Regal INTRODUCES TURNKEY RETROFITS OF LIVE-ROLLER CONVEYOR

Regal Power Transmission Solutions recently introduced a turnkey retrofit program that transforms live-roller conveyor for sustainable, high-uptime performance.

Combining its System Plast modular plastic belt and chain, Hub City or Grove Gear drives and long-lived Sealmaster material handling bearings, Regal provides single-source or à la carte capabilities for on-site evaluation, consulting, layout design, validation and installation. The variety of conveying surfaces available from System Plast creates new options for every material handling need from single bottles to cases, people and even cars.

“Live-roller conveyor is old technology that has many weaknesses compared to recent advances in plastic chain and belt,” said Mike Suter, vice president for Regal Power Transmission Solutions. “Live-roller is noisy with pinch points from day one, and gradually turns into a downtime and maintenance problem with dead zones, belt wear, tracking and replacement, and complex snub roller center drives. Converting a system makes economical use of existing conveyor frame, while the new solution reduces product damage, part count, maintenance, downtime, noise, and energy consumption.”

System Plast engineers a variety of conveyor belt and chain for low-maintenance, high-efficiency performance, utilizing proprietary polymer formulations to suit application requirements. Showcasing its flexibility at Promat, Regal demonstrated its directionally unlimited roller top belt that can align products to any angle, divert them, sort to multiple lanes, rotate, combine, or gap them — all done softly without contact.

System Plast 2253RT roller top belt simplifies conveyor design and installation with its independently controlled moving surface that handles large or small, flat-bottom products, moving them on half-inch (12.5 mm) balls spaced on one inch (25.4 mm) centers. It supports loads up to 617 lb/ft (9,000 Nm/m) or 1.1 lb/ball (0.5 kg/ball). The belt’s non-contact product manipulation eliminates impact and abrasion damage from pushers, as well as the need for mechanical adjustment or changeovers for conventional diverters or guides.

System Plast heavy duty and extra heavy duty plastic belts provide a non-skid, energy efficient conveyor surface for moving walkways, automotive assembly lines, car washes, and general material handling of heavy loads, such as barrels, drums, kegs and pallets. The belts handle loads up to 5,400 lb/ft and 7,800 lb/ft (80 kN/m and 115 kN/m), respectively. Both styles are ideal for moving assembly line floors where the belt’s non-skid, solid surface protects against slips and prevents tools and small parts from being trapped. The belts’ design allows pusher bars to be attached, removed or replaced by the user at any time without disassembly of the belt, using molded-in drilling locators. Both belts utilize a patent-pending retention clip for the hinge pin. It can be installed or removed from either side of the belt with simple tools, as well as re-used. The molded-in non-skid surface of hexagonal dimples is ideal for people movers, offering a high coefficient of slip resistance under oily or dry conditions.

Hub City High Efficiency Right Angle (HERA) reducers are the 21st century replacement of industrial worm-gear drives, providing 90% efficiency in all ratios for up to 40% reduction in energy requirements. Torque-dense with double the capacity of worm drives, HERA drives reduce motor size requirements, as well as the physical size of the drive package. HERA reducers save up to $550 per year with each increment of motor horsepower for rapid payback, and they are warranted for three years. Wide torque capacity and modular shaft, base and flange components allow just four sizes of HERA reducers to interchange with worm reducers from 1.75” (44.45 mm) to 6” (152.4 mm) center distance, reducing inventory requirements. Maximum torque ratings for the four sizes are 1,100, 2,600, 4,500 and 8,500 in-lbs (124 Nm to 960 Nm). The smallest and largest HERA reducers are available in stainless steel, and packaged drives with Marathon or LEESON motors are available as well.

Grove Gear Bravo gear reducers feature a lightweight, single-piece aluminum housing that is vent-free and protected with high-temperature nitrile output seals. Bravo reducers weigh as much as two thirds less and are one-third smaller than cast-iron designs. Interchangeable with drives commonly found in material handling and packaging systems, Bravo reducers are designed for frequent reversing and start-stop cycles with oversized high-speed bearings and a bronze alloy worm gear centrifugally cast onto an iron hub for maximum strength and lubricity.
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Bosch Rexroth recently repackaged its compact series of Hägglunds industrial hydraulic motors. The new Hägglunds CA 10 to 40 motors are smaller and lighter, yet nothing has changed in their output. The new motors will extend the Hägglunds compact series downward to 10 Nm/bar. Initially, the focus for the Hägglunds CA 10 to 40 series will be injection molding machines in the plastics industry. These machines represent a large portion of the demand at 50 Nm/bar and below. Additional industries and further applications are set to follow in the near future.

