

R+W

INTRODUCES STE SAFETY COUPLING SERIES

R+W has recently narrowed the gap between its classic precision and industrial drive safety couplings with the new STE series. Featuring the well proven technology of the ball-detent safety element system, which disconnects drivelines within milliseconds of a torque overload event, this version is more cost effective and available in smaller sizes than the standard ST product line of the past.

The STE series is available in three sizes and can be configured for disengagement torques between 200 Nm to 14,000 Nm. Customers can individually adjust the safety elements to fine tune the disengagement torque level, or change the number of safety elements to make large adjustments to the disengagement torque range even after installation. This particular model is available in the full disengagement function system, and comes with an optional ring for easier re-engagement.

Unlike the previous ST2 design of elastomer safety couplings, this version makes use of R+W EK elastomer couplings, with a more compact polyurethane insert, saving space and cost for applications without severe vibration.



The elastomer inserts, which can be replaced in the field, provide some vibration damping and compensation for misalignment. Shore hardness is selected by the customer based on the requirements of the application.

For more information:

R+W America
 Phone: (630) 521-9911
<http://www.rw-america.com/products/industrial-drive-couplings/safety-couplings/ste.html>



Torque Systems

RELEASES NEW FAMILY OF BRUSH DC MOTORS

Torque Systems, a division of SL-MTI, has developed a high performance family of three new size 15 permanent magnet DC motors. They are used in a wide range of applications that includes semiconductor processing equipment robots UAVs and medical devices. The longer stack size 15 DC motor (model MS1525-A) reaches a rated torque value of 10 ounce-inches at 6,700 rpm. Rated power output is an impressive 50 watts out. Shorter models MS1509-A and MS1515-A provide 30 and 40 watts out respectively. All models have a top speed of 10,000 rpm. The theoretical acceleration performance ranges from 45 K radians per second squared up to 65 K radians per second squared. Peak torque reached 77.8 ounce-inches on the MS1525-A model.

For more information:

Torque Systems
 Phone: (800) 669-5112
www.slmti.com

MMI

IMPROVES AND EXPANDS O-RING PRODUCTION

Michigan Manufacturing International (MMI) announced that it recently added new stainless steel and Inconel seal ring production to its impressive list of capabilities. With this new service, technicians can now provide precision welding, making MMI a one-stop shop for original equipment manufacturers (OEMs).

Stainless and Inconel O-rings from MMI can be used for applications such as pressure control valves where non-metallic seals are not suitable or will not be reliable due to factors such as temperature or pressure. These long-lasting rings fabricated by MMI are made so the seam is indistinguishable from the rest of the ring. In addition to the standard profiles, MMI can design seals to meet the customer's specifications. Stainless and Inconel rings are used in various applications in the oil and gas, chemicals, plastics, aerospace, and semi-conductor industries.

Jacob Prak, CEO of MMI, mentioned that the company is growing and evolving to meet its customers' needs. "Our goal is to design the most effective and highest quality solutions for our customers. Adding this new service helps ensure that we can provide the best solution for the intended use, customized according to the specific application. Ring making is one more way that we can partner with our customers to design, manufacture, and deliver solutions to challenging equipment situations."

For more information:
Michigan Manufacturing International
Phone: (800) 677-0504
www.michmfg.com



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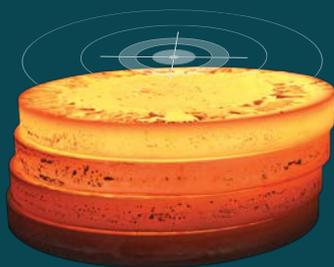
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Mayr

DEVELOPS NEW DISENGAGING TORQUE LIMITER

With their EAS-reverse, Mayr Power Transmission has developed a new, disengaging torque limiter on which all functional processes can be automated through the drive. It is easy to handle, permits long run-out times and re-engages again through slow backwards rotation. A housing also makes the clutch resistant to dust or spray water — and thus ideal for use in heavy mechanical engineering.

In case of rough operating and ambient conditions such as dust, dirt, spray water, heat or cold, the drive lines, particularly in heavy mechanical engineering, are frequently encapsulated and therefore hard to access. But these machines in particular require reliable overload protection. Therefore, Mayr has now developed with the EAS-reverse a robust, disengaging torque limiter which can withstand both high loads and which automatically re-engages — which is ideal for drives without access possibilities for re-engagement.

On the EAS-reverse torque limiter, all functional processes can be automated via the drive alone. In case of overload, if the torque exceeds the value set on the clutch, a patented disengagement mechanism separates the input and output almost residual torque-free with high switch-off and repetitive accuracy. The kinetic energy from the rotating masses stored in the system can slow down freely. After responding, the clutch can withstand long drive run-out times. Through slow reverse rotation, the EAS-reverse torque limiter re-engages automatically without the use of pneumatics or hydraulics.

