

# Power Transmission Products

AC and DC Controllers



Electromagnetic Clutches and Brakes

Open Gearing




Overrunning Clutches



Enclosed Gear Drives



 **Altra**  
Industrial Motion

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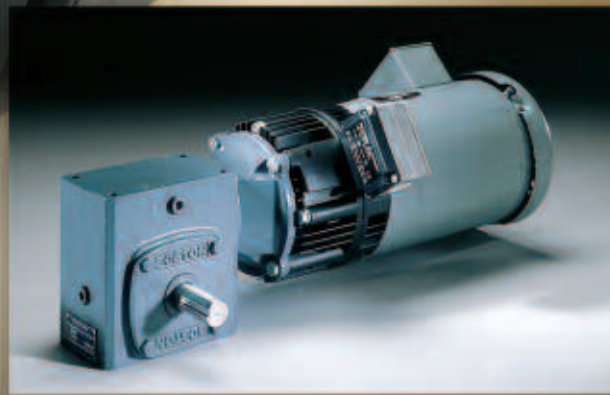
# ALTRA INDUSTRIAL MOTION

*The Number 1 Brands  
in power transmission.*

***Altra Industrial Motion provides  
single-source convenience and  
world-class service.***

As a Genstar Capital company, Altra Industrial Motion is committed to carrying on the legacy of its powerful line-up of industry leading brands in clutch/brake components, special purpose clutch assemblies, speed reducers, gear drives and more. New brand logos have been introduced to visually associate all our brands with Altra. You'll continue to get everything you've come to expect from the leaders in power transmission including:

- Extensive application knowledge
- Single-source convenience
- World-class service
- Largest array of products
- Award winning design advantages
- Proven product performance





## UniModule - one piece, clutch-brake package

The ultimate in packaged convenience. Available as pre-assembled clutches or clutch-brake packages with power-on or electrically released brakes, stand alone or C-face mounting. Factory run-in provides rated torque right out of the box. No maintenance.

- 5 combinations fit motor sizes from 1/4 to 10 HP
- Torque range from 16 lb.ft. to 95 lb.ft.
- Totally enclosed and washdown versions



## Electrically Released Brakes

Spring set and permanent magnet designs are available for holding a load in the event of a power failure; or choose dynamically engaged models for stopping a moving load.

- Electrically released C-face brake modules are available in the UniModule or Electro Module series
- Shaft mounted or flange mounted design
- Torque range from 1.5 to 400 lb.ft.



## Magnetic Clutches and Brakes

Magnetic particle units are specifically designed to provide precise control, fast response, superior heat dissipation and extremely long life. They are quiet, clean and smooth.

Mechanically adjusted, permanent magnet type units provide excellent repeatability and accuracy. Ideal for tension control and soft starts and stops. No external power source required.

- Magnetic Particle Units  
Torque range to 578 lb.ft.
- Mechanically Adjusted Units  
Torque range to 65 lb.in.



## Electro Modules - individual clutch and brake modules

Electro Modules are separate clutch or brake units, easily assembled into a variety of combinations; individual clutch and brake modules, motor brakes; or combined to form complete clutch-brake packages. Bolt them together, wire it up and it's ready to go.

- Stand alone or C-face mounting
- 13 clutch-brake configurations
- Power-on or electrically released brakes



## Custom Design Clutches and Brakes

These basic electric clutches and brakes are user assembled from individual clutch and brake components. Mounting versatility, space saving design, flexibility and lower cost are value added benefits.

- 45 clutch-brake models
- 3 motor brakes
- 10 sizes from 1-1/4" to 15-1/4" dia.
- Torque range from 5 lb.in. to 1350 lb.ft.



## Foot Mounted Clutch-Brake Packages

Electro Packs are extremely rugged, factory aligned, pre-assembled clutch/brakes in an enclosed, foot mounted housing.

- 7 sizes. New torque range from 15 lb.in. to 1350 lb.ft.
- High performance version is available featuring ceramic faced wear components for long life.



### Shaft Mounted Clutches and Brakes

Package designed Electro Clutches and Electro Brakes feature no assembly, long life and no maintenance. Ready for mounting on any thru-shaft or extended motor shaft.

- 6 sizes
- Torque range from 16 lb.ft. to 465 lb.ft.



### Wrap Spring Clutches and Brakes

Accurate positioning with high torque-to-size ratio is achieved with Warner Electric's energy efficient, maintenance-free wrap spring clutches and brakes. Fast, repeatable and positive action provides consistent cycling over a long lifetime. Pre-assembled, easy to install.

- Torque range from 25 lb.in. to 2500 lb.in.
- Over 25 sizes available



### Sensors and Switches

Warner Electric offers a broad range of innovative and technologically advanced sensor products to meet almost any motion control requirement:

- **Non-Contact Sensors** – Photoelectric, ultrasonic, inductive proximity, capacitive and magnetic
- **Industrial Switches** – Limit, foot operated and cable pull
- **Safety Technology Products** – Safety interlocks, cable pull switches and coded magnetic monitoring systems



### Tension Brakes and Controls

Complete line of tension control products for unwind and rewind applications.

