS.
		L	W	A	B1	B2	G	H	J1	J2	Q	R	S	T		
6T210BC-3	3/4 - 1	17-1/8	3-1/4	2-1/4	13-7/8	15-7/8	3-5/16	2-3/8	7/16	9/16	1-3/4	9/16	5/8	3/16	3/8	6.0
9T210BC-3	3/4 - 1	20-1/8	3-1/4	2-1/4	16-7/8	18-7/8	3-5/16	2-3/8	7/16	9/16	1-3/4	9/16	5/8	3/16	3/8	6.7
6T210DH-3	1-1/16 - 2S	18-3/16	3-3/4	2-1/2	15-7/16	16-15/16	3-3/8	2-13/16	7/16	9/16	2-5/16	7/8	3/4	3/16	1/2	8.9
9T210DH-3	1-1/16 - 2S	22-5/8	3-3/4	2-1/2	19-7/8	21-3/8	3-3/8	2-13/16	7/16	9/16	2-5/16	7/8	3/4	3/16	1/2	10.3
12T210DH-3	1-1/16 - 2S	24-3/16	3-3/4	2-1/2	21-7/16	22-15/16	3-3/8	2-13/16	7/16	9/16	2-5/16	7/8	3/4	3/16	1/2	10.9
18T210DH-3	1-1/16 - 2S	31-5/8	3-3/4	2-1/2	28-7/8	30-3/8	3-3/8	2-13/16	7/16	9/16	2-5/16	7/8	3/4	3/16	1/2	13/3
12T210JK-3	2 - 2-7/16	28	4-3/4	3	24-3/4	26-3/4	4	3-5/16	9/16	11/16	2-5/8	1-7/16	1	1/4	5/8	18.3
18T210JK-3	2 - 2-7/16	34	4-3/4	3	30-3/4	32-3/4	4	3-5/16	9/16	11/16	2-5/8	1-7/16	1	1/4	5/8	21.2

PROTECTED SCREW TAKE-UP FRAMES ARE DESIGNED FOR USE WITH:

PB220, PB221, PB220W, PB221W, PB220HW AND PB221HW SHOWN ON PAGES M-13, M-14, M-15.
PB250, PB251, PB250W, PB251W, PB250HW AND PB251HW SHOWN ON PAGES M-16, M-17, M-18.
PB350 AND PB350H SHOWN ON PAGES M-32 AND M-33.

* "C" DIMENSION IS OBTAINED BY ADDING "H" IN THE TABLE ABOVE TO "A" FROM PILLOW BLOCK DIMENSION TABLES.

THE FIRST DIGIT OF THE PART NUMBER REPRESENTS THE NOMINAL ADJUSTMENT WHICH IS POSSIBLE. BECAUSE OF THE DIMENSIONAL DIFFERENCES OF THE VARIOUS PILLOW BLOCKS, THIS ADJUSTMENT VARIES ACCORDING TO THE SPECIFICATIONS NOTED BELOW.

ACTUAL AMOUNT OF ADJUSTMENT

SHAFT SIZE	FRAME PART NUMBER							
	6T210BC-3	9T210BC-3	6T210DH-3	9T210DH-3	12T210DH-3	18T210DH-3	12T210JK-3	18T210JK-3
WHEN USED WITH 200 SERIES PILLOW BLOCKS								
3/4	6-3/8	9-3/8	–	–	–	–	–	–
13/16 - 1	6	9	–	–	–	–	–	–
1-1/16 - 1-3/16	–	–	6-3/8	10-13/16	12-3/8	19-13/16	–	–
1-1/4 - 1-7/16	–	–	6	10-7/16	12	19-7/16	–	–
1-1/2 - 1-9/16	–	–	5-9/16	10	11-9/16	19	–	–
1-5/8 - 1-3/4	–	–	5-3/16	9-5/8	11-3/16	18-5/8	–	–
1-13/16 - 2S	–	–	4-9/16	9	10-9/16	18	–	–
2 - 2-3/16	–	–	–	–	–	–	12-3/4	18-3/4
2-1/4 - 2-7/16	–	–	–	–	–	–	12	18
WHEN USED WITH 350 SERIES PILLOW BLOCKS								
1-7/16	–	–	6-5/8	11-1/16	12-5/8	20-1/16	–	–
1-1/2 - 1-3/4	–	–	6-1/8	10-9/16	–	–	14-11/16	20-11/16
1-15/16 - 2-15/16	–	–	5-5/8	10-1/16	–	–	14-3/16	20-3/16
2-3/16 - 2-1/4	–	–	–	–	–	–	13-9/16	19-9/16
2-7/16 - 2-1/2	–	–	–	–	–	–	12-13/16	18-13/16

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

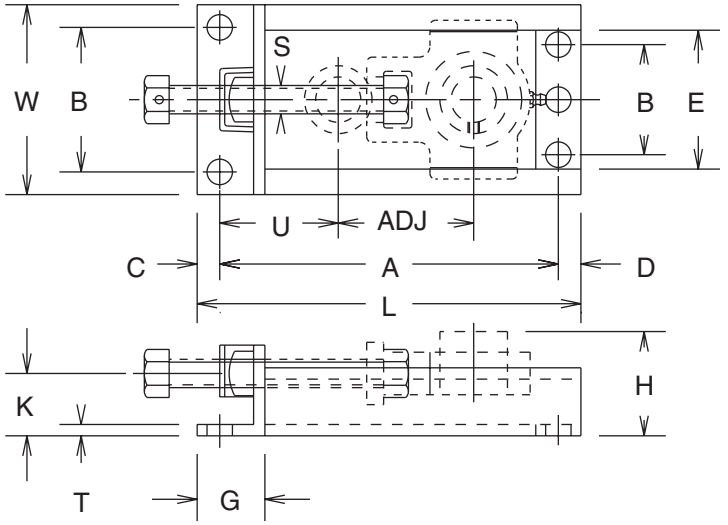
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

TAKE-UP FRAMES

SERIES T200

T200 SIDE MOUNTING TAKE-UP FRAMES

- Welded steel construction
- Plated adjusting screw



PART NUMBER	SHAFT SIZE RANGE FOR "200" SERIES UNITS	SHAFT SIZE RANGE FOR "300" SERIES UNITS	ADJUST-MENT	DIMENSIONS L	W	A	B	C	D	E	G	H MAX.	K	S	T	BOLT HOLES NO.	SIZE	WT. LBS.
1T200A	1/2 - 5/8	—	1-1/2	6-3/8	3-11/16	5-3/8	2-11/16	1/2	1/2	2-9/16	1-1/2	2-1/4	1-3/8	1/2	1/4	3	9/16	2.2
3T200BC	3/4 - 1	—	3	8-1/2	4-3/16	7-1/2	3-3/16	1/2	1/2	3-1/16	1-1/2	2-19/64	1-3/8	5/8	1/4	3	9/16	3.6
6T200BC	3/4 - 1	—	6	11-1/2	4-3/16	10-1/2	3-3/16	1/2	1/2	3-1/16	1-1/2	2-19/64	1-3/8	5/8	1/4	3	9/16	4.4
9T200BC	3/4 - 1	—	9	14-1/2	4-3/16	13-1/2	3-3/16	1/2	1/2	3-1/16	1-1/2	2-19/64	1-3/8	5/8	1/4	3	9/16	5.5
3T200DE	1-1/16 - 1-7/16	—	3	9-3/8	4-11/16	8-3/8	3-11/16	1/2	1/2	3-9/16	1-1/2	2-17/32	1-3/8	3/4	1/4	3	9/16	4.3
6T200DE	1-1/16 - 1-7/16	—	6	12-3/8	4-11/16	11-3/8	3-11/16	1/2	1/2	3-9/16	1-1/2	2-17/32	1-3/8	3/4	1/4	3	9/16	5.3
9T200DE	1-1/16 - 1-7/16	—	9	15-3/8	4-11/16	14-3/8	3-11/16	1/2	1/2	3-9/16	1-1/2	2-17/32	1-3/8	3/4	1/4	3	9/16	6.3
12T200DE	1-1/16 - 1-7/16	—	12	18-3/8	4-11/16	17-3/8	3-11/16	1/2	1/2	3-9/16	1-1/2	2-17/32	1-3/8	3/4	1/4	3	9/16	7.4
3T200FH	1-1/2 - 2S	1-7/16 - 1-3/4	3	11	5-3/16	9-7/8	3-1/16	1/2	5/8	4-1/16	2	2-15/16	1-5/8	1	1/4	4	9/16	6.3
6T200FH	1-1/2 - 2S	1-7/16 - 1-3/4	6	14	5-3/16	12-7/8	3-1/16	1/2	5/8	4-1/16	2	2-15/16	1-5/8	1	1/4	4	9/16	7.6
9T200FH	1-1/2 - 2S	1-7/16 - 1-3/4	9	17	5-3/16	15-7/8	3-1/16	1/2	5/8	4-1/16	2	2-15/16	1-5/8	1	1/4	4	9/16	9.1
12T200FH	1-1/2 - 2S	1-7/16 - 1-3/4	12	20	5-3/16	18-7/8	3-1/16	1/2	5/8	4-1/16	2	2-15/16	1-5/8	1	1/4	4	9/16	10.5
18T200FH	1-1/2 - 2S	1-7/16 - 1-3/4	18	26	5-3/16	24-7/8	3-1/16	1/2	5/8	4-1/16	2	2-15/16	1-5/8	1	1/4	4	9/16	13.2
9T200JK	2 - 2-7/16	1-15/16 - 2-3/16	9	18-1/4	6-3/8	16-7/8	4-1/8	5/8	3/4	5-1/4	2	3-7/16	1-7/8	1-1/4	5/16	4	11/16	13.9
12T200JK	2 - 2-7/16	1-15/16 - 2-3/16	12	21-1/4	6-3/8	19-7/8	4-1/8	5/8	3/4	5-1/4	2	3-7/16	1-7/8	1-1/4	5/16	4	11/16	15.0
18T200JK	2 - 2-7/16	1-15/16 - 2-3/16	18	27-1/4	6-3/8	25-7/8	4-1/8	5/8	3/4	5-1/4	2	3-7/16	1-7/8	1-1/4	5/16	4	11/16	19.8

THESE TAKE-UP FRAMES ARE USED WITH TU220, TU250, TU220W AND TU250W TAKE-UP UNITS SHOWN ON PAGES M-24 AND M-25 AND WITH TU350 TAKE-UP UNITS SHOWN ON PAGE M-34.
*NOTE — "U" MAY HAVE MORE THAN ONE VALUE, DEPENDING ON THE TAKE-UP UNIT AND FRAME COMBINATION USED, THEREFORE DETERMINED "U" FROM FRAME DIMENSIONS "G" MINUS "C" PLUS TAKE-UP UNIT DIMENSIONS "A", "C" AND "F".

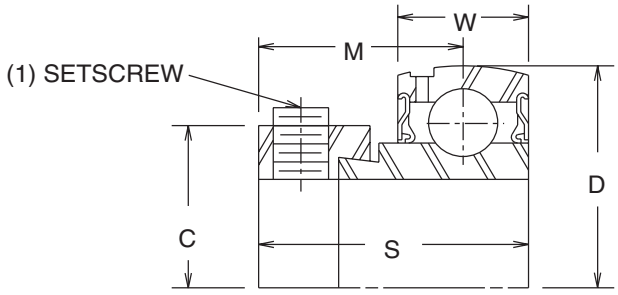
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

BEARING INSERTS

SERIES B220 & B250

B220 BEARING INSERTS



- Spherical outside diameter
- Relube type. Prelubricated at factory
- Molded glass fiber reinforced polyamide retainer
- Nitrile rubber seals with steel trash guard
- Eccentric locking collar

NOTE: BEARINGS WITH ECCENTRIC LOCKING COLLARS ARE NOT RECOMMENDED FOR USE IN REVERSING APPLICATIONS.

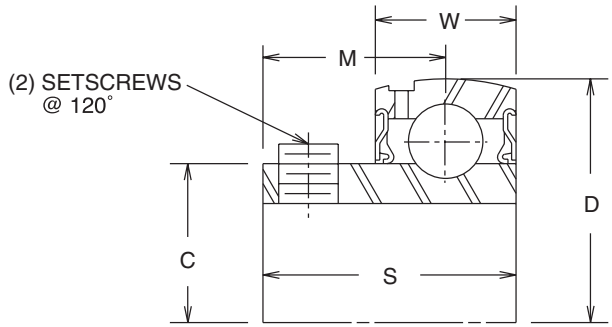
M

SHAFT SIZE	DIMENSIONS						WT.
	C	D	M	S	W	SETSCREW	LBS.
1/2, 5/8	1.101	1.5748	.870	1.126	.472	1/4-28 UNF	.2
3/4	1.273	1.8504	.925	1.220	.551	1/4-28 UNF	.3
1	1.460	2.0472	.925	1.220	.592	1/4-28 UNF	.4
1-1/8, 1-3/16, 1-1/4S	1.710	2.4409	1.051	1.406	.709	5/16-24 UNF	.6
1-1/4, 1-3/8, 1-7/16	2.148	2.8346	1.157	1.531	.748	3/8-24 UNF	1.0

SHAFT SIZE	DIMENSIONS						WT.
	C	D	M	S	W	SETSCREW	LBS.
1-1/2	2.335	3.1496	1.268	1.720	.827	3/8-24 UNF	1.3
1-11/16, 1-3/4	2.483	3.3465	1.287	1.720	.866	3/8-24 UNF	1.6
1-15/16	2.733	3.5433	1.287	1.720	.866	3/8-24 UNF	1.7
2, 2-3/16	2.983	3.9370	1.439	1.911	.984	7/16-20 UNF	2.4
2-7/16	3.296	4.3307	1.559	2.091	1.024	7/16-20 UNF	3.0

PART NUMBERS ARE SPECIFIED BY "B220" AND BORE SIZE. EXAMPLE B220 X 1-1/4.
USED IN PB220, PB221 PILLOW BLOCKS; FB220, FB230 FLANGE BLOCKS; AND TU220, WSTU220 TAKE-UP UNITS.

B250 BEARING INSERTS



- Spherical outside diameter
- Relube type. Prelubricated at factory
- Molded glass fiber reinforced polyamide retainer
- Nitrile rubber seals with steel trash guard
- Setscrew Locking

SHAFT SIZE	DIMENSIONS						WT.
	C	D	M	S	W	SETSCREW	LBS.
1/2, 5/8	.953	1.5748	.630	.886	.472	10-32	.3
3/4	1.110	1.8504	.720	1.004	.551	1/4-28 UNF	.3
7/8, 15/16, 1	1.328	2.0472	.768	1.071	.591	1/4-28 UNF	.4
1-1/8, 1-3/16, 1-1/4S	1.563	2.4409	.866	1.220	.709	5/16-24 UNF	.6
1-1/4, 1-3/8, 1-7/16	1.815	2.8346	1.004	1.378	.748	5/16-24 UNF	.9
1-1/2	2.039	3.1496	1.122	1.575	.827	5/16-24 UNF	1.5

SHAFT SIZE	DIMENSIONS						WT.
	C	D	M	S	W	SETSCREW	LBS.
1-5/8, 1-11/16, 1-3/4	2.236	3.3465	1.201	1.634	.866	5/16-24 UNF	1.8
1-15/16, 2S	2.461	3.5433	1.260	1.693	.866	3//8-24 UNF	1.8
2, 2-3/16	2.719	3.9370	1.280	1.772	.984	3/8-24 UNF	2.4
2-1/4, 2-7/16	2.978	4.3307	1.378	1.909	1.024	3/8-24 UNF	2.9
2-15/16	3.624	5.1181	1.535	2.106	1.142	3/8-24 UNF	4.9

PART NUMBERS ARE SPECIFIED BY "B250" AND BORE SIZE. EXAMPLE B250 X 1-1/4.
USED IN PB100, PB100L, PB150, PB150L, PB250, PB251, TPB250 PILLOW BLOCKS; FB100, FB110, FB150, FB160, FB250, FB260 FLANGE BLOCKS; AND TU250, WSTU250 TAKE-UP UNITS.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

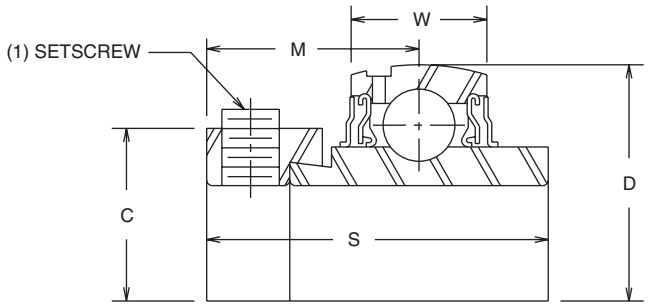
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

BEARING INSERTS

SERIES YW220 & YW250

YW220 BEARING INSERTS

- Spherical outside diameter
- Relube type. Prelubricated at factory
- Molded glass fiber reinforced polyamide retainer
- Nitrile rubber seals with steel trash guard
- Metal flingers
- Eccentric locking collar
- Wide inner race



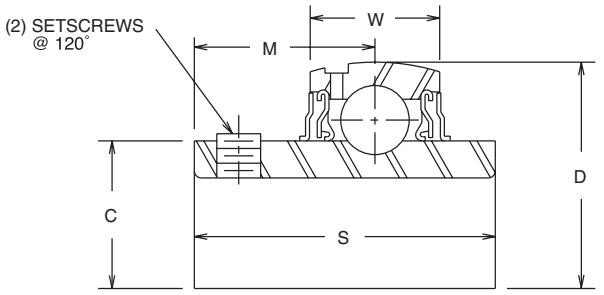
SHAFT SIZE	DIMENSIONS						WT. LBS.
	C	D	M	S	W	SETSCREW	
1	1.460	2.0472	1.059	1.748	.591	1/4-28 UNF	.57
1-3/16	1.710	2.4409	1.185	1.906	.709	5/16-24 UNF	.82
1-1/4, 1-3/8, 1-7/16	2.148	2.8346	1.272	2.012	.748	3/8-24 UNF	1.35
1-1/2	2.335	3.1496	1.374	2.217	.827	3/8-24 UNF	1.65
1-11/16, 1-3/4	2.483	3.3465	1.374	2.217	.866	3/8-24 UNF	1.85
1-15/16	2.733	3.5433	1.500	2.469	.866	3/8-24 UNF	2.05
2, 2-3/16	2.983	3.9370	1.717	2.811	.984	7/16-20 UNF	3.10
2-7/16	3.296	4.3307	1.838	3.063	1.024	7/16-20 UNF	4.40

PART NUMBERS ARE SPECIFIED BY "YW220" AND BORE SIZE. EXAMPLE YW220 X 1-1/4.

USED IN PB220W, PB221W, PB220HW, PB221HW PILLOW BLOCKS; FB220HW, FB230HW FLANGE BLOCKS; AND TU220W TAKE-UP UNITS.

YW250 BEARING INSERTS

- Spherical outside diameter
- Relube type. Prelubricated at factory
- Molded glass fiber reinforced polyamide retainer
- Nitrile rubber seals with steel trash guard
- Metal flingers
- Setscrew locking
- Wide inner race



SHAFT SIZE	DIMENSIONS						WT. LBS.
	C	D	M	S	W	SETSCREW	
5/8	.953	1.5748	.626	1.079	.472	1/4-28 UNF	.20
3/4	1.110	1.8504	.720	1.220	.551	1/4-28 UNF	.31
1	1.328	2.0472	.780	1.343	.591	1/4-28 UNF	.46
1-3/16, 1-1/4S	1.563	2.4409	.874	1.500	.709	1/4-28 UNF	.66
1-1/4, 1-7/16	1.815	2.8346	1.000	1.689	.748	5/16-24 UNF	1.00
1-1/2	2.039	3.1496	1.189	1.937	.827	5/16=24 UNF	1.30
1-3/4	2.236	3.3465	1.189	1.937	.866	5/16-24 UNF	1.55
1-15/16	2.461	3.5433	1.283	2.031	.866	3/8-24 UNF	1.55
2	2.719	3.9370	1.315	2.189	.984	3/8-24 UNF	2.45
2-1/4, 2-7/16	2.978	4.3307	1.566	2.566	1.024	3/8-24 UNF	3.75

PART NUMBERS ARE SPECIFIED BY "YW250" AND BORE SIZE. EXAMPLE YW250 X 1-1/4.

USED IN PB250W, PB251W, PB250HW, PB251HW, TPB250W PILLOW BLOCKS; FB250HW, FB260HW FLANGE BLOCKS; AND TU250W TAKE-UP UNITS.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

SERIES 350 - RATINGS

SHAFT SIZE	BEARING RADIAL LOAD CAPACITY IN POUNDS BASED ON L-10 LIFE OF 500 HOURS AND STEADY LOAD CONDITIONS (2500 HOURS AVERAGE LIFE)							
	BEARING SPEED – REVOLUTIONS PER MINUTE (RPM)							
	100	500	1,000	1,500	2,000	2,500	3,000	3,500
1	3,040	1,780	1,410	1,230	1,120	1,040	980	930
1-3/16	3,980	2,330	1,850	1,610	1,470	1,360	1,280	–
1-7/16	4,790	2,800	2,220	1,940	1,760	1,640	1,540	–
1-1/2	5,180	3,030	2,400	2,100	1,910	1,770	–	–
1-11/16, 1-3/4	5,480	3,200	2,540	2,220	2,020	1,870	–	–
1-15/16, 2	6,800	3,980	3,160	2,760	2,510	–	–	
2-3/16, 2-1/4	8,250	4,830	3,830	3,350	3,040	–	–	–
2-7/16, 2-1/2	9,710	5,680	4,510	3,940	–	–	–	–
2-11/16	10,330	6,040	4,790	4,190	–	–	–	
2-15/16, 3	11,370	6,650	5,280	4,610	–	–	–	–
3-7/16, 3-1/2	14,890	8,710	6,910	6,040	–	–	–	–

For ultimate life, snug fit or light press on shaft should be used.
Maximum Recommended Speeds — 1" and smaller 3500 RPM
1-3/16" - 1-7/16" 3000 RPM
1-1/2" -1-3/4" 2500 RPM
1-15/16" - 2-1/4" 2000 RPM
2-7/16" and larger 1800 RPM
Recommended Operating Temperature Range — 25° to + 225°F.
For applications not covered in the table above, consult factory engineering.

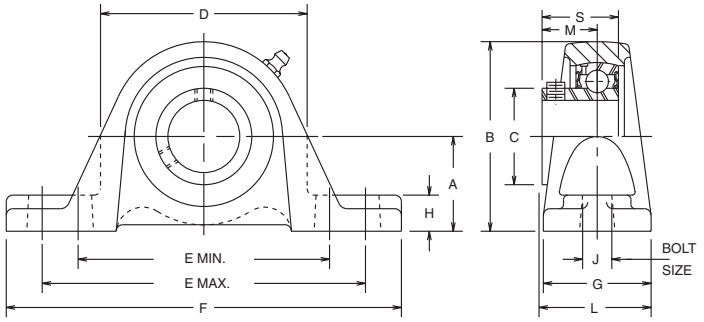
TO MODIFY THE ABOVE RATINGS FOR OTHER L-10 LIFE REQUIREMENTS OR FOR SHOCK LOADS MULTIPLY THE ABOVE RATINGS BY THE FACTOR FROM THIS CHART														
MODIFICATION FACTORS FOR L-10 SERVICE LIFE AND LOAD CONDITIONS:														
LOAD CONDITIONS	L-10 LIFE (HOURS)													
	500	700	1,000	1,500	2,000	3,000	4,000	5,000	7,000	10,000	15,000	20,000	30,000	50,000
Steady Load	1.00	.894	.794	.694	.630	.550	.500	.464	.415	.368	.322	.292	.255	.215
Light Shock	.90	.804	.715	.624	.567	.495	.450	.418	.373	.331	.290	.263	.230	.194
Moderate Shock	.70	.626	.556	.485	.441	.385	.350	.325	.290	.258	.225	.205	.179	.151

M

CAST IRON PILLOW BLOCKS

SERIES PB350

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replaceable bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron Housing



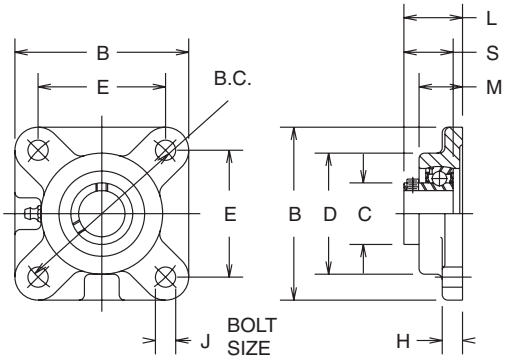
SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-11/16	3-1/4	1.563	3	4-1/4	5-1/8	6-3/8	1-3/4	3/4	1/2	1-3/4	.866	1.220	3.3
1-3/16	1-7/8	3-11/16	1.815	3-7/16	4-11/16	5-1/2	6-3/4	1-7/8	11/16	1/2	1-15/16	1.004	1.378	4.4
1-7/16	2-1/8	4-1/8	2.039	3-7/8	5-1/8	5-15/16	7-1/8	1-7/8	15/16	1/2	2-1/16	1.122	1.575	4.9
1-1/2	2-5/16	4-7/16	2.236	4-1/8	5-3/4	6-1/2	8	2	1	5/8	2-13/64	1.201	1.634	5.6
1-3/4	2-5/16	4-9/16	2.461	4-5/16	5-13/16	6-3/4	8-3/8	2	7/8	5/8	2-17/64	1.260	1.693	6.7
1-15/16, 2	2-1/2	5	2.719	4-3/4	6-7/16	7-3/8	9	2-1/4	15/16	5/8	2-13/32	1.280	1.772	8.5
2-3/16, 2-1/4	2-3/4	5-9/16	2.978	5-1/4	6-7/8	8	9-5/8	2-1/2	1-3/16	3/4	2-5/8	1.378	1.909	11.3
2-7/16, 2-1/2	3	6-1/8	3.427	6	7-3/4	8-3/4	10-1/2	2-3/4	1-1/8	3/4	2-15/16	1.560	2.008	15.2
2-11/16	3-1/2	6-3/4	3.624	6-1/4	8	9-1/2	11-1/4	3	1-3/8	7/8	3-1/32	1.535	2.106	17.9
2-15/16, 3	3-1/2	7	3.835	6-3/4	8-1/2	10-1/4	12	3-1/4	1-1/8	7/8	3-5/32	1.537	2.185	19.1
3-7/16, 3-1/2	4	8	4.394	7-11/16	9-11/16	12-9/16	14-9/16	3-1/2	1-1/8	7/8	3-21/64	1.575	2.244	28.4

PART NUMBERS ARE SPECIFIED BY "PB350" AND BORE SIZE. EXAMPLE: PB350 X 2-7/16.
FOR LOAD RATINGS, SEE PAGE M-31. FOR COMPARISON CHARTS, SEE PAGE M39. FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.

CAST IRON FLANGE BLOCKS

SERIES FB350

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replacement bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron Housing

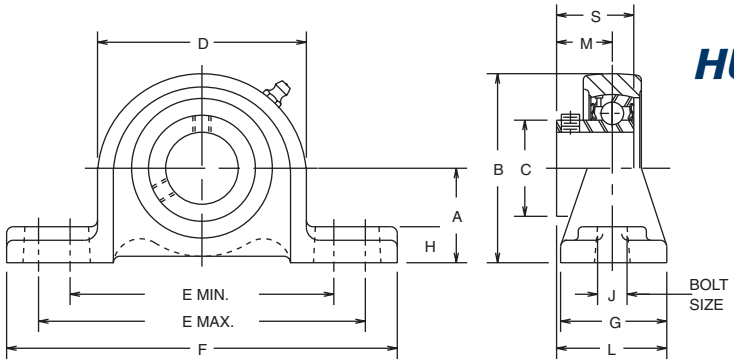


SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
1	4-1/2	4-19/32	1.563	3-1/8	3-1/4	7/16	7/16	1-13/32	1	1.220	3.0
1-3/16	4-3/4	5-1/8	1.815	3-5/8	3-5/8	1/2	1/2	1-5/8	1-3/16	1.378	4.6
1-7/16	5-1/8	5-21/32	2.039	4	4	1/2	1/2	1-13/16	1-3/8	1.575	5.4
1-1/2	5-1/4	5-53/64	2.236	4-1/4	4-1/8	1/2	1/2	1-61/64	1-3/8	1.634	5.8
1-3/4	5-1/2	6-3/16	2.461	4-1/2	4-3/8	1/2	1/2	2	1-1/2	1.693	7.0
1-15/16, 2	6-1/2	7-1/4	2.719	5	5-1/8	5/8	5/8	2-1/32	1-1/2	1.772	9.2
2-3/16, 2-1/4	7	7-15/16	2.978	5-1/2	5-5/8	5/8	5/8	2-1/4	1-3/4	1.909	12.1
2-7/16, 2-1/2	7-1/4	8-5/16	3.427	6-1/4	5-7/8	5/8	5/8	2-7/16	1-7/8	2.008	15.4
2-11/16	7-5/8	8-31/64	3.624	6-1/2	6	3/4	3/4	2-1/2	1-15/16	2.106	18.3
2-15/16, 3	7-5/8	8-31/64	3.835	7	6	3/4	3/4	2-17/32	2	2.185	19.0
3-7/16, 3-1/2	8-3/8	9-35/64	4.394	8	6-3/4	3/4	3/4	2-37/64	2	2.244	22.2

PART NUMBERS ARE SPECIFIED BY "FB350" AND BORE SIZE. EXAMPLE: FB350 X 2-7/16.
FOR LOAD RATINGS, SEE PAGE M-31. FOR COMPARISON CHARTS, SEE PAGE M-40. FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



HUB-ALLOY® PILLOW BLOCKS

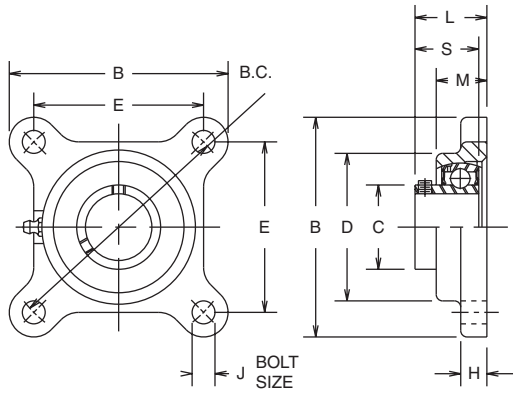
SERIES PB350H

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replacement bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads

SHAFT SIZE	DIMENSIONS													WT. LBS.
	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	
1	1-11/16	3-5/32	1.563	2-15/16	4-1/4	5-1/8	6-1/16	1-1/2	11/16	1/2	1-5/8	.815	1.220	2.0
1-3/16	1-7/8	3-9/16	1.815	3-3/8	4-5/8	5-1/2	6-7/16	1-1/2	5/8	1/2	1-3/4	1.004	1.378	2.8
1-7/16	2-1/8	4	2.039	3-3/4	5-1/16	6-5/16	7-3/8	1-3/4	11/16	1/2	2	1.122	1.575	4.3
1-1/2	2-5/16	4-5/16	2.236	4	5-9/16	6-11/16	7-7/8	2	13/16	5/8	2-13/64	1.201	1.634	5.1
1-3/4	2-5/16	4-7/16	2.461	4-1/4	5-13/16	6-11/16	7-7/8	2-1/8	7/8	5/8	2-21/64	1.260	1.693	5.3
1-15/16, 2	2-1/2	4-27/32	2.719	4-11/16	6-1/16	7-7/16	8-5/8	2-3/8	7/8	5/8	2-15/32	1.280	1.772	6.6
2-3/16, 2-1/4	2-3/4	5-11/32	2.978	5-3/16	6-11/16	7-13/16	9-1/4	2-5/8	15/16	3/4	2-11/16	1.378	1.909	8.6
2-7/16, 2-1/2	3	5-15/16	3.427	5-7/8	7-7/16	8-9/16	10	2-7/8	15/16	3/4	2-57/64	1.457	2.008	12.4
2-11/16	3-1/2	6-9/16	3.624	6-1/8	8-5/16	9-11/16	11-5/16	3	1	7/8	3-1/32	1.534	2.106	15.3
2-15/16, 3	3-1/2	6-3/4	3/835	6-1/2	8-5/16	9-11/16	11-5/16	3-1/8	1	7/8	3-3/32	1.537	2.185	15.8
3-7/16, 3-1/2	4	7-11/16	4.394	7-3/8	9-11/16	12-9/16	14-3/16	3-1/2	1-3/16	7/8	3-21/64	1.575	2.244	23.3

PART NUMBERS ARE SPECIFIED BY "PB350H" AND BORE SIZE. EXAMPLE: PB350H X 2-7/16.

FOR LOAD RATINGS, SEE PAGE M-31. FOR COMPARISON CHARTS, SEE PAGE M-39. FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.



HUB-ALLOY® FLANGE BLOCKS

SERIES FB350H

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replacement bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads

SHAFT SIZE	DIMENSIONS										WT. LBS.
	B	B.C.	C	D	E	H	J	L	M	S	
1	4-3/16	4-19/32	1.563	2-15/16	3-1/4	1/2	7/16	1-3/8	31/32	1.220	1.9
1-3/16	4-11/16	5-1/8	1.815	3-3/8	3-5/8	1/2	1/2	1-17/32	1-1/32	1.378	2.5
1-7/16	5-1/16	5-21/32	2.039	3-3/4	4	9/16	1/2	1-23/32	1-1/8	1.575	3.6
1-1/2	5-1/4	5-53/64	2.236	4	4-1/8	9/16	1/2	1-51/64	1-1/8	1.634	4.1
1-3/4	5-1/2	6-3/16	2.461	4-1/4	4-3/8	5/8	1/2	1-55/64	1-1/8	1.693	4.8
1-15/16, 2	6-3/8	7-1/4	2.719	4-11/16	5-1/8	5/8	5/8	1-7/8	1-3/16	1.772	6.0
2-3/16, 2-1/4	6-7/8	7-61/64	2.978	5-3/16	5-5/8	11/16	5/8	2-1/32	1-1/4	1.909	7.4
2-7/16, 2-1/2	7-1/8	8-5/16	3.427	5-7/8	5-7/8	11/16	5/8	2-17/64	1-17/32	2.008	10.5
2-11/16	7-5/8	8-31/64	3.624	6-1/8	6	3/4	3/4	2-11/32	1-17/32	2.106	12.1
2-15/16, 3	7-5/8	8-31/64	3.835	6-1/2	6	13/16	3/4	2-7/16	1-21/32	2.185	13.5
3-7/16, 3-1/2	8-3/8	9-35/64	4.394	7-3/8	6-3/4	15/16	3/4	2-35/64	1-25/32	2.244	17.7

PART NUMBERS ARE SPECIFIED BY "FB350H" AND BORE SIZE. EXAMPLE: FB350H X 2-7/16.

FOR LOAD RATINGS, SEE PAGE M-31. FOR COMPARISON CHARTS, SEE PAGE M-39. FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.

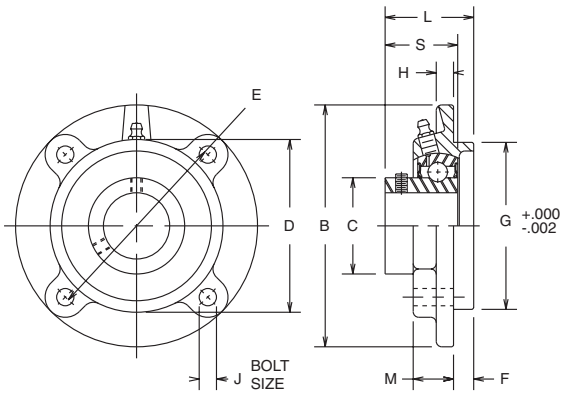
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

M

CAST IRON FLANGE CARTRIDGE

SERIES FC350

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replacement bearing
- Nitrile rubber seals with steel trash guard
- Precision bored Cast Iron Housing



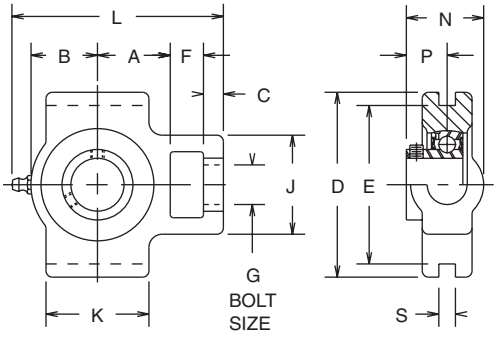
SHAFT SIZE	DIMENSIONS											WT. LBS.
	B	C	D	E	F	G	H	J	L	M	S	
1-1/4	5	1.815	3-3/8	4-1/8	3/8	3.375	3/8	3/8	1-25/32	7/8	1.378	3.3
1-7/16	5-1/4	2.039	3-3/4	4-3/8	7/16	3.625	3/8	3/8	1-29/32	7/8	1.575	3.9
1-1/2	5-1/4	2.236	4	4-3/8	7/16	3.625	3/8	3/8	1-63/64	7/8	1.634	4.1
1-3/4	6-1/8	2.461	4-1/4	5-1/8	15/32	4.250	3/8	1/2	2-5/64	7/8	1.693	5.5
1-15/16, 2	6-3/8	2.719	4-11/16	5-3/8	5/8	4.500	3/8	1/2	2-7/32	7/8	1.772	6.1
2-3/16, 2-1/4	7-1/8	2.978	5-3/16	6	7/8	5.000	1/2	1/2	2-21/32	1	1.909	8.9
2-7/16, 2-1/2	7-5/8	3.427	5-7/8	6-1/2	1	5.500	1/2	1/2	2-47/64	1	2.008	11.3
2-11/16	8-3/4	3.624	6-1/8	7-1/2	1	6.375	1/2	5/8	2-13/16	1	2.106	15.4
2-15/16, 3	8-3/4	3.835	7-1/2	7-1/2	1-1/8	6.375	1/2	5/8	2-29/32	1	2.185	15.2
3-7/16, 3-1/2	10-1/4	4.394	7-3/8	8-5/8	1-1/8	7.375	5/8	3/4	3-1/64	1-1/8	2.244	22.5

PART NUMBERS ARE SPECIFIED BY "FC350" AND BORE SIZE. EXAMPLE: FC350 X 1-1/2.
FOR LOAD RATINGS, SEE PAGE M-31. FOR COMPARISON CHARTS, SEE PAGE M-40. FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.

HUB-ALLOY® TAKE-UP UNITS

SERIES TU350

- Relube type. Prelubricated at factory
- Setscrew locking
- Self-aligning replacement bearing
- Nitrile rubber seals with steel trash guard
- Precision bored HUB-ALLOY® housing
- Higher strength and greater impact resistance than gray iron for high shock loads

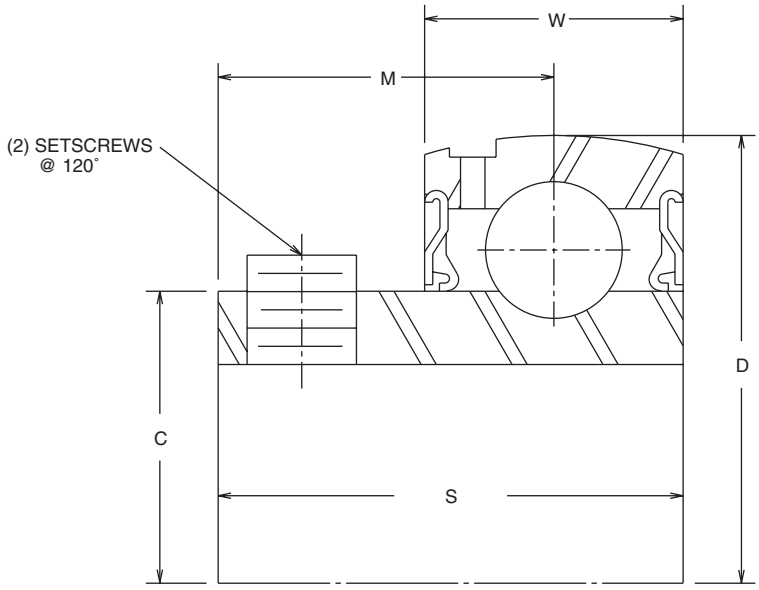


SHAFT SIZE	USE WITH FRAME NO. ★	DIMENSIONS													WT. LBS.
		A	B	C	D	E	F	G	J	K	L	N	P	S§	
1-7/16	3 thru 18T200FH	1-7/8	1-7/8	5/8	4-1/2	4	3/4	1	2-5/8	2-15/16	5-1/2	2-1/32	1.122	5/16	4.0
1-1/2	3 thru 18T200FH	2-1/16	2	5/8	4-1/2	4	3/4	1	2-5/8	3-1/8	5-13/16	2-7/64	1.201	5/16	4.8
1-3/4	3 thru 18T200FH	2-3/16	2-1/8	5/8	4-1/2	4	3/4	1	2-5/8	3-5/16	6-1/16	2-11/64	1.260	5/16	6.8
1-15/16, 2	9 thru 18T200JK	2-3/8	2-11/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	3-11/16	6-27/32	2-11/32	1.279	5/16	9.6
2-3/16, 2-1/4	9 thru 18T200JK	2-11/16	2-19/32	3/4	5-3/4	5-1/8	1	1-1/4	3-1/4	4-1/16	7-13/32	2-7/16	1.378	5/16	12.0
2-7/16, 2-1/2	—	3-5/16	2-15/16	3/4	6-9/16	5-15/16	1-1/4	1-1/2	3-3/4	4-3/4	8-5/8	2-53/64	1.457	5/16	16.0
2-15/16, 3	—	3-7/16	3-1/4	3/4	7-1/4	6-1/2	1-1/4	1-1/2	3-3/4	4-3/4	9-1/16	2-29/32	1.535	5/16	20.0

PART NUMBERS ARE SPECIFIED BY "TU350" AND BORE SIZE. EXAMPLE: TU350 X 2-1/4.
§ TAKE-UP UNITS WITH WIDER SLOTS ARE AVAILABLE ON A MADE-TO-ORDER BASIS.
FOR REPLACEMENT INSERTS USE B350 BEARING INSERTS, SEE PAGE M-35.
★ TAKE-UP FRAMES SHOWN ON PAGE M-28.
FOR LOAD RATINGS, SEE PAGE M-31.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. **CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST**

BEARING INSERTS
SERIES B350



- Spherical outside diameter
- Relube type. Prelubricated at factory
- Molded glass fiber reinforced polyamide retainer
- Nitrile rubber seals with steel trash guard
- Setscrew locking
- Medium duty

M

SHAFT SIZE	DIMENSIONS						WT. LBS.
	C	D	M	S	W	SETSCREW	
1	1.563	2.4409	.866	1.220	.709	5/16-24 UNF	1.0
1-3/16	1.815	2.8346	1.004	1.378	.748	5/16-24 UNF	1.3
1-7/16	2.039	3.1496	1.122	1.575	.827	5/16-24 UNF	1.6
1-1/2	2.236	3.3465	1.201	1.634	.866	5/16-24 UNF	1.9
1-3/4	2.461	3.5433	1.260	1.693	.866	3/8-24 UNF	2.2
1-15/16, 2	2.719	3.9370	1.280	1.772	.984	3/8-24 UNF	2.6
2-3/16, 2-1/4	2.978	4.3307	1.378	1.909	1.024	3/8-24 UNF	3.1
2-7/16, 2-1/2	3.427	4.9213	1.457	2.008	1.102	3/8-24 UNF	5.1
2-11/16	3.624	5.1181	1.535	2.106	1.142	3/8-24 UNF	5.6
2-15/16, 3	3.835	5.5118	1.537	2.185	1.181	3/8-24 UNF	6.4
3-7/16, 3-1/2	4.394	6.2992	1.575	2.244	1.339	3/8-34 UNF	8.5

PART NUMBERS ARE SPECIFIED BY "B350" AND BORE SIZE. EXAMPLE: B350 X 1-1/2.
USED IN PB350, PB350H PILLOW BLOCKS, FB350, FB350H FLANGE BLOCKS, FC350 FLANGE CARTRIDGES AND TU350 TAKE-UP UNITS.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

INTERCHANGE COMPARISONS

SERIES PB100, PB150

HUB-ALLOY® Pillow Blocks
High Shaft Height

SHAFT SIZE	HUB CITY PB100① PB150②	BOSTON XL①	BROWNING VPS-M②	SEALMASTER LP①
1/2	X 1/2	- 1/2	-108	-8
5/8	X 5/8	- 5/8	-110	-10
3/4	X 3/4	- 3/4	-112	-12
7/8	X 7/8	- 7/8	-114	-14
15/16	X 15/16	- 15/16	- 115	-15
1	X 1	-1	-116	-16
1-1/8	X 1-1/8	-1-1/8	-118	-18
1-3/16	X 1-3/16	-1-3/16	-119	-19
1-1/4S	X 1-1/4S	-1-1/4S	-120S	-20R
1-1/4	X 1-1/4	—	—	—
1-5/16	X 1-5/16	-1-5/16	—	—
1-3/8	X 1-3/8	-1-3/8	-122	-22
1-7/16	X 1-7/16	-1-7/16	-123	-23

① NON-RELUBE – SETSCREW LOCK
② RELUBE – SETSCREW LOCK

SERIES FB100, FB150

HUB-ALLOY®
Three-Hole Flange Blocks

SHAFT SIZE	HUB CITY FB100① FB150②	BOSTON XL3①	FAFNIR VFD① GVFD②	BROWNING VF3S-M②	PTC F-W-U/E① F-WG-U/E②	SEALMASTER LF①	DODGE SCLF N/L① SCLF②
1/2	X 1/2	- 1/2	- 1/2	-108	2B08	—	- 1/2
5/8	X 5/8	- 5/8	- 5/8	-110	210	—	- 5/8
3/4	X 3/4	- 3/4	- 3/4	-112	212	-12	- 3/4
7/8	X 7/8	- 7/8	- 7/8	-114	214	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	-115	215	-15	- 15/16
1	X 1	-1	-1	-116	216	-16	-1
1-1/8	X 1-1/8	-1-1/8	-1-1/8	-118	218	-18	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-119	219	-19	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4S	-120S	2E20	-20R	-1-1/4, 206
1-1/4	X 1-1/4	—	-1-1/4	—	220	-20	-1-1/4, 207
1-5/16	X 1-5/16	-1-5/16	-1-5/16	—	221	—	-1-5/16
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-122	222	-22	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-123	223	-23	-1-7/16

① NON-RELUBE – SETSCREW LOCK
② RELUBE – SETSCREW LOCK

SERIES FB110, FB160

HUB-ALLOY®
Two-Hole Flange Blocks

SHAFT SIZE	HUB CITY FB110① FB160②	BOSTON XL2②	FAFNIR VFTD① GVFTD②	BROWNING VF2S-M②	PTC FX-W-U③ FX-WG-U④	SEALMASTER LFT①	DODGE SCLFT N/L① SCLFT②
1/2	X 1/2	- 1/2	- 1/2	-108	2B08	-8	- 1/2
5/8	X 5/8	- 5/8	- 5/8	-110	210	-10	- 5/8
3/4	X 3/4	- 3/4	- 3/4	-112	212	-12	- 3/4
7/8	X 7/8	- 7/8	- 7/8	-114	214	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	-115	215	-15	- 15/16
1	X 1	-1	-1	-116	216	-16	-1
1-1/8	X 1-1/8	-1-1/8	-1-1/8	-118	218	-18	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-119	219	-19	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4S	-120S	2E20	-20R	-1-1/4, 206
1-1/4	X 1-1/4	—	-1-1/4	—	220	-20	-1-1/4, 207
1-5/16	X 1-5/16	-1-5/16	-1-5/16	—	221	—	-1-5/16
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-122	222	-22	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-123	223	-23	-1-7/16

① NON-RELUBE – SETSCREW LOCK
② RELUBE – SETSCREW LOCK
③ NON-RELUBE – ECCENTRIC LOCK
④ RELUBE – ECCENTRIC LOCK

SERIES TPB250, TPB250W

Cast Iron Tapped Base
Pillow Blocks

SHAFT SIZE	HUB CITY TPB250① TPB250W①	BROWNING MTBS① VTBS①	SEALMASTER TB① RTB①	DODGE SCTB①
1/2	X 1/2	-208②	-8	- 1/2
5/8	X 5/8	-210	-10	- 5/8
3/4	X 3/4	-212	-12	- 3/4
7/8	X 7/8	-214②	-14	- 7/8
15/16	X 15/16	-215	-15	- 15/16
1	X1	-216	-16	-1
1-1/8	X 1-1/8	-218②	-18	-1-1/8
1-3/16	X 1-3/16	-219	-19	-1-3/16
1-1/4S	X 1-1/4S	-220S②	-20R	-1-1/4,206
1-1/4	X 1-1/4	-220	-20	-1-1/4,207
1-5/16	X 1-5/16	—	-21③	-1-5/16
1-3/8	X 1-3/8	-222	-22	-1-3/8
1-7/16	X 1-7/16	-223	-23	-1-7/16
1-1/2	X 1-1/2	-224	-24	—
1-5/8	X 1-5/8	-226②	-26	—
1-11/16	X 1-11/16	-227②	-27	—
1-3/4	X 1-3/4	-228	-28	—
1-15/16	X 1-15/16	-231	-31	—
2S	X 2S	—	-32R	—
2	X 2	-232	—	—
2-3/16	X 2-3/16	—	—	—

① NON-RELUBE – SETSCREW LOCK
② NOT AVAILABLE IN MTBS SERIES
③ NOT AVAILABLE IN RTB SERIES

INTERCHANGES ARE FOR COMPARISON PURPOSES; DIMENSIONS AND RATINGS MAY VARY.

INTERCHANGE COMPARISONS

SERIES PB220, PB220W, PB250, PB250W CAST IRON, PB220HW, PB250HW HUB-ALLOY® PILLOW BLOCKS - LOW

① Relube — Eccentric Lock

② Relube — Setscrew Lock

③ Non-Relube — Eccentric Lock

④ VPLE and VPLS available in 100 and 200 Series

⑤ U or E Suffix on PL3-W only

⑥ 3 thru 12 Prefix on L Series

⑦ Not all sizes available

⑧ 1 7/16 maximum shaft size

‡ Not dimensionally interchangeable

SHAFT SIZE	HUB CITY PB220 ① PB250 ② PB220W ① ⑦ PB250W ② ⑦ PB220HW ① ⑦ PB250HW ② ⑦	BOSTON L ① ⑥ SL ②	DODGE SCB ② VSCB ② ⑦ SXRB ① SXVB ① ⑦	FAFNIR LAK ① RAK ① TAK ① VAK ①	BROWNING MPLS ② MPLE ① VPLS ② ④ VPLE ① ④	PTC PL3-U ② PL3-Y ① PL3-W ①	SEALMASTER NPL② RPL ② ⑦ VPL ② ⑦	SKF SYHP ③ ⑧ SYH-X ②	MCGILL CL-25 ②
1/2	X 1/2	- 1/2	–	- 1/2	-108/208	2B08N/U	-8	-8	- 1/2
5/8	X 5/8	- 5/8	–	-5/8	-110/210	210N/U	-10	-10	- 5/8
3/4	X 3/4	- 3/4	- 3/4	- 3/4	-112/212	212N/U	-12	-12	-3/4
7/8	X 7/8	- 7/8	- 7/8	- 7/8	-114/214	214N/U	-14	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	- 15/16	-115/215	215N/U	-15	-15	- 15/16
1	X 1	-1	-1	-1	-116/216	216N/U	-16	-100	-1
1-1/8	X 1-1/8	-1-1/8	-1-1/8	-1-1/8	-118/218	218N/E	-18	-102	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-1-3/16	-119/219	219N/E	-19	-103	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4, 206	–	-120S/220S	2E20N/E	-20R	-104A	-1-1/4S
1-1/4	X 1-1/4	-1-1/4	-1-1/4, 207	-1-1/4	-220	220N/E	-20	-104	-1-1/4
1-5/16	X 1-5/16	-1-5/16	-1 5/16	-1-5/16	–	221N/E	-21	-105	–
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-1-3/8	-122/222	222N/E	-22	-106	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-123/223	223N/E	-23	-107	-1-7/16
1-1/2	X 1-1/2	-1-1/2	-1-1/2	‡-1-1/2	-224	224N/E	-24	-108	-1-1/2
1-5/8	X 1-5/8	-1-5/8	‡-1-5/8	-1-5/8	-226	226N/U	-26	-110	-1-5/8
1-11/16	X 1-11/16	-1-11/16	-1-11/16	-1-11/16	-227	227N/U	-27	-111	-1-11/16
1-3/4	X 1-3/4	-1-3/4	-1-3/4	-1-3/4	-228	228N/U	-28	-112	-1-3/4
1-7/8	X 1-7/8	–	–	-1-7/8	–	230N/U	-30	–	–
1-15/16	X 1-15/16	-1-15/16	-1-15/16	-1-15/16	-231	231N/U	-31	-115	-1-15/16
2S	X 2S	–	-2, 210	-2S	–	2E32N/U	-2R	–	-2
2	X 2	-2	–	-2	-232	232N	-32	-200	-2L
2-3/16	X 2-3/16	-2-3/16	-2-7/16	-2 3/16	-235	235N	-35	-203	-2-3/16
2 1/4	X 2 1/4	-2-1/4	‡-2-1/4	-2 1/4	-236	236N	-36	-204	-2-1/4
2 7/16	X 2 7/16	-2-7/16	-2-7/16	-2 7/16	-239	239N	-39	-207	-2-3/8
2 15/16	X 2 15/16	–	–	‡-2 15/16	-247	–	–	-215	‡-2-15/16

SERIES PB221, PB221W, PB251, PB251W CAST IRON, PB221HW, PB251HW HUB-ALLOY® PILLOW BLOCKS - HIGH

① Relube — Eccentric Lock

② Relube — Setscrew Lock

③ Non-Relube — Eccentric Lock

④ VPE and VPS available in 100 and 200 Series

⑤ U or E Suffix on P3-W only

⑥ 3 thru 12 Prefix on H Series

⑦ Not all sizes available

⑧ 1 7/16 maximum shaft size

‡ Not dimensionally interchangeable

SHAFT SIZE	HUB CITY PB221 ① PB251 ② PB221W ① ⑦ PB251W ② ⑦ PB221HW ① ⑦ PB251HW ② ⑦	BOSTON H ① ⑥ SH ②	DODGE SC ② VSC ② ⑦ SXR ① ⑦ SXV ① ⑦	FAFNIR LAS ① RAS ① RASC ② SAS ② TAS ① VAS ①	BROWNING MPS ② MPE ① VPS ② ④ VPE ① ④	PTC P3-U② P3-Y① P3-W① ⑤	SEALMASTER NP ② RP ② ⑦ VP ②⑦	SKF SY ② SYP ③ ⑧	MCGILL C-25 ②
1/2	X 1/2	- 1/2	1/2, 203	- 1/2	-108/208	2B08N/U	- 8	- 8	- 1/2
5/8	X 5/8	- 5/8	5/8, 203	- 5/8	-110/210	210N/U	-10	-10	- 5/8
3/4	X 3/4	- 3/4	- 3/4	- 3/4	-112/212	212N/U	-12	-12	- 3/4
7/8	X 7/8	- 7/8	- 7/8	- 7/8	-114/214	214N/U	-14	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	- 15/16	-115/215	215N/U	-15	-15	- 15/16
1	X 1	-1	-1	-1	-116/216	216N/U	-16	-100	-1
1-1/8	X 1-1/8	-1-1/8	‡-1-1/8	-1-1/8	-118/218	218N/E	-18	-102	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-1-3/16	-119/219	219N/E	-19	-103	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4, 206	–	-120S/220S	2E20N/E	-20R	-104A	-1-1/4S
1-1/4	X 1-1/4	-1-1/4	-1-1/4, 207	-1-1/4	-220	220N/E	-20	-104	-1-1/4
1-5/16	X 1 5/16	-1-5/16	-1-5/16	-1-5/16	–	221N/E	-21	-105	–
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-1-3/8	-122/222	222N/E	-22	-106	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-123/223	223N/E	-23	-107	-1-7/16
1-1/2	X 1-1/2	-1-1/2	‡-1-1/2	‡-1-1/2	-224	224N/E	‡-24	-108	-1-1/2
1-5/8	X 1-5/8	-1-5/8	-1-5/8	-1-5/8	-226	226N/U	-26	-110	-1-5/8
1-11/16	X 1-11/16	-1-11/16	-1-11/16	-1-11/16	-227	227N/U	-27	-111	-1-11/16
1-3/4	X 1-3/4	-1-3/4	-1-3/4	-1-3/4	-228	228N/U	-28	-112	- 1-3/4
1-7/8	X 1-7/8	–	–	-1-7/8	–	230N/U	-30	–	–
1-15/16	X 1-15/16	-1-15/16	-1 15/16	-1 15/16	-231	231N/U	-31	-115	-1-15/16
2S	X 2S	–	-2, 210	-2S	–	2E32N/U	-2R	–	-2
2	X 2	-2	-2, 211	-2	-232	232N	-32	-200	-2L
2-3/16	X 2 3/16	-2-3/16	-2 3/16	-2-3/16	-235	235N	-35	-203	-2-3/16
2-1/4	X 2-1/4	-2-1/4	-2 1/4, 212	-2-1/4	-236	236N	-36	-204	-2-1/4
2-7/16	X 2-7/16	-2-7/16	-2 7/16	-2- 7/16	-239	239N	-39	-207	-2-7/16
2-15/16	X 2-15/16	–	‡-2 15/16	‡-2-15/16	-247	–	–	-215	‡-2-15/16

INTERCHANGES ARE FOR COMPARISON PURPOSES; DIMENSIONS AND RATINGS MAY VARY.

INTERCHANGE COMPARISONS

SERIES FB220, FB250 CAST IRON; FB220HW, FB250HW HUB ALLOY® 4-HOLE FLANGE BLOCKS

SHAFT SIZE	HUB CITY FB220① FB250② FB220HW①⑦ FB250HW②⑦	BOSTON F①⑥ SF②	DODGE SC4② VSC4②⑦ SXR4①⑦ SXV4①⑦	FAFNIR LCJ① RCJ① RCJC② SCJ② TCJ① VCJ①	BROWNING MF4S② MF4E① VF-4S②④ VF4E①④	PTC F3-U② F3-Y① F3-W①⑤	SEALMASTER SF② RF②⑦ VF②⑦	SKF FYP③⑧ FY② FY-X① FY-TM② FY-WN①⑦	MCGILL FC4-25②
1/2	X 1/2	- 1/2	- 1/2, 203	- 1/2	-108/208	2B08N/U	-8	-8	- 1/2
5/8	X 5/8	- 5/8	- 5/8, 203	- 5/8	-110/210	210N/U	-10	-10	- 5/8
3/4	X 3/4	- 3/4	- 3/4	- 3/4	-112/212	212N/U	-12	-12	- 3/4
7/8	X 7/8	- 7/8	- 7/8	- 7/8	-114/214	214N/U	-14	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	- 15/16	-115/215	215N/U	-15	-15	- 15/16
1	X 1	-1	-1	-1	-116/216	216N/U	-16	-100	-1
1-1/8	X 1-1/8	-1-1/8	-1-1/8	-1-1/8	-118/218	218N/E	-18	-102	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-1-3/16	-119/219	219N/E	-19	-103	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4, 206	—	-120S/220S	2E20N/E	-20R	—	-1-1/4S
1-1/4	X 1-1/4	-1-1/4	-1-1/4, 207	-1-1/4	-220	220N/E	-20	-104	-1-1/4
1-5/16	X 1-5/16	-1-5/16	-1-5/16	-1-5/16	—	221N/E	-21	-105	-1-5/16
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-1-3/8	-122/222	222N/E	-22	-106	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-123/223	223N/E	-23	-107	-1-7/16
1-1/2	X 1-1/2	-1-1/2	-1-1/2	-1-1/2	-224	224N/E	-24	-108	-1-1/2
1-5/8	X 1-5/8	-1-5/8	‡-1-5/8	-1-5/8	-226	226N/U	-26	-110	-1-5/8
1-11/16	X 1-11/16	-1-11/16	-1-11/16	-1-11/16	-227	227N/U	-27	-111	-1-11/16
1-3/4	X 1-3/4	-1-3/4	-1-3/4	-1-3/4	-228	228N/U	-28	-112	-1-3/4
1-7/8	X 1-7/8	—	—	-1-7/8	—	230N/U	-30	—	-1-7/8
1-15/16	X 1-15/16	-1-15/16	-1-15/16	-1-15/16	-231	231N/U	-31	-115	-1-15/16
2S	X 2S	—	-2, 210	-2S	—	2E32N/U	-32R	—	-2
2	X 2	-2	-2, 211	-2	-232	2323N	-32	-200	-2L
2-3/16	X 2-3/16	-2-3/16	-2-3/16	-2-3/16	-235	235N	-35	-203	-2-3/16
2-1/4	X 2-1/4	-2-1/4	-2-1/4, 212	-2-1/4	-236	236N	-36	-204	-2-1/4
2-7/16	X 2-7/16	-2-7/16	-2-7/16	-2-7/16	-239	239N	-39	-207	-2-7/16
2-15/16	X 2-15/16	—	-2-15/16	-2-15/16	-247	—	-47	-215	-2-15/16

① Relube – Eccentric Lock

② Relube – Setscrew Lock

③ Non-Relube – Eccentric Lock

④ VF4E and VF4S available in 100 and 200 Series

⑤ U or E Suffix on F3-W only

⑥ 3 thru 12 Prefix on F Series

⑦ Not all sizes available

⑧ 1-7/16 maximum shaft size

‡ Not dimensionally interchangeable

SERIES FB230, FB260 CAST IRON; FB230HW, FB260HW HUB ALLOY® 2-HOLE FLANGE BLOCKS

SHAFT SIZE	HUB CITY FB230① FB260② FB230HW①⑦ FB260HW②⑦	BOSTON T①⑥ ST②	DODGE SC2② VSC2②⑦ SXR2①⑦ SXV2①⑦	FAFNIR LCJT① RCJT① RCJCT② SCJT② TCJT① VCJT①	BROWNING MF2S② MF2E① VF2S②④ VF2E①④	PTC FX3-U② FX3-Y① FX3-W①⑤	SEALMASTER SFT② RFT②⑦ VFT③⑦	SKF FYPJ-P③⑧ FYTJ-S②⑦ FYTJ-X①⑦ FYT-FM③	MCGILL FC2-25③
1/2	X 1/2	- 1/2	- 1/2, 203	- 1/2	-108/208	2B08N/U	-8	-8	- 1/2
5/8	X 5/8	- 5/8	- 5/8, 203	- 5/8	-110/210	210N/U	-10	-10	- 5/8
3/4	X 3/4	- 3/4	- 3/4	- 3/4	-112/212	212N/U	-12	-12	- 3/4
7/8	X 7/8	- 7/8	- 7/8	- 7/8	-114/214	214N/U	-14	-14	- 7/8
15/16	X 15/16	- 15/16	- 15/16	- 15/16	-115/215	215N/U	-15	-15	- 15/16
1	X 1	-1	-1	-1	-116/216	216N/U	-16	-100	-1
1-1/8	X 1-1/8	-1-1/8	-1-1/8	-1-1/8	-118/218	218N/E	-18	-102	-1-1/8
1-3/16	X 1-3/16	-1-3/16	-1-3/16	-1-3/16	-119/219	219N/E	-19	-103	-1-3/16
1-1/4S	X 1-1/4S	-1-1/4S	-1-1/4, 206	—	-120S/220S	2E20N/E	-20R	—	-1-1/4S
1-1/4	X 1-1/4	-1-1/4	-1-1/4, 207	-1-1/4	-220	220N/E	-20	-104	-1-1/4
1-5/16	X 1-5/16	-1-5/16	-1-5/16	-1-5/16	—	221N/E	-21	-105	-1-5/16
1-3/8	X 1-3/8	-1-3/8	-1-3/8	-1-3/8	-122/222	222N/E	-22	-106	-1-3/8
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-123/223	223N/E	-23	-107	-1-7/16
1-1/2	X 1-1/2	—	-1-1/2	-1-1/2	-224	224N/E	-24	-108	-1-1/2
1-5/8	X 1-5/8	—	‡-1-5/8	-1-5/8	-226	226N/U	-26	-110	-1-5/8
1-11/16	X 1-11/16	—	-1-11/16	-1-11/16	-227	227N/U	-27	-111	-1-11/16
1-3/4	X 1-3/4	—	-1-3/4	-1-3/4	-228	228N/U	-28	-112	-1-3/4
1-7/8	X 1-7/8	—	—	-1-7/8	—	230N/U	-30	—	-1-7/8
1-15/16	X 1-15/16	—	-1-15/16	-1-15/16	-231	231N/U	-31	-115	-1-15/16
2S	X 2S	—	-2	-2S	—	2E32N/U	-32R	—	-2
2	X 2	—	—	-2	-232	232N	-32	-200	-2L
2-3/16	X 2-3/16	—	—	-2-3/16	-235	235N	-35	-203	-2-3/16
2-1/4	X 2-1/4	-2-1/4	—	—	—	—	—	—	—
2-7/16	X 2-7/16	-2-7/16	—	—	—	—	—	—	—

① Relube – Eccentric Lock

② Relube – Setscrew Lock

③ Non-Relube – Eccentric Lock

④ VF2E and VF2S available in 100 and 200 Series

⑤ U or E Suffix on F3-W only

⑥ 3 thru 7 Prefix on T Series

⑦ Not all sizes available

⑧ 1-7/16 maximum shaft size

‡ Not dimensionally interchangeable

INTERCHANGES ARE FOR COMPARISON PURPOSES; DIMENSIONS AND RATINGS MAY VARY.

INTERCHANGE COMPARISONS

SERIES WSTU220, WSTU250 HUB-ALLOY® WIDE SLOT TAKE-UP UNITS

SHAFT SIZE	HUB CITY		DODGE	FAFNIR	BROWNING		PTC	SEALMASTER		SKF	
	WSTU220①	WSTU250②	SC② SXR①⑦ SXV①⑦	RTU①	VTWE①	MTWS② VTWS②	TH3-U②	ST②	RT②	TB②	TBX①
3/4	X 3/4	X 3/4	- 3/4	- 3/4	-212	-212	212N	—	-12	-12	-12
7/8	X 7/8	X 7/8	-7/8	-7/8	-214	-214	214N	—	-14	-14	-14
15/16	X 15/16	X 15/16	-15/16	-15/16	-215	-215	215N	-15	-15	-15	-15
1	X 1	X 1	-1	-1	-216	-216	216N	-16	-16	-100	-100
1-1/8	X 1-1/8	X 1-1/8	-1-1/8	-1-1/8	-218	-218	218N	—	-18	-102	-102
1-3/16	X 1-3/16	X 1-3/16	-1-3/16	-1-3/16	-219	-219	219N	-19	-19	-103	-103
1-1/4S	X 1-1/4S	X 1-1/4S	-1-1/4, 206	—	—	—	2E20N	-20R	-20R	—	—
1-1/4	X 1-1/4	X 1-1/4	-1-1/4, 207	-1-1/4	-220	-220	220N	-20	-20	-104	-104
1-5/16	X 1-5/16	X 1-5/16	-1-5/16	-1-5/16	—	—	221N	—	—	-105	-105
1-3/8	X 1-3/8	X 1-3/8	-1-3/8	-1-3/8	-222	-222	222N	—	-22	-106	-106
1-7/16	X 1-7/16	X 1-7/16	-1-7/16	-1-7/16	-223	-223	223N	-23	-23	-107	-107
1-1/2	X 1-1/2	X 1-1/2	-1-1/2	-1-1/2	-224	-224	224N	-24	-24	-108	-108
1-5/8	X 1-5/8	X 1-5/8	-1-5/8	-1-5/8	-226	-226	226N	—	-26	-110	-110
1-11/16	X 1-11/16	X 1-11/16	-1-11/16	-1-11/16	-227	-227	227N	-27	-27	-111	-111
1-3/4	X 1-3/4	X 1-3/4	-1-3/4	-13/4	-228	-228	228N	-28	-28	-112	-112
1-7/8	X 1-7/8	X 1-7/8	—	-1-7/8	—	—	230N	—	-30	—	—
1-15/16	X 1-15/16	X 1-15/16	-1-15/16	-1-15/16	-231	-231	231N	-31	-31	-115	-115
2S	—	X 2S	-2, 210	—	—	—	2E32N	-32R	-32R	—	—
2	X 2	X 2	-2, 211	-2	-232	-232	232N	-32	-32	-200	-200
2-3/16	X 2-3/16	X 2-3/16	-2-3/16	-2-3/16	-235	-235	235N	-35	-35	-203	-203
2-1/4	X 2-1/4	X 2-1/4	-2-1/4, 212	-2-1/4	—	—	236N	-36	-36	-204	-204
2-7/16	X 2-7/16	X 2-7/16	-2-7/16	-2-7/16	-239	-239	239N	-39	-39	-207	-207

① RELUBE – ECCENTRIC LOCK ② RELUBE – SETSCREW LOCK

SERIES PB350 CAST IRON, PB350H HUB-ALLOY® PILLOW BLOCKS

SHAFT SIZE	HUB CITY	BOSTON	DODGE	FAFNIR	BROWNING	SEALMASTER	SKF	MCGILL
	PB350① PB350H①	MB①	SCM①	RAKH② LAKH②③	MPS① VPS①	MP① MRP①③	SYM-TM①	C-35①
1	X 1	—	-1	‡-1	‡-316	‡-16	—	-1
1-3/16	X 1-3/16	—	-1-3/16	-1-3/16	-319	-19	—	-1-3/16
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-323	-23	-1-7/16	-1-7/16
1-1/2	X 1-1/2	-1-1/2	‡-1-1/2	-1-1/2	-324	-24	-1-1/2	-1-1/2
1-11/16	X 1-11/16	-1-11/16	‡-1-11/16	-1-11/16	-327	-27	-1-11/16	‡-1-11/16
1-3/4	X 1-3/4	-1-3/4	‡-1-3/4	-1-3/4	-238	-28	-1-3/4	-1-3/4
1-15/16	X 1-15/16	-1-15/16	-1-15/16	-1-15/16	-331	-31	-1-15/16	-1-15/16
2	X2	-2	-2	‡-2	-332	-32	-2	-2
2-3/16	X 2-3/16	-2-3/16	-2-3/16	-2-3/16	-335	-35	-2-3/16	-2-3/16
2-1/4	X 2-1/4	-2-1/4	-2-1/4	‡-2-1/4	-336	-36	-2-1/4	-2-1/4
2-7/16	X 2-7/16	-2-7/16	-2-7/16	-2-7/16	-339	-39	-2-7/16	-2-7/16
2-1/2	X 2-1/2	-2-1/2	-2-1/2	—	-340	-40	-2-1/2	-2-1/2
2-11/16	X 2-11/16	-2-11/16	-2-11/16	-2-11/16	-343	-43	-2-11/16	-2-11/16
2-15/16	X 2-15/16	-2-15/16	-2-15/16	-2-15/16	-347	-47	-2-15/16	-2-15/16
3	X 3	-3	-3	—	-348	-48	-3	-3
3-7/16	X 3-7/16	-3-7/16	-3-7/16	—	-355	-55	-3-7/16	-3-7/16
3-1/2	X 3-1/2	-3-1/2	-3-1/2	—	-356	-56	-3-1/2	-3-1/2

① RELUBE – SETSCREW LOCK ② RELUBE – ECCENTRIC LOCK ③ NOT ALL SIZES AVAILABLE ‡ NOT DIMENSIONALLY INTERCHANGEABLE

INTERCHANGES ARE FOR COMPARISON PURPOSES, DIMENSIONS AND RATINGS MAY VARY.

