

Active Contact Flange

OFFERS TOUCH-SENSITIVE PROCESSING

KEBA Corp., an Austrian based industrial automation products manufacturer, recently announced the launch of the KEBA Active Contact Flange, a device combining highly sensitive sensor, positioning and control technologies. This product enables automatic, touch-sensitive surface processing independent of the robot or end of arm tooling device through a combination of fast and targeted force regulation.

“The combination of active pneumatics and sensing devices along with KEBA’s closed loop control platform will streamline implementation processes of robotic positioning based on force, dramatically cutting implementation times, while increasing quality and productivity,” said Helmut Schreiberhuber, vice president, KEBA Corp. “The reaction time of this product eliminates typical delayed response times when compared to existing technologies, which allows for unparalleled touch-sensitive positioning of the tooling. We are proud and excited to offer this unique touch-sensitive device to the automation market.”

The Active Contact Flange can be used to simplify and improve a multitude of processes, including surface treatment procedures, force sensitive and complex assembly applications. The touch-sensitive handling of the workpiece is vital in automating sanding, polishing, buffing, stripping, cleaning and deburring procedures, to name a few, because the device automatically compensates for position and force control. This is equally key in force-sensitive applications including gluing, bonding, testing and delicate positioning.

Quality and productivity gains have been proven by customers, including Volkswagen Bratislava, MC, Neubacher, Wifi-Linz and Austrian-based systems integrator SPS Technik. The KEBA



Active Contact Flange allows for robotic path programming to be greatly simplified since the flange independently and automatically compensates for positioning to maintain a constant force on the work surface regardless of its contour (within the 100 mm stroke envelope of the flange.) This allows for a straight line (linear move) to be employed in the robot program while buffing a curved object. All that is required is to set the force required and the system takes care of the rest.

The KEBA Active Contact Flange is available as a stand-alone product solution or can be a part of a total KEBA solution for the turnkey control of the complete application from robot kinematics to I/O interfaces to system wide control. As a stand-alone product, the KEBA flange package can be employed immediately in a variety of applications. The program logic can be quickly and simply extended in the IEC program language. Common communication interfaces through Ethernet, field bus or digital I/O provide quick and straightforward integration into existing control systems. Data concerning the actual force, position and contact situation is tracked on a permanent basis, providing a comprehensive accessible parameter log, eliminating the need for separate process and quality controls.

As part of a total KEBA control solution, the flange acts as an integral device on the KEBA master control platform. Scalable software provides system control including motion, I/O, process, supervisory and HMI visualization packages. Hardware such as motors, drives, I/O, process controls and fixed and mobile HMI devices round out the KEBA product offering for the ultimate turnkey coordinated automation solution.

The special mechanical design of the KEBA Active Contact Flange minimizes the risk of workpiece damage due to tool collisions in a highly effective manner. Even in the case of sudden interference, the system reacts at great speed and gives way. The combination of touch-sensitive features and collision protection are very economical when compared to the high investment solutions offered to date.

For more information:

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Kollmorgen

RELEASES AKM 8 MOTOR SERIES

Kollmorgen introduces AKM 8 servomotors, the latest addition to the company's global AKM motor series. AKM 8 motors deliver higher torque density to cover the broadest torque/speed range in a housing that is 30 percent shorter than any standard motor in its class available today. As a result machine builders can reduce the size of their machines without sacrificing performance, or they can select a longer stack length to achieve higher performance without having to specify a larger, more expensive motor that would typically require mechanical changes to the machine.

"The AKM high performance motor series offers a wide range of mounting, connectivity, feedback and other options and, with the addition of the AKM 8, is now available in eight frame sizes, 28 frame/stack combinations and 112 'standard' windings. The result is unprecedented choice and flexibility to satisfy the exact needs of even more global applications, with the favorable delivery times and lower cost of a standard product. This is particularly significant for today's machine builders who need to get a better, globally-deployable machine to market, faster," says Gene Matthews, product manager.

The AKM 8 is available in two standard flange/shaft combinations designed to seamlessly integrate with 80–90 percent of machine builder needs around the globe, with no modifications to the customer flange needed. As standard, AKM 8 windings are designed to operate at 230, 400, 480 VAC, eliminating the need for voltage transformation for machines that will be deployed in various geographic regions. AKM 8 motors feature Class F insulation for a temperature rating of 155 degrees C, and provide stall torque from 75 to 180 Nm, operating speeds up to 2,500 rpm, and power up to 19.8 kW, with bearing lifetime rated to 20,000 h. These motors

are RoHS- and REACH-compliant, UL listed and carry the CE mark.

"A low-cog design provides smooth performance to maximize power efficiency and improve the quality of final product, making it a particularly attractive motor solution in metal forming and processing, printing, converting, molding and alternative energy applications, among others," explains Matthews.

