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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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.

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ENGINEERING MANUAL No. 6

Spine