M

INTERCHANGE COMPARISONS

SERIES FB350 CAST IRON; FB350H HUB-ALLOY® FOUR-HOLE FLANGE BLOCKS

SHAFT SIZE	HUB CITY FB350 ① FB350H ①	BOSTON MBF ①	DODGE SCM-4 ①	FAFNIR RCJO ②	BROWNING MF4S ① VF4S ①	SEALMASTER MSF ① MRF ①	SKF FLY-TM ①	MCGILL FC4-35 ①
1	X 1	–	-1	–	-316	-16	–	-1
1-3/16	X 1-3/16	–	-1-3/16	-1-3/16	-319	-19	–	-1-3/16
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-323	-23	-1-7/16	-1-7/16
1-1/2	X 1-1/2	-1-1/2	-1-1/2	-1-1/2	-324	-24	-1-1/2	-1-1/2
1-11/16	X 1-11/16	-1-11/16	-1-11/16	-1-11/16	-327	-27	-1-11/16	-1-11/16
1-3/4	X 1-3/4	-1-3/4	-1-3/4	–	-328	-28	-1-3/4	-1-3/4
1-15/16	X 1-15/16	-1-15/16	-1-15/16	-1-15/16	-331	-31	-1-15/16	-1-15/16
2	X 2	-2	-2	–	-332	-32	-2	-2
2-3/16	X 2-3/16	-2-3/16	-2-3/16	-2-3/16	-335	-35	-2-3/16	-2-3/16
2-1/4	X 2-1/4	-2-1/4	-2-1/4	–	-336	-36	-2-1/4	-2-1/4
2-7/16	X 2-7/16	-2-7/16	-2-7/16	-2-7/16	-339	-39	-2-7/16	-2-7/16
2-1/2	X 2-1/2	-2-1/2	-2-1/2	–	-340	-40	-2-1/2	-2-1/2
2-11/16	X 2-11/16	-2-11/16	-2-11/16	-2-11/16	-343	-43	-2-11/16	-2-11/16
2-15/16	X 2-15/16	-2-15/16	-2-15/16	-2-15/16	-347	-47	-2-15/16	-2-15/16
3	X 3	-3	-3	–	-348	-48	-3	-3
3-7/16	X 3-7/16	-3-7/16	-3-7/16	-3-7/16	-355	-55	-3-7/16	-3-7/16
3-1/2	X 3-1/2	-3-1/2	-3-1/2	–	-356	-56	-3-1/2	-3-1/2

① RELUBE – SETSCREW LOCK ② RELUBE – ECCENTRIC LOCK

SERIES FC350 CAST IRON FOUR-HOLE FLANGE CARTRIDGES

SHAFT SIZE	HUB CITY FC350 ①	BOSTON MBP ①	DODGE SCM ①	FAFNIR RFC ②	BROWNING MFCS ① VFCS ①	SEALMASTER MFC ① MRFC ①	MCGILL PFC4-35 ①
1-1/4	X 1-1/4	–	–	-1-1/4S	-320	-20	-1-1/4
1-7/16	X 1-7/16	-1-7/16	-1-7/16	-1-7/16	-323	-23	-1-7/16
1-1/2	X 1-1/2	-1-1/2	-1-1/2	-1-1/2	-234	-24	-1-1/2
1-11/16	X 1-11/16	-1-11/16	-1-11/16	-1-11/16	-327	-27	-1-11/16
1-3/4	X 1-3/4	-1-3/4	-1-3/4	-1-3/4	-328	-28	-1-3/4
1-15/16	X 15/16	-1-15/16	-1-15/16	-1-15/16	-331	-31	-1-15/16
2	X 2	-2	-2	-2	-332	-32	-2
2-3/16	X 2-3/16	-2-3/16	-2-3/16	-2-3/16	-335	-35	-2-3/16
2-1/4	X 2-1/4	-2-1/4	-2-1/4	–	-336	-36	-2-1/4
2-7/16	X 2-7/16	-2-7/16	-2-7/16	–	-339	-39	-2-7/16
2-1/2	X 2-1/2	-2-1/2	-2-1/2	–	-340	-40	-2-1/2
2-11/16	X 2-11/16	-2-11/16	–	–	-343	-43	-2-11/16
2-15/16	X 2-15/16	-2-15/16	-2-15/16	–	-347	-47	-2-15/16
3	X 3	-3	-3	–	-348	-48	-3
3-7/16	X 3-7/16	-3-7/16	-3-7/16	–	-355	-55	-3-7/16
3-1/2	X 3-1/2	-3-1/2	-3-1/2	–	-356	-56	-3-1/2

① RELUBE – SETSCREW LOCK ② RELUBE – ECCENTRIC LOCK

INTERCHANGES ARE FOR COMPARISON PURPOSES, DIMENSIONS AND RATINGS MAY VARY.

DURALINE™ BEARINGS

DuraLine™ Features N-2
Pillow Blocks ..... N-3 to N-6
Flange Blocks ..... N-7 to N-10
Flange Bracket Bearings N-11
Tapped Based Pillow Blocks N-12
Medium Duty Bearings N-13
Load Ratings N-14

N

DURALINE™ MOUNTED BEARINGS

FEATURES

- Reliable Performance
- Economical Durability
- Bore Sizes Up to 3-1/2″
- Cast Iron Pillow Blocks
- Cast Iron and Ductile Iron Flange Blocks
- Cast Iron Flange Brackets
- Normal Duty and Medium Duty Sizes
- Setscrew Lock and Eccentric Lock Inserts
- Wide and Narrow Inner Race Inserts
- Self-Aligning Replacement Bearings
- Pre-Lubricated with Lithium Grease
- Steel Retainers
- Anti-rotation Pins
- Nitrile Rubber Seals with Steel Trash Guards
- Precision Bored Housings

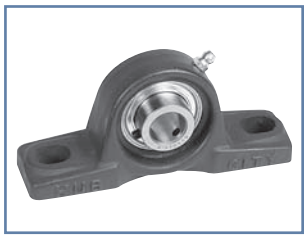


For Additional Mounted Bearing Choices See IndustriaLine Section M

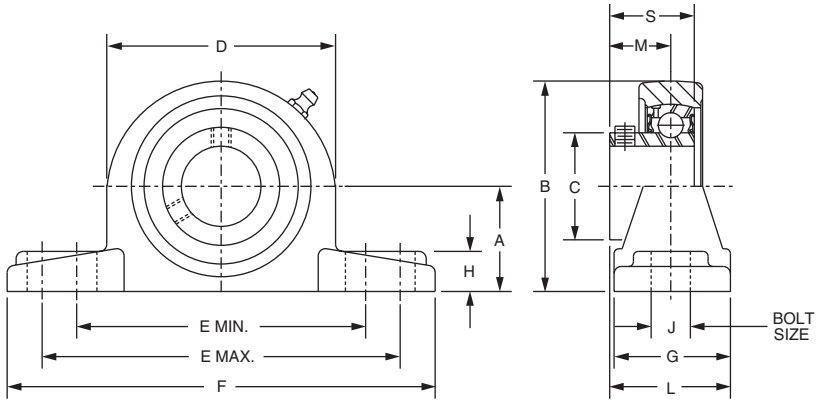
PILLOW BLOCKS
PB250UR, PB251UR

FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings



200 SERIES 2 BOLT PILLOW BLOCK – SETSCREW LOCK



200 SERIES – 2 BOLT PILLOW BLOCKS – CAST IRON – SETSCREW LOCK – RELUBE TYPE														
PB250UR (FOR LOW SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-1/16	2-1/8	0.921	2-1/4	3-3/8	3-5/8	4-3/4	1-3/8	33/64	3/8	1-5/16	0.630	0.866	1.2
3/4	1-1/4	2-1/2	1.142	2-5/8	3-3/4	3-31/32	5-1/32	1-1/2	35/64	3/8	1-29/64	0.709	0.984	1.8
7/8, 1	1-5/16	2-5/8	1.339	2-25/32	4	4-1/4	5-1/2	1-9/16	19/32	3/8	1-35/64	0.768	1.063	2.3
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.587	3-9/32	4-9/16	4-31/32	6-5/16	1-23/32	43/64	1/2	1-47/64	0.866	1.181	2.8
1-1/4, 1-3/8, 1-7/16	1-13/16	3-19/32	1.890	3-27/32	4-13/16	5-3/16	6-9/16	1-7/8	45/64	1/2	1-7/8	0.925	1.260	3.6
1-1/2,	1-15/16	3-27/32	2.087	4-3/16	5-5/16	5-11/16	7-1/8	2-1/16	3/4	1/2	2	0.984	1.339	4.5
1-5/8, 1-11/16, 1-3/4	2-1/16	4-1/8	2.252	4-17/32	5-9/16	5-15/16	7-7/16	2-1/8	25/32	1/2	2-9/32	1.220	1.622	5.1
1-7/8, 1-15/16, 2S	2-3/16	4-3/8	2.433	4-13/16	6-1/16	6-11/16	8-1/8	2-1/4	53/64	5/8	2-13/32	1.283	1.713	6
2, 2-3/16	2-7/16	4-27/32	2.717	5-5/16	6-7/8	7-3/8	9-1/8	2-3/8	29/32	5/8	2-1/2	1.319	1.783	8.2
2-1/4, 2-7/16	2-11/16	5-11/32	2.949	5-13/16	7-9/32	7-15/16	9-1/2	2-17/32	63/64	5/8	2-25/32	1.528	2.114	10.9
2-15/16	3-1/4	6-3/8	3.602	6-3/4	8-3/8	8-11/16	10-13/16	2-15/16	1-1/8	3/4	3-63/64	1.535	2.106	16.5

PB251UR (FOR HIGH SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-3/16	2-1/4	0.921	2-3/8	3-5/8	3-15/16	4-15/16	1-1/4	33/64	3/8	1-17/64	0.630	0.866	1.3
3/4	1-5/16	2-1/2	1.142	2-19/32	3-21/32	3-29/32	5	1-15/32	35/64	3/8	1-7/16	0.709	0.984	1.9
7/8, 1	1-7/16	2-3/4	1.339	2-7/8	3-29/32	4-3/8	5-1/2	1-1/2	19/32	3/8	1-33/64	0.768	1.063	2.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-7/32	1.587	3-3/8	4-9/16	4-31/32	6-5/16	1-23/32	5/8	1/2	1-47/64	0.866	1.181	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-5/8	1.890	3-3/4	4-13/16	5-1/8	6-9/16	1-7/8	43/64	1/2	1-7/8	0.925	1.260	4
1-1/2,	2	3-15/16	2.087	4-1/8	5-1/8	5-19/32	7-3/32	2-1/16	45/64	1/2	2	0.984	1.339	4.6
1-5/8, 1-11/16, 1-3/4	2-1/8	4-5/32	2.252	4-13/32	5-1/2	5-31/32	7-7/16	2-1/8	25/32	1/2	2-9/32	1.220	1.622	5.2
1-7/8, 1-15/16, 2S	2-1/4	4-13/32	2.433	4-11/16	6-5/32	6-11/16	8-1/8	2-1/4	53/64	5/8	2-13/32	1.283	1.713	6.2
2, 2-3/16	2-1/2	4-29/32	2.717	5-3/32	6-21/32	6-7/8	8-17/32	2-3/8	55/64	5/8	2-1/2	1.319	1.783	8.4
2-1/4, 2-7/16	2-3/4	5-13/32	2.949	5-21/32	7-3/32	7-15/16	9-1/2	2-19/32	61/64	5/8	2-53/64	1.528	2.114	11.1

FOR LOAD RATINGS, SEE PAGE N-14

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250R, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220R, FOR 300 SERIES SETSCREW LOCK USE B350R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: PB250UR X 1-7/16

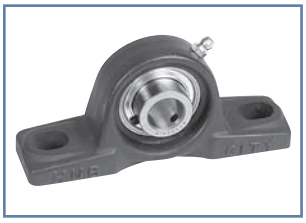
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

PILLOW BLOCKS - WIDE INNER RACE

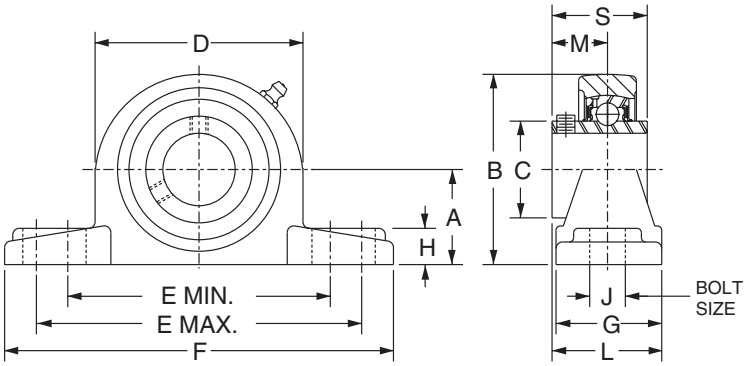
PB250DRW, PB251DRW

FEATURES

- Ductile iron housings
- Higher strength and impact resistance for high shock loads
- Suitable to replace gray iron housed bearings
- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers and anti-rotation pins
- Nitrile rubber seals with steel flingers
- Precision bored housings



200 SERIES 2 BOLT PILLOW BLOCK
SETSCREW LOCK – WIDE INNER RING



200 SERIES - 2 BOLT PILLOW BLOCKS - DUCTILE IRON - SETSCREW LOCK - RELUBE TYPE - WIDE INNER RING PB250DRW (FOR LOW SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-1/16	2-1/8	0.969	2-1/4	3-3/8	3-5/8	4-3/4	1-3/8	33/64	3/8	1-5/16	0.626	1.079	1.2
3/4	1-1/4	2-1/2	1.142	2-5/8	3-3/4	3-31/32	5-1/32	1-1/2	35/64	3/8	1-15/32	0.720	1.220	1.9
7/8, 1	1-5/16	2-5/8	1.339	2-25/32	4	4-1/4	5-1/2	1-9/16	19/32	3/8	1-9/16	0.776	1.339	2.4
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.587	3-9/32	4-9/16	4-31/32	6-5/16	1-23/32	43/64	1/2	1-3/4	0.874	1.500	3
1-1/4, 1-3/8, 1-7/16	1-13/16	3-19/32	1.843	3-27/32	4-13/16	5-3/16	6-9/16	1-7/8	45/64	1/2	1-15/16	1.000	1.689	3.8
1-1/2,	1-15/16	3-27/32	2.063	4-3/16	5-5/16	5-11/16	7-1/8	2-1/16	3/4	1/2	2-7/32	1.189	1.937	4.8
1-11/16, 1-3/4	2-1/16	4-1/8	2.260	4-17/32	5-9/16	5-15/16	7-7/16	2-1/8	25/32	1/2	2-1/4	1.189	1.937	5.4
1-15/16, 2S	2-3/16	4-3/8	2.433	4-13/16	6-1/16	6-11/16	8-1/8	2-1/4	53/64	5/8	2-13/32	1.283	2.031	6.5
2, 2-3/16	2-7/16	4-27/32	2.705	5-5/16	6-7/8	7-3/8	9-1/8	2-3/8	29/32	5/8	2-1/2	1.315	2.189	8.7
2-7/16	2-11/16	5-11/32	2.992	5-13/16	7-9/32	7-15/16	9-1/2	2-17/32	63/64	5/8	2-53/64	1.563	2.563	11.4
2-15/16	3-1/4	6-3/8	3.602	6-3/4	8-3/8	8-11/16	10-13/16	2-15/16	1-1/8	3/4	3-7/32	1.752	3.062	16.5

PB251DRW (FOR HIGH SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-3/16	2-7/16	0.969	2-1/2	3-35/64	4-1/64	5	1-1/2	19/32	3/8	1-3/8	0.626	1.079	1.3
3/4	1-5/16	2-9/16	1.142	2-1/2	3-25/32	4-1/64	5	1-1/2	19/32	3/8	1-15/32	0.720	1.220	2
7/8, 1	1-7/16	2-3/4	1.339	2-27/32	3-29/32	4-3/8	5-1/2	1-1/2	5/8	3/8	1-17/32	0.776	1.339	2.5
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-9/32	1.587	3-5/16	4-39/64	4-59/64	6-1/2	1-7/8	23/32	5/8	1-13/16	0.874	1.500	3.1
1-1/4, 1-3/8, 1-7/16	1-7/8	3-5/8	1.843	3-5/8	4-13/16	5-1/8	6-9/16	1-7/8	3/4	5/8	1-15/16	1.000	1.689	4.2
1-1/2	2	3-7/8	2.063	4-1/64	5-13/64	5-33/64	7-1/4	2-1/8	3/4	5/8	2-1/4	1.189	1.937	4.9
1-11/16, 1-3/4	2-1/8	4-3/16	2.260	4-7/32	5-19/32	5-29/32	7-31/64	2-1/8	25/32	5/8	2-1/4	1.189	1.937	5.5
1-15/16, 2S	2-1/4	4-13/32	2.433	4-37/64	6-1/16	6-11/16	8-1/8	2-3/8	55/64	3/4	2-15/32	1.283	2.031	6.7
2, 2-3/16	2-1/2	4-31/32	2.705	5	6-17/32	6-15/16	8-5/8	2-3/8	55/64	3/4	2-1/2	1.315	2.189	8.9
2-7/16	2-3/4	5-13/32	2.992	5-5/8	7-1/16	7-15/16	9-1/2	2-3/4	63/64	3/4	2-15/16	1.563	2.563	11.6
2-15/16	3-5/16	6-7/16	3.602	6-3/4	8-3/8	8-11/16	10-13/16	2-15/16	1-3/16	3/4	3-7/32	1.752	3.062	16.7

FOR LOAD RATINGS, SEE PAGE N-14

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250RW, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220RW

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: PB250DRW X 1-7/16

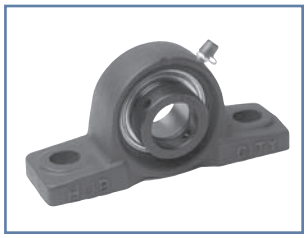
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CALL: (605) 225-0360 • FAX: (605) 225-0567

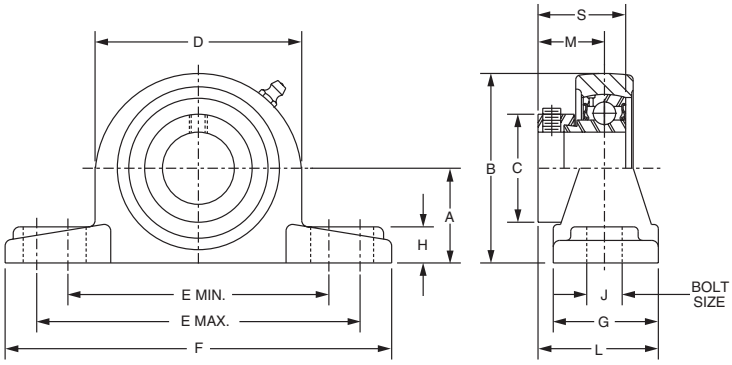
PILLOW BLOCKS
PB220UR, PB221UR

FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings



200 SERIES 2 BOLT PILLOW BLOCK – ECCENTRIC LOCK



N

200 SERIES – 2 BOLT PILLOW BLOCKS – CAST IRON – ECCENTRIC LOCK – RELUBE TYPE														
PB220UR (FOR LOW SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-1/16	2-1/8	1.126	2-1/4	3-3/8	3-5/8	4-3/4	1-3/8	33/64	3/8	1-9/16	0.870	1.126	1.1
3/4	1-1/4	2-1/2	1.311	2-5/8	3-3/4	3-31/32	5-1/32	1-1/2	35/64	3/8	1-43/64	0.921	1.217	1.8
7/8, 1	1-5/16	2-5/8	1.500	2-13/16	4	4-1/4	5-1/2	1-9/16	19/32	3/8	1-45/64	0.921	1.217	2.3
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.752	3-9/32	4-9/16	4-31/32	6-5/16	1-23/32	43/64	1/2	1-59/64	1.051	1.406	2.8
1-1/4, 1-3/8, 1-7/16	1-13/16	3-19/32	2.189	3-27/32	4-13/16	5-3/16	6-9/16	1-7/8	45/64	1/2	2-7/64	1.157	1.531	3.7
1-1/2,	1-15/16	3-27/32	2.374	4-3/16	5-5/16	5-11/16	7-1/8	2-1/16	3/4	1/2	2-5/16	1.287	1.720	4.2
1-5/8, 1-11/16, 1-3/4	2-1/16	4-1/8	2.500	4-17/32	5-9/16	5-15/16	7-7/16	2-1/8	25/32	1/2	2-11/32	1.283	1.717	4.8
1-7/8, 1-15/16, 2S	2-3/16	4-3/8	2.752	4-13/16	6-1/16	6-11/16	8-1/8	2-1/4	53/64	5/8	2-13/32	1.283	1.717	5.9
2, 2-3/16	2-7/16	4-27/32	3.000	5-5/16	6-7/8	7-3/8	9-1/8	2-3/8	29/32	5/8	2-39/64	1.433	1.906	8.3
2-1/4, 2-7/16	2-11/16	5-11/32	3.315	5-13/16	7-9/32	7-15/16	9-1/2	2-17/32	63/64	5/8	2-47/64	1.469	1.941	10.9

PB221UR (FOR HIGH SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-3/16	2-1/4	1.126	2-3/8	3-5/8	3-15/16	4-15/16	1-1/4	33/64	3/8	1-1/2	0.870	1.126	1.2
3/4	1-5/16	2-1/2	1.311	2-19/32	3-21/32	3-29/32	5	1-15/32	35/64	3/8	1-21/32	0.921	1.217	1.9
7/8, 1	1-7/16	2-3/4	1.500	2-7/8	3-29/32	4-3/8	5-1/2	1-1/2	19/32	3/8	1-43/64	0.921	1.217	2.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-7/32	1.752	3-3/8	4-9/16	4-31/32	6-5/16	1-23/32	5/8	1/2	1-59/64	1.051	1.406	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-5/8	2.189	3-3/4	4-13/16	5-1/8	6-9/16	1-7/8	43/64	1/2	2-7/64	1.157	1.531	4.1
1-1/2,	2	3-15/16	2.374	4-1/8	5-1/8	5-19/32	7-3/32	2-1/16	45/64	1/2	2-5/16	1.287	1.720	4.3
1-5/8, 1-11/16, 1-3/4	2-1/8	4-5/32	2.500	4-13/32	5-1/2	5-31/32	7-7/16	2-1/8	25/32	1/2	2-11/32	1.283	1.717	4.9
1-7/8, 1-15/16, 2S	2-1/4	4-13/32	2.752	4-11/16	6-5/32	6-11/16	8-1/8	2-1/4	53/64	5/8	2-13/32	1.283	1.717	6.1
2, 2-3/16	2-1/2	4-29/32	3.000	5-3/32	6-21/32	6-7/8	8-17/32	2-3/8	55/64	5/8	2-39/64	1.433	1.906	9
2-1/4, 2-7/16	2-3/4	5-13/32	3.315	5-21/32	7-3/32	7-15/16	9-1/2	2-19/32	61/64	5/8	2-49/64	1.469	1.941	11.1

FOR LOAD RATINGS, SEE PAGE N-14

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250R, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220R, FOR 300 SERIES SETSCREW LOCK USE B350R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: PB220UR X 1-7/16

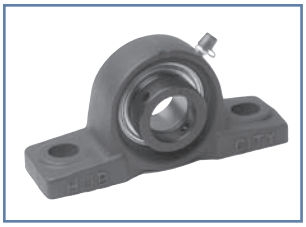
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

PILLOW BLOCKS - WIDE INNER RACE

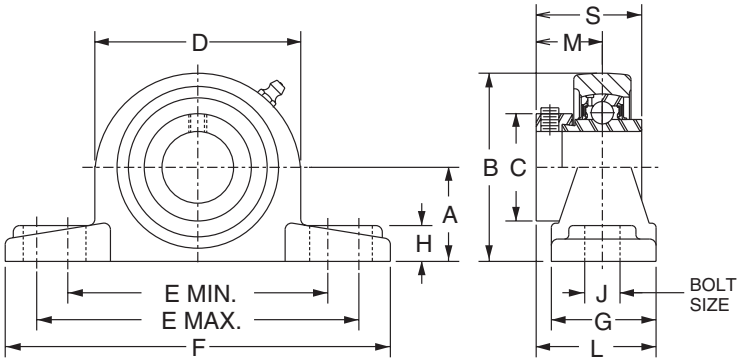
PB220DRW, PB221DRW

FEATURES

- Ductile iron housings
- Higher strength and impact resistance for high shock loads
- Suitable to replace gray iron housed bearings
- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel flingers
- Precision bored housings



200 SERIES 2 BOLT PILLOW BLOCK
ECCENTRIC LOCK – WIDE INNER RING



200 SERIES - 2 BOLT PILLOW BLOCKS - DUCTILE IRON - ECCENTRIC LOCK - RELUBE TYPE - WIDE INNER RING PB220DRW (FOR LOW SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-1/16	2-1/8	1.126	2-1/4	3-3/8	3-5/8	4-3/4	1-3/8	33/64	3/8	1-39/64	0.921	1.468	1.1
3/4	1-1/4	2-1/2	1.311	2-5/8	3-3/4	3-31/32	5-1/32	1-1/2	35/64	3/8	1-51/64	1.044	1.720	1.9
7/8, 1	1-5/16	2-5/8	1.500	2-13/16	4	4-1/4	5-1/2	1-9/16	19/32	3/8	1-27/32	1.059	1.906	2.4
1-1/8, 1-3/16, 1-1/4S	1-9/16	3-1/8	1.752	3-9/32	4-9/16	4-31/32	6-5/16	1-23/32	43/64	1/2	2-1/16	1.185	1.902	3
1-1/4, 1-3/8, 1-7/16	1-13/16	3-19/32	2.189	3-27/32	4-13/16	5-3/16	6-9/16	1-7/8	45/64	1/2	2-7/32	1.272	2.012	3.9
1-1/2	1-15/16	3-27/32	2.374	4-3/16	5-5/16	5-11/16	7-1/8	2-1/16	3/4	1/2	2-13/32	1.374	2.216	4.5
1-11/16, 1-3/4	2-1/16	4-1/8	2.500	4-17/32	5-9/16	5-15/16	7-7/16	2-1/8	25/32	1/2	2-7/16	1.374	2.216	5.1
1-15/16, 2S	2-3/16	4-3/8	2.752	4-13/16	6-1/16	6-11/16	8-1/8	2-1/4	53/64	5/8	2-5/8	1.500	2.469	6.4
2, 2-3/16	2-7/16	4-27/32	3.000	5-5/16	6-7/8	7-3/8	9-1/8	2-3/8	29/32	5/8	2-29/32	1.716	2.811	8.8
2-7/16	2-11/16	5-11/32	3.315	5-13/16	7-9/32	7-15/16	9-1/2	2-17/32	63/64	5/8	3-7/64	1.843	3.063	11.4

PB221DRW (FOR HIGH SHAFT HEIGHTS)														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-3/16	2-29/64	1.126	2-1/2	3-35/64	4-1/64	5	1-1/2	19/32	3/8	1-21/32	0.921	1.468	1.2
3/4	1-5/16	2-9/16	1.311	2-1/2	3-25/32	4-1/64	5	1-1/2	19/32	3/8	1-51/64	1.047	1.720	2
7/8, 1	1-7/16	2-3/4	1.500	2-27/32	3-29/32	4-3/8	5-1/2	1-1/2	5/8	3/8	1-13/16	1.059	1.744	2.5
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-9/32	1.752	3-5/16	4-39/64	4-59/64	6-1/2	1-7/8	23/32	5/8	2-1/8	1.185	1.906	3.1
1-1/4, 1-3/8, 1-7/16	1-7/8	3-5/8	2.189	3-3/4	4-13/16	5-1/8	6-9/16	1-7/8	3/4	5/8	2-7/32	1.272	2.012	4.3
1-1/2	2	3-25/64	2.374	4-1/64	5-13/64	5-33/64	7-1/4	2-1/8	3/4	5/8	2-7/16	1.374	2.216	4.6
1-11/16, 1-3/4	2-1/8	4-3/16	2.500	4-7/32	5-19/32	5-29/32	7-31/64	2-1/8	25/32	5/8	2-7/16	1.374	2.216	5.2
1-15/16, 2S	2-1/4	4-13/32	2.752	4-37/64	6-1/16	6-11/16	8-1/8	2-3/8	55/64	3/4	2-11/16	1.500	2.469	6.6
2, 2-3/16	2-1/2	4-31/32	3.000	5	6-17/32	6-59/64	8-5/8	2-3/8	55/64	3/4	2-29/32	1.716	2.811	9.5
2-7/16	2-3/4	5-13/32	3.315	5-5/8	7-1/16	7-15/16	9-1/2	2-3/4	63/64	3/4	3-15/64	1.843	3.059	11.5

FOR LOAD RATINGS, SEE PAGE N-14

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250RW, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220RW

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: PB220DRW X 1-7/16

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

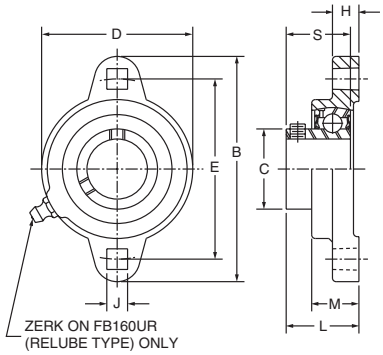
FLANGE BLOCKS

FB110UR, FB160UR, FB260UR, FB230UR

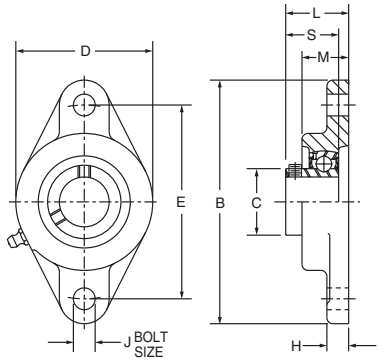
FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- ❖ Precision bored housings

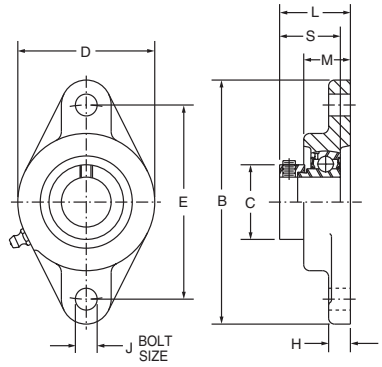
100 SERIES 2 BOLT FLANGE BLOCK
SETSCREW LOCK



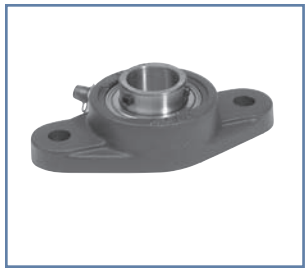
200 SERIES 2 BOLT FLANGE BLOCK
SETSCREW LOCK



200 SERIES 2 BOLT FLANGE BLOCK
ECCENTRIC LOCK







100 SERIES – 2 BOLT FLANGE BLOCKS – DUCTILE IRON – SETSCREW LOCK										
FB110UR (NON-RELUBE) & FB160UR (RELUBE)										
SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-3/16	0.921	2-7/32	2-1/2	23/64	11/32	63/64	45/64	0.866	0.6
3/4	3-19/32	1.142	2-1/2	2-13/16	13/32	11/32	1-7/64	25/32	0.984	0.8
7/8, 1	3-25/32	1.339	2-23/32	3	13/32	11/32	1-3/16	3/4	1.063	0.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.587	3-1/8	3-9/16	29/64	13/32	1-5/16	55/64	1.181	1.1
1-1/4, 1-3/8, 1-7/16	4-13/16	1.890	3-1/2	3-15/16	1/2	13/32	1-27/64	15/16	1.260	1.5

200 SERIES – 2 BOLT FLANGE BLOCKS – CAST IRON – SETSCREW LOCK										
FB260UR										
SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-29/32	0.921	2-1/4	3	7/16	3/8	1-7/32	1	0.866	0.8
3/4	4-7/16	1.142	2-3/8	3-17/32	7/16	3/8	1-19/64	1	0.984	1
7/8, 1	5-1/8	1.339	2-11/16	3-57/64	33/64	7/16	1-13/32	1-1/16	1.063	1.4
1-1/8, 1-3/16, 1-1/4S	5-13/16	1.587	3-5/32	4-19/32	33/64	7/16	1-37/64	1-7/32	1.181	1.9
1-1/4, 1-3/8, 1-7/16	6-11/32	1.890	3-17/32	5-1/8	35/64	1/2	1-43/64	1-11/32	1.260	2.9
1-1/2	6-7/8	2.087	3-15/16	5-21/32	35/64	1/2	1-13/16	1-27/64	1.339	3.9
1-5/8, 1-11/16, 1-3/4	7-13/32	2.252	4-1/4	5-53/64	5/8	1/2	2-3/32	1-1/2	1.622	4.5
1-7/8, 1-15/16, 2S	7-3/4	2.433	4-17/32	6-3/16	5/8	1/2	2-5/32	1-37/64	1.713	4.9
2, 2-3/16	8-13/16	2.717	5-1/8	7-1/4	45/64	5/8	2-5/16	1-11/16	1.783	6.5

200 SERIES – 2 BOLT FLANGE BLOCKS – CAST IRON – ECCENTRIC LOCK										
FB230UR										
SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-29/32	1.126	2-1/4	3	7/16	3/8	1-15/32	1	1.126	1
3/4	4-7/16	1.311	2-3/8	3-17/32	7/16	3/8	1-33/64	1	1.217	1.3
7/8, 1	5-1/8	1.500	2-11/16	3-57/64	33/64	7/16	1-35/64	1-1/16	1.217	1.9
1-1/8, 1-3/16, 1-1/4S	5-13/16	1.752	3-5/32	4-19/32	33/64	7/16	1-49/64	1-7/32	1.406	2.7
1-1/4, 1-3/8, 1-7/16	6-11/32	2.189	3-17/32	5-1/8	35/64	1/2	1-29/32	1-11/32	1.531	3.1
1-1/2	6-7/8	2.374	3-15/16	5-21/32	35/64	1/2	2-1/8	1-27/64	1.720	3.6
1-5/8, 1-11/16, 1-3/4	7-13/32	2.500	4-1/4	5-53/64	5/8	1/2	2-5/32	1-1/2	1.717	4.3
1-7/8, 1-15/16, 2S	7-3/4	2.752	4-17/32	6-3/16	5/8	1/2	2-5/32	1-37/64	1.717	5.3
2, 2-3/16	8-13/16	3.000	5-1/8	7-1/4	45/64	5/8	2-27/64	1-11/16	1.906	7.6

FOR LOAD RATINGS, SEE PAGE N-14

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250R, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220R, FOR 300 SERIES SETSCREW LOCK USE B350R

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: FB260UR X 1-7/16

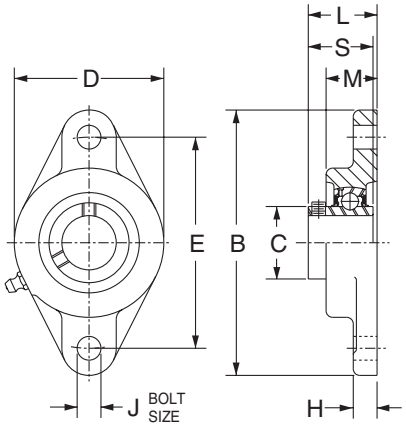
FLANGE BLOCKS - WIDE INNER RACE

FB260DRW, FB230DRW

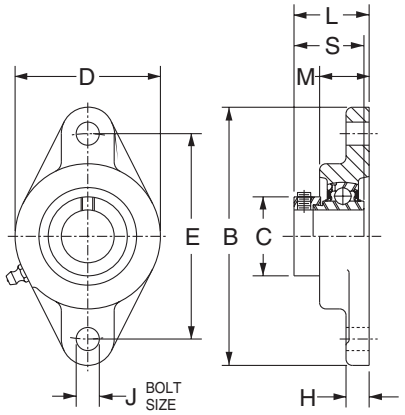
FEATURES

- Ductile iron housings
- Higher strength and impact resistance for high shock loads
- Suitable to replace gray iron housed bearings
- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel flingers
- Precision bored housings

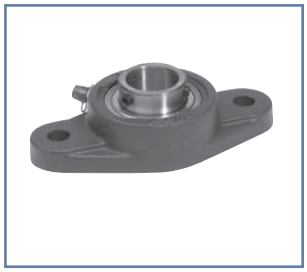
200 SERIES 2 BOLT FLANGE BLOCK
SETSCREW LOCK – WIDE INNER RING



200 SERIES 2 BOLT FLANGE BLOCK
ECCENTRIC LOCK – WIDE INNER RING



200 SERIES - 2 BOLT FLANGE BLOCKS - DUCTILE - SETSCREW LOCK - WIDE INNER RING										
FB260DRW										
SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-29/32	0.969	2-1/4	3	7/16	3/8	1-7/32	1	1.079	0.8
3/4	4-7/16	1.142	2-13/32	3-17/32	19/32	3/8	1-15/32	1-5/32	1.220	1.1
7/8, 1	4-27/32	1.339	2-3/4	3-57/64	19/32	7/16	1-17/32	1-3/16	1.339	1.5
1-1/8, 1-3/16, 1-1/4S	5-19/32	1.587	3-7/32	4-19/32	5/8	7/16	1-21/32	1-9/32	1.500	2.1
1-1/4, 1-3/8, 1-7/16	6-7/32	1.843	3-11/16	5-1/8	43/64	1/2	1-27/32	1-7/16	1.689	3.1
1-1/2	6-25/32	2.063	4-1/16	5-21/32	43/64	1/2	2-1/8	1-17/32	1.937	4.2
1-11/16, 1-3/4	7-3/32	2.260	4-1/4	5-53/64	23/32	1/2	2-1/8	1-9/16	1.937	4.8
1-15/16, 2S	7-1/2	2.433	4-1/2	6-3/16	25/32	1/2	2-25/64	1-25/32	2.031	5.2
2, 2-3/16	8-9/16	2.705	5-1/32	7-1/4	53/64	5/8	2-17/32	1-15/16	2.189	7
2-7/16	9-15/16	2.949	5-7/16	7-61/64	53/64	5/8	2-57/64	2-5/64	2-9/16	10



200 SERIES - 2 BOLT FLANGE BLOCKS - DUCTILE - ECCENTRIC LOCK - WIDE INNER RING										
FB230DRW										
SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-29/32	1.126	2-1/4	3	7/16	3/8	1-33/64	1	1.469	1
3/4	4-7/16	1.311	2-13/32	3-17/32	19/32	3/8	1-51/64	1-5/32	1.720	1.4
7/8, 1	4-27/32	1.500	2-3/4	3-57/64	19/32	7/16	1-13/16	1-3/16	1.744	2
1-1/8, 1-3/16, 1-1/4S	5-19/32	1.752	3-7/32	4-19/32	5/8	7/16	1-31/32	1-9/32	1.906	2.9
1-1/4, 1-3/8, 1-7/16	6-7/32	2.189	3-11/16	5-1/8	43/64	1/2	2-3/32	1-7/16	2.012	3.3
1-1/2	6-25/32	2.374	4-1/16	5-21/32	43/64	1/2	2-5/16	1-17/32	2.217	3.9
1-11/16, 1-3/4	7-3/32	2.500	4-1/4	5-53/64	23/32	1/2	2-5/16	1-9/16	2.217	4.6
1-15/16, 2S	7-1/2	2.752	4-1/2	6-3/16	25/32	1/2	2-39/64	1-25/32	2.469	5.8
2, 2-3/16	8-9/16	3.000	5-1/32	7-1/4	53/64	5/8	2-15/16	1-15/16	2.811	8.1



DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250RW, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220RW

FOR LOAD RATINGS, SEE PAGE N-14

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: FB260URW X 1-7/16

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

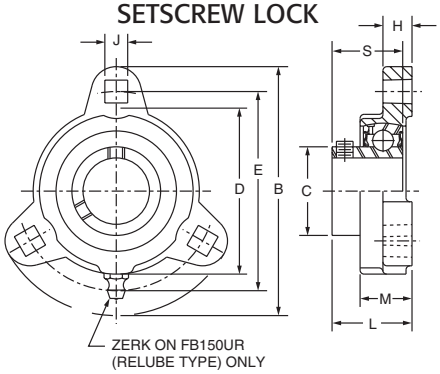
CALL: (605) 225-0360 • FAX: (605) 225-0567

FLANGE BLOCKS
FB100UR, FB150UR, FB250UR, FB220UR

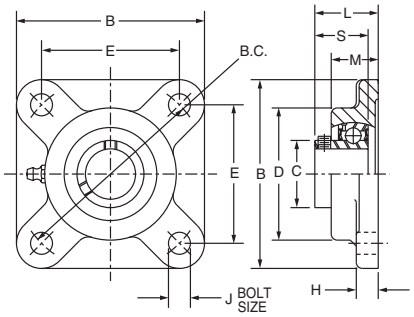
FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings

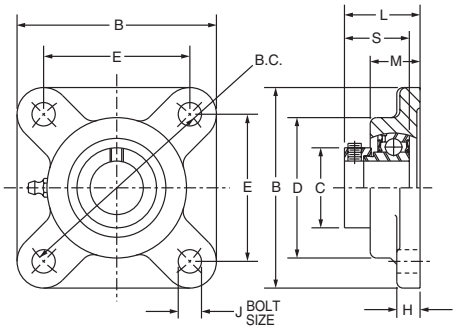
100 SERIES 3 BOLT FLANGE BLOCK SETSCREW LOCK



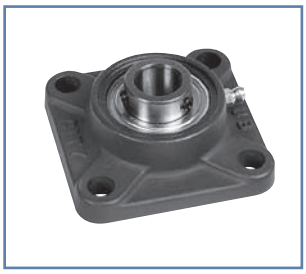
200 SERIES 4 BOLT FLANGE BLOCK SETSCREW LOCK



200 SERIES 4 BOLT FLANGE BLOCK ECCENTRIC LOCK









DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250R, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220R,FOR 300 SERIES SETSCREW LOCK USE B350R

100 SERIES – 3 BOLT FLANGE BLOCKS – DUCTILE IRON – SETSCREW LOCK
FB100UR (NON-RELUBE) & FB150UR (RELUBE)

SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-3/16	0.921	1-15/16	2-1/2	27/64	9/32	1-3/64	3/4	0.866	0.6
3/4	3-9/16	1.142	2-1/4	2-13/16	7/16	11/32	1-9/64	25/32	0.984	0.8
7/8, 1	3-3/4	1.339	2-3/4	3	13/32	11/32	1-11/64	25/32	1.063	0.8
1-1/8, 1-3/16, 1-1/4S	4-7/16	1.587	3-1/32	3-9/16	15/32	13/32	1-11/32	55/64	1.181	1.1
1-1/4, 1-3/8, 1-7/16	4-13/16	1.890	3-1/2	3-15/16	1/2	13/32	1-27/64	15/16	1.260	1.7

200 SERIES – 4 BOLT FLANGE BLOCKS – CAST IRON – SETSCREW LOCK
FB250UR

SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3	3	0.921	2-3/32	2-1/8	7/16	3/8	1-7/32	1	0.866	1.0
3/4	3-3/8	3-5/8	1.142	2-3/8	2-1/2	7/16	3/8	1-19/64	1	0.984	1.4
7/8, 1	3-3/4	3-57/64	1.339	2-13/16	2-3/4	1/2	7/16	1-25/64	1-1/16	1.063	1.8
1-1/8, 1-3/16, 1-1/4S	4-1/4	4-19/32	1.587	3-3/16	3-1/4	1/2	7/16	1-37/64	1-7/32	1.181	2.6
1-1/4, 1-3/8, 1-7/16	4-5/8	5-1/8	1.890	3-5/8	3-5/8	19/32	1/2	1-43/64	1-11/32	1.260	4.2
1-1/2	5-1/8	5-43/64	2.087	4-3/32	4	19/32	1/2	1-13/16	1-27/64	1.339	5.3
1-5/8, 1-11/16, 1-3/4	5-3/8	5-27/32	2.252	4-1/4	4-1/8	5/8	1/2	2-3/32	1-1/2	1.622	5.7
1-7/8, 1-15/16, 2S	5-5/8	6-3/16	2.433	4-1/2	4-3/8	5/8	1/2	2-5/32	1-37/64	1.713	6.6
2, 2-3/16	6-3/8	7-1/4	2.717	4-15/16	5-1/8	23/32	5/8	2-5/16	1-11/16	1.783	9.0
2-1/4, 2-7/16	6-29/32	7-31/32	2.949	5-5/16	5-5/8	23/32	5/8	2-43/64	1-57/64	2.114	11.9

200 SERIES – 4 BOLT FLANGE BLOCKS – CAST IRON – ECCENTRIC LOCK
FB220UR

SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3	3	1.126	2-3/32	2-1/8	7/16	3/8	1-15/32	1	1.126	1.0
3/4	3-3/8	3-17/32	1.311	2-3/8	2-1/2	7/16	3/8	1-1/2	1	1.217	1.4
7/8, 1	3-3/4	3-57/64	1.500	2-13/16	2-3/4	1/2	7/16	1-35/64	1-1/16	1.217	1.8
1-1/8, 1-3/16, 1-1/4S	4-1/4	4-19/32	1.752	3-3/16	3-1/4	1/2	7/16	1-49/64	1-7/32	1.406	2.6
1-1/4, 1-3/8, 1-7/16	4-5/8	5-1/8	2.189	3-5/8	3-5/8	19/32	1/2	1-29/32	1-11/32	1.531	4.3
1-1/2	5-1/8	5-21/32	2.374	4-3/32	4	19/32	1/2	2-1/8	1-27/64	1.720	5.3
1-5/8, 1-11/16, 1-3/4	5-3/8	5-53/64	2.500	4-1/4	4-1/8	5/8	1/2	2-5/32	1-1/2	1.717	5.6
1-7/8, 1-15/16, 2S	5-5/8	6-3/16	2.752	4-1/2	4-3/8	5/8	1/2	2-5/32	1-37/64	1.717	6.5
2, 2-3/16	6-3/8	7-1/4	3.000	4-15/16	5-1/8	23/32	5/8	2-13/32	1-11/16	1.906	9.1
2-1/4, 2-7/16	6-7/8	7-15/16	3.315	5-5/16	5-5/8	23/32	5/8	2-39/64	1-57/64	1.941	11.9

FOR LOAD RATINGS, SEE PAGE N-14

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: FB250UR X 1-7/16

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

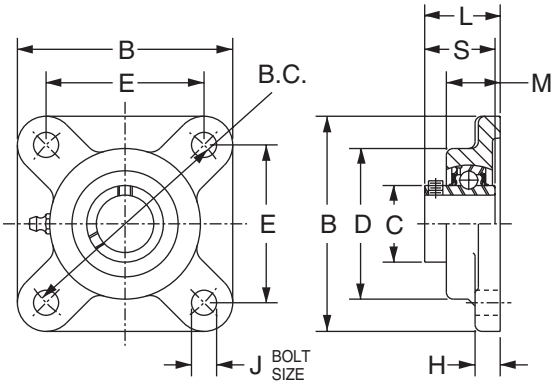
FLANGE BLOCKS - WIDE INNER RACE

FB250DRW, FB220DRW

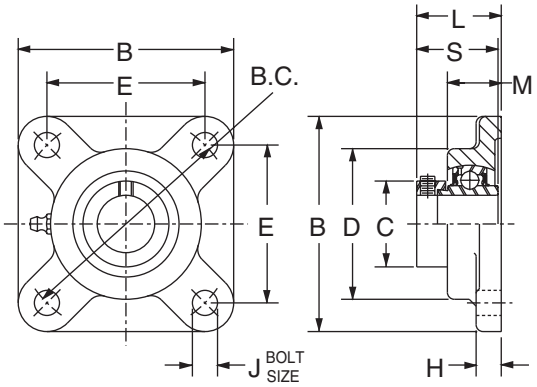
FEATURES

- Ductile iron housings
- Higher strength and impact resistance for high shock loads
- Suitable to replace gray iron housed bearings
- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel flingers
- Precision bored housings

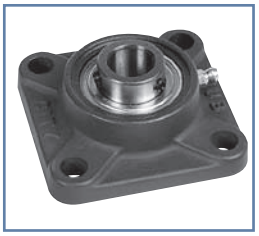
200 SERIES 4 BOLT FLANGE BLOCK
SETSCREW LOCK – WIDE INNER RING



200 SERIES 4 BOLT FLANGE BLOCK
ECCENTRIC LOCK – WIDE INNER RING



200 SERIES - 4 BOLT FLANGE BLOCKS - DUCTILE IRON - SETSCREW LOCK - WIDE INNER RING FB250DRW											
SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3	3	0.969	2-3/32	2-1/8	7/16	3/8	1-7/32	31/32	1.079	1.0
3/4	3-3/8	3-5/8	1.142	2-3/8	2-1/2	19/32	3/8	1-15/32	1-5/32	1.220	1.5
7/8, 1	3-21/32	3-57/64	1.339	2-3/4	2-3/4	19/32	7/16	1-17/32	1-3/16	1.339	1.9
1-1/8, 1-3/16, 1-1/4S	4-3/16	4-19/32	1.587	3-3/16	3-1/4	5/8	7/16	1-21/32	1-9/32	1.500	2.8
1-1/4, 1-3/8, 1-7/16	4-9/16	5-1/8	1.843	3-9/16	3-5/8	11/16	1/2	1-27/32	1-3/8	1.689	4.4
1-1/2	5-3/32	5-43/64	2.063	4-1/32	4	11/16	1/2	2-1/8	1-17/32	1.937	5.6
1-11/16, 1-3/4	5-5/16	5-27/32	2.260	4-1/4	4-1/8	23/32	1/2	2-1/8	1-9/16	1.937	6.0
1-15/16, 2S	5-5/8	6-3/16	2.433	4-1/2	4-3/8	25/32	1/2	2-25/64	1-25/32	2.031	7.1
2, 2-3/16	6-3/8	7-1/4	2.705	5	5-1/8	27/32	5/8	2-17/32	1-15/16	2.189	9.5
2-7/16	6-7/8	7-31/32	2.992	5-13/32	5-5/8	7/8	5/8	2-29/32	2-1/8	2.563	12.4
2-15/16	7-7/8	8-31/64	3.602	6-9/64	6	15/16	3/4	3-3/8	2-7/16	3.062	16.6



200 SERIES - 4 BOLT FLANGE BLOCKS - DUCTILE IRON - ECCENTRIC LOCK - WIDE INNER RING FB220DRW											
SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3	3	1.126	2-3/32	2-1/8	7/16	3/8	1-33/64	31/32	1.469	1.5
3/4	3-3/8	3-17/32	1.311	2-3/8	2-1/2	19/32	3/8	1-51/64	1-5/32	1.720	1.7
7/8, 1	3-21/32	3-57/64	1.500	2-3/4	2-3/4	19/32	7/16	1-13/16	1-3/16	1.744	2.1
1-1/8, 1-3/16, 1-1/4S	4-3/16	4-19/32	1.752	3-3/16	3-1/4	5/8	7/16	1-31/32	1-9/32	1.906	2.9
1-1/4, 1-3/8, 1-7/16	4-9/16	5-1/8	2.189	3-9/16	3-5/8	11/16	1/2	2-3/32	1-3/8	2.012	3.9
1-1/2	5-3/32	5-21/32	2.374	4-1/32	4	11/16	1/2	2-5/16	1-17/32	2.217	4.9
1-11/16, 1-3/4	5-5/16	5-53/64	2.500	4-1/4	4-1/8	23/32	1/2	2-5/16	1-9/16	2.217	5.8
1-15/16, 2S	5-5/8	6-3/16	2.752	4-1/2	4-3/8	25/32	1/2	2-39/64	1-25/32	2.469	6.5
2, 2-3/16	6-3/8	7-1/4	3.000	5	5-1/8	27/32	5/8	2-15/16	1-15/16	2.811	9.0
2-7/16	6-7/8	7-15/16	3.315	5-13/32	5-5/8	7/8	5/8	3-3/16	2-1/8	3.063	10.7



DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250RW, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220RW

FOR LOAD RATINGS, SEE PAGE N-14

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

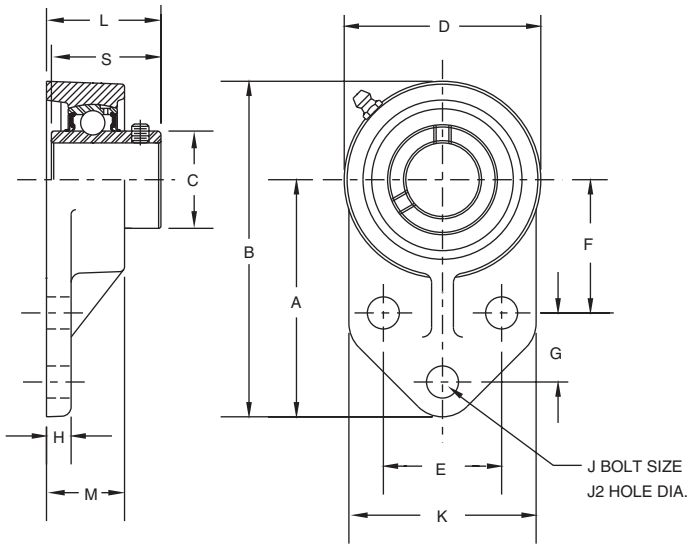
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. TO ORDER, SPECIFY TYPE AND BORE SIZE. EXAMPLE: FB250DRW X 1-7/16

THREE-BOLT FLANGE BRACKET BEARINGS
FR250URW

FEATURES

- Reliable Performance
- Economical Durability
- Cast Iron Housings
- Wide Inner Race
- Self Aligning Replaceable Bearing
- Setscrew Lock Inserts
- Pre-lubricated with Lithium Grease
- Steel Retainers
- Anti-rotation pins
- Nitrile Rubber Seals with Steel Flingers
- Precision Bored Housings

FR250URW DURALINE
3-BOLT FLANGE BRACKET

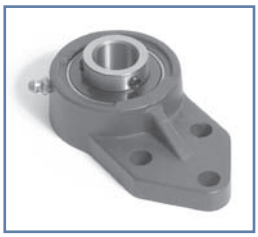


N

200 SERIES - 3 BOLT FLANGE BRACKETS - CAST IRON - SETSCREW LOCK - WIDE INNER RING FR250URW								
SHAFT SIZE	A	B	C	D	E	F	G	H
3/4	3	4-1/4	1.142	2-1/2	1-1/2	1-11/16	7/8	5/16
7/8, 1	3-3/8	4-3/4	1.339	2-3/4	1-5/8	1-13/16	1-1/8	3/8
1-3/16, 1-1/4S	3-3/4	5-3/8	1.587	3-1/4	1-7/8	2-1/16	1-1/4	3/8
1-1/4, 1-3/8, 1-7/16	4-1/4	6-1/8	1.890	3-3/4	2	2-3/8	1-1/4	1/2
1-15/16, 2S	5-3/16	7-1/2	2.433	4-5/8	2-3/4	2-15/16	1-5/8	1/2



200 SERIES - 3 BOLT FLANGE BRACKETS - CAST IRON - SETSCREW LOCK - WIDE INNER RING FR250URW							
SHAFT SIZE	J	J2	K	L	M	S	WT. LBS.
3/4	3/8	13/32	2-3/8	1-11/32	1	1.220	1.5
7/8, 1	3/8	13/32	2-1/2	1-7/16	1-3/32	1.339	1.9
1-3/16, 1-1/4S	3/8	13/32	2-3/4	1-5/8	1-7/32	1.500	2.2
1-1/4, 1-3/8, 1-7/16	1/2	17/32	3-1/4	1-13/16	1-3/8	1.689	3.6
1-15/16, 2S	1/2	17/32	4	2-3/32	1-7/16	2.031	5.7



DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250RW, FOR 100 AND 200 SERIES
ECCENTRIC LOCK USE B220RW

FOR LOAD RATINGS, SEE PAGE N-14

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: FR250URW X 1-7/16

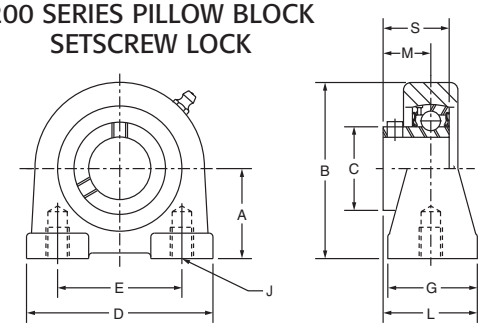
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

TAPPED BASE
TPB250UR

FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings

200 SERIES PILLOW BLOCK
SETSCREW LOCK





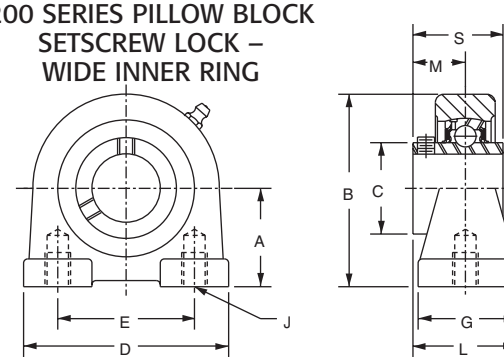
200 SERIES – TAPPED BASE PILLOW BLOCKS – CAST IRON – SETSCREW LOCK – RELUBE TYPE											
TPB250UR											
SHAFT SIZE	A	B	C	D	E	G	J - TAPPED HOLES	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-9/16	0.921	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-3/8	0.630	0.866	0.8
3/4	1-5/16	2-9/16	1.142	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-15/32	0.709	0.984	0.9
7/8, 1	1-7/16	2-13/16	1.339	3	2	1-1/2	3/8-16NC X 1/2	1-17/32	0.768	1.063	1.4
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-3/8	1.587	4	3	1-1/2	7/16-16NC X 5/8	1-5/8	0.866	1.181	2
1-1/4, 1-3/8, 1-7/16	1-7/8	3-3/4	1.890	4-1/4	3-1/4	1-7/8	1/2-13NC X 3/4	1-7/8	0.925	1.260	2.6
1-1/2	1-15/16	3-15/16	2.087	4-5/8	3-1/2	1-7/8	1/2-13NC X 3/4	1-15/16	0.984	1.339	3.5
1-5/8, 1-11/16, 1-3/4	2-1/8	4-1/4	2.252	5	3-3/4	2	1/2-13NC X 3/4	2-7/32	1.220	1.622	4.9
1-7/8, 1-15/16, 2S	2-1/4	4-5/8	2.433	5-1/2	4	2	5/8-11NC X 1	2-9/32	1.283	1.713	5.1
2, 2-3/16	2-1/4	4-5/8	2.720	5-1/2	4	2	5/8-11NC X 1	2-5/16	1.319	1.783	5.2

TAPPED BASE - WIDE INNER RACE
TPB250DRW

FEATURES

- Ductile iron housings
- Higher strength and impact resistance for high shock loads
- Suitable to replace gray iron housed bearings
- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel flingers
- Precision bored housings

200 SERIES PILLOW BLOCK
SETSCREW LOCK –
WIDE INNER RING





200 SERIES - TAPPED BASE PILLOW BLOCKS - DUCTILE - SETSCREW LOCK - RELUBE TYPE - WIDE INNER RING											
TPB250DRW											
SHAFT SIZE	A	B	C	D	E	G	J - TAPPED HOLES	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-9/16	0.969	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-3/8	0.626	1.079	0.8
3/4	1-5/16	2-9/16	1.142	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-15/32	0.720	1.220	1
7/8, 1	1-7/16	2-27/32	1.339	3	2	1-1/2	3/8-16NC X 1/2	1-17/32	0.776	1.339	1.5
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-3/8	1.587	4	3	1-1/2	7/16-16NC X 5/8	1-5/8	0.874	1.500	2.2
1-1/4, 1-3/8, 1-7/16	1-7/8	3-3/4	1.843	4-1/4	3-1/4	1-7/8	1/2-13NC X 3/4	1-15/16	1.000	1.689	2.8
1-1/2	1-15/16	3-15/16	2.063	4-5/8	3-1/2	1-7/8	1/2-13NC X 3/4	2-1/8	1.189	1.937	3.8
1-11/16, 1-3/4	2-1/8	4-1/4	2.260	5	3-3/4	2	1/2-13NC X 3/4	2-3/16	1.189	1.937	5.2
1-15/16, 2S	2-1/4	4-5/8	2.433	5-1/2	4	2	5/8-11NC X 1	2-9/32	1.283	2.031	5.6
2, 2-3/16	2-1/4	4-5/8	2.705	5-1/2	4	2	5/8-11NC X 1	2-5/16	1.315	2.189	5.7

FOR LOAD RATINGS, SEE PAGE N-14

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

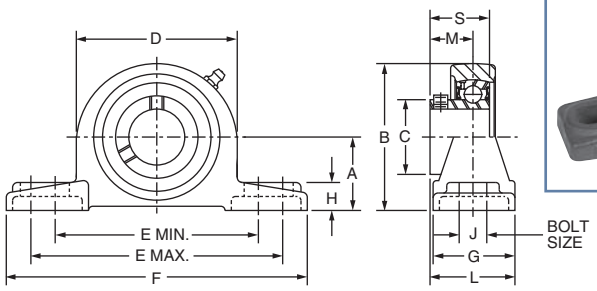
PILLOW BLOCK - PB350UR

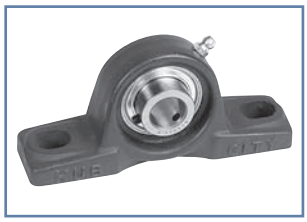
MEDIUM DUTY

FEATURES

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings

300 SERIES PILLOW BLOCK





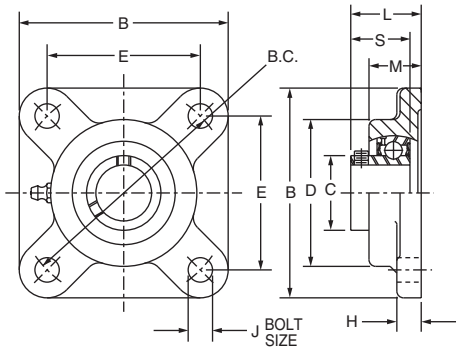
300 SERIES – PILLOW BLOCKS AND FLANGE BLOCKS – CAST IRON – SETSCREW LOCK														
PB350UR														
SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1	1-11/16	3-9/32	1.587	3-3/8	4-9/16	4-13/16	6-1/4	2	5/8	1/2	1-7/8	0.866	1.220	3.3
1-7/16	2-1/8	4-1/8	2.087	4-7/32	5-9/16	5-25/32	8	2-3/16	53/64	1/2	2-7/32	1.122	1.575	4.9
1-1/2	2-5/16	4-13/32	2.252	4-13/32	6-1/32	6-1/4	8-3/4	2-9/16	29/32	5/8	2-31/64	1.201	1.634	5.6
1-3/4	2-5/16	4-9/16	2.433	4-21/32	6-1/32	6-1/4	8-3/4	2-5/8	63/64	5/8	2-37/64	1.260	1.693	6.7
1-15/16, 2	2-1/2	4-31/32	2.717	5-1/8	6-5/8	6-27/32	9-7/16	2-25/32	61/64	5/8	2-43/64	1.280	1.772	8.5
2-3/16	2-3/4	5-13/32	2.949	5-7/16	7-1/8	7-3/8	10-1/4	3-1/8	1-9/64	3/4	2-15/16	1.378	1.909	11.3
2-7/16, 2-1/2	3	6	3.406	6-3/32	7-7/8	8-1/8	11-1/4	3-9-32	1-19/64	3/4	3-3/32	1.457	2.008	15.2
2-11/16	3-1/2	6-11/16	3.602	6-9/16	8-29/32	9-1/8	12-19/32	3-11/32	1-11/32	7/8	3-11/64	1.496	2.106	17.9
2-15/16, 3	3-1/2	6-29/32	3.858	6-31/32	8-29/32	9-1/8	13	3-5/8	1-3/8	7/8	3-11/32	1.535	2.185	19.1
3-7/16, 3-1/2	4	7-5/8	4.370	7-9/16	11-1/32	11-1/4	14-7/8	3-29/32	1-29/64	7/8	3-17/32	1.575	2.244	28.4

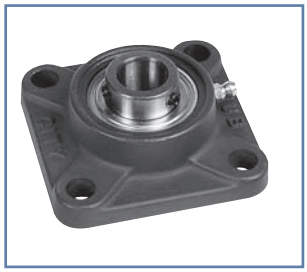
N

FLANGE BLOCK - FB350UR

- Self-aligning replaceable bearing
- Pre-lubricated with lithium grease
- Steel retainers
- Anti-rotation pins
- Nitrile rubber seals with steel trash guards
- Precision bored housings

300 SERIES FLANGE BLOCK





FB350UR											
SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1	4-1/4	4-19/32	1.587	3-3/16	3-1/4	1/2	7/16	1-37/64	1-7/32	1.220	3.0
1-7/16	5-1/8	5-21/32	2.087	4-3/32	4	19/32	1/2	1-61/64	1-27/64	1.575	5.4
1-1/2	5-3/8	5-53/64	2.252	4-1/4	4-1/8	5/8	1/2	2-1/16	1-1/2	1.634	5.8
1-3/4	5-5/8	6-3/16	2.433	4-7/16	4-3/8	5/8	1/2	2-1/8	1-37/64	1.693	7.0
1-15/16, 2	6-3/8	7-1/4	2.717	4-15/16	5-1/8	23/32	5/8	2-17/64	1-11/16	1.772	9.2
2-3/16	6-29/32	7-15/16	2.949	5-5/16	5-5/8	23/32	5/8	2-33/64	1-57/64	1.909	12.1
2-7/16, 2-1/2	7-3/8	8-5/16	3.406	6-3/32	5-7/8	13/16	5/8	2-51/64	2-21/64	2.008	15.4
2-11/16	7-3/4	8-31/64	3.602	6-3/8	6	15/16	3/4	3	2-23/64	2.106	18.3
2-15/16, 3	7-3/4	8-31/64	3.858	6-25/32	6	15/16	3/4	3-7/64	2-11/16	2.185	19.0
3-7/16, 3-1/2	8-7/16	9-35/64	4.370	7-11/16	6-3/4	15/16	3/4	3-5/32	2-3/4	2.244	22.2

DURALINE REPLACEMENT INSERTS
FOR 100 AND 200 SERIES SETSCREW LOCK USE B250R, FOR 100 AND 200 SERIES ECCENTRIC LOCK USE B220R, FOR 300 SERIES SETSCREW LOCK USE B350R

FOR LOAD RATINGS, SEE PAGE N-14

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
TO ORDER, SPECIFY TYPE AND BORE SIZE.
EXAMPLE: PB350UR X 1-7/16

LOAD RATINGS

BEARING RADIAL LOAD CAPACITY (POUNDS) FOR 500 HOURS L-10 LIFE (2500 HOURS AVERAGE LIFE) AND STEADY LOAD CONDITIONS											
SHAFT SIZE (INCHES) 100, 200 SERIES	SHAFT SIZE (INCHES) 300 SERIES	BASIC DYNAMIC RATING, C* (POUNDS)	BASIC STATIC RATING, Co** (POUNDS)	BEARING SPEED (RPM) 100	500	1,000	1,500	2,000	2,500	3,000	3,500
1/2 to 5/8		2150	1070	1,490	870	690	600	550	510	480	460
3/4		2880	1490	2,000	1,170	930	810	740	680	640	610
7/8 to 1		3150	1770	2,180	1,280	1010	890	800	750	700	670
1-1/8 to 1-1/4S	1	4380	2520	3,040	1,780	1410	1230	1120	1040	980	930
1-1/4 to 1-7/16		5780	3420	4,010	2,340	1860	1620	1480	1370	1290	
1-1/2	1-7/16	6650	4090	4,610	2,700	2140	1870	1700	1580	1480	
1-5/8 to 1-3/4	1-1/2	7160	4680	4,960	2,900	2300	2010	1830	1700		
1-7/8 to 2S	1-5/8 to 1-3/4	7890	5220	5,470	3,200	2540	2220	2020	1870		
2 to 2-3/16	1-15/16 to 2	9790	6560	6,790	3,970	3150	2750	2500			
2-1/4 to 2-7/16	2-3/16	10750	7370	7,450	4,360	3460	3020	2750			
	2-7/16 to 2-1/2	13670	10120	9,480	5,540	4400	3840				
2-15/16	2-11/16	14840	11130	10,290	6,020	4780	4170				
	2-15/16 to 3	16070	12180	11,140	6,520	5170	4520				
	3-7/16 to 3-1/2	21560	16070	14,950	8,740	6940	6060				

TO MODIFY THE ABOVE RATINGS FOR OTHER L-10 LIFE REQUIREMENTS OR FOR SHOCK LOADS MULTIPLY THE ABOVE RATINGS BY THE FACTOR FROM THIS CHART

MODIFICATION FACTORS FOR L-10 SERVICE LIFE AND LOAD CONDITIONS:

LOAD CONDITIONS	L-10 LIFE (HOURS) 500	700	1,000	1,500	2,000	3,000	4,000	5,000	7,000	10,000	15,000	20,000	30,000	50,000
Steady Load	1.00	.894	.794	.694	.630	.550	.500	.464	.415	.368	.322	.292	.255	.215
Light Shock	.90	.804	.715	.624	.567	.495	.450	.418	.373	.331	.290	.263	.230	.194
Moderate Shock	.70	.626	.556	.485	.441	.385	.350	.325	.290	.258	.225	.205	.179	.151

* RADIAL LOAD FOR AN L-10 RATING LIFE OF 1,000,000 REVOLUTIONS.
** RADIAL LOAD RATING FOR STATIONARY OR VERY LOW SPEED OPERATION.