The new EAS-reverse torque limiter transmits the torque with exceptionally low wear (<0.05°) and features hardened functional parts. It is easy to handle and represents adaptable,

branch-optimized solutions with its numerous versions and additional characteristics. In this way, for example, the combination with an elastomer coupling permits easy separation of the drive line by loosening a few screws, without the motor or gearbox having to be displaced.

In addition, applications with load-holding outputs can also be combined with a brake disk on the output side. The EAS-reverse can also easily be integrated into a solid housing with standard IEC or NEMA dimensions. It is thus protected against dust and spray water



and resistant to adverse ambient conditions. The new torque limiter already covers the first three construction sizes with a torque range from 80–2,500 Nm, and this range is now to be extended with a fourth construction size up to 5,000 Nm and a bore diameter of up to 100 mm. The EAS-reverse provides permanent protection for machines and protects them reliably against overload damage, thus ensuring operational safety and maximum productivity.

For more information:

Mayr Corporation
Phone: (201) 445-7210
www.mayrcorp.com

Huco Dynatork

AIR MOTORS BRING EFFICIENCY TO
HAZARDOUS APPLICATION AREAS

Huco Dynatork 3 air motors bring efficiency, performance and versatility to hazardous application areas. When you require a low cost, efficient and reliable motor for applications in a sensitive environment, the Dynatork 3 air motor from Huco presents an optimum solution.

Designed for efficient, spark-free operation, the Dynatork 3 air motor offers simplicity and high performance even under harsh duty cycles. Affordable, compact and easy to maintain — such benefits have seen Dynatork 3 air motors utilised in the wood, hydrocarbon, paper, paint, food processing and even stealth industries.

The immediate benefit of selecting an air motor is that it offers spark-free operation without resorting to an expensive shielded ATEX-rated electric motor. In hazardous environments it's important to reduce the risk of sparks wherever possible, so specifying a motor that operates entirely on compressed air is the recommended and most cost effective solution. As a result, the Dynatork 3 air motor is compliant for use in ATEX Zone 1 applications.

The air motor incorporates Huco's unique free-floating piston technology, which minimizes air leakage past the piston. This ensures that the vast majority of the energy present in the compressed air is converted into motion, resulting in air consumption up to 80 percent less than an equivalent vane air motor. This of course translates into substantial energy savings for end users, even during heavy operation.

Air is supplied at up to 100 psi to each of the three pistons through an integral rotary valve, providing maximum torque from start-up. The motor can also be fitted with torque sensors to provide closed loop feedback for accurate position control without the need for expensive electronic controls.

For more information:

Huco Dynatork
Phone: +44 (0) 1992 501900
www.huco.com



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IKO

MINIATURE BEARING LINE OFFERS CUSTOM DESIGN OPTIONS

IKO's standard miniature bearings line is now available in rail widths from 1 mm to 25 mm with wide-bearing options as high as 42 mm. They are also available in up to four different lengths—compact, standard, long and extra-long in many sizes.

The variety of widths and bearing lengths enables designers to easily tailor a miniature bearing system to specific payload requirements. IKO's largest miniature linear bearings with the larger bearing lengths can handle much higher dynamic and moment loads than expected from a miniature unit. The largest miniature models for example, have dynamic load ratings in excess of 16,600 N (LWLG25) and moment load ratings over 320 N•m (MLFG42) in the roll axis.

To ensure its miniature bearings keep running smoothly, IKO has integrated its C-Lube long-term lubrication system into many units, which



offers a controlled release of lubricant over 20,000 km of operation. C-Lube technology can be integrated into bearings as small as 3 mm wide.

For more information:

IKO
Phone: (800) 922-0337
www.ikont.com

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Zero-Max

OFFERS CUSTOM CD COUPLING DESIGN FOR CHALLENGING MOTION SYSTEM APPLICATIONS

Connecting motion components over a long space requires multiple engineering design disciplines to manufacture a coupling that maintains smooth operation and avoids rotation through the system's axial natural frequency (ANF).

This Zero-Max Custom CD Coupling design is one of many different ones available for difficult and challenging motion system applications. The 80-inch floating shaft coupling pictured is designed around Zero-Max's CD Composite Disc technology bringing to bear several engineering disciplines. This coupling design was optimized such that the operational speed (2,600 rpm) is below the ANF point. That means that the coupling will never go through the critical speed and always operate in a sub-critical speed.

Key to this design is the accurate prediction of the axial natural frequency point based on Zero-Max's composite flex disc performance. Connecting

to these custom discs are 316 stainless steel hubs passivated for extra cleanliness required for the application. A three-inch diameter 80-inch long thin-walled alloy tube connects the two coupling assemblies at each end for mounting in the motion system.