- Electric friction brakes. Basic brake designs and modular disc brakes with torque ratings to 590 lb.ft.
- Pneumatic friction brakes with torque ratings to 1785 lb.ft.
- Magnetic particle and permanent magnet brakes for extra smoothness
- Complete line of analog and digital tension brake controls



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### Enclosed Gear Drives

Boston Gear offers the industry's greatest variety of gear drive sizes, reduction ratios, shaft arrangements and mounting styles.

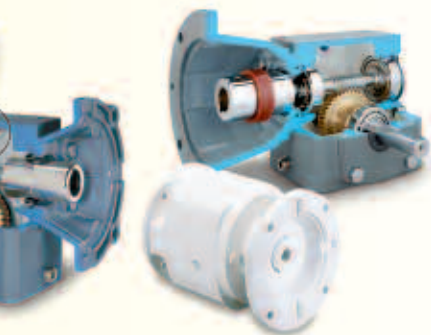
- Worm Gear Speed Reducers - Available in single and double reduction gearing 1/40 - 25 HP; 5-3600:1 ratios
- All stainless steel versions and BISSC® certified versions available
- Helical-Worm Speed Reducers - Available in double and triple reductions from 8:1 thru 900:1, 1/6-10 HP
- Helical Gear Speed Reducers- parallel and in-line shafts, single and double reduction gearing 1/20 - 55 HP; 1.5-250:1 ratios
- Bevel Gear Right Angle Drives- spiral bevel and straight bevel gearing come in 1/10 - 95 HP; 1:1 thru 3:1 ratios
- Planetary Motor Multiplier 1/6 - 3/4 HP; 5:1 ratio

### NEW PosiVent® Option

The award winning, patented PosiVent internal pressure equalization system allows the gearbox to operate in any environment and any mounting position without the use of traditional breather vents. Units comes lubed for life and are ideal for wet and dusty environments. Available on all 700 Series models.

### NEW QC700 Series

If quick motor assembly is the problem you face daily, choose the QC700 Series because it can decrease assembly time to < 50% of what it takes with a traditional flanged unit. Debris and bacteria collection is eliminated since the QC700 does not have a coupling alignment hole.



### Washdown Applications

Exclusive, new and improved, BISSC certified and USDA approved Bost-Kleen™ (BK) and Stainless Bost-Kleen™ (SBK) washdown duty coatings are available on all worm gear reducers. All stainless steel 700 units are also available.



### Open Gearing

As the innovator of stock gears and gear standardization, Boston Gear continues its tradition of leadership with the manufacture of over 2800 different styles of open gearing at our state of the art facility in Charlotte, NC.

- Spur gears for parallel shaft applications. Steel, cast iron, brass & non-metallic.
- Helical gears for parallel and 90° non-intersecting applications. Hardened steel & bronze.
- Miter and bevel gears for 90° intersecting shaft applications. Steel, cast iron, brass & nylon.
- Worm and worm gears for 90° non-intersecting shaft applications. Acetal, bronze & cast iron.



### Electrical Products - AC and DC Controllers

From fractional horsepower on up, AC and DC motors and motor controllers come with full field support and technical assistance.

- AC controllers are microprocessor based, adjustable frequency inverters. 1/6 - 800 HP range. Basic controllers to advanced programmable units
- DC Controllers - regenerative and non-regenerative, basic analog and sophisticated digital programming versions, 1/12 - 1000 HP range. Wide variety of standard features & options
- AC and DC motors
- Meters and tachs
- NEMA 1 and NEMA 4 enclosures



### Bearings

The most comprehensive selection of bearing products from a single source is available from Boston Gear. Our bearings are found on machinery in industries ranging from packaging equipment to agricultural.

- Pillow blocks and flange bearings
- Bronze, steel and non-metallic bushings
- Rod end and spherical bearings
- Thrust washers & radial ball bearings
- Oil impregnated and cast bronze sleeve bearings



### Shaft Accessories

Couplings for misalignment and couplings for connecting two shafts are just two of the popular shaft accessories that can be used in industries as diverse as pumps and compressors to machine tools to material handling.

- Chain and sprockets
- Couplings
- Universal joints
- Shaft collars
- Miniature timing belts and pulleys



### Centric Clutches

The Centric product line is the premier name in overload protection devices for virtually any overload situation in your plant.

Over 50 years of experience makes the Centric name the most trusted in the industry.

- Mechanical overload release clutches
- Pneumatic overload clutches



## General & Special Purpose Clutches

Formsprag general purpose clutches are available in several standard bearing configurations for overrunning, backstopping and indexing service. Special purpose clutch models are also offered for applications where special coupling, actuation or operating environment may dictate equipment design.

- Choice of supported or non self-supporting bearing designs
- Versatile mounting styles
- Guaranteed same day shipping\*
- Oil lubricated
- Torque capacity from 275 lb.ft. to 5,000 lb.ft.

\*Some restrictions apply. Ask your Formsprag representative for details.