MAXIMUM RECOMMENDED SPEEDS:

100, 200 Series	300 Series	
1/2 to 1-1/4S	1	3,500 RPM
1-1/4 to 1-1/2	1-3/16 to 1-7/16	3,000 RPM
1-5/8 to 2S	1-1/2 to 1-3/4	2,500 RPM
2 to 2-7/16	1-15/16 to 2-1/4	2,000 RPM
	2-7/16 to 2-11/16	1,700 RPM
	2-15/16 to 3-1/2	1,500 RPM

FOR ULTIMATE LIFE, SNUG FIT OR LIGHT PRESS FIT ON SHAFT SHOULD BE USED.
RECOMMENDED OPERATING TEMPERATURE RANGE: -25 TO +225 DEG F.
FOR APPLICATIONS NOT COVERED IN THE RATING TABLES, CONSULT THE FACTORY.
RATINGS ARE BASED ON ISO 281.
RATINGS ARE BASED ON SNUG OR LIGHT PRESS FIT ON SHAFT. MULTIPLY RATINGS BY 0.8 FOR LOOSE SHAFT FITS.

FOR LUBRICATION AND MOUNTING INSTRUCTIONS REFER TO SECTION R.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CLEANLINE™ GEAR DRIVES & MOUNTED BEARINGS

Solutions for Pharmaceutical, Meat, Poultry and Produce Processing & Washdown Applications.

Hub³™ (Hub Cube) Advantages ..... O-2 to O-3
CleanLine™ Features ..... O-4 to O-7

CleanLine UltraPlus™ & Pharmaceutical Selection O-8
Hub³™ (Hub Cube) Stainless Steel Worm Gear Drives ..... O-9 to O-13
Hub³™ (Hub Cube) Stainless Steel Bevel Gear Drives ..... O-14 to O-18
Hub³™ (Hub Cube) Stainless Steel Helical Inline Drives ..... O-19 to O-21
Hub³™ (Hub Cube) Stainless Steel Helical-Bevel Gear Drives ..... O-22 to O-23
Hub³™ (Hub Cube) Stainless Steel and Aluminum Helical Ratio Multipliers ..... O-24 to O-25
Hub³™ (Hub Cube) Stainless Steel Accessories ..... O-26 to O-29
Stainless Steel Mounted Bearings ..... O-30 to O-31

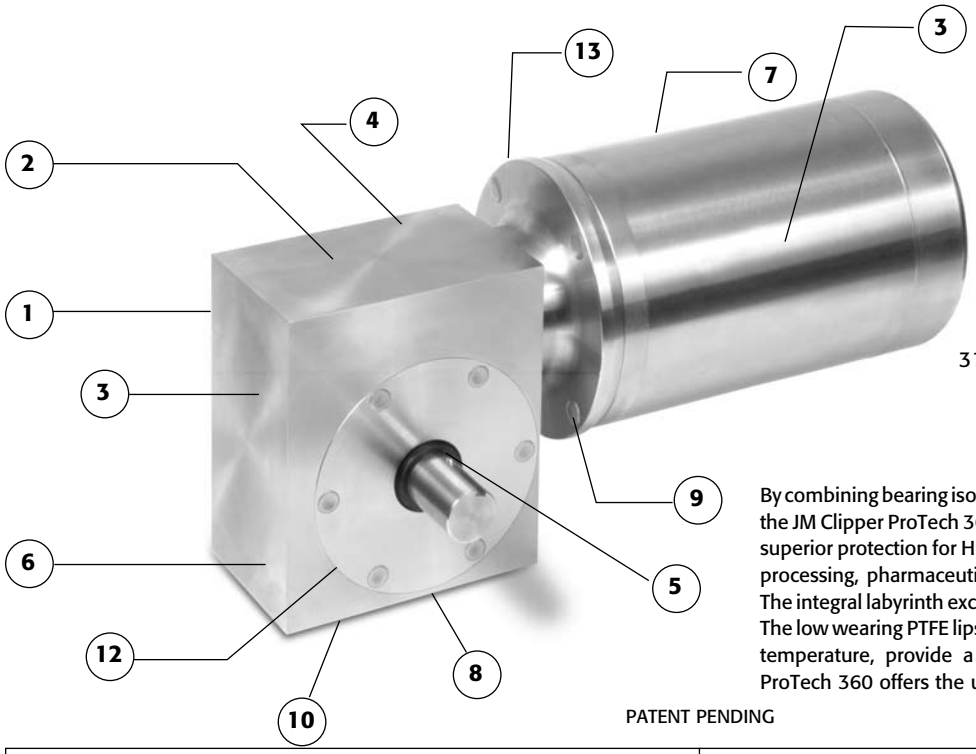
CleanLine Plus™
Thermoplastic Composite Mounted Bearings ..... O-32 to O-33
Stainless Steel Bearings and Ratings O-34
Thermoplastic Composite Housing Load Ratings O-35
Mounted Bearing Accessories ..... O-36 to O-37
Cleanline Plus™ Bevel Gear Drives ..... O-38 to O-39

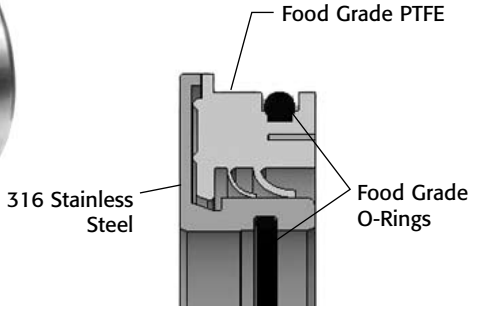
CleanLine™
Gear Drives O-40

O

THE HUB CITY ADVANTAGE

Raising Pharmaceutical, Meat, Poultry and Produce Processing Solutions to a Higher Power!





By combining bearing isolator technology with positive contact PTFE lip seals, the JM Clipper ProTech 360/Hub City exclusive seal design is able to provide superior protection for Hub City gear drives that operate in demanding food processing, pharmaceutical and other extreme environment applications. The integral labyrinth excludes heavy wash down spray and foreign material. The low wearing PTFE lips, designed for high internal operating pressure and temperature, provide a service life unmatched by traditional lip seals. ProTech 360 offers the ultimate gear drive protection.

PATENT PENDING

① 316 Stainless Steel Housing, Shafting and Hardware (Plated Non-motorized Integral Gear Input Shafts):
- Provides superior corrosion resistance

② Cleanline UltraPlus™ and Pharmaceutical Design Enhances Ease of Cleaning:
- All exterior surfaces uninterrupted and machined
- Contoured interfaces
- No protrusions
- No undercuts
- No ribs

③ Reducer/Motor Oversized Identification, Configuration, and Operating Data:
- Micro-embossed in the housing/frame for permanent retention
- Elimination of bacteria growth supporting protrusions
- Will not trap food particles or dirt

④ Sealed Housing Design-Non-Vented:
- Will not ingest liquids and foreign material during operation or washdown

⑤ JM Clipper ProTech 360/Hub City exclusive seal design:
- Bearing Isolator technology excludes high pressure wash down spray and foreign material.
- PTFE lip seal technology retains oil
- Retains lubricant regardless of gear drive mounting position
- Sealing surface is internal, no shaft wear
- All components meet USDA/FDA requirements
- Superior gear drive protection in hostile food processing applications
- Low wear PTFE lips, designed for high internal operating pressure and temperature, provide extended seal and gear drive service life
- Enhances ease of cleaning

⑥ Permanently Lubricated for the Service Life of the Drive With USDA/FDA Compliant Lubricant:
- Excellent ageing and oxidation stability
- Broad service temperature range
- Physiologically inert and without taste or smell

⑦ Motors:
- Stainless steel
- Totally enclosed non-vented (TENV) with rear integral non-protruding conduit box (1/4,1/3, 1/2, 3/4 and 1 horsepower)
- Total enclosed fan cooled - TEFC (1-1/2, 2, 3, and 5 horsepower)
- Conduit opening for customer connection is easily relocated to 12:00, 3:00, 6:00, and 9:00 o'clock positions
- C-Face non footed design
- Smooth uninterrupted exterior surfaces enhances ease of cleaning
- Suitable for inverter-duty applications

⑧ Rebuild for Life Longevity Program

⑨ Installation/Service Friendly NSF/3-A Compliant Fasteners

⑩ Computer Aided Designed Elevated Operating Temperature (Above 160°F) Assists in Eradicating Bacteria

⑪ HACCP Compatible

⑫ O-Ring Sealed Bearing Carriers

⑬ Sealed Motor to NEMA Frame Interface

THE HUB CITY ADVANTAGE

The Hub City stainless steel Hub³™ design goes beyond basic corrosion resistance, by providing a machined unobstructed, contoured exterior surface. The exterior is free of ribs, undercuts and protrusions that do not support washdown, cleaning and sanitary conditions. The geardrives are configured such that all exterior surfaces self drain, do not entrap soil, foreign material or contain areas that support the breeding of bacteria, fungi, mold and or other microorganisms. All exterior surfaces are smooth and easily cleaned allowing for cleaning in place or manual cleaning processes.

The design of this superior product evolved from facility inspections and design input from a number of major food, meat, produce, and pharmaceutical processors. The acquired data was integrated with "Hygiene requirements for the design of meat and poultry processing equipment," NSF/ANSI/3-A 14159-1-2002. These resources, combined with Hub City's years of design and application experience in these industries, provide a drive that specifically meets the requirements of the processing industries and FDA/USDA/NSF National Sanitation Requirements. Several typical industrial applications requiring high degrees of sanitation and hygiene or severe environmental conditions are listed as follows:

- Food Handling and Processing including:
  - Poultry and Meat
  - Seafood and Fish
  - Cereal and Grain
  - Produce
  - Baking
  - Beverage
- Pharmaceutical Industry
- Chemical Processing Industry
- Petroleum Processing Industry
- Tobacco Industry
- Carwash Industry
- Mixer Industry
- Pump Industry

Stainless steel Hub³™ geardrives, manufactured with 316 stainless steel housings and shafting, provide superior corrosion resistance to most types of chemical corrosives and washdown chemicals. The exterior stainless steel surface texture is 70 microinches R_a. Configurations with a smoother surface texture (near mirror finish) are also available, consult the factory for further information.

Stainless steel Hub³™ geardrives utilize non-vented housings with high-pressure seals designed to be easily cleaned, expel and exclude foreign material and are resistant to ingestion of liquids during pressurized washdown. The seal material is non-absorbent and capable of withstanding elevated operating temperatures.

Stainless steel Hub³™ geardrives are factory lubricated, for the application service life of the unit, with food-grade lubricant conforming to the demands of USDA H1 regulations. The ingredients used in the formulation of this lubricant are on the FDA list of allowable substances, as specified in the Guidelines of Security CFR 212, section 178.3570.

Stainless steel Hub³™ geardrives are supported by industry-identified accessories. These accessories increase functionality, reduce bacteria and microorganism growth, and enhance ease of cleaning. Accessories are listed as follows:

- Clearance Spacers
- Shaft Protectors
- Hollow Bore Output Sleeve Protectors
- Universal Base Kits
- Torque Arm Brackets
- "C" Flange Adaptor Kits

Hub City stainless steel Hub³™ geardrives are part of the Hub City "Rebuild for Life Longevity Program". This program ensures that the customer is only required to purchase the stainless steel geardrive one time. When the unit has reached it's service life it can be returned to the factory and refurbished for the current cost of a similar sized cast iron drive. The refurbished unit carries the same factory warranty as a new unit.

CLEANLINE ULTRAPLUS™ ULTIMATE SOLUTIONS

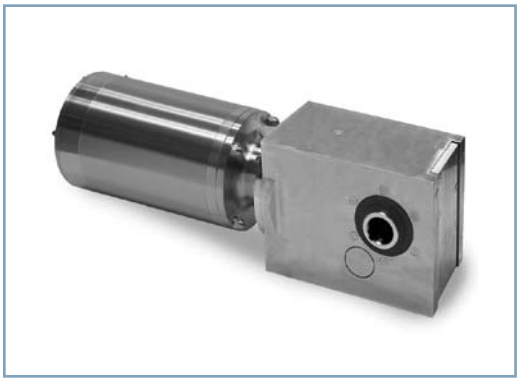
HUB³™ STAINLESS STEEL HIGH EFFICIENCY HELICAL INLINE DRIVES



FEATURES:

- Ratios from 2.57/1 to 51.25/1
- Power Ratings to 18HP
- Two Models: SSHI4042 and SSHI4062
- Smooth Cast Surface Finish
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- 316 Stainless Steel Housings & Shafts
- HACCP Compatible
- BISSC Certified
- Packaged with LEESON WASHGUARD All-Stainless Motors

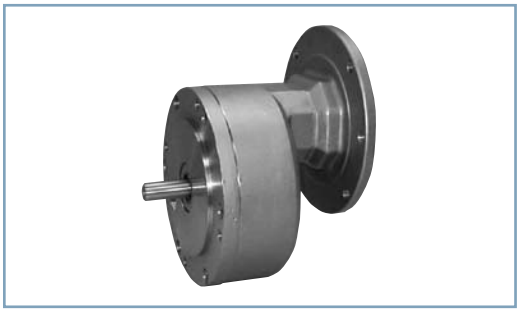
HUB³™ STAINLESS STEEL HIGH EFFICIENCY HELICAL BEVEL DRIVES



FEATURES:

- Ratios from 6:1 to 140:1
- Power Ratings from 3/4 to 12 hp
- Two Models: SSHB2043 and SSHB2063
- Surface Finish Machined to a Ra of 70μin
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- 316 Stainless Steel Housings & Shafts
- HACCP Compatible
- BISSC Certified
- Packaged with LEESON WASHGUARD All-Stainless Motors
- Rebuild for Life Longevity Program
- Patented

CLEANLINE ULTRAPLUS™ STAINLESS STEEL HIGH EFFICIENCY HELICAL RATIO MULTIPLIER



FEATURES:

- 316 Stainless Steel Housing and Shafts
- Smooth Cast Surface Finish
- Ratios up to 7.46 /1
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Seals Configured for Severe High Pressure & Chemical Washdown Environments
- BISSC Certified and HACCP compatible
- Packaged with LEESON WASHGUARD All-Stainless Motors
- Ideal for use between a stainless steel motor and a C-face stainless steel gear drive to gain needed additional gear reduction.

CLEANLINE ULTRAPLUS™ ULTIMATE SOLUTIONS

HUB³™ STAINLESS STEEL WORM GEAR DRIVES

FEATURES:

- Four Sizes: 1.75" CD, 2.06" CD, 2.625" CD & 3.25" CD
- Designed to be Compliant with NSF/ANSI/3-A 14159-1—2002
- Surface Finish Machined to a R_a of 70µin
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- Sealed Non-Vented Housing
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- 316 Stainless Steel Housings & Shafts
- HACCP Compatible
- BISSC Certified
- Packaged with LEESON WASHGUARD All-Stainless Motors
- Rebuild for Life Longevity Program
- Patented



HUB³™ STAINLESS STEEL BEVEL GEAR DRIVES

FEATURES:

- Five Models: M3, 165, 175, 65 and 66
- Designed to be Compliant with NSF/ANSI/3-A 14159-1—2002
- Surface Finish Machined to a R_a of 70µin
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- 316 Series Stainless Steel Housings & Shafts
- HACCP Compatible
- BISSC Certified
- Rebuild for Life Longevity Program
- Patented



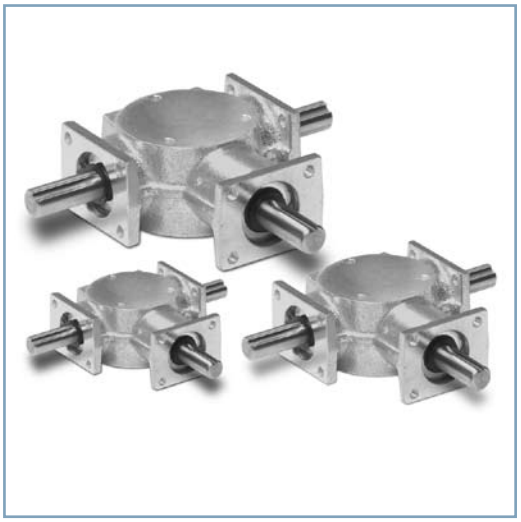
CLEANLINE ULTRAPLUS™ STAINLESS STEEL MOUNTED BEARINGS

FEATURES:

- 304 Stainless Steel Housing
- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Factory Filled with USDA H1 Lubricant
- Machine Polished to NSF/3-A or Industry Approved Standards
- Bore Sizes Up to 1.9375
- HACCP Compatible



CLEANLINE PLUS™ INTERMEDIATE SOLUTIONS



CLEANLINE PLUS™ AD SERIES BEVEL GEAR DRIVES

FEATURES:

- Three Models: AD3, AD4, AD5
- 303 Stainless Steel Shafts
- Aluminum Housings with Platinum Plus™ Finish
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Seals with V-Rings
- 1/1 and 2/1 Spiral Bevel Gears
- BISSC Certification Optional



CLEANLINE PLUS™ HELICAL RATIO MULTIPLIERS

FEATURES:

- Two Models CPARM1 and CPARM2
- Aluminum Housings with Platinum Plus™ Finish
- BISSC Certification Optional
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- Optional Corrosion and Bacteria Resistant Treatments Available



CLEANLINE PLUS™ THERMOPLASTIC COMPOSITE MOUNTED BEARINGS

FEATURES:

- Ultradur® Glass Reinforced PBT Thermoplastic Housings
- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Factory Filled with USDA H1 Lubricant
- Smooth Surface for Easy Cleaning
- Bore Sizes Up to 1.5″

CLEANLINE™ BASIC SOLUTIONS

CLEANLINE™ HIGH EFFICIENCY GEAR DRIVES

FEATURES:

- FDA Approved White Acrylic Paint
- 303 Stainless Steel Output Shafts
- Stainless Steel Hardware and Nameplate
- BISSC Certification Optional
- Available in All Standard Models of Helical Bevel, Helical Worm, Helical Parallel & Helical InLine
- USDA/FDA Approved Stainless Steel Paint Optional



CLEANLINE™ WORM & BEVEL GEAR DRIVES

FEATURES:

- FDA Approved White Acrylic Paint
- 303 Stainless Steel Output Shafts
- Stainless Steel Hardware and Nameplate
- BISSC Certification Optional
- Available in All Standard Models
- USDA/FDA Approved Stainless Steel Paint Optional
- Most Popular Models Available in 5 Days or Less



CLEANLINE PLUS™ MODIFIED & CUSTOM DRIVES

FEATURES:

- Designs Tailored to Your Specifications
- Meets Unique Application Needs
- Special Fabrications
- Corrosion Resistant Treatments such as Powder or Stainless Steel Paint



HOW TO SELECT & ORDER HUB CUBE MODELS

WORM GEAR DRIVES:

1. When ordering a worm gear reducer, it is necessary to select reducer size (series), gear ratio, model and assembly style. If accessories are required, they must be ordered separately and in addition to the reducer.
2. Selection Information: Refer to pages B-8, B-9 and B-10.
3. Mechanical Ratings: Refer to page O-9 for mechanical rating parameters.
4. Thermal Ratings: Series SS180, SS210, and SS260 Hub Cube Worm Gear Reducers are not thermally limited. The application service factors associated with mechanical selection and rating, pages B-8, B-9 and O-9, address thermal requirements for the above listed units. In some applications a Thermal Rating may apply to SS320 Worm Gear Drives. If the mechanical service factor selected for a SS320 is 1.50 or less consult the factory with your application information for further assistance.
5. Lubrication and Installation: All Hub Cube Worm Gear Reducers are configured and supplied with the correct quantity of lubricating oil from the factory for all horizontal and vertical shaft mounting positions, EXCEPT for THREE UNAPPROVED mounting positions shown in figure SSW1. For applications requiring mounting in any of these unapproved mounting positions, CONSULT HUB CITY. For additional Worm Gear Hub Cube Lubrication and Installation information, refer to CleanLine Hub³™ pages of Section R.

BEVEL GEAR DRIVES:

1. Refer to page D-3 for selection of a Hub Cube Bevel Gear Drive.
2. Lubrication and Installation: A Mounting position for a Hub Cube Bevel Gear Drive must be specified at the time of placing the order. (See figure SSB1 for mounting positions.) All Hub Cube Bevel Gear Drives are configured and supplied with the correct quantity of lubricating oil for the specified mounting position. For additional Bevel Hub³™ Lubrication and Installation information, refer to CleanLine Hub³™ pages of Section R.

HELICAL INLINE GEAR DRIVES:

1. Refer to section I for selection, page O-19 for ratings.

HELICAL BEVEL GEAR DRIVES:

1. Refer to section K for selection, page O-22 for ratings.

HELICAL RATIO MULTIPLIERS:

1. Refer to section F for selection, page O-24 for ratings.

HUB³™ WORM GEAR DRIVES
UNAPPROVED MOUNTING POSITIONS

UNAPPROVED POSITION	Description
1	INPUT (SHAFT) — INPUT SHAFT MOUNTED VERTICAL/UP — HORIZON
2	HORIZON — INPUT SHAFT MOUNTED VERTICAL/DOWN — INPUT (SHAFT)
3	HORIZON — C-FLANGE MOUNTED VERTICAL/DOWN — INPUT (C-FLANGE)

FIGURE SSW1

HUB³™ BEVEL GEAR DRIVE MOUNTING POSITIONS

POSITION	MODELS: SSM3, SS165, SS66 STYLES:* A, B, C, D, E, F	MODELS: SSM3, SS165, SS66 STYLE: G	MODELS: SS175, SS65 STYLES: A, B
1	TOP, HORIZON	TOP, HORIZON	TOP, HORIZON
2	TOP, HORIZON	TOP, HORIZON	TOP, HORIZON
3	HORIZON, TOP	HORIZON, TOP	HORIZON, TOP
4	TOP, HORIZON	TOP, HORIZON	TOP, HORIZON
5	TOP, HORIZON	TOP, HORIZON	TOP, HORIZON

* Only style A and B are shown. For styles C, D, E & F ignore non-applicable shaft extension.

Bevel Geared Units Styles A-F
(as viewed from top of unit)

STYLE: A STYLE: B STYLE: C STYLE: D STYLE: E STYLE: F

FIGURE SSB1

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

RATIO	OUTPUT R.P.M.	SERIES SS180 SERVICE FACTOR 1.00 INPUT H.P.	SERIES SS180 SERVICE FACTOR 1.00 OUTPUT TORQUE	SS210 SERVICE FACTOR 1.00 INPUT H.P.	SS210 SERVICE FACTOR 1.00 OUTPUT TORQUE	SS260 SERVICE FACTOR 1.00 INPUT H.P.	SS260 SERVICE FACTOR 1.00 OUTPUT TORQUE	SS320 SERVICE FACTOR 1.00 INPUT H.P.	SS320 SERVICE FACTOR 1.00 OUTPUT TORQUE
1750 RPM INPUT SPEED (HIGH SPEED SHAFT)									
5	350.0	2.17	358	3.01	492	4.47	723	11.1	1820
7.5	233.0	1.72	415	–	–	–	–	–	–
10	175.0	1.51	472	2.01	621	3.91	1260	7.51	2323
15	116.6	1.12	500	1.52	663	2.51	1110	5.43	2390
20	87.5	.922	536	1.31	748	2.34	1380	4.42	2490
25	70.0	.754	518	1.16	804	2.16	1600	3.76	2550
30	58.3	.675	518	.930	684	1.52	1140	3.29	2450
40	43.8	.547	536	.787	748	1.36	1380	2.67	2490
50	35.0	.439	489	.673	765	1.21	1530	2.23	2440
60	29.2	.365	448	.537	640	.838	986	1.89	2330
1150 RPM INPUT SPEED (HIGH SPEED SHAFT)									
5	230.0	1.73	436	2.40	601	3.67	915	9.02	2270
7.5	153.0	1.36	501	–	–	–	–	–	–
10	115.0	1.13	540	1.64	776	3.18	1570	5.89	2820
15	76.6	.880	598	1.23	826	2.06	1410	4.40	3020
20	57.5	.750	659	1.05	918	1.89	1710	3.60	3170
25	46.0	.583	608	.874	929	1.55	1760	3.06	3250
30	38.3	.530	618	.752	858	1.23	1450	2.63	3120
40	28.8	.431	633	.624	912	1.09	1710	2.14	3170
50	23.0	.345	580	.533	928	.920	1780	1.76	3090
60	19.1	.268	533	.412	761	.670	1250	1.51	2970
850 RPM INPUT SPEED (HIGH SPEED SHAFT)									
5	170.0	1.42	482	2.02	685	3.16	1070	7.87	2700
7.5	113.0	1.12	551	–	–	–	–	–	–
10	85.0	.929	593	1.36	871	2.64	1760	5.08	3310
15	56.6	.750	678	1.03	929	1.74	1610	3.79	3540
20	42.5	.587	688	.873	1019	1.58	1920	3.07	3680
25	34.0	.501	692	.659	929	1.17	1760	2.57	3710
30	28.3	.440	676	.624	954	1.04	1660	2.24	3630
40	21.2	.351	687	.525	1010	.911	1920	1.81	3680
50	17.0	.285	631	.410	934	.695	1780	1.51	3590
60	14.1	.236	573	.312	761	.564	1430	1.13	3030
690 RPM INPUT SPEED (HIGH SPEED SHAFT)									
5	138.0	1.22	508	1.77	735	2.81	1170	7.03	2970
7.5	92.0	1.00	606	–	–	–	–	–	–
10	69.0	.792	620	1.19	928	2.30	1870	4.51	3620
15	46.0	.620	685	.898	987	1.52	1730	3.36	3860
20	34.5	.503	717	.754	1077	1.38	2040	2.72	4010
25	27.6	.411	690	.537	929	1.01	1867	2.09	3710
30	23.0	.379	706	.550	1014	.921	1780	2.01	4010
40	17.2	.306	715	.455	1070	.798	2030	1.60	4000
50	13.8	.251	668	.334	934	.569	1780	1.28	3740
60	11.5	.196	573	.258	761	.501	1534	.912	3030
100 RPM INPUT SPEED (HIGH SPEED SHAFT)									
5	20.0	.251	642	.364	939	.614	1610	1.56	4210
7.5	13.3	.192	688	–	–	–	–	–	–
10	10.0	.167	749	.253	1150	.473	2320	1.02	4980
15	6.6	.135	805	.202	1220	.346	2230	.785	5280
20	5.0	.111	834	.156	1190	.304	2510	.583	4840
25	4.0	.084	703	.104	929	.174	1760	.383	3710
30	3.3	.093	829	.139	1250	.234	2290	.517	5420
40	2.5	.077	830	.109	1200	.189	2380	.391	4880
50	2.0	.061	708	.075	934	.120	1780	.265	3740
60	1.6	.048	573	.060	761	.110	1500	.197	3030



Hub³™ Worm Gear Drives Mechanical Rating (1.0 SF) & Continuous Duty Thermal Rating*

*** A THERMAL RATING MAY APPLY TO SOME SS320 APPLICATIONS. SEE REFERENCE #4 ON PAGE O-8 FOR FURTHER INFORMATION**

OVERHUNG LOAD - LOW SPEED SHAFT — MODELS 181 AND 184 400 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 182, AND 185 NOT APPLICABLE.
MODELS 211 AND 214 550 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 212, AND 215 NOT APPLICABLE.
MODELS 261 AND 264 850 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 262, AND 265 NOT APPLICABLE.
MODELS 321 AND 324 1,100 LBS. AT CENTER POINT OF SHAFT EXTENSION. MODELS 322, AND 325 NOT APPLICABLE.

*OHL AND THRUST VALUES SHOWN ARE INDEPENDENT FUNCTIONS AND CANNOT BE APPLIED SIMULTANEOUSLY. REFER APPLICATIONS WITH COMBINED OHL AND THRUST TO HUB CITY CUSTOMER SERVICE DEPARTMENT.

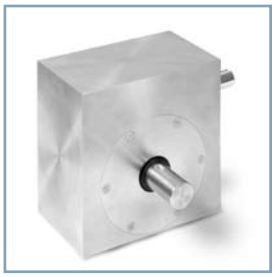
CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

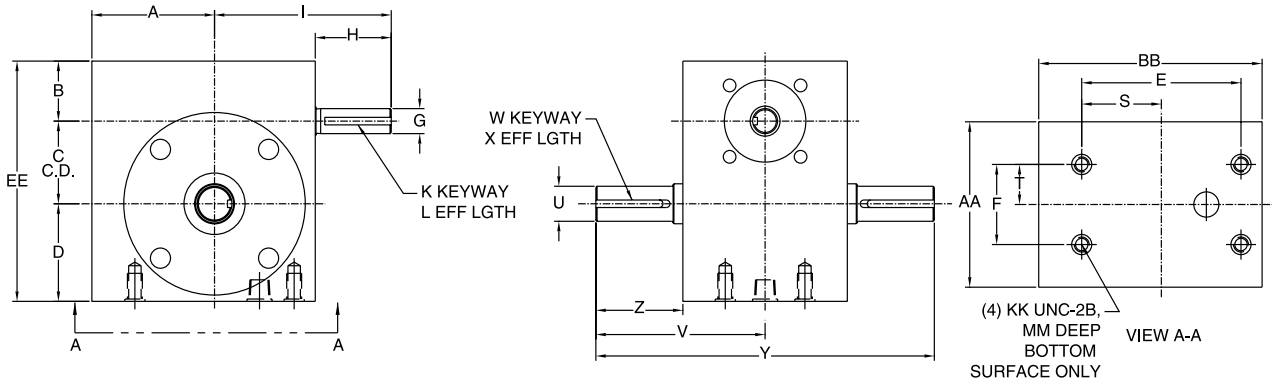
HUB³™ WORM GEAR DRIVES MODELS SS181, SS211, SS261 & SS321

FEATURES:

- 316 Stainless Steel Housings & Output Shafts
- Plated Input Shafts
- Sealed Non-Vented Housing
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Lubricant
- Universal Mounting Capability

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP: EXAMPLE SSP181





MODEL	A	B	C	D	E	F	G	H	I	K	L
SS181	2.65	1.374	1.751	1.875	3.125	1.625	.500/.499	1.83	4.00	1/8 X 1/16	1.40
SS211	3.08	1.499	2.064	2.437	4.000	2.000	.625/.624	1.91	4.44	3/16 X 3/32	1.38
SS261	3.46	1.874	2.626	2.938	4.875	2.688	.625/.624	2.73	5.63	3/16 X 3/32	2.20
SS321	4.20	2.124	3.251	3.250	6.250	2.750	.875/.874	2.56	6.75	3/16 X 3/32	2.00

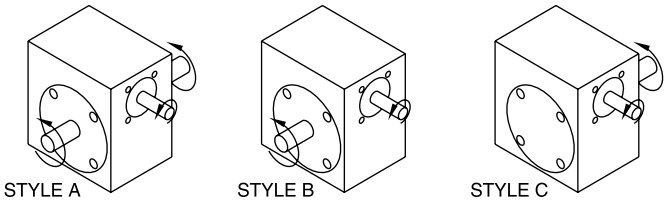
MODEL	S	T	U	V	W	X	Y	Z	AA	BB
SS181	1.56	.81	.750/.749	3.50	3/16 X 3/32	1.30	7.00	1.75	3.50	4.82
SS211	2.00	1.00	.875/.874	4.25	3/16 X 3/32	1.59	8.50	2.19	4.13	5.61
SS261	2.44	1.34	1.250/1.249	4.50	1/4 X 1/8	1.78	9.00	2.23	4.54	6.36
SS321	3.13	1.38	1.375/1.374	5.44	5/16 X 5/32	2.05	10.88	2.74	5.40	8.39

MODEL	EE	KK	MM	WEIGHT (LBS)
SS181	5.000	1/4 NC	.50	16
SS211	6.000	3/8 NC	.70	25
SS261	7.438	3/8 NC	.70	37
SS321	8.625	1/2 NC	.90	75

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL INPUT SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

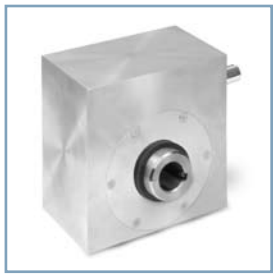
HUB³™ WORM GEAR DRIVES MODELS SS182, SS212, SS262 & SS322

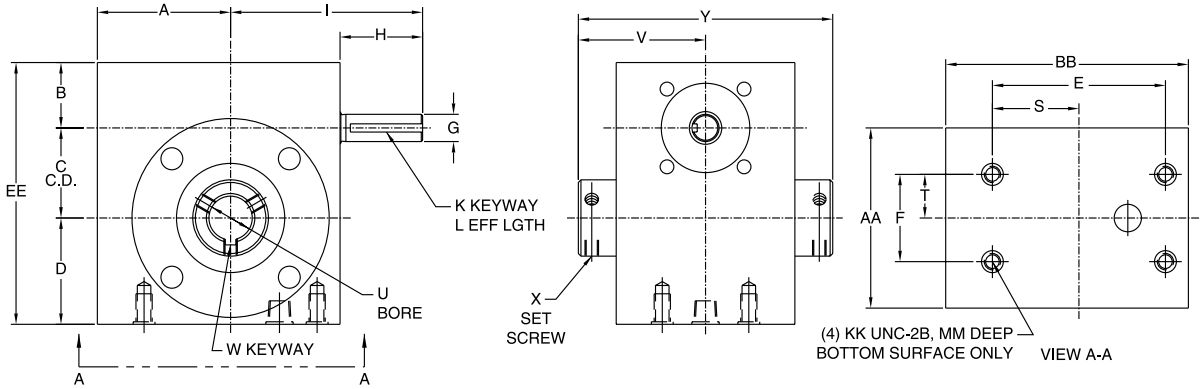
FEATURES:

- 316 Stainless Steel Housings & Output Sleeves
- Plated Input Shafts
- Sealed Non-Vented Housing
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Lubricant
- Universal Mounting Capability
- Optional Seize Proof Output Sleeve Liners Available

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP: EXAMPLE SSP182

SHAFT MOUNTED UNITS REQUIRE TORQUE ARM. TORQUE ARM KITS ARE AVAILABLE, SEE PAGE O-27





MODEL	A	B	C	D	E	F	G	H	I	K	L	S	T	V	Y
SS182	2.65	1.374	1.751	1.875	3.125	1.625	.500/.499	1.83	4.00	1/8 X 1/16	1.40	1.56	.81	2.40	4.81
SS212	3.08	1.499	2.064	2.437	4.000	2.000	.625/.624	1.91	4.44	3/16 X 3/32	1.38	2.00	1.00	2.94	5.88
SS262	3.46	1.874	2.626	2.938	4.875	2.688	.625/.624	2.73	5.63	3/16 X 3/32	2.20	2.44	1.34	3.12	6.25
SS322	4.20	2.124	3.251	3.250	6.250	2.750	.875/.874	2.56	6.75	3/16 X 3/32	2.00	3.13	1.38	3.78	7.56

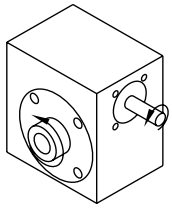
STOCK BORES

MODEL	U	W	X	KEY FURNISHED
SS182	.9375	1/4 X 1/8	1/4 UNC	1/4 Sq.
	1.000 (MAX)	1/4 X 1/8	1/4 UNC	1/4 Sq.
SS212	1.000	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.1875	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.250 (MAX)	1/4 X 1/8	5/16 UNC	1/4 Sq.
SS262	1.000	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.1875	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.250	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.4375 (MAX)	3/8 X 1/8	1/4 UNC OVER KW 5/16 UNC NON KW	3/8 X 5/16
SS322	1.4375	3/8 X 3/16	3/8 UNC	3/8 Sq.
	1.9375	1/2 X 1/4	3/8 UNC	1/2 Sq.
	2.188 (MAX)	1/2 X 1/8	3/8 UNC	1/2 Sq.

MODEL	AA	BB	EE	KK	MM	WEIGHT (LBS)
SS182	3.50	4.82	5.000	1/4 NC	.50	16
SS212	4.13	5.61	6.000	3/8 NC	.70	25
SS262	4.54	6.36	7.438	3/8 NC	.70	37
SS322	5.40	8.39	8.625	1/2 NC	.90	75

BORE TOLERANCE: NOMINAL +.002

STANDARD STYLES AVAILABLE



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

CONSULT FACTORY FOR VERTICAL INPUT SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ MOTORIZED WORM GEAR DRIVES MODELS SS184, SS214, SS264 & SS324

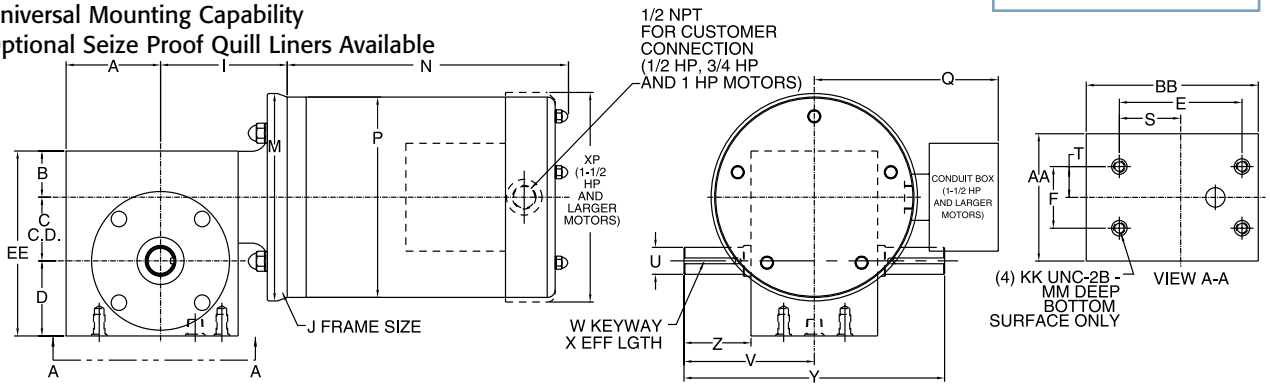
FEATURES:

- 316 Stainless Steel Housings & Shafts
- LEESON WASHGUARD All-Stainless Motors
- Integrated Rear Conduit Box 1/4 thru 1 hp
- Sealed Non-Vented Housing
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Lubricant
- Universal Mounting Capability
- Optional Seize Proof Quill Liners Available

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP: EXAMPLE SSP184





MODEL	A	B	C	D	E	F	I	J	M
SS184	2.65	1.374	1.751	1.875	3.125	1.625	3.75	56C	6.73
SS214	3.08	1.499	2.064	2.437	4.000	2.000	4.13	56C	6.73
								143TC	
SS264	3.46	1.874	2.626	2.938	4.875	2.688	4.50	56C	6.73
								143TC	
							5.00	182TC	9.00
SS324	4.20	2.124	3.251	3.250	6.250	2.750	5.50	56C	6.73
								143TC	
							6.25	182TC	9.00

MOTOR HP	FRAME	STYLE	N	P	Q	XP	MOTOR WT
1/4 HP	56C	TENV	9.15	6.50	NA	NA	30
1/3 HP	56C	TENV	9.15	6.50	NA	NA	30
1/2 HP	56C	TENV	10.15	6.50	NA	NA	32
3/4 HP	56C	TENV	10.65	6.50	NA	NA	39
1 HP	56C	TENV	11.65	6.50	NA	NA	40
1-1/2 HP	143TC	TEFC	11.57	6.60	6.19	7.16	46
2 HP	143TC	TEFC	12.07	6.60	6.19	7.16	47
3 HP	182TC	TEFC	11.99	8.53	7.19	9.22	67
5 HP	182TC	TEFC	12.99	8.53	7.19	9.22	79

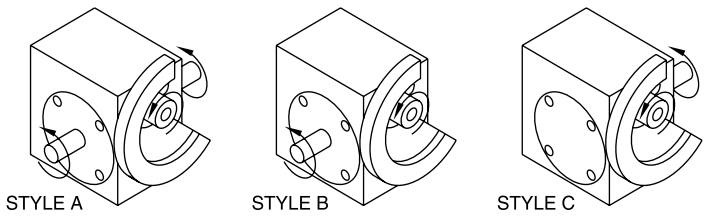
MOTORS ARE 1750 RPM - 230/460 VOLT - 3 PHASE - SOLD SEPARATELY

MODEL	S	T	U	V	W	X	Y	Z	AA	BB	EE	KK	MM	WEIGHT* (LBS)
SS184	1.56	.81	.750/.749	3.50	3/16 X 3/32	1.30	7.00	1.75	3.50	4.82	5.000	1/4 NC	.50	21
SS214	2.00	1.00	.875/.874	4.25	3/16 X 3/32	1.59	8.50	2.19	4.13	5.61	6.000	3/8 NC	.70	30
SS264	2.44	1.34	1.250/1.249	4.50	1/4 X 1/8	1.78	9.00	2.23	4.54	6.36	7.438	3/8 NC	.70	42
SS324	3.13	1.38	1.375/1.374	5.44	5/16 X 5/32	2.05	10.88	2.74	5.40	8.39	8.625	1/2 NC	.90	80

*WEIGHT OF GEAR BOX ONLY -DOES NOT INCLUDE MOTOR.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL INPUT SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ MOTORIZED WORM GEAR DRIVES MODELS SS185, SS215, SS265 & SS325

FEATURES:

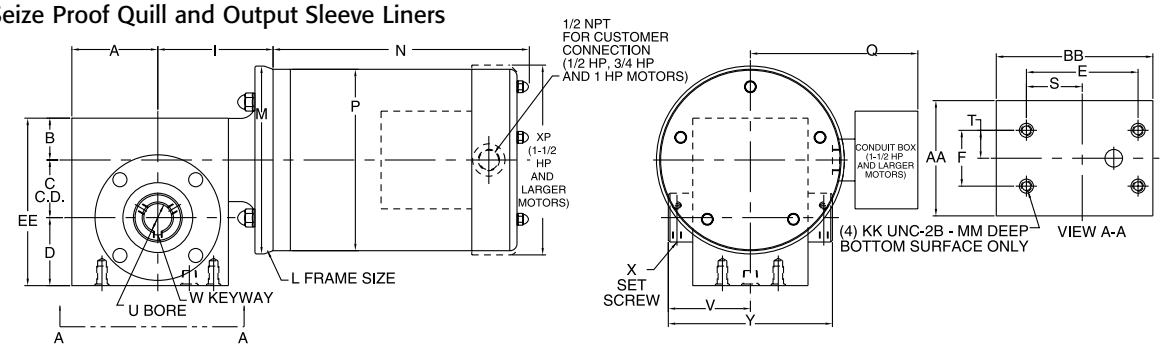
- 316 Stainless Steel Housings & Output Sleeves
- LEESON WASHGUARD All-Stainless Motors
- Integrated Rear Conduit Box 1/4 thru 1 hp
- Sealed Non-Vented Housing
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Lubricant
- Universal Mounting Capability
- Optional Seize Proof Quill and Output Sleeve Liners Available

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP: EXAMPLE SSP185

SHAFT MOUNTED UNITS REQUIRE TORQUE ARM. TORQUE ARM KITS ARE AVAILABLE, SEE PAGE O-27





MODEL	A	B	C	D	E	F	I	J	M
SS185	2.65	1.374	1.751	1.875	3.125	1.625	3.75	56C	6.73
SS215	3.08	1.499	2.064	2.437	4.000	2.000	4.13	56C	6.73
								143TC	
SS265	3.46	1.874	2.626	2.938	4.875	2.688	4.50	56C	6.73
								143TC	
							5.00	182TC	9.00
SS325	4.20	2.124	3.251	3.250	6.250	2.750	5.50	56C	6.73
								143TC	
							6.25	182TC	9.00

MOTOR HP	FRAME	STYLE	N	P	Q	XP	MOTOR WT
1/4 HP	56C	TENV	9.15	6.50	NA	NA	30
1/3 HP	56C	TENV	9.15	6.50	NA	NA	30
1/2 HP	56C	TENV	10.15	6.50	NA	NA	32
3/4 HP	56C	TENV	10.65	6.50	NA	NA	39
1 HP	56C	TENV	11.65	6.50	NA	NA	40
1-1/2 HP	143TC	TEFC	11.57	6.60	6.19	7.16	46
2 HP	143TC	TEFC	12.07	6.60	6.19	7.16	47
3 HP	182TC	TEFC	11.99	8.53	7.19	9.22	67
5 HP	182TC	TEFC	12.99	8.53	7.19	9.22	79

MOTORS ARE 1750 RPM - 230/460 VOLT - 3 PHASE - SOLD SEPARATELY

MODEL	S	T	V	Y	AA	BB	EE	KK	MM	WGT* (LBS)
SS185	1.56	.81	2.40	4.81	3.50	4.82	5.000	1/4 NC	.50	21
SS215	2.00	1.00	2.94	5.88	4.13	5.61	6.000	3/8 NC	.70	30
SS265	2.44	1.34	3.12	6.25	4.54	6.36	7.438	3/8 NC	.70	42
SS325	3.13	2.75	3.78	7.56	5.40	8.39	8.625	1/2 NC	.90	80

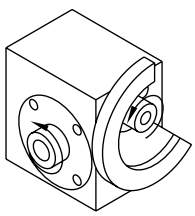
*WEIGHT OF GEAR BOX ONLY -DOES NOT INCLUDE MOTOR.

STOCK BORES

MODEL	U	W	X	KEY FURNISHED
SS185	.9375	1/4 X 1/8	1/4 UNC	1/4 Sq.
	1.000 (MAX)	1/4 X 1/8	1/4 UNC	1/4 Sq.
SS215	1.000	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.1875	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.250 (MAX)	1/4 X 1/8	5/16 UNC	1/4 Sq.
SS265	1.000	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.1875	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.250	1/4 X 1/8	5/16 UNC	1/4 Sq.
	1.4375 (MAX)	3/8 X 1/8	1/4 UNC OVER KW 5/16 UNC NON KW	3/8 X 5/16
SS325	1.4375	3/8 X 3/16	3/8 UNC	3/8 Sq.
	1.9375	1/2 X 1/4	3/8 UNC	1/2 Sq.
	2.188 (MAX)	1/2 X 1/8	3/8 UNC	1/2 Sq.

BORE TOLERANCE: NOMINAL +.002

STANDARD STYLES AVAILABLE



DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

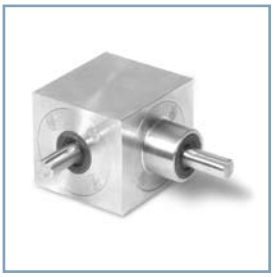
CONSULT FACTORY FOR VERTICAL INPUT SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ BEVEL GEAR DRIVES MODEL SSM3

FEATURES

- 316 Series Stainless Steel Housings & Shafts
- All Exterior Surfaces Machined
- Precision Ball Bearings to Accommodate Higher Operating Speeds.
- Choice of Five (5) Gear Ratios.
- Factory Configured for Universal Mounting Assures Maximum Design Flexibility
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Lubricant



NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSPM3

RATING TABLE

INPUT RPM†		REDUCTION RATIOS				
		1:1	SPIRAL 1:1Δ	1.5:1	2:1	SPIRAL 2:1Δ
3000	INPUT HORSEPOWER		3.59	2.60	1.75	1.77
	OUTPUT TORQUE IN. LBS.		75.50	82.00	73.00	74.20
	‡INPUT O.H.L.		25.00	72.00	83.00	30.00
	‡OUTPUT O.H.L.		70.00	200.00	245.00	100.00
2400	INPUT HORSEPOWER	3.00	2.95	2.10	1.40	1.45
	OUTPUT TORQUE IN. LBS.	79.00	77.40	83.00	74.00	76.10
	‡INPUT O.H.L.	67.00	45.00	85.00	90.00	50.00
	‡OUTPUT O.H.L.	155.00	105.00	220.00	270.00	135.00
1750	INPUT HORSEPOWER	2.25	2.19	1.57	1.04	1.07
	OUTPUT TORQUE IN. LBS.	81.00	78.70	84.00	75.00	77.20
	‡INPUT O.H.L.	88.00	60.00	98.00	102.00	70.00
	‡OUTPUT O.H.L.	177.00	150.00	245.00	300.00	180.00
1150	INPUT HORSEPOWER	1.50	1.47	1.03	.70	.72
	OUTPUT TORQUE IN. LBS.	83.00	80.30	85.00	77.00	78.60
	‡INPUT O.H.L.	110.00	90.00	118.00	121.00	95.00
	‡OUTPUT O.H.L.	205.00	175.00	290.00	350.00	210.00
850	INPUT HORSEPOWER	1.13	1.10	.80	.53	.54
	OUTPUT TORQUE IN. LBS.	84.00	81.30	88.00	78.00	79.40
	‡INPUT O.H.L.	131.00	100.00	137.00	142.00	105.00
	‡OUTPUT O.H.L.	240.00	210.00	320.00	382.00	240.00
690	INPUT HORSEPOWER	.93	.90	.65	.43	.44
	OUTPUT TORQUE IN. LBS.	85.00	81.90	89.00	80.00	80.00
	‡INPUT O.H.L.	137.00	110.00	144.00	148.00	112.00
	‡OUTPUT O.H.L.	267.00	230.00	350.00	400.00	270.00
400	INPUT HORSEPOWER	.55	.53	.39	.26	.26
	OUTPUT TORQUE IN. LBS.	87.00	83.30	92.00	82.00	81.20
	‡INPUT O.H.L.	169.00	125.00	175.00	180.00	138.00
	‡OUTPUT O.H.L.	330.00	300.00	400.00	400.00	330.00
300	INPUT HORSEPOWER	.42	.40	.30	.20	.19
	OUTPUT TORQUE IN. LBS.	88.00	84.70	95.00	83.00	82.40
	‡INPUT O.H.L.	189.00	150.00	190.00	190.00	152.00
	‡OUTPUT O.H.L.	378.00	400.00	400.00	400.00	400.00
100	INPUT HORSEPOWER	.14	.14	.12	.08	.07
	OUTPUT TORQUE IN. LBS.	90.00	85.80	113.00	100.00	83.20
	‡INPUT O.H.L.	190.00	160.00	190.00	190.00	175.00
	‡OUTPUT O.H.L.	400.00	400.00	400.00	400.00	400.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.

‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.
ΔMFG. TO ORDER - CONSULT FACTORY FOR PRICE AND DELIVERY.

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ BEVEL GEAR DRIVES MODELS SS165 & SS175





FEATURES

- 316 Series Stainless Steel Housings & Shafts
- All Exterior Surface Machined
- Tapered Roller Bearings for Endurance and Strength
- Choice of Seven (7) Gear Ratios
- Sealed — Non-Vented Housing
- Factory Configured for Universal Mounting Assures Maximum Design Flexibility
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Food Grade Lubricant

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP165 OR SSP175

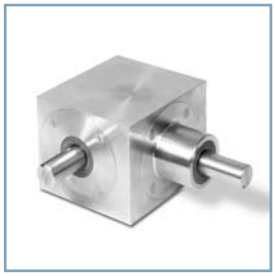
RATING TABLE

INPUT RPM†		REDUCTION RATIOS						
		1:1*	SPIRAL 1:1	1.5:1*	SPIRAL 1.5:1	2:1*	SPIRAL 2:1	SPIRAL 3:1
3000	INPUT HORSEPOWER		26.87		28.00		16.75	8.70
	OUTPUT TORQUE IN. LBS.		564.00		883.00		703.00	548.00
	‡INPUT O.H.L.		25.00		25.00		55.00	225.00
	‡OUTPUT O.H.L.		160.00		200.00		500.00	625.00
2400	INPUT HORSEPOWER		21.80		22.70	9.00	13.65	7.00
	OUTPUT TORQUE IN. LBS.		570.00		895.00	341.00	717.00	554.00
	‡INPUT O.H.L.		54.00		50.00	330.00	85.00	275.00
	‡OUTPUT O.H.L.		215.00		225.00	410.00	600.00	700.00
1750	INPUT HORSEPOWER		16.00	9.20	16.90	6.25	10.25	5.20
	OUTPUT TORQUE IN. LBS.		580.00	500.00	911.00	442.00	736.00	562.00
	‡INPUT O.H.L.		114.00	366.00	75.00	372.00	125.00	350.00
	‡OUTPUT O.H.L.		265.00	320.00	275.00	455.00	665.00	775.00
1150	INPUT HORSEPOWER	17.00	11.00	6.20	11.30	4.25	7.00	3.50
	OUTPUT TORQUE IN. LBS.	930.00	600.00	510.00	930.00	465.00	761.00	571.00
	‡INPUT O.H.L.	79.00	182.00	426.00	125.00	434.00	200.00	475.00
	‡OUTPUT O.H.L.	260.00	310.00	380.00	375.00	525.00	750.00	800.00
850	INPUT HORSEPOWER	13.00	8.30	4.70	8.50	3.25	5.25	2.60
	OUTPUT TORQUE IN. LBS.	960.00	615.00	520.00	941.00	481.00	777.00	576.00
	‡INPUT O.H.L.	121.00	211.00	473.00	250.00	481.00	280.00	575.00
	‡OUTPUT O.H.L.	305.00	355.00	425.00	450.00	555.00	800.00	800.00
690	INPUT HORSEPOWER	10.60	6.80	3.90	6.90	2.70	4.30	2.10
	OUTPUT TORQUE IN. LBS.	970.00	620.00	530.00	950.00	494.00	788.00	578.00
	‡INPUT O.H.L.	156.00	243.00	508.00	325.00	517.00	345.00	600.00
	‡OUTPUT O.H.L.	345.00	395.00	470.00	500.00	575.00	800.00	800.00
400	INPUT HORSEPOWER	6.30	4.10	2.30	4.10	1.60	2.60	1.24
	OUTPUT TORQUE IN. LBS.	1000.00	645.00	550.00	964.00	504.00	815.00	586.00
	‡INPUT O.H.L.	374.00	319.00	600.00	375.00	600.00	500.00	600.00
	‡OUTPUT O.H.L.	425.00	475.00	610.00	650.00	780.00	800.00	800.00
300	INPUT HORSEPOWER	5.00	3.10	1.80	3.10	1.25	2.00	.94
	OUTPUT TORQUE IN. LBS.	1010.00	650.00	560.00	974.00	525.00	829.00	592.00
	‡INPUT O.H.L.	450.00	384.00	600.00	475.00	600.00	600.00	600.00
	‡OUTPUT O.H.L.	500.00	550.00	655.00	750.00	800.00	800.00	800.00
100	INPUT HORSEPOWER	1.65	1.10	.65	1.05	.50	.70	.32
	OUTPUT TORQUE IN. LBS.	1040.00	693.00	615.00	993.00	630.00	876.00	605.00
	‡INPUT O.H.L.	600.00	600.00	600.00	600.00	600.00	600.00	600.00
	‡OUTPUT O.H.L.	775.00	800.00	800.00	800.00	800.00	800.00	800.00

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
‡OVERHUNG LOAD IN POUNDS AT CENTER OF SHAFT EXTENSIONS.
* NOT AVAILABLE IN MODEL 175

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ BEVEL GEAR DRIVES MODELS SS66 & SS65





FEATURES

- 316 Series Stainless Steel Housings & Shafts
- All Exterior Surface Machined
- Tapered Roller Bearings for Endurance and Strength
- Choice of Seven (7) Gear Ratios
- Factory Configured for Universal Mounting Assures Maximum Design Flexibility
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Factory Filled with USDA H1 Food Grade Lubricant

NOTE: CLEANLINE PHARMACEUTICAL FEATURES, POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSP66 OR SSP65

RATING TABLE

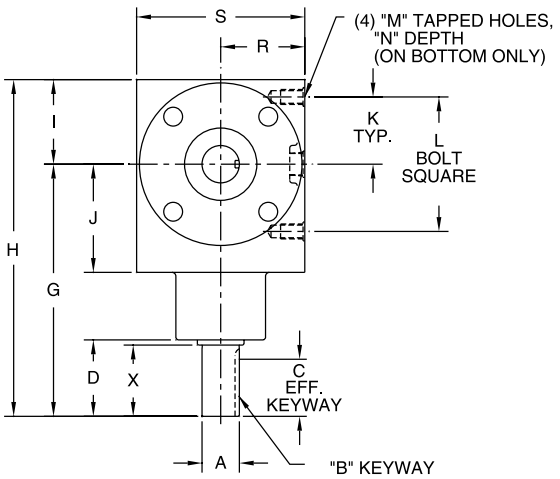
		REDUCTION RATIOS						
INPUT RPM†		1:1*	SPIRAL 1:1	1.5:1*	SPIRAL 1.53:1	2:1*	SPIRAL 2:1	SPIRAL 3:1
3000	INPUT HORSEPOWER				56.00		25.50	15.40
	OUTPUT TORQUE IN. LBS.				1765.00		1072.00	951.00
	‡INPUT O.H.L.				38.00		100.00	35.00
	‡OUTPUT O.H.L.				80.00		725.00	100.00
2400	INPUT HORSEPOWER		59.00		46.00		20.67	12.50
	OUTPUT TORQUE IN. LBS.		1550.00		1810.00		1085.00	961.00
	‡INPUT O.H.L.		30.00		59.00		125.00	45.00
	‡OUTPUT O.H.L.		65.00		100.00		800.00	225.00
1750	INPUT HORSEPOWER		46.00	15.00	35.00	7.30	15.40	9.20
	OUTPUT TORQUE IN. LBS.		1650.00	810.00	1887.00	525.00	1112.00	975.00
	‡INPUT O.H.L.		62.00	351.00	97.00	459.00	225.00	85.00
	‡OUTPUT O.H.L.		100.00	300.00	140.00	330.00	900.00	350.00
1150	INPUT HORSEPOWER	24.20	30.50	10.60	23.00	5.40	10.30	6.15
	OUTPUT TORQUE IN. LBS.	1320.00	1670.00	870.00	1930.00	591.00	1125.70	989.00
	‡INPUT O.H.L.	126.00	109.00	446.00	133.00	521.00	400.00	100.00
	‡OUTPUT O.H.L.	190.00	160.00	340.00	190.00	380.00	1075.00	500.00
850	INPUT HORSEPOWER	19.00	24.00	8.20	18.00	4.50	7.68	4.60
	OUTPUT TORQUE IN. LBS.	1410.00	1790.00	910.00	2000.00	667.00	1139.00	998.00
	‡INPUT O.H.L.	158.00	143.00	524.00	161.00	567.00	525.00	195.00
	‡OUTPUT O.H.L.	230.00	210.00	400.00	230.00	440.00	1080.00	750.00
690	INPUT HORSEPOWER	16.30	20.00	7.10	15.00	3.90	6.28	3.75
	OUTPUT TORQUE IN. LBS.	1480.00	1830.00	970.00	2050.00	712.00	1147.00	1009.00
	‡INPUT O.H.L.	213.00	178.00	558.00	217.00	603.00	600.00	215.00
	‡OUTPUT O.H.L.	265.00	250.00	445.00	270.00	465.00	1080.00	800.00
300	INPUT HORSEPOWER	8.14	10.00	3.50	7.00	1.80	2.80	1.65
	OUTPUT TORQUE IN. LBS.	1700.00	2100.00	1100.00	2205.00	756.00	1177.00	1031.00
	‡INPUT O.H.L.	418.00	312.00	744.00	421.00	806.00	900.00	550.00
	‡OUTPUT O.H.L.	425.00	420.00	645.00	425.00	715.00	1080.00	1080.00
100	INPUT HORSEPOWER	2.86	3.70	1.40	3.00	.70	.95	.55
	OUTPUT TORQUE IN. LBS.	1800.00	2330.00	1320.00	2835.00	882.00	1198.00	1056.00
	‡INPUT O.H.L.	625.00	493.00	900.00	611.00	900.00	900.00	800.00
	‡OUTPUT O.H.L.	695.00	685.00	965.00	685.00	1080.00	1080.00	1080.00
	STYLE							
WR^2 (Lb. $In.^2$) REFERRED TO HIGH SPEED SHAFT	A, B	6.29	5.42	3.10	4.04	1.87	2.17	1.24
	C, D, E, F	6.08	5.21	3.00	3.96	1.82	2.12	1.22
	G	8.76	7.45	4.43	6.27	2.59	3.19	1.68
	GG	9.21	7.90	4.46	5.47	2.81	3.08	1.97
WR^2 (Lb. $In.^2$) REFERRED TO LOW SPEED SHAFT	A, B	6.29	5.42	6.97	9.42	7.50	8.67	11.17
	C, D, E, F	6.08	5.21	6.76	9.22	7.29	8.46	10.96
	G	8.76	7.45	9.96	14.62	10.35	12.77	15.16
	GG	9.21	7.90	10.03	12.74	11.22	12.33	17.70

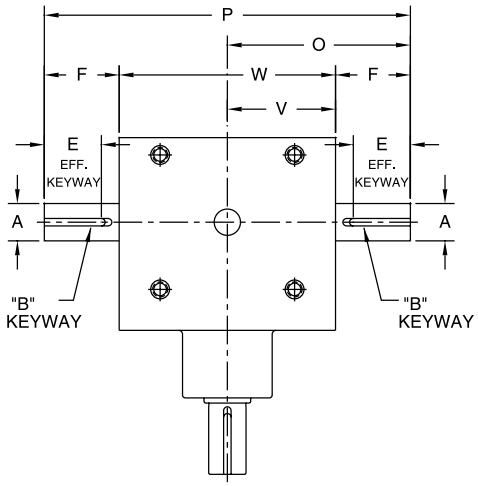
†FOR HIGHER INPUT SPEEDS CONSULT FACTORY.
* NOT AVAILABLE IN MODEL 65

‡OVERHUNG LOAD IN LBS. AT CENTER OF SHAFT EXTENSIONS.

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ BEVEL GEAR DRIVES MODELS SSM3, SS165 & SS66





	WEIGHTS (LBS)	SSM3	SS165	SS66
Styles	A,B,C,D,E,F	13	31	54
Styles	G	16	39	65

MODEL	A	B	C	D	E	F	G	H	I	J
SSM3	0.625 0.624	3/16 X 3/32 KW	1.00*	1.53	1.00	1.35	4.57	6.20	1.63	1.89
SS165	1.000 0.999	1/4 X 1/8 KW	1.44**	2.03	1.53	2.07	7.16	9.72	2.56	3.03
SS66	1.250 1.249	1/4 X 1/8 KW	1.91	2.56	1.91	2.51	8.44	11.27	2.83	3.62

MODEL	K	L	M	N	O	P	R	S	V	W	X
SSM3	1.125	2.250	5/16-18UNC-2B	0.44	3.24	6.47	1.594	3.188	1.89	3.78	N/A
SS165	2.125	4.250	3/8-16UNC-2B	0.69	5.10	10.19	2.313	4.625	3.03	6.06	1.89
SS66	2.250	4.500	1/2-13UNC-2B	0.81	6.13	12.25	2.814	5.628	3.62	7.24	N/A

* - 1.16 EFFECTIVE KEYWAY ON SSM3, 2/1 STRAIGHT BEVEL RATIO
** - 1.53 EFFECTIVE KEYWAY ON SS165, 3/1 SPIRAL BEVEL RATIO

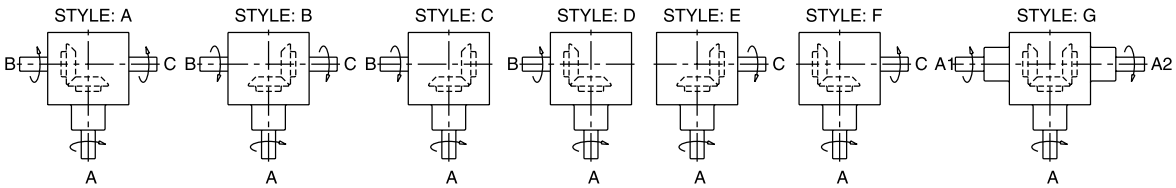
NOTE: STYLE G;
1.DIMENSIONS FOR SHAFTS A, A1AND A2 ARE IDENTICAL FOR ALL RATIOS.
2. CENTERLINE TO END OF SHAFT DIMENSIONS WILL VARY. REQUEST CERTIFIED DIMENSIONAL PRINTS.

"A" SHAFT EXTENSION ON SSM3 2/1 STRAIGHT BEVEL, SS165 3/1 SPIRAL BEVEL AND SS66 3/1 SPIRAL BEVEL RATIOS ARE MADE FROM 8620 STEEL TREATED FOR CORROSION RESISTANCE.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE

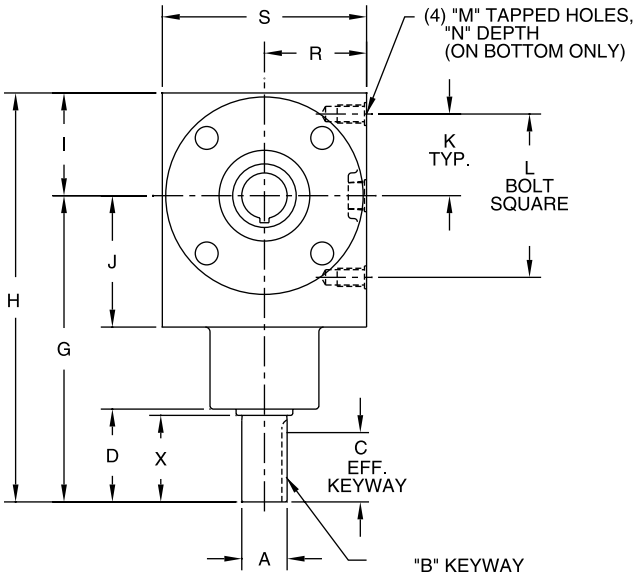
(Viewed from Top of Gear Drives - Mounting Holes on Bottom Surface **Only)**

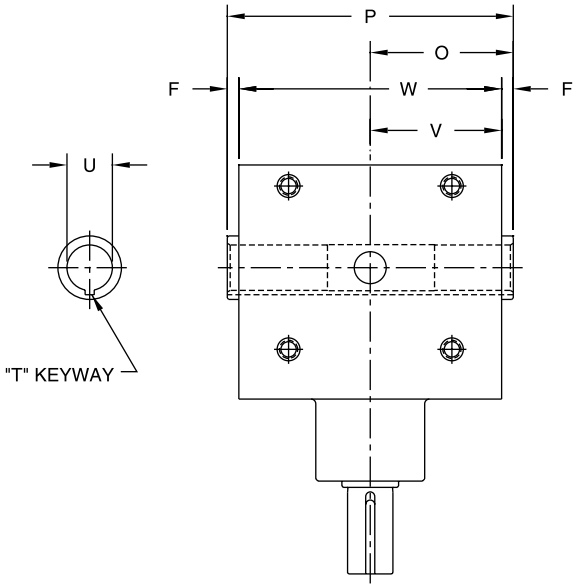


CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ BEVEL GEAR DRIVES MODELS SS175 & SS65





WEIGHTS (LBS)	SS175	SS65
	33	60

MODEL	A	B	C	D	F	G	H	I	J	K	L
SS175	1.000 0.999	1/4 X 1/8 KW	1.44**	2.03	0.17	7.16	9.72	2.56	3.03	2.125	4.250
SS65	1.250 1.249	1/4 X 1/8 KW	1.91	2.56	0.32	8.44	11.27	2.83	3.62	2.250	4.500

MODEL	M	N	O	P	R	S	T	U	V	W	X
SS175	3/8-16UNC-2B	0.69	3.20	6.40	2.313	4.625	1/4 X 1/8 KW	1.0000 1.0025	3.30	6.06	1.89
SS65	1/2-13UNC-2B	0.81	3.94	7.88	2.814	5.628	1/4 X 1/8 KW	1.2500 1.2525	3.62	7.24	N/A

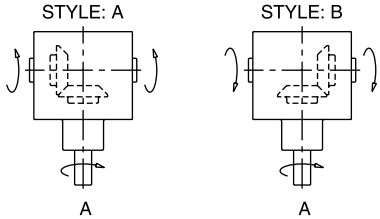
** - 1.53 EFFECTIVE KEYWAY ON SS175, 3/1 SPIRAL BEVEL RATIO

"A" SHAFT EXTENSION ON SS175 3/1 SPIRAL BEVEL AND SS65 3/1 SPIRAL BEVEL RATIOS ARE MADE FROM 8620 STEEL TREATED FOR CORROSION RESISTANCE.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

STANDARD STYLES AVAILABLE

(Viewed from Top of Gear Drives - Mounting Holes on Bottom SURFACE **Only)**



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ HELICAL INLINE GEAR DRIVES MODELS SSHI4042 & SSHI4062

FEATURES



- Ratios from 2.57/1 to 51.25/1
- Power Ratings to 18HP
- Two Models: SSHI4042 and SSHI4062
- Smooth Cast Surface Finish
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- 316 Stainless Steel Housings & Shafts
- HACCP Compatible
- BISSC Certified
- Packaged with LEESON WASHGUARD All-Stainless Motors
- Optional Seize Proof Quill Liners Available
- 95% Efficiency Ratings

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSHBP2043 OR SSHBP2063

RATING TABLE

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
SSHI4042						
2.63	665	11.2	1020	530	140	610
2.95	593	10.4	1060	550	140	630
3.31	529	9.61	1100	570	140	650
3.72	470	9.10	1170	580	140	660
4.21	416	8.79	1280	590	140	650
4.78	366	7.75	1280	620	140	690
5.47	320	6.77	1280	650	140	730
5.87	298	6.31	1280	680	140	780
6.13	285	6.79	1440	710	140	840
6.86	255	6.16	1460	740	140	880
7.70	227	5.56	1480	770	140	920
8.67	202	5.17	1550	790	140	950
9.80	179	4.75	1610	820	140	980
11.14	157	4.41	1700	850	140	1010
12.74	137	3.95	1740	890	140	1060
13.67	128	3.77	1780	920	140	1100
16.66	105	3.13	1800	980	140	1250
20.77	84	2.52	1810	1050	140	1250
25.04	70	2.10	1820	1150	140	1250
28.79	61	1.84	1830	1150	140	1250
36.56	48	1.46	1840	1150	140	1250
44.10	40	1.21	1850	1150	140	1250
50.47	35	1.01	1770	1150	140	1250
SSHI4062						
2.57	681	18.6	1650	960	200	890
3.08	568	16.5	1760	1010	200	930
3.90	449	13.9	1880	1090	200	1000
4.52	387	12.6	1970	1140	200	1050
5.98	293	15.8	3260	1080	200	870
7.16	244	13.5	3340	1180	200	990
9.06	193	11.0	3450	1290	200	1110
10.52	166	10.1	3680	1340	200	1140
13.75	127	8.22	3910	1470	200	1260
16.43	107	7.04	4000	1560	200	1370
17.50	100	6.63	4010	1600	200	1400
20.00	88	5.83	4030	1600	200	1400
21.47	82	5.44	4040	1600	200	1400
25.00	70	4.69	4050	1600	200	1400
27.14	64	4.33	4060	1600	200	1400
29.62	59	3.97	4070	1600	200	1400
32.50	54	3.64	4090	1600	200	1400
35.91	48.7	3.30	4100	1600	200	1400
45.00	38.9	2.64	4110	1600	200	1400
51.25	34.1	2.33	4120	1600	200	1400

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ HELICAL INLINE GEAR DRIVES MODELS SSHI4042 & SSHI4062

MODELS SSHI4042E & SSHI4062E

GEARCASE

MODEL	A	AD	B	BA	D	E	F	H	OA
SSHI4042E	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	4.33	5.12	0.39	6.68
SSHI4062E	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.53	8.48

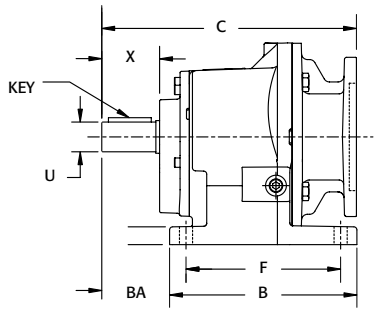
OUTPUT SHAFT

MODEL	U	X	KEY
SSHI4042E	$1.000^{+0}_{-.001}$	2.12	1/4 x 1/4 x 1-1/2
SSHI4062E	$1.375^{+0}_{-.001}$	2.83	5/16 x 5/16 x 1-3/4

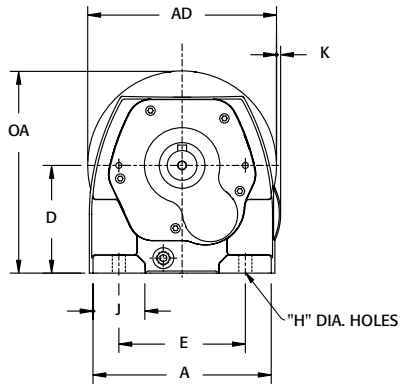
MOTOR COMPATIBILITY - NEMA

MODEL	NEMA			
	56C	143TC 145TC	182TC 184TC	213TC 215TC
SSHI4042E C	9.90	9.90	11.21	-
SSHI4062E C	11.10	11.10	12.12	12.12

SSHI4062E ALSO AVAILABLE WITH 1.250" OUTPUT SHAFT



DIMENSIONS ARE INCH



MODELS SSHI4042A & SSHI4062A

GEARCASE

MODEL	A	AD	B	BA	D	E	F	H	OA
SSHI4042A	5.72	6.61	6.30	2.95	$3.54^{+0}_{-.02}$	4.33	5.12	0.39	6.68
SSHI4062A	7.48	7.93	7.87	3.94	$4.53^{+0}_{-.02}$	5.32	6.50	0.53	8.48

OUTPUT SHAFT *

MODEL	U	X	KEY
SSHI4042A	$1.000^{+0}_{-.001}$	2.12	1/4 x 1/4 x 1-1/2
SSHI4062A	$1.375^{+0}_{-.001}$	2.83	5/16 x 5/16 x 1-3/4

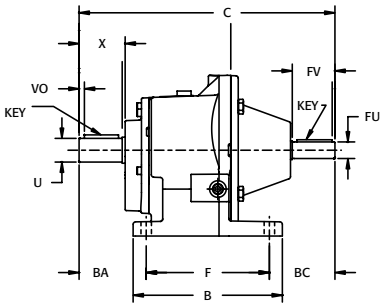
INPUT SHAFT *

MODEL	FU	FV	KEY
SSHI4042A	$0.750^{+0}_{-.001}$	1.57	3/16 x 3/16 x 1-1/16
SSHI4062A	$0.875^{+0}_{-.001}$	2.25	3/16 x 3/16 x 2

GEARCASE/INPUT

MODEL	BC	C
SSHI4042A	3.56	11.63
SSHI4062A	3.45	13.89

* SEE PAGES I-64 AND I-65 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.