The engineering disciplines Zero-Max applied to this and many other custom coupling applications include: metallurgy and alloy material design, composite disc formation, disc deflection control, precision fastening of components and dynamic coupling balancing. These engineering disciplines required precise control of tube stiffness, stiffness properties of the composite disc and overall weight of the coupling assembly.

(Note: Often a custom coupling can be designed so that the ANF point is above the particular application's maximum speed. When this is not possible



and the desired operational speed exceeds the ANF band, it is possible to design the coupling so that the ANF band will be within a speed range not critical for that application. The motion system operator simply programs his system to run through the ANF band to the desired operating rpm range. This ensures smooth and consistent performance where needed.)

For more information:

Zero-Max, Inc.
Phone: (800) 533-1731
www.zero-max.com

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AutomationDirect

EXPANDS LINE OF UNMANAGED ETHERNET SWITCHES

AutomationDirect's line of Stride Unmanaged Industrial Ethernet Switches now offers even more connectivity choices for Ethernet applications. The new Stride SE2 series DIN rail mountable switches offer up to 16 ports and include models with Gigabit Ethernet and SFP options; select models are IP65 rated to withstand washdown environments. These Ethernet switches feature a "plug and play" design with no user setup required and immediately start operating once powered up and connected to the network.

Starting at \$75.00, SE2 series switches offer a wide operating temperature range and are available with a 12-48

VDC or 18-30 VAC redundant power input, reverse polarity protection, and IP30 metal cases.

Stride Ethernet switches, designed for the industrial environment, survive extreme temperatures, as well as noisy industrial power. Meeting hazardous location requirements (Class I Div. 2), and the IEC60068-2 standard for vibration resilience, the Stride switches provide years of reliable connectivity in applications too tough for commercial grade switches.

For more information:

AutomationDirect
Phone: (800) 633-0405
www.automationdirect.com



Siemens

SIMPLIFIES MOTION CONTROL TASKS WITH TECHNOLOGY CONTROLLER

Siemens has matched its new advanced Simatic S7-1500 T-CPU controller with its popular Sinamics servo drive system, simplifying complex motion control tasks.

The matched controller and drive system are integrated into Siemens TIA Portal engineering framework, making them suitable for electronic gearing, camming and other advanced motion control applications. Additionally, the new controller is suitable for safety applications, eliminating the need for multiple CPUs for standard, safety and

motion control automation tasks.

An easy-to-use integrated Cam Editor simplifies configuration, optimization



tion and diagnostics of variable, position-dependent transmission ratios between leading and following axes. The cams can be changed or readjusted for product changes, even while the machine is running.

Siemens Digital Factory (DF) offers a comprehensive portfolio of seamlessly integrated hardware, software and technology-based services in order to support manufacturing companies worldwide in enhancing the flexibility and efficiency of their manufacturing processes and reducing the time to market of their products.

For more information:

Siemens Industry Inc.
<http://sie.ag/2i67fYZ>

Heidenhain

INTRODUCES LINEAR AND ANGLE ENCODERS AT PHOTONICS WEST

Heidenhain displayed precision measurement components for the photonics industry at the Photonics West trade show in San Francisco, California from January 28–February 2. Heidenhain’s linear and angle encoders were highlighted.

A feature on the linear side was the LIF 400 1Dplus scale from Heidenhain that is a uniquely innovative two-dimensional encoder. It is frictionless with gratings in two dimensions, and includes models featuring two or three scanning units for simultaneous measurement of both the X and Y directions. The scale allows measurement of linear guiding and thermal drift errors during movements of a stage or machine, allowing the processing and immediate compensation of guiding and thermal drift errors.

On the angle encoder side, Heidenhain’s newest MRP 5000 angle encoder was on display. This is the result of a development of a new product family that is a merger of Heidenhain bearing and an-



gle encoder technologies. This unique module series contains bearing sets not conventionally available, and are able to be integrated with various encoder types to yield highly stiff modules that are easy to install. This new component family represents a successful merging of the key requirements for precision rotary axes used in metrology, calibration devices, automation technology, micro machining, and the semiconductor industry.

For more information:

Heidenhain Corporation
 Phone: (847) 490-1191
www.heidenhain.us

Regal Beloit

LAUNCHES NEW FEATURES FOR SEALMASTER BALL BEARING

Regal Beloit Corporation has announced it has launched the Time Saving Axial Groove in Bore feature to the SealMaster Large Bore Performance Gold Line Mounted Ball Bearing. The new feature is available in both a medium 2⁷/₁₆" and up and standard 2¹/₁₆" and up shaft sizes, and the Time Saving axial groove in the inner ring bore allows for easier bearing re-

moval. This design provides clearance from the burr created by the setscrew used to lock the bearing to the shaft, which makes removal difficult and can cause damage to the shaft during removal. This feature has no impact to ball path roundness, load and speed rating, strength or bearing performance.