All AKM series motors feature a robust one-piece housing with potted windings for maximum wire isolation and excellent heat dissipation, resulting in robust performance and long life in even the most demanding application environments. Market-standard high resolution feedback options for high-performance/precision or rugged environments are available, including Endat, BISS, Hiperface, and resolver option, among others. AKM motors are available for low or high speed (to 8,000 rpm) applications, with windings that can be applied to all standard global voltages including 75 VDC, 120, 240, 400 and 480 VAC. A number of options are available to satisfy wide ranging application needs including a reinforced bearing to handle higher radial force, a sealing option to achieve IP67 protection at the flange, as well as varied connectivity

and mounting options.

For truly unique applications where the more than 200,000 standard AKM offerings don't meet the requirements of a given application, the Kollmorgen engineering support team can work alongside OEMs to customize a solution to satisfy their needs. AKM motors can also be combined with Kollmorgen's AKD servo drives. The AKD series ensures plug-and-play commissioning for instant, seamless access to everything in the machine. No matter what the application demands, AKD offers industry-leading servo performance, communication options and power levels, all in a smaller footprint than competitive options.

For more information:

Kollmorgen
201 Rock Road
Radford, VA 24141
Phone: (540) 633-3545
www.kollmorgen.com



Mayr Brake

INCREASES SAFETY
OF VERTICAL AXES

If there is a danger of falling loads on vertical axes in areas where personnel have to work, additional measures must be taken to minimize the risk of accidents. The brake specialist Mayr Power Transmission has developed brake systems capable of providing safety in any critical situation occurring during vertical axis operation. Vertically-moved masses, particularly when they are heavy parts such as motors or gearboxes, become a serious safety hazard if, on power failure, their movement is inadvertently accelerated or if they drop uncontrollably.

Mayr Power Transmission offers the ROBA-topstop, a modular construction brake type series with individual brakes and redundant dual-circuit brake modules for the prevention of any critical danger situations which can occur during vertical axis operation and which are defined in the DIN EN 954-1, Categories 1-3. The aspect of safety was not the only target criterion during development of the ROBA-topstop. The constructional conditions for drive elements in vertical axes were also considered carefully. Due to their adapted flange dimensions, ROBA-topstop brakes can be integrated problem-free into pre-existing constructions

between the servomotor and the counter flange.

The modular assembly is flexible enough to allow many different designs, for example with a shaft; with a hollow shaft; with a flexible coupling; with an additional safety clutch for torque limiting or with two individual brakes. Using a ROBA-topstop brake system with a hollow shaft and an integrated, insertable shaft coupling means that the separate compensation coupling and the coupling housing usually necessary are no longer needed. A driveline with this brake

system is only minimally longer than the usual axis with servomotor and shaft coupling for connection to a spindle or to a gearbox shaft. ROBA-topstop designs with shafts are principally conceived for installation between the servomotor and the hollow shaft gearbox.

For more information:

Mayr Corporation
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www.mayrcorp.com



Balluff

ADDS I/O TO IO-LINK

As part of its expanding package of control connectivity solutions, Balluff has introduced a full line of I/O Hubs to their IO-Link device offering. Balluff understands that one size does not fit all, and different applications require different housing materials. For this

reason, Balluff offers a large range of IO-Link I/O hubs, ranging from M8 to M12 with plastic or metal housing. When adding IO-Link I/O Hubs in an application, the hub usually replaces a standalone module that is connected directly to the bus network. Most of these standalone modules have a certain level of diagnostics that assist in fast troubleshooting and aid in reducing downtime. Balluff's line of IO-Link I/O Hubs are offered with or without



diagnostics, thus giving your application the same level of short circuit and overload diagnostics as the network connected standalone modules. The M8 Hubs range from four to eight ports, with three or four pole varieties. The M12 Hubs are all eight port with single or dual input versions, as well as a configurable model with output capabilities.

For more information:

Balluff Inc.
8125 Holton Drive
Florence, KY 41042
Phone: (859) 727-2200
www.balluff.com

AutomationDirect

EXTENDS INDUSTRIAL SENSORS SERIES



AutomationDirect has extended its offering of industrial sensors to include the PEW series of stainless steel DC proximity sensors. The shielded eight mm sensors are flush-mountable and feature a two mm sensing range. Available with either M8 or M12 quick disconnects, they are equipped with LED status indicators visible at wide angles, and have PNP outputs. PEW series inductive proximity sensors are priced at \$45. Also added are the LF40 series rectangular inductive DC proximity sensors. Two

shielded and two unshielded models are available with 20 mm or 35 mm sensing ranges. The rectangular plastic PNP sensors provide either normally-open or normally-open/normally-closed complementary outputs. LF40 series sensor prices start at \$39.