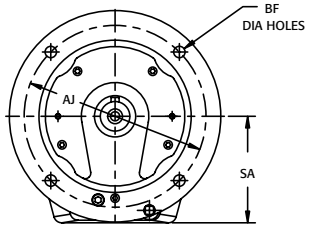
DIMENSIONS ARE INCH/ mm

CALL: (605) 225-0360 • FAX: (605) 225-0567

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ HELICAL INLINE GEAR DRIVES MODELS SSHI4042 & SSHI4062

MODELS SSHI4042G & SSHI4062G



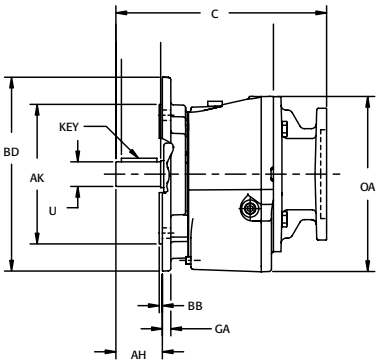
GEARCASE

MODEL	OA	SA
SSHI4042G	7.22	4.04
SSHI4062G	8.92	4.96

OUTPUT SHAFT *

MODEL	AH	AJ	AK	BB	BD	BF	U	KEY
SSHI4042G	1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	$1.000^{+0}_{-.001}$	1/4 x 1/4 x 1-1/2
SSHI4062G	2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	$1.375^{+0}_{-.001}$	5/16 x 5/16 x 1-3/4

DIMENSIONS ARE INCH/ mm

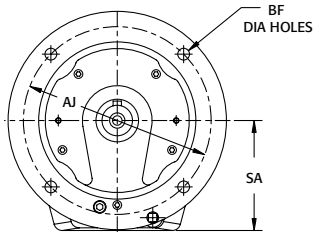


MOTOR COMPATIBILITY - NEMA

MODEL	NEMA			
	56C	143TC 145TC	182TC 184TC	213TC 215TC
SSHI4042G C	9.90	9.90	11.21	-
SSHI4062G C	11.10	11.10	12.12	12.12

* SEE PAGES I-64 AND I-65 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

MODELS SSHI4042C & SSHI4062C



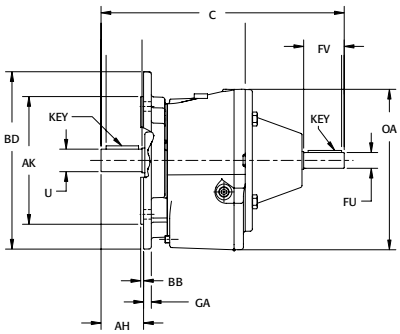
DIMENSIONS ARE INCH/ mm

GEARCASE

MODEL	OA	SA
SSHI4042C	7.22	4.04
SSHI4062C	8.92	4.96

OUTPUT SHAFT *

MODEL	AH	AJ	AK	BB	BD	BF	U	KEY
SSHI4042C	1.97	6.50	$5.118^{+0}_{-.002}$	0.14	7.90	0.47	$1.000^{+0}_{-.001}$	1/4 x 1/4 x 1-1/2
SSHI4062C	2.76	8.46	$7.087^{-.0004}_{-.0029}$	0.16	9.84	0.53	$1.375^{+0}_{-.001}$	5/16 x 5/16 x 1-3/4



INPUT SHAFT *

MODEL	FU	FV	KEY
SSHI4042C	$0.750^{+0}_{-.001}$	1.57	3/16 x 3/16 x 1-1/16
SSHI4062C	$0.875^{+0}_{-.001}$	2.25	3/16 x 3/16 x 2

GEARCASE/INPUT

MODEL	C
HI4042C	11.63
HI4062C	13.89

* SEE PAGES I-64 AND I-65 FOR ADDITIONAL SHAFT DIAMETERS AVAILABLE.

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

HUB³™ HELICAL-BEVEL GEAR DRIVES MODELS SSHB2043 & SSHB2063

FEATURES



- Ratios from 6:1 to 140:1
- Power Ratings from 3/4 to 12 hp
- 316 Stainless Steel Housing and Shafts
- Surface Finish Machined to R_a of 70µin
- Patented
- Optional Seize Proof Quill & Sleeve Output Liners Available
- 93% Efficiency Ratings

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SSHBP2043 OR SSHBP2063

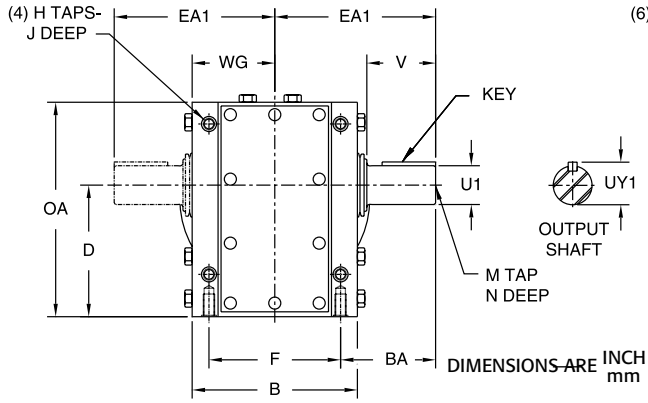
RATING TABLE

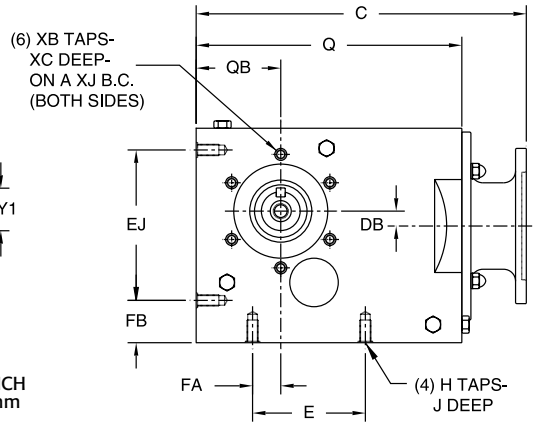
RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
SSHB2043						
6.53	268	10	2210	650	140	1730
7.31	239	9.0	2230	675	140	1730
9.24	189	7.5	2350	700	140	1730
12.07	145	7.6	3100	800	140	1950
13.51	130	6.9	3150	770	140	1950
17.08	102	5.8	3350	830	140	1950
21.94	80	4.8	3540	930	140	1950
25.10	70	4.2	3540	1050	140	1950
30.37	58	3.4	3540	1150	140	1950
38.38	46	2.7	3540	1250	140	1950
49.31	35	2.1	3540	1250	140	1950
56.41	31	1.9	3540	1250	140	1950
73.76	24	1.4	3540	1250	140	1950
91.94	19	1.1	3540	1250	140	1950
110.88	16	0.9	3540	1250	140	1950
127.45	14	0.8	3540	1250	140	1950
SSHB2063						
6.22	281	12	2530	2050	200	2850
7.46	235	11	2880	2050	200	2850
9.44	185	10	3250	2050	200	2850
11.25	156	11	4060	2050	200	2850
13.48	130	12	5320	2050	200	2850
17.06	103	9.9	5720	2050	200	2850
19.80	88	9.2	6200	2050	200	2850
25.89	68	7.4	6500	2050	200	2850
30.51	57	6.8	7000	2050	200	2850
38.61	45	5.5	7150	2050	200	2850
44.81	39	4.8	7250	2050	200	2850
58.58	30	3.7	7260	2050	200	2850
69.99	25	3.1	7260	2050	200	2850
74.56	23	2.9	7260	2050	200	2850
85.21	21	2.5	7260	2050	200	2850
91.47	19	2.3	7260	2050	200	2850
106.51	16	2.0	7260	2050	200	2850
115.64	15	1.9	7260	2050	200	2850
126.17	14	1.7	7260	2050	200	2850
138.46	13	1.5	7260	2050	200	2850

ALL TORQUE VALUES LISTED IN INCH-POUNDS, ALL OVERHUNG LOAD AND THRUST LOAD VALUES LISTED IN POUNDS.
THE POINT OF APPLICATION OF OHL IS CONSIDERED TO BE APPLIED AT THE MIDPOINT OF SHAFT EXTENSION. INPUT OHL APPLIES ONLY TO SHAFT INPUT MODELS.
OHL AND THRUST RATINGS CANNOT BE APPLIED SIMULTANEOUSLY. CONSULT THE FACTORY FOR APPLICATIONS WITH COMBINED OHL AND THRUST LOAD.
AT SPEEDS ABOVE 1750 RPM, UNITS MAY BECOME THERMALLY LIMITED. FOR EXTENDED OPERATION, LIMIT HP TO 1750 RPM RATING.

CLEANLINE ULTRAPLUS™ & PHARMACEUTICAL

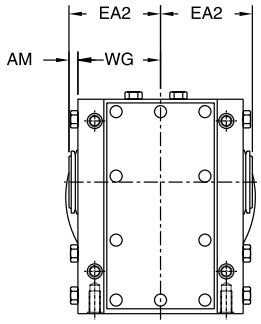
HUB³™ HELICAL-BEVEL GEAR DRIVES MODELS SSHB2043 & SSHB2063

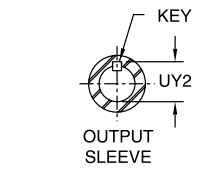


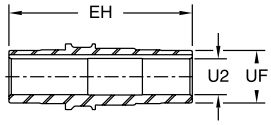


GEARCASE

MODEL	B	D	DB	E	EJ	F	FA
SSHB2043E*	5.71	4.41 $^{+0}_{-.02}$	0.47	5.12	5.12	4.72	1.38
	145	112 $^{+0}_{-.02}$	12.0	130	130	120	35
SSHB2063E*	692	5.51 $^{+0}_{-.02}$	0.62	4.72	6.30	5.51	1.18
	1.76	140 $^{+0}_{-.02}$	15.8	120	160	140	30







GEARCASE

MODEL	FB	H	J	OA	Q	QB	WG
SSHB2043E*	1.46	–	0.63	7.48	9.82	2.80	2.85
	37	M10 X 1.5	16	190	249	71	72.5
SSHB2063E*	1.77	–	0.95	8.98	11.13	3.54	3.46
	45	M12 X 1.75	24	228	283	90	87.9

GEARCASE

MODEL	XB	XC	XJ
SSHB2043E*	–	0.63	3.875
	M8 X 1.25	16.0	98.43
SSHB2063E*	–	0.66	4.750
	M10 X 1.5	16.8	120.65

OUTPUT SHAFT

MODEL	BA	EA1	U1	UV1	V	KEY	M	N
SSHB2043E*	2.95	5.31	1.250 $^{+0}_{-.001}$	1.36	2.04	1/4 X 1/4 X 1-1/2	1/2 - 13UNC	1.20
	75	135	–	–	–	–	–	–
SSHB2063E*	3.98	6.73	1.625 $^{+0}_{-.001}$	1.78	2.88	3/8 X 3/8 X 2-1/4	5/8 - 11UNC	1.38
	101	171	–	–	–	–	–	–

OUTPUT SLEEVE (SEIZE PROOF SLEEVE LINERS AVAILABLE)

MODEL	AM	EA2	EH	U2	UF	UY2	KEY
SSHB2043E*	0.48	3.34	6.67	1.375 $^{+.0025}_{-0}$	1.97	1.52	(2) 5/16 X 5/16 X 1-13/16
	12		84.7	–	–	–	–
SSHB2063E*	0.38	3.84	7.68	1.500 $^{+.0025}_{-0}$	2.20	1.67	(2) 3/8 X 3/8 X 2-1/4
	10	97.5	–	–	–	–	–

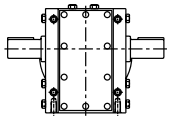
MOTOR COMPATIBILITY - NEMA

MODEL		NEMA 56C	NEMA 143TC 145TC	NEMA 182TC 184TC
SSHB2043E*	C	12.43	12.43	13.80
		316	316	351
SSHB2063E*	C	13.83	13.83	14.85
		351	351	377

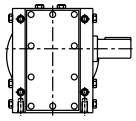
SHAFT INPUT VERSIONS AND STAINLESS STEEL ACCESSORIES AVAILABLE, CONSULT FACTORY

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE

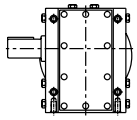
*OUTPUT STYLES



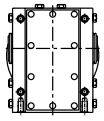
D: Double Ext.



L: Left Ext.



R: Right Ext.



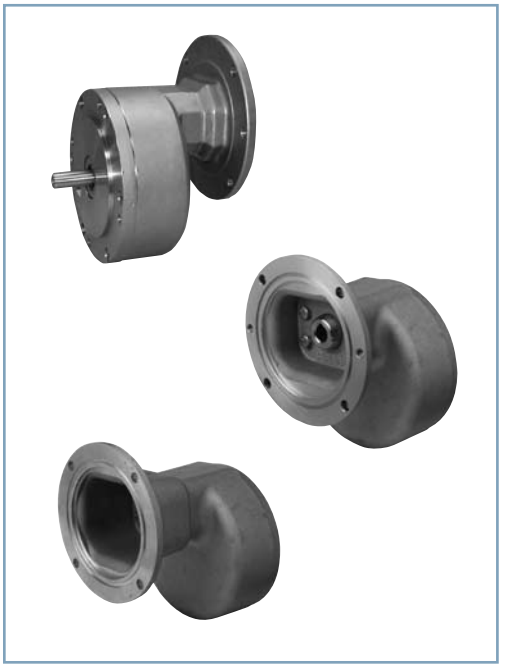
S: Sleeve
(Hollow Bore)

RATIO MULTIPLIERS

MODELS SSRM1, CPARM1, CPARM2
SINGLE REDUCTION

FEATURES:

- 316 Stainless Steel Housing and Shafts
- Smooth Cast Surface Finish
- Ratios up to 7.46 /1
- Factory Filled with USDA H1 Lubricant for Application Service Life of the Drive
- High Pressure Seals Configured for Severe High Pressure & Chemical Washdown Environments
- BISSC Certified and HACCP compatible
- Packaged with LEESON WASHGUARD All-Stainless Motors
- Ideal for use between a stainless steel motor and a C-face stainless steel gear drive to gain needed additional gear reduction.



MODEL NOMENCLATURE EXAMPLE

A RM 1 Q 2.056 56C - 56C

HOUSING MATERIAL
SS : Stainless Steel
CPA : Cleanline Platinum Plus Aluminum

RATIO MULTIPLIER

UNIT SIZE
1, 2

INPUT OPTION
Q : Quill style C-Face
C : Coupling style C-Face
S : Shaft input

EXACT RATIO

INPUT FRAME SIZE

OUTPUT FRAME SIZE

RM1 RATINGS @1750 RPM INPUT (48, 56 Stainless Steel or Aluminum Housing)

RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	MAX LS OHL
2.056	851	4.69	347	222
2.929	598	3.64	384	265
4.000	438	2.91	419	300
5.111	342	2.33	428	300
7.462	235	1.56	419	300

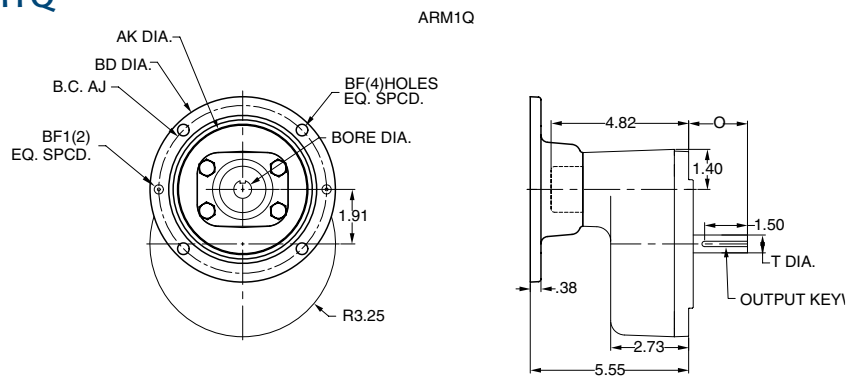
RM2 RATINGS @1750 RPM INPUT (56, 140 Aluminum Housing)

				56C OUTPUT	140TC OUTPUT
RATIO	OUTPUT RPM	INPUT HP	OUTPUT TORQUE	MAX LS OHL	MAX LS OHL
2.000	875	6.00	424	358	358
2.913	601	4.21	433	375	434
4.000	438	3.63	511	375	455
5.000	350	3.00	529	375	455
7.182	244	2.62	664	375	455

RATIO MULTIPLIERS

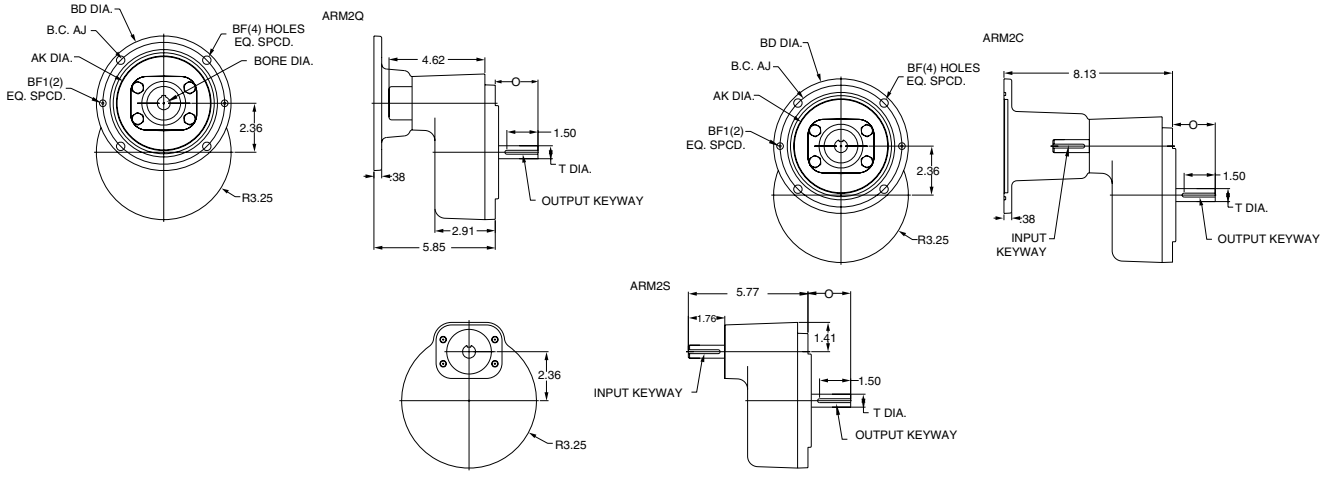
MODELS CPARM1Q & CPARM2Q - SINGLE REDUCTION ALUMINUM HOUSING

MODEL CPARM1Q



STYLE	FRAME COMBINATIONS	AJ	AK	BD	BF	BF1	O	T	INPUT BORE	INPUT KEYWAY	OUTPUT KEYWAY	WGT. (LBS.)
CPARM1	48CZ-56C 56C-56C	3.75 5.88	3.00 4.50	4.36 6.64	0.28 0.41	1/4-20 UNC 3/8-16 UNC	2.06 2.06	0.625 0.625	0.50 0.63	1/8 X 1/16 3/16 X 3/32	3/16 x 3/32 3/16 x 3/32	9.5 9.5

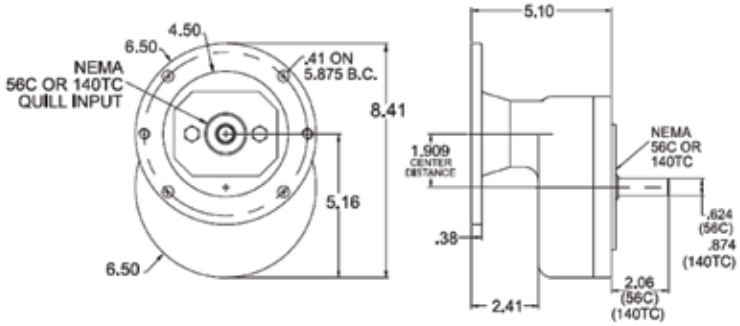
MODEL CPARM2Q



STYLE	FRAME COMBINATIONS	AJ	AK	BD	BF	BF1	O	T	INPUT BORE	INPUT KEYWAY	OUTPUT KEYWAY	WGT. (LBS.)
CPARM2Q CPARM2C CPARM2S	140TC-56C 140TC-140TC	5.88 5.88	4.50 4.50	6.64 6.64	0.41 0.41	3/8-16 UNC 3/8-16 UNC	2.06 2.125	0.625 0.625	0.63 0.88	3/16 X 3/32 3/16 X 3/32	3/16 x 3/32 3/16 x 3/32	11.5 11.5

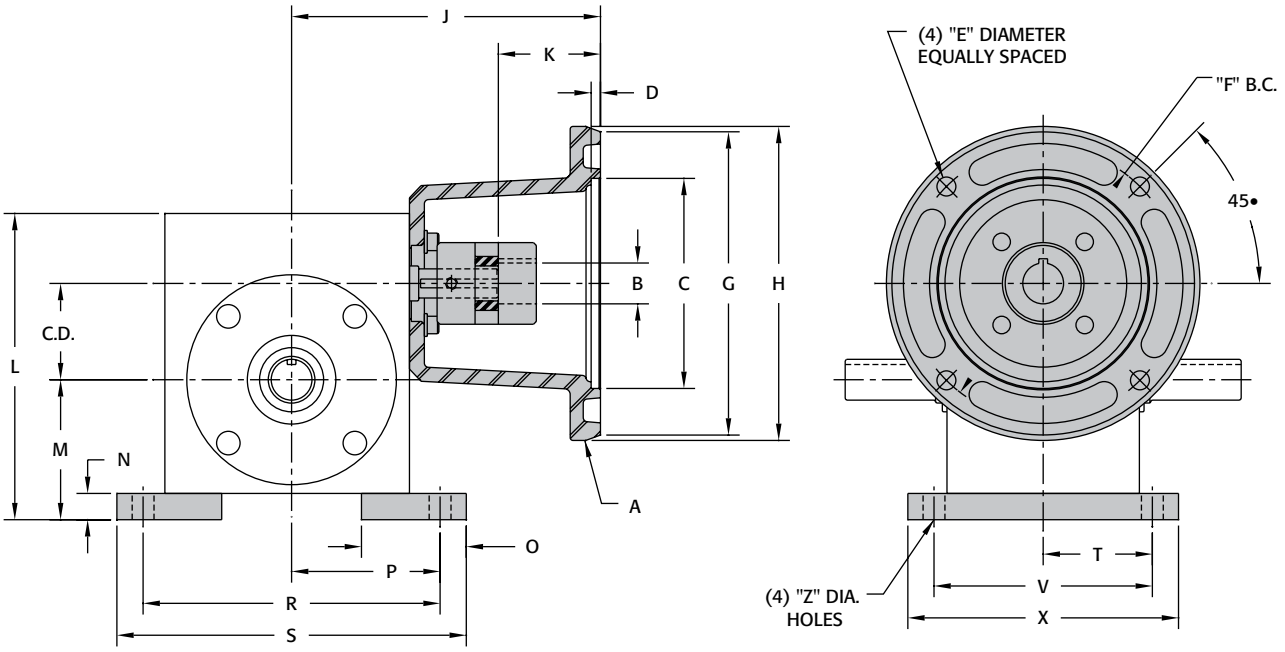
STAINLESS STEEL MODEL SSRM1

WEIGHT (LBS.) - 20



HUB³™ ACCESSORIES

316 STAINLESS STEEL NEMA "C" FLANGE ADAPTOR & UNIVERSAL BASE KITS



316 STAINLESS STEEL NEMA "C" FLANGE ADAPTOR KITS

SERIES	A-NEMA FLANGE	FLANGE KIT NO.	FLANGE KIT SHIP WT.	B	C	D	E	F	G	H	J	K
SS180	56C*	0229-02913*	6.1 lbs.	.625/.626	4.501/4.503	.20	13/32	5.875	6.50	6.73	6.19	2.19
SS210	56C	0229-02914	6.3 lbs.	.625/.626	4.501/4.503	.20	13/32	5.875	6.50	6.73	6.63	2.19
	143TC, 145TC, 182C, 184C	0229-02915	6.5 lbs.	.875/.876								
SS260	56C	0229-02916	8.5 lbs.	.625/.626	4.501/4.503	.20	13/32	5.875	6.50	6.73	7.82	2.19
	143TC, 145TC, 182C, 184C	0229-02917	8.3 lbs.	.875/.876								
	182TC, 184TC, 213C, 215C	0229-02918	17.8 lbs.	1.125/1.126	8.501/8.504	.31	17/32	7.250	N/A	9.00	8.82	3.19
SS320	56C	0229-02919	10.3 lbs.	.625/.626	4.501/4.503	.20	13/32	5.875	6.50	6.73	8.94	2.19
	143TC, 145TC, 182C, 184C	0229-02920	10.1 lbs.	.875/.876								
	182TC, 184TC, 213C, 215C	0229-02921	18.5 lbs.	1.125/1.126	8.501/8.504	.31	17/32	7.250	N/A	9.00	9.94	3.19

* - SERIES SS180 FLANGE ADAPTOR KIT MUST BE FACTORY INSTALLED.

316 STAINLESS STEEL UNIVERSAL BASE KITS

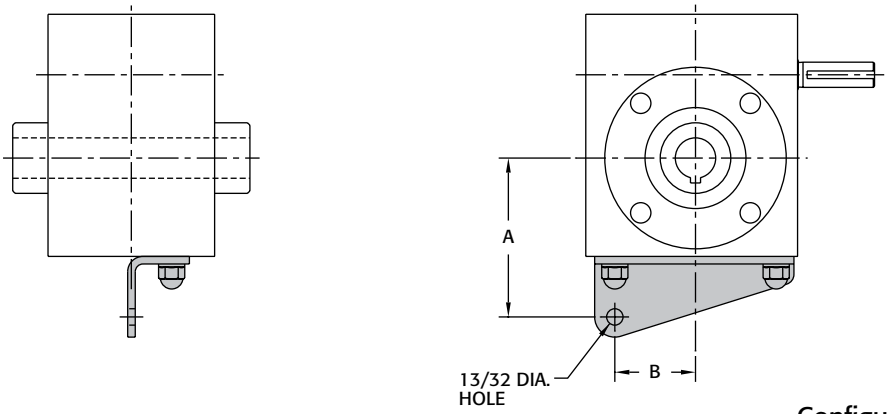
SERIES	BASE KIT NO.	BASE KIT SHIP WT.	C.D.	L	M	N	O	P	R	S	T	V	X	Z
SS180	0229-02922	6.5 lbs.	1.751	5.88	2.75	0.88	2.25	2.88	5.75	6.88	2.25	4.50	5.62	13/32 THRU
SS210	0229-02923	4.4 lbs.	2.064	6.56	3.00	0.56	2.25	3.19	6.38	7.50	2.34	4.69	5.81	7/16 UNC TAPPED
SS260	0229-02924	7.8 lbs.	2.626	8.19	3.69	0.75	2.75	4.00	8.00	9.25	2.63	5.25	6.50	17/32 THRU
SS320	0229-02925	14.3 lbs.	3.251	9.75	4.38	1.13	3.00	4.75	9.50	10.75	3.06	6.13	7.38	17/32 THRU

CONFIGURED TO BE USED WITH OR WITHOUT CLEARANCE SPACERS BETWEEN BASE KIT AND REDUCER HOUSING

HUB³™ ACCESSORIES

STAINLESS STEEL TORQUE ARM BRACKET KITS & CLEARANCE SPACERS

316 STAINLESS STEEL TORQUE ARM BRACKET KITS



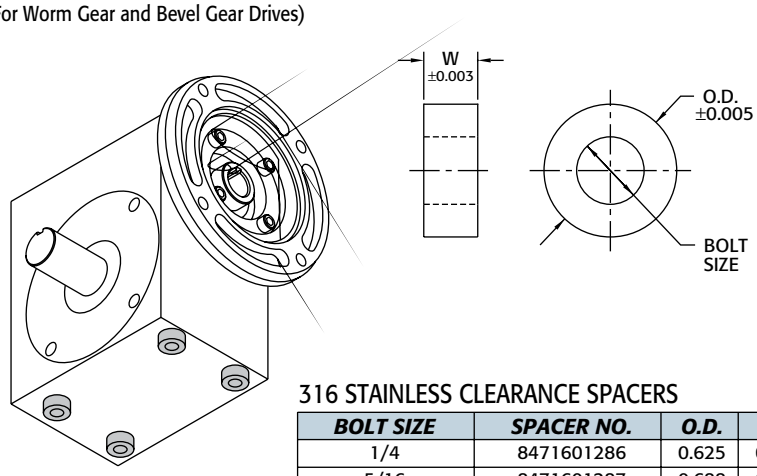
316 STAINLESS TORQUE ARM BRACKET KITS

SERIES	BASE KIT NO.	BASE KIT SHIP WT.	A	B
SS180	0229-02926	0.6 lbs.	3.25	1.56
SS210	0229-02927	1.4 lbs.	3.94	2.00
SS260	0229-02928	2.0 lbs.	4.94	2.44
SS320	0229-02929	2.5 lbs.	5.50	3.13

Configured to be Used With or Without Clearance Spacers between Base Kit and Reducer Housing

316 STAINLESS STEEL CLEARANCE SPACERS

(For Worm Gear and Bevel Gear Drives)



Clearance spacers are an excellent method of adding space between the gearbox and its mounting surface.

Clearance spacers minimize the surface contact area between the gearbox and its mounting surface to reduce potential bacterial growth areas.

Clearance spacers provide space for cleaning brushes to be used during sanitation processes. The spacers allow accessibility when cleaning by high-pressure washing or circulation of flowing chemical solutions, cleaning liquids and water rinses.

316 STAINLESS CLEARANCE SPACERS

BOLT SIZE	SPACER NO.	O.D.	W
1/4	8471601286	0.625	0.375
5/16	8471601287	0.688	0.375
3/8	8471601288	0.812	0.375
7/16	8471601289	0.922	0.375
1/2	8471601290	0.969	0.375
5/8	8471601291	1.312	0.375

ORDER (1) SPACER FOR EACH MOUNTING HOLE REQUIRED.
CONSULT FACTORY FOR ADDITIONAL SIZES AVAILABLE.

SUITABLE FOR:
CleanLine Pharmaceutical
CleanLine UltraPlus
CleanLine Plus
CleanLine Gear Drives

HUB³™ STAINLESS SHAFT PROTECTORS

SHAFT EXTENSION AND HOLLOW SLEEVE PROTECTOR KITS

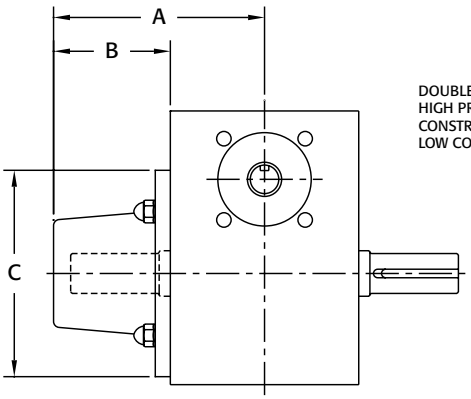
Caps are made from corrosion and bacteria resistant material.

WORM GEAR DRIVES

SOLID OUTPUT SHAFT

Models: SS_ _1 & SS_ _4

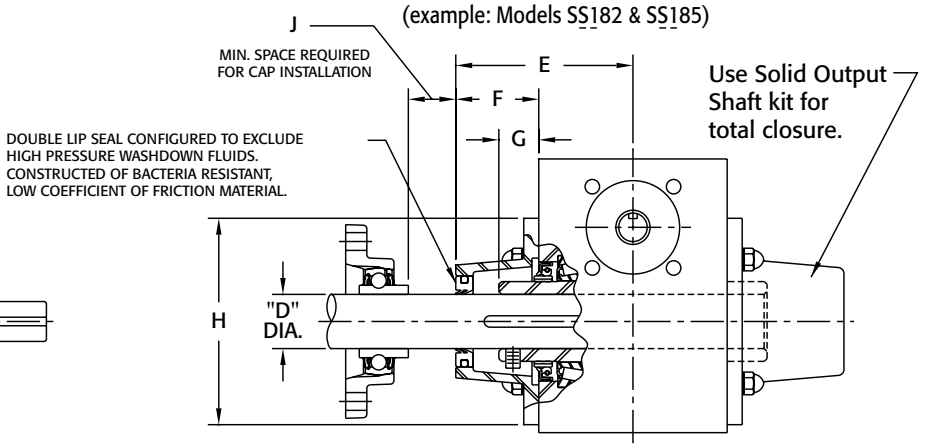
(example: Models SS181 & SS184)



HOLLOW OUTPUT SLEEVE

Models: SS_ _2 & SS_ _5

(example: Models SS182 & SS185)



SOLID OUTPUT SHAFT KIT				
SERIES	***KIT PART NO.***	***A***	***B***	***C***
SS180	0229-02930	3.91	2.16	3.59
SS210	0229-02931	4.62	2.56	4.53
SS260	0229-02932	5.17	2.90	5.60
SS320	0229-02933	5.83	3.13	6.29

HOLLOW OUTPUT SLEEVE KIT							
SERIES	***KIT PART NO.***	***D***	***E***	***F***	***G***	***H***	***J***
SS180	0229-02934	1.000	3.25	1.50	0.66	3.59	0.81
SS210	0229-02935	1.000	3.88	1.82	0.88	4.53	1.03
	0229-02936	1.188					
	0229-02949	1.250					
SS260	0229-02937	1.000	4.12	1.85	0.86	5.60	1.01
	0229-02938	1.188					
	0229-02948	1.250					
	0229-02939	1.438					
SS320	0229-02940	1.438	5.33	2.63	1.08	6.29	1.23
	0229-02941	1.938					
	0229-02942	2.188					

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

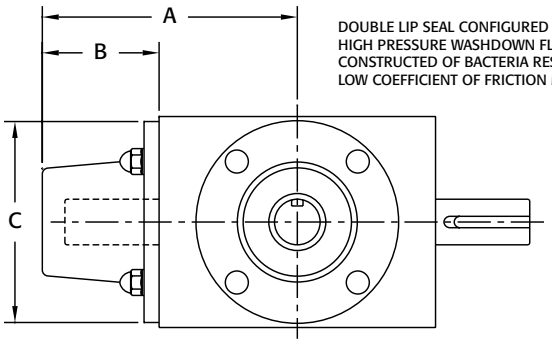
HUB³™ STAINLESS SHAFT PROTECTORS

SHAFT EXTENSION AND HOLLOW SLEEVE PROTECTOR KITS

BEVEL GEAR DRIVES

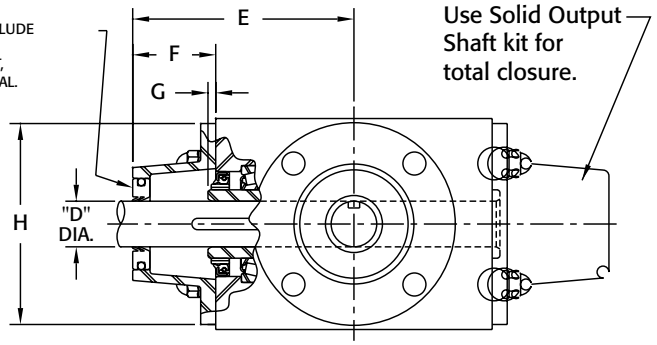
SOLID OUTPUT SHAFT

Models: SSM3, SS165 & SS66



HOLLOW SLEEVE OUTPUT

Models: SS175 & SS65



SOLID OUTPUT SHAFT KIT

MODEL	KIT PART NO.	A	B	C
SSM3	0229-02943	3.61	1.72	2.85
SS165	0229-02944	5.59	2.56	4.41
SS66	0229-02945	6.52	2.90	5.42

HOLLOW OUTPUT SLEEVE KIT

MODEL	KIT PART NO.	D	E	F	G	H
SS175	0229-02946	1.000	3.85	1.82	0.17	4.41
SS65	0229-02947	1.250	5.47	1.85	0.32	5.42

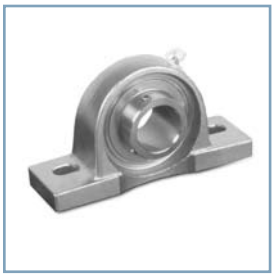
DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
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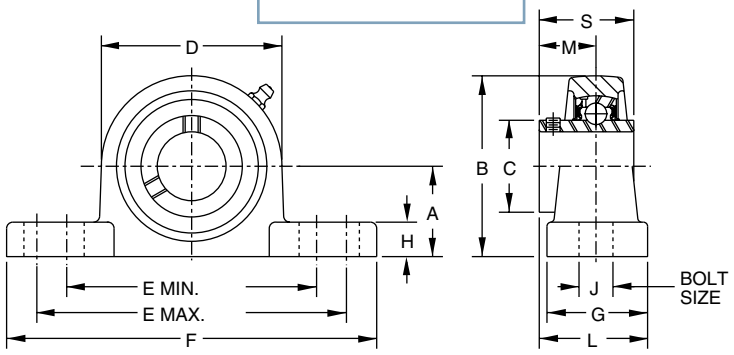
CLEANLINE ULTRAPLUS™ AND PHARMACEUTICAL

STAINLESS STEEL MOUNTED BEARINGS - PILLOW BLOCK PB251STW

FEATURES:

- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Setscrew Lock - Wide Inner Ring
- Factory Filled USDA H1 Lubricant Meets FDA Regulation 178.3570 Requirement for Incidental Contact with Food
- 304 Stainless Steel Setscrews
- Anti Rotation Pin
- 304 Stainless Steel Housing
- No Ribs Undercuts or Protrusions - Easier to Clean
- Stainless Steel Grease Fittings
- Grooved for Composite Dust Caps on One Side, See Page O-37





SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-9/16	1.142	2-1/2	3-1/2	3-31/32	5	1-1/2	9/16	3/8	1-15/32	0.720	1.220	1.4
3/4	1-5/16	2-9/16	1.142	2-1/2	3-1/2	3-31/32	5	1-1/2	9/16	3/8	1-15/32	0.720	1.220	1.4
7/8, 1	1-7/16	2-3/4	1.339	2-5/8	3-29/32	4-3/8	5-1/2	1-1/2	19/32	3/8	1-17/32	0.780	1.343	1.7
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-9/32	1.587	3-5/32	4-5/8	4-15/16	6-1/2	1-7/8	5/8	1/2	1-53/64	0.874	1.500	2.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-23/32	1.890	3-21/32	4-27/32	5-5/32	6-9/16	1-7/8	11/16	1/2	1-61/64	1.000	1.689	3.5
1-1/2	1-15/16	3-15/16	2.087	4	5-1/4	5-9/16	7-1/4	2-1/8	23/32	1/2	2-1/4	1.189	1.937	4.4
1-11/16, 1-3/4	2-1/8	4-1/4	2.252	4-1/4	5-9/16	5-15/16	7-1/2	2-1/8	25/32	1/2	2-1/4	1.189	1.937	5.0
1-15/16	2-1/4	4-15/32	2.433	4-15/32	6-1/16	6-15/32	8-1/8	2-3/8	27/32	5/8	2-15/32	1.283	2.031	5.9

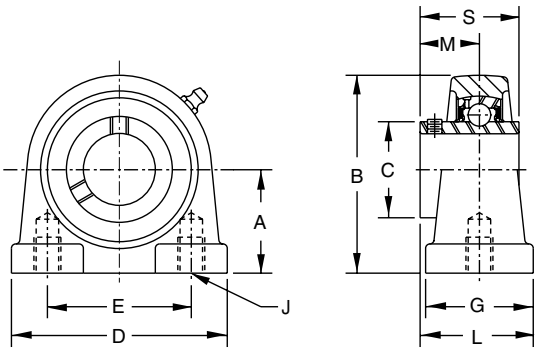
PART NUMBERS ARE SPECIFIED BY "PB251STW" AND BORE SIZE. EXAMPLE: PB251STW X 1. FOR LOAD RATINGS, SEE PAGE O-34.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

TAPPED BASE PILLOW BLOCK TPB250STW

FEATURES: (Same as Above)

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SPTW: EXAMPLE PB251SPTWX1



SHAFT SIZE	A	B	C	D	E	G	J - TAPPED HOLES	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-9/16	1.142	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-15/32	0.720	1.220	0.8
3/4	1-5-16	2-9/16	1.142	2-7/8	2	1-1/2	3/8-16NC X 1/2	1-15/32	0.720	1.220	0.8
7/8, 1	1-7/16	2-13/16	1.339	3	2	1-1/2	3/8-16NC X 1/2	1-17/32	0.780	1.343	0.9
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-7/16	1.587	4	3	1-1/2	7/16-16NC X 5/8	1-5/8	0.874	1.500	1.9
1-1/4, 1-3/8, 1-7/16	1-7/8	3-3/4	1.890	4-1/4	3-1/4	1-7/8	1/2-13NC X 3/4	1-61/64	1.000	1.689	2.0
1-1/2	1-15/16	3-15/16	2.087	4-5/8	3-1/2	1-7/8	1/2-13NC X 3/4	2-9/64	1.189	1.937	2.8
1-11/16, 1-3/4	2-1/8	4-1/4	2.252	5	3-3/4	2	1/2-13NC X 3/4	2-13/64	1.189	1.937	3.3
1-15/16	2-1/4	4-5/8	2.433	5-1/2	4	2	5/8-11NC X 1	2-9/32	1.283	2.031	4.2

PART NUMBERS ARE SPECIFIED BY "TPB250STW" AND BORE SIZE. EXAMPLE: TPB250STW X 3/4. FOR LOAD RATINGS, SEE PAGE O-34.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

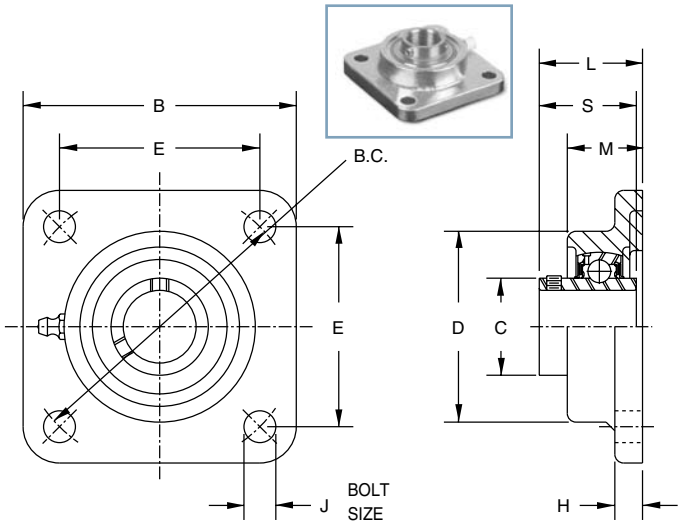
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

CLEANLINE ULTRAPLUS™ AND PHARMACEUTICAL

STAINLESS STEEL MOUNTED BEARINGS - 4 BOLT FLANGE BLOCKS FB250STW

FEATURES:

- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Setscrew Lock - Wide Inner Ring
- Factory Filled USDA H1 Lubricant Meets FDA Regulation 178.3570 Requirement for Incidental Contact with Food
- 304 Stainless Steel Setscrews
- Anti Rotation Pin
- 304 Stainless Steel Housing
- No Ribs - Undercuts or Protrusions Easier to Clean
- Stainless Steel Grease Fittings
- Grooved for Composite Dust Caps on One Side, See Page O-37



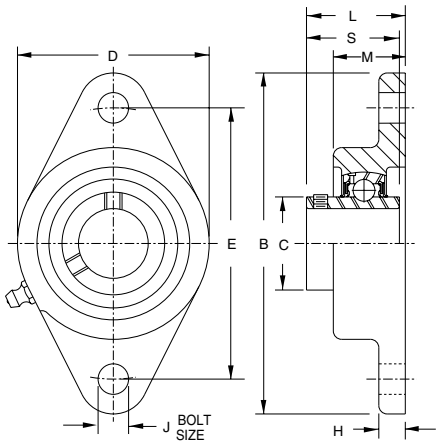
SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-3/8	3-17/32	1.142	2-3/8	2-1/2	7/16	3/8	1-5/16	1-3/64	1.220	1.3
3/4	3-3/8	3-17/32	1.142	2-3/8	2-1/2	7/16	3/8	1-5/16	1-3/64	1.220	1.3
7/8, 1	3-3/4	3-57/64	1.339	2-13/16	2-3/4	1/2	3/8	1-13/32	1-5/64	1.343	1.8
1-1/8, 1-3/16, 1-1/4S	4-1/4	4-19/32	1.587	3-3/16	3-1/4	1/2	3/8	1-37/64	1-7/32	1.500	2.4
1-1/4, 1-3/8, 1-7/16	4-5/8	5-1/8	1.890	3-5/8	3-5/8	19/32	1/2	1-3/4	1-9/32	1.689	3.5
1-1/2	5-1/8	5-21/32	2.087	4-3/32	4	19/32	1/2	2-1/64	1-3/8	1.937	4.2
1-11/16, 1-3/4	5-3/8	5-53/64	2.252	4-1/4	4-1/8	5/8	1/2	2-1/16	1-7/16	1.937	5.3
1-15/16	5-5/8	6-3/16	2.433	4-1/2	4-3/8	5/8	1/2	2-5/32	1-29/64	2.031	5.7

PART NUMBERS ARE SPECIFIED BY "FB250STW" AND BORE SIZE. EXAMPLE: FB250STW X 3/4.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

FOR LOAD RATINGS, SEE PAGE O-34.

O

2 BOLT FLANGE BLOCKS FB260STW





FEATURES: (Same as Above)

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

NOTE: CLEANLINE PHARMACEUTICAL FEATURES POLISHED EXTERIOR SURFACES.
TO ORDER SPECIFY SPTW: EXAMPLE FB250SPTW

SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2S, 5/8S	3-7/8	1.142	2-9/32	3	25/64	3/8	1-5/16	1-3/64	1.220	0.9
1/2, 5/8	4-7/16	1.142	2-3/8	3-17/32	7/16	3/8	1-5/16	1-3/64	1.220	1.1
3/4	4-7/16	1.142	2-3/8	3-17/32	7/16	3/8	1-5/16	1-3/64	1.220	1.0
7/8, 1	5-1/8	1.339	2-11/16	3-57/64	33/64	3/8	1-13/32	1-5/64	1.343	1.4
1-1/8, 1-3/16, 1-1/4S	5-13/16	1.587	3-5/32	4-19/32	33/64	3/8	1-37/64	1-7/32	1.500	1.9
1-1/4, 1-3/8, 1-7/16	6-11/32	1.890	3-17/32	5-1/8	35/64	1/2	1-3/4	1-9/32	1.689	2.6
1-1/2	6-7/8	2.087	3-15/16	5-21/32	35/64	1/2	2-1/64	1-3/8	1.937	3.5
1-11/16, 1-3/4	7-13/32	2.252	4-1/4	5-53/64	19/32	1/2	2-3/64	1-7/16	1.937	4.2
1-15/16	7-3/4	2.433	4-17/32	6-3/16	19/32	1/2	2-5/32	1-15/32	2.031	5.1

PART NUMBERS ARE SPECIFIED BY "FB260STW" AND BORE SIZE. EXAMPLE: FB260STW X 3/4.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

FOR LOAD RATINGS, SEE PAGE O-34.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

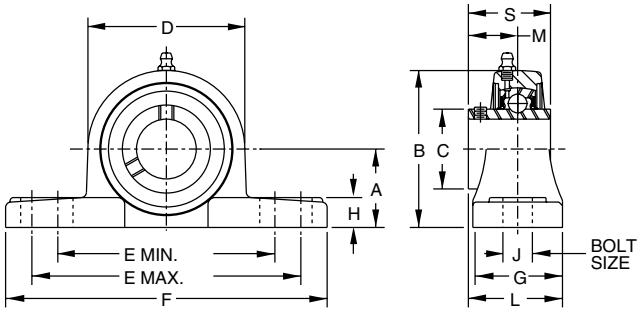
CLEANLINE PLUS™ THERMOPLASTIC

COMPOSITE MOUNTED BEARINGS - PILLOW BLOCK PB251CTW

FEATURES:



- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Setscrew Lock - Wide Inner Ring
- Factory Filled USDA H1 Lubricant Meets FDA Regulation 178.3570 Requirement for Incidental Contact with Food
- 304 Stainless Steel Setscrews
- Anti Rotation Pin
- Ultradur Glass Reinforced PBT Thermoplastic Housing
- Tensile Strength 16700 psi at Room Temperature
- Stainless Steel Bushings in All Bolt Holes
- Stainless Steel Insert for Zerk Threads
- Stainless Steel Zerks
- Moisture Resistant
- Corrosion Resistant
- Grooved for Composite Dust Caps on One Side, See Page O-37
- Smooth Surface with No Ribs for Easy Cleaning



SHAFT SIZE	A	B	C	D	E MIN.	E MAX.	F	G	H	J	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-19/32	1.142	2-17/32	3-5/8	3-7/8	5	1-1/2	9/16	3/8	1-15/32	0.720	1.220	0.7
3/4	1-5/16	2-19/32	1.142	2-17/32	3-5/8	3-7/8	5	1-1/2	9/16	3/8	1-15/32	0.720	1.220	0.7
7/8, 1	1-7/16	2-25/32	1.339	2-23/32	4-1/32	4-1/4	5-17/32	1-1/2	9/16	3/8	1-17/32	0.780	1.343	0.7
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-5/16	1.587	3-1/4	4-17/32	4-27/32	6-13/32	1-13/16	11/16	1/2	1-25/32	0.874	1.500	1.2
1-1/4, 1-3/8, 1-7/16	1-7/8	3-23/32	1.890	3-11/16	4-27/32	5-5/32	6-5/8	1-7/8	23/32	1/2	1-61/64	1.000	1.689	1.6
1-1/2	1-15/16	3-31/32	2.087	4-3/32	5-1/4	5-9/16	7-1/4	2-1/8	25/32	1/2	2-1/4	1.189	1.937	2.3

PART NUMBERS ARE SPECIFIED BY "PB251CTW" AND BORE SIZE. EXAMPLE: PB251CTW X 3/4.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

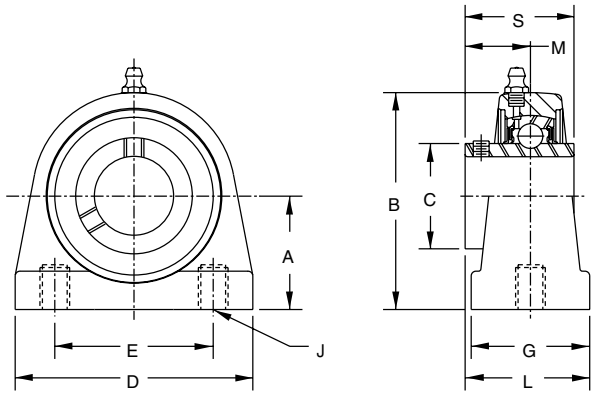
FOR LOAD RATINGS, SEE PAGE O-34 & O-35.

TAPPED BASE PILLOW BLOCK TPB250CTW

FEATURES:
(Same as Above)



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R



SHAFT SIZE	A	B	C	D	E	G	J - TAPPED HOLES	L	M	S	WT. LBS.
1/2, 5/8	1-5/16	2-19/32	1.142	2-7/8	2	1-11/32	3/8-16NC X 1/2	1-13/32	0.720	1.220	0.6
3/4	1-5-16	2-19/32	1.142	2-7/8	2	1-11/32	3/8-16NC X 1/2	1-13/32	0.720	1.220	0.6
7/8, 1	1-7/16	2-29/32	1.339	3	2	1-9/16	3/8-16NC X 1/2	1-35/64	0.780	1.343	0.7
1-1/8, 1-3/16, 1-1/4S	1-11/16	3-5/16	1.587	3-31/32	3	1-21/32	7/16-14NC X 1/2	1-23/32	0.874	1.500	1.1
1-1/4, 1-3/8, 1-7/16	1-7/8	3-3/4	1.890	4-11/32	3-1/4	1-7/8	1/2-13NC X 5/8	1-15/16	1.000	1.689	1.6
1-1/2	1-15/16	3-31/32	2.087	4-23/32	3-1/2	1-29/32	1/2-13NC X 5/8	2-1/8	1.189	1.937	2.2

PART NUMBERS ARE SPECIFIED BY "TPB250CTW" AND BORE SIZE. EXAMPLE: TPB250CTW X 1.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

FOR LOAD RATINGS, SEE PAGE O-34 & O-35.

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

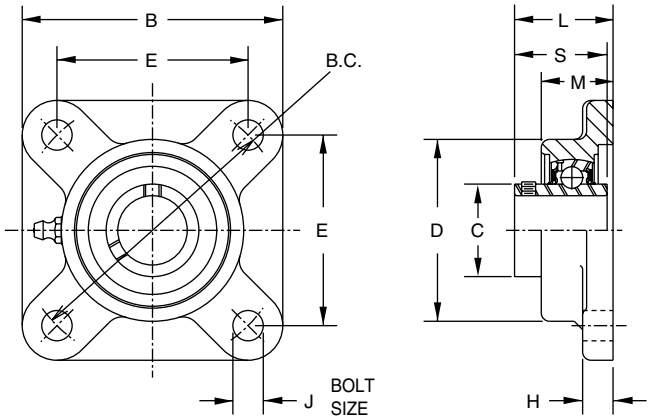
CLEANLINE PLUS™ THERMOPLASTIC

COMPOSITE MOUNTED BEARINGS - 4 BOLT FLANGE BLOCK FB250CTW

FEATURES:



- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Flingers and Retainers
- Setscrew Lock - Wide Inner Ring
- Factory Filled USDA H1 Lubricant Meets FDA Regulation 178.3570 Requirement for Incidental Contact with Food
- 304 Stainless Steel Setscrews
- Anti Rotation Pin
- Ultradur Glass Reinforced PBT Thermoplastic Housing
- Tensile Strength 16700 psi at Room Temperature
- Stainless Steel Bushings in All Bolt Holes
- Stainless Steel Insert for Zerk Threads
- Stainless Steel Zerks
- Moisture Resistant
- Corrosion Resistant
- Grooved for Composite Dust Caps on One Side, See Page O-37
- Smooth Surface with No Ribs for Easy Cleaning



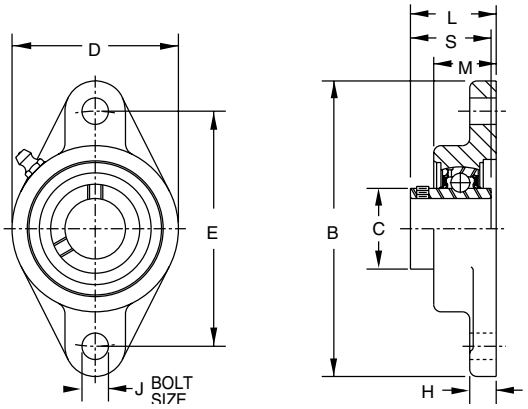
SHAFT SIZE	B	B.C.	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	3-3/8	3-17/32	1.142	2-17/32	2-1/2	17/32	3/8	1-23/64	1-3/32	1.220	0.7
3/4	3-3/8	3-17/32	1.142	2-17/32	2-1/2	17/32	3/8	1-23/64	1-3/32	1.220	0.7
7/8, 1	3-3/4	3-57/64	1.339	2-3/4	2-3/4	9/16	3/8	1-29/64	1-1/8	1.343	0.8
1-1/8, 1-3/16, 1-1/4S	4-7/32	4-19/32	1.587	3-1/8	3-1/4	9/16	3/8	1-5/8	1-1/4	1.500	1.1
1-1/4, 1-3/8, 1-7/16	4-5/8	5-1/8	1.890	3-17/32	3-5/8	5/8	7/16	1-27/32	1-23/64	1.689	1.6
1-1/2	5-1/8	5-21/32	2.087	3-15/16	4	11/16	1/2	2-3/32	1-7/16	1.937	2.3

PART NUMBERS ARE SPECIFIED BY "FB250CTW" AND BORE SIZE. EXAMPLE: FB250CTW X 3/4. FOR LOAD RATINGS, SEE PAGE O-34 & O-35.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34

O

2 BOLT FLANGE BLOCKS FB260CTW

FEATURES: (Same as Above)





FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

SHAFT SIZE	B	C	D	E	H	J	L	M	S	WT. LBS.
1/2, 5/8	4-7/16	1.142	2-9/16	3-17/32	17/32	3/8	1-5/16	1-3/64	1.220	0.6
3/4	4-7/16	1.142	2-9/16	3-17/32	17/32	3/8	1-5/16	1-3/64	1.220	0.6
7/8, 1	5-5/32	1.339	2-3/4	3-57/64	9/16	3/8	1-27/64	1-7/64	1.343	0.7
1-1/8, 1-3/16, 1-1/4S	5-13/16	1.587	3-5/32	4-19/32	9/16	3/8	1-37/64	1-13/64	1.500	1.0
1-1/4, 1-3/8, 1-7/16	6-15/32	1.890	3-17/32	5-1/8	5/8	7/16	1-3/4	1-17/64	1.689	1.4
1-1/2	6-15/16	2.087	3-15/16	5-21/32	11/16	1/2	2-1/32	1-3/8	1.937	2.0

PART NUMBERS ARE SPECIFIED BY "FB260CTW" AND BORE SIZE. EXAMPLE: FB260CTW X 3/4. FOR LOAD RATINGS, SEE PAGE O-34 & O-35.
FOR REPLACEMENT INSERTS USE B250TW BEARING INSERTS, O-34.

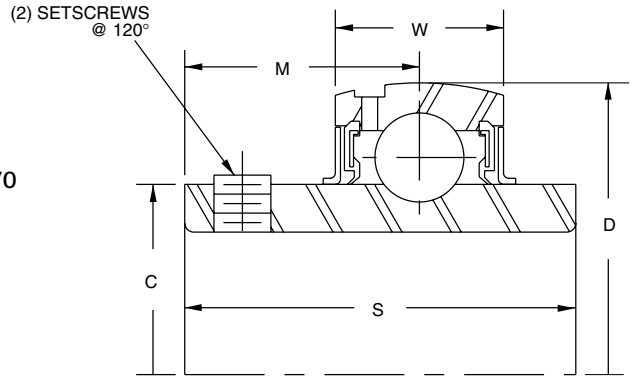
¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

CLEANLINE PLUS™ & ULTRAPLUS BEARING INSERTS

B250TW STAINLESS STEEL BEARINGS

FEATURES:

- 440 Stainless Steel Rings and Balls
- 302 Stainless Steel Retainers
- Setscrew Lock - Wide Inner Ring
- Factory Filled USDA HI Lubricant Meets FDA Regulation 178.3570 Requirement for Incidental Contact with Food
- Silicone Seals with 302 Stainless Steel Flingers
- Lube Groove for Relubrication. (Housing Groove Not Required)
- 304 Stainless Steel Setscrews
- Anti Rotation Pin



SHAFT SIZE	C	D	M	S	W	SETSCREW	WT. LBS.
1/2, 5/8	1.142	1.8504	0.720	1.220	0.669	1/4-28 UNF	0.4
3/4	1.142	1.8504	0.720	1.220	0.669	1/4-28 UNF	0.4
7/8, 1	1.339	2.0472	0.780	1.343	0.669	1/4-28 UNF	0.5
1-1/8, 1-3/16, 1-1/4S	1.587	2.4409	0.874	1.500	0.748	1/4-28 UNF	0.7
1-1/4, 1-3/8, 1-7/16	1.890	2.8346	1.000	1.689	0.787	5/16-24 UNF	1.0
1-1/2	2.087	3.1496	1.189	1.937	0.827	5/16-24 UNF	1.5
1-11/16, 1-3/4	2.252	3.3465	1.189	1.937	0.866	5/16-24 UNF	1.6
1-15/16	2.433	3.5433	1.283	2.031	0.906	3/8-24 UNF	1.8

CLEANLINE™ STAINLESS STEEL BEARING RATINGS - SERIES B250TW

BEARING RADIAL LOAD CAPACITY (POUNDS) FOR 500 HOURS L-10 LIFE (2500 HOURS AVERAGE LIFE) AND STEADY LOAD CONDITIONS										
SHAFT SIZE (INCHES) 100, 200 SERIES	BASIC DYNAMIC RATING, C* (POUNDS)	BASIC STATIC RATING, Co** (POUNDS)	BEARING SPEED (RPM)							
			100	500	1,000	1,500	2,000	2,500	3,000	3,500
1/2 to 5/8	2200	1390	1,530	890	710	620	560	520	490	470
3/4	2200	1390	1,530	890	710	620	560	520	490	470
7/8 to 1	2430	1570	1,680	990	780	680	620	580	540	520
1-1/8 to 1-1/4S	3350	2250	2,320	1,360	1080	940	860	790	750	710
1-1/4 to 1-7/16	4430	3060	3,070	1,800	1430	1250	1130	1050	990	
1-1/2	5640	3990	3,910	2,290	1810	1590	1440	1340	1260	
1-11/16 to 1-3/4	5640	3990	3,910	2,290	1810	1590	1440	1340		
1-7/8 to 1-15/16	6060	4450	4,200	2,460	1950	1700	1550	1440		

* RADIAL LOAD FOR AN L-10 RATING LIFE OF 1,000,000 REVOLUTIONS.
** RADIAL LOAD RATING FOR STATIONARY OR VERY LOW SPEED OPERATION.

FOR ULTIMATE LIFE, SNUG FIT OR LIGHT PRESS FIT ON SHAFT SHOULD BE USED.
RECOMMENDED OPERATING TEMPERATURE RANGE: 0 TO +225 DEG F.
FOR APPLICATIONS NOT COVERED IN THE RATING TABLES, CONSULT THE FACTORY.
RATINGS ARE BASED ON ISO 281.

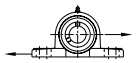
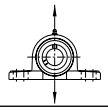
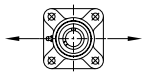
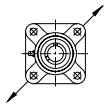
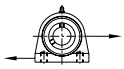
MAXIMUM RECOMMENDED SPEEDS:
1/2 to 1-1/4S 3,500 RPM
1-1/4 to 1-1/2 3,000 RPM
1-5/8 to 1-15/162,500 RPM

TO MODIFY THE ABOVE RATINGS FOR OTHER L-10 LIFE REQUIREMENTS OR FOR SHOCK LOADS MULTIPLY THE ABOVE RATINGS BY THE FACTOR FROM THIS CHART														
MODIFICATION FACTORS FOR L-10 SERVICE LIFE AND LOAD CONDITIONS:														
LOAD CONDITIONS	L-10 LIFE (HOURS)													
	500	700	1,000	1,500	2,000	3,000	4,000	5,000	7,000	10,000	15,000	20,000	30,000	50,000
Steady Load	1.00	.894	.794	.694	.630	.550	.500	.464	.415	.368	.322	.292	.255	.215
Light Shock	.90	.804	.715	.624	.567	.495	.450	.418	.373	.331	.290	.263	.230	.194
Moderate Shock	.70	.626	.556	.485	.441	.385	.350	.325	.290	.258	.225	.205	.179	.151

¶ DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DOWNLOAD AVAILABLE CAD MODELS AT: WWW.HUBCITYINC.COM

LOAD RATINGS

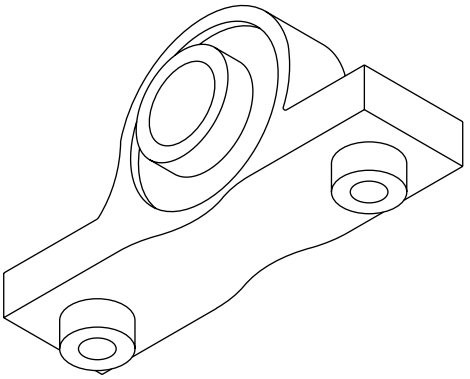
CLEANLINE PLUS™ LOAD RATINGS

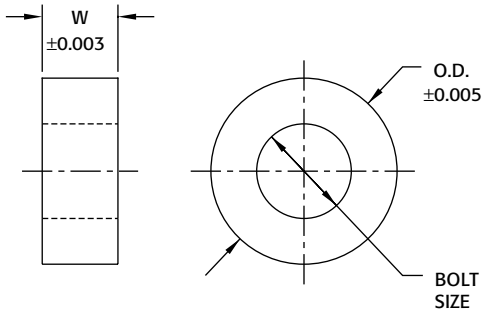
	BREAKING POINT TESTS OF COMPOSITE HOUSINGS AT ROOM TEMPERATURE (75 F.)					
	MODE OF LOAD	BREAKING STRENGTH (POUNDS)				
		1/2 TO 3/4	7/8 TO 1	1-1/8 TO 1-1/4S	1-1/4 TO 1-7/16	1-1/2
PB251CTW		2000	3100	2800	2900	2900
		1700	2200	2400	2400	2500
		1100	1800	1300	1700	1900
FB250CTW		2900	2900	3800	4200	4300
		2300	2700	4000	4200	4300
		730	750	760	790	850
FB260CTW		2500	2600	3700	3800	3900
		2500	3100	3000	3100	3200
		1900	2500	3200	3300	3400
TPB250CTW		1800	1900	2300	2700	2700
		1500	1600	1500	1800	2000
		670	640	1100	1800	2200

RECOMMENDED OPERATING TEMPERATURE OF COMPOSITE HOUSINGS IS 20 TO 230 DEG F.
HOUSING STRENGTH VARIES WITH OPERATING TEMPERATURE, AND THIS MUST BE CONSIDERED IN THE SELECTION AND APPLICATION OF COMPOSITE BEARING UNITS.

CLEANLINE ULTRAPLUS™ MOUNTED BEARING

ACCESSORIES - CLEARANCE SPACERS





Clearance spacers are an excellent method of adding space between the mounted bearing and its mounting surface.

Clearance spacers minimize the surface contact area between the mounted bearing and its mounting surface to reduce potential bacterial growth areas.

Clearance spacers provide space for cleaning brushes to be used during sanitation processes. The spacers allow accessibility when cleaning by high-pressure washing or circulation of flowing chemical solutions, cleaning liquids and water rinses.