“Through years of customer discussions, on-site installation and removal observations, it was evident that the burr created by the setscrew had a significant impact on the time required to remove mounted bearings,” said Ian Rubin, director of marketing, bearings, at Regal Beloit Corporation. “With time being a very valuable commodity in plant operation, we recognized the importance of developing a solution that reduces downtime and lost production, in turn potentially saving thousands of dollars.”

In addition to the time and related costs saved during bearing removal, the design also reduces damage to the shaft. A reduction in damage to the shaft not only then reduces the cost associated with repairing the shaft before reuse, it can eliminate the cost of having to replace the shaft.

For more information:

Regal Beloit Corporation
 Phone: (859) 342-7900
www.regalpts.com



HMB, Inc.

OFFERS T12HP DIGITAL TORQUE TRANSDUCER

HBM, Inc. has introduced the new T12HP digital torque transducer. The T12HP supports dynamic measurements in the test stand and provides precision, particularly in terms of temperature stability. Temperature influences have virtually no impact on the measurement result, due to a TC0 value of 0.005%/10K. In addition, the resulting FlexRange function provided by the T12HP allows users to take a closer look at any partial range of the full nominal (rated) measurement range.

The T12HP, therefore, meets the market requirements for increasingly flexible and efficient test cycles; for example, in the development of ever more energy-efficient motors. Due to the T12HP's integrated and unparalleled high basic accuracy and the resulting FlexRange function, users can run more detailed analyses in any partial range from the full measurement range—as if looking through a magnifying glass. Unlike other technologies used in the market (“Dual Range”), different measurement tasks can be performed using a single characteristic curve. Switching to a second measurement range is a thing of the past with T12HP. Moreover, test bench setup times are reduced, and besides, utilization as well as the number of tests can be increased.

CAN, Profibus, EtherCAT, and Profinet interfaces ensure easy integration of the T12HP torque transducer with different test stand concepts. The T12HP measurement flange is in-

stalled directly in the drivetrain and is, therefore, maintenance free. The transducer is available with different nominal (rated) torques, ranging from 100 Nm to 10 kNm.

The T12HP digital torque transducer is the successor of the “T12” model that was introduced 11 years ago and takes



over its role as HBM's flagship product range of torque sensors (“HBM smarttorque”). As the first company to provide a measuring flange and fully digital torque sensors, HBM has continuously strived to achieve higher levels of innovation in torque measurement for decades so that users benefit from meaningful data for further improvement in drives.

For more information:

HBM, Inc.
Phone: (800) 578-4260
www.hbm.com



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www.mikipulley-us.com



Curtiss-Wright

INTRODUCES OFF-HIGHWAY INNOVATIONS AT IFPE 2017

Curtiss-Wright's Industrial division has announced its attendance at the International Fluid Power Exposition (IFPE 2017) in Las Vegas. The show, which is co-located within the CONEXPO-CON/AGG 2017 exhibition, is an ideal opportunity for Curtiss-Wright to showcase the latest innovations from its product brands of Arens Controls, Penny & Giles and Williams Controls.

Commenting for Curtiss-Wright, Senior Vice President and General Manager of the Industrial division, Kevin Rayment says: "This is one of the few industry trade shows in North America where most of our legacy product brands will be exhibited together. Products from the division's diverse portfolio are suitable for a wide range of applications within off-highway specialty vehicles, from wheeled loaders, skid-steer loaders, excavators, compactors, heavy haulers and articulated dump-trucks, to telehandlers, mobile cranes and aerial work platforms."

The product brands within Curtiss-Wright's Industrial division have extensive experience in designing and manufacturing solutions for the monitoring and control of vehicles operating in extreme conditions, including applications throughout the construction and off-highway sectors.

Arens Controls products will include by-wire shift selectors for automatic and automated manual transmissions; and off-highway mechatronic controls including mechanical lever shifters and hydrostatic lever controls. Key products include electric and hybrid vehicle power management systems such as traction inverters, voltage converters and inverters and power distribution modules.

The Penny & Giles branded products will include finger- and hand-operated, multi-axis joystick controllers, position sensors and examples of custom



HMI systems demonstrating the growing capability for integrated operator controls.

Finally, the Williams Controls brand will be represented by a range of floor-mounted electronic throttle controls, including suspended and rocker pedal versions; with complementary systems that include lever-operated and rotary electronic hand controls and new Hall-effect rotary position sensors.

For more information:

Curtiss-Wright Corporation
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