

Large-Bore Shaft Collars

CUSTOMIZED FOR
HEAVY-DUTY EQUIPMENT

Large-bore shaft collars new from Stafford are designed for paper converting, timber processing, mining, drilling and construction equipment, in addition to any other oversize material handling systems. Stafford customizes these large-bore shaft collars by material, size, configuration and quantity, making them versatile for various customer requirements. Stafford offers smooth or threaded bores up to 16 inches outside diameter, and the widths vary from ½ inch up to 20 inches. The bores are made from steel, stainless steel, brass or bronze, and they are offered in one- or two-piece styles. Particular contours and tapped holes on the face or outside diameter are other modifications. The collars come with one or more alloy socket cap screws that are supplied in various sizes and quantities for favorable clamping power.

For more information:

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MC4U Modular Control System

INTEGRATES
COMPONENT PARTS

The MC4U modular control system from ACS Motion Control is intended for multi-axis motion control applications that need high performance, flexible drive configuration, PLC motion and logic control. The new product has eight integral servo drives and 64 distributed axes via CANopen, combining controllers, drives, power supplies and added I/O and networking

capability, so machine automation functions, such as motion, logic, power and data, are all controlled by the MC4U control system. The panel or rack-mounted system focuses on each multi-axis motion control need, so development cycle time is reduced along with risk and costs.

The MC4U's intended use is for production, test and inspection



Torque Feedback Device

SIMULATES HYDRAULIC POSITION/VELOCITY FEEDBACK

equipment that uses flat panel displays, semiconductors, electronic assembly, general automation or medical applications, and the system speaks to the motion and machine control needs of OEMs, according to the company's press release.

Since the MC4U includes motion controllers, cost is lowered because the need for individual controllers for each axis is removed. The host computer isn't required to handle the network because there is a single control module instead of several. The system is produced from off-the-shelf components, making assembly and delivery time shorter, so customers receive the product soon after they order—one to two weeks for fast prototypes or low-volume orders. This component feature also lowers maintenance costs because individual parts can be repaired without the need to replace the entire system.

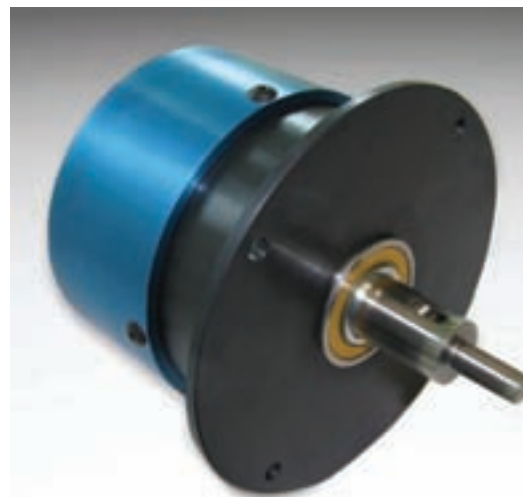
For more information:

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Danaher Motion's Torque Feedback Device (TFD) meshes tactile and position or velocity feedback with a steering wheel interface in an IP66 rated package. The TFD provides electronic vehicle system, personal mobility and mobile off-highway machine builders the ability to create vehicles and machines capable of delivering the performance and maintenance benefits found in electric or steer-by-wire systems with the tactile response of a hydraulic system, according to the company's press release.

Since the product's design integrates major components, the result is a more compact, modular device capable of high torque densities and energy efficiency in use, as well as making the device easy to scale to specific application requirements. The TFD comes in five versions that range in torque densities from 2.5 Nm to 20 Nm, available as a stand-alone or integrated vehicle system component. When tested, their life lasted over 10,000,000 revolutions at 120 rpm, and they are designed to function in ambient temperatures from -35 degrees Celsius to 60 degrees Celsius.

Redundant sensors are a feature that make shaft feedback dependable and provide field serviceability. Friction materials and an electromagnetic actuation system provide a variable torque output proportional to a DC input for steering and other by-wire applications. Typical steer-by-wire applications include electric vehicles like lift trucks, golf carts, pallet trucks, floor sweepers and cleaning equipment. Other steer-by-wire systems are found



in are turf and garden equipment, aerospace appliances, construction equipment and marine vehicles.