For more information:

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www.circlegear.com

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Mico

INTRODUCES HYDRAULIC-OVER-AIR RELAY VALVES

Mico, Incorporated recently introduced its hydraulic-over-air relay valves. The valves are designed to convert hydraulic modulated input pressure to a proportional output air pressure. The new relay valves are suitable for various on- and off-highway applications, such as controlling an air-braked trailer with a hydraulically braked towing vehicle that has an air power source. The system originates with a hydraulic vehicle component, such as a master cylinder or hydraulic control valve, which delivers a given hydraulic input pressure. This input pressure sends a pilot signal to the relay valve in order to modulate air brake pressure on the other end. Mico offers three different hydraulic-over-air relay valve designs: single, dual and tandem. The single input design provides one hydraulic pilot port to control modulated air braking pressure. The dual input features two independent ports, either of which can accept pilot pressure;



when pressure is applied to both ports simultaneously, the controlled air braking pressure ratio increases proportionally. The dual input ports can be set up for different pressure ratios, making the dual design a good fit for certain steering assist applications. Functionally similar to the single design, the tandem input provides redundancy by utilizing two independent pilot pressure ports. This enables hydraulic pilot pressure to be applied to either port while allowing the pressure ratio to remain the same. The new relay valves can accommodate a maximum air pressure of 150 PSI and

maximum hydraulic pressure of 2,000 PSI. The valves can be adjusted to operate at anywhere from a 3:1 to 21:1 hydraulic-to-air-pressure ratio. Maximum operating temperature for the valves is 250 degrees Fahrenheit.

For more information:

Mico Incorporated
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www.mico.com

Marsh Bellofram

LAUNCHES SPM SERIES



The ATC Diversified Electronics division of Marsh Bellofram Corporation has recently launched the SPM series, a

dual function alarm and relay, designed to monitor shaft seal and stator temperature of a submersible pump motor, providing early warning of machinery failure to reduce downtime and maintenance costs. The SPM series is designed to operate from a 120 VAC supply voltage, with reliable operation over 10 million continuous duty cycles. The series detects leaks by either resistive float switch or a pair of conductive probes installed in the seal cavity, while over-temperature is detected by a normally-closed low-temperature switch that is mounted on the stator, with LEDs that indicate green for "normal" and red for "leak" and "over temperature" condition values. The SPM series also incorporates the use of a bi-stable relay which can retain its position

during power failures or energy surges. The relay automatically resets following leakage detection. Sensor voltage is 12 VDC at 50 to 60 Hz. Units are UL listed and include a 10-year comprehensive product warranty.

For more information:

Marsh Bellofram
8019 Ohio River Blvd.
Newell, WV 26050
Phone: (304) 387-1200
www.marshbellofram.com

Haydon Kerk Magnetic Encoder Technology



Haydon Kerk Motion Solutions Inc., a manufacturer of precision linear motion products, offers an integrated magnetic encoder available on the 1" 25000 Series linear actuators. The extremely compact and fully enclosed incremental encoder utilizes solid state technology and includes both analog detection circuitry and full signal processing from a single chip. When combined with the Haydon can stack linear actuator, suitable position feedback can be obtained for use in critical applications including medical equipment, analysis devices and robotics. The 64-line quadrature encoder system utilizes a high energy neodymium magnet and provides an eight-bit digital resolution resulting in a total of 256 output pulses per revolution. The encoder provides 90-degree phase shifted A/B output channels along with a single index pulse for every complete shaft rotation. The encoder circuitry samples angular position at 10,000 samples per second for an output update every 100 microseconds. The 256 pulse magnetic encoder is an adequate replacement for optical encoders and is virtually immune to vibration, shock, dust and contaminants. The encoder can be operated using either a 3.3 V or 5 V input voltage. When combined with the Haydon 25000 series linear actuator, a robust, compact linear motion package is created.

For more information:

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product news

Boston Gear Motors

PROVIDE LONG-LASTING PERFORMANCE



Boston Gear has recently launched a new line of stainless steel motors which are value engineered for washdown performance. Exterior construction consists of 300 Series stainless steel housing, end bells, output shaft and conduit box. Motors are UL/ULC certified and conform to 2007 EISA efficiency standards. All units feature Class F insulation, Class B rise at 1.15 service factor, and epoxy-encapsulated windings. Internally-locked bearings eliminate unwanted axial movement. Other features include double lip shaft seals, rubber gasket seal on conduit cover, O-rings between end bells and housing, and smooth exterior with no

mounting feet.