316 STAINLESS STEEL CLEARANCE SPACERS

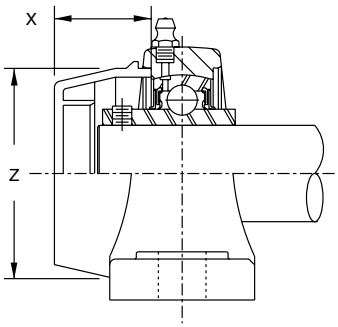
BOLT SIZE	SPACER NO.	O.D.	W
1/4	8471601286	0.625	0.375
5/16	8471601287	0.688	0.375
3/8	8471601288	0.812	0.375
7/16	8471601289	0.922	0.375
1/2	8471601290	0.969	0.375
5/8	8471601291	1.312	0.375

ORDER (1) SPACER FOR EACH MOUNTING HOLE REQUIRED.
CONSULT FACTORY FOR ADDITIONAL SIZES AVAILABLE.

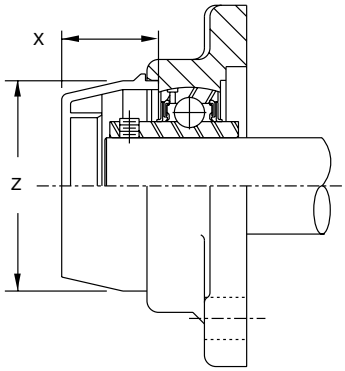
SUITABLE FOR:

CleanLine Pharmaceutical
CleanLine UltraPlus
CleanLine Plus
CleanLine Gear Drives

CLEANLINE ULTRAPLUS™ MOUNTED BEARING
ACCESSORIES - PROTECTIVE CAPS

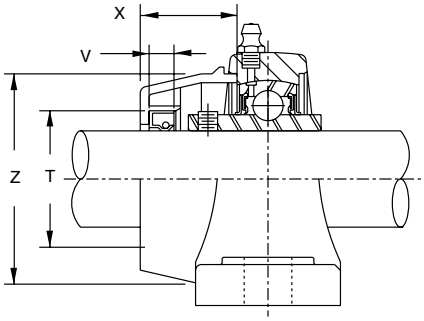


CLOSED PILLOW BLOCK UNITS

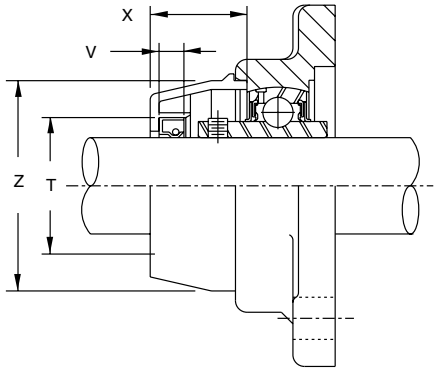


CLOSED FLANGE UNITS





OPEN PILLOW BLOCK UNITS



OPEN FLANGE UNITS



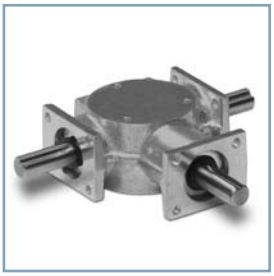
O

PROTECTIVE CAPS AND SEALS										
SHAFT SIZE	T	V	X	Z	CLOSED CAP DESCRIPTION	CLOSED CAP PART NUMBER	OPEN CAP DESCRIPTION	OPEN CAP PART NUMBER	SEAL FOR OPEN CAP DESCRIPTION	SEAL FOR OPEN CAP PART NUMBER
1/2	1.260	0.28	29/32	1-31/32	CPCCx3/4	1540101016	CPOCx3/4	1540101007	CPSEALx1/2	1745011004
5/8									CPSEALx5/8	1745011005
3/4									CPSEALx3/4	1745011006
7/8	1.457	0.28	1	2-5/32	CPCCx1	1540101017	CPOCx1	1540101008	CPSEALx7/8	1745011019
1									CPSEALx1	1745011007
1-1/8	1.654	0.28	1-3/16	2-1/2	CPCCx1-3/16	1540101018	CPOCx1-3/16	1540101009	CPSEALx1-1/8	1745011008
1-3/16									CPSEALx1-3/16	1745011009
1-1/4S									CPSEALx1-1/4S	1745011010
1-1/4	1.850	0.28	1-1/4	2-15/16	CPCCx1-7/16	1540101019	CPOCx1-7/16	1540101010	CPSEALx1-1/4	1745011011
1-3/8									CPSEALx1-3/8	1745011012
1-7/16									CPSEALx1-7/16	1745011013
1-1/2	2.047	0.28	1-15/32	3-5/16	CPCCx1-1/2	1540101020	CPOCx1-1/2	1540101011	CPSEALx1-1/2	1745011014

PROTECTIVE CAPS AND SEALS ARE SUITABLE FOR BOTH STAINLESS STEEL AND THERMOPLASTIC COMPOSITE BEARINGS
CAPS AND SEALS ARE SOLD SEPARATELY. ORDER BY DESCRIPTION OR PART NUMBERS SHOWN

CLEANLINE PLUS™ MODELS CPAD3, CPAD4, CPAD5

FEATURES



- Cast aluminum housing with Platinum Plus finish designed to resist corrosion and provide rigid gear and bearing support.
- Stainless steel or chrome plated shaft provide resistance to corrosion.
- Precision ball bearings to accommodate higher operating speeds.
- Spiral bevel gearing to assure low noise level at higher operating speeds.
- High Pressure Seals with V-Rings
- Factory filled with USDA H1 lubricant for application service life.
- Universal mounting (5 surfaces) to assure maximum design flexibility.
- BISSC Certification Optional

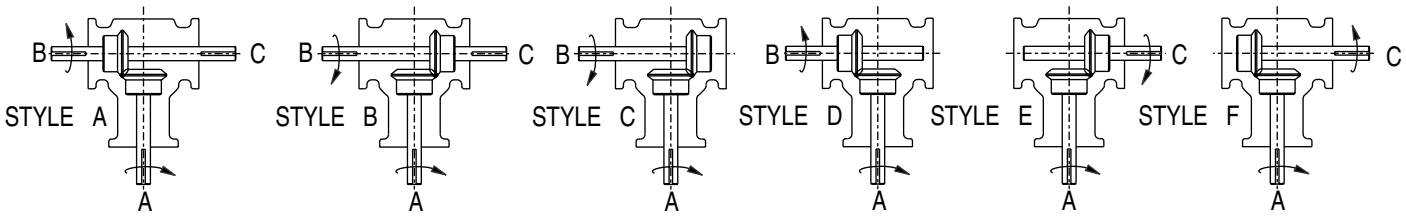
RATING TABLE

INPUT RPM†		MODEL CPAD4 RATIO		MODEL CPAD5 RATIO		MODEL CPAD3 RATIO	
		1:1	2:1Δ	1:1	2:1Δ	1:1	2:1Δ
3600	INPUT HORSEPOWER	1.810	.525	4.310	2.120	10.250	3.820
	OUTPUT TORQUE IN. LBS.	31.700	18.400	75.500	74.200	179.560	133.800
2400	INPUT HORSEPOWER	1.240	.356	2.950	1.450	7.100	2.620
	OUTPUT TORQUE IN. LBS.	32.500	18.700	77.400	76.100	186.400	137.600
1750	INPUT HORSEPOWER	.913	.262	2.190	1.070	5.270	1.960
	OUTPUT TORQUE IN. LBS.	32.900	18.900	78.700	77.200	189.700	141.000
1150	INPUT HORSEPOWER	.609	.176	1.470	.720	3.550	1.320
	OUTPUT TORQUE IN. LBS.	33.400	19.300	80.300	78.600	194.800	144.400
850	INPUT HORSEPOWER	.457	.131	1.100	.540	2.670	.990
	OUTPUT TORQUE IN. LBS.	33.900	19.500	81.300	79.400	198.000	146.800
690	INPUT HORSEPOWER	.374	.108	.900	.440	2.190	.810
	OUTPUT TORQUE IN. LBS.	34.200	19.700	81.900	80.000	200.100	148.200
400	INPUT HORSEPOWER	.220	.064	.530	.260	1.300	.480
	OUTPUT TORQUE IN. LBS.	34.700	20.000	83.300	81.200	204.800	151.200
200	INPUT HORSEPOWER	.112	.033	.270	.130	.670	.250
	OUTPUT TORQUE IN. LBS.	35.100	20.300	84.700	82.400	209.400	154.400
100	INPUT HORSEPOWER	.057	.016	.140	.070	.340	.130
	OUTPUT TORQUE IN. LBS.	35.600	20.500	85.800	83.200	212.900	156.600

†FOR HIGHER INPUT SPEEDS CONSULT FACTORY

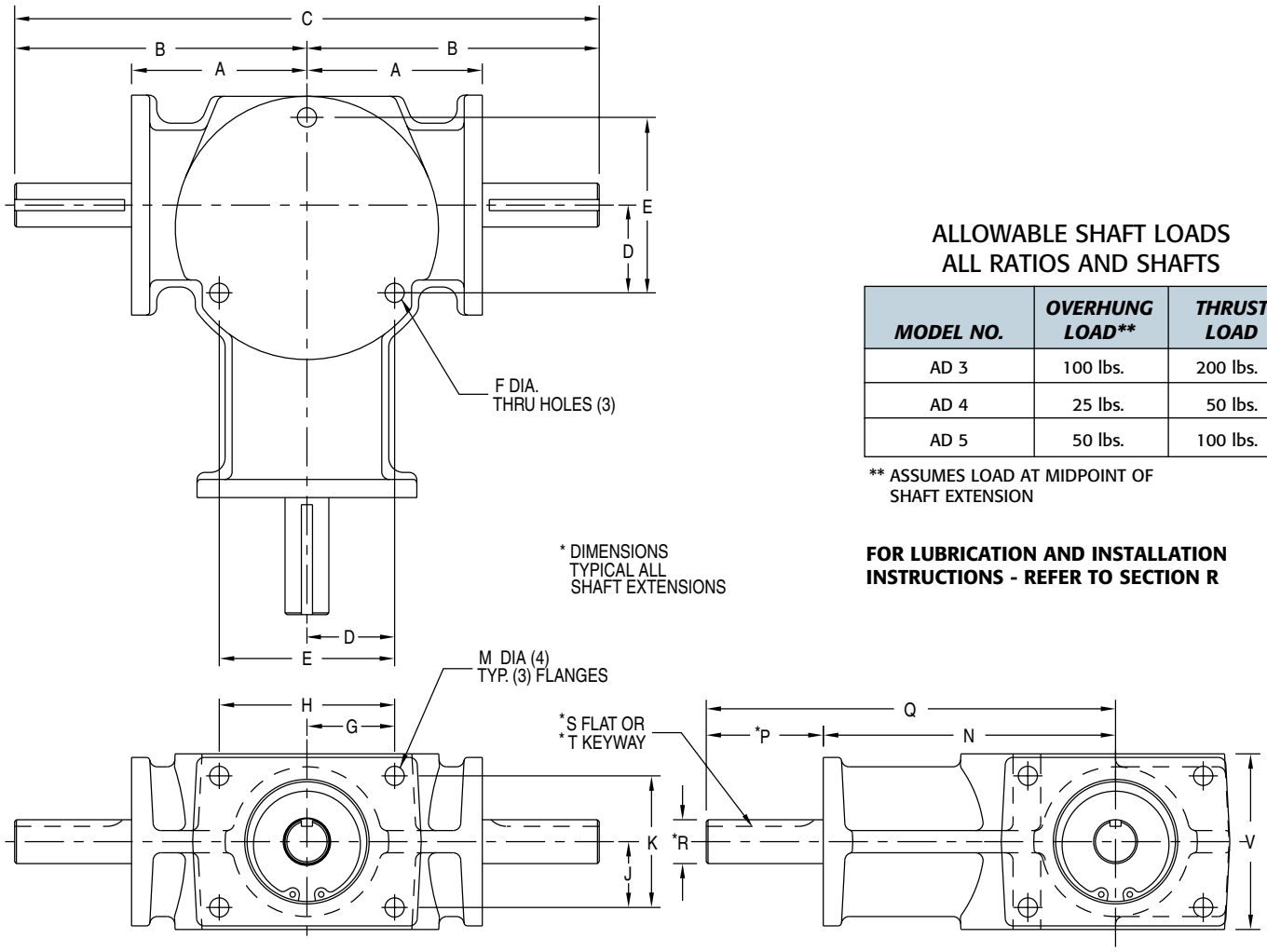
Δ2:1 RATIO HAS PLATED PINION SHAFTS

STANDARD STYLES AVAILABLE



CONSULT FACTORY FOR VERTICAL SHAFT LUBRICATION RECOMMENDATIONS
INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

CLEANLINE PLUS™ MODELS CPAD3, CPAD4, CPAD5



* DIMENSIONS TYPICAL ALL SHAFT EXTENSIONS

ALLOWABLE SHAFT LOADS ALL RATIOS AND SHAFTS

MODEL NO.	OVERHUNG LOAD**	THRUST LOAD
AD 3	100 lbs.	200 lbs.
AD 4	25 lbs.	50 lbs.
AD 5	50 lbs.	100 lbs.

** ASSUMES LOAD AT MIDPOINT OF SHAFT EXTENSION

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS - REFER TO SECTION R

SHIPPING WEIGHTS

MODEL CPAD3 . . . . . 8-1/4 lbs.
MODEL CPAD4 . . . . . 1/2 lb.
MODEL CPAD5 . . . . . 2 lbs.

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
DOWNLOAD AVAILABLE CAD MODELS AT:
WWW.HUBCITYINC.COM

INPUT SHAFT CAN BE ROTATED IN EITHER DIRECTION

MODEL NO.	A	B	C	D	E	F	G	H	J	K	M
CPAD3	3	5	10	1.500	3.000	21/64	1.500	3.000	1.125	2.250	21/64
CPAD4	1-3/8	1-63/64	3-61/64	.656	1.312	17/64	.594	1.188	.438	.875	11/64
CPAD5	2-1/8	3-5/8	7-1/4	.937	1.875	17/64	.937	1.875	.687	1.375	17/64

MODEL NO.	N	P	Q	R	S	T	V
CPAD3	5	2	3.005 7	.750/.749	—	3/16 X 3/32 1-9/16 EFF. LGTH.	3.005/3.000
CPAD4	2-5/32	19/32	2-3/4	.3745/.3740	1/32 DEEP	.60 Eff. Flat	1.255/1.250
CPAD5	3-1/4	1-1/2	2.005 4-3/4	.6245/.6240	—	3/16 X 3/32 1-7/32 EFF. LGTH.	2.005/2.000

CLEANLINE™ GEAR DRIVES



CLEANLINE™ HIGH EFFICIENCY GEAR DRIVES

FEATURES:

- FDA/USDA Approved White Acrylic Paint
- FDA/USDA Approved Stainless Steel Paint Optional
- 303 Stainless Steel Output Shafts
- Stainless Steel Hardware and Nameplate
- BISSC Certification Optional
- Available in All Standard Models of Helical Bevel, Helical Worm, Helical Parallel & Helical InLine
- Spring Loaded Double Lip Seals with V-Rings

REFER TO SECTIONS I,J,K AND L FOR
RATINGS AND DIMENSIONS



CLEANLINE™ WORM & BEVEL GEAR DRIVES

FEATURES:

- FDA/USDA Approved White Acrylic Paint
- FDA/USDA Approved Stainless Steel Paint Optional
- 303 Stainless Steel Output Shafts
- Stainless Steel Hardware and Nameplate
- BISSC Certification Optional
- Available in All Standard Models
- Spring Loaded Double Lip Seals with V-Rings
- Components in Stock for Worm Gear Series 130 thru 320 (Model # Ending in 1, 2, 3, 4, 5, 6)
- Components In Stock for Bevel Gear Models M3 thru 66
- **Most Popular Models Available in 5 Days or Less!**

REFER TO SECTIONS B AND D FOR
RATINGS AND DIMENSIONS

MODIFIED AND CUSTOM DESIGNS

If you have looked through this catalog and do not see exactly what you need, Hub City has the capability and engineering expertise to design and produce a special drive. Capabilities range from flange and shaft modifications, to custom housing dimensions. Consult the factory or your Hub City representative with your specifications.

MINA-GEAR™ GEARMOTORS

2210 Series Size D Parallel Shaft Gearmotors & Reducers

56C Gear Drives 158-858 In-Lbs Output Torque P-2

P

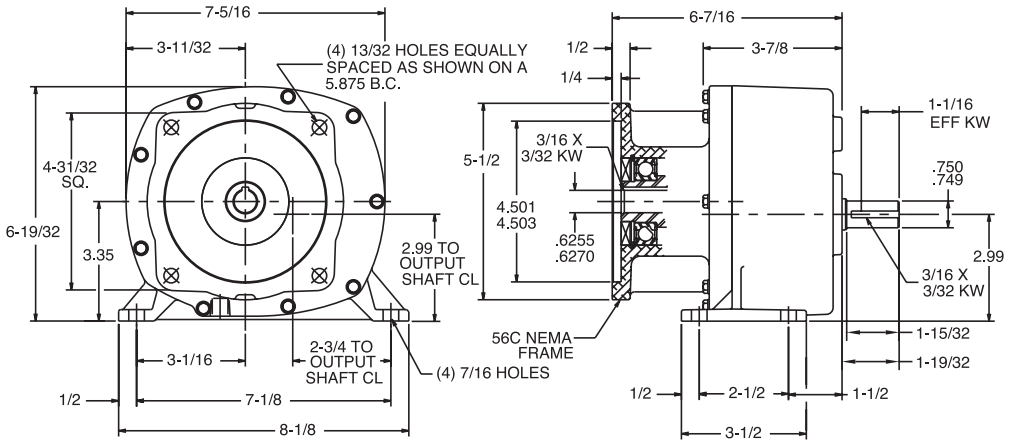
2210 SERIES 56C GEARDRIVES

FEATURES

- Mounting interchangeable with Bison Models 482 and 483, and many Dayton brand gear motors
- Torque from 150 to 1171 inch lbs.
- Ratios from 6:1 to 206:1
- Horsepowers from 1/8 to 3/4
- AC or DC motors available
- AGMA Class 9 gearing for maximum torque capacity and quiet operation
- Rugged 380 aluminum die cast housing for maximum gear and bearing support
- Permanently lubricated
- Modified units available upon request



UNITS ARE FACTORY FILLED WITH LUBRICANT. FOR IMPORTANT INSTALLATION INFORMATION REFER TO SECTION R (Pages R-2 to R-4)



SIZE D 56C GEARDRIVE

EXACT RATIO	MODEL	GEAR BOX ASSEMBLY NUMBER	OUTPUT RPM (1750 INPUT)	OUTPUT TORQUE @ 1750	HP @ 1750	OHL LBS.	SHIPPING WEIGHT
5.989	2212	50-5000796	292	158	.75	400	13 lbs.
10.780	2212	50-5000797	162	284	.75	500	13 lbs.
13.091	2212	50-5000798	134	344	.75	525	13 lbs.
19.067	2212	50-5000799	92	504	.75	575	13 lbs
28.106	2212	50-5000800	62	744	.75	625	13 lbs.
40.581	2212	50-5000801	43	839	.60	650	13 lbs.
54.733	2213	50-5000802	32	1171	.63	650	14 lbs.
67.554	2213	50-5000803	26	1139	.50	650	14 lbs.
77.628	2213	50-5000804	22	1022	.40	700	14 lbs.
96.803	2213	50-5000805	18	1089	.33	700	14 lbs.
142.697	2213	50-5000806	12	1030	.21	700	14 lbs.
206.030	2213	50-5000807	8	858	.12	700	14 lbs.

ALL TORQUE VALUES ARE IN INCH LBS.
THESE UNITS ARE DESIGNED FOR MOUNTING IN ANY POSITION, EXCEPT VERTICAL SHAFT WITH MOTOR BELOW IS NOT RECOMMENDED

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

CALL: (605) 225-0360 • FAX: (605) 225-0567

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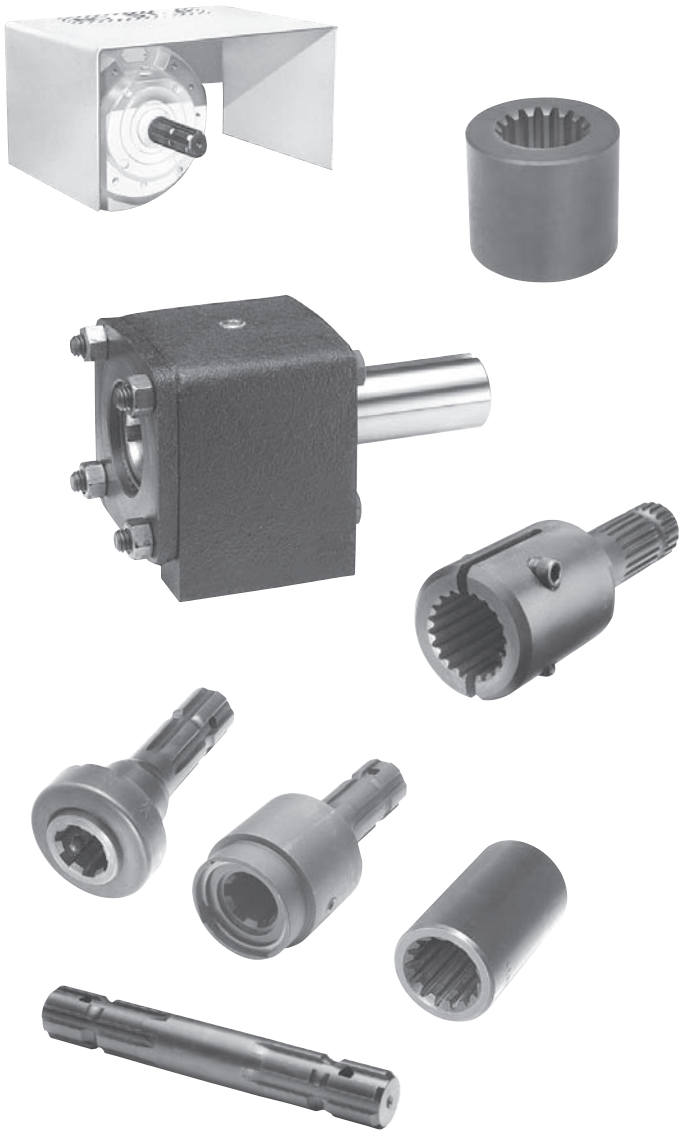
FARM PRODUCTS & ACCESSORIES

FEATURES

- Power Ratings Up to 125 hp
- Splined PTO Adapters to Fit Most Tractor and Implement Shafting
- Kwik-D-Tach Connections for Safe and Secure Attachments
- Forged Adapters for High Horsepower Applications
- Clamp Type Adapters for Safe Permanent Installations
- Over-Running Couplers for Handling High-Inertia PTO Applications
- Splined Shafts, Couplings and Hubs for Convenient Design and Fabrications
- Stroke Control Segments for Hydraulic Cylinders
- Overhung Load Adapters for Orbit Motors
- Pump Drives for PTO Driven Hydraulic Pumps
- PTO Speed Changers to Facilitate Tractor/Implement Adaptations

OPTIONS

- Special Over-Running Coupler
- Modified and Custom Shafts, Hubs and Couplings
- Contact Hub City with Your Design Requirements!



CALL: (605) 225-0360 • FAX: (605) 225-0567

WARRANTY

Hub City Inc. warrants product to be free from defect in material and workmanship for one year from date of shipment. The company will repair or replace, F.O.B. shipping point, any item found to be defective upon inspection at Hub City's factory in Aberdeen, South Dakota within one year from date of shipment. See Terms and Conditions of Sale at the end of this catalog for complete warranty and limitation of liability statement.

ADJUSTMENT POLICY

SPLINED SHAFT ADAPTORS: Broken or damaged Splined Shaft Adaptors returned directly to the factory in Aberdeen, South Dakota, will be replaced on a no-charge basis.

FOR USER/OPERATOR SAFETY, SEE DETAILS ON PAGES Q-4, Q-5 & Q-11

HOW TO ORDER

When ordering Hub City Farm Products and Accessories specify the part number and quantity for each item ordered. Orders may be placed by mail, telephone, fax or e-mail.

Hub City Inc.
Box 1089
Aberdeen, SD 57401

Telephone: 605/225-0360 Fax: 605/225-0567
E-Mail: sales@hubcityinc.com
Website: www.hubcityinc.com



IMPORTANT INFORMATION!

PLEASE READ BEFORE USING PRODUCT



PTO MOUNTED ACCESSORY SAFETY INSTRUCTION

The application of Hub City farm products/accessories may expose rotating implement drive line components from the equipment guarding and/or extend the tractor P.T.O. shaft and/or contract the implement drive line.

For the safety of the user/operator, the purchaser or his/her designee must shield and guard any exposed rotating components and extend the hitch point or shorten the implement drive line to accommodate the use of these products/accessories.

For the safety of the user/operator, the Hub City products in this catalog identified by this symbol ⊗ must be used only on the tractor P.T.O. shaft.

APPLICATION

Mounting a Hub City PTO accessory on your tractor changes the relationship between the end of the operating (rotating) PTO shaft and the end of the tractor master power take-off (PTO) shield.



This change can result in exposed rotating implement drive line components and if left unguarded can result in serious injury or death to the user/operator.

To use this Hub City PTO accessory, you MUST extend the tractor master PTO shield to provide proper guarding of the implement PTO drive line.

The tractor to which you will be mounting this Hub City Power Take-off (PTO) accessory, must be equipped with an ASAE approved Tractor Master Power Take-Off (PTO) Shield supplied by the tractor manufacturer or constructed to American Society of Agricultural Engineers Standards and a Power Take-Off (PTO) Shield Extension as identified below and in Figure No. 1. If the tractor will not have these two (2) shields, DO NOT mount or use this PTO accessory.



Failure to properly guard can result in serious injury or death.

Your PTO driven implement MUST BE equipped with a shielded drive line at all times when using this Hub City power take-off accessory! If your PTO driven implement drive line is equipped with a tunnel type drive line shield that is attached to the drive line pedestal on the implement and attaches to the slot and tang on the tractor master power take-off (PTO) shield, that allows the tunnel shield to telescope as you turn corners, DO NOT use the implement with this or any other Hub City PTO accessory. The tractor master power take-off shield extension shown in Figure No. 1, covers the tractor master power-take off shield slot and tang and will not allow the attachment of the tunnel type drive line shield.



Before mounting the PTO device on the tractor power take-off (PTO) shaft, and configuring and mounting a PTO shield extension, disengage the tractor power take-off PTO shaft and shut off the tractor engine.

INSTRUCTIONS

The information below will guide you in extending the tractor master power take-off (PTO) shield. If you are unable or unwilling to extend the tractor master power take-off (PTO) shield do not use or mount this Hub City PTO Accessory on your tractor.

The requirements of a tractor master power take-off (PTO) shield and its relationship to the tractor power take-off (PTO) shaft, that will provide the specifications to extend your tractor master power take-off (PTO) shield, can be obtained from:

The American Society of Agricultural Engineers (ASAE) – 2950 Niles Road – St. Joseph, MI 49085-9659
Phone #616-429-0300, FAX #:616-429-3852, E-mail: hq@asae.org, Web: http://asae.org/
Ref: Std #S203.13, December 1999 or latest revision, front & rear power take-off for agricultural tractors.

Global Engineering Documents – 15 Inverness Way East – Englewood, CO 80112-5776
Phone #303-397-7956 or 800-854-7179, Fax #: 303-397-2740, E-mail global@ihs.com
Ref: ASAE Std S203-13 December 1999 or latest revision

Your tractor manufacturer, Ref: Your owner/operators manual for mailing address and phone number.

Your local implement dealer from whom you purchased your tractor or who provides similar tractors.



IMPORTANT INFORMATION!

PLEASE READ BEFORE USING PRODUCT



In the construction of a tractor master power take-off (PTO) shield extension, the following information can be used as a guideline.

CAUTION **DO NOT USE this power take-off shield extension guideline with PTO accessories NOT manufactured by Hub City.**

The shield extension material must be steel, the same or a greater thickness than the steel used in the tractor master power take-off (PTO) shield.

The shield extension material should be formed to closely fit the contour of the inside of the tractor master power take-off (PTO) shield.

The shield extension should be fastened to the tractor master power take-off (PTO) shield with a minimum of (7) 5/16 NC Grade 5 bolts, with flat washers, lock washer and nut, (2) bolts on each side and (3) bolts on top of the shield extension.

CAUTION **DO NOT USE the tractor master power take-off (PTO) shield or the shield extension as a step.**

A generic guideline for the dimensional size & construction characteristics of a PTO shield extension are shown in Figure No. 1:

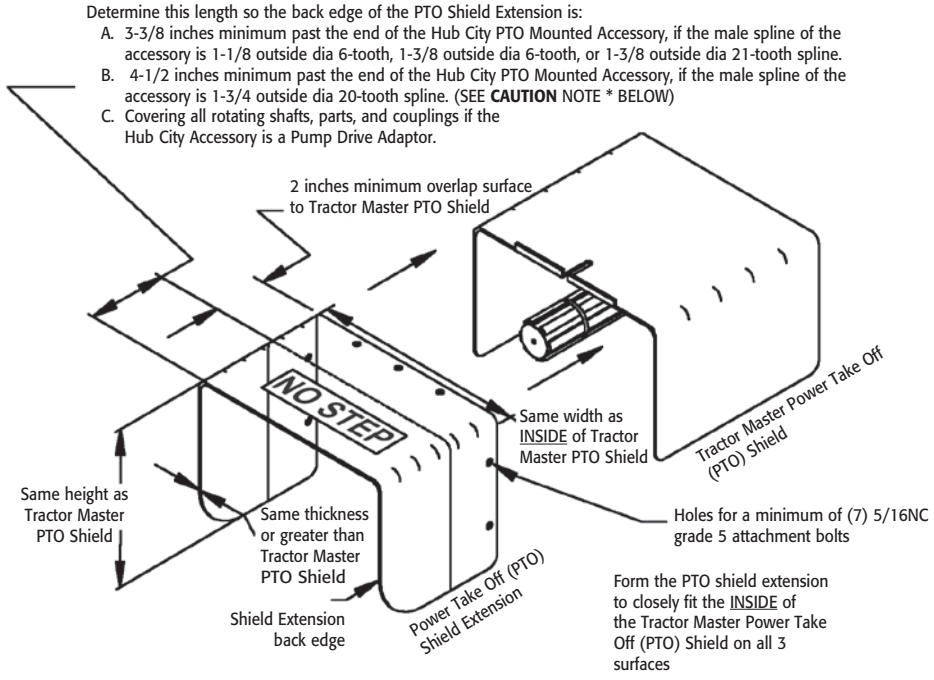


Figure No. 1

CAUTION *If this Hub City PTO mounted accessory has a 1-3/4 outside diameter 20-tooth male spline, and is being mounted on a 1-1/8 or 1-3/8 outside diameter 6-tooth or 1-3/8 outside diameter 21-tooth male spline tractor PTO shaft, the tractor master power take-off (PTO) shield on the tractor is narrower and closer to the tractor PTO shaft than a tractor equipped with a 1-3/4 20-tooth male spline PTO shaft. Using this adaptor and extending the tractor master PTO shield as illustrated above may result in interference between the implement drive line shield and the tractor master power take-off (PTO) shield and extension during short turns or very unevenground. If this condition is evident, the tractor master power take-off (PTO) shield and extension must be modified to provide sufficient implement drive line and drive line shield clearance.



The installation of this Hub City PTO accessory on your tractor also changes the relationship between the end of the operating PTO shaft and the tractor draw bar hitch point. This extended tractor PTO shaft condition may require you to extend the tractor hitch point, and/or shorten the implement drive line to reduce excessive drive line angularity, resulting from short turns or very uneven ground, and/or prevent the implement drive line from bottoming out, which may damage the Hub City accessory and/or equipment and result in injury to the user/operator.



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

P.T.O. PRODUCTS

SPLINED ADAPTORS – TO 75 HP

- Capacity to operate on tractors related to 75 P.T.O. HP
- Provide a means of connecting two dissimilar splines
- Welded steel construction for added strength
- Corrosion resistant finish
- Spring and retaining ring pin or setscrews furnished



FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
25mm-18	1 3/8-6	4 5/8	3 3/8	3 1/2	Cross Pin	0332-00084*
1 1/8-6	1 3/8-6	5 1/2	3 3/4	3 5/8	Cross Pin	0332-03531
1 1/8-6	1 1/8-6	5 1/2	3 3/4	3 5/8	Cross Pin	0332-00377*
1 3/8-6	1 1/8-6	6 1/2	4 3/8	4 1/4	Cross Pin	0332-00400
1 3/8-6	1 1/8-6	5 1/8	3 5/16	3 5/16	Cross Pin	0332-00420
1 3/8-6	1 3/8-6	6 1/2	4 3/8	3 7/8	Cross Pin	0332-00371
1 3/8-6	1 3/8-6	5 1/8	3 5/16	3 5/16	Cross Pin	0332-00378
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	Setscrew	0332-00373
1 3/8-21	1 3/4-20	7	5	4 1/2	Setscrew	0332-00070
1 3/4-6	1 3/8-6	6 1/2	4 3/4	4 5/8	Cross Pin	0332-00401

* MANUFACTURED TO ORDER

SPLINED ADAPTORS – TO 125 HP

- Capacity to operate on tractors related to 125 P.T.O. HP
- Developed for long and rugged use
- Alloy steel, heat treated for extra strength
- Corrosion resistant finish
- Setscrews furnished



FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/8-21	1 3/8-21	6 7/8	4 13/16	4 13/16	Setscrew	0332-00001
1 3/8-21	1 3/8-6	6 7/8	4 13/16	4 11/16	Setscrew	0332-00002
1 3/8-21	1 3/4-20	7 11/16	5 31/64	4 63/64	Clamp Type	0332-00094**
1 3/8-6	1 3/8-21	6 7/8	4 13/16	5 5/16	Setscrew	0332-00004
1 3/8-6	1 3/8-6	6 7/8	4 13/16	5 3/16	Setscrew	0332-00005*

** NOT HEAT TREATED
* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY
SEE DETAILS PAGE Q-4

HUBCITY

P.T.O. PRODUCTS

KWIK-D-TACH SPLINE ADAPTORS – TO 75 HP



- Capacity to operate on tractors rated to 75 P.T.O. HP
- Patented Quick Release Drive
- New P.T.O. Quick Release Concept – Spring Loaded –rotates about 30° by hand for quick release
- Dependable operation – no sticking pins. Always easily operated
- No sharp edges, protrusions, pins or other interferences to injure operators

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-6	6 1/2	4 3/8	4 3/8	0332-00010
1 3/8-6	1 3/8-21	6 1/2	4 3/8	4 7/8	0332-00013
1 3/8-6	1 1/8-6	6 1/2	4 3/8	4 3/4	0332-00015*
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-01373
1 3/8-21	1 3/8-21	6 1/2	4 3/8	4 3/8	0332-02121
Repair Kit					0332-00086

* MANUFACTURED TO ORDER

SPLINED ADAPTORS – TO 75 HP

For tractors with 1 3/4 - 20 Spline P.T.O.



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/4-20	1 3/8-6	8 3/16	5 3/16	5 3/16	Clamp Type	0332-01476
1 3/4-20	1 3/8-21	8 3/16	5 3/16	5 11/16	Clamp Type	0332-01477

HEAVY-DUTY SPLINED ADAPTORS – TO 125 HP

For tractors with 1 3/4 - 20 Spline P.T.O.



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		SECURED BY	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 3/4-20	1 3/8-6	8 3/16	5 3/16	5 3/16	Clamp Type	0332-01490
1 3/4-20	1 3/8-21	8 3/16	5 3/16	5 11/16	Clamp Type	0332-01491

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

HUBCITY



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

P.T.O. PRODUCTS

"FORGED" P.T.O. ADAPTOR – TO 75 HP

- 1 1/8 - 6 Spline female – 1 3/8 - 6 Spline male PART NO. 0332-00018
- "Forged" internal spline
- Universal quick-detach slot and bolt holes – can be used with any American, British or European P.T.O. system
- Furnished with 5/16 x 1 1/16 spring pin for direct connection to P.T.O.
- Overall length: 3 – extends P.T.O. 1 1/8



PUSH-PIN TYPE P.T.O. ADAPTORS – TO 75 HP

Quick Release Extension Adaptor

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-21	6 1/2	4 3/8	4 7/8	0332-00092
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-01375
Repair Kit				Old Style	0335-90120
				New Style	0336-00182



SPRING TYPE RELEASE

ROUND SHAFT ADAPTORS – TO 75 HP

FEMALE ROUND	KEYWAY	MALE SPLINE	LENGTH	EXTENDS SHAFT	PART NUMBER
1	1/4	1 3/8-6	5 11/16	3 1/4	0332-00376
1 1/8	1/4	1 3/8-6	5 11/16	3 3/16	0332-00430
1 1/4	1/4	1 3/8-6	5 11/16	3 3/16	0332-00431
1 3/8	5/16	1 3/8-6	5 11/16	3 3/16	0332-00432
1 1/2	3/8	1 3/8-6	6 9/32	4	0332-00433



CLAMP TYPE P.T.O. ADAPTORS – TO 75 HP

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 1/8-6	1 3/8-6	7 5/16	4 5/8	4 5/8	0332-01354
1 3/8-6	1 3/8-6	6 1/2	4 3/8	4 3/8	0332-00057
1 3/8-21	1 3/8-6	6 1/2	4 3/8	3 7/8	0332-00087



SLEEVE TYPE SPLINED ADAPTORS – TO 75 HP

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	PART NUMBER	SPECIAL APPLICATIONS
31/32-10	1 3/8-6	2 1/4	0332-00355	IHC Cub & Kubota
1 1/8-6	1 3/8-6	2 1/4	0332-00352	
1 1/8-6	1 3/8-6	2	0332-00363	Replaced Ford 231082
1 3/8-6	1 3/4-6	2 1/2	0332-00403*	

* MANUFACTURED TO ORDER



CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

P.T.O. PRODUCTS

KWIK-D-TACH SPLINED PUMP DRIVE ADAPTORS

Same safe, dependable, fast action release as Kwik-D-Tach Splined Adaptors



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	FEMALE ROUND**	KEYWAY	LENGTH(INCHES)	PART NUMBER
1 3/8-6	.625	3/16 x 3/32	4 1/8	0332-00012
1 3/8-6	.750	3/16 x 3/32	4 1/8	0332-00014
1 3/8-6	.875	3/16 x 3/32	4 1/8	0332-00011
1 3/8-6	.937	1/4 x 1/8	4 1/8	0332-00040
1 3/8-6	1.000	1/4 x 1/8	4 1/8	0332-00016
1 3/8-6	1.125	1/4 x 1/8	4 1/8	0332-00017

** NOMINAL + .002

SPLINED PUMP DRIVE ADAPTORS

1 3/8 - 21 Spline Pump Drives are supplied with setscrews



FEMALE SPLINE	FEMALE ROUND**	KEYWAY	LENGTH(INCHES)	PART NUMBER
1 1/8-6	1.000	1/4 x 1/8	3 1/16	0332-00412
1 3/8-6	.625	3/16 x 3/32	4 1/8	0332-00407
1 3/8-6	.750	3/16 x 3/32	4 1/8	0332-00408
1 3/8-6	.875	3/16 x 3/32	4 1/8	0332-00409
1 3/8-6	.937	1/4 x 1/8	4 1/8	0332-00413
1 3/8-6	1.000	1/4 x 1/8	4 1/8	0332-00410
1 3/8-6	1.125	1/4 x 1/8	4 1/8	0332-00411
1 3/8-21	.625	3/16 x 3/32	4 1/8	0332-00607
1 3/8-21	.750	3/16 x 3/32	4 1/8	0332-00608
1 3/8-21	.937	1/4 x 1/8	4 1/8	0332-00612
1 3/8-21	1.000	1/4 x 1/8	4 1/8	0332-00610
1 3/8-21	1.125	1/4 x 1/8	4 1/8	0332-00611*

** NOMINAL + .002

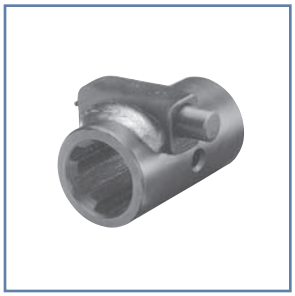
* MANUFACTURED TO ORDER

SPLINED WELD-ONS



DESCRIPTION	PART NUMBER
1 1/8-6 Spline, 5 1/4 Long	0332-00358
1 3/8-6 Spline, 5 1/2 Long	0332-00359
1 3/8-21 Spline, 5 1/2 Long	0332-00019

QUICK RELEASE WELD-ONS



⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

DESCRIPTION	PART NUMBER
1 3/8-21 Spline, 3 5/16 Long	0332-01350*
1 3/8-6 Spline, 3 5/16 Long	0332-01345

* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

P.T.O. PRODUCTS

OVER-RUNNING COUPLERS

HUB CITY Over-Running Couplers provide a safe way to protect operators and machinery where inertia of driven units: e.g. rotary mowers, balers, hay conditioners, etc. can over-run driving source. They take the push out of the driven machine and eliminate the chance of broken or twisted P.T.O. shafts. Over-Running Couplers drive solidly from tractor to driven implement, but over-run smoothly when implement exceeds P.T.O. speeds.

KWIK-D-TACH TRACTOR MODELS – TO 125 HP



- Patent applied for – pending serial No. U.S. 465 641 – Canadian 1 117 114
- Capacity to operate on tractors to 125 P.T.O. HP
- New P.T.O. Quick Release Concept – Spring Loaded – rotates about 30° by hand for quick release
- Designed to operate with 1000 RPM P.T.O.'s
- Installation and lubrication instructions enclosed with each coupler

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE	
1 3/8-6	1 3/8-6	7 5/16	4 3/16	5 3/16	0331-00010
1 3/8-6	1 3/8-21	7 3/16	4 11/16	5 3/16	0331-00011
1 3/8-21	1 3/8-6	7 5/16	5 5/16	5 3/16	0331-00012
1 3/8-21	1 3/8-21	7 3/16	5 3/16	5 3/16	0331-00013
Repair Kit					0337-00126

TRACTOR MODELS – TO 75 HP



SHIPPING WGT. 6 LBS.

Over-Running Couplers covered by Patent No. 3,233,471 – Canadian Patent No. 727-982

- All steel welded housing
- Heat treated alloy steel inner sleeve
- Hardened steel keys, spring loaded
- Snap ring construction for quick, easy disassembly for cleaning and service
- Spring roll pin for quick mounting to tractor
- Convenient grease fitting for gun lubrication
- Designed to operate with 1000 RPM P.T.O.'s

⊗ SEE USAGE SAFETY WARNING ON PAGE Q4

FEMALE SPLINE	MALE SPLINE	LENGTH (INCHES)	EXTENDS TRACTOR P.T.O.		FITS TRACTOR	PART NUMBER
			SHAFT END	SHAFT RETAINING GROOVE		
1 1/8-6	1 1/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00690
1 1/8-6	1 3/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00670
1 3/8-6	1 1/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00680
1 3/8-6	1 3/8-6	6 21/32	4 5/32	4 1/32	All with Cross Pin Hole Including Ford	0331-00660
Repair Kit						0337-00076

INSTALLATION AND LUBRICATION INSTRUCTIONS ENCLOSED WITH EACH COUPLER.
FOR NON-PTO OVER-RUNNING COUPLERS, REFER TO PAGE Q15.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

NON P.T.O. PRODUCT SAFETY

WARNING

For safety, purchaser or user must provide protective guards over all rotating shafts and any moving apparatus mounted thereon. The user is responsible for checking all applicable safety codes in his area and for the equipment utilizing this component, and providing suitable guards.

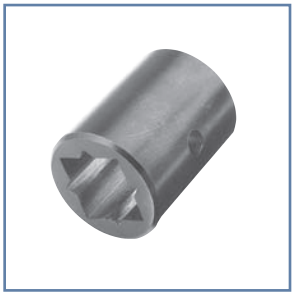
Buyer shall be solely responsible for determining the adequacy of this product for any and all uses to which the buyer shall apply this product. The application by the buyer shall not be subject to any implied warranty of fitness for a particular purpose. The purchaser/user of this component accepts responsibility for the above issues when removing the safety warning label from the component.



DO NOT OPERATE WITHOUT PROPER GUARDS. FAILURE TO GUARD CAN RESULT IN SERIOUS INJURY OR DEATH AND DAMAGE TO THE EQUIPMENT.

SQUARE BUSHING WELD-ONS

I.D.	O.D.	LENGTH (INCHES)	PART NUMBER
7/8 & 1 Square	1 3/4	2 1/4	0332-00360
1 1/8 Square	2	2 1/2	0332-00362
1 1/4 Square	2 1/4	2 1/2	0332-00364



SPROCKET REPAIR HUB FOR TRANSIT-MIXER

NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	SHOULDER O.D.	PILOT O.D.	PILOT LENGTH	O.A. LENGTH	PART NUMBER
23	8/16 INV.	3	4 1/2	4	1 15/32	3 5/64	0332-00045



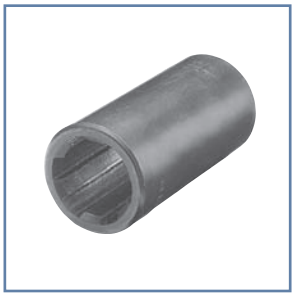
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

SPLINED COUPLINGS



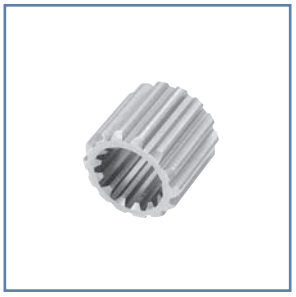
SPLINED SIZE	O.D.	LENGTH (INCHES)	PART NUMBER
3/4-6	1 3/8	2 1/2	0332-00336
7/8-6	1 3/8	2 1/2	0332-00337
31/32-10 (IHC CUB & KUBOTA)	1 3/8	2 3/4	0332-00340
1-10	1 3/8	2 1/2	0332-00338
1-6	1 3/8	2 3/4	0332-00341
1 1/8-6	1 9/16	2 3/4	0332-00344
1 1/4-6	1 7/8	3 1/4	0332-00342
1 1/4-10	1 3/4	3 3/4	0332-00348
1 3/8-6	1 3/4	3 3/4	0332-00345
1 3/8-10	1 3/4	3	0332-00365
1 1/2-6	1 7/8	3 3/4	0332-00347
1 1/2-10	1 7/8	3	0332-00367
1 5/8-6	2	3 3/4	0332-00349
1 3/4-6	2 1/4	3 3/4	0332-00346

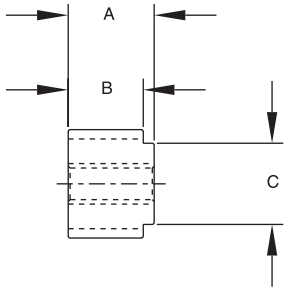
INVOLUTE SPLINED COUPLINGS



NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	COUPLING O.D.	COUPLING LENGTH	PART NUMBER
9	16/32 DP 30° PA	.625	1 3/8	2	0332-00027
11	16/32 DP 30° PA	.750	1 3/8	2	0332-00066
13	16/32 DP 30° PA	.875	1 3/8	3	0332-00028
15	16/32 DP 30° PA	1.000	1 1/2	3	0332-00043
14	12/24 DP 30° PA	1.250	1 3/4	3	0332-00029
21	16/32 DP 30° PA	1.375	1 3/4	3	0332-00350
20	12/24 DP 30° PA	1.750	2 1/4	3 3/4	0332-00320
13	8/16 DP 30° PA	1.750	2 1/4	3 3/4	0332-00030
27	16/32 DP 30° PA	1.750	2 1/4	3	0332-00351

HYDRAULIC REDUCER BUSHINGS





MALE SPLINE	FEMALE SPLINE	A	B	C	PART NUMBER
1 3/4 - 13T 8/16 DP, 30° PA	5/8 - 9T 16/32 DP, 30° PA	1 3/8	1 7/32	1 5/16	23-01531
1 3/4 - 13T 8/16 DP, 30° PA	7/8 - 13T 16/32 DP, 30° PA	1 3/8	1 7/32	1 5/16	23-01532
1 3/4 - 13T 8/16 DP, 30° PA	1 1/4 - 14T 12/24 DP, 30° PA	1 7/32	N/A	N/A	23-01533
1 3/4 - 13T 8/16 DP, 30° PA	1 - 15T 16/32 DP, 30° PA	1 3/8	1 7/32	1 5/16	23-01558
1 1/4 - 14T 12/24 DP, 30° PA	.625 Round 5/32 x 5/64 KW	1 1/8	N/A	N/A	0223-02150
1 1/4 - 14T 12/24 DP, 30° PA	5/8 - 9T 16/32 DP, 30° PA	1 1/8	N/A	N/A	0223-02149
1 1/4 - 14T 12/24 DP, 30° PA	7/8 - 13T 16/32 DP, 30° PA	1 1/8	N/A	N/A	0223-02148

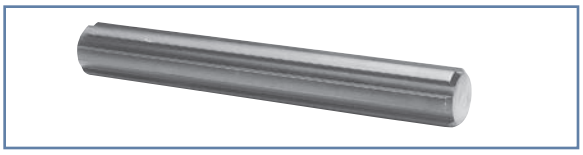
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

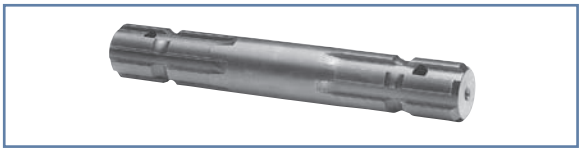
NON P.T.O. PRODUCTS

SPLINED SHAFTS



SIZE	SPLINE	LENGTH (INCHES)	PART NUMBER
1	6	10	0332-00390
1 1/8	6	10	0332-00391
1 1/4	6	10	0332-00392
1 1/4	10	10	0332-00393
1 3/8	6	10	0332-00394
1 1/2	6	10	0332-00396
1 5/8	6	10	0332-00397
1 3/4	6	10	0332-00398

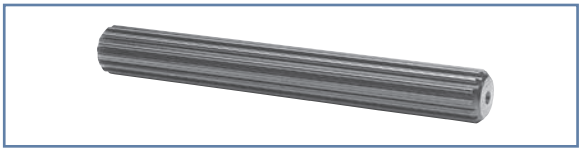
EXTENSION SHAFTS



SPLINE	SPLINE	LENGTH (INCHES)	PART NUMBER
1 3/8-6	1 3/8-6	9	0332-00356
1 3/8-6	1 1/8-6	9	0332-00357*

* MANUFACTURED TO ORDER

INVOLUTE SPLINED SHAFTS



NO. OF SPLINES	SPLINE DESCRIPTION	SPLINE O.D.	SHAFT LENGTH	PART NUMBER
9	16/32 DP 30° PA	.625	6	0332-00023
13	16/32 DP 30° PA	.875	6	0332-00024
15	16/32 DP 30° PA	1	8	0332-00044
14	12/24 DP 30° PA	1.25	10	0332-00025
21	16/32 DP 30° PA	1.375	10	0332-00395
26	20/40 DP 30° PA	1.358	10	0332-00414*
16	10/20 DP 30° PA	1.7	10	0332-00038*
13	8/16 DP 30° PA	1.75	10	0332-00026
27	16/32 DP 30° PA	1.75	10	0332-00399
34	20/40 DP 30° PA	1.750	10	0332-00415*
16	8/16 DP 30° PA	2.125	10	0332-00039

* MANUFACTURED TO ORDER

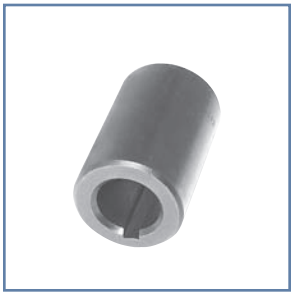
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

ROUND BORE COUPLINGS

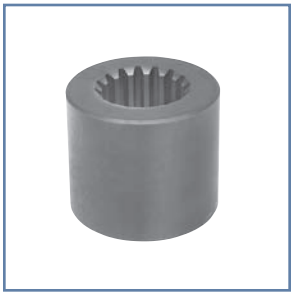


- Use to join two shafts
- Repair pulleys, gears, sprockets, etc.
- O.D. and I.D. concentricity not held to close limits
- If precision O.D. and I.D. concentricity is required, write for quotations
- Not drilled for setscrews

BORE SIZE	KEYWAY	O.D.	LENGTH(INCHES)	PART NUMBER
3/4	3/16	1 1/2	2 3/4	0332-00380
7/8	3/16	1 1/2	2 3/4	0332-00381
1	1/4	1 3/4	2 3/4	0332-00382
1 1/16	1/4	1 3/4	2 3/4	0332-00383*
1 1/8	1/4	2	3	0332-00384
1 3/16	1/4	2	3	0332-00385
1 1/4	1/4	2	3	0332-00386
1 5/16	5/16	2	3	0332-00387*
1 3/8	5/16	2 1/8	3	0332-00388
1 7/16	3/8	2 1/8	3	0332-00389
1 1/2	3/8	2 1/4	3	0332-00379

* MANUFACTURED TO ORDER

PRECISION SPLINED HUBS



- Designed for hydraulic motors
- Made from low alloy, high carbon steel
- Close tolerance O.D. and I.D. concentricity permits accurate mounting of sheave or sprocket
- Precision also permits accurate chucking for additional mounting

NO. OF SPLINES	SPLINE DESCRIPTION		SPLINE O.D.	HUB O.D.	LENGTH(INCHES)	PART NUMBER
6	6B	Str. Side	1.000	2.001/2.000	1 3/4	0332-00031
18	1.25 Module	20° PA	.984	1.751/1.750	1 3/4	0332-00085*
9	16/32 DP	30° PA	.625	1.251/1.250	1 1/4	0332-00032
11	16/32 DP	30° PA	.750	1.501/1.500	1 1/2	0332-00071
13	16/32 DP	30° PA	.875	1.501/1.500	1 1/2	0332-00033
15	16/32 DP	30° PA	1.000	1.751/1.750	1 3/4	0332-00072
21	16/32 DP	30° PA	1.375	2.251/2.250	2 1/8	0332-00035
17	12/24 DP	30° PA	1.500	2.251/2.250	2 1/4	0332-00093
23	16/32 DP	30° PA	1.500	2.251/2.250	2 1/8	0332-00073
27	16/32 DP	30° PA	1.750	3.001/3.000	2 1/4	0332-00075
14	12/24 DP	30° PA	1.250	2.251/2.250	2	0332-00034
16	10/20 DP	30° PA	1.700	2.751/2.750	2 1/4	0332-00036
13	8/16 DP	30° PA	1.750	3.001/3.000	2 1/4	0332-00074
16	8/16 DP	30° PA	2.125	3.501/3.500	2 31/32	0332-00037

* MANUFACTURED TO ORDER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

UTILITY MODELS – TO 75 HP

- Same construction as Standard-Duty Tractor Models
- For those applications other than tractor P.T.O. shafts, where the driven shaft overruns the driver occasionally or where one shaft must override or idle part of the time.
- Operating Speed to 1000 RPM



SHIPPING WGT. 6 LBS.

FEMALE SPLINE	MALE EXTENSION	PART NUMBER
1 ¼ Rd., ¼ KW	1 ¼ Rd., ¼ KW	0331-00615
Repair Kit		0337-00076

INSTALLATION AND LUBRICATION INSTRUCTIONS ENCLOSED WITH EACH COUPLER

UNIVERSAL MODELS– TO 75 HP

- Same construction as Standard-Duty Tractor Models
- Universal flange for mounting sheave or sprocket, has six ⅜" holes equally spaced on 4 ¼" Bolt Circle. Flange O.D. 5" – Hub O.D. 2 ¾"
- Operating Speed to 1000 RPM



SHIPPING WGT. 6 LBS.

FEMALE SLEEVE		PART NUMBER
I.D.	TYPE	
1 ¼	Round w/¼ keyway	0331-00600
1 ⅜	Round w/5/16 keyway	0331-00607
Repair Kit		0337-00082

MANUFACTURED TO ORDER. CONSULT FACTORY FOR PRICE AND DELIVERY.

SPECIAL OVER-RUNNING MODELS

Send us details of your special requirements! We can design and manufacture to your order. Pictured to the right is a special unit with sprocket welded to outer housing.



CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

NON P.T.O. PRODUCTS

STROKE CONTROL SEGMENTS FOR HYDRAULIC CYLINDERS



- Cast iron segments for durability
- Rigidly attached spring with contoured handle permits installation and removal with one hand
- Universal: each segment assembly fits all shaft sizes 1 through 1 ¾ inches
- Large area parallel compression face of segments distribute cylinder clamping load over a greater area of the cylinder head and cylinder rod ends clevis to minimize possible cylinder damage
- Attached spring reduces loss of segment halves
- Provides ¼ inch adjustments from 1 through 6 ½ inches
- Can be ordered by sets or segments

SEGMENT COMBINATIONS

FOR STROKE REDUCTION (INCHES)	*USE SEGMENT (INCHES)*	*FOR STROKE REDUCTION (INCHES)*	*USE SEGMENT (INCHES)*
1	1	3 ½	1, 1, 1 ½
1 ¼	1 ¼	3 ¾	1, 1 ¼, 1 ½
1 ½	1 ½	4	1, 1 ¼, 1 ¾
1 ¾	1 ¾	4 ¼	1, 1 ½, 1 ¾
2	1, 1	4 ½	1 ¼, 1 ½, 1 ¾
2 ¼	1, 1 ¼	4 ¾	1, 1, 1 ¼, 1 ½
2 ½	1, 1 ½	5	1, 1, 1 ¼, 1 ¾
2 ¾	1, 1 ¾	5 ¼	1, 1, 1 ½, 1 ¾
3	1 ¼, 1 ¾	5 ½	1, 1 ¼, 1 ½, 1 ¾
3 ¼	1 ½, 1 ¾	6 ½	1, 1, 1 ¼, 1 ½, 1 ¾

SET OF 5 SEGMENTS	*WEIGHT (LBS.) 7.7*	*PART NUMBER 0339-80000*
Set Includes:		
2 - 1 In. Segments	1.2	0339-80001
1 - 1 ¼ In. Segment	1.4	0339-80002
1 - 1 ½ In. Segment	1.8	0339-80003
1 - 1 ¾ In. Segment	2.1	0339-80004

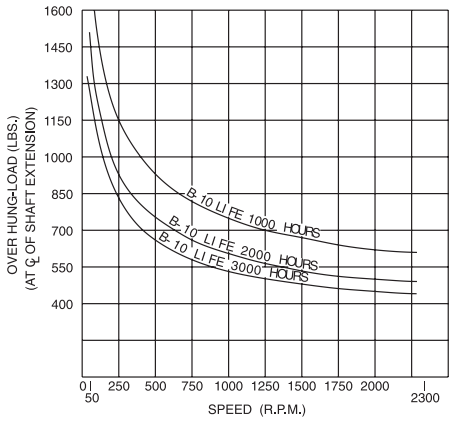
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



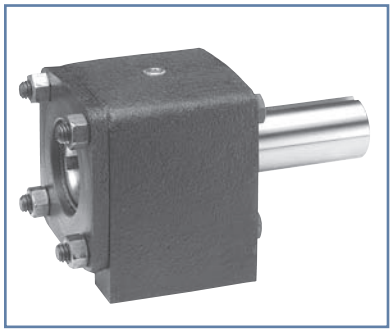
FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-11

OVER-HUNG LOAD ADAPTOR FOR ORBIT MOTORS

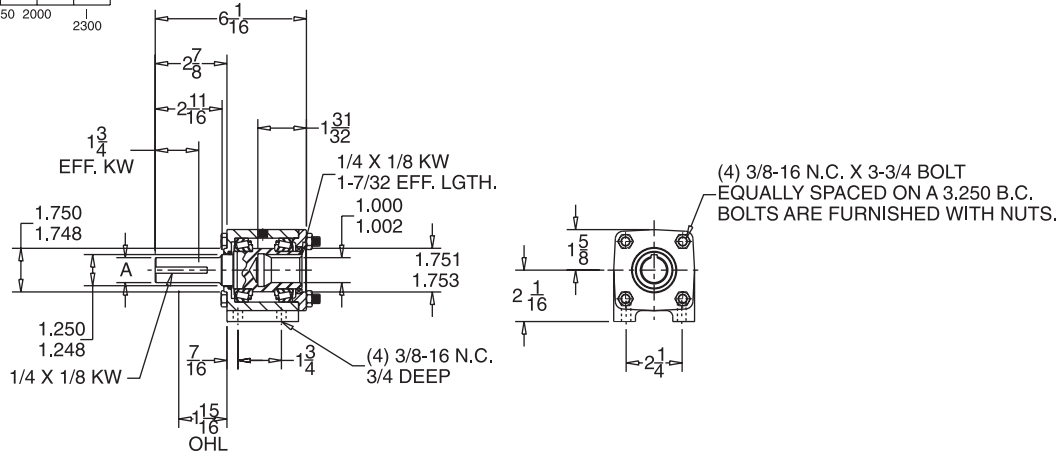
Specifically designed to direct connect with the orbit motor and provide substantially greater capacity for sprockets, sheaves, etc.



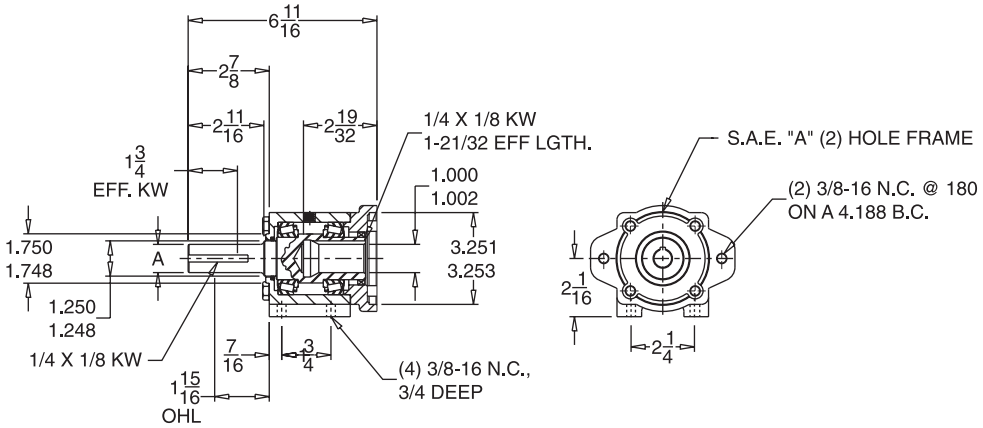
- Tapered Roller Bearings
- Grease Seals
- Lubricated for Life
- Two (2) Shaft Sizes
- Maximum O.H.L. Capacity



DIMENSIONS FOR CHAR-LYNN ORBIT MOTORS



DIMENSIONS FOR S.A.E. "A" 2-HOLE ORBIT MOTORS



ITEM	SHAFT DIA. A	PART NUMBER	WGT. EACH
CHAR-LYNN MOTORS	1.000/.998	0334-00028	9 lbs.
CHAR-LYNN MOTORS	1.250/1.248	0334-00035	9 lbs.
S.A.E. 2-HOLE MOTORS	1.000/.998	0334-00042	11 lbs.
S.A.E. 2-HOLE MOTORS	1.250/1.248	0334-00043	11 lbs.

EXTREME OVER-HUNG LOADS WILL REQUIRE THE LARGER DIAMETER SHAFT

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

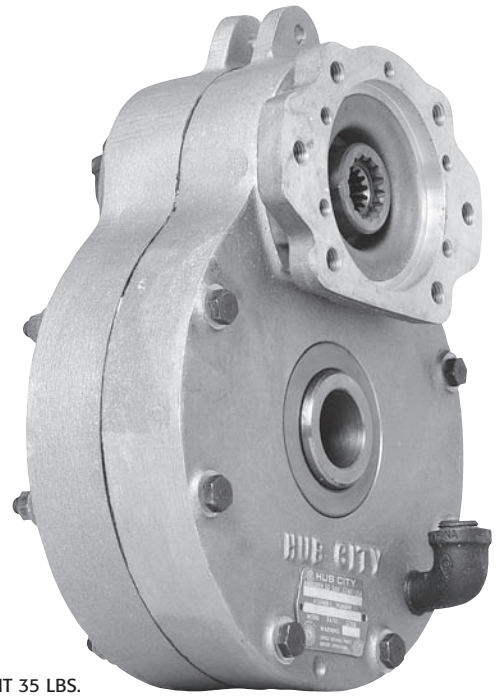




FOR USER/OPERATOR SAFETY SEE
DETAILS PAGE Q-4

MODEL 330 PUMP DRIVE

- Two standard ratios available
- Increases 540 or 1000 RPM tractor P.T.O. speed to 1825 RPM to facilitate use of a smaller, less expensive hydraulic pump
- Fits most standard SAE hydraulic pumps having SAE B or C mounting flange
- Easy installation and removal on most standard tractor P.T.O. shafts
- Torque arm bracket furnished as standard equipment
- Rugged cast aluminum housing
- All steel alloy gears
- High strength alloy shafts
- Off-the-shelf delivery
- Rated for pumps requiring up to 45 HP at 540 RPM and 65 HP at 1000 RPM



WEIGHT 35 LBS.

With the new HUB CITY Series 330 Pump Drive, it is now possible to increase either 540 RPM or 1000 RPM tractor P.T.O. speed to 1825 RPM to permit use of a similar, less expensive hydraulic pump for your implements.

Two flange sizes are available: SAE B and C, for use with standard SAE pumps.

Also, both spline and round shafts are available in several sizes to suit your pump adaptation requirements.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

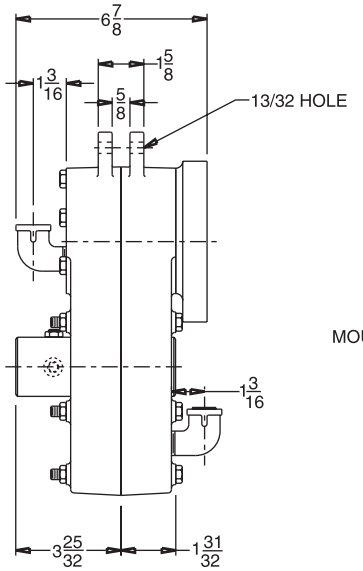
CALL: (605) 225-0360 • FAX: (605) 225-0567

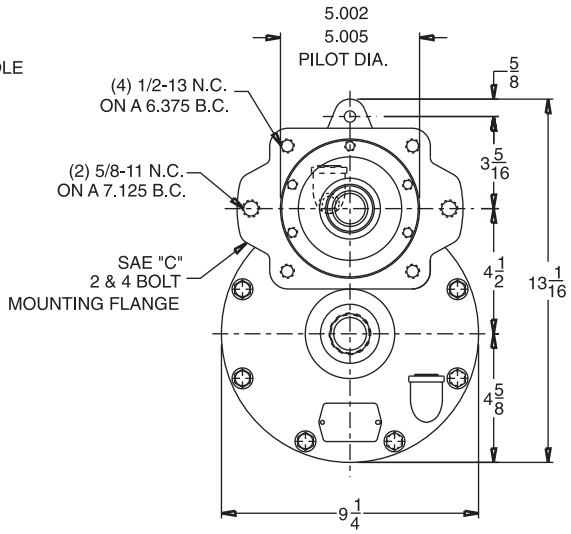


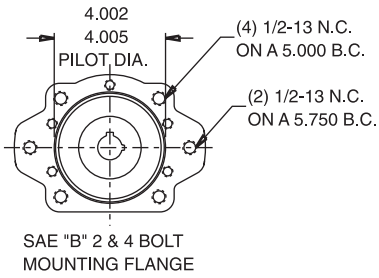
FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

MODEL 330 PUMP DRIVE

DIMENSIONS







SPECIFICATIONS

PART NUMBER	SAE ADAPTOR	PUMP SLEEVE			OPERATING SPEED	
		NUMBER SPLINES	SPLINE/KEYWAY	SPLINE OR BORE I.D.	TRACTOR*	PUMP
0220-06110	B	Keyway	3/16 x 3/32 KW 1/4 x 1/8 KW	.875	540 RPM	1825 RPM
0220-06104	B	Keyway	1/4 x 1/8 KW	.875	1000 RPM	1825 RPM
0220-06109	B	13	16/32 DP 30° PA	.875	540 RPM	1825 RPM
0220-06103	B	13	16/32 DP 30° PA	.875	1000 RPM	1825 RPM
0220-06117	B	14	12/24 DP 30° PA	1.250	540 RPM	1825 RPM
0220-06112	C	Keyway	5/16 x 5/32 KW	1.250	540 RPM	1825 RPM
0220-06106	C	Keyway	5/16 x 5/32 KW	1.250	1000 RPM	1825 RPM
0220-06111	C	14	12/24 DP 30° PA	1.250	540 RPM	1825 RPM
0220-06105	C	14	12/24 DP 30° PA	1.250	1000 RPM	1825 RPM

* INPUT DESIGNED FOR 1 3/8 P.T.O. SHAFT ONLY

540 RPM TRACTOR 1 3/8 - 6 SPLINE
1000 RPM TRACTOR 1 3/8 - 21 SPLINE

FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST



FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

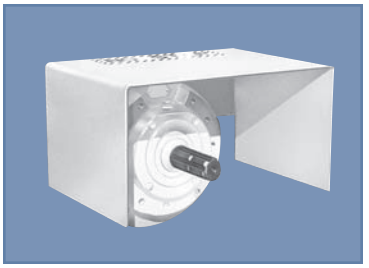
MODEL 390 P.T.O. SPEED CHANGER

Adapts up to 125 HP tractor to all P.T.O. operated field equipment

- Unit takes input horsepower up to 125 @ 1000 rpm!
- Alloy steel, heat treated gears don't shy away from jolts and shock loads
- Rugged, cast iron housing protects the unit for long, trouble free service
- Tapered roller bearings give quiet performance and long life
- Double lip, spring loaded seals keep lubricant where it belongs
- Alloy shaft and spline sleeve add to strength and dependability
- Unit minimizes P.T.O. shaft overhung load and drive line angularity
- Minimum offset between tractor P.T.O. and speed changer extension minimizes drive line adjustment
- Easily installed and removed
- Two (2) ratios to fit most applications
- Safety shield included
- Permanently lubricated at factory



ASSEMBLY NO.	0220-06206-390	0220-06207-390	0220-06208-390
Ratio	1.89:1 Reducer	1:1.89 Increaser	1.89:1 Reducer
Tractor RPM	1000	540	1000
Drive Line RPM	540	1000	540
Female Spline	1 3/8-21 Inv.	1 3/8-6B	1 3/4-20 Inv.
Male Spline	1 3/8-6B	1 3/8-21 Inv.	1 3/8-6B
C.D. Center Distance	1.60	1.60	1.60
A	8 1/8	7 5/8	8 11/32
B	9 1/2	9 1/2	9 1/2
C	5 3/4	5 3/4	5 3/4
D	11 1/8	11 1/8	11 1/8
E	4 1/4	3 9/16	4 1/4
F P.T.O. Ext.	11 5/8	10 15/16	10 31/32
G	14 5/8	13 15/16	14 27/32
H	10 3/8	9 3/8	10 19/32
I	1 1/16	1	1 5/16
J	5 3/8	5 3/8	5 3/8
K	10 3/4	10 3/4	10 3/4
L	5 3/4	5 3/4	5 3/4
M	13 1/8	13 1/8	13 1/8
N	7 7/8	7 7/8	7 7/8
O	6 9/32	7 7/8	6 9/32



FOR LUBRICATION AND INSTALLATION INSTRUCTIONS REFER TO SECTION R.