"The Torque Feedback Device provides input to a controller that commands the actuation mechanism in steering and other by-wire applications," says product manager Geoff Rondeau. "The device also provides continuously variable torque output to simulate the 'feel' that users of hydraulic systems are comfortable with, allowing operators to more easily adapt to an electric-steer or steer-by-wire vehicle system. With legacy electric steering systems, this functionality either didn't exist, was too complex or had to be developed and implemented by the vehicle manufacturer."

For more information:

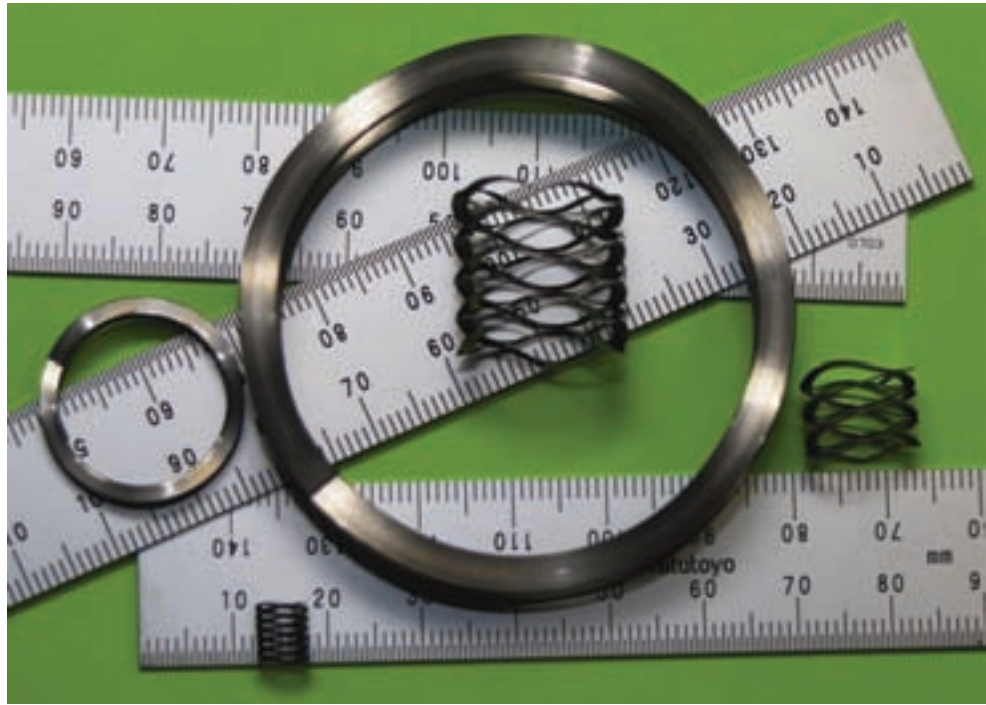
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Smalley's Crest-to-Crest Springs

SLASH ASSEMBLY SIZES

Smalley's new series of metric Crest-to-Crest wave springs provide original equipment manufacturers with the ability to cut the size of their assemblies up to 50 percent with force and deflection comparable to regular coiled springs, according to the company's press release.

The spring cavity required is smaller, effectively reducing assembly size and cost. Smalley makes over 3,000 standard wave springs in 17-7 stainless steel or carbon steel. The Crest-to-Crest series comes in sizes from 6 to 60 mm. The company is providing free samples for anyone who sends an online request to them.



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Active Cube

MAXIMIZES MACHINE AUTOMATION OPPORTUNITIES

The Active Cube (ACT3) series from Bonfiglioli is used to design automation solutions for industrial machinery and plants. It is appropriate for use as both a system drive and a servo drive because it fits the standards of most motion control applications. Users can rearrange drive routines because Active Cube's logic functions are integrated, and the drive is adapted to specific control needs. The ACT3 is highly compatible with the other drives in the system because data can be substituted and/or coordinated quickly. As far as servo applications go,

Active Cube is compatible with other Bonfiglioli synchronous servomotors and other accessories, such as the BTD and BCR series. Users can potentially form a complete Bonfiglioli servo system, so they can ensure each component will work well together. Technical support is important in the Active Cube series with several devices for diagnostics and troubleshooting, according to the company's press release.

