

# Motion Industries & Rexnord

OFFER FALK WRAPFLEX ELASTOMERIC COUPLINGS

The Falk Wrapflex elastomeric coupling from Rexnord offers an innovative “replace-in-place” element that allows quick, easy installation and replacement—eliminating the need to move or realign equipment. The compact design eliminates the need for coupling guard redesign on existing machinery. Maximum bore capacity is 7¼": (186 mm), and finished bores are available in popular sizes ranging from .625" to 4.125".

Available in close-coupled (Type R10) and spacer designs (R31 and R35), the Wrapflex coupling's 9 sizes range from 5R through 80R, and accommodates torque loads up to 133,000 lb-in (15,000 Nm). The nonlubricated design features a tough polyurethane element resistant to wear and chemicals, with an operating temperature of -40°C (-40°F) to 95°C (200°F). The vibration dampening capability and high-misalignment capacity provide extended life to connected equipment.

The optional high torque 70D black element can increase standard catalog

torque ratings by 25%. Standard covers are nylon for sizes 5R-50R and black epoxy-coated steel for sizes 60R-80R. Optional black epoxy-coated steel covers and stainless-steel hubs are available for highly corrosive, severe-duty and food industry applications. Electroless nickel plated carbon steel hubs are also optional for moderately corrosive applications. Hubs are available in rough bore, custom bore and bushed designs.

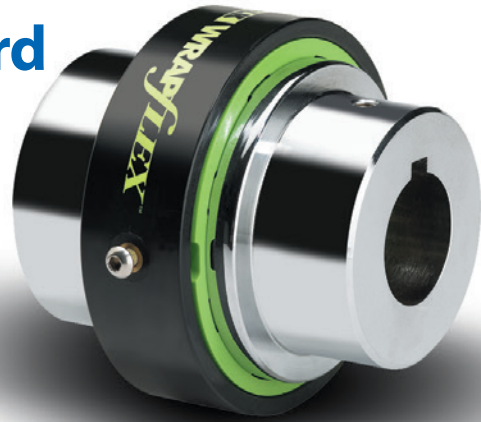
Safety was a top consideration when the Wrapflex couplings were engineered, designed with two stainless steel button head cap screws—positioned

180° apart—that prevent relative motion between cover and element, and provide a positive means of retaining the cover to the element. The flexible element is retained after failure, helping minimize the potential for damage or personal injury.

The Wrapflex R10 couplings are perfect for many applications including gearboxes, conveyors, lube oil pumps, centrifugal pumps, vertical pumps, compressors, blowers, mixers, winders for paper rolls, and runout tables.

**For more information:**

Motion Industries  
Phone: (800) 526-9328  
[Motionindustries.com/PTE](http://Motionindustries.com/PTE)



# Eaton

ANNOUNCES BEZARES PTO FOR ENDURANT AND DETROIT AUTOMATED TRANSMISSIONS

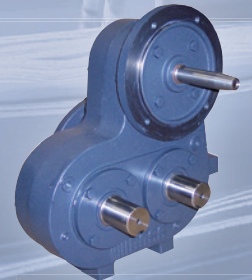
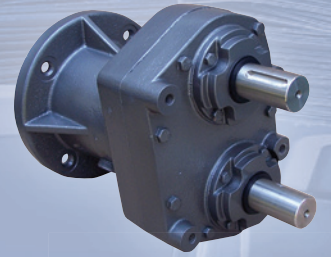
Power management company Eaton recently announced it will expand its mobile power take-off (PTO) portfolio to include two new Bezares PTO units. These new offerings complement the all-makes portfolio already available for a variety of vehicles and transmissions in operation in North America.

Eaton will distribute the Bezares 95X series four-bolt, rear-mounted PTO for the Eaton Cummins Automated Transmission Technologies Endurant 12-speed automated transmission and the new Bezares PTO for the Detroit DT12 automated transmission.