IMPORTANT: THE MODEL 390 P.T.O. SPEED CHANGERS CAN BE MOUNTED ON MOST TRACTOR P.T.O. SHAFTS, HOWEVER, THEY CANNOT BE MOUNTED ON TRACTORS THAT DO NOT HAVE DETACHABLE P.T.O. SHIELDS. UNITS MUST BE USED IN AN APPROVED MOUNTING POSITION WITH THE TORQUE ARM BRACKET ALSO IN AN APPROVED POSITION (SEE PAGE 21) OTHERWISE EXCESSIVE SIDE LOADING WILL BE EXERTED ON THE TRACTOR P.T.O. SHAFT. THE TORQUE ARM MUST ALWAYS BE POSITIONED AT 90° TO THE TORQUE ARM BRACKET. TO DETERMINE IF THE MODEL 390 WILL MOUNT ON A SPECIFIC TRACTOR USE THE OUTLINE ON PAGE 21 AND THE DIMENSIONS SHOWN ON THIS PAGE.

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

DANGER

FOR USER/OPERATOR SAFETY SEE DETAILS PAGE Q-4

MODEL 390 P.T.O. SPEED CHANGER

APPROVED MOUNTING POSITIONS

P.T.O. SPEED REDUCER
(VIEWED FROM REAR OF TRACTOR)

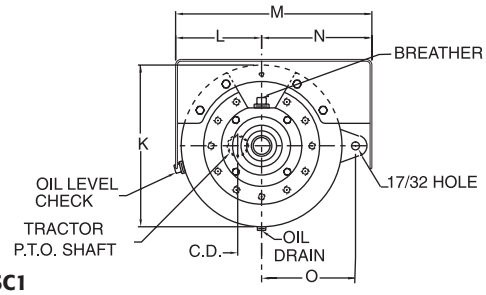


FIG. SC1

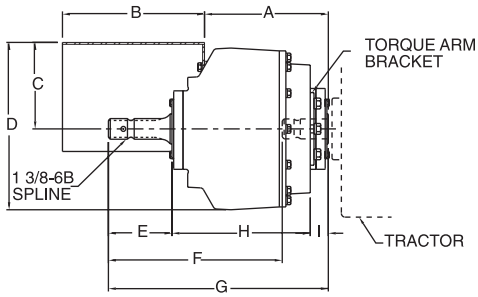


FIG. SC2

P.T.O. SPEED INCREASER
(VIEWED FROM REAR OF TRACTOR)

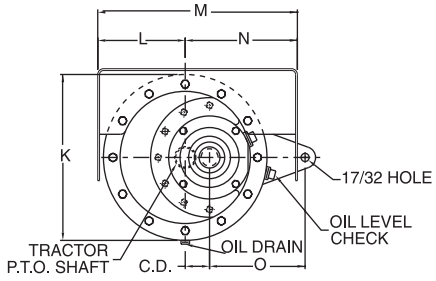


FIG. SC3

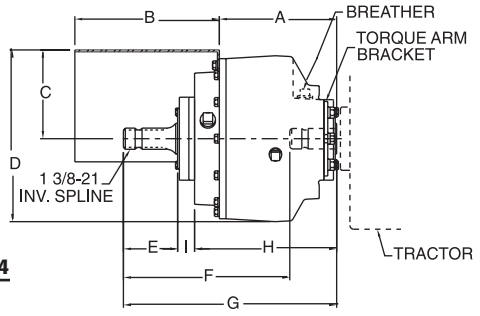


FIG. SC4

P.T.O. SPEED REDUCER
ALTERNATE MOUNTING
(VIEWED FROM REAR OF TRACTOR)

SEE SERVICE PARTS MANUAL FOR APPROVED MOUNTING POSITIONS

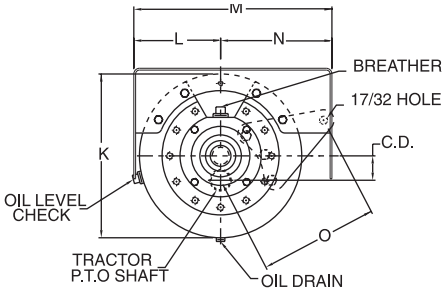


FIG. SC5

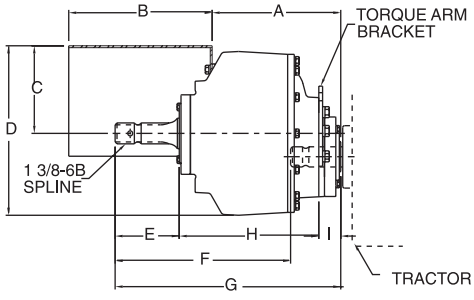


FIG. SC6

APPROVED TORQUE ARM BRACKET POSITIONS

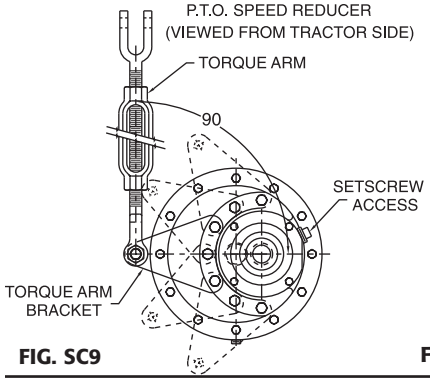


FIG. SC9

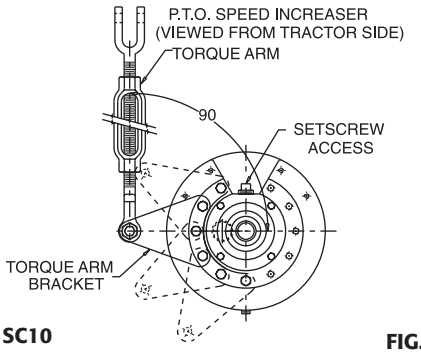


FIG. SC10

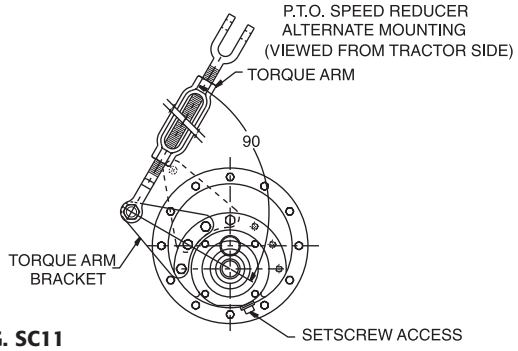


FIG. SC11

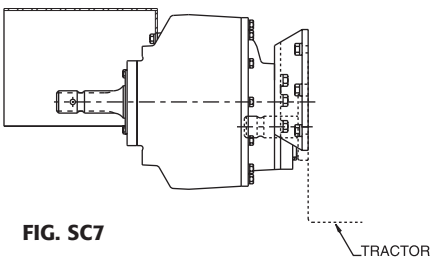


FIG. SC7

P.T.O. SPEED REDUCER
ALTERNATE MOUNTING BRACKET
BRACKET FURNISHED BY CUSTOMER

CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST

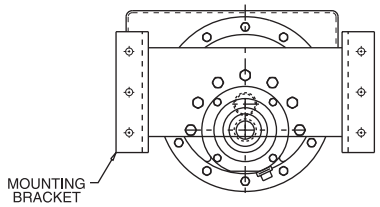


FIG. SC8 (VIEWED FROM FRONT OF TRACTOR)

Q

HUBCITY

SHIPPING WEIGHTS & INDEX

PART NUMBER	WT.(LBS.)	PAGE	PART NUMBER	WT.(LBS.)	PAGE	PART NUMBER	WT.(LBS.)	PAGE
02-20-06206-390	110	Q-20	03-32-00043	0.8	Q-12	03-32-00391	2.3	Q-13
02-20-06207-390	110	Q-20	03-32-00044	1.6	Q-13	03-32-00392	2.8	Q-13
02-20-06208-390	110	Q-20	03-32-00045	6.2	Q-11	03-32-00393	3	Q-13
02-20-06103-330	35	Q-19	03-32-00057	1.5	Q-8	03-32-00394	3.5	Q-13
02-20-06104-330	35	Q-19	03-32-00066	0.8	Q-12	03-32-00395	3.8	Q-13
02-20-06105-330	35	Q-19	03-32-00070	3.5	Q-6	03-32-00396	4.3	Q-13
02-20-06106-330	35	Q-19	03-32-00071	0.5	Q-14	03-32-00397	5.2	Q-13
02-20-06109-330	35	Q-19	03-32-00072	0.5	Q-14	03-32-00398	5.8	Q-13
02-20-06110-330	35	Q-19	03-32-00073	1.5	Q-14	03-32-00399	6.2	Q-13
02-20-06111-330	35	Q-19	03-32-00074	1.5	Q-14	03-32-00400	2.3	Q-6
02-20-06112-330	35	Q-19	03-32-00075	1.5	Q-14	03-32-00401	3.5	Q-6
02-20-06117-330	35	Q-19	03-32-00084	1.5	Q-6	03-32-00403	0.5	Q-8
02-23-02148-330	0.5	Q-12	03-32-00085	1.2	Q-14	03-32-00407	1.5	Q-9
02-23-02149-330	0.5	Q-12	03-32-00086	0.5	Q-7	03-32-00408	1.5	Q-9
02-23-02150-330	0.5	Q-12	03-32-00087	1.5	Q-8	03-32-00409	1.5	Q-9
23-01531	0.5	Q-12	03-32-00092	2.5	Q-8	03-32-00410	1.3	Q-9
23-01532	0.5	Q-12	03-32-00093	2	Q-14	03-32-00411	1.3	Q-9
23-01533	0.5	Q-12	03-32-00094	6	Q-6	03-32-00412	1.5	Q-9
23-01558	0.5	Q-12	03-32-00320	2	Q-12	03-32-00413	1.5	Q-9
03-31-00010	7.5	Q-10	03-32-00336	1	Q-12	03-32-00414	1.5	Q-13
03-31-00011	7.5	Q-10	03-32-00337	0.8	Q-12	03-32-00415	1.5	Q-13
03-31-00012	7.5	Q-10	03-32-00338	0.8	Q-12	03-32-00420	1.8	Q-6
03-31-00013	7.5	Q-10	03-32-00340	0.8	Q-12	03-32-00430	1.8	Q-8
03-31-00600	6	Q-15	03-32-00341	0.8	Q-12	03-32-00431	1.8	Q-8
03-31-00607	6	Q-15	03-32-00342	1.5	Q-12	03-32-00432	1.8	Q-8
03-31-00615	6	Q-15	03-32-00344	0.8	Q-12	03-32-00433	1.8	Q-8
03-31-00660	6	Q-10	03-32-00345	1	Q-12	03-32-00607	1.5	Q-9
03-31-00670	6	Q-10	03-32-00346	1.8	Q-12	03-32-00608	1.5	Q-9
03-31-00680	6	Q-10	03-32-00347	1.3	Q-12	03-32-00610	1.3	Q-9
03-31-00690	6	Q-10	03-32-00348	1.3	Q-12	03-32-00611	1.5	Q-9
03-32-00001	6	Q-6	03-32-00349	1.3	Q-12	03-32-00612	1.5	Q-9
03-32-00002	6	Q-6	03-32-00350	1	Q-12	03-32-01345	1.3	Q-9
03-32-00004	6	Q-6	03-32-00351	1.5	Q-12	03-32-01350	1.3	Q-9
03-32-00005	6	Q-6	03-32-00352	0.3	Q-8	03-32-01354	1.5	Q-8
03-32-00010	2.3	Q-7	03-32-00355	0.5	Q-8	03-32-01373	2.5	Q-7
03-32-00011	2	Q-9	03-32-00356	3.3	Q-13	03-32-01375	2.5	Q-8
03-32-00012	2	Q-9	03-32-00357	3	Q-13	03-32-01476	7	Q-7
03-32-00013	2	Q-7	03-32-00358	1.5	Q-9	03-32-01477	7	Q-7
03-32-00014	2	Q-9	03-32-00359	2.3	Q-9	03-32-01490	7	Q-7
03-32-00015	2	Q-7	03-32-00360	1	Q-11	03-32-01491	7	Q-7
03-32-00016	1.8	Q-9	03-32-00362	1.3	Q-11	03-32-02121	2.5	Q-7
03-32-00017	1.8	Q-9	03-32-00363	0.3	Q-8	03-32-03531	1.8	Q-6
03-32-00018	0.8	Q-8	03-32-00364	1.5	Q-11	03-34-00028	9	Q-17
03-32-00019	2.3	Q-9	03-32-00365	1	Q-12	03-34-00035	9	Q-17
03-32-00023	0.5	Q-13	03-32-00367	1.3	Q-12	03-34-00042	11	Q-17
03-32-00024	0.8	Q-13	03-32-00371	2.5	Q-6	03-34-00043	11	Q-17
03-32-00025	3	Q-13	03-32-00373	2.8	Q-6	0335-90120	0.5	Q-8
03-32-00026	5.8	Q-13	03-32-00376	1.8	Q-8	0336-00182	0.5	Q-8
03-32-00027	0.8	Q-12	03-32-00377	1.8	Q-6	03-37-00076	0.8	Q-10&Q-15
03-32-00028	0.8	Q-12	03-32-00378	1.8	Q-6	03-37-00082	0.8	Q-15
03-32-00029	1	Q-12	03-32-00379	1.8	Q-14	03-37-00126	0.5	Q-10
03-32-00030	2	Q-12	03-32-00380	1	Q-14	03-39-80000	7.7	Q-16
03-32-00031	1.2	Q-14	03-32-00381	1	Q-14	03-39-80001	1.2	Q-16
03-32-00032	0.3	Q-14	03-32-00382	1.3	Q-14	03-39-80002	1.4	Q-16
03-32-00033	0.5	Q-14	03-32-00383	1.3	Q-14	03-39-80003	1.8	Q-16
03-32-00034	1.5	Q-14	03-32-00384	1.8	Q-14	03-39-80004	2	Q-16
03-32-00035	2	Q-14	03-32-00385	1.8	Q-14	8-58-00-01-009	2	R-28 & R-29
03-32-00036	2.5	Q-14	03-32-00386	1.5	Q-14	8-58-00-01-011	2	R-28 & R-29
03-32-00037	5.2	Q-14	03-32-00387	1.5	Q-14	8-58-00-01-024	2	R-28 & R-29
03-32-00038	6.2	Q-13	03-32-00388	1.8	Q-14	8-58-00-01-031	2	R-28 & R-29
03-32-00039	9	Q-13	03-32-00389	1.5	Q-14			
03-32-00040	2	Q-9	03-32-00390	1.3	Q-13			

WARNINGS & CAUTIONS
LUBRICATION & INSTALLATION INSTRUCTIONS

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Gear Drive Warnings & Cautions R-4
Gear Drive Lubrication & Installation Instructions ..... R-5 to R-32
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- Spartan Aluminum Worm Speed Reducers R-8
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- Cooling Tower Drives ..... R-10 to R-11
- Parallel Shaft & Helical Ratio Multipliers ..... R-12 to R-13
- PowerTorque® Shaft Mount Reducers ..... R-14 to R-15
- Spartan Aluminum Helical Inline Reducers R-16
- Poweratio® 2000 & 4000 High Efficiency Drives ..... R-16 to R-24
  - Helical In-Line
  - Compact Helical Parallel
  - Helical Bevel
  - Helical Worm
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  - Hub³™ Stainless Steel Worm Gear Drives
  - Hub³™ Stainless Steel Helical Gear Drives
  - CleanLine Plus™ Bevel Gear Drives

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Gear Lubricant ..... R-30 to R-32
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CleanLine UltraPlus™, and
- CleanLine Plus™ Mounted Bearings R-36

R

WARNING

IMPORTANT INFORMATION

PLEASE READ CAREFULLY

CAUTION

The following WARNING ***and*** CAUTION ***information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your HUB CITY product.***

Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

WARNING

- Written authorization from HUB CITY is required to operate or use reducers in man lift or people moving devices.
- Check to make certain application does not exceed the allowable load capacities published in the current catalog.
- Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
- Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application of power.
- Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
- Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
- Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and no other associated attachments or motors.
- Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.
- Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and/or shaft breakage from bending fatigue, if not sized properly.

CAUTION

- Test run unit to verify operation. If the unit tested is a prototype, that unit must be of current production.
- If the speed reducer cannot be located in a clear and dry area with access to adequate cooling air supply, then precautions must be taken to avoid the ingestion of contaminants such as water and the reduction in cooling ability due to exterior contaminants.
- Mounting bolts should be routinely checked to ensure that the unit is firmly anchored for proper operation.

In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

> The manufacturer makes no warranty or representations, express or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods sold hereunder. Buyer acknowledges that it alone has determined that the goods purchased hereunder will suitably meet the requirements of their intended use. In no event will the manufacturer be liable for consequential, incidental or other damages. Even if the repair or replacement remedy shall be deemed to have failed of its essential purpose under Section 2-719 of the Uniform Commercial Code, the manufacturer shall have no liability to Buyer for consequential damages.

Resellers/Buyers agree to also include this entire document including the warnings and cautions above in a conspicuous place and in a conspicuous manner in writing to instruct users on the safe usage of the product.

This information should be read together with all other printed information supplied by HUB CITY.

WARNING

IMPORTANT INFORMATION

PLEASE READ CAREFULLY

CAUTION

This catalog is not intended to provide operational instructions. Appropriate Marathon Electric instructions provided with the motor and precautions attached to the motor should be read carefully prior to installation, operation and/or maintenance of the equipment. Injury to personnel or motor failure may be caused by improper installation, maintenance or operation.

The following WARNING and CAUTION information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your Marathon Electric product:

WARNING

- Disconnect power and lock out driven equipment before working on a motor.
- Always keep hands and clothing away from moving parts.
- The lifting support on the motor is not to be used to lift the entire machine. Only the motor attached directly to the support may be safely lifted by the support.
- Install and ground per local and national codes.
- Discharge all capacitors before servicing a single phase motor.
- Misapplication of a motor in a hazardous environment can cause fire or an explosion and result in serious injury. Only the end user, local authority having jurisdiction, and/or insurance underwriter are qualified to identify the appropriate class(es), group(s), division and temperature code. Marathon Electric personnel can not evaluate or recommend what motors may be suitable for use in hazardous environments. If a motor is nameplated for hazardous locations, do not operate the motor without all of the grease and drain plugs installed.
- Never attempt to measure the temperature rise of a motor by touch. Temperature rise must be measured by thermometer, resistance, imbedded detector or thermocouple.
- Motors with automatic reset thermal protectors will automatically restart when the protector temperature drops sufficiently. Do not use motors with automatic reset thermal protectors in applications where automatic restart will be hazardous to personnel or equipment.
- Motors with manual reset thermal protectors may start unexpectedly after the protector trips when the surrounding air is at +20°Fahrenheit or lower. If the manual reset protector trips, disconnect motor from its power supply. After the protector cools (five minutes or more), it can be reset and power may be applied to the motor.
- Connect all protective device leads, marked P1, P2, etc., per instructions supplied with the motor.
- Operation of a motor at other than its nameplate rating may result in fire, damage to equipment or serious injury to personnel.
- For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.

CAUTION

- Consult qualified personnel with questions and all electrical repairs must be performed by trained and qualified personnel only.
- For motors nameplated as “belted duty only”, do not operate the motor without belts properly installed.
- Motors and/or driven equipment should not be operated faster than their rated speed.
- For inverter applications, follow the inverter manufacturer’s installation guidelines.
- Make sure the motor is properly secured and aligned before operation.

In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

> The manufacturer makes no warranty or representations, express or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods sold hereunder. Buyer acknowledges that it alone has determined that the goods purchased hereunder will suitably meet the requirements of their intended use. In no event will the manufacturer be liable for consequential, incidental or other damages. Even if the repair or replacement remedy shall be deemed to have failed of its essential purpose under Section 2-719 of the Uniform Commercial Code, the manufacturer shall have no liability to Buyer for consequential damages.

Resellers/Buyers agree to also include this entire document including the warnings and cautions above in a conspicuous place and in a conspicuous manner in writing to instruct users on the safe usage of the product.

This information should be read together with all other printed information supplied by Marathon Electric. For more information contact: **Marathon Electric**, Regal Beloit Manufacturing Corporation, 100 E. Randolph St., Wausau, WI 54401
Phone: 715-675-3311 or Fax: 715-675-8030.

GEAR DRIVE WARNINGS & CAUTIONS

IMPORTANT SELECTION INFORMATION

The system of connected rotating parts must be free from critical speed, torsional, or other type vibration, regardless of how induced. The responsibility for this system analysis lies with the purchaser of the gear unit.

⚠WARNING

SHIELD ALL ROTATING PARTS

For safety, purchaser or user must provide protective guards over all shaft extensions and any moving apparatus mounted on the unit. The uses is responsible for checking and complying with all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.

⚠WARNING

Wear protective clothing and eye shields when installing or maintaining unit and machine.

⚠WARNING

A unit cannot be used as an integral part of a machine superstructure which would impose additional loads on the unit other than those imposed by the torque being transmitted, or by any shaft mounted power transmitting device such as sprockets, pulleys, or couplings.

⚠WARNING

Make certain that all tools and other items are clear from rotating parts before starting machine. Stand clear, and start machine slowly to be sure all components are secure and operating properly.

⚠WARNING

For safe operation and to continue the unit warranty, when installing, reinstalling, or replacing a factory installed fastener for servicing purpose, or to accommodate the mounting of guards, shields or other light load imposing devices, or for mounting the unit, it becomes the responsibility of the purchaser or user to properly determine the quality, grade of fastener, thread engagement, load carrying capacity, tightening torque, and the means of torque retention.

COUPLINGS – Flexible couplings to input and output shafts are recommended because they minimize bearing and gear wear caused by slight misalignment. Follow coupling manufacturer's recommendations for installation and shielding.

SHEAVES AND SPROCKETS – When mounting sheaves or sprockets, the center of the load should be located as close to the reducer as possible. Excessive overhung loading could result in early failures of bearing or shaft. Refer to the general catalog or contact Hub City for overhung load ratings. Follow manufacturer's recommendations for installation and shielding.

⚠CAUTION

Do not operate the unit without making sure it contains the correct amount of oil. Do not overfill or underfill with oil, or injury to personnel, unit, or other equipment may result.

⚠CAUTION

Oil should be changed with greater frequency if unit is used in a severe environment such as dusty or humid or high or low temperatures.

⚠CAUTION

Do not mix nonsynthetic and synthetic oil in the unit.

⚠CAUTION

If unit is used in the food or drug industry (including animal food) consult the petroleum supplier or HUB CITY for recommendations of lubricants which meet the specifications of FDA, USDA and/or other authoritative bodies having jurisdiction. Standard lubricants are not suitable for these applications or these industries.

⚠CAUTION

Inspect shafts and components for paint, burrs, or other imperfections before installing components. Do not use excessive force or pounding to install components onto unit shafts, as this may cause damage to shafts, bearings, or gears.

PREVENTATIVE MAINTENANCE – Keep shafts and vent plug clean to prevent foreign particles from entering seals or gear case. Inspect periodically for oil leaks.

⚠CAUTION

STORAGE OF HUB CITY REDUCERS: A gearbox does not have a definable shelf life. The main points of deterioration are rusting of non-painted surfaces and drying out of the seal lips. Proper storage of drives in a cool dry place in a carton away from exposure to ultraviolet light should permit protection for approximately one year.

If the unit is to be inoperative for a longer period of time, completely fill the gear case with regular lubricant containing rust and oxidation inhibitors, tag the gear case and any connected motor to prevent operation until the proper oil level is obtained. Do not operate a completely filled gear case. Coat external shafts with a rust preventative oil or grease. At least every three months, rotate the input shaft until the output rotates at least one revolution to ensure all internal parts are coated and that the shaft seals are free and the seal journals are coated with oil.

The most sensitive part of the gearbox is the radial lip seals. Even under ideal storage conditions, the seal lips may deteriorate or take a set, losing their sealing effect and reducing service life. Therefore, it may be necessary to replace the seals prior to putting the units in service depending upon the length and conditions of storage.

WORM GEAR SPEED REDUCERS

WORM GEAR SPEED REDUCERS - SINGLE & DOUBLE REDUCTION LUBRICATION

General Note – These instructions contain information for the standard Worm Gear Speed Reducer product line. For Instructions specific to the Hub³™ Worm Gear Speed Reducers see the CleanLine Products pages R-25 and R 26.

⚠CAUTION

ALL WORM GEAR SPEED REDUCERS ARE SHIPPED DRY. OIL MUST BE ADDED PRIOR TO OPERATION.

All HUB CITY Worm Gear Speed Reducers are splash lubricated. The unique design of the reducers permits nearly universal mounting by placing a fill, drain and oil level plug at the proper location for mounting positions. Figures W1-W12 show common mounting positions for the different style reducers.

PowerCube Reducers with "L" suffix, i.e., 211L, are filled at the factory with PAG 460 H1 synthetic oil. The mounting position must be specified on the order. See figures B3 through V5. Only PAG synthetic oil can be used in these reducers, other oils are not compatible and may cause the unit to fail.

⚠CAUTION

WORM GEAR SPEED REDUCERS: Review the approved mounting positions and lubrication levels identified in Figures W1-W12 on this sheet. Do not deviate from the mounting positions or lubrication levels shown without contacting the factory.

DOUBLE REDUCTION WORM GEAR SPEED REDUCERS: If the final mounting position of the Double Reduction Reducer is such that either the input shaft of the Primary Unit or the input (high speed) shaft of the Secondary Unit is in a vertical position, consult HUB CITY for special lubrication instructions.

The Primary Unit and the Secondary Unit (Figure W13) each have independent oil reservoirs. Each unit must be filled to the specified level of oil indicated in Figures W1-W12.

WORM GEAR SPEED REDUCERS: After selecting the position that the unit will be mounted but before operating: Remove Fill and Breather Plug (1, Figures W1-W12) and Oil Level Plug (2, Figures W1-W12). Clean threads on removed plugs and plug holes with degreaser.

Fill gearbox with recommended lubricant (see APPROXIMATE OIL CAPACITY CHART in these instructions and GEAR LUBRICANT page of these instructions) to a level near the centerline of the uppermost horizontal shaft or until lubricant starts coming out oil level plug hole. Install plugs securely in gear case. Note – Plug with breather (1, Figures W1-W12) must always be installed in the top of gear case, opposite Drain Plug (3, Figures W1-W12). HUB CITY Worm Gear Speed Reducers Series 60, 70 and 80 have drain plug at 3A position.

Figures W1-W4 show four common mounting positions of the shaft output and hollow bore units. Figures W5-W8 show four common mounting positions of Drop Bearing Units. Figures W9-W12 show four common mounting positions of vertical mount Units.

VARIATIONS FROM NORMAL CONDITIONS – Input speeds of more than 1,800 RPM may require an adjustment in oil level. Refer to figures B6 to V5 for worm gear reducers with vertical shafts. For vertical input, factory modifications are required, unless the input is a quill-type c-flange mounted vertical up. For vertical output, factory modifications (grease pack and nilos ring) are required.

When position selected is Output Vertical-Up (Figures W5 & W9) or Output Vertical Down (Figures W7 & W11) an adequate amount of lubrication must be supplied to the upper Bearing through Grease Fitting (4, Figures W5, W7, W9 & W11).

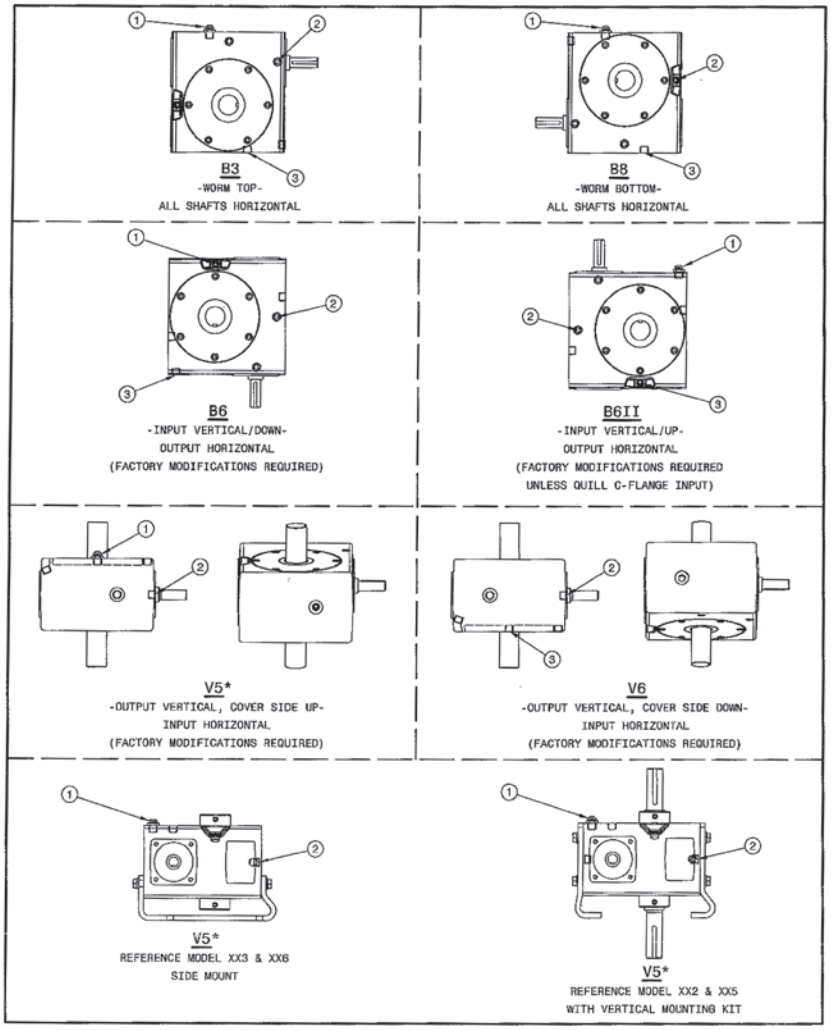
All Worm Gear Speed Reducer Drop Bearing Models are equipped with Double Seals on the Output Shaft. Periodically the Pipe Plugs should be removed (5, Figures W5-W8) a Grease Fitting inserted in one plug hole and enough grease injected to purge all of the old grease from between the seals.

LUBRICANT – Use only lubricants which are recommended for enclosed bronze worm gears, with ISO viscosity Grade 460, or AGMA 7. (Extreme ambient or operating temperature may require different viscosities, consult factory for recommendations.) Choose conventional oil, PAO synthetic oil, or PAG synthetic oil, depending on the application. Refer to page R-30 to R-32 for Hub City lubricants.

⚠CAUTION

CHANGING LUBRICANT – After the first 100 hours of operation, drain out initial oil, flush out the worm gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 2,500 operating hours (5,000 for synthetic oil lubricant) or every 6 months (12 months for synthetic oil lubricant), which ever occurs first.

POWERCUBE MOUNTING POSITIONS (130-380 SERIES)



* V5 IS THE PREFERRED MOUNTING POSITION FOR VERTICAL OUTPUT

GW60 TO GW100 SERIES MOUNTING POSITIONS

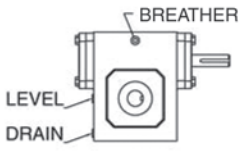


FIGURE 1

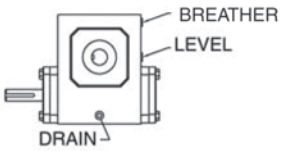


FIGURE 2

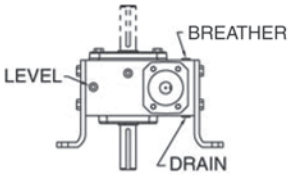


FIGURE 3*

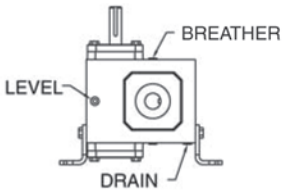


FIGURE 4*

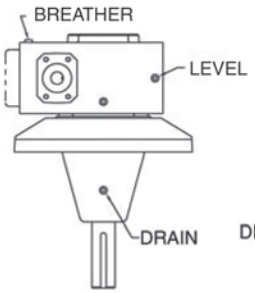


FIGURE 5

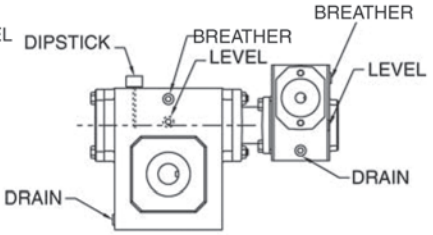


FIGURE 6

NOTE: For Double and Triple Reduction Reducers: High oil level is required in all Intermediate or Final units of Double and Triple Reduction Reducers. A dipstick is installed in these units to indicate the correct oil level. Primary, Intermediate and Final units have separate oil sumps and must be filled and checked independently.

*Factory Modifications are Required.

WORM GEAR SPEED REDUCERS

MOUNTING POSITIONS 450-520

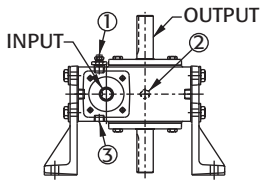


FIGURE W1: SIDE MOUNT
NOTE: This mounting position requires factory modifications.

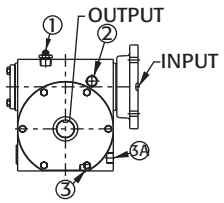


FIGURE W2: WORM TOP

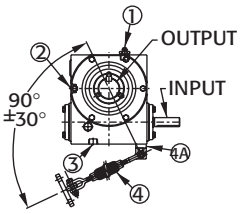


FIGURE W3: SHAFT MOUNT

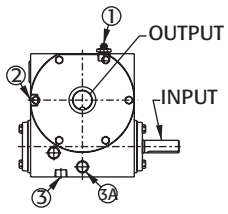


FIGURE W4: WORM BOTTOM

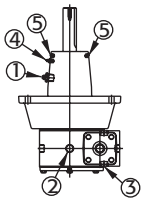


FIGURE W5: OUTPUT VERTICAL-UP

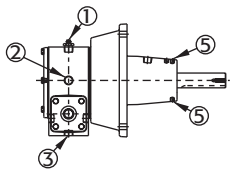


FIGURE W6: WORM BOTTOM

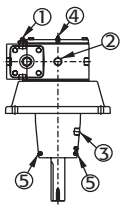


FIGURE W7: OUTPUT VERTICAL DOWN

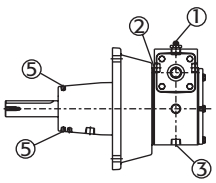


FIGURE W8: WORM TOP

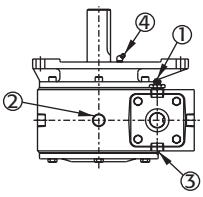


FIGURE W9: OUTPUT VERTICAL-UP
NOTE: This mounting position requires factory modifications.

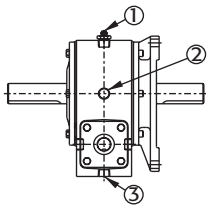


FIGURE W10: WORM BOTTOM

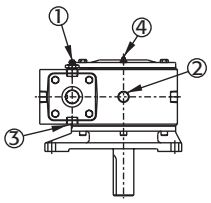


FIGURE W11: OUTPUT VERTICAL DOWN

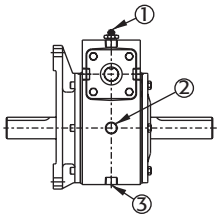


FIGURE W12: WORM TOP

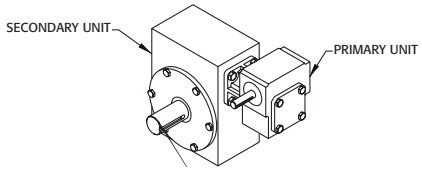


FIGURE W13: DOUBLE REDUCTION

WORM GEAR SPEED REDUCERS - SINGLE & DOUBLE REDUCTION INSTALLATION

OPERATING POSITIONS – Normal Worm Gear Speed Reducer positions are shown in Figures W1-W12. For special applications, mounting position may be inclined. However, if position varies more than 15°, it may be necessary to make some adaptations to maintain a sufficient oil level. Contact your local distributor or HUB CITY for recommendations. Input rotation of Speed Reducers can be either clockwise or counterclockwise.

⚠CAUTION

SHAFT MOUNT WORM GEAR UNITS – The Torque Arm Pad Ref. 4A (Figure W3) can be attached to any of the four available mounting surface locations of the unit.

Install and position Torque Arm Ref. 4 at 90° to the place (a line drawn) between the center of the output hollow bore and the bolt that attached the Torque Arm 4 to the Torque Arm Pad 4A of the unit, Ref. (Figure W3). The Torque Arm should be positioned to be in tension, NOT compression, based on output rotation of the gear drive.

⚠CAUTION

Excessive setscrew torque may cause damage to the output sleeves in hollow bore Worm Gear Reducers. Please refer to the following table for recommended tightening torque.

SIZE	*RECOMMENDED TORQUE*
1/4-20 NC	87 LB.–IN
5/16-18 NC	165 LB.–IN
3/8-16 NC	290 LB.–IN

Shaft Mount Worm Gear Reducers equipped with QD bushings utilize a bushing on both sides to provide shaft support. However the keyways on QD bushings are not timed to the mounting holes, therefore it is not possible to install keys in both bushings. One key is sufficient to carry the transmitted torque.

⚠CAUTION

When installing Q/D Bushing Kits on Worm Gear Reducers, follow the Q/D Bushing manufacturer recommendations for bolt tightening torque and installation methods. Failure to do so could result in damage to the bushings and unit.

⚠CAUTION

RUN-IN PERIOD – A new Worm Gear Reducer will not operate at maximum efficiency during the run-in period. Increased current draw or heat rise may be seen during this time.

R

WORM GEAR SPEED REDUCERS

APPROXIMATE OIL CAPACITIES - WORM GEAR SPEED REDUCERS				
		QUANTITY (pints)		
SERIES	MOUNTING POSITION	SHAFT OUTPUT MODELS	HOLLOW BORE MODELS	DROP BEARING MODELS
130	WORM TOP	0.53	N/A	N/A
	WORM BOTTOM	0.44	N/A	N/A
	VERTICAL INPUT ***	0.31	N/A	N/A
	VERTICAL OUTPUT ---	0.31	N/A	N/A
180	WORM TOP	1.00	0.81	N/A
	WORM BOTTOM	0.81	0.75	N/A
	VERTICAL INPUT ***	0.56	0.56	N/A
	VERTICAL OUTPUT ---	0.56	0.56	N/A
210	WORM TOP	1.38	1.50	N/A
	WORM BOTTOM	1.25	1.12	N/A
	VERTICAL INPUT ***	1.12	1.00	N/A
	VERTICAL OUTPUT ---	1.00	0.88	N/A
240	WORM TOP	2.25	1.88	N/A
	WORM BOTTOM	2.13	1.88	N/A
	VERTICAL INPUT ***	1.75	1.63	N/A
	VERTICAL OUTPUT ---	1.69	1.44	N/A
260	WORM TOP	2.75	2.50	N/A
	WORM BOTTOM	2.50	2.25	N/A
	VERTICAL INPUT ***	2.12	1.87	N/A
	VERTICAL OUTPUT ---	2.00	1.63	N/A
320	WORM TOP	5.00	4.00	7.50
	WORM BOTTOM	3.88	3.38	5.50
	VERTICAL INPUT ***	3.38	2.75	4.50
	VERTICAL OUTPUT ---	3.12	2.75	5.0 VERTICAL DOWN 3.0 VERTICAL UP
380	WORM TOP	5.38	5.50	8.50
	WORM BOTTOM	4.50	4.50	7.00
	VERTICAL INPUT ***	3.88	4.00	5.75
	VERTICAL OUTPUT ---	3.63	3.75	6.0 VERTICAL DOWN 4.0 VERTICAL UP
450	WORM TOP	7	5.2	9
	WORM BOTTOM	4.8	4	5.7
	VERTICAL OUTPUT	3.8	3	5.8 VERTICAL DOWN 3.8 VERTICAL UP
520	WORM TOP	10.6	7.3	14.5
	WORM BOTTOM	7.5	5.1	9.3
	VERTICAL OUTPUT	5.5	3.8	9.4 VERTICAL DOWN 5.5 VERTICAL UP
W300	WORM TOP	N/A	0.70	N/A
	WORM BOTTOM		0.40	
	VERTICAL OUTPUT		0.40	
W50B	WORM TOP	N/A	3.2	N/A
	WORM BOTTOM		2	
	VERTICAL OUTPUT		3.5	
W516	WORM TOP	5.25	5.25	N/A
	WORM BOTTOM	2.75	2.75	
	VERTICAL OUTPUT	2.6	2.6	

*** This quantity of oil will fill the unit to the centerline.
Factory modifications required to provide sealed top bearing.
No modifications needed if quill-type C-Flange is mounted up.
--- This quantity of oil will fill the unit to the centerline.
Factory modifications required to provide grease pack and Nilos ring at top bearing.

GW Series Lubricant Capacities (Pts)

Mounting Position	GW60	GW70	GW80	GW100
Single Reduction Units				
Worm Over	19 1/2	35	48	72
Worm Under	20 1/2	32 3/4	51 1/4	80
Vertical Output*	20	20 3/4	28 3/4	40
Vertical Input*	20 1/3	36 1/2	50	75
Extended Bearing	27	40	63	102
Double Reduction Primary Unit				
Worm Over	4 1/2	4 1/2	7	11 3/4
Worm Under	6 3/4	6 3/4	9 1/2	19
Vertical Output*	5 1/2	5 1/2	8	15 1/2
Vertical Input*	5 3/4	5 3/4	8	15 1/2
Extended Bearing	8	8	12	17
Sec.Unit Worm Over	30 1/3	50 1/3	71 1/2	107 1/4

* Factory modifications required.

SPARTAN ALUMINUM WORM GEAR DRIVES LUBRICATION

Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Spartan reducers are properly filled at Factory with sufficient lubricant quantity for any mounting position. Change oil only when performing maintenance that requires gearbox disassembly or if the reducer is operated in a severe environment. If oil must be replaced, use only PAG 460. PAG 460 is H1 Food Grade approved lube. ***NOTE: PAG SYNTHETIC LUBRICANTS ARE NOT COMPATIBLE WITH ANY OTHER LUBRICANTS,AND MUST NEVER BE MIXED. TOPPING OFF WITH THE WRONG LUBRICANT COULD CAUSE UNIT FAILURE.***

SPECIAL LUBRICATION REQUIREMENTS – Sizes AL450-AL850
- Reducer is mounted with input worm shaft vertical
- Input speed is sustained less than 900 RPM

NOTE: The reducer may require modifications to assure proper lubrication in these applications. Contact Factory for more detail.

For lubrication requirements of helical reducers (primaries of helical worm reducers and ratio multipliers), contact Factory.

Lubrication type	Series			
	AL450	AL500	AL630	AL850
Oil (pints)	0.2	0.3	0.8	2.6

Installation Instructions

The following instructions apply to standard Spartan Worm type reducers with base or flange mounting in motorized and non-motorized single and double reduction options.

1. Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting hole. Shim as required under flange or base feet which do not lie flat against the mounting surface.

2. Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Spartan reducers are properly filled at Factory with sufficient lubricant quantity for nearly any mounting position.

   SPARTAN aluminum gear reducers: Series AL450-AL850 utilize a vent-free design and are Factory filled with synthetic oil formulated for lifetime lubrication & wide operating temperature range (+5F to +220F). It is not necessary to change the lubricant unless the reducer is used in a severe environment. If these reducers will be used in severe environment or if lubricant must be replaced, contact Factory.

3. Connect motor to speed reducer.

⚠ CAUTION

DO NOT CHANGE MOUNTING POSITIONS WITHOUT CONTACTING FACTORY. Altering the mounting position may require special lubrication provisions which must be factory installed.

BEVEL GEAR DRIVES

BEVEL GEAR DRIVES LUBRICATION

General Note – These instructions contain information for the standard Bevel Gear Drive product line. For Instructions specific to the Hub³™ Bevel Gear Drives and the CleanLine Plus Bevel Gear Drives see the CleanLine Products page R-25.

BEVEL GEAR DRIVES General Note — These instructions contain information common to more than one model of Bevel Gear Drive. To simplify reading, similar models have been grouped as follows:

GROUP 1 — Models 44, 11, 150, 165, 165M, 175, 175M, 66, 66M, 65, 65M, 600, 88, 800, 800M, 810, 850, 850M, 1000, 1010, 101M, 1200, 120M, 1700 and 2200.
GROUP 2 — Models 790, 920, 950, 1050, 105M, 1250 and 125M.
GROUP 3 — Models M2, M3 and M3M.
GROUP 4 — Models AD1, AD2, AD3, AD3M, AD4, AD4M, AD5 and AD5M.
GROUP 5 — Models RA0, RA1, RA2, RA3, RA4

⚠CAUTION

GROUP 1, 2, and 3 BEVEL GEAR DRIVES ARE SHIPPED DRY. OIL MUST BE ADDED PRIOR TO OPERATION. GROUP 4 and 5 DRIVES ARE PREFILLED AT FACTORY.

All HUB CITY Bevel Gear Drives are splash lubricated. Typical mounting positions with all shafts in horizontal position are shown in Figures B1 & B2. Fill/breather, level and drain plugs have been provided to meet most mounting requirements. Group 4 Drives may be mounted in any position and are prefilled at factory with a semi-fluid grease designed for a wide variety of applications. Group 5 drives are factory filled with a Lubricant, which has an AGMA Number 4EP and an ISO-ASTM Viscosity Grade 150, for horizontal shaft mounting as shown in figure B1.

⚠CAUTION

BEVEL GEAR DRIVES: Review the approved mounting positions and lubrication levels identified in Figures B1 & B2 on this sheet. Do not deviate from the mounting positions or lubrication levels shown without contacting the factory.

BEFORE OPERATING BEVEL GEAR DRIVES (Except Group 4 and Group 5 Drives) — Remove Breather and/or fill Plug (1, Figures B1 & B2) and Oil Level Plug (2, Figures B1 & B2). Fill gearbox with a recommended lubricant (see APPROXIMATE OIL CAPACITY CHART in these instructions and GEAR LUBRICANT page of these instructions) until lubricant starts coming out oil level plug hole. Clean thread on the removed plugs and the plug holes with degreaser. Install plugs securely in gear case. Note — Breather and/or fill Plug (1, Figure B1 & B2) must always be installed in the top of gear case, opposite Drain Plug (3, Figure B1 & B2). Note — Models 790, 920 and 950 have the breather (4, Figure B2) installed in the pinion housing.

⚠WARNING

Do not change lubricants in Group 4 Bevel Gear Drives unless they are disassembled for service. Groups 1, 2, 3 & 5 Bevel Gear Drives should have lubricant changed as described below.

⚠CAUTION

CHANGING LUBRICANT — After the first 500 hours or (4) weeks of operation, drain out initial oil, flush out the bevel gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant), which ever occurs first.

VARIATIONS FROM NORMAL CONDITIONS — Bevel Gear Drives: Input speeds that exceed the maximum speeds recommended for a given ratio, which are listed in the general catalog specifications, may require an adjustment in the oil level. Consult HUB CITY for special lubricant recommendations when operating at higher speeds.

All HUB CITY Bevel Gear Drives (except Group 4 Drives) are designed for installation with all shafts in a horizontal position.

If either shaft is in a vertical position or mounted on an incline (except Group 4 Drives) zerk fittings may be required to lubricate upper bearings. It may also be necessary to make some oil plug modification. Consult HUB CITY for recommendations.

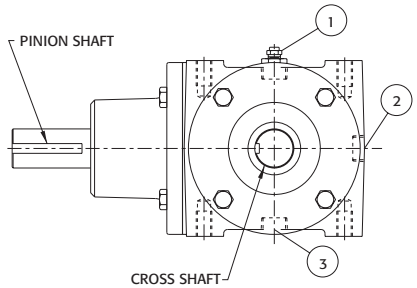


FIGURE B1 - MOUNTING POSITION, GROUP 1, 3 & 5

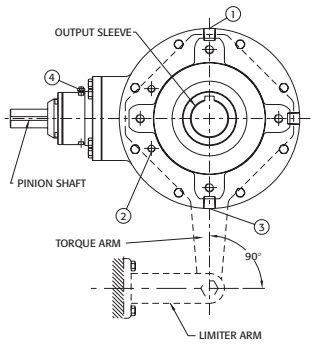


FIGURE B2 - MOUNTING POSITION, GROUP 2

BEVEL GEAR DRIVES & COOLING TOWER DRIVES

APPROXIMATE OIL CAPACITIES - BEVEL GEAR DRIVES

MODEL	QUANTITY
GROUP 1	
44	0.50 pint
11	0.40 pint
150	0.75 pint
165 & 165M	0.75 pint
175 & 175M	0.70 pint
66 & 66M	1.50 pints
65 & 65M	1.40 pints
600	1.50 pints
88	5 pints
800 & 800M	5 pints
810	5 pints
850 & 850M	4.5 pints
1000	10 pints
1010 & 101M	10 pints
1200 & 120M	20 pints
1700	10 gallons
2200	14 gallons

MODEL	QUANTITY
GROUP 2	
790	2.75 pints
920	5 pints
950	10 pints
1050 & 105M	10 pints
1250 & 125M	18 pints

GROUP 3	
M2	0.25 pints
M3 & M3M	0.25 pints

GROUP 4 (ALL PRELUBED AT FACTORY)	
AD1	.5 oz
AD2	1.5 oz
AD3 & AD3M	8.0 oz
AD4 & AD4M	.5 oz
AD5 & AD5M	1.5 oz

GROUP 5 (ALL PRELUBED AT FACTORY)	
RA0	10 oz
RA1	28 oz
RA2	37 oz
RA3	75 oz
RA4	154 oz

BEVEL GEAR DRIVES INSTALLATION

⚠WARNING

Power may be applied (drive shaft) to either the cross or pinion shaft providing that the gear reduction does not exceed 3:1. On models that have greater than 3:1 gear ratio, the input must be on the pinion shaft such as Models 790, 920 and 950. Also, input rotation on these models should be clockwise.

⚠WARNING

SHAFT MOUNTED BEVEL GEAR DRIVES, Group 2 Drives – Driven shaft should be supported independently with pillow block bearings, located as close to Bevel Gear Drive as possible. A suitable Torque Arm, shown in dotted line (Figure B2) must be provided (not supplied) to keep unit from rotating. A rigid torque arm will cause bearings to "load up" and cause excessive wear. To prevent this, provide a slight amount of "float" at the pivot point. Note that torque arm must be fastened to all mounting pads.

⚠CAUTION

BEVEL GEAR DRIVES configured with the Hub City "Counter Flow" lubrication system. models 1010, 101M, 1050, 105M, 1200, 120M, 1250, 125M, 790, 920 and 950, may require the pinion housing and/or the end caps to be rotated as part of the installation, depending on the drives mounting position. With the drive in it's required mounting position, the word "TOP" that appears on the pinion housing and/or end caps must be in a vertically up position, to maintain proper bearing lubrication.

To reposition the pinion housing or cap, remove all capscrews, rotate the housing or cap with out removing it from the main housing. Apply Loctite® to the capscrews, reinstall and torque proper specifications. Units are assembled at the factory with pinion housings and/or end caps positioned for style "A", "C" and "E" units mounted with all shafts in a horizontal plane.

COOLING TOWER DRIVES LUBRICATION

⚠CAUTION

ALL COOLING TOWER DRIVES ARE SHIPPED DRY. OIL MUST BE ADDED PRIOR TO OPERATION.

All HUB CITY Cooling Tower Drives are splash lubricated. The design of the Cooling Tower Drive permits uniform lubrication of all moving parts and bearing surfaces. After installation, and prior to operation, the gear case must be filled to the proper level with a recommended lubricant (see APPROXIMATE OIL CAPACITY CHART in these instructions and GEAR LUBRICANT page of these instructions).

INITIAL LUBRICANT FILL – Clean threads on removed plugs and plug holes with degreaser. Fill gear case with approved lubrication until the oil level is within 1/4 inch from the top of the filling elbow. Allow several minutes for the oil to stabilize at a static level. Coat plugs with thread sealant and replace in gear case.

If a remote oil gage has been installed, be sure that the oil level in the remote oil gage matches the oil level in the Cooling Tower Drive filling elbow.

⚠CAUTION

CHANGING LUBRICANT – The initial lubricant should be changed after the first 2 weeks of operation. Drain the original oil, fill the cooling tower gear case to the proper level with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), start Cooling Tower Drive and allow to reach operating speed, then remove power immediately. Drain flushing oil and refill to proper level with recommended lubricant. Thereafter, oil changes should be every 6 months (12 months for synthetic oil lubricant) unless operating under extreme operating conditions. Extreme operating conditions are described under Variations From Normal Conditions.

The original oil may be strained and replaced. Do not use a strainer finer than 25 micro inches to avoid filtering out oil additives.

COOLING TOWER DRIVES LUBRICATION CON'T

VARIATIONS FROM NORMAL CONDITIONS – Input speeds not to exceed 1800 RPM.
IMPORTANT – The Cooling Tower Drive should not be operated when internal temperature is above 225° F (107° C) or the starting ambient temperature is below 15° F (-9° C). (See cold temperature operation.) Reduced seal life or lubrication failure could be caused unless special duty lubricants are used.
COLD TEMPERATURE OPERATION – For cold temperature operation, below 15° F (-9° C), where the initial oil viscosity is greater than 5000 SUS, either heaters or low temperature gear oil must be used. Thermostatically controlled heaters are available from HUB CITY. Lubricants with a normal operating viscosity range of 90 to 400 SUS at operating temperature are normally unsatisfactory for cold temperature starting. Hub City 75W-90 synthetic oil has performed satisfactorily as a lubricant for most cold temperature starting and operating conditions, and can be used where heaters are not practical.
EXTREME OPERATING CONDITIONS – Extreme operating conditions include unusually high ambient temperatures combined with intermittent high loads causing rapid changes in gear case temperature, continuous oil temperature above 180° F, or operation in high humidity. Under these conditions the oil should be changed at one, two, or three month intervals depending on severity of operating conditions.

APPROXIMATE OIL CAPACITIES - COOLING TOWER DRIVES

MODEL	*QUANTITY (PINTS)*
5000	5.50
8000	8.50
9000	14.0

COOLING TOWER DRIVES INSTALLATION

OPERATION POSITION – The Cooling Tower Drive must be mounted with the output shaft vertical. This position is required to achieve uniform lubrication to shafts, gears and bearings.
Because of varying requirements, mounting hardware is not supplied with this unit. Good quality cap screws with lock washers should always be used. Base and fasteners for motor and Cooling Tower Drive must be rigid enough to maintain alignment between the Cooling Tower Drive and motor. Adjust mounting position of the Cooling Tower Drive so that high speed shaft is properly aligned with motor shaft.
The gears are carefully adjusted by the factory during assembly for proper tooth contact and backlash. No further adjustment during installation is necessary or recommended.
COUPLING – A flexible coupling is required for input shaft to minimize bearing and gear wear caused by slight misalignment. Follow coupling manufacturer's recommendations for installation. Check coupling connections for minimum parallel and angular misalignment. If an alignment adjustment is required, shimming of the drive or motor might be necessary but care must be taken to prevent distortion of the reducer housing.
NOTE: Coupling and unit alignment should be rechecked after two weeks operation.

⚠CAUTION

If any noticeable resistance is encountered when installing fan hubs or couplings on shafts, inspect bore for paint, weld burrs or imperfections and hone smooth. Force fitting can easily damage gears, shafts, and bearings.

⚠WARNING

All rotating shafts and couplings must be adequately shielded by the user for maximum safety.

⚠CAUTION

Any noticeable vibration due to fan imbalance could cause damage to the Cooling Tower Drive gear set or bearings. Check the fan mounting, and if vibration persists, contact fan manufacturer.

SHUTDOWN – For shutdowns exceeding one week, operate fan for ten minutes once a week to minimize rust formation inside gear housing. If unit is to be inoperative for a long period, completely fill gear case with regular lubricant containing rust and oxidation inhibitors. Tag gear case and motor to prevent operation until proper oil level is obtained. Do not operate completely filled gear case.

PARALLEL SHAFT REDUCERS & HELICAL RATIO MULTIPLIERS

PARALLEL SHAFT REDUCERS and HELICAL RATIO MULTIPLIERS LUBRICATION

CAUTION

ALL PARALLEL SHAFT REDUCERS (EXCEPT HELICAL RATIO MULTIPLIERS) ARE SHIPPED DRY AND OIL MUST BE ADDED PRIOR TO OPERATION.
HELICAL RATIO MULTIPLIERS ARE FACTORY FILLED WITH THE PROPER AMOUNT OF PAG460 SYNTHETIC OIL FOR UNIVERSAL MOUNTING EXCEPT FOR VERTICAL SHAFTS. NO LUBRICATION CHANGE IS NECESSARY. FOR VERTICAL SHAFT APPLICATIONS CONSULT FACTORY. *NOTE: PAG SYNTHETIC LUBRICANTS ARE NOT COMPATIBLE WITH ANY OTHER LUBRICANTS,AND MUST NEVER BE MIXED. TOPPING OFF WITH THE WRONG LUBRICANT COULD CAUSE UNIT FAILURE.*

All HUB CITY Parallel Shaft Reducers are splash lubricated. Figures P1, P2, and P3 indicate oil levels for three basic mounting positions. Shaded area indicates the recommended oil level when input speeds are **greater than 800 RPM**. Dashed lines indicates the recommended oil level when input speeds are **less than 800 RPM**. Always determine mounting position before installing lubricant.
NOTE: When Parallel Shaft Reducer is mounted so that shafts are in a vertical position (Figure P3), see "VARIATIONS FROM NORMAL CONDITIONS – Parallel Shaft Reducers".

BEFORE OPERATING Parallel Shaft Reducer — Remove uppermost plug and fill Reducer with a recommended lubricant (see APPROXIMATE OIL CAPACITY CHART in these instructions and GEAR LUBRICANT page of these instructions) Clean threads on removed plugs and plug holes with degreaser; coat with thread sealant and install securely into Reducer case. If fill, level and drain plugs are not located conveniently for your mounting position, additional plugs may be installed. Consult HUB CITY for recommendations.

WARNING

VARIATIONS FROM NORMAL CONDITIONS —Parallel Shaft Reducers: When operating High Speed Shaft (Figures P1, P2 and P3) at speeds above 1800 RPM or below 400 RPM, special adjustment in oil level may be required. Consult HUB CITY for recommendations.
If either shaft is in a vertical position or inclined more than 15°, zerk fittings may be required to lubricate upper bearings. It may also be necessary to make some oil level or plug modifications. Consult HUB CITY for recommendations.

CAUTION

CHANGING LUBRICANT —Parallel Shaft Reducers: After the first 100 hours of operation, drain out initial oil, flush out the parallel shaft gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant), which ever occurs first.

WARNING

IMPORTANT - HELICAL RATIO MULTIPLIERS: Unit should not be operated when internal temperature exceeds 225° F or below 40° F unless a special duty lubricant is used. Reduced seal, bearing and gear life due to lubrication failure could result.

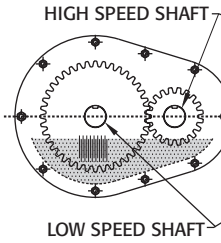
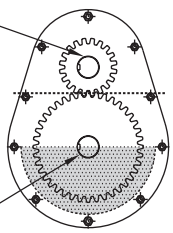
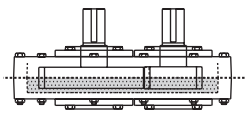


FIGURE P1


FIGURE P2


FIGURE P3

APPROXIMATE OIL CAPACITIES
Parallel Shaft Reducers & Helical Ratio Multipliers

MODEL	QUANTITY
22	0.50 pints
230	0.75 pints
240	1.50 pints
280	1.75 pints
85L	1.40 pints
200	1.50 pints
95L	2.50 pints
95H	3.50 pints
290	12.0 pints
52	1.60 pints
83L & 83S	1.80 pints
89	1.90 pints

MODEL	QUANTITY
1	2.10 pints
2	2.90 pints
3	3.60 pints
4	4.30 pints
5	4.90 pints
6	20.0 pints
75	31.0 pints
8	42.0 pints
HT100	2.75 pints
ARM1 & RM1	(Prelubed) 0.6
ARM2 & RM2	(Prelubed) 0.9
RM3	(Prelubed) 1
SSRM1	(Prelubed) 0.6

PARALLEL SHAFT REDUCERS & HELICAL RATIO MULTIPLIERS

PARALLEL SHAFT REDUCERS INSTALLATION

The basic design of HUB CITY Parallel Shaft Reducers allows operation in virtually any position. However, if your Reducer has a fill/breather plug and/or pipe plugs, the ideal position would be: Fill/breather plug at the top of the Reducer, drain plug at the bottom of the Reducer and a level plug located where oil level is desired according to shaft position and input speed.

Because mounting positions can vary greatly along with the location and availability of plugs in certain model Reducers, it may be necessary to install additional plugs as needed or level gages in level plugs.

Power may be applied (drive shaft) to either the high speed or the low speed shafts providing that the high speed shaft does not rotate more than 1750 RPM. Shafts may rotate in either direction.

Because of varying requirements, mounting hardware is not supplied with these units. Good quality cap screws with lock washers should be used. Base and fasteners for motor and Reducer must be rigid enough to maintain alignment between Reducer and motor and between Reducer and couplings.

⚠ CAUTION

SHAFT MOUNTED PARALLEL SHAFT REDUCERS – The driven shaft must extend through the full width of the Reducer and shaft should be independently supported with pillow block bearings, located as close to the Reducer as possible.

A torque arm must be installed on shaft mounted Reducers to prevent unit from rotating. Figure P4 shows the suggested installation. A rigid torque arm will cause bearings to "load up", causing excessive wear. To prevent this, provide a slight amount of "float" at the pivot point. Install Torque Arm so that it is approximately 90° to a line drawn through the low speed sleeve centerline and torque arm pivot point. Brackets must be fashioned by using a minimum of three attaching points on case.

No flexible coupling is required to connect low speed shaft on shaft mounted models but a clutch or torque limiting device is advisable somewhere in the drive train.

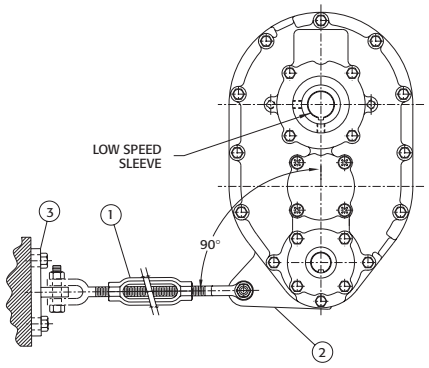


FIGURE P4

HELICAL RATIO MULTIPLIERS INSTALLATION

OPERATING POSITIONS – Normal speed reducer mounting positions are shown in Figures HRM1-HRM5. Because of varying requirements, mounting hardware is not supplied with these units, however foot mounting kits are available. Grade 5 or stronger cap screws should always be used. Base and fasteners for motor and reducers must be rigid enough to maintain alignment between reducer and motor, and between reducer and couplings. Input rotation of the speed reducer can be either clockwise or counterclockwise.

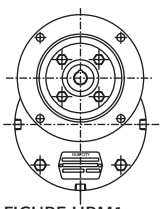


FIGURE HRM1 - FOOT MOUNTING AVAILABLE

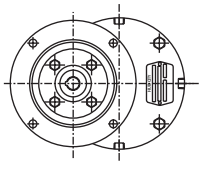


FIGURE HRM2 - FOOT MOUNTING AVAILABLE

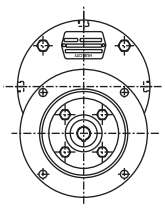


FIGURE HRM3

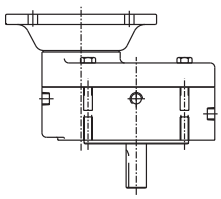


FIGURE HRM4 - VERTICAL SHAFT Mounting requires factory modification

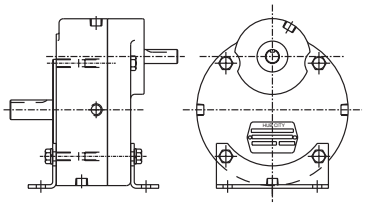


FIGURE HRM5 - SHAFT VERSION (Optional mounting feet shown)

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POWERTORQUE® SHAFT MOUNT REDUCERS

POWERTORQUE® SHAFT MOUNT REDUCERS LUBRICATION

CAUTION

ALL POWERTORQUE® SHAFT MOUNT REDUCERS ARE SHIPPED DRY AND OIL MUST BE ADDED PRIOR TO OPERATION.

BEFORE INSTALLATION: All Hub City PowerTorque® Shaft Mount Reducers are splash lubricated. Review the mounting positions and lubrication levels identified in Figure SM1. Below 15 RPM output speed, the oil level must be adjusted to reach the highest oil level plug. If the reducer mounting position is to vary from the positions shown in Figure SM1, either more or less oil may be required. Consult HUB CITY for recommendations.

BEFORE OPERATING PowerTorque® Shaft Mount Reducers: After final installation, install the magnetic drain plug in the drain location specified in Figure SM1. Remove the fill/vent plug and level plug. Fill the reducer with recommended lubricant (see APPROXIMATE OIL CAPACITY CHART in these instructions and GEAR LUBRICANT page of these instructions) until oil starts coming out the oil level plug hole specified in Figure SM1. Clean threads on removed plugs and plug holes with degreaser, coat plugs with thread sealant and install plugs securely in gear case. Install the vent plug in the location specified in Figure SM1 for the appropriate mounting position. Remove the tape used to cover the vent plug during shipment and discard.

CAUTION

The oil level is correct when the surface of the oil is level with the lowest point of the level plug shown in Figure SM1.

VARIATIONS FROM NORMAL CONDITIONS - PowerTorque® Shaft Mount Reducers: Input speeds that exceed the maximum speeds recommended for a given ratio, which are listed in the general catalog specifications, may require an adjustment in the oil level. Consult HUB CITY for special lubricant recommendations when operating at higher speeds.

Hub City PowerTorque® Shaft Mount Reducers may be mounted in any of the positions shown in Figure SM1. These positions may vary up to 5° for positions "A" or "C" and 20° for positions "B" or "D" in either direction and still have adequate lubrication. If these angles of inclination are exceeded consult HUB CITY for special lubrication instructions. Because mounting positions can very greatly along with the location and availability of plugs in certain applications, it may be necessary to install additional plugs as needed or level gages in place of level plugs.

CAUTION

CHANGING LUBRICANT – After the first 100 hours of operation, drain out initial oil, flush out the PowerTorque® gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant), which ever occurs first.

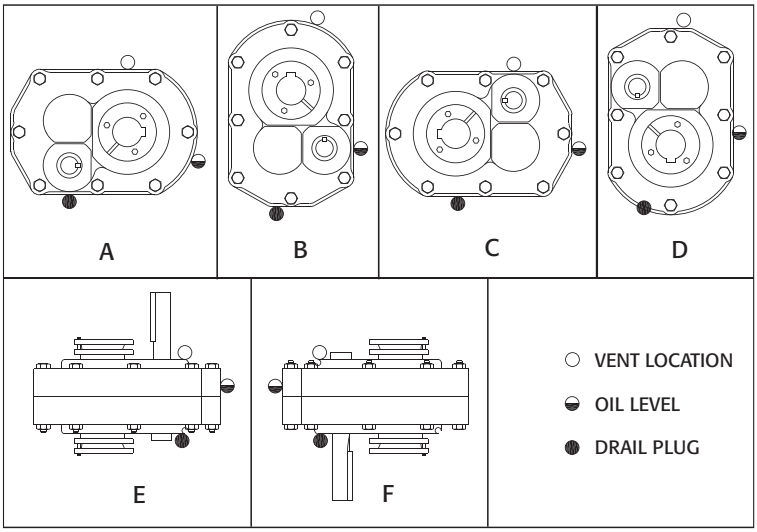
WARNING

Do not use GL-90, 75W-90 or other extreme pressure (EP) lubricants containing friction modifiers such as graphite or molybdenum disulfide in gear drives containing internal backstops. Lubricants with EP additives may produce coatings which adversely affect operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.

POWER TORQUE SHAFT MOUNT REDUCERS
Approximate Oil Capacities (pints)

	MOUNTING POSITION					
	HORIZONTAL SHAFTS				VERTICAL SHAFTS	
MODEL	A	B	C	D	E	F
PT1107	1.0	1.0	1.3	1.5	2.0	2.5
PT2115	1.8	2.0	1.3	2.0	3.3	3.5
PT3203	3.0	3.0	1.5	4.5	5.3	6.0
PT4207	3.8	4.5	2.5	6.0	6.8	8.5
PT5215	6.5	5.0	6.5	5.0	14.0	17.3
PT6307	8.5	10.0	8.5	10.0	17.3	18.3
PT7315	13.0	16.0	14.5	18.5	30.8	32.8
PT8407	17.0	22.0	21.0	17.0	38.3	38.3
PT9415	26.0	26.0	25.0	28.5	50.8	50.8
PT10507	46.0	28.0	31.5	37.5	82.0	82.0

MOUNTING POSITIONS FIGURE - SM1



POWERTORQUE® SHAFT MOUNT REDUCERS

POWERTORQUE® SHAFT MOUNT REDUCERS INSTALLATION

⚠CAUTION

The lifting eye included on this drive is to be used to vertically lift the drive only and no other associated attachments or motors.

⚠WARNING

For high momentum loads, if coasting to a stop is undesirable, a braking mechanism should be applied to the reducer output or driven mechanism.