The ACT3 hardware features include a safe torque off function, external 24V DC supply, integrated dynamic braking module DC link connection, standard encoders interface, resolver module, motor temperature monitoring, and plug-in power and control terminals. The main software features include 32 programmable motion blocks, 36 homing functions,

unit converter, jog function, absolute and relative positioning modes, touch probe, teach-in functions, rotary table control, reference value channel, motor potentiometer, PI controller, bumpless torque/speed changeover, index and stability control and functions for lift, crane and winch applications.

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Warner Electric

IMPROVES
CLUTCH/BRAKE
MODULES
IN NEW LINE

The Gen 2 packaged electromagnetic clutch/brake modules present several enhanced performance and appearance features compared to the original C-Face design. The internal component mounting and external housing fin design raise heat dissipation, so stop/start frequencies are more effective, and the input-to-output axis alignment reduces vibration, noise and wear. Using integrated custom mounting bolts for installation, the conduit box is located right on top of the unit, so orientation across the product line is more consistent. Optional cover kits are available that translate vented units into fully enclosed modules that keep contaminants out and wear particles in, so they operate cleanly and quietly, according to the company's press release.

The fit and wiring requirements of the unit remain the same, so they are compatible to replace C-Face models in sizes 50-180. For users transitioning from previous models to the Gen 2 line, the company has created tools such as a

Gen 2 website (www.warnerelectricgen2.com), an interactive training program, a part conversion tool and an updated e-catalog to help phase in the conversion process.

For more information:

Warner Electric
449 Gardner Street
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Phone: (800) 234-3369
www.warnerelectric.com



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Pepperl+Fuchs' Vision Sensors

SERVE MULTIPLE PURPOSES

The VOS300 series vision sensor from Pepperl+Fuchs integrates a camera, illuminations, digital outputs, process data and five evaluation methods into one sensor housing. The sensors can be configured without programming knowledge and controlled without detailed image processing experience. They are appropriate for use in applications that traditional photoelectric sensors are not suitable for, according to the company's press release.

There are two versions of the new sensor series available. The VOS301 can test a single feature of a target object, and the VOS310 can test as many as five different features. They perform like simple sensors with one output showing pass/fail status, and they have a 100 mm sensing range with internal illumination and a 500 mm range with external illumination. Objects within the 500 mm field of view, which is 135 mm x 100 mm, are detected regardless

of orientation (rotation). The VOS300 vision sensors use VOS3-Config software, which is designed to be simpler by not using complex programming language.

"Complex inspections and error proofing applications have traditionally required expensive components that are difficult to install and use. With the VOS300, hardware and software are standardized in a fully-integrated package, eliminating the need for more complex systems and the integration of individual components," says Dr. Helge Hornis, manager of intelligent systems.



For more information:

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www.am.pepperl-fuchs.com



Low-Temp Black Chrome Plating

RESISTS CORROSION,

Misumi USA, Inc. now offers low-temp, black chrome plating on various motion components the company provides, including linear shafts, linear

bushings, linear guides, and ball screws in addition to other hardware such as precision-class washers. The coating is made when an anti-corrosion black film forms on an alloyed surface through a chemical process, and then the film is deposited on Misumi products to prevent cracking and peeling. The material functions under extreme temperature, repeated flexing and friction conditions and can be used for optical applications where low light reflection is required, according to the company's press release

For more information:

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www.misumiusa.com

Schurter Piezo Switches

WITHSTAND EXTREME
TEMPERATURES



With a newly extended operating temperature ranging from -40 degrees Celsius to +85 degrees Celsius, Schurter piezo switches are suitable for use in outdoor applications where intense temperature or temperature fluctuations take place, including ticketing and toll machines, call boxes, building access controls, construction equipment and transport vehicles.