Eaton announced in early 2019 its Vehicle Group's Aftermarket division had reached a distribution agreement with Bezares SA to become the North American master distributor for its mobile power hydraulic portfolio.

“Since introducing our relationship with Bezares a year ago, we worked to quickly ramp up availability of Bezares products and achieved a fully stocked warehouse,” said Tim Bauer, vice president, Aftermarket, Eaton's Vehicle Group North America. “We also have secured a strong distribution footprint across North America and will continue to build on the momentum throughout 2020. These new offerings show our continued commitment to supporting mobile power hydraulic customers in North America.”





What **if...**

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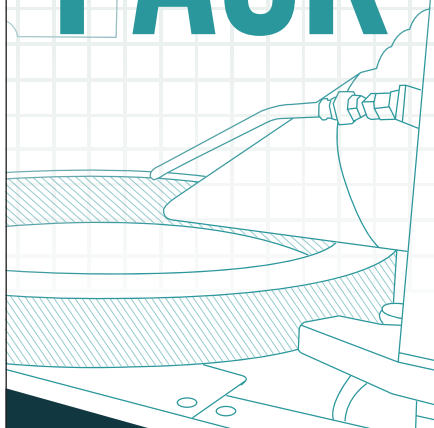
**Accustomed to customs** – one size does not fit all, and sometimes your application requires an engineered-to-order speed reducer and gear drive. Our engineering and technical support teams are proficient in working closely with our customers to design and develop speed reducer and gear drives specific to the application requirements, when what's in the catalog won't work!

For more information, email [hubsales@regalbeloit.com](mailto:hubsales@regalbeloit.com).

[regalbeloit.com/HubCity](http://regalbeloit.com/HubCity)

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The Bezares 95X series, the lightest and most compact rear countershaft PTO for Endurant in the heavy-duty segment, features pneumatic shifting and is available with three different internal ratios and popular output types. The offset design improves the position of an attached pump to avoid possible interference with other vehicle elements.

The heavy-duty, two-gear 120X series PTO is built from an aluminum housing, coupling heavy-duty strength with light weight, and fits models DT12-DA/14.93-1.0 and DT12-OA/14.96-1.0.

Featuring internal ratios from 1:1 to 1:1.8, the 120X PTO series integrates with the auxiliary systems of the DT12

transmission and offers four different output options. The PTO housing is designed to improve clearance and ease of installation, while the DIN output option permits multiple configuration options. A lube pump flange is included with the PTO, simplifying ordering and installation.

Eaton will add the Bezares portfolio to its online Order Center, which includes real-time inventory visibility, quick and easy ordering, and improved order management, with an anticipated launch in Q2 2020.

**For more information:**

Eaton Corp.  
Phone: (248) 226-6462  
[Eaton.com](http://Eaton.com)

## Freudenberg Sealing Technologies

INTRODUCES A SEAL WITH INTEGRATED BEARING

Freudenberg Sealing Technologies has introduced a machine component that combines a plastic rotating bearing with a seal in a single, precisely matched unit. The design offers significant weight, cost and friction advantages over separate bearings and seals and improves the properties of the mated bearings and seals. Freudenberg has validated the advantages of this new component through extensive testing performed in a sensor housing unit including the seal-bearing component.

While mostly hidden from view,

seals and bearings are nonetheless important components in automotive and industrial applications. They are key elements in operational safety and performance and their durability must be optimized to prevent system failure. At the same time, these bearings and seals must be small, lightweight and cost efficient in keeping with manufacturers' efforts to remove cost and weight from vehicles without sacrificing performance.

Freudenberg has resolved this challenge with the introduction of its seal





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with integrated bearing (SWIB). The company spent two years developing this engineered solution and has successfully tested it in a sensor housing of an electric power steering (EPS) system installed in an electric powered vehicle.

The sensor records data, like steering angle, which is critical to advanced driver assistance programs like electronic stability control (ESC). The seal inside the housing is responsible for protecting the sensor from the penetration of dust, splash water and other media over the entire service life of the vehicle. Bearings used in the assembly are also important; they must withstand significant mechanical loads—sometimes as much as 3,000 Newton of radial force when a car drives over a curb with its wheels at an extreme angle.