1. INSTALL REDUCER ON DRIVEN SHAFT

The driven shaft must extend through the full length of the reducer sleeve and the shaft should be independently supported with pillow block bearings located as close to the reducer as possible. The driven shaft must be installed in the sleeve with a bushing at each end. Refer to installation instructions provided with tapered bushings.

2. INSTALL TORQUE ARM

The Torque Arm must be installed on shaft mounted reducers to prevent the unit from rotating. Install and position the Torque Arm at a 90° angle to a line drawn through the center of the low speed sleeve and the bolt that attaches the Torque Arm to the Torque Arm brackets on the unit. (Refer to Figure SM2). The Torque Arm should be positioned to be in tension, NOT compression, based on output rotation of the gear reducer. A rigid Torque Arm can cause bearings to "load up" and cause premature bearing failure. To prevent this, provide a slight amount of "float" at the torque arm pivot points.

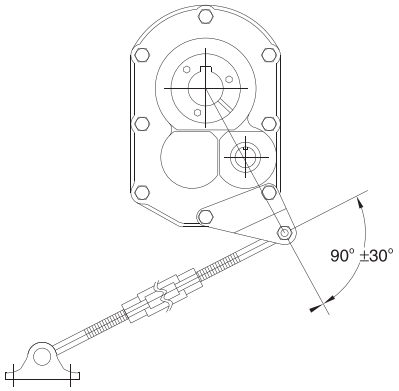


FIGURE SM2

3. INSTALL SHEAVES AND SPROCKETS

When mounting sheaves or sprockets, they should be located as close to the Gear Drive as possible. Excessive overhung load could result in premature failures of bearings or shaft. Refer to the general catalog or contact your local distributor for overhung load ratings.

4. INSTALL MOTOR AND V-BELT DRIVE

Install the motor and V-belt drive with the V-belt at a right angle approximately to the centerline between the driven and input shaft. This will allow using the torque arm to tighten the V-belt. (See Figure SM3.)

If using a motor mount that is installed directly to the reducer, refer to the Installation Instructions provided with the motor mount.

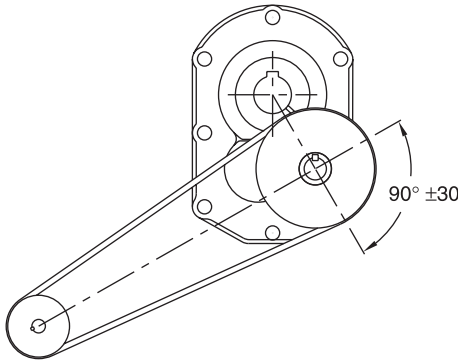


FIGURE SM3

⚠WARNING

SHIELD ALL ROTATING PARTS

For safety, purchaser or user should provide protective shields over the V-belt drive, all shaft extensions and any moving apparatus mounted on the unit. The user is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.

5. FILL REDUCER WITH LUBRICANT

Refer to the PowerTorque® Shaft Mount Reducers Lubrication section for recommended lubricants and oil levels for the various mounting positions.

⚠CAUTION

FLANGE MOUNTED PowerTorque® Shaft Mount Reducers: Units with the flange mount accessory are to be mounted and supported by the mounting flange only. The mounting pads on the housing are not to be used in conjunction with the mounting flange to support the unit.

SHAFT MOUNTED PowerTorque® Shaft Mount Reducers WITH MOUNTING FLANGE: There must be concentricity between the driven shaft and the machine register that accepts the mounting flange pilot to prevent misalignment between the hollow shaft of the drive and the driven shaft.

SHAFT OUTPUT PowerTorque® Shaft Mount Reducers WITH MOUNTING FLANGE: If coupling to shaft – flexible couplings are recommended to minimize excessive bearing and shaft loading caused by misalignment. Follow coupling manufacturer's installation directions.

R

SPARTAN AND POWERATIO® 2000 & 4000 HIGH EFFICIENCY DRIVES

SPARTAN ALUMINUM HELICAL INLINE GEAR DRIVES LUBRICATION

CAREFULLY FOLLOW LUBRICATION INSTRUCTIONS AND INSTALLATION MANUALS FURNISHED WITH THE GEAR REDUCER. ALL STANDARD SPARTAN™ INLINE REDUCERS ARE FACTORY FILLED WITH THE PROPER AMOUNT OF PAG460 SYNTHETIC OIL. SPECIFY MOUNTING POSITION OF REDUCER FOR CORRECT OIL FILL AT FACTORY. THE MOUNTING POSITION IS STAMPED ON ALL SPARTAN™ REDUCER NAMEPLATES. POSITION B3 IS STANDARD. POSITIONS B3-B8 ARE HORIZONTAL MOUNTS. POSITIONS V5 AND V6 ARE VERTICAL MOUNTS. *NOTE: PAG SYNTHETIC LUBRICANTS ARE NOT COMPATIBLE WITH ANY OTHER LUBRICANTS,AND MUST NEVER BE MIXED. TOPPING OFF WITH THE WRONG LUBRICANT COULD CAUSE UNIT FAILURE.*

SPARTAN ALUMINUM HELICAL INLINE
Approximate Oil Capacities (pints)

	MOUNTING POSITION (SEE FIG HI 1)				
MODEL	B3	B6	B7	B8	V5
ALHI4032	0.5	0.6	0.8	0.8	0.8
ALHI4033	0.6	0.8	0.9	0.9	0.9
ALHI4042	0.5	0.6	0.8	0.8	0.8
ALHI4043	0.6	0.8	0.9	0.9	0.9
ALHI4052	0.9	1.2	2.1	2.3	2.3
ALHI4053	1.6	1.6	2.2	2.4	2.5
ALHI4062	1.2	1.8	2.3	2.5	2.5
ALHI4063	1.6	1.9	2.4	2.6	2.8

POWERATIO 2000 & 4000 HIGH EFFICIENCY HELICAL IN-LINE, COMPACT HELICAL PARALLEL, HELICAL BEVEL, and HELICAL WORM GEAR DRIVES LUBRICATION

IMPORTANT SELECTION INFORMATION
Check to verify that the application does not exceed the capacities published in the current catalog, and printed on the gear unit name plate. All capacity ratings are based on proper application of AGMA Service Factors listed in the current catalog.

⚠CAUTION

All POWERATIO 2000 & 4000 HIGH EFFICIENCY gearmotors and gear reducers are supplied with the correct quantity of lubricating oil for the mounting position specified at time of order.

BEFORE INSTALLATION – Review the approved mounting positions and lubrication levels identified in Figures HI1 & HI2, CPS1, HB1, or HW1 & HW2. Do not deviate from the mounting positions or lubrication levels shown without contacting the factory.

For transportation, the units are supplied as sealed gearcases. In place of the breather plug, a pipe plug is installed. The breather plug accompanies the unit in the lubrication instructions and hardware envelope.

BEFORE OPERATING – After final installation, install the breather plug in the locations specified in Figures HI1 & HI2, CPS1, HB1, or HW1 & HW2 for the appropriate mounting position.
After installation, the actual mounting position should be confirmed against the mounting position shown on the gear reducer nameplate. Adequate lubrication is only guaranteed if the unit is mounted in the specific nameplated mounting position.

⚠CAUTION

If the mounting position is changed, the oil quantity must be adjusted to obtain the proper oil level per the Lubrication Instruction enclosed with each unit. Mounting position must be one shown in Figures HI1 & HI2, CPS1, HB1, or HW1 & HW2. Consult the factory if you are not certain of the correct oil level or quantity. Consult the factory for mounting positions not shown.

VARIATIONS FROM NORMAL CONDITIONS - Input speeds that exceed the maximum speeds recommended for a given ratio, which are listed in the general catalog specifications, may require an adjustment in the oil level. Consult HUB CITY for special lubricant recommendations when operating at higher speeds.

⚠WARNING

Do not use GL-90, 75W-90 or other extreme pressure (EP) lubricants containing friction modifiers such as graphite or molybdenum disulfide in gear drives containing internal backstops. Lubricants with EP additives may produce coatings which adversely affect operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.

POWERATIO 4000 HIGH EFFICIENCY HELICAL IN-LINE GEAR DRIVES LUBRICATION

⚠CAUTION

QUAD REDUCTION UNITS – The primary and secondary units are independent units, with separate fill, vent, level and drain holes. Use the double reduction drawings in Figures HI1 & HI2 for the mounting positions and lube hole locations. The mounting position designation is based on the secondary unit, which can be foot mount or flange mount. The primary unit is always flange mount type.

POWERATIO® 4000 HIGH EFFICIENCY DRIVES

⚠ CAUTION

The clear sight glass plug should be installed in the proper oil level hole. The oil level is correct when the surface of the oil is at the center of the plug. When a solid plug is provided for the oil level, the oil level is correct when the surface of the oil is level with the lowest point of the level plug, shown in Figures HI1 & HI2, for the appropriate mounting position.

⚠ CAUTION

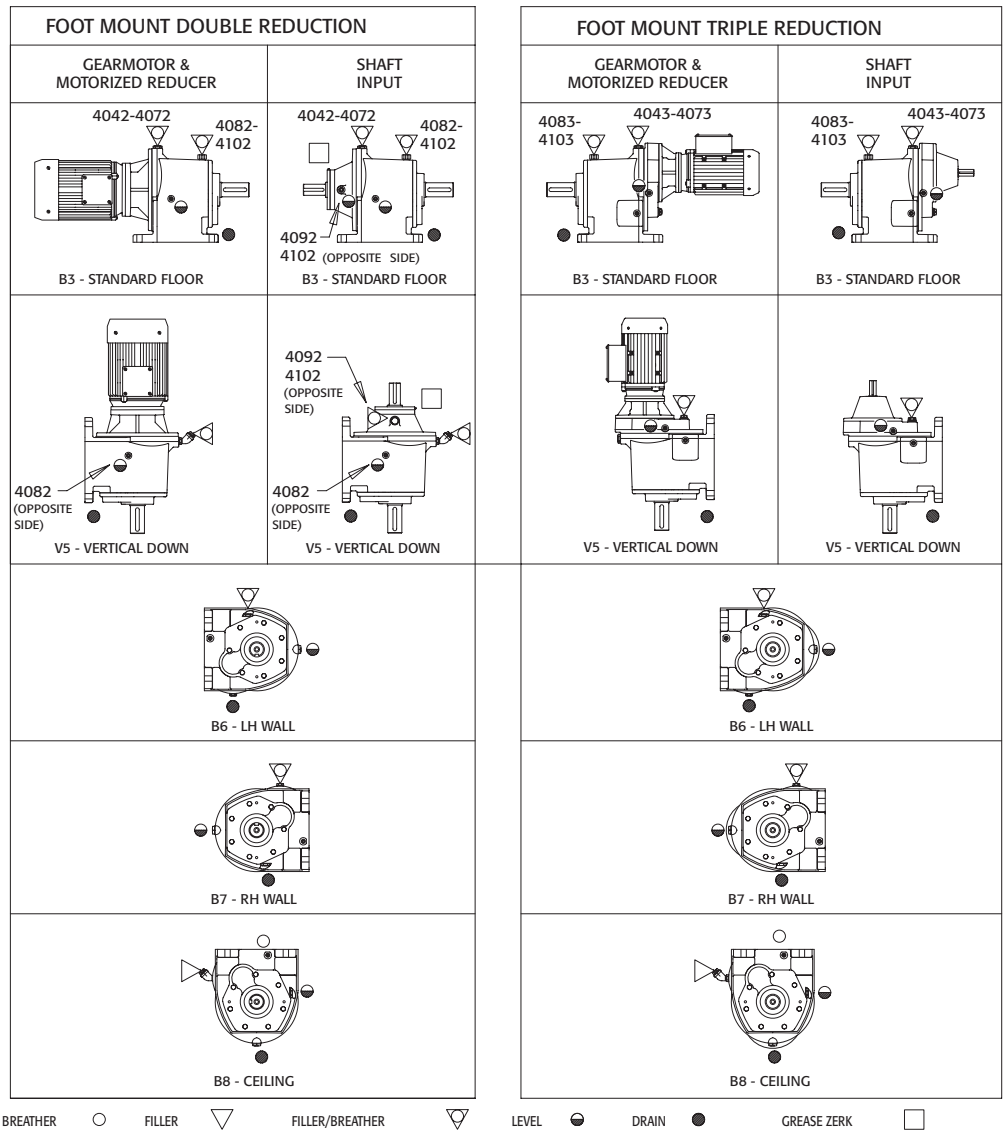
CHANGING LUBRICANT - After the first 100 hours of operation, drain out initial oil, flush out the helical in-line gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 7,500 operating hours (15,000 for synthetic oil lubricant) or every 18 months (36 months for synthetic oil lubricant) — whichever occurs first.

⚠ CAUTION

INPUT BEARING GREASE – The outer bearing on shaft input models of Helical In-Line Gear Drives is grease lubricated at the factory and sealed with a Nilos Ring for operation in all mounting positions. Pump 3 pumps of grease into the grease zerk after every 3000 hours of operation, to lubricate the bearing and input seal.

FIGURE - HI 1

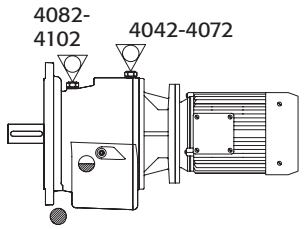
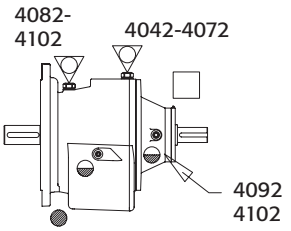
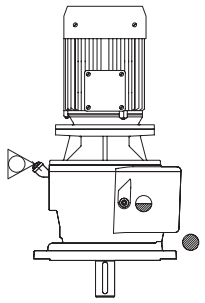
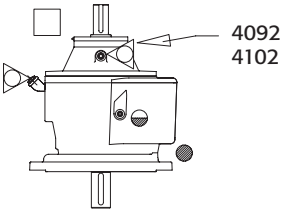
HELICAL IN-LINE MOUNTING POSITION, FILL, LEVEL AND DRAIN LOCATIONS



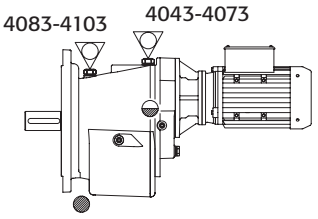
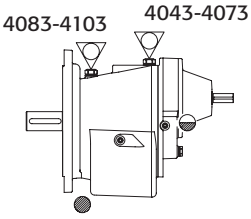
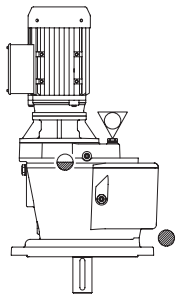
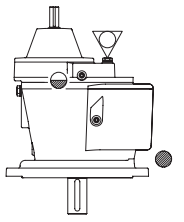
POWERATIO® 4000 HIGH EFFICIENCY DRIVES

FIGURE - HI 2 HELICAL IN-LINE MOUNTING POSITION, FILL, LEVEL AND DRAIN LOCATIONS

FLANGE MOUNT DOUBLE REDUCTION

GEARMOTOR & MOTORIZED REDUCER	SHAFT INPUT
 B5 - HORIZONTAL	 B5 - HORIZONTAL
 V1 - VERTICAL DOWN	 V1 - VERTICAL DOWN

FLANGE MOUNT TRIPLE REDUCTION

GEARMOTOR & MOTORIZED REDUCER	SHAFT INPUT
 B5 - HORIZONTAL	 B5 - HORIZONTAL
 V1 - VERTICAL DOWN	 V1 - VERTICAL DOWN

BREATHER ○ FILLER ▽ FILLER/BREATHER ▽ LEVEL ⊖ DRAIN ● GREASE ZERK □ (4092-4102 SHAFT INPUT)

POWERATIO® 2000 & 4000 HIGH EFFICIENCY DRIVES

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL IN-LINE DOUBLE AND TRIPLE REDUCTION

MODEL TYPE	MOUNTING POSITION	UNIT SIZE (FOOT OR FLANGE MOUNT)													
		4042	4043	4062	4063	4662	4663	4072	4073	4082	4083	4092	4093	4102	4103
C-Frame or Gearmotor Models (HI40XXE) (HI40XXG)	B3, B5 Floor	1	2	1.6	4.1	3.3	6.1	4.3	8.1	6.8	11.6	16.9	29.6	22.5	39.4
	B8 Ceiling	1.8	2	3	4.2	5.2	5.9	7.4	7.6	11.4	11.8	20.1	20.3	28.4	29.0
	B6, B7 Wall	1.5	1.7	2.3	3	4.2	4.3	6.1	5.5	10.1	10.1	19.6	19.6	25.5	25.5
	V5, V1 Vertical	1.4	2.8	2.5	4.7	4.0	7.1	5.5	9.5	10	15.8	13.6	21.7	19.4	30.0
Shaft Input Models (HI40XXA) (HI40XXC)	B3, B5 Floor	1	2	1.6	4.1	3.3	6.1	4.3	8.1	6.8	11.6	16.9	29.6	22.5	39.4
	B8 Ceiling	2.2	2.2	3.1	4.3	5.4	6.4	7.8	8.6	13.2	12.9	23.3	22.3	33.3	31.0
	B6, B7 Wall	1.6	1.9	2.4	3.1	4.2	5.1	6.1	7.1	11	10.8	21.6	20.6	30.0	26.5
	V5, V1 Vertical	1.4	2.8	2.5	4.7	4.0	7.1	5.5	9.5	10	15.8	13.6	21.7	19.4	30.0

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL IN-LINE QUAD REDUCTION

Quad reduction units are compound units, and the primary and secondary units are filled separately. Refer to the model table below and use the oil capacities in the table above.

UNIT SIZE	4064	4664	4074	4084	4094	4104	
PRIMARY UNIT SIZE	4042	4042	4062	4072	4082	4082	(use primary oil capacities for desired Input type)
SECONDARY UNIT SIZE	4062	4662	4072	4082	4092	4102	(use secondary oil capacities for C-Frame Input)

POWERATIO® 2000 HIGH EFFICIENCY COMPACT HELICAL PARALLEL GEAR DRIVES LUBRICATION

⚠ CAUTION

QUIN REDUCTION UNITS – The primary and secondary units are independent units, with separate fill, vent, level and drain holes. Use the Figure CPS1 for the mounting positions and lube hole locations for the secondary unit. The primary unit is a Helical In-Line drive. Refer to the Helical In-Line Lubrication and Installation instructions for the primary unit.

⚠ CAUTION

The oil level is correct when the surface of the oil is level with the lowest point of the level plug, shown in Figure CPS1, for the appropriate mounting position.

⚠ CAUTION

CHANGING LUBRICANT - After the first 100 hours of operation, drain out initial oil, flush out the compact helical parallel gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant) — whichever occurs first.

APPROXIMATE OIL CAPACITY (PINTS)
COMPACT HELICAL PARALLEL

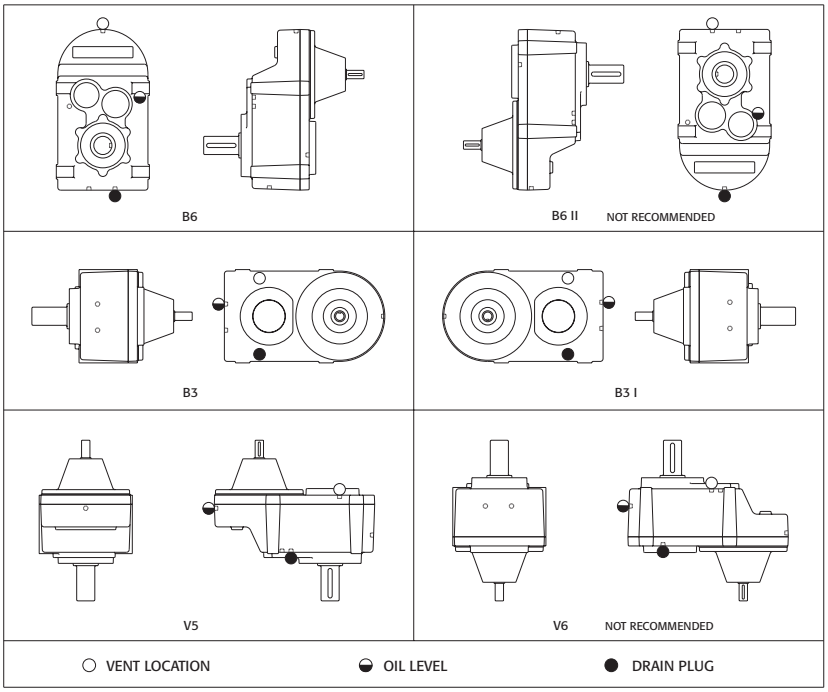
MODEL	MOUNTING POSITION					
	B3	B3 I	B6	B6 II	V5	V6
HP2030	2.1	2.4	2.1	1.5	2.8	2.6
HP2040	3.2	3.6	3.0	2.4	4.0	3.9
HP2060	6.2	6.8	5.7	4.3	8.0	8.0
HP2070	12.8	13.3	10.8	9.2	17.2	15.5

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POWERATIO® 2000 HIGH EFFICIENCY DRIVES

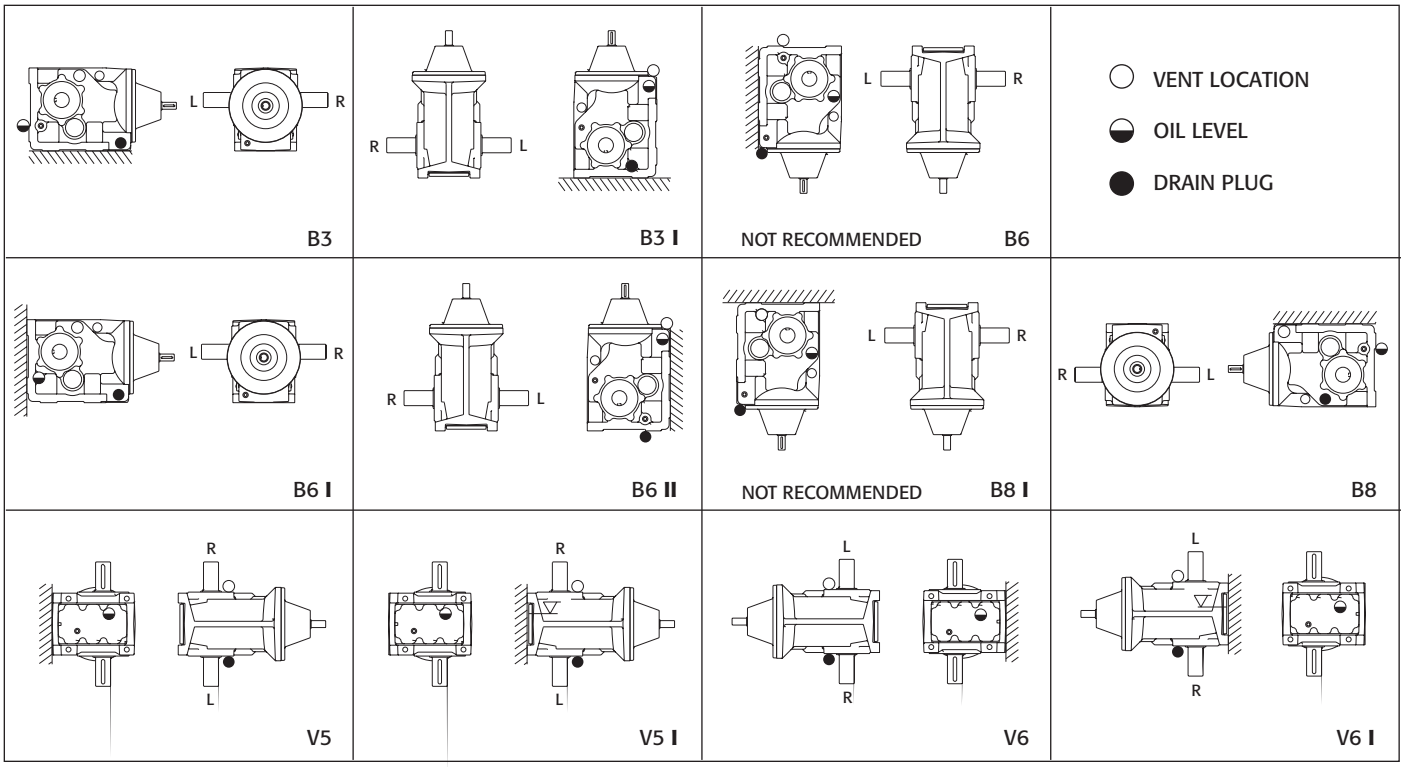
COMPACT HELICAL PARALLEL GEAR DRIVES MOUNTING POSITIONS

FIGURE - CPS 1



HELICAL BEVEL MOUNTING POSITIONS

FIGURE - HB1



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POWERATIO® 2000 HIGH EFFICIENCY DRIVES

POWERATIO® 2000 HIGH EFFICIENCY HELICAL BEVEL GEAR DRIVES LUBRICATION

CAUTION

QUIN REDUCTION UNITS – The primary and secondary units are independent units, with separate fill, vent, level and drain holes. Use the triple reduction drawings in Figure HB1 for the mounting positions and lube hole locations. The mounting position designation is based on the secondary unit, which can be foot mount or flange mount. The primary unit is always flange mount type.

CAUTION

The clear sight glass plug should be installed in the proper oil level hole. The oil level is correct when the surface of the oil is at the center of the plug. When a solid plug is provided for the oil level, the oil level is correct when the surface of the oil is level with the lowest point of the level plug, shown in Figure HB1, for the appropriate mounting position.

CAUTION

CHANGING LUBRICANT - After the first 100 hours of operation, drain out initial oil, flush out the helical bevel gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant) — whichever occurs first.

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL BEVEL TRIPLE REDUCTION

MODEL	MOUNTING POSITION					
	B3 AND B6 I*	B3 I AND B6 II	B6 AND B8 I	V5 AND V5 I	V6 AND V6 I	B8
HB2043A or E	1.3	3.5	Consult Factory	2.6	2.7	2.9
HB2063A or E	2.4	7.2	Consult Factory	5.5	5.7	6.0
HB2073A or E	3.6	10.8	Consult Factory	8.3	8.6	9.0
HB2083A or E	6.7	20.1	Consult Factory	15.4	16.1	17.4
HB2093A or E	15	37.8	Consult Factory	29.0	30.3	32.7
HB2103 A or E	21	71	Consult Factory	51	51	54

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL BEVEL QUIN REDUCTION

Quin reduction units are compound units. The primary and secondary units are filled separately. Refer to the model table below and use the oil capacities shown.

MODEL	UNIT	MOUNTING POSITION					
		B3 AND B6 I*	B3 I AND B6 II	B6 AND B8 I	V5 AND V5 I	V6 AND V6 I	B8
HB2065A	Primary	1.0	1.4	Consult	1.6	1.6	2.2
	Secondary	2.4	7.2	Factory	5.5	5.7	6.0
HB2065E	Primary	1.0	1.4	Consult	1.5	1.5	1.8
	Secondary	2.4	7.2	Factory	5.5	5.7	6.0
HB2075A	Primary	1.6	2.5	Consult	2.4	2.4	3.1
	Secondary	3.6	10.8	Factory	8.3	8.6	9.0
HB2075E	Primary	1.6	2.5	Consult	2.3	2.3	3.0
	Secondary	3.6	10.8	Factory	8.3	8.6	9.0
HB2085A	Primary	4.3	5.5	Consult	6.1	6.1	7.8
	Secondary	6.7	20.1	Factory	15.4	16.1	17.4
HB2085E	Primary	4.3	5.5	Consult	6.1	6.1	7.8
	Secondary	6.7	20.1	Factory	15.4	16.1	17.4
HB2095A	Primary	6.8	10.0	Consult	11.0	11.0	13.2
	Secondary	15.0	37.8	Factory	29.0	30.3	32.7
HB2095E	Primary	6.8	10.0	Consult	10.1	10.1	11.4
	Secondary	15.0	37.8	Factory	29.0	30.3	32.7
HB2105A	Primary	6.8	10.0	Consult	11.0	11.0	13.2
	Secondary	21.0	71.0	Factory	51.0	51.0	54.0
HB2105E	Primary	6.8	10.0	Consult	10.1	10.1	11.4
	Secondary	21.0	71.0	Factory	51.0	51.0	54.0

*REFER TO FIG. HB1 FOR MOUNTING POSITIONS.

POWERATIO® 2000 HIGH EFFICIENCY DRIVES

POWERATIO® 2000 HIGH EFFICIENCY HELICAL WORM GEAR DRIVES LUBRICATION

CAUTION

QUAD REDUCTION UNITS – The primary and secondary units are independent units, with separate fill, vent, level and drain holes. Use the double reduction drawings in Figure HW1 for the mounting positions and lube hole locations for the secondary unit. The primary unit is a Helical In-Line drive, which requires a different lubricant from the Helical-Worm secondary unit. Refer to the Helical In-Line Lubrication and Maintenance Instructions for the primary unit.

CAUTION

The oil level is correct when surface of the oil is level with the lowest point of the level plug shown in Figures HW1 & HW2.

CAUTION

CHANGING LUBRICANT - After the first 200 hours of operation, drain out initial oil, flush out the helical worm gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 2,500 operating hours (5,000 for synthetic oil lubricant) or every 6 months (12 months for synthetic oil lubricant) – whichever occurs first.

FIGURE - HW1

HELICAL WORM DOUBLE REDUCTION MOUNTING POSITIONS

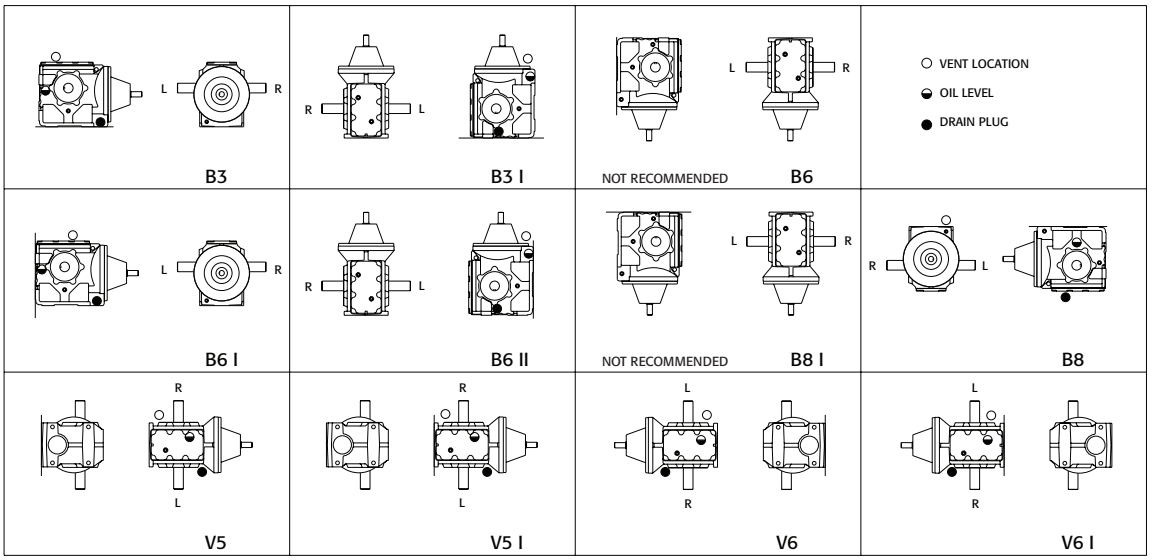
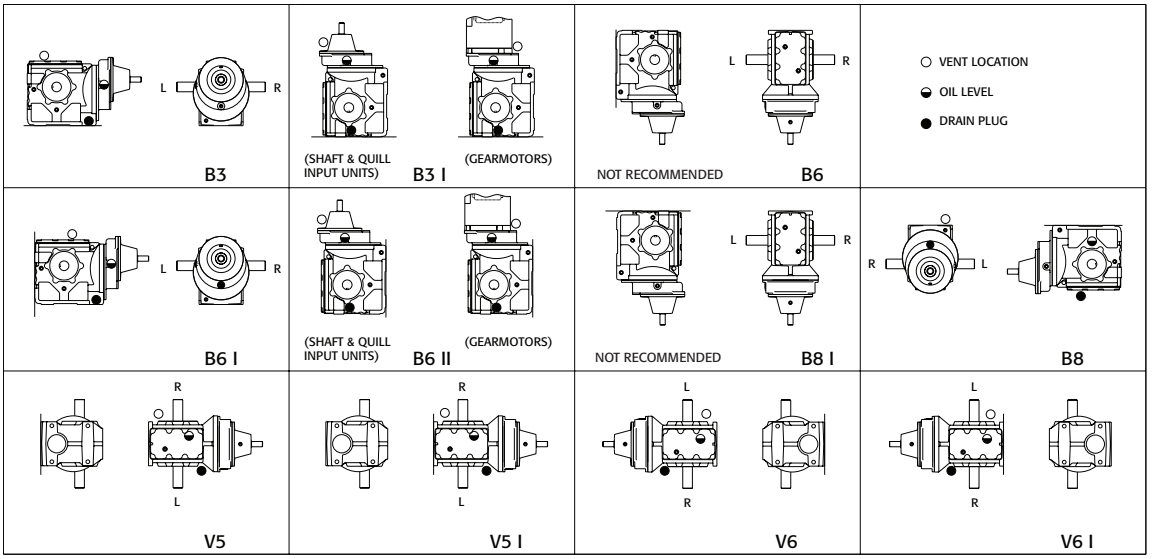


FIGURE - HW2

HELICAL WORM TRIPLE REDUCTION MOUNTING POSITIONS



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POWERATIO® 2000 HIGH EFFICIENCY DRIVES

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL WORM DOUBLE REDUCTION

MODEL	MOUNTING POSITION					
	B3 AND B6 I*	B3 I AND B6 II	B6 AND B8 I	V5 AND B5 I	V6 AND V6 I	B8
HW2042A or E	1.7	2.1	Consult Factory	1.9	1.9	2.4
HW2052A or E	2.0	3.7	Consult Factory	3.3	3.3	3.9
HW2062A or E	4.3	6.0	Consult Factory	5.3	5.3	5.6
HW2072A or E	7.7	12.7	Consult Factory	11.6	11.6	14.0

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL WORM TRIPLE REDUCTION

MODEL	MOUNTING POSITION					
	B3 AND B6 I*	B3 I AND B6 II	B6 AND B8 I	V5 AND B5 I	V6 AND V6 I	B8
HW2043A or E	2.1	2.8	Consult Factory	2.2	2.2	2.8
HW2053A or E	2.8	4.8	Consult Factory	3.9	3.9	4.5
HW2063A or E	6.3	8.0	Consult Factory	7.3	7.3	8.3
HW2073A or E	11.2	16.2	Consult Factory	15.1	15.1	18.0

APPROXIMATE OIL CAPACITIES (PINTS) HELICAL WORM QUAD REDUCTION

Quad reduction units are compound units. The primary and secondary units are filled separately. Refer to the model table below and use the oil capacities shown.

MODEL	UNIT	MOUNTING POSITION					
		B3 AND B6 I*	B3 I AND B6 II	B6 AND B8 I	V5 AND B5 I	V6 AND V6 I	B8
HW2064A	Primary	1.0	1.4	Consult	1.6	1.6	2.2
	Secondary	4.3	6.0	Factory	5.3	5.3	5.6
HW2064E	Primary	1.0	1.4	Consult	1.5	1.5	1.8
	Secondary	4.3	6.0	Factory	5.3	5.3	5.6
HW2074A	Primary	1.6	2.5	Consult	2.4	2.4	3.1
	Secondary	7.7	12.7	Factory	11.6	11.6	14.0
HW2074E	Primary	1.6	2.5	Consult	2.3	2.3	3.0
	Secondary	7.7	12.7	Factory	11.6	11.6	14.0

*REFER TO FIGURES HW1 & HW2 FOR MOUNTING POSITIONS.

POWERATIO® 2000 HIGH EFFICIENCY HELICAL IN-LINE GEAR DRIVES INSTALLATION

FLANGE MOUNT UNITS – If coupling to shaft, there must be concentricity between the driven shaft and the machine register that accepts the mounting flange pilot to prevent misalignment. Flexible couplings are recommended to minimize excessive bearing and shaft loading caused by misalignment. Follow coupling manufacturer's installation directions.

POWERATIO® 2000 HIGH EFFICIENCY HELICAL IN-LINE, COMPACT HELICAL PARALLEL, HELICAL BEVEL, and HELICAL WORM GEAR DRIVES INSTALLATION

⚠ CAUTION

The lifting eye included on this drive is to be used to vertically lift the drive only and no other associated attachments or motors.

⚠ WARNING

For high momentum loads, if coasting to a stop is undesirable, a braking mechanism should be applied to the reducer output or driven mechanism.

⚠ CAUTION

MOTORS – Check to be certain that the voltage range specified on the motor corresponds to the supply voltage. Follow the motor manufacturer's wiring instructions, and adhere to all local electrical codes.

Run the motor to check the direction of rotation. Follow the motor manufacturer's instructions for reversing direction of rotation.

MOUNTING – Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting holes. Shim as required under flange or base feet which do not lie flat against the mounting surface.

When the units are used in conjunction with any auxiliary equipment, care must be taken to be certain that proper alignment is achieved.

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POWERATIO® 2000 HIGH EFFICIENCY DRIVES

POWERATIO 2000 HIGH EFFICIENCY COMPACT HELICAL PARALLEL, HELICAL BEVEL and HELICAL WORM GEAR DRIVES INSTALLATION

SHAFT MOUNTED MODELS - HUB CITY recommends application of an antiseize compound, such as Dow-Corning® 1000 High Temperature Anti-seize Paste or Never-Seez®, to the driven shaft during installation. This assists in preventing fretting corrosion and aids in unit removal. Driven shaft should be supported independently with pillow block bearings. A suitable Torque Arm must be provided and can be ordered separately (not supplied) to keep unit from rotating. A torque arm pad can be attached to any of the four available mounting surface locations of the unit. Install and position Torque Arm at 90° angle to a line drawn between the center of the output hollow bore and the bolt that attaches the Torque Arm to the Torque Arm Pad of the unit. The Torque Arm should be positioned to be in tension, NOT compression, based on output rotation of the gear drive. (Figures CPS2, HB2, and HW3). A rigid torque arm can cause bearings to "load up" and cause premature bearing failure. To prevent this, provide a slight amount of "float" at the torque arm pivot points.

FIGURE - CPS2

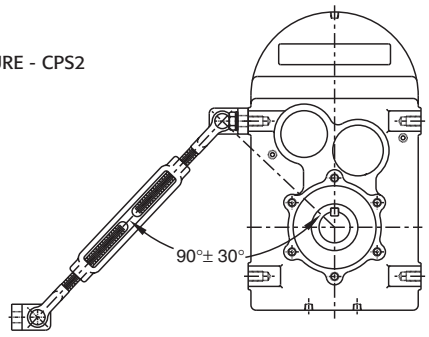


FIGURE - HB2

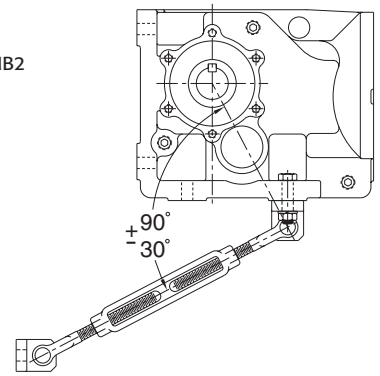
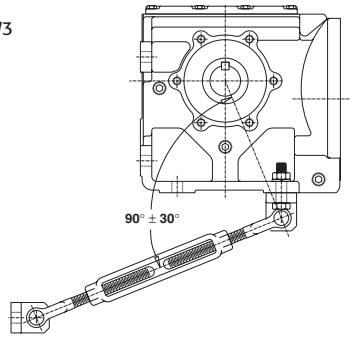


FIGURE - HW3



CAUTION

FLANGE MOUNTED UNITS - Units with the flange mount accessory are to be mounted and supported by the mounting flange only. The mounting pads on the housing are not to be used in conjunction with the mounting flange to support the unit.

SHAFT MOUNTED UNITS WITH MOUNTING FLANGE: There must be concentricity between the driven shaft and the machine register that accepts the mounting flange pilot to prevent misalignment between the hollow shaft of the drive and the driven shaft.

SHAFT OUTPUT UNITS WITH MOUNTING FLANGE: If coupling to shaft – flexible couplings are recommended to minimize excessive bearing and shaft loading caused by misalignment. Follow coupling manufacturer's installation directions.

POWERATIO® 2000 HIGH EFFICIENCY HELICAL WORM GEAR DRIVES INSTALLATION

CAUTION

RUN-IN PERIOD — A new Helical Worm Gear Drive will not operate at maximum efficiency during the run-in period. Increased current draw or heat rise may be seen during this time.

CLEANLINE™ HUB CUBE

HUB³™ BEVEL GEAR DRIVES LUBRICATION

General Note – These instructions contain information specifically for the Hub³™ Bevel Gear Drives, models SSM3, SS165, SS175, SS65 and SS66.

⚠CAUTION

Hub³™ Bevel Gear Drives are lubricated at the factory, for the application service life of the unit, with food-grade lubricant conforming to the demands of USDA H1 regulations. The ingredients used in the formulation of this lubricant are on the FDA list of allowable substances in accordance with the Guidelines of Security CFR 21², section 178.3570.

⚠CAUTION

All Hub³™ Bevel Gear Drives are configured and supplied with the correct quantity of lubricating oil for the mounting position specified at time of order. Refer to Figure SSB1 for mounting positions and styles.

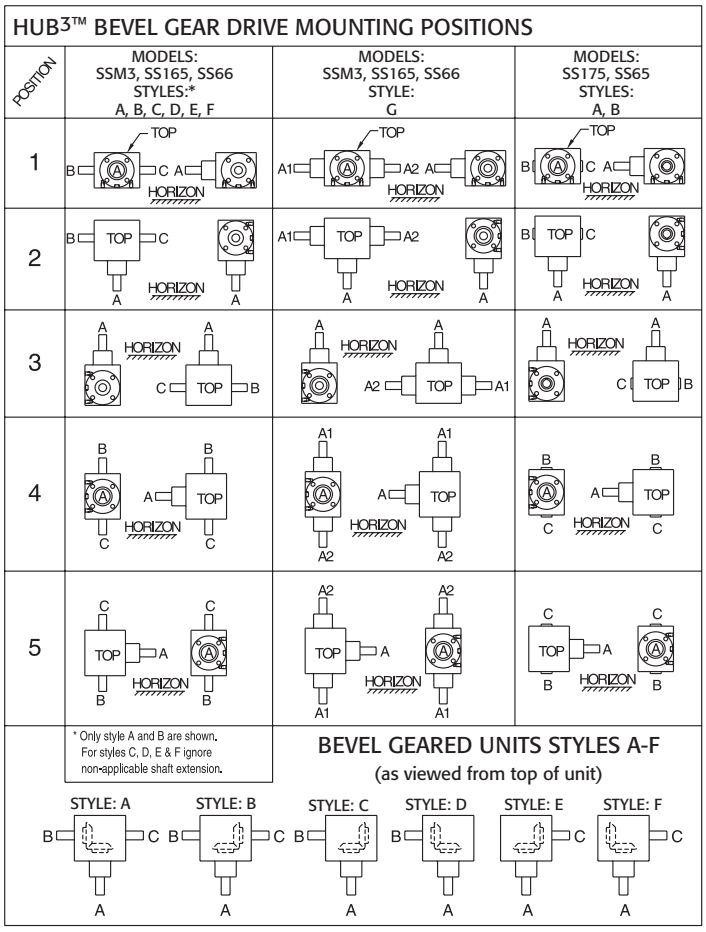


FIGURE - SSB1

AFTER INSTALLATION – the actual mounting position should be confirmed against the mounting position shown on the gear reducer nameplate. Correct configuration and lubrication is only guaranteed if the unit is mounted in the specific nameplated mounting position.

HUB³™ BEVEL GEAR DRIVES INSTALLATION

⚠WARNING

Power may be applied (drive shaft) to either the cross or pinion shaft.

⚠WARNING

SHAFT MOUNTED HUB³™ BEVEL GEAR DRIVES – Driven shaft should be supported independently with pillow block bearings, located as close to Bevel Gear Drive as possible. A suitable Torque Arm must be provided (not supplied) to keep unit from rotating. A rigid torque arm will cause bearings to "load up" and cause excessive wear. To prevent this, provide a slight amount of "float" at the pivot point.

HUB³™ WORM GEAR SPEED REDUCERS LUBRICATION

General Note – These instructions contain information specifically for the Hub³™ Worm Gear Speed Reducers, models SS181, SS182, SS184, SS185, SS211, SS212, SS214, SS215, SS261, SS262, SS264, SS265, SS321, SS322, SS324, and SS325.

⚠CAUTION

Hub³™ Worm Gear Speed Reducers are lubricated at the factory, for the application service life of the unit, with food-grade lubricant conforming to the demands of USDA H1 regulations. The ingredients used in the formulation of this lubricant are on the FDA list of allowable substances in accordance with the Guidelines of Security CFR 21², section 178.3570.

⚠CAUTION

All Hub³™ Worm Gear Speed Reducers are configured and supplied with the correct quantity of lubricating oil from the factory for all Horizontal and Vertical Mounting Postions, EXCEPT for the THREE UNAPPROVED mounting positions shown in Figure SSW1. For mounting in any of these THREE UNAPPROVED mounting positions, CONSULT HUB CITY.

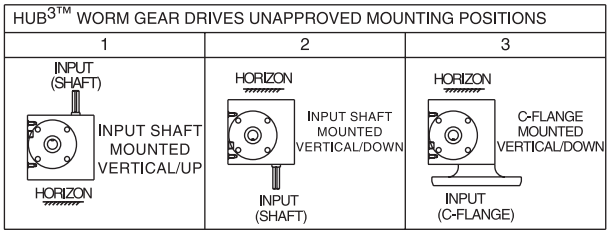


FIGURE - SSW1

R

CLEANLINE™ PRODUCTS

HUB³™ WORM GEAR SPEED REDUCERS INSTALLATION

OPERATING POSITIONS – Hub³™ Worm Gear Speed Reducers can be mounted in all Horizontal and Vertical Mounting Postions, EXCEPT for the THREE UNAPPROVED mounting positions shown in Figure SSW1. For mounting in any of these THREE UNAPPROVED mounting positions, CONSULT HUB CITY.

For special applications, mounting position may be inclined. However, if position varies more than 15°, it may be necessary to make some adaptations to maintain a sufficient oil level. Contact HUB CITY for recommendations.

Input rotation of Speed Reducers can be either clockwise or counterclockwise.

⚠WARNING

SHAFT MOUNTED HUB³™ WORM GEAR SPEED REDUCERS – Driven shaft should be supported independently with pillow block bearings, located as close to the Hub³™ Worm Gear Speed Reducer as possible. A suitable Torque Arm must be provided (not supplied) to keep unit from rotating. A rigid torque arm will cause bearings to "load up" and cause excessive wear. To prevent this, provide a slight amount of "float" at the pivot point.

⚠CAUTION

Excessive setscrew torque may cause damage to the output sleeves in hollow bore Hub³™ Worm Gear Speed Reducers. Please refer to the following table for recommended tightening torque.

SIZE	*RECOMMENDED TORQUE*
1/4-20 NC	87 LB.–IN
5/16-18 NC	165 LB.–IN
3/8-16 NC	290 LB.–IN

⚠CAUTION

RUN-IN PERIOD – A new Hub³™ Worm Gear Speed Reducer will not operate at maximum efficiency during the run-in period. Increased current draw or heat rise may be seen during this time.

HUB³™ SSHI & SSHB GEAR DRIVES LUBRICATION

General Note – These instructions contain information specifically for the Hub³™ SSHI4042, SSHI4062, SSHB2043 AND SSHB2063

⚠CAUTION

Hub³™ Helical Gear Drives are lubricated at the factory, for the application service life of the unit, with food-grade lubricant conforming to the demands of USDA H1 regulations. The ingredients used in the formulation of this lubricant are on the FDA list of allowable substances in accordance with the Guidelines of Security CFR 21², section 178.3570.

⚠CAUTION

All Hub³™ Helical Gear Drives are configured and supplied with the correct quantity of lubricating oil for the mounting position specified at time of order. Refer to Figures HI1, HI2, HB1 on pages R-17 to R-22 for mounting positions and styles.

AFTER INSTALLATION – the actual mounting position should be confirmed against the mounting position shown on the gear reducer nameplate. Correct configuration and lubrication is only guaranteed if the unit is mounted in the specific nameplated mounting position.

CLEANLINE™ PLUS BEVEL GEAR DRIVES LUBRICATION

General Note – These instructions contain information specifically for the CleanLine Plus™ Bevel Gear Drives, models CPAD3, CPAD4, and CPAD5.

⚠CAUTION

CleanLine Plus™ Bevel Gear Drives may be mounted in any position and are lubricated at the factory, for the application service life of the unit, with food-grade lubricant conforming to the demands of USDA H1 regulations.

⚠WARNING

Do not change lubricants in CleanLine Plus™ Bevel Gear Drives unless they are disassembled for service.

CLEANLINE PLUS™ BEVEL GEAR DRIVES INSTALLATION

⚠WARNING

Power may be applied (drive shaft) to either the cross or pinion shaft.

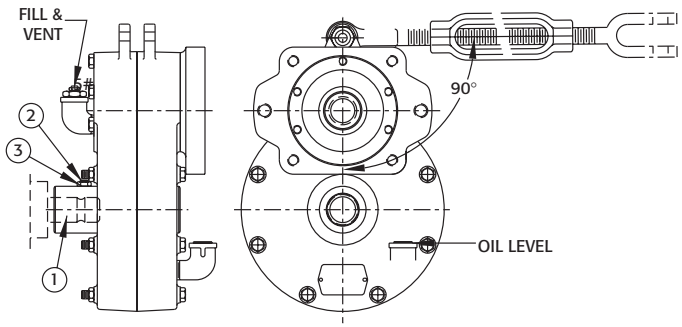
330 PUMP DRIVE

MODEL 330 PUMP DRIVE LUBRICATION

CAUTION

ALL MODEL 330 PUMP DRIVES ARE SHIPPED DRY.
Oil must be added prior to operation. Hub City 330 Pump Drive units are splash lubricated and require 1.25 pints to fill to the recommended level. Do not overfill – this causes excessive heat build-up. See Figures PD1 & PD2 for fill and level check points.

BEFORE OPERATING 330 Pump Drive – Remove uppermost plug and fill Reducer with a recommended lubricant (see GEAR LUBRICANT page of these instructions). Clean threads on removed plugs and plug holes with degreaser; coat with thread sealant and install securely into Reducer case. If fill, level and drain plugs are not located conveniently for your mounting position, additional plugs may be installed. Consult HUB CITY for recommendations.



FIGURES PD1 AND PD2

WARNING

VARIATIONS FROM NORMAL CONDITIONS – Model 330 Pump Drive: When operating High Speed Shaft at speeds above 1800 RPM or below 400 RPM, special adjustment in oil level may be required. Consult HUB CITY for recommendations.
If either shaft is in a vertical position or inclined more than 15°, zerk fittings may be required to lubricate upper bearings. It may also be necessary to make some oil level or plug modifications. Consult HUB CITY for recommendations.

CAUTION

CHANGING LUBRICANT – After the first 100 hours of operation, drain out initial oil, flush out the 330 pump drive gear case with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill. Thereafter, oil should be changed at least every 5,000 operating hours (10,000 for synthetic oil lubricant) or every 12 months (24 months for synthetic oil lubricant), which ever occurs first.

MODEL 330 PUMP DRIVE INSTALLATION

IMPORTANT: Check tractor PTO shaft for nicks and burrs.
Slide the pump drive onto the PTO shaft (1, Figure PD1). Center the setscrews over the groove in the PTO shaft. With a torque wrench tighten setscrews (2, Figure PD1) to 300 in-lb (25 ft-lb). Torque jam nuts (3, Figure PD1) to 120 in-lb torque. Pump drive should be mounted with SAE pump flange directly above the PTO shaft.

TORQUE ARM:
It is recommended that torque arm be fabricated from flat cold-rolled steel (800 lbs. capacity, compression or tension). It must be a minimum of 3/4" wide and 1/2" thick. Torque arm must be able to swivel in both torque arm housing bracket and pivot bracket mounted on tractor.
Connection of the torque arm to the pivot bracket should be made with a 3/8" heat-treated bolt with double jam nuts. Connection of the torque arm to the pump drive housing bracket should be made in the same manner. Torque arm should be mounted at 90° (or as close to 90° as possible) to a line between the tractor PTO shaft and gearbox torque arm housing bracket. (See Figure PD2.)
NOTE: Flexibility in torque arm connection is necessary to prevent undue load on pump drive and shaft. Stress is placed on housing if torque arm is clamped too tightly.

R

390 SERIES PTO SPEED CHANGER

MODEL 390 SERIES PTO SPEED CHANGER LUBRICATION

NOTE: The 390 Units with 1.48:1 ratio are intended for use with stationary pumps, generators or grain elevators where the tractor horsepower capacity far exceeds the horsepower requirement of the driven device. Test programs have shown that in those applications engine RPM can be dropped to maintain a tractor PTO shaft speed of 800 RPM, a gear drive output shaft speed of 540 RPM, and still provide adequate horsepower for the driven device. Applying the 1.48:1 ratio 390 in this fashion can result in considerable fuel savings.

Features: The new 390 PTO Speed Changer features a cast iron housing, tapered roller bearings, heat treated gears, hi-temperature gaskets, seals and lubricant, a universal mounting configuration and adaptability to **most** tractors. The new 390 Unit has a rating of 125 HP continuous operation.

SPECIAL PRECAUTIONS AND REQUIREMENTS (See also safety label)

A. ASAE Standards provide that tractor PTO shafts be designed for a limited amount of overhung load. The approved mounting positions of the 390 Speed Changer shown, will not exceed this limit at the maximum 125 HP rating. (See also Mounting Instructions.)

B. Keep drive lines as straight as possible and reduce speed and horsepower requirements of the driven machine when cornering to minimize PTO shaft loads and vibration.

C. Keep telescoping drive lines well lubricated to reduce end thrust on 390 bearings.

D. Shorten drive lines where required to compensate for the additional PTO shaft length created by the 390.

E. In most cases it will be necessary to remove the **tractor** PTO shield to install the 390 unit. The **390** PTO shield must **always** be kept in place. It should never be used as a step.

⚠CAUTION

F. The main housing of the 390 Speed Changer may reach a surface temperature of 300° F during operation. Avoid physical contact with the housing.

G. The 390 Speed Changer is shipped with Hub City 75W-90 Synthetic Oil installed. This oil is specially formulated to cope with the high temperatures generated in this unit. **Do NOT substitute other lubricants.**

MOUNTING POSITIONS

Before purchasing the 390 Speed Changer check to see that the unit will fit the tractor it is to be mounted on. The 390 is designed to function on **most** farm tractors. On some tractors the PTO shield is not removable. It is impossible to mount the Series 390 on these tractors.

Two different methods of mounting the speed changer on the tractor are recommended.
(Figures referenced are found on page Q-21)

1. The unit may be mounted directly on PTO shaft and supported by a torque arm. In accordance with ASAE guidelines for overhung load ratings on the PTO shaft two acceptable positions for the speed reducer have been determined. See Figures SC1 and SC2 and Figures SC5 and SC6. NOTE: When unit is mounted as shown in Figures SC5 and SC6, the housing must be rotated 90° clockwise in relation to the cover to keep the breather and PTO shield in proper alignment. One position for the speed increaser has been approved. See Figures SC3 and SC4.

   Similarly, the approved torque arm positions for the speed reducer and the speed increaser are shown in Figures SC9, SC10 and SC11. The solid black lines illustrate the recommended positions while the dotted lines illustrate the other approved positions. The torque arm should be mounted perpendicular to a line through the center of the torque arm bracket as shown.

   Construction of torque arm may be accomplished by using any general purpose steel with a minimum of 1/2" to 1" section of 3/4" diameter. Torque arm must be equipped with a clevis at one end. Connect the torque arm to the torque arm bracket and tractor with a 1/2" heat treated bolt and double jam nuts. The torque arm must be free to swivel in both the torque arm bracket and in the tractor connection or pivot.

   NOTE: Flexibility in the torque arm connection is necessary to prevent undue load on the gear box and tractor PTO shaft. Excessive stress may be imposed on housing and tractor PTO shaft if the torque arm is clamped tightly.

⚠CAUTION

Do not substitute chain for the torque arm. Doing so may induce excessive shock loads and cause equipment damage or injury to the operator.

2. The second mounting alternative involves the use of a mounting adaptor and fastens the 390 Speed Changer solidly to the tractor. The 390 is constructed with flats and bolt circles on both cover and housing sides. This allows the unit to be easily adapted to alternative mountings. One possible mounting adaptor is illustrated in Figures SC7 and SC8, but ingenuity will provide a variety of different adaptor brackets to use with the

390 SERIES PTO SPEED CHANGER

various makes and models of tractors. Because of the variety of tractors available, it is impossible to illustrate or manufacture all the different adaptors. Fabrication of such adaptor brackets is left to the customer.

Mounting the unit in this way avoids the majority of the loading problems on the PTO shaft by transferring them to the 390 housing and the tractor frame.

MODEL 390 SERIES PTO SPEED CHANGER INSTALLATION

Refer to Figures SC1 and SC2 or Figures SC5 and SC6 for the mounting positions for the 1000 RPM to 540 RPM and the 800 RPM to 540 RPM speed reducers. Refer to Figures SC3 and SC4 for the mounting position of the 540 RPM to 1000 RPM speed increaser. (Figures referenced are found on page Q-21) See the Service Parts Manual enclosed with each unit for diagrams showing specific parts called out in the following instructions.

1. IMPORTANT: Check tractor PTO shaft for nicks, burrs, and undue wear. Repair or replace worn or damaged PTO shafts.
2. Remove the pipe plug (ref. A-34, B-35, or C-38) from the female spline side of the speed changer. Keep in mind the unit is shipped with oil installed.
3. Use your hand to turn the unit shaft and rotate the sleeve. Locate the (2) socket setscrews (ref. A-30, B-30, OR C-34) and (2) locknuts (ref. A-31, B-31 OR C-35) thru the pipe plug hole.
4. Use a socket and extension to loosen the setscrews. If you loosen the setscrews just enough to permit full spline engagement on PTO shaft oil will not run out through the open setscrew holes as the unit is maneuvered into position. NOTE: In some cases it may be necessary to remove the oil from the 390 unit during installation to avoid spilling it.
5. Slide the speed changer into position on the tractor PTO shaft.
6. Center setscrews over the groove in tractor PTO shaft. Us e a torque wrench to tighten the setscrews to 240 in-lb (20 ft-lb). Torque the locknuts to 100 in-lb. Note: Setscrews must be installed to position and lock the unit on the PTO shaft and to prevent oil from escaping through the setscrew holes.
7. After the unit is installed on the PTO shaft replace the oil (if necessary) and the pipe plug. The pipe plug on the 540 RPM side of the unit should be replaced by the breather plug supplied with the unit.
8. Fasten the speed changer to the torque arm or the mounting adaptor as prescribed in the mounting instructions. Installation is then completed.

MAINTENANCE

The Hub City 390 PTO Speed Changer is a compact, durable unit capable of long life with a minimum of maintenance. Because of the universal application of Hub City Gear Units in mounting and positioning, the user must assume responsibility for assuring adequate lubrication in any gear box installation. The 390 Speed Changer is splash lubricated and may attain an operating temperature of 300° F (149° C). These temperatures will produce no harmful effects to internal parts as long as unit is properly lubricated with Hub City 75W-90 Synthetic Oil. Recommended ambient operating temperature range for the 390 is –20° F to 100° F.

IMPORTANT: Units are shipped with Hub City 75W-90 Synthetic Oil installed. Using lubricant other than Hub City Synthetic Oil will void any warranty. Hub City will not assume responsibility for inadequate or contaminated lubricant.

Oil may be added to the speed changer through either of the plugged ports on the top half of the unit. The average oil capacity to fill the unit to the oil level check hole is **2-1/4** quarts when unit is mounted in an approved position. Do not overfill as this causes excessive heat build-up. It is normal to experience some oil loss from breather as temperature of unit rises during operation. Check periodically to be sure that proper oil level is maintained.

BREAK-IN PERIOD

After first 50 hours of operation drain oil in a new unit. Flush case thoroughly with an approved nonflammable, non-toxic solvent, such as Lubriplate Syn Flush, Lubriplate Pure Flush, Whitmore's Flushing Oil (#06802030) or Medallion™ Flushing Oil Kosher (#06812010), and refill with Hub City 75W-90 Synthetic Oil. At the same time thoroughly clean magnetic drain plug in bottom of housing. After initial 50 hour period, change oil every season of operation or every twelve months, whichever comes first. Where operating conditions are severe it may be necessary to change oil at more frequent intervals.

OFF-SEASON MAINTENANCE

If a 390 Drive Unit is to be stored or not in use for a period of several months, it should be drained, flushed, and filled completely with a light rust-inhibiting oil. Drain and refill unit with Hub City 75W-90 Synthetic Oil before unit is put back in operation.

HUB CITY GEAR LUBRICANT

GEAR LUBRICANT GL-460
Part No. 8580001024(Qt.)
AGMA No: 7 Comp.
ISO Viscosity Grade: 460

A premium quality, heavy bodied lubricant formulated and recommended for enclosed worm gear drives. It is suitable for splash lubrication of worm gearing at moderate to high speeds and temperatures. This highly filtered oil has the following outstanding advantages and benefits:

- Excellent film forming characteristics.
- Superior load carrying capacity.
- Good oxidation stability.
- Minimizes friction and bulk oil temperature rise.
- Ideal for severe service conditions.

For worm gear reducers with ambient temperatures of 40° to 100°F (4° to 38°C) and operating temperatures To 225° F (107°C).

For ambient temperatures below or above these temperatures, or operating temperatures above this temperature, consult the factory.

Lubricants of this type and meeting the above specifications may be substituted where HUB CITY LUBRICANTS are recommended. Lubricant selected must be compatible with bronze gear materials and nitrile rubber seals.

⚠ CAUTION

If unit is used in the food or drug industry (including animal food) consult the petroleum supplier or HUB CITY for recommendations of lubricants which meet the specifications of FDA, USDA and/or other authoritative bodies having jurisdiction. Standard lubricants are not suitable for these applications or these industries.

ALL-TEMPERATURE PAO SYNTHETIC GEAR LUBRICANT
Part No. 8580001011(Qt.)
AGMA No: 7
ISO Viscosity Grade: 460

HUB CITY SYNTHETIC LUBRICANT is premium gearbox lubricant which is recommended for worm gear drives in most applications, especially those subject to low start-up temperature and/or high operating temperature. This lubricant is a synthesized hydrocarbon based material which provides longer lubrication intervals because of its increased resistance to thermal and oxidative degradation. This decreases maintenance costs. Further economy is realized because of the increased efficiency of units lubricated with HUB CITY SYNTHETIC LUBRICANTS.

It provides:

- Excellent wear protection and load carrying ability.
- Outstanding oxidation stability at elevated temperatures.
- Wide temperature range.
- Extended lubricant life, resulting in lower maintenance and lubrication costs.
- Outstanding foam stability.

For worm gear reducers with ambient temperatures of -10° to 125°F (-23° to 52°C) and operating temperatures To 225°F (107°C).

For ambient temperatures below or above these temperatures, or operating temperatures above this temperature, consult the factory.

This lubricant can be operated at temperatures considerably above 225°F (107°C). However, the gear drive manufacturer should always be contacted prior to operating at high temperatures as damage may occur to seals or other gear drive components.

Lubricant manufacturer and HUB CITY should be contacted when substituting a premium lubricant where HUB CITY SYNTHETIC is recommended.

NOTE: Although this synthetic lubricant is fully compatible with conventional lubricants, maximum benefits will be obtained when installed in a system that has been thoroughly cleaned and flushed.

PAG 460 H1 SYNTHETIC GEAR LUBRICANT
PART NO. 8580001049 (QT.).
ISO Viscosity Grade 460

HUB CITY PAG 460 H1 SYNTHETIC GEAR LUBRICANT is a Fully Synthetic PolyGlycol, which provides the ultimate efficiency and thermal capacity, and is recommended for worm gear drives in most applications, including lubed-for-life units. The exceptional anti-wear protection, high efficiency, and reduced oil temperature with HUB CITY PAG 460 H1 allow more torque to be transmitted through the reducer, and can often allow downsizing to a smaller, more economical gear drive. This lubricant has very high thermal and oxidative stability to reduce sludge and deposits, which provides longer lubrication intervals. This reduces maintenance costs, and the high efficiency reduces energy consumption and cost.

HUB CITY PAG 460 H1 is approved for USDA/NSF H-1 use in food processing facilities where there is the possibility of incidental contact with food.

HUB CITY PAG 460 H1 SYNTHETIC GEAR LUBRICANT provides:

- Exceptional EP/antiwear protection for gears and bearings.
- High viscosity index of 250 for wide operating temperature range. Viscosity of 460 cSt @ 100° F (40° C) and 77 cSt @ 212° F (100° C). Pour point of – 27° F (33° C).
- Protection against rust and corrosion in service.
- Resistance against foaming.
- Excellent lubricity inherent to this fully synthetic lubricant.
- Low traction coefficient resulting in increased energy efficiency and reduced oil temperature.
- Excellent thermal and oxidative stability to reduce sludge formation and deposits.

NOTE: PAG SYNTHETIC LUBRICANTS ARE NOT COMPATIBLE WITH MINERAL OIL AND OTHER TYPES OF SYNTHETIC LUBRICANTS and must never be mixed. Topping off with the wrong lubricant type could cause unit failure. Converting existing units in service with other lubricants to PAG synthetic is not recommended. If this is done, the housing must be thoroughly flushed out with PAG synthetic before being refilled. Converting existing units from PAG synthetic to other lubricants is not recommended, because the lower efficiency and thermal capacity may cause unit failure.

PAG SYNTHETIC LUBRICANTS are hygroscopic and absorb more water than mineral oils or PAO synthetic lubricants. Water does not drop to the bottom, but stays on top of the lubricant. Therefore, extra care should be taken not to expose the PAG lubricants to excessive moisture.

For Worm Gear Reducers with ambient temperatures of –10° F to 125° F (-23° C to 52° C) and operating temperatures to 225° F (107° C).

For ambient temperatures below or above these temperatures, or operating temperatures above this temperature, consult the factory.

Lubricant manufacturer and HUB CITY should be contacted before substituting any other lubricant. The lubricant must be a PAG synthetic lubricant, with ISO 460 viscosity. If used in a food processing facility, the lubricant must meet USDA/NSF H1 approval. Food grade lubricants must always be stored separately from non-food grade lubricants, to prevent the possibility of using the wrong lubricant. Separate pumps or containers must always be used with food grade lubricants, to prevent contamination.

HUB CITY GEAR LUBRICANT

GEAR LUBRICANT
GL-90
Part No. 8580001009(Qt.)

AGMA No: 5EP
ISO Viscosity Grade: 220
A non-leaded, heavy-duty industrial gear lubricant designed for spur, helical, and bevel enclosed gear sets operating under severe service conditions. Ideal for both circulation and splash lubrication systems, GL-90 offers:

- Superior load-carrying capacity.
- Outstanding anti-wear properties.
- Excellent rust and corrosion protection.
- Good oxidation stability.
- Minimal friction and bulk oil temperature rise.
- Full protection against foaming.

For ambient temperatures of 15° to 125° F (-10° to 52° C) and operating temperatures To 185° F (85° C).
For ambient temperatures below or above these temperatures, or operating temperatures above this temperature, consult the factory.

GEAR LUBRICANT
SYNTHETIC 75W-90
Part No. 8580001031(Qt.)

AGMA No: 4/5EP
ISO Viscosity Grade: 150/220
Formulated from synthesized hydrocarbon base oils and a sulfer phosphorus gear lubricant additive for severe operating conditions. Recommended for bevel, helical, and spur gear drives. Especially those subject to low startup temperature and/or high operating temperature. It provides the following outstanding advantages and benefits.
- Excellent wear protection and load carrying ability.
- Outstanding oxidation stability at elevated temperatures.
- Wide temperature range.
- Extend lubricant life resulting in lower maintenance and lubrication costs.
- Recommended for year-round lubrication.
- Not recommended for worm gear drives or gear drives with backstops.

The outstanding oxidation and thermal stability of this product results in a considerable extension of lubrication and oil change intervals.
For ambient temperatures of -25° to 125° F (-32° to 52° C) and operating temperatures To 225° F (107° C).
For ambient temperatures below or above these temperatures, or operating temperatures above this temperature, consult the factory.
Hub City synthetic 75W-90 gear lubricant can be operated at temperatures above 225° F however, the gear drive manufacturer should always be contacted prior to operation at high temperatures. As damage may occur to seals or other gear drive components. Although Hub City synthetic 75W-90 lubricant is fully compatible with conventional lubricants, maximum benefits will be obtained when installed in a system which has been thoroughly cleaned and flushed.

GEAR LUBRICANT

RECOMMENDED LUBRICANTS					
					
HUB CITY UNIT	**GL-460 8580001024**	**PAO SYNTHETIC 8580001011**	**PAG460 SYNTHETIC 8580001049**	**GL-90 8580001009**	**SYNTHETIC 75W-90 8580001031**
WORM GEAR SPEED REDUCERS (except Cleanline HUB3™)	X	X	X		
BEVEL GEAR DRIVES (except Group 4, Group 5, Cleanline Plus, and Cleanline HUB3™)				X	X
COOLING TOWER DRIVES				X	X
PARALLEL SHAFT (except Helical Ratio Multipliers)				X	X
POWERTORQUE®				X	X
HELICAL IN-LINE (factory filled)				X	X
COMPACT HELICAL PARALLEL (factory filled)				X	X
HELICAL BEVEL (factory filled)				X	X
HELICAL WORM (factory filled)	X EXCEPT PRIM. UNIT OF QUAD RED. UNITS	X EXCEPT PRIM. UNIT OF QUAD RED. UNITS	X EXCEPT PRIM. UNIT OF QUAD RED. UNITS	X PRIM. UNIT ONLY OF QUAD RED. UNITS	X PRIM. UNIT ONLY OF QUAD RED. UNITS
330 SERIES PTO SPEED CHANGER				X	X
390 SERIES PTO SPEED CHANGER (factory filled)					X do NOT Substitute other lubricants
CLEANLINE HUB3™ WORM GEAR DRIVES SPARTAN WORM AND HELICAL DRIVES RATIO MULTIPLIERS (ARM & RM SERIES) (ALL FACTORY FILLED)			X		

MOTOR INSTALLATION INSTRUCTIONS

MOTOR INSTALLATION INSTRUCTIONS:

1. Be sure all of the paint and masking has been removed from the face and pilot of the flange. Check the input bore to be sure it contains a small amount of anti-seize compound. If there isn't any, apply a small amount. This compound will inhibit fretting corrosion between the motor or pump shaft and the unit bore.
2. Install the key (if round bore) to the maximum depth of the keyway provided in the bore.
3. Align keyways or splines of motor or pump and bore of unit and install motor or pump into flange. Do not use excessive force or pounding to install motor or pump into flange, as this may damage shafts or bearings.