The extended temperature switches are made with an anodized aluminum or stainless steel metal housing that is both durable and hermetically sealed. They feature a lifetime rated at more than 20 million switching cycles because the seal-tight surface design prevents material wear and mechanical fatigue; they resist dirt, sand, dust and water, and they don't freeze or stick through contact with fluids.

Schurter offers several mounting

diameters of 16, 19, 22, 24, 27 and 30 mm. For the 22 mm version, point or ring illumination is an option. Customized mounting diameters, materials, colors, shapes and laser lettering for the actuating surface are all available, according to the company's press release.

For more information:

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info@schurterinc.com
www.schurter.com

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Piezo Flexure Nanopositioning Stage Family

WIDENS TRAVEL RANGES

Physik Instrumente expanded the PIHera family of compact X, XY and Z flexure-guided piezo nanopositioning tables, so they are now capable of 50 to 1,800 μm travel ranges and less than 1 nm resolution. The PIHera stages work best for measuring and quality assurance applications; other applications they can be used for include scanning probe applications, biotechnology, nanometrology, interferometry, nanopositioning, semiconductor technology and static positioning, according to the company's press release.

A frictionless and stiff flexure system is responsible for compact size, quick response and guiding accuracy. Each stage has a non-contact capacitive sensor, which is an absolute-measuring, direct-metrology device that shows no periodic errors and has a high bandwidth. The flexures, actuators and

sensors require no maintenance, and the PIHera stage family has closed-loop digital and analog control that makes positioning up to 99.98 percent accurate. PI offers vacuum compatible versions and low-noise controllers that have various software tool options, the company says in its press release.



For more information:

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www.pi-usa.us



Compact Pneumatic Mini Slide

POSITIONS ACCURATELY

Festo Corporation's pneumatic mini slide DGSL features an integrated

bearing system that is accurate to .01 mm and has linearity and parallelism in the 1/100 mm range, so the slide can be used as a pick-and-place system or for precise positioning.

The DGSL has an optional clamping unit and end-position interlock to avoid unwanted load drops onto workpiece carriers, which might occur with a compressed air supply breakdown, and protects against an emergency stop

scenario. A piggyback configuration can be arranged without adapter plates.

The DGSL comes in eight sizes ranging from four to 20 mm diameter with strokes up to 200 mm to encompass a variety of functions including those for the electronics industry, which requires tiny parts to be managed with great precision in potentially small areas. The mini slide offers flexibility with three end-stop systems—shock-absorber, cushioned metal stops and polymer stops.

For more information:

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Fax: (631) 231-9215
www.festo.com/usa

Sick Stegmann Encoders

EQUIPPED FOR DIRTY, DUSTY ENVIRONMENTS

These DFS 60 incremental encoders are made in a blind, hollow-shaft version, so the risk of potential contamination by dust, dirt or water is reduced. The hollow-shaft encoders are ideal for dirty and dusty conditions with water washdown cleansing. They offer resolution from 1 to 65,536 ppr and are suitable to perform in temperatures ranging from 20 to 100 degrees Celsius; these performance numbers are higher than those of typical optical encoders, according to the company's press release.

"Unlike most conventional optical

encoders that have a glass or plastic rotating disc, DFS 60 encoders boast a unique nickel code disc that delivers significantly more robust and reliable operation than conventional encoders in heavy-duty industrial applications," says Scott Hewitt, president of Sick Stegmann, Inc.

For more information:

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Dayton, OH 45414
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Fax: (937) 454-1955
sales@stegmann.com
www.stegmann.com

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QTC Belt and Chain Tensioners

MAINTAIN
CONSTANT TENSION



Quality Transmission Components has introduced a new line of belt and chain tensioners called the Zetasassi line that is designed to reduce noise, transmit torque more effectively, minimize wear and increase the belt and chain lives, according to the company's press release.