## Backstopping Clutches

These sleeve- or ball-bearing supported sprag clutches are used where reverse rotation must be prevented as in material feed applications, pumps, incline conveyors and other material handling applications.

- Horizontal or vertical mountings
- Torque range from 277 to 27,000 lb.ft.
- Overrunning speeds from 200 to 2,900 rpm
- Variety of bore sizes
- Mounting configurations for detachable and integral torque arm



## Modular Clutch Components

Formsprag modular components allow you to configure special combinations of covers, torque arms and coupling designs with any of three base clutches.

- Sprag or ramp and roller technologies
- Wide range of torque capacities, overrunning speeds and mounts
- Overrunning, indexing and backstopping applications



## Clutch Couplings

Often specified for inline mounting between motors and load, these clutch couplings provide reliable performance for overrunning, indexing or backstopping.

- Inner or outer race overrunning models
- Space-saving, compact design
- Broad selection of torque capacities, shaft diameters, speeds and mounts
- Accommodates both angular and parallel misalignment



## Holdback Clutches

These positive holdback clutches are commonly applied on systems such as inclined conveyors, bucket elevators, and fans.

- Grease labyrinth seals
- Torque range from 4,000 ft.lbs. to 700,000 ft.lbs.
- Torque arm lengths from 33.6 to 101.5"
- Bore sizes from 1.9 to 20"



## Boston Gear

Started in 1877 as a machine shop making gear-cutting machines, Boston Gear has led the growth of the power transmission industry for almost 125 years. In its early years, Boston Gear introduced the concepts of gear standardization and stock gears that led to the development of the industry standard footprint for modular worm gear speed reducers in 1968. Today, Boston Gear provides the widest range of integrated power transmission products available from a single source.

- Enclosed gear drives
- Open gearing
- Centric overload release clutches
- AC & DC adjustable speed drives and motors
- Shaft accessories
- Bearings
- Fluid power components



## Warner Electric

The company designed and patented the first electromagnetic clutch/brake more than 70 years ago and has pioneered every significant advance in the field since then.

In the beginning Warner Electric produced wheel brakes for trailers. During the post-war era the push for higher productivity and automation led to the development of electric clutches and brakes for applications ranging from machine tools to combines, packaging machines to garden tractors, conveyors to automotive air conditioning.

Today, Warner Electric offers a complete line of standard, off-the-shelf products available through a network of local distributors, as well as the capability to provide unique design solutions for original equipment manufacturers.

- Packaged clutches and brakes
- Custom design clutches and brakes
- Electric clutch-brake controls
- Tension brakes and controls
- Magnetic clutches and brakes
- Sensors



## Formsprag Clutch

Providing one of the broadest lines of overrunning clutches in the world, Formsprag Clutch has been a leading name in power transmission products for more than 50 years.

Known for consistent quality and dependable performance, Formsprag clutches are available in ramp & roller and sprag designs and are engineered in configurations for a wide range of industrial applications.

- General & special purpose clutches
- Indexing clutches
- Backstopping clutches
- Overrunning clutches
- Modular clutch components
- Clutch couplings
- Stieber metric designs



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## Altra Industrial Motion

### Warner Electric

Electromagnetic Clutches  
and Brakes - USA

South Beloit, IL 61080  
815-389-3771

For application assistance:  
1-800-825-9050

Electromagnetic Clutches  
and Brakes - Europe

Allonnes, France  
+33 (0)2 43 43 63 63

Precision Electric Coils - USA

Columbia City, IN 46725  
260-244-6183

### Boston Gear

Enclosed and Open Gearing,  
Electrical and Mechanical P.T.  
Components

Quincy, MA 02171  
617-328-3300

For Customer Service:  
1-888-999-9860

For Application Assistance:  
1-800-816-5608

### Formsprag Clutch

Overrunning Clutches  
and Holdbacks

Warren, MI 48089  
586-758-5000

For application assistance:  
1-800-927-3262

### Stieber Clutch

Overrunning Clutches  
and Holdbacks

Heidelberg, Germany  
+49 (0)6221 30 47 0

### Marland Clutch

Roller Ramp and Sprag Type  
Overrunning Clutches  
and Backstops

Warren, MI 48089  
630-455-1752

### Nuttall Gear and Delroyd Worm Gear

Worm Gear and  
Helical Speed Reducers

Niagara Falls, NY 14302  
716-731-5180

### Wichita Clutch and Industrial Clutch

Pneumatic and Oil Immersed  
Clutches and Brakes - USA

Wichita Falls, TX 76302  
940-723-3400

Pneumatic Clutches  
and Brakes - Europe

Bedford, UK  
+44 (0)1234 350311

### Ameridrives Couplings

Gear Couplings, Mill Spindles,  
Universal Joints

Erie, PA 16512  
814-480-5000

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Thailand	66 2 322 0481
Australia	612 9894 0133

## Magnetic Particle Clutches & Brakes



## Sensors & Switches



## Tension Systems



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Boston Gear  
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617-328-3300 • Fax: 617-479-6238  
www.bostongear.com

Formsprag Clutch  
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586-758-5000 • Fax: 586-758-5204  
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