⚠ CAUTION

4. Hub City "C" flange reducers and Hydraulic Flange Reducers are designed to accept motors with shaft lengths that do not exceed the maximum specified by the N.E.M.A. or SAE standards. If the motor or pump shaft bottoms out before the motor flange seats against the reducer flange face, the motor or pump shaft length must be reduced to N.E.M.A. or SAE standards.
5. Secure the motor or pump to the unit. Capscrews and lockwashers are provided with "C" flange units.
6. Proper tightening torques for mounting bolts are provided in the chart below.

CAPSCREW TIGHTENING TORQUE GRADE 5 CAPSCREWS (DRY, WITHOUT LUBRICANT)	
CAPSCREW SIZE	**TIGHTENING TORQUE (FT. LBS.)**
1/4-20 NC	8
5/16-18 NC	16
3/8-16 NC	29
1/2-13 NC	71
5/8-11 NC	143
3/4-10 NC	251

A Parts List and Print for your Drive is available upon request. To obtain the proper Parts List and Print, you must accurately furnish the Assembly Number, Model Number, Ratio, Style and Shipping Code as shown on the metal tag attached to the Gear Drive. HUB CITY has Sales Offices and a network of Industrial Power Transmission Distributors that can serve your needs world wide. Check the Yellow Pages for one near you. For assistance, phone or write you Industrial Power Transmission Distributor, or the Hub City Factory Sales Office.

WARNING

IMPORTANT INFORMATION

PLEASE READ CAREFULLY

CAUTION

The following WARNING ***and*** CAUTION ***information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your HUB CITY mounted bearing product.***

Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

WARNING

- Written authorization from HUB CITY is required to operate or use bearing units in man lift or people moving devices.
- Check to make certain application does not exceed the allowable load capacities published in the current catalog.
- Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- Hot machinery and bearings can cause severe burns. Use extreme care when servicing or lubricating.
- Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application of power.
- Lifting supports including eyebolts are to be used for vertically lifting the bearing unit only and no other associated attachments or motors.
- Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and/or shaft breakage from bending fatigue, if not sized properly.

CAUTION

- Test run bearing unit to verify operation. If the unit tested is a prototype, that unit must be of current production.
- If the bearing unit cannot be located in a clear and dry area with access to adequate cooling air supply, then precautions must be taken to avoid the ingestion of contaminants such as water and the reduction in cooling ability due to exterior contaminants.
- Mounting bolts should be routinely checked to ensure that the bearing unit is firmly anchored for proper operation.

In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

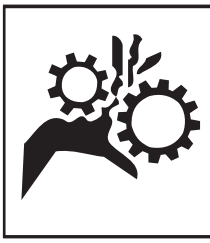
> The manufacturer makes no warranty or representations, express or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods sold hereunder. Buyer acknowledges that it alone has determined that the goods purchased hereunder will suitably meet the requirements of their intended use. In no event will the manufacturer be liable for consequential, incidental or other damages. Even if the repair or replacement remedy shall be deemed to have failed of its essential purpose under Section 2-719 of the Uniform Commercial Code, the manufacturer shall have no liability to Buyer for consequential damages.

Resellers/Buyers agree to also include this entire document including the warnings and cautions above in a conspicuous place and in a conspicuous manner in writing to instruct users on the safe usage of the product.

This information should be read together with all other printed information supplied by HUB CITY.

MOUNTED BEARINGS WARNINGS & CAUTIONS

⚠ WARNING
Failure to observe safety precautions could cause personal injury or equipment damage.



⚠ WARNING
Do not operate without guards, Turn off power to install or service.



⚠ WARNING
High voltage and rotating parts may cause serious or fatal injury. Turn off power to install or service.

IMPORTANT SELECTION INFORMATION

The system of connected rotating parts must be free from critical speed, torsional, or other type vibration, regardless of how induced. The responsibility for this system analysis lies with the purchaser of the bearing unit.

⚠ WARNING

SHIELD ALL ROTATING PARTS

For safety, purchaser or user must provide protective guards over all shaft extensions and any moving apparatus mounted on the unit. The uses is responsible for checking and complying with all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.

⚠ WARNING

Wear protective clothing and eye shields when installing or maintaining bearing unit and machine.

⚠ WARNING

A bearing unit cannot be used as an integral part of a machine superstructure which would impose additional loads on the unit other than those imposed by the torque being transmitted, or by any shaft mounted power transmitting device such as sprockets, pulleys, or couplings.

⚠ WARNING

Make certain that all tools and other items are clear from rotating parts before starting machine. Stand clear, and start machine slowly to be sure all components are secure and operating properly.

⚠ WARNING

For safe operation and to continue the bearing unit warranty, when installing or reinstalling a fastener for servicing purpose, or to accommodate the mounting of guards, shields or other light load imposing devices, or for mounting the bearing unit, it becomes the responsibility of the purchaser or user to properly determine the quality, grade of fastener, thread engagement, load carrying capacity, tightening torque, and the means of torque retention.

COUPLINGS – Flexible couplings are recommended because they minimize bearing wear caused by excessive misalignment. Follow coupling manufacturer's recommendations for installation and shielding.

SHEAVES AND SPROCKETS – When mounting sheaves or sprockets, the center of the load should be located as close to the bearing unit as possible. Excessive overhung loading could result in early failures of bearing or shaft. Refer to the general catalog or contact your local distributor for bearing load ratings. Follow manufacturer's recommendations for installation and shielding.

⚠ CAUTION

All Hub City bearing units are prelubricated with grease at the factory. Do not overgrease or undergrease, or injury to personnel, unit, or other equipment may result.

⚠ CAUTION

Grease should be added with greater frequency if unit is used in a severe environment such as dusty or humid or high or low temperatures.

⚠ CAUTION

Do not mix different grease types in the bearing unit.

⚠ CAUTION

If unit is used in the food or drug industry (including animal food) consult the petroleum supplier or HUB CITY for recommendations of lubricants which meet the specifications of FDA, USDA and/or other authoritative bodies having jurisdiction. Standard lubricants are not suitable for these applications or these industries.

⚠ CAUTION

Inspect shafts and components for paint, burrs, or other imperfections before installing components. Do not use excessive force or pounding to install components onto shafts, as this may cause damage to shafts or bearings.

⚠ CAUTION

Mounting bolts, coupling fasteners, and other power transmitting devices should be routinely checked to ensure that all parts of the unit are firmly anchored to provide proper operation (loose fasteners can cause alignment problems and excessive wear). Check end play in shafts. Noticeable movement might indicate service or parts replacement is necessary.

PREVENTATIVE MAINTENANCE – Keep shafts and zerk clean to prevent foreign particles from entering bearing unit. Inspect periodically for excessive grease leakage.

⚠ CAUTION

STORAGE OF HUB CITY BEARING UNITS: A bearing unit does not have a definable shelf life. The main points of deterioration are rusting of non-painted surfaces and drying out of grease and the seal lips. Proper storage of bearing units in a cool dry place in a carton away from exposure to ultraviolet light should permit protection for approximately one year. For extended shutdown under these conditions, extra grease should be added to the bearing and distributed by rotating the bearing. Coat external shafts with a rust preventative oil or grease. After extended storage periods, a little fresh grease should be added prior to running.

MOUNTED BEARINGS INDUSTRIALINE™ & DURALINE™

INDUSTRIALINE™ and DURALINE™ MOUNTED BEARINGS LUBRICATION

General Note – These Lubrication instructions contain information for the IndustriaLine™ and DuraLine™ Mounted Bearings. For Lubrication Instructions specific to the CleanLine UltraPlus™, CleanLine Plus™, & CleanLine™ Mounted Bearings see the CleanLine™ Products page, R-36.

⚠CAUTION

The proper lubrication of ball bearing units is critical in order to attain maximum bearing life expectancy. All Hub City bearing units are lubricated at the factory. Non-relube type bearings have no grease fitting and should not require additional lubricant. Relube type bearings are equipped with a lubrication fitting and should be periodically lubricated when used in wet or dirty applications. The amount and type of lubricant used will affect bearing life. Lack of lubricant can lead to premature surface fatigue failures of balls and races. Over lubrication can damage seals and result in premature failure from contamination due to the inability of damaged seals to keep foreign material out of the bearing. Under normal operating conditions, there is no need to relubricate bearings at all.

The following table is a general guide for relubrication. Experience will determine the best interval for each specific application.

OPERATING CONDITIONS	*BEARING TEMPERATURES*	*GREASE INTERVAL*
Clean	32° F to 120° F	6-12 Months
	120° F to 150° F	1-3 Months
	150°F to 200° F	1-4 Weeks
Dirty	32° F to 150° F	1-4 Weeks
	150° F to 200° F	Daily – 1 week
Moisture	32° F to 200° F	Daily – 1 week

Some Recommended Greases:
Texaco Multifak #2, Shell Alvania #2, Sun Prestige #41, Humble L100K #2, Sinclair Litholine Multi-Purpose, Mobil Mobilux #2, Conoco Super-Sta, Amoco Lithium MP, Chevron Dura-Lith EP #2 or equivalent NLGI #2, Multi-Purpose Lithium Grease.

⚠CAUTION

When lubricating bearings add grease slowly. When the first sign of grease appears at the seals, the bearing will contain the correct amount of lubricant.

Bearings should not run in steady operation over 200° F and should not exceed 225° F for intermittent operation.

For unusual lubrication requirements or severe duty applications, contact Hub City for recommendations.

INDUSTRIALINE™ and DURALINE™ MOUNTED BEARINGS MOUNTING INSTRUCTIONS

⚠CAUTION

Proper mounting of ball bearing units is critical to unit performance. Failure to follow accepted mounting practice may result in poor performance and short bearing life. Good engineering and design practice does not recommend the application of more than two bearings to support any shaft. Where more than two bearings are used to support the same shaft, it is possible to induce heavy bearing overloads. In these cases extreme care must be taken to line up bearings in both the vertical and horizontal planes. When the recommended two bearing support designs are used, alignment is not as critical. Hub City self aligning mounted bearing units will compensate for minor differences in mounting structure and gradual changes due to the settling of foundations. Misalignment up to 1.5° is allowable.

⚠CAUTION

For the best results use turned and ground shafting, free of rough spots and burrs. If old shafting is used, mount bearing unit on a smooth unworn section, if possible. For ultimate life, snug fit on shaft should be used. Refer to tables below for Bearing Bore Tolerances and recommended Shaft Tolerances.

SHAFT TOLERANCES

SHAFT DIA.	*SHAFT TOLERANCE*
1/2" - 1-15/16"	Plus .0000" to minus .0005"
2" - 3"	Plus .0000" to minus .0010"
3-3/16" - Up	Plus .0000" to minus .0015"

BEARING BORE TOLERANCES

BORE DIA.	*BORE TOLERANCE*
1/2" - 5/8"	Plus .0008" to minus .0000"
3/4" - 1-15/16"	Plus .0009" to minus .0000"
2" - 3"	Plus .0010" to minus .0000"
3-3/16" - Up	Plus .0012" to minus .0000"

R

MOUNTED BEARINGS INDUSTRIALINE™ & DURALINE™

Prior to mounting on shaft, clean mounting face, shaft and bearing bore. Coat shaft with a small amount of oil. Clean support surface and make sure it is flat.

INDUSTRIALINE™ and DURALINE™ MOUNTING PROCEDURES:

1. Slide bearing unit onto the shaft. For ECCENTRIC LOCK BEARINGS, if projecting side of the bearing is to be mounted toward the machine, put the locking collar on the shaft first. The eccentric locking collar should be opposing any thrust load.
2. Do not hammer the ends of the inner race. If it is necessary to apply force in mounting, use a soft metal bar or pipe against the inner race only. Tap the bearing unit into place.
3. It may be necessary to use shims to avoid shaft deflection and excessive misalignment. Bolt bearing housing securely to the support, by tightening capscrews alternately until tight.

4a. SETSCREW LOCKING BEARINGS: Align the setscrews on the two bearing units, and tighten setscrews alternately until tight.

4b. ECCENTRIC LOCKING COLLAR BEARINGS: Fit the eccentric locking collar on the inner race. Turn the collar in the direction of shaft rotation. Tighten the locking collar securely, using a spanner wrench, setscrew wrench, punch, or drift. Tighten the setscrew against the shaft. Refer to the setscrew tightening torque chart below.

SETSCREW TIGHTENING TORQUE

These torques are generally obtained when the setscrew stops turning and the hex socket wrench starts to spring.

SIZE	TORQUE IN-LBS.
10-32 NF	36
1/4-28 NF	87
5/16-24 NF	165
3/8-24 NF	290

CLEANLINE ULTRAPLUS™, CLEANLINE PLUS™, & CLEANLINE™ MOUNTED BEARINGS LUBRICATION

⚠ CAUTION

The proper lubrication of ball bearing units is critical in order to attain maximum bearing life expectancy. All Hub City CleanLine UltraPlus™, CleanLine Plus™, & CleanLine™ bearing units are lubricated at the factory with a grease that meets USDA H-1 standards for incidental contact with food. Non-relube type bearings have no grease fitting and should not require additional lubricant. Relube type bearings are equipped with a lubrication fitting and should be periodically lubricated when used in wet or dirty applications. When relubricating CleanLine™ bearings, use only a grease which is approved for incidental contact with food. The amount and type of lubricant used will affect bearing life. Lack of lubricant can lead to premature surface fatigue failures of balls and races. Over lubrication can damage seals and result in premature failure from contamination due to the inability of damaged seals to keep foreign material out of the bearing.

The following table is a general guide for relubrication. Experience will determine the best interval for each specific application.

OPERATING CONDITIONS	BEARING TEMPERATURES	GREASE INTERVAL
Clean	32° F to 120° F	6-12 Months
	120° F to 150° F	1-3 Months
	150°F to 200° F	1-4 Weeks
Dirty	32° F to 150° F	1-4 Weeks
	150° F to 200° F	Daily – 1 week
Moisture	32° F to 200° F	Daily – 1 week

Recommended Grease or equivalent: Mobil Mobilgrease FM102, Chevron FM-2, Lubriplate FGL-2, SFL-2, Clearplex-2.

⚠ CAUTION

When lubricating bearings add grease slowly. When the first sign of grease appears at the seals, the bearing will contain the correct amount of lubricant.

Bearings should not run in steady operation over 200° F and should not exceed 225° F for intermittent operation.

For unusual lubrication requirements or severe duty applications, contact Hub City for recommendations.

CLEANLINE ULTRAPLUS™, CLEANLINE PLUS™, & CLEANLINE™ MOUNTED BEARINGS MOUNTING INSTRUCTIONS

Mounting Instructions for the CleanLine UltraPlus™, CleanLine Plus™, & CleanLine™ Mounted Bearings are the same as for the IndustriaLine™ and DuraLine™ Mounted Bearings. **See IndustriaLine™ and DuraLine™ Mounted Bearings Mounting Instructions, pages R-35.**

ENGINEERING INFORMATION, TERMS & CONDITIONS AND ALPHA-NUMERIC MODEL INDEX

Part Numbering System & Name Plate Info S-2
Mechanical Engineering Formulae ..... S-3 to S-4
Engineering Formulae S-5
Decimal & Metric Equivalents S-6
Engineering Tables S-7
Terms & Conditions of Sale ..... S-8 to S-9
Alpha-Numberic Model Index ..... S-10 to S-13

PART NUMBERING SYSTEM & NAME PLATE INFO.

ENCLOSED DRIVE PRODUCTS

PRODUCT CATEGORY CODE
02 – Power Transmission Products
03 – Accessory Products
04 – Contract Machine Products

NUMERICAL SEQUENCE CODE

00 00 00000

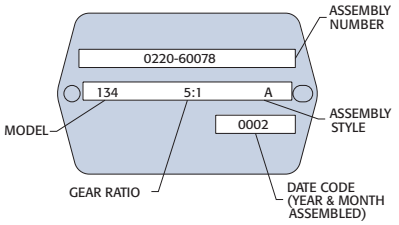
CeanLine HUB3™ Worm Gear Speed Reducers and Bevel Gear Drives do not have an attached name-plate. The information is directly marked on the housing.
Bevel Gear Drives have the ASSEMBLY NUMBER, MODEL, GEAR RATIO, STYLE/MOUNTING POSITION, and DATE CODE. Worm Gear Speed Reducers have the ASSEMBLY NUMBER, MODEL, GEAR RATIO, STYLE, and DATE CODE.

PRODUCT IDENTIFICATION CODE

Power Transmission Products:
20 – Standard Units
21 – Modified Standard Units
22 – Special Units – Custom Designs
23 – Standard Components
25 – Special Components
27 – Modules – Poweratio, others
29 – Accessory Kits
50 – High Efficiency Drives - Standard Units
51 – High Efficiency Drives - Modified Standard Units
53 – High Efficiency Drives - Standard Components
55 – High Efficiency Drives - Special Components
60 – Standard Electric Motors
65 – Modified Standard Electric Motors
70 – Powertorque® Shaft Mount & Spartan Aluminum Worm Drives - Standard Units
71 – Powertorque® Shaft Mount & Spartan Aluminum Worm Drives - Modified Standard Units
72 – Powertorque® Shaft Mount & Spartan Aluminum Worm Drives - Accessory Kits

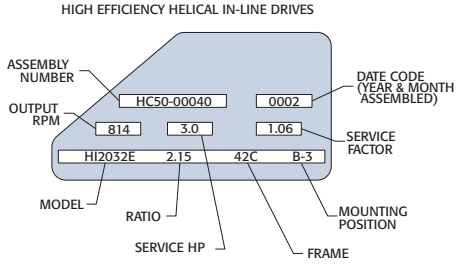
Accessory Products:
31 – Over-running Couplers
32 – PTO Adaptors
34 – Overhung Load Adaptors
35 – Standard Yokes

Contract Machine Products:
40 – Contract Parts

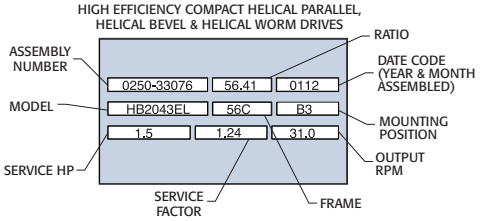


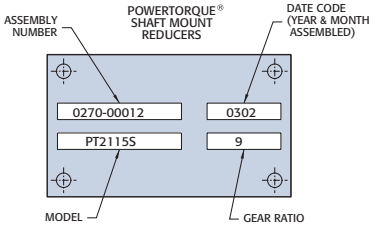
HUB CITY NAME PLATE INFORMATION

HIGH EFFICIENCY HELICAL IN-LINE DRIVES



HIGH EFFICIENCY COMPACT HELICAL PARALLEL, HELICAL BEVEL & HELICAL WORM DRIVES





MOUNTED BEARING PRODUCTS

0000 00000

NUMERICAL SEQUENCE CODE

PRODUCT IDENTIFICATION CODE

BALL BEARING

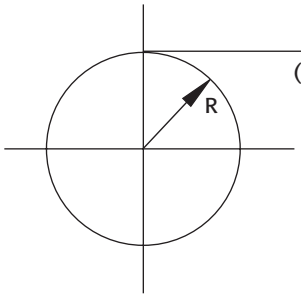
1001	Standard	Pillow Blocks	1102	Modified	Flange Blocks	1203	Special	Flange Cartridges
1002	Standard	Flange Blocks	1103	Modified	Flange Cartridges	1204	Special	Take-Up Units
1003	Standard	Flange Cartridges	1104	Modified	Take-Up Units	1205	Special	Accessories
1004	Standard	Take-Up Units	1105	Modified	Accessories	1300	Standard	Components
1005	Standard	Accessories	1201	Special	Pillow Blocks	1500	Special	Components
1101	Modified	Pillow Blocks	1202	Special	Flange Blocks			

TYPE E — TAPERED ROLLER BEARING (DISCONTINUED)

1031	Standard	Pillow Blocks	1132	Modified	Flange Blocks	1203	Special	Flange Cartridges
1032	Standard	Flange Blocks	1133	Modified	Flange Cartridges	1330	Standard	Components
1033	Standard	Flange Cartridges	1201	Special	Pillow Blocks	1530	Special	Components
1131	Modified	Pillow Blocks	1202	Special	Flange Blocks			

MECHANICAL ENGINEERING FORMULAE

POWER AND TORQUE IMPERIAL STANDARDS



R=RADIUS (INCHES)
RPM=ROTATIONAL SPEED (REVOLUTIONS PER MINUTE)

$$HP = \frac{F \times \pi \times 2R \times RPM}{33{,}000 \times 12}$$

OR

$$HP = \frac{F \times R \times RPM}{63{,}025}$$

OR

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

HORSEPOWER (HP)

Common unit of mechanical power, one HP is the rate of work required to raise 33,000 pounds one foot in one minute.

ONE IMPERIAL HORSEPOWER EQUALS	33,000 foot pounds per minute. 36 inch pounds torque at 1750 RPM. .746 Kilowatts 1.014 Metric Horsepower (PS) 42.4 BTU per Minute.

TORQUE (T)

TORQUE is a twisting force. Torque causes rotation of a shaft, or it will set up a twist in a stationary shaft. It is generally expressed in foot pounds or in inch pounds. Torque is measured by the load or pull and by the distance of the pull from the center of a shaft.

$$T = F \times R$$

OR

$$T = \frac{HP \times 63{,}025}{RPM}$$

CALCULATION EXAMPLES

A cable wrapped around a 6" dia. drum must lift 2,500 pounds weight. The drum rotates at 30 RPM.

TO CALCULATE HP:

$$HP = \frac{F \times R \times RPM}{63{,}025}$$

$$HP = \frac{2500 \times 3 \times 30}{63{,}025}$$

$$HP = 3.57$$

TO CALCULATE T:

T = F x R
T = 2500 x 3"
T = 7,500 INCH POUNDS

METRIC (SI) STANDARDS

RPM = ROTATIONAL SPEED REVOLUTIONS PER MINUTE

$$P = \frac{W \cdot g \cdot V}{1000}$$

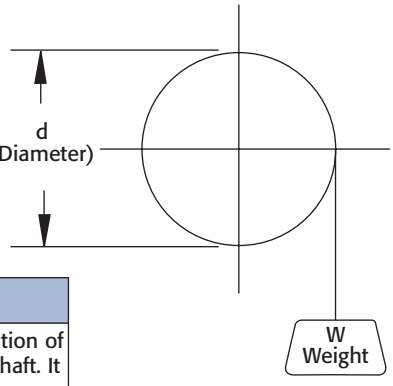
POWER (P)

The basic unit power measurement in the metric (SI) system is the Watt.
1000 WATTS=1 KILOWATT (KW)

Constant g = ACCELERATION OF FREE FALL 9.81 M/S^2

V = VELOCITY IN METERS/SEC.

$$V = \frac{\pi \cdot d \cdot RPM}{60}$$



CALCULATION EXAMPLES

A cable wrapped around a .5 meter dia. drum must lift 5,000 kilograms weight. The drum rotates at 50 RPM.

TO CALCULATE P: Power in Kilowatts

$$P = \frac{W \cdot g \cdot V}{1000}$$

$$P = \frac{5000 \cdot 9.81 \quad \frac{\pi \cdot .5 \cdot 50}{60}}{1000}$$

P = 64.2 KILOWATTS

TO CALCULATE N-m:

$$N\text{-}m = \frac{9550 \cdot 64.2}{50}$$

N-m = 12,262

TORQUE (M)

TORQUE is a twisting force. Torque causes rotation of a shaft, or it will set up a twist in a stationary shaft. It is generally expressed in Newton-meters.

$$N\text{-}m = \frac{9550 \cdot P}{RPM}$$

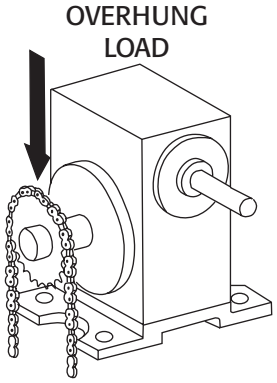
SI SYMBOLS

P = Power in Kilowatts
N = Newton
m = Meter
kgfm = Kilogram force meter
N-m = Torque in Newton-meters
• = Multiplication Symbol

CONVERSION FACTORS

1 KILOWATT =	1 N-M =	1 KGFM =	1 LB. FT. =	1 LB. IN. =
1.341 Imperial Horsepower	.10197 kgfm .73756 lb. ft. 8.8507 lb. in.	9.807 N-m 7.233 lb. ft. 86.796 lb. in.	1.356 N-m .1883 kgfm 12 lb. in.	.1129 N-m .0115 kgfm .083 lb. ft.

MECHANICAL ENGINEERING FORMULAE



OVERHUNG LOAD

An overhung load is a bending force imposed on a shaft due to the torque transmitted by V-drives, chain drives and other power transmission devices, other than flexible couplings.

Most motor and reducer manufacturers list the maximum values allowable for overhung loads. It is desirable that these figures be compared with the load actually imposed by the connected drive.

F – LOAD CONNECTION FACTOR		
1.00	–	Single Chain Drives
1.25	–	Spur or Helical Gear Drives, Timing Belt or Double Chain Drives
1.50	–	V-Belt Drives
2.50	–	Flat Belt Drives
3.50	–	Variable Pitch Pulley

OVERHUNG LOADS MAY BE CALCULATED AS FOLLOWS:

USING IMPERIAL DATA

$$\text{OHL (Lbs.)} = \frac{63{,}000 \times HP \times F}{N \times R}$$

WHERE HP=TRANSMITTED HP
N = RPM OF SHAFT
R = RADIUS OF SPROCKET, PULLEY, ETC. IN INCHES
F = LOAD CONNECTION FACTOR

EXAMPLE:
CALCULATE OVERHUNG LOAD IMPOSED ON THE OUTPUT SHAFT OF A REDUCER BY A SINGLE CHAIN DRIVE TRANSMITTING 5 HP AT 30 RPM. THE SPROCKET RADIUS IS 6 INCHES.

$$\text{OHL} = \frac{63{,}000 \times 5 \times 1}{30 \times 6} = 1{,}750 \text{ Lbs.}$$

USING METRIC (SI) DATA

$$\text{OHL (Kg)} = \frac{M \cdot F \cdot 102}{R}$$

WHERE M = TORQUE IN NEWTON-METERS
F = LOAD CONNECTION FACTOR
R = RADIUS OF SPROCKET, PULLEY, ETC. IN MILLIMETERS

EXAMPLE:
CALCULATE OVERHUNG LOAD IMPOSED ON THE OUTPUT SHAFT OF A REDUCER BY A SINGLE CHAIN DRIVE TRANSMITTING 200 NEWTON-METERS TORQUE. THE SPROCKET RADIUS IS 150 MILLIMETERS.

$$\text{OHL} = \frac{200 \cdot 1 \cdot 102}{150} = 136 \text{ Kilograms}$$

The radius of a sprocket, pulley gear, etc. to be mounted on a reducer shaft must be at least as large as – and preferably larger than – the result of dividing the torque requirement by the calculated overhung load imposed on the reducer shaft.

$$\text{MINIMUM PITCH DIA.} = 2 \times \frac{T \times F}{OHL}$$

WHERE T = TORQUE IN POUND INCHES
F = LOAD CONNECTION FACTOR
OHL = OVERHUNG LOAD RATING OF REDUCER SELECTED

EXAMPLE:
CALCULATE THE MINIMUM PITCH DIAMETER FOR A SINGLE CHAIN SPROCKET TRANSMITTING 10,500 POUND INCHES OF TORQUE. REDUCER HAS OVERHUNG LOAD CAPACITY OF 2,000 LBS.

$$\text{MINIMUM PITCH DIA.} = 2 \times \frac{10{,}500 \times 1}{2{,}000} = 10.5 \text{ Inches}$$

$$\text{MINIMUM PITCH DIA.} = 2 \cdot \frac{M \cdot F \cdot 102}{OHL}$$

WHERE T = TORQUE IN NEWTON-METERS
F = LOAD CONNECTION FACTOR
OHL = OVERHUNG LOAD RATING OF REDUCER SELECTED

EXAMPLE:
CALCULATE THE MINIMUM PITCH DIAMETER FOR A SINGLE CHAIN SPROCKET TRANSMITTING 200 NEWTON-METERS TORQUE • REDUCER HAS OVERHUNG LOAD CAPACITY OF 250 KILOGRAMS.

$$\text{MINIMUM PITCH DIA.} = 2 \cdot \frac{200 \cdot 1 \cdot 102}{250} = 163.2 \text{ MM}$$

ENGINEERING FORMULAE

ELECTRICAL POWER FORMULAE

	DIRECT CURRENT	ALTERNATING CURRENT	
		SINGLE PHASE	THREE PHASE
AMPS =	$\frac{\text{HP x 746}}{\text{VOLTS x \% EFF.}}$ **OR** $\frac{\text{KW x 1000}}{\text{VOLTS}}$	$\frac{\text{HP x 746}}{\text{VOLTS x \% EFF. x P.F.}}$ **OR** $\frac{\text{KW x 1000}}{\text{VOLTS x P.F.}}$	$\frac{\text{HP x 746}}{\text{VOLTS x \% EFF. x P.F. x 1.73}}$ **OR** $\frac{\text{KW x 1000}}{\text{VOLTS x P.F. x 1.73}}$
KILOWATTS =	$\frac{\text{AMPS x VOLTS}}{1000}$	$\frac{\text{AMPS x VOLTS x P.F.}}{1000}$	$\frac{\text{AMPS x VOLTS x P.F. x 1.73}}{1000}$
HORSEPOWER =	$\frac{\text{AMPS x VOLTS x \% EFF.}}{746}$	$\frac{\text{AMPS x VOLTS x \% EFF.x P.F.}}{746}$	$\frac{\text{AMPS x VOLTS x \% EFF. x P.F. x 1.73}}{746}$

PF = POWER FACTOR (USUALLY ESTIMATED AT 80%).
EFF. = EFFICIENCY (USUALLY 80-90%).
CONTACT MOTOR MANUFACTURER FOR COMPLETE INFORMATION.

HYDRAULIC FORMULAE

	LETTER FORMULA:	WORD FORMULA:
CYLINDER VELOCITY or SPEED *Feet/Second*	$v=\frac{231Q}{720A}$ or $v=\frac{3208Q}{A}$	VELOCITY = $\frac{\text{231 x FLOW RATE } \textit{(GPM)}}{\text{12 x 60 x NET AREA } \textit{(Square Inches)}}$
CYLINDER VOLUME CAPACITY	$v=\frac{\pi r^2 l.}{231}$	VOLUME = $\frac{\pi \text{ x RADIUS}^2 \textit{ (Inches)} \text{ x STROKE } \textit{(Inches)}}{231}$
Gallons of Fluid	$v=\frac{A\,t}{231}$ l = Length of Stroke	= $\frac{\text{NET AREA } \textit{(Square Inches)} \text{ x STROKE } \textit{(Inches)}}{231}$
CYLINDER FLOW RATE *Gallons Per Minute*	$Q=\frac{720vA}{231}$ or $Q= 3.117vA$	FLOW RATE = $\frac{\text{12 x 60 X VELOCITY } \textit{(Feet/Sec.)} \text{ NET AREA } \textit{(Square Inches)}}{231}$
FLUID MOTOR TORQUE *Inch Pounds*	$T=\frac{psi\ d}{2\pi}$ or $T=\frac{Pd}{2\pi}$	TORQUE = $\frac{\text{PRESSURE } \textit{(psi)} \text{ x F.M. DISPLACEMENT } \textit{(Cu. In./Rev.)}}{2\pi}$
	$T=\frac{63025\ HP}{n}$	= $\frac{\text{HORSEPOWER x 63025}}{\text{RPM}}$
	$T=\frac{36.77QP}{n}$ or $T=\frac{36.77Q\ psi}{n}$	= $\frac{\text{FLOW RATE } \textit{(GPM)} \text{ x PRESSURE } \textit{(psi)} \text{ x 36.77}}{\text{RPM}}$
FLUID MOTOR TORQUE / 100 psi *Inch Pounds*	$T_{100}psi = \frac{3}{0628}$	TORQUE/100 psi = $\frac{\text{F.M. DISPLACEMENT } \textit{(Cu. Inches/Revolution)}}{0628}$
FLUID MOTOR SPEED *Revolutions/Minute*	$n=\frac{231Q}{d}$	SPEED = $\frac{\text{231 x FLOW RATE } \textit{(GPM)}}{\text{F.M. DISPLACEMENT } \textit{(Cu. Inches/Revolution)}}$
FLUID MOTOR POWER *Horsepower Output*	$HP=\frac{Tn}{63025}$	HORSEPOWER = $\frac{\text{TORQUE OUTPUT } \textit{(Inch Pounds)} \text{ x RPM}}{63025}$
PUMP OUTLET FLOW *Gallons/Minute*	$Q=\frac{nd}{231}$	FLOW-GPM = $\frac{\text{RPM x PUMP DISPLACEMENT } \textit{(Cu. In./Rev.)}}{231}$
PUMP INPUT POWER *Horsepower Required*	HP in$=\frac{QP}{1714Eff.}$ or $\frac{GPM\ x\ psi}{1714Eff.}$	HORSEPOWER INPUT = $\frac{\text{FLOW RATE OUTPUT } \textit{(GPM)} \text{ x PRESSURE } \textit{(psi)}}{\text{1714 x EFFICIENCY } \textit{(Overall)}}$

Wattage for heating hydraulic oil:
Each watt will raise the temperature of 1 gallon of oil by 1°F per hour.

Flow velocity in hydraulic lines:
Pump suction lines 2 to 4 feet per second:
pressure lines up to 500 PSI. 10 to 15 feet/sec.;
pressure lines 500 to 3000 PSI. 15 to 20 feet/sec.;
pressure lines over 3000 PSI. 25 feet/sec.; all oil lines in air-over-oil system, 4 feet/sec.

Torque and horsepower relations:
T = HP x 5252 ÷ RPM
HP = T x RPM ÷ 5252
RPM = HP x 5252 ÷ T
Torque values are in foot pounds.

Hydraulic (fluid power) horsepower:
HP = PSI x GPM ÷ 1714
PSI is gauge pressure in pounds per square inch,
GPM is oil flow in gallons per minute.

DECIMAL AND METRIC EQUIVALENTS

EQUIVALENT OF COMMON FRACTIONS OF AN INCH

INCHES		MILLIMETERS
FRACTIONS	DECIMALS	
	.00394	.1
	.00787	.2
	.01	.254
	.01181	.3
1/64	.015625	.3969
	.01575	.4
	.01969	.5
	.02	.508
	.02362	.6
	.02756	.7
	.03	.762
1/32	.03125	.7938
	.0315	.8
	.03543	.9
	.03937	1.0
	.04	1.016
	.04331	1.1
3/64	.046875	1.906
	.04724	1.2
	.05	1.27
	.05118	1.3
	.05512	1.4
	.05906	1.5
	.06	1.524
1/16	.0625	1.5875
	.06299	1.6
	.06693	1.7
	.07	1.778
	.07087	1.8
	.07480	1.9
5/64	.078125	1.9844
	.07874	2.0
	.08	2.032
	.08268	2.1
	.08661	2.2
	.09	2.286
	.09055	2.3
3/32	.09375	2.3812
	.09449	2.4
	.09843	2.5
	.1	2.54
	.10236	2.6
	.10630	2.7
7/64	.109375	2.7781
	.11	2.794
	.11024	2.8
	.11417	2.9
	.11811	3.0
	.12	3.048
	.12205	3.1
1/8	.125	3.175
	.12598	3.2
	.12992	3.3
	.13	3.302
	.13386	3.4
	.13780	3.5
	.14	3.556
9/64	.140625	3.5719
	.14173	3.6
	.14567	3.7
	.14961	3.8
	.15	3.810
	.15354	3.9
5/32	.15625	3.9688
	.15748	4.0
	.16	4.064
	.16142	4.1
	.16535	4.2
	.16929	4.3
	.17	4.318
11/64	.171875	4.3656
	.17323	4.4
	.17717	4.5
	.18	4.572
	.18110	4.6
	.18504	4.7
3/16	.1875	4.7625
	.18898	4.8
	.19	4.826
	.19291	4.9
	.19685	5.0
	.2	5.08
	.20079	5.1
13/64	.203125	5.1594
	.20472	5.2
	.20866	5.3
	.21	5.334
	.21260	5.4
	.21654	5.5
7/32	.21875	5.5562
	.22	5.588
	.22047	5.6
	.22441	5.7
	.22835	5.8
	.23	5.842
	.23228	5.9
15/64	.234375	5.9531
	.23622	6.0
	.24	6.096
	.24016	6.1
	.24409	6.2
	.24803	6.3
1/4	.25	6.35
	.25197	6.4
	.25591	6.5
	.25984	6.6
	.26	6.604
	.26378	6.7
17/64	.265625	6.7469
	.26772	6.8
	.27	6.858
	.27165	6.9
	.27559	7.0
	.27953	7.1
	.28	7.112
9/32	.28125	7.1438
	.28346	7.2
	.28740	7.3
	.29	7.366
	.29134	7.4
	.29528	7.5
19/64	.296875	7.5406
	.29921	7.6
	.30	7.62
	.30315	7.7
	.30709	7.8
	.31	7.874
	.31102	7.9
5/16	.3125	7.9375
	.31496	8.0
	.31890	8.1
	.32	8.128
	.32283	8.2
	.32677	8.3
21/64	.328125	8.3344
	.33	8.382
	.33071	8.4
	.33465	8.5
	.33858	8.6
	.34	8.636
	.34252	8.7
11/32	.34375	8.7312
	.34646	8.8
	.35	8.89
	.35039	8.9
	.35433	9.0
	.35827	9.1
23/64	.359375	9.1281
	.36	9.144
	.36220	9.2
	.36614	9.3
	.37	9.398
	.37008	9.4
	.37402	9.5
3/8	.375	9.525
	.33795	9.6
	.38	9.652
	.38189	9.7
	.38583	9.8
	.38976	9.9
	.39	9.906
25/64	.390625	9.9219
	.39370	10.0
	.39764	10.1
	.40	10.16
	.40157	10.2
	.40551	10.3
13/32	.04625	10.3188
	.40945	10.4
	.41	10.414
	.41339	10.5
	.41732	10.6
	.42	10.668
	.42126	10.7
27/64	.421875	10.7156
	.42520	10.8
	.42913	10.9
	.43	10.922
	.43307	11.0
	.43701	11.1
7/16	.4375	11.1125
	.44	11.176
	.44094	11.2
	.44488	11.3
	.44882	11.4
	.45	11.430
	.45276	11.5
29/64	.453125	11.5094
	.45669	11.6
	.46	11.684
	.46063	11.7
	.46457	11.8
	.46850	11.9
15/32	.46875	11.9062
	.47	11.938
	.47244	12.0
	.47638	12.1
	.48	12.192
	.48031	12.2
	.48425	12.3
31/64	.484375	12.3031
	.48819	12.4
	.49	12.446
	.49213	12.5
	.49606	12.6
1/2	.50	12.7
	.50394	12.8
	.50787	12.9
	.51	12.954
	.51181	13.0
33/64	.515625	13.0969
	.51575	13.1
	.51968	13.2
	.52	13.208
	.52362	13.3
	.52756	13.4
	.53	13.462
17/32	.53125	13.4938
	.53150	13.5
	.53543	13.6
	.53937	13.7
	.54	13.716
	.54331	13.8
35/64	.546875	13.8906
	.54724	13.9
	.55	13.970
	.55118	14.0
	.55512	14.1
	.55905	14.2
	.56	14.224
9/16	.5625	14.2875
	.56299	14.3
	.56693	14.4
	.57	14.478
	.57087	14.5
	.57480	14.6
37/64	.578125	14.6844
	.57847	14.7
	.58	14.732
	.58268	14.8
	.58661	14.9
	.59	14.986
	.59055	15.0
19/32	.59375	15.0812
	.59440	15.1
	.59842	15.2
	.60	15.24
	.60236	15.3
	.60630	15.4
39/64	.609375	15.4781
	.61	15.494
	.61024	15.5
	.61417	15.6
	.61811	15.7
	.62	15.748
	.62205	15.8
5/8	.625	15.875
	.62598	15.9
	.62992	16.0
	.63	16.002
	.63386	16.1
	.63779	16.2
	.64	16.256
41/64	.640625	16.2719
	.64173	16.3
	.64567	16.4
	.64961	16.5
	.65	16.510
	.65354	16.6
21/32	.65625	16.6688
	.65748	16.7
	.66	16.764
	.66142	16.8
	.66535	16.9
	.66929	17.0
	.67	17.018
43/64	.671875	17.0656
	.67323	17.1
	.67716	17.2
	.68	17.272
	.68110	17.3
	.68504	17.4
11/16	.6875	17.4625
	.68898	17.5
	.69	17.526
	.69291	17.6
	.69685	17.7
	.70	17.78
	.70079	17.8
45/64	.703125	17.8594
	.70472	17.9
	.70866	18.0
	.71	18.034
	.71250	18.1
	.71653	18.2
23/32	.71875	18.2562
	.72	18.288
	.72047	18.3
	.72441	18.4
	.72735	18.5
	.73	18.542
	.73228	18.6
47/64	.734375	18.6531
	.73622	18.7
	.74	18.796
	.74016	18.8
	.74409	18.9
	.74803	19.0
3/4	.75	19.050
	.75197	19.1
	.75590	19.2
	.75984	19.3
	.76	19.304
	.76378	19.4
49/64	.765625	19.4469
	.76772	19.5
	.77	19.558
	.77165	19.6
	.77559	19.7
	.77953	19.8
	.78	19.812
25/32	.78125	19.8438
	.78346	19.9
	.78740	20.0
	.79	20.066
	.79134	20.1
	.79527	20.2
51/64	.796875	20.2406
	.79921	20.3
	.80	20.320
	.80315	20.4
	.80709	20.5
	.81	20.574
	.81102	20.6
13/16	.8125	20.6375
	.81496	20.7
	.81890	20.8
	.82	20.828
	.82283	20.9
	.82677	21.0
53/64	.828125	21.0344
	.83	21.082
	.83071	21.1
	.83464	21.2
	.83858	21.3
	.84	21.336
	.84252	21.4
27/32	.84375	21.4312
	.84646	21.5
	.85	21.590
	.85039	21.6
	.85433	21.7
	.85827	21.8
55/64	.859375	21.8281
	.86	21.844
	.86220	21.9
	.86614	22.0
	.87	22.098
	.87008	22.1
	.87401	22.2
7/8	.875	22.225
	.87795	22.3
	.88	22.352
	.88189	22.4
	.88583	22.5
	.88976	22.6
	.89	22.606
57/64	.890625	22.6219
	.89370	22.7
	.89764	22.8
	.90	22.860
	.90157	22.9
	.90551	23.0
29/32	.90625	23.0188
	.90945	23.1
	.91	23.114
	.91338	23.2
	.91732	23.368
	.92	23.368
	.92126	23.4
59/64	.921875	23.4156
	.92520	23.5
	.92913	23.6
	.93	23.622
	.93307	23.7
	.93701	23.8
15/16	.9375	23.8125
	.94	23.876
	.94094	23.9
	.94488	24.0
	.94882	24.1
	.95	24.130
	.95275	24.2
61/64	.953125	24.2094
	.95669	24.3
	.96	24.384
	.96063	24.4
	.96457	24.5
	.96850	24.6
31/32	.96875	24.6062
	.97	24.638
	.97244	24.7
	.97638	24.8
	.98	24.892
	.98031	24.9
	.98425	25.0
63/64	.984375	25.0031
	.98819	25.1
	.99	25.146
	.991212	25.2
	.99606	25.3
1	1.00000	25.4000
1-1/4	1.25	31.7500
1-1/2	1.5	38.1000
1-3/4	1.75	44.4500
2	2.00000	50.8000
2-1/2	2.5	63.5000
3	3.00000	76.2000
3-1/2	3.5	88.0000
4	4.00000	101.6000
4-1/2	4.5	144.3000
5	5.00000	127.0000
6	6.00000	152.4000
7	7.00000	177.8000
8	8.00000	203.2000
9	9.00000	228.6000
10	10.00000	254.0000

CONVERSIONS BETWEEN IMPERIAL AND (SI) STANDARD UNITS

SI (International Standards) units should be used on documents prepared for international circulation.

QUANTITY	SI UNIT FOR FLUID POWER	CUSTOMARY IMPERIAL UNIT	CONVERSION FACTOR
Length	millimeter (mm)	inch (in.)	1 inch = 25.4mm
Pressure*	bar (bar g. or bar a)	pounds/sq. in. (psig or psia)	1 bar - 14.5 psi
Pressure**	mm of mercury (mm Hg)	inches of mercury (in. Hg)	1 in. Hg - 25.4 mm Hg
Flow***	liters per minute (1/min.)	U.S. gallons per minute (U.S. GPM)	1 U.S. GPM - 3.79 1/min.
Flow‡	cubic decimeters/sec. (dm^3/sec.)	cubic feet per minute (cfm)	1 dm^3/sec. = 2.12 cfm
Force	Newton (N)	pound (f) or lb (f) (force)	1 lb (f) = 4.44 N
Mass	kilogram (Kg)	pound (m) of lb. (m) (mass)	1 Kg - 2.2 lb. (m)
Time	second (sec.)	second (sec.)	------
Volume***	liter (l)	gallon (U.S. gal.)	1 U.S. gal. = 3.79 l
Temperature	degrees Celsius (°C)	degrees Fahrenheit (°F)	°C = 5/9 (°F -32)
Torque	Newton-meters (Nm)	pounds (f) - inches [lbs. (f)-in.]	1 Nm = 8.88 lb. (f)-in.
Power	kilowatt (kw)	horsepower (HP)	1 kw = 1.34 HP
Shaft speed	revolutions per minute (rpm)	revolutions per minute (rpm)	-----
Frequency	Hertz (Hz)	cycles per second (cps)	1 Hz = 1 cps
Displacement	milliliters/revolution (ml/rev)	cubic inches per revolution (cipr) or (cir)	1 ml/rev = 0.061 cir
Kenematic viscosity	centistokes (cSt)	Saybolt Universal Seconds (SUS or SSU)	cSt = (4.635) (SSU)‡‡
Velocity	meter per second (m/s)	feet per second (fps)	1 m/s = 3.28 fps

NOTES: *PRESSURE ABOVE ATMOSPHERIC. **PRESSURE BELOW ATMOSPHERIC. ***LIQUID. ‡GAS. ‡‡@38°C; FACTOR IS 4.667 @ 99°C.

CALL: (605) 225-0360 • FAX: (605) 225-0567

HANDY CONVERSION FACTORS

To use this table, multiply COLUMN "A" by the CONSTANT to obtain COLUMN "B".

— OR —

Divide COLUMN "B" by CONSTANT to obtain COLUMN "A".

A	*CONSTANT*	*B*
acres	4.047×10^{-1}	hectares
acres	4.35×10^{4}	sq. ft.
acre-feet	4.356×10^{4}	cubic feet
acre-feet	3.259×10^{5}	gallons
atmospheres	1.058	ton/sq. foot
atmospheres	1.47×10^{1}	pounds/sq. in.
barrels (US liq.)	3.15×10^{1}	gallons
barrels (oil)	4.2×10^{1}	gallons (oil)
btu	7.7816×10^{2}	foot-pounds
btu	2.928×10^{-4}	kilowatt-hours
centigrade (deg.)	(°Cx9/5) + 32	fahrenheit (deg.)
centimeters/sec.	1.969	feet/minutes
centimeters/sec.	2.237×10^{-2}	miles/hour
circular mils	7.854×10^{-7}	square inches
circumference	6.283	radians
cubic feet	1.728×10^{3}	cubic inches
cubic feet	7.48052×10^{-2}	gallons (US liquid)
cubic inches	1.639×10^{1}	cubic centimeters
cubic inches	1.732×10^{-2}	quarts (US liquid)
feet/min.	1.667×10^{-2}	feet/second
feet/min.	1.136×10^{-2}	miles/hour
feet/sec.	3.048×10^{1}	centimeters/sec.
gallons	3.785	liters
gallons (US)	8.3267×10^{-1}	gallons (imperial)
grains (troy)	6.48×10^{-2}	grams
grains (troy)	2.0833×10^{-3}	ounces (avdp.)
grams	3.527×10^{-2}	ounces (avdp.)
grams	3.215×10^{-2}	ounces (troy)
horsepower (met.)	9.863×10^{-1}	horsepower
horsepower	7.457×10^{-1}	kilowatts
inches	2.540	centimeters
kilograms	2.2406	pounds
kilograms-cm	.866	inch-pounds
kilogram-meters	7.233	foot-pounds
kilometers	6.214×10^{-1}	miles (statute)
kilowatts	1.341	horsepower
light year	5.9×10^{12}	miles
liters	1.057	quarts (US liquid)
meters	3.281	feet
meters	1.094	yards
meter/sec.	3.6	kilometers/hour
microns	1.0×10^{-6}	meters
miles (statute)	1.609	kilometers
million gals./day	1.54723	cubic feet/second
minutes (angles)	1.667×10^{-2}	degrees
minutes (angles)	2.909×10^{-4}	radians
Newton-Meter	8.8507	inch-pounds
ounces (troy)	4.8×10^{2}	grains
ounces (troy)	.1097	ounces (avdp.)
parts/million	8.345	pounds/mil. gal.
pounds (avdp.)	1.4583×10^{1}	ounces (troy)
pounds/sq. in.	1.44×10^{2}	pounds/sq. feet
pounds/sq. in.	7.03×10^{-2}	kilograms/sq. cm.
quadrants (angle)	9.0×10^{1}	degrees
quarts	9.464×10^{2}	cubic centimeters
quarts (liquid)	3.342×10^{-2}	cubic feet
radians	5.7296×10^{1}	degrees
radians	6.366×10^{-1}	quadrants
revolutions	6.283	radians
revolutions/min.	6.0	degrees/second
rods	1.65×10^{1}	feet
seconds (angle)	1.667×10^{-2}	minutes
seconds (angle)	4.848×10^{-6}	radians
square feet	1.44×10^{2}	square inches
square inches	6.452	sq. centimeters
square meters	1.076×10^{1}	square feet
square miles	6.40×10^{2}	acres
square miles	2.590	square kilometers
square yards	9.0	square feet
tons (long)	2.24×10^{3}	pounds
tons (short)	2.0×10^{3}	pounds
watts	1.34×10^{-3}	horsepower

$10^{-1} = 0.1$	**Powers**	$10^{1} =$	**10**
$10^{-2} = 0.01$	**of 10**	$10^{2} =$	**100**
$10^{-3} = 0.001$	**($10^{0} = 1$)**	$10^{3} =$	**1000**
$10^{-4} = 0.0001$		$10^{4} =$	**10000**
$10^{-5} = 0.00001$		$10^{5} =$	**100000**
$10^{-6} = 0.000001$		$10^{6} =$	**1,000,000**

MATHEMATICAL EQUATIONS

To find circumference of a circle, multiply diameter by 3.1416.
To find diameter of a circle, multiply circumference by .31831.
To find area of a circle, multiply square of diameter by .7854.
To find area of a rectangle, multiply length by breadth.
To find area of a triangle, multiply base by 1/2 perpendicular height.
To find area of ellipse, multiply product of both diameters by .7854.
To find area of parallelogram, multiply base by altitude.
To find side of an inscribed square, multiply diameter by 0.7071 or multiply circumference by 4.4428.
To find side of inscribed cube, multiply radius of sphere by 1.1547.
To find side of an equal square, multiply diameter by .8862.
To find the surface of a sphere, square the diameter and multiply by 3.1416.
To find the volume of a sphere, cube the diameter and multiply by .5236.
A side of a square multiplied by 1.4142 equals diameter of its circumscribing circle.
A side of a square multiplied by 4.443 equals circumference of its circumscribing circle.
A side of a square multiplied by 1.128 equals diameter of an equal circle.
A side of a square multiplied by 3.547 equals circumference of an equal circle.
To find gallon capacity of tanks (given dimensions of a cylinder in inches: square the diameter of the cylinder, multiply by the length and by .0034.

WEIGHTS AND MEASURES

LIQUID MEASURE

1 U.S. gallon = 0.1337 cubic foot = 231 cubic inches = 4 quarts = 8 pints.
1 quart = 2 pints = 8 gills.
1 pint = 4 gills.
1 British Imperial gallon = 1.2003 U.S. gallons = 277.27 cubic inches
1 cubic foot - 7.48 U.S. gallons

MEASURES OF PRESSURE

1 pound per square inch = 144 pounds per square foot = 0.068 atmosphere = 2.042 inches of mercury at 62°F. = 27.7 inches of water at 62°F. = 2.31 feet of water at 62°F.
1 atmosphere = 30 inches of mercury at 62°F. = 14.7 pounds per square inch = 2,116.3 pounds per square foot = 33.95 feet of water at 62°F.
1 foot of water at 62°F. = 62.355 pounds per square foot = 0.433 pound per square inch.
1 inch of mercury at 62°F. = 1.132 foot of water = 13.58 inches of water = 0.491 pound per square inch.
A gallon of water (U.S. standard) weighs 8-1/2 pounds and contains 231 cubic inches.
A cubic foot of water contains 7-1/2 gallons, 1,728 cubic inches, and weighs 62-1/2 pounds at a temperature of about 39° Fahrenheit. The weight changes slightly above and below this temperature.
To find the pressure in pounds per square inch of a column of water, multiply the height of the column in feet by .434.
Steam rising from water at its boiling point (212°F.) has a pressure equal to that of the atmosphere at sea level (14.7 pounds per square inch).

METRIC WEIGHT EQUIVALENTS

1 KILOGRAM = 2.2 LBS.
45.36 KILOGRAMS - 100 LBS. (1 CWT)
909.09 KILOGRAMS = 2000 LBS. (1 TON, U.S.)
1018.18 KILOGRAMS - 2240 LBS. (1 TON, U.K.)
1 METRIC TON - 2202 LBS.

METRIC MEASURE EQUIVALENTS

25.4 x 10^{-3}MM = 1 MIL (.001 IN.)
25.4 MM = 1 INCH
304.8 MM = 1 FOOT (12 INCHES)
914.4 MM = 1 YARD (36 INCHES)
1.609 KM - 1 MILE (5280 FEET)

TERMS & CONDITIONS OF SALE

QUOTATIONS ARE MADE AND ORDERS ARE ACCEPTED BY SELLER SUBJECT ONLY TO THESE TERMS AND CONDITIONS:

1. AGREEMENT AND MODIFICATION OF SALES TERMS. The agreement between Seller and Buyer ("Sales Contract") is with respect to the sale of goods described on the other side hereof (the "goods"). Any Terms and Conditions contained in any purchase order or other form of communication from Seller's customers which are additional to or different from these Terms and Conditions shall be deemed rejected by Seller unless expressly accepted in writing by Seller.

2. ACCEPTANCE OF ORDERS. Acceptance by Seller of Buyer's purchase order(s) is expressly conditioned upon Buyer's assent to these Terms and Conditions. Buyer will be deemed to have assented to such Terms and Conditions unless Seller receives written notice of any objections within 10 days after Buyer's receipt of this form or in all events prior to any delivery or other performance by Seller of Buyer's order if less than 10 days.

3. QUOTATIONS. Quotations by Seller shall be deemed to be offers by Seller to sell the goods described therein subject to these Terms and Conditions, and acceptance of such offers is expressly limited to acceptance by Buyer of all of these Terms and Conditions within 30 days from the date of the quotation or as specified. Purchase orders submitted by Buyer for the goods quoted by Seller shall be subject to and will be deemed to constitute acceptance of these Terms and Conditions. All purchase orders will be subject to approval by Seller.

4. TERMINATION OR MODIFICATION. The Sales Contract may be modified or terminated only upon Seller's express written consent, which consent will at all times be conditioned on Buyer's agreement to pay Seller's modification or termination charge including, but not limited to expenses and costs plus a reasonable profit, except that any goods completed on or before Seller's acceptance of termination shall be accepted and paid in full by Buyer.

5. PRICES AND TERMS. Fulfillment of Buyer's order is contingent upon the availability of materials. The price of the goods sold pursuant to the Sales Contract shall be based upon Seller's prices in effect at the time of shipment and any acceptance of the order will be on the basis of the freight rates now in effect. In the event of an increase or decrease in the applicable freight charges before the material is shipped, such changes in freight charges will be for the account of Buyer. Price advances, discounts, extras and terms and conditions are subject to changes without notice. Unless otherwise provided on the front side hereof, price is F.O.B. Seller's point of shipment, and terms of payment shall be net 30 days from date of invoice. Seller may assess a delinquency charge of 1-1/2 percent per month on invoices not paid within stated payment terms. Seller may require full or partial payment or payment guarantees in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. In addition, Seller may, at any time, suspend performance of any order or require payment in cash, security or other adequate assurance satisfactory to Seller when, in Seller's opinion, the financial condition of Buyer warrants such action.

6. TAXES. Prices do not include sales, use or other similar federal, state or local taxes. Buyer shall pay to Seller, in addition to the price of the goods, all applicable taxes which may be invoiced separately at a later date.

7. DESIGN; EXTRA WORK; BUYER'S MATERIAL. (a) If any order accepted by Seller contemplates the preparation of special designs by Seller, Buyer issuing such order will have a responsible representative specifically approve all designs prepared by Seller.

(b) If Buyer requests extra work not included in the quotation or original order, Buyer will pay for the extra work at reasonable rates as determined by Seller.

(c) In the event spoilage/damage occurs on orders where Buyer furnishes the material, Seller shall not be liable for replacement of or damage to such material.

8. RISK OF LOSS, TITLE, SECURITY INTEREST. Delivery shall occur, and risk of loss shall pass to Buyer, upon delivery of the material to a carrier at the F.O.B. point of shipment. Transportation shall be at Buyer's sole risk and expense, and any claims for losses or damage in transit shall be against the carrier only. However, Seller retains title to all products until paid for in full in cash and Buyer agrees to perform all acts necessary to provide a fully perfected security interest in the goods in favor of Seller. Seller may, at Seller's option, repossess the same, upon Buyer's default in payment hereunder, and charge Buyer with any deficiency.

9. DELIVERIES AND QUANTITIES. (a) Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delay, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. If the goods are non-catalog goods, Seller may ship overages or underages to the extent of 10 percent of quantity ordered, and Buyer shall pay for such quantity based upon the unit price of the goods. Seller shall not be required to maintain closer control of quantity, unless specifically agreed to by Seller in writing. Quantities of all items may be determined by weight. Any claims for shortage must be within 10 days from the date of receipt of the goods by Buyer, and in every case the weights found in any particular shipment, including tare, must be given and Seller advised as to the method used by Buyer in computing the count of parts.

(b) In the event that Buyer is unable to accept delivery of the goods at time of shipment, Seller shall invoice Buyer for the full purchase price as if shipment had been made and: (i) if Seller is able to store such goods in its own facilities, Buyer will pay Seller the reasonable handling and storage charges for the period of such storage, and (ii) if Seller is unable to store such goods at its own facility, Seller reserves the right to arrange handling and storage in a suitable bonded warehouse for the Buyer at Buyer's expense. In cases where handling and storage become necessary, it shall be Buyer's responsibility to notify Seller when shipment is to be made. Seller will make necessary arrangements for shipment at Buyer's expense.

10. RETURNED GOODS. Goods may not be returned. However, if Seller consents in writing or upon verbal authorization to the return of goods for any reason, transportation charges must be prepaid by Buyer, who also shall assume all risk of loss of such returned goods until actual receipt by Seller.

11. INSPECTION, ACCEPTANCE. Buyer shall inspect the goods immediately upon the receipt thereof. All claims by Buyer (including claims for shortages), except only those provided for under the WARRANTY AND LIMITATIONS OF LIABILITY and PATENTS clauses below, must be asserted in writing by Buyer within a 10 day period or they are waived. If this contract involves partial performances, all such claims must be asserted within a 10 day period for each partial performance. Rejection may be only for defects substantially impairing the value of products or work. Buyer's remedy for lesser defects shall be those provided for under the Warranty and Liability clauses. THERE SHALL BE NO REVOCATION OF ACCEPTANCE. If Buyer wrongfully rejects, revokes or delays acceptance of items or work tendered under this contract, or fails to make a payment due on or before delivery, or repudiates this contract, Seller shall, at its option, have a right to recover as damages, either the price as stated herein (upon recovery of the price, the items involved shall become the property of the Buyer) or the profit (including reasonable overhead) which the Seller would make from performance together with incidental damages and reasonable cost.

12. WARRANTIES AND LIMITATIONS OF LIABILITY. (a) Seller warrants to Buyer that the goods will conform to the following warranty: The goods will be commercially free from defects in material and workmanship under normal use for a period of 1 year from the date of shipment of the goods by Seller and will conform at the date of shipment to applicable specifications, drawings and blueprints, except for departures therefrom with written approval of Buyer; provided that work performed by Seller upon blanks and other materials furnished by Buyer is excluded from this warranty. Seller shall have no liability to Buyer for cost of blanks furnished by Buyer which are damaged or spoiled during heat treat or machining operations;

(b) In the case of drives, gears and reducers manufactured by Seller, Seller warrants only that such products, when shipped, shall be capable of delivering the service rating as indicated in Seller's written documents, including quotations and catalogs or as noted on such products, providing such equipment is properly installed and maintained, correctly lubricated, operating under normal conditions with competent supervision, and within the load limits for which it was sold, and provided further that the equipment is free from critical speed, tortional or other type vibration, no matter how induced;

(c) If any model or sample was provided to the Buyer, it was used merely to illustrate the general type and quality of goods and not to warrant that goods shipped would be of that type or quality;

(d) UNLESS AUTHORIZED IN WRITING BY A CORPORATE OFFICER OR VICE PRESIDENT, NO AGENT, EMPLOYEE OR REPRESENTATIVE OF SELLER HAS ANY AUTHORITY TO BIND SELLER TO ANY AFFIRMATION, REPRESENTATION OR WARRANTY CONCERNING THE GOODS SOLD UNDER THE SALES CONTRACT AND ANY SUCH AFFIRMATION, REPRESENTATION OR WARRANTY HAS NOT FORMED A PART OF THE BASIS OF THE BARGAIN AND SHALL BE UNENFORCEABLE;

(e) Seller's sole obligation under the foregoing warranties is limited to either, at Seller's option, replacing or repairing defective goods (or defective parts thereof). This warranty does not cover the cost of installation of

the new or repaired goods or parts. Replacement goods or parts are warranted for the remainder of the warranty period applicable to the goods originally supplied by Seller. All claims for allegedly defective goods must be made within 10 days after Buyer learns of such alleged defects. All claims not made in writing and received by Seller within such 10 day period shall be deemed waived. Buyer shall return a sample of the alleged defective part for Seller's inspection, and no other goods shall be returned to Seller without Seller's written consent. This warranty shall not extend to goods subjected to misuse, abuse, neglect, accident or improper installation or maintenance, incorrect lubrication, or goods which have been altered or repaired by anyone other than Seller or its authorized representative;

(f) THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED;

(g) Products not manufactured and work not performed by Seller are warranted only to the extent and in the manner that the same are warranted to Seller by Seller's vendors, and then only to the extent that Seller is reasonably able to enforce such warranty. In enforcing such warranty, it is understood Seller shall have no obligation to initiate litigation unless Buyer undertakes to pay all costs and expenses therefor, including but not limited to Attorney's fees, and indemnifies Seller against any liability to Seller's vendors arising out of such litigation;

(h) THE FOREGOING IS SELLER'S ONLY OBLIGATION AND BUYER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY. BUYER'S FAILURE TO SUBMIT A CLAIM AS PROVIDED ABOVE SHALL SPECIFICALLY WAIVE ALL CLAIMS FOR DAMAGES OR OTHER RELIEF INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON LATENT DEFECTS. IN NO EVENT SHALL BUYER BE ENTITLED TO INCIDENTAL, CONSEQUENTIAL, CONTINGENT, OR SPECIAL DAMAGES, NOR SHALL SELLER'S LIABILITY EXCEED THE PURCHASE PRICE OF THE GOODS. EVEN IF THE REPAIR OR REPLACEMENT REMEDY SHALL BE DEEMED TO HAVE FAILED OF ITS ESSENTIAL PURPOSE UNDER SECTION 2-719 OF THE UNIFORM COMMERCIAL CODE, SELLER SHALL HAVE NO LIABILITY TO BUYER FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, SUCH AS LOST PROFITS, LOST REVENUE, DAMAGE TO OTHER EQUIPMENT OR LIABILITY OR INJURY TO A THIRD PARTY. ANY ACTION ARISING HEREUNDER OR RELATED HERETO MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE CAUSE OF ACTION OCCURS OR IT SHALL BE BARRED, NOTWITHSTANDING ANY STATUTORY PERIOD OF LIMITATIONS TO THE CONTRARY; and

(i) In the event of the resale of any of the goods, in whatever form, Buyer will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such resale: "THE MANUFACTURER MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE GOODS SOLD HEREUNDER. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE GOODS PURCHASED HEREUNDER WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. IN NO EVENT WILL MANUFACTURER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGES."

(j) Nuclear Use Disclaimer - Equipment sold by Seller is not intended for use in connection with any nuclear facility or activity. If so used, Seller disclaims all liability for any nuclear damage, injury or contamination, and Buyer shall indemnify and hold Seller, its officers, agents, employees, successors, assigns and customers harmless from and against any and all losses, damages or expenses of whatever form or nature (including attorneys' fees and other costs of defending any action) which they or any of them may sustain or incur, whether as a result of breach of contract, warranty, tort (including negligence) or otherwise, by reason of such use.

13. REMEDIES AND LIMITATIONS OF LIABILITY. In the event Buyer claims Seller has breached any of its obligations under the Sales Contract, whether of warranty or otherwise, Seller may request the return of goods and tender to Buyer, at Seller's option, a replacement shipment of goods. If Seller so requests the return of the goods, the goods will be redelivered to Seller in accordance with Seller's instructions and at Buyer's expense. Except as herein provided, Seller shall have no further obligation under the Sales Contract. The remedies contained in this paragraph and paragraph 12 hereof shall constitute the sole recourse of Buyer against Seller for breach of any of Seller's obligations under the Sales Contract, whether warranty or otherwise.

14. TECHNICAL ADVICE. Any technical advice furnished or recommendation made by Seller or any representative of Seller concerning any use or application of any of the goods is believed to be reliable, but SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, ON RESULTS TO BE OBTAINED. BUYER ASSUMES ALL RESPONSIBILITY FOR LOSS OR DAMAGE RESULTING FROM THE HANDLING OR USE OF ANY OF THE GOODS.

15. FORCE MAJEURE. Seller shall not be liable for failure to perform its obligations under the Sales Contract in whole or in part caused by the occurrence of any contingencies beyond the reasonable control either of Seller or of suppliers of Seller. If any such contingency occurs, Seller may allocate goods and deliveries among Seller's customers.

16. ASSIGNMENT AND DELEGATION. No right or interest in the Sales Contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or to the performance of any obligation by Buyer shall be made without Seller's prior written consent. Any attempt at assignment or delegation shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

17. PATTERNS AND TOOLING. Unless otherwise agreed to in writing with Buyer, Seller shall retain title to and possession of all special tooling, patterns and dies whether paid for by Buyer or not, but such special tooling, patterns and dies that are specifically paid for by Buyer will be held by Seller exclusively for the manufacture of Buyer's goods for not more than 2 years after the date of Buyer's last order requiring their use. Seller will exercise reasonable care in handling and storing any tooling, patterns or dies specifically paid for by Buyer, but Seller shall not be liable for damage or loss thereof.

18. PATENTS. SELLER MAKES NO REPRESENTATION OR WARRANTY WITH RESPECT TO THE PATENTABILITY OF THE GOODS OR THAT ANY OF THE GOODS WILL BE FREE FROM CLAIMS OF INFRINGEMENT. Buyer agrees to indemnify and defend Seller in any such suit, action or proceeding for any claim resulting from actual or alleged infringement of any domestic or foreign letters patent for (i) any feature, construction or design incorporated at Buyer's request in any goods or to adapt such goods to the particular use of Buyer or Buyer's customers or (ii) any additions, changes or adaptations made by Buyer or Buyer's customers after delivery of the goods.

19. CONFIDENTIAL INFORMATION. All drawings, diagrams, specifications, technical data and other materials furnished by Seller and identified by Seller as confidential are and shall remain the exclusive property of Seller and shall be returned to Seller upon request. Buyer agrees to treat such information and material as confidential and not to reproduce or disclose such information or materials without Seller's prior written consent. This paragraph does not apply to any information already known to and readily accessible in the trade or which may become so through no fault of Buyer.

20. CHANGES. Seller may, at any time, without notice, make changes (whether in design, material, improvements or otherwise) in any catalog goods, and may discontinue the manufacture of any catalog goods, all in its sole discretion, without incurring any obligations of any kind as a result thereof, whether for failure to fill an order of Buyer or otherwise.

21. INSTALLATION. Installation of the goods shall be by Buyer unless otherwise specifically stated in the Sales Contract.

22. SEVERABILITY. If any term or provision contained in the Sales Contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision contained herein.

23. GOVERNING LAW AND LIMITATION. (a) The formation and performance of the Sales Contract shall be deemed to have been made and governed by the Uniform Commercial Code as adopted in the state of Seller's principal place of business;

(b) Buyer hereby agrees to the jurisdiction of any state or federal court located in the county of Seller's principal place of business. Buyer waives any objection based on forum non conveniens and any objection to venue of any action instituted hereunder, and consents to the granting of such legal or equitable relief as is deemed appropriate by a court of competent jurisdiction. The rights and obligations of Seller and Buyer shall not be governed by the provisions of the United Nations Convention on Contracts for the International Sale of Goods; and

(c) Seller represents that the goods will be produced in compliance with the Fair Labor Standards Act of 1938, as amended.

(d) BUYER AGREES TO PAY ALL OF SELLER'S COSTS AND EXPENSES OF COLLECTION AND LITIGATION, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES AND COSTS.

Revised December 2008

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