**Integrated system can reduce loads and vibration**

Freudenberg Sealing Technologies' integrated solution offers significant improvements compared with sepa-

rate bearings and seals. The rigidity of the integrated plastic bearing is higher so that its deflection is reduced by nearly 50 percent when lateral forces are exerted. This reduces the induced vibrations to increase the steering comfort for the driver. The seal, on the other hand, has 35 percent less friction, which reduces resistance during steering—especially important for highly automated driving. The weight of the overall solution is reduced by as much as 80 percent through integration. Freudenberg's patented plastic bearing plays a major role in achieving these component breakthroughs.

Automotive safety applications are subject to many requirements which individual manufacturers define according to their own specifications. Freudenberg Sealing Technologies used common specifications—a temperature resistance of -40 to +125 degrees Celsius under mechanical stress, for example—to test its integrated component during the past year. Extreme cases, such as direct exposure

to high water pressure, which can occur in practice during engine washing, were also tested. The seal that includes an integrated bearing proved itself in all tests. "We can now commence with customer-specific series development at any time," says Freudenberg expert Frank Schönberg.

Product experts at Freudenberg Sealing Technologies are already researching additional industrial applications for the new component. In addition to automotive applications, seals with integrated plastic bearings can likely bring benefits to many industrial operations. Freudenberg is also looking to the manufacturing process for further innovation: If the seal/bearing unit is currently still being assembled, it could be produced using new materials in an integrated two-component injection molding process in the future.

**For more information:**

Freudenberg Sealing Technologies  
Phone: +49 6201 80 5713 (Europe)  
(734) 354-5373 (USA)  
[www.fst.com](http://www.fst.com)

## Kollmorgen

### 2G MOTION SYSTEM OFFERS SINGLE-SOURCE SOLUTIONS

Kollmorgen announces the 2G Motion System, a servo solution based on the latest thinking about single-source, systems-based design. The 2G Motion System was designed specifically to harness the performance capabilities of Kollmorgen's AKD2G servo drive and AKM2G servo motor. Motor and drive are precisely matched in every element (e.g. drive switching frequency, commutation algorithms, motor magnetics), avoiding micro-incompatibilities that can occur when engineers select components from various manufacturers. The result is a system that delivers maximum

performance, efficiency, and effectiveness in even the most demanding applications, including industrial printing, laser cutting, packaging, robotics, inspection and measurement, machine tools, winding machines, and food processing. Key benefits of the 2G Motion System include a reduced design envelope, increased dynamic performance, faster development and commissioning, machine cost savings, and additional Kollmorgen features.

**For more information:**

Kollmorgen  
Phone: (540) 633-3545  
[www.kollmorgen.com](http://www.kollmorgen.com)



## Stagnoli

### OFFERS PLASTIC GEARING FOR VARIOUS INDUSTRIAL APPLICATIONS

The request for higher performance solutions intensifies metal replacement activity in many fields like automotive, medical, aerospace, electrotechnics. Currently, about the 16 percent of weight in a vehicle is in plastic, and it is expected to reach at least 25 percent within the next five years.

Metal replacement projects requires experience from the material choice to the functionality of the final product. For 30+ years, Stagnoli has been a leader in designing and producing techno-polymer mechanic transmissions for any type of application.

The company offers a wide range of spur gears, bevel gears, timing pulleys, belt tensioner pulleys, sprockets, chain tensioner sprockets, joints, racks and planetary gearboxes in PA6-Stagnoli Fiber Torque. Geometric and dimensional characteristics (UNI 6773 and UNI 4760 standards) makes

them interchangeable with the respective metal products.

Stagnoli has a department dedicated to mechanical machining (CNC) that gives the possibility to customize the standard product as our client needs (bores, keyway etc).