Stainless steel 230/460VAC, three-phase, 60 Hz (50 Hz) motors are totally enclosed and are available in seven sizes ranging from .5 hp to 3 hp. Fan-cooled and non-ventilated models are offered. These stainless steel motors are designed to provide long-lasting performance in harsh washdown environments where high-pressure caustic solvents and cleaners are utilized to help meet FDA bacteria and food contamination guidelines. Motors are suitable for food processing and packaging applications including dairy, meat and poultry, bakery and snacks, fruits and vegetables and candy.

For a complete washdown power transmission kit solution, these new stainless steel motors can be easily mounted to Boston Gear 700 Series stainless steel speed reducers.

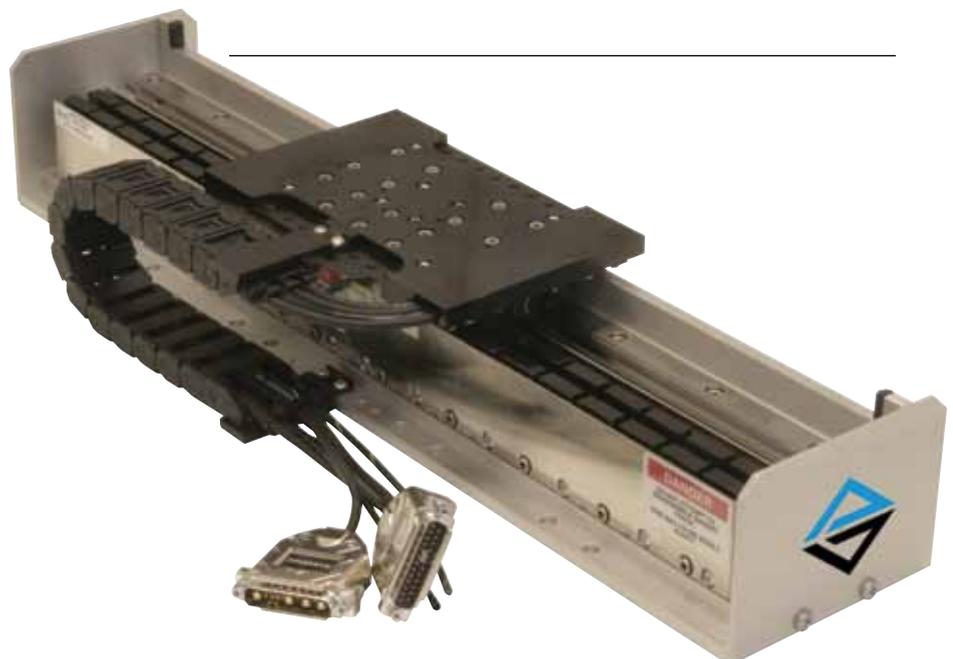
For more information:

Boston Gear
701 Carrier Drive
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Phone: (704) 588-5610
www.bostongear.com

Aerotech Actuators

BOAST HIGH PERFORMANCE,
LOW MAINTENANCE

The ACT by Aerotech is a high performance, cost-effective linear-servomotor-driven actuator that is faster and more accurate than a ball screw or belt-drive without the costly, time-consuming maintenance ball screw or belt-drives typically require. Because the ACT is an integrated,



assembled mechanical system, it also eliminates the design complexity and guesswork in choosing and assembling individual components. It is suitable for applications including assembly, pick and place machines, electronic assembly and qualification, packaging, vision inspection, dispensing, life sciences, image scanning and processing and ink jet printing.

Aerotech's high-power, cog-free linear motors drive the ACT series to accelerations of 5 g and a top speed of 5 m/s, providing the solution to increase throughput. The stiff mechanical structure gives dynamic performance and reduces settling times, according to the company's press release. The non-magneticforcer coil provides high force with zero cogging for smooth velocity and position control, and can be utilized for applications requiring outstanding contour accuracy and smooth velocity profiling. The linear motor has zero backlash, no windup, zero friction and outstanding system responsiveness, and the magnetic field is totally self-contained within the U-channel design.

Many high-performance applications cannot tolerate the stray magnetic fields generated by flat motor magnet tracks. Noncontact linear optical encoders with micron-level repeatabilities are standard on all ACT series actuators. Either a line-driver output or amplified sine-wave output encoder is available for maximum flexibility. Optional factory calibration further increases standard accuracy and repeatability.

Aerotech manufactures a wide range of matching drives and controls to provide a fully integrated and optimized motion solution. ACT actuators consist of noncontact linear motors and encoders, making them virtually maintenance-free. For applications requiring a complete solution, a cable management chain is provided. For OEM or applications requiring user-defined cable management, both cable pigtail and bulkhead termination options are available. Moveable limits

allow easy adjustment of usable travel for varying applications.

For more information:

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