



# Shaft to Shaft Product Range



 **Guardian Couplings**<sup>®</sup>  
Altra Industrial Motion

## GENERAL PURPOSE COUPLINGS



### NF / Oil Burner

One of the original Guardian products, this product is excellent for older residential heating applications. The NF line fits Sundstrand, BorgWarner, and Webster fuel pumps. The coupling is a three piece design and can be provided as single coupling or as "repair packs" / "repair kits".



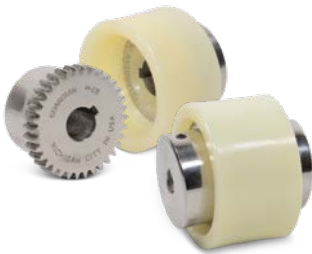
### Dynamline

Available in 4 sizes, the Dynamline is a single piece rubber-in-shear coupling. These couplings are used in sub-fractional thru 3HP applications, with torque ratings up to 54 IN-LBS. End fittings are made from zinc die castings, and are crimped to the rubber sleeve. Bore sizes up to 3/4" (19mm). The coupling length can be varied to suit many applications.



### Gear Grip

A general use coupling that is best suited for applications with a large degree of misalignment up to 50 HP. The Gear Grip Coupling is a three-piece highly flexible design which includes two hubs and a flexible sleeve. Guardian offers three different sleeve materials including neoprene, urethane, and reinforced neoprene. Depending on the series, the hubs are typically offered in zinc or sintered steel.



### Guardex™ M/I Style

GUARDEX™ is a double cardanic curved-tooth gear coupling. This three-piece design is able to compensate for axial, radial, and angular shaft misalignment. The coupling consists of a nylon sleeve and two steel hubs. As a result, creates a maintenance free product and doesn't require any further lubrication. It fits electric motor driven applications up to 300HP. They are perfectly interchangeable with other popular European designs.



### Curved Jaw Coupling

The Curved Jaw couplings can be utilized in many applications and serve as an all-purpose coupling. The basic design of the Curved Jaw allows for a higher torque capacity in a compact design. The curved tooth has a greater contact area which gives it the high torque capacity, and reduces edge pressure. It will accommodate axial, radial and angular shaft misalignments. The hubs are produced from a variety of materials including; aluminum, gray iron, steel, sintered steel, and stainless steel. The spider elements are available in various durometer options in Urethane & Hytrel. The spiders can perform under normal and heavy duty cycle conditions and can dampen torsional vibrations in the system.



### LJW Coupling

The LJW coupling is the industry standard jaw coupling, and it is completely interchangeable to other popular manufactures. Guardian offers the LJW in steel and cast iron, but if required can also be produced from other materials. It features three material types on the spiders which include Buna-N, Urethane, and Hytrel. The LJW is a very economical solution, and will accommodate axial, radial and angular shaft misalignments. Guardian also offers a change in place spider design to help minimize change over time.

## Why Choose Guardian?

For more than 70 years, Guardian has been designing and manufacturing world-class couplings and other power transmission components. Utilizing advanced manufacturing technologies and processes, Guardian provides highly-reliable coupling and component solutions to meet the most challenging industrial application requirements.





## SPECIALTY COUPLINGS



### Tapered Grid

The Taper Grid Coupling is an all steel shaft to shaft coupling which allows for a compact size and high torque capacity. The tapered grid element is torsionally flexible, which absorbs shock loads reducing wear on connected equipment components. The grid element requires lubrication and can also be replaced without moving the hubs or realigning the shafts. Sizes 1020 thru 1140 stocked in minimum plain bores, 1150 thru 1200 made to order. Clearance or interference fit bores available as requested. The Guardian Taper Grid Couplings are completely interchangeable with other manufacturers.



### Steel Gear

The crowned gear tooth ensures maximum contact at the strongest part of the tooth resulting in high torque capacities. Available in double engagement full flex or single engagement flex rigid designs. Exposed bolt sleeve design allows for ease of assembly. Size 10 through 60 stocked in minimum plain bores, size 70 thru 120 made to order. Clearance or interference fit bores available as requested.



### Superflex

The Superflex Coupling has been used world-wide on a variety of applications with higher driven mass moments of inertia. The Superflex is very well suited for gen-sets, compressors, welders, and blowers. The rubber element will expand from its original pre-stressed condition upon installation. As a result the allowable torsional load of the rubber element is influenced favorably. It allows a lower tensile stress, and higher permissible vibratory loads. This coupling is an excellent solution for shock and vibration dampening.



### HH

The HH coupling is considered a failsafe jaw coupling that has progressive characteristics. For instance the dynamic torsional stiffness is enhanced with increasing the coupling load. This type of feature gives a distinct advantage in applications where a wide range is used and the torque increases with speed. The resulting characteristics provide the HH coupling with a relatively low torsional stiffness that places the critical speed (resonance) below the operational speed of the system.