Benefits of techno-polymer gears include lightness, low noise, self-lubrication, chemical inertia, and a cost-savings on machining and lubrication.

### S-Torque Gears

PA6-Stagnoli Fiber Torque is a semi-crystalline polyamide. Production of these polymers requires the repeated

joining of an amine group and a terminal carbonyl component of a functional group. These gears are used in applications that require low engine speed and high transmissible torques.

### S-Speed Gears

POM-Stagnoli Celeretal is a partially semi-crystalline thermoplastic material that is formed during the formaldehyde polymerization. These gears are used with applications that require high rotation speed and low transmissible torques; they also have a good dimensional stability essentially above all at a low hygroscopicity (low water

absorption) of the techno-polymer, good sliding properties and wear resistance; they are physiologically inert (suitable for contact with food) and have good resistance to a wide range of chemicals.

### S-Shock Gears

PK-Stagnoli Keton Shock is chemical compounds in which several ketone groups are present. Precisely the identifying term of synthetic polymers composed of carbonyl groups (C=O) spaced from other related groups (for example, alkyls).

They have a chemical resistance and





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hydrolysis that is usually detectable only on plastic materials with high performances that are positioned in much higher price ranges, as in the case of PEEK or PPS; it has low water absorption which translates into excellent dimensional stability, has a high barrier effect and high toughness and impact resistance.

The S-Shock, compared to the S-Speed series, can be managed at a higher operating temperature, ensure greater chemical resistance and impact and thanks to an excellent surface finish reduces the squeaking that occurs when the resin acetate rotates in contact with another type of techno-polymer.

**For more information:**

Stagnoli  
Phone: +39 030 91 39 511  
www.stagnoligears.com



**KISSsoft**

OFFERS DIRECT ACCESS TO SKF BEARING DATA

Recently, the Swedish rolling bearing manufacturer SKF and the Swiss gearbox design software developer KISSsoft have joined forces: The *KISSsoft Release 2019* offers the possibility to calculate bearing performance by SKF through a cloud calculation service (Module WPK and WB1).

Bearing rating life and other performance parameters are calculated based on direct access to SKF bearing geometry data and SKF formulas which have been validated by extensive testing at SKF facilities. The results are separately displayed in *KISSsoft* and can therefore quickly be compared with ISO results.

The SKF bearing module in *KISSsoft* enables a machine engineer to a seamless experience when working on a new gearbox design. As a result, the prediction of bearing performance becomes more realistic, especially for the SKF Explorer range and hybrid bearings.

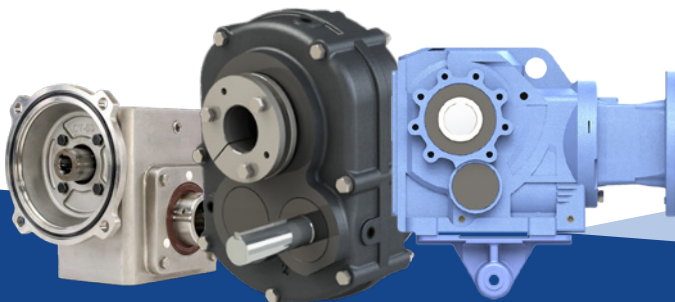
**For more information:**

KISSsoft AG (A Gleason Company)  
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www.kisssoft.ch



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# Applied Motion Products

SOLVES HEAT PROBLEMS WITH INTEGRATED CLOSED-LOOP STEP MOTORS

Applied Motion Products solved heat problems associated with a peristaltic pump system that supplies materials to a bioreactor by replacing open-loop step motors with closed-loop step motors. A peristaltic pump, with internal tubing that separates media from pump components, offers a sanitary method to supply the bioreactor with various fluids to grow cell cultures in the development of new medicines. Step motors are used to drive the pump head, compressing and releasing the pump tubing to move media into the bioreactor chamber.