Tension can be modified on the chain or belt with spring-loaded Econobelt tensioners made in rotational and linear movement varieties; they are easy to install and require no maintenance. According to QTC's press release, the Zetasassi line of belt and chain tensioners result in a 23 percent increase in chain life, 7 percent reduction in vibrations, 12 percent reduction in noise and reduction in chain slackening.

For more information:

Quality Transmission Components,
Division of Designatronics, Inc.
125 Railroad Avenue
Garden City Park, NY 11040
Phone: (516) 437-6700
Fax: (516) 328-3343
www.econobelt.com/tensioners

Tsubaki Chain

WITHSTANDS HIGHER
TEMPERATURES

A new product in Tsubaki's Lambda chain family, the H.T. Lambda, is heat resistant, operating at temperatures between 150 degrees Celsius to 230 degrees Celsius, displaying no degradation at high temperatures and featuring an extended wear life, enabling the chain for use in heat sealing packaging, semiconductor production, dry and steel furnaces and die casting for automotive parts, according to the company's press release.

The H.T. Lambda is designed for high-temperature operations that otherwise employ standard chains with special coatings, which are expensive, larger than usual, wear quickly and expend more energy while conveying equivalent power to the H.T. Lambda. The chain does not require added lubrication because it is built with oil-impregnated bushes, offering steady, food-grade lubrication that continues to function at high temperatures.



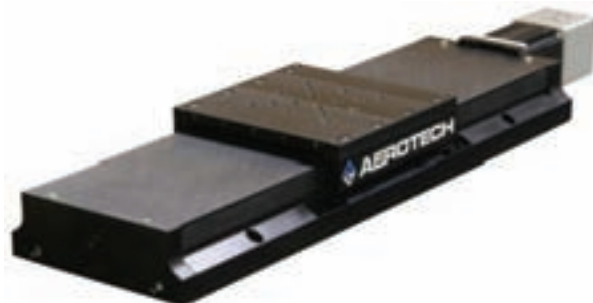
Tsubaki refers to the Lambda chain family as eco-friendly because they are evaluated with a life cycle assessment (LCA), which measures the environmental aspects of the chains from raw materials to waste management, and they demonstrate a CO2 reduction of 89.4 percent, according to the Tsubaki press release.

For more information:

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<http://tsubakimoto.com>

Aerotech Linear Stage

TRAVELS UP TO 600 MM



Aerotech's linear stage, the ATS165, is used for applications that require debris protection and mid-tier positioning performance. In addition to other models' features, the ATS165 has added load carrying capability with larger bearings and a wider cross-section.

Durable construction features debris protection and a scratch-resistant surface while minimizing contamination with side seals that are arranged vertically to avert debris. A brush assembly is available for the tabletop to eliminate particles that might build up on the hard cover. The ATS165 is equipped with

a NEMA 23 motor flange mounting interface and can be purchased with or without a motor, providing customers with the option of using an alternative, third-party motor. The stage has a ground 5 mm/rev. ball screw with a 0.5 μ m resolution, according to the company's press release.

For more information:

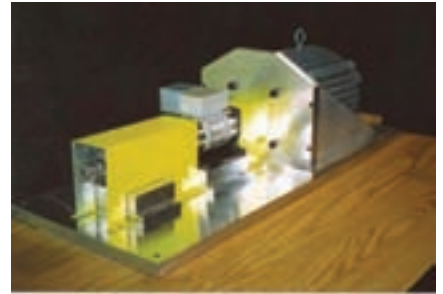
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sales@aerotech.com
www.aerotech.com

Dynamometer System Family

COMPATIBLE WITH VARIOUS TESTING APPLICATIONS

Sakor Technologies presents a new AC motoring dynamometer family, the Accudyne, which provides a dynamometer system compatible with a range of testing applications, including conventional engine and powertrain systems, hybrid vehicle drives, electric motors and rotary components, such as alternators, generators, pumps, compressors and more.

The Accudyne sizes are varied, stretching from fractional to more than 2,000 horsepower with speeds greater than 30,000 rpm, so they can be used for most rotational testing needs. With stall capability for low-speed applications



that require full torque, the system also has 4-quadrant potential and can cross over between motoring and loading modes.

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