## MOTION CONTROL COUPLINGS



### Stainless Steel Bellows

The characteristics of the bellows coupling can be modified by varying the number and spacing of convolutions. This type of coupling has high torsional stiffness and may be used in any drive system where high levels of torsional integrity are essential. Typical applications include encoder drives and closed loop servo systems. These couplings features speed ranges up to 10,000 RPM.



### Membrane (Disc)

Thin pressed steel membranes act as the pivotal members in these couplings. Torque is resolved to simple tensile stresses in opposing segments of the membranes. These couplings have near-infinite life and a dynamically balanced construction which makes them suitable for applications requiring high rotational speed and high-level motion integrity e.g. machine tools, robots, centrifuges, turbines, dynamometers.



### Multi Beam

These general purpose, multi-beam couplings will readily accommodate any combination of axial motion and angular & parallel misalignment but should be used with caution if low bearing loads are desirable. The three start helical-cut design provides higher torque capability and greatly reduced wind-up when compared to single beam couplings. The 6 beam version provides greater misalignment capability but reduced torque accuracy when compared to the 3 beam version. The couplings are available in aluminum and stainless steel to suit various environments.



### Universal Lateral

This coupling combines the sliding mechanism of the Oldham and the pivotal action of the universal joint to combat angular and radial misalignment. A series of integral pins engage a pair of injection molded annular rings with controlled preload to eliminate backlash. The Uni-Lat has a generous angular and radial misalignment capacity and is electrically isolating. Applications are usually general purpose, light duty stepper (half and full step) encoder, resolver and tachogenerator drives and light push/ pull duties.



### Oldham

Rotation is transmitted through a central disc that slides over the teeth on the hubs under controlled preload conditions to eliminate backlash. Discs and hubs are available in different materials and configurations to suit different applications. These couplings provide generous radial compensation and easy maintenance.



### Mini Curved Jaw Coupling

Same characteristics as the curved jaw, except these are zero backlash to the pre-load limit of the spider. A very good all-purpose coupling assembly with good torque capacity.

## Guardian Couplings Facilities

### North America

#### USA

300 Indiana Highway 212  
Michigan City, IN 46360  
219-874-5248

*Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings*

### Europe

#### United Kingdom

Merchant Drive, Hertford  
Hertfordshire SG13 7BL - England  
+44(0)1992 501900

*Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings*

## The Brands of Altra Motion

### Couplings

**Ameridrives**  
[www.ameridrives.com](http://www.ameridrives.com)

**Bibby Turboflex**  
[www.bibbyturboflex.com](http://www.bibbyturboflex.com)

**Guardian Couplings**  
[www.guardiancouplings.com](http://www.guardiancouplings.com)

**Huco**  
[www.huco.com](http://www.huco.com)

**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Linear Systems

**Thomson**  
[www.thomsonlinear.com](http://www.thomsonlinear.com)

**Warner Linear**  
[www.warnerlinear.com](http://www.warnerlinear.com)

### Geared Cam Limit Switches

**Stromag**  
[www.stromag.com](http://www.stromag.com)

### Engineered Bearing Assemblies

**Kilian**  
[www.kilianbearings.com](http://www.kilianbearings.com)

### Electric Clutches & Brakes

**Matrix**  
[www.matrix-international.com](http://www.matrix-international.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Warner Electric**  
[www.warnerelectric.com](http://www.warnerelectric.com)

**Deltran**  
[www.thomsonlinear.com](http://www.thomsonlinear.com)

### Belted Drives

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Heavy Duty Clutches & Brakes

**Twiflex**  
[www.twiflex.com](http://www.twiflex.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Gearing & Specialty Components

**Bauer Gear Motor**  
[www.bauergears.com](http://www.bauergears.com)

**Boston Gear**  
[www.bostongear.com](http://www.bostongear.com)

**Delevan**  
[www.delevan.com](http://www.delevan.com)

**Delroyd Worm Gear**  
[www.delroyd.com](http://www.delroyd.com)

**Nuttall Gear**  
[www.nuttallgear.com](http://www.nuttallgear.com)

### Engine Braking Systems

**Jacobs Vehicle Systems**  
[www.jacobsvehiclesystems.com](http://www.jacobsvehiclesystems.com)

### Precision Motors & Automation

**Kollmorgen**  
[www.kollmorgen.com](http://www.kollmorgen.com)

### Miniature Motors

**Portescap**  
[www.portescap.com](http://www.portescap.com)

### Overrunning Clutches

**Formsprag Clutch**  
[www.formsprag.com](http://www.formsprag.com)

**Marland Clutch**  
[www.marland.com](http://www.marland.com)

**Stieber**  
[www.stieberclutch.com](http://www.stieberclutch.com)

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