Initially, excessive heat generated by open-loop step motors elevated the temperature of fluids being pumped into the bioreactor. The

higher temperatures, in turn, adversely affected biological processing times and reduced yields. Integrated closed-loop step motors from Applied Motion Products eliminated the heat problem by operating cooler and consuming less power than open-loop step motors.

Incorporating encoder feedback and servo-control firmware, the closed-loop step motor system's current is controlled to precisely meet torque demands. Drawing only enough current as needed, the closed-loop step motor generates substantially less heat than an open-loop step motor. Closed-loop step motors also run quieter and more smoothly than their open-loop counterparts. Open-loop step motors operate continuously at full current regardless of load requirements, which results in excessive heat generation.

Switching to a closed-loop step motor also enabled the life sciences company to use a single-size NEMA 23 step motor to address all combinations of pump tubing and media instead of stocking different pump and motor sizes. This change to a single motor supported the development of one standard pump head assembly that required only switching tube adapters



to dispense different materials to the bioreactor.

Using an integrated motor design also reduced componentry and decreased space requirements in the control panel. Combining a step motor, encoder, drive, controller and connectors into a single package, the integrated motor eliminated the need for cabling to connect separate motion control components together, which freed space in the very small control panels. Dual-port Ethernet connections enabled daisy-chain connections of Ethernet signals among multiple motors to reduce network cables routed around the equipment and back to the control panel.

## For more information:

Applied Motion Products  
Phone: (800) 525-1609  
[www.applied-motion.com](http://www.applied-motion.com)

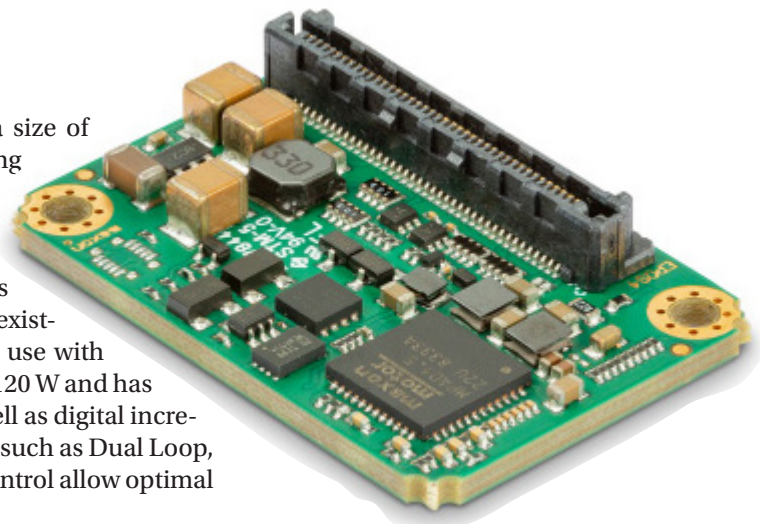


# Maxon

INTRODUCES MINIATURIZED CONTROLLER

Maxon is launching a new, miniaturized controller with a size of only 32 mm x 22 mm as part of its successful line of positioning controllers. The attractive price-performance ratio, with a functionality that's virtually identical to the larger units, addresses cost-sensitive single- and multi-axis applications.

The functionality, operation, software, and accessories of the new controller are derived almost directly from the existing products in the EPOS4 range. The device is suitable for use with both brushed DC and brushless EC motors (BLDC) of up to 120 W and has comprehensive feedback options such as Hall sensors, as well as digital incremental and SSI absolute encoders. State-of-the-art concepts such as Dual Loop, Field Oriented Control (FOC), feed forward, and observer control allow optimal control in a wide variety of applications.





The existing digital and analog inputs and outputs are freely configurable and ideally matched to the numerous functions and operating modes of the CiA-402 positioning controller. The intuitive EPOS Studio start-up software, as well as libraries and programming examples for integration in a wide variety of master systems, are available free of charge and make operation as easy as possible. A plug-and-play EvaluationBoard (EB) is provided for initial commissioning. The offer is rounded out by a comprehensive scope of accessories and detailed product documentation.

The first derivative of this new micro design is the CANopen version, which can also be addressed via RS232 or USB, as usual. In spring 2020, the EPOS4 Micro 24/5 EtherCAT will follow as a second product of similarly small size.

**For more information:**

Maxon Precision Motors  
Phone: (508) 677-0520  
Epos.maxongroup.us

# NORD Gear

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output torque their heavy-duty applications demand, NORD Gear Corporation manufactures several extruder flanges for its Maxxdrive industrial gear units.

The extruder flange option is available with Maxxdrive sizes 5 to 11, which deliver torque from 132,000 to 684,000 lb-in. (15 to 75 kNm). This broad availability enables adaptation to nearly all common connection types and sizes, while appropriately selected thrust bearings ensure safe absorption of process forces and a long operating life. In addition, NORD will customize an extruder shaft to precisely fit a customer's shaft and use a range of bearing variants to match the specified requirements. This gives plant builders, manufacturers, and processors of plastics and rubber the flexibility to develop safe, high-performance drive units for various applications.

**For more information:**

NORD Gear Corporation  
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# Regal Beloit

## WORM GEAR REDUCER RECEIVES IP69K CERTIFICATION

Regal Beloit Corporation has announced that its Grove Gear Stainless Steel Worm Gear Reducer has achieved third party IP69K certification.

Ingress Protection (IP) Marking rates the degree of protection provided by mechanical casings and electrical enclosures against intrusion, dust, accidental contact and water. It is published by the International Electrotechnical Commission (IEC). The IP69K rating is for high-pressure, high temperature washdown applications. Enclosures conforming to it must not only be dust-tight, but also able to withstand high pressure and steam cleaning.

The Grove Gear Stainless Steel Worm Gear Reducer now joins the Hub City Hera Stainless Steel Gear Drive, Sealmaster PN Gold Mounted Bearings and the Leeson Extreme Duck Ultra Motor as third party IP69K-certified products from Regal. Together, these four products provide a complete washdown solution for food and beverage, pharmaceutical and chemical processing applications.

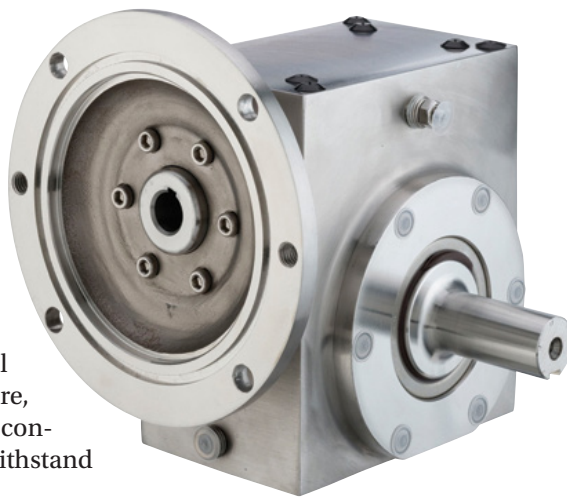
"Traditionally, IP ratings have been used for electrical components, but the industry is starting to recognize the benefit of IP rating for power transmission components," said David Silverman, product manager of worm gearing at Regal. "This allows our customers to have a better understanding of the product capabilities for specification purposes. We are pleased that the Grove Gear Stainless Steel Worm Gear Reducer now carries the formal IP69K certification."

This Grove Gear Stainless Steel Worm Gear Reducer has a 316 stainless steel housing to withstand extreme environments. An O-ring on the face of the motor adapter, poppet-style vent, and v-rings on the output shaft seals provide a system that fights dust and moisture intrusion. A 303 stainless steel output shaft and stainless-steel hardware are also included.

This reducer is also available with Leeson motors pre-assembled for the perfect performance-matched and IP69K-certified solution.

### For more information:

Regal Beloit Corporation  
Phone: (630) 364-8800  
[Regalbeloit.com](http://Regalbeloit.com)



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