To achieve the power density of the CA 10 to 40 motors, Bosch Rexroth has reduced the motor diameter while refining the internal construction. These changes have no effect on reliability or output. Full speed and full torque are available simultaneously, and both can be sustained for an indefinite time.

“In designing the series, we’ve used principles similar to those in our proven Hägglunds CBM motors,” said Bengt Liljedahl, technical product manager. “The new CA 10 to 40 motors provide the same power as before but with far less weight — up to three times less than a competitor solution.”

Further efficiency comes from the flexibility in the series, which includes four basic models and a wide variety of displacements. Fourteen configurations in small torque steps allow tight dimensioning, as well as full optimization in relation to the hydraulic pumps. The configurations are achieved using just two mechanical interfaces.

For more information:
Bosch Rexroth Corporation
Phone: (610) 694-8352
www.boschrexroth-us.com
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Asahi Intecc
OFFERING DRIVE CABLES IN EXPANDED SIZE RANGE

Asahi Intecc now offers high speed rotation stainless steel miniature drive cables for medical device and industrial applications requiring diameters less than ¼”.

The Asahi drive cable is a multi-layer, multi-filar, stranded flexible shaft with high bi-directional torque transmission properties with minimal backlash or lag. The multi-stranded shaft may be cut to short lengths for a smooth finish 1” to 2 m lengths depending on the application, and in-house assembly and coating services are offered.

The layers and size of wires, along with the way in which the wires are processed, may be customized to the degree of flexibility, torque force, rotation speed required by the application. Secondary operations for the drive cable include laser welding, soldering, crimping hypotubes, cutters, micromachined parts, housings; extrusion, heatshrink, dip, spray PTFE, ETFE, PU, PE, FEP with lubricity and bonding strength; centerless grind the distal end for multi-segmented flexibility; rotary swaging for torsional rigidity, and augering the drive cable with a stainless wire for additional cutting and aspirating capability.

A cannulated 3-layer version is also offered for applications in which material in which aspirated material is extracted through the lumen.

For more information:
Asahi Intecc
Phone: (662) 501-1302
www.asahi-intecc.com

Miki Pulley
INTRODUCES ITS JAW TYPE, HIGH RPM SHAFT COUPLING

Miki Pulley recently introduced its Jaw Type, High RPM coupling for direct sale to OEM’s in North America. This ALS-SGN model handles speeds to 22,000 RPM.

Designed for use in the main spindle shaft on CNC machining centers, the Miki Pulley ALS-SGN coupling features taper-lock hubs. This hub design ensures concentricity and rotational balance during high-speed operation.

The ALS-SGN coupling’s high-torque elastomer center element absorbs resonance and mitigates conductive heat while providing over 22,000 Nm/rad torsional stiffness. The coupling’s aerodynamic profile decreases noise while optimizing performance at high speeds.

For more information:
Miki Pulley
Phone: (800) 533-1731
www.mikipulley-us.com
Voith
SHOWCASES SERVO PUMP AT HANNOVER MESSE

Hydraulic applications with high demands on control technology are subject to fluctuating stresses during operation. To ensure cost-effective operation under these conditions, the Voith servo pump adjusts to the power needed over varying volume flows and motor speeds. This provides advantages over conventional systems, particularly in the part load range, with a high volume flow that is needed only within an operating cycle. Optimized operation reduces energy consumption by up to 70% and the total cost of ownership (TCO) of the entire hydraulic system by up to 3%. In this way, it is usually amortized within one to two years.

Featuring the motto “Saving Energy while Increasing Productivity,” Voith presented the servo pump to visitors at the Hannover Messe trade fair from the April 13-17 in Hall 23, Booth 41.

The pump system consists of three main components: the servo inverter, the synchronous servo motor and the Voith internal gear pump. The servo inverter analyzes and processes the set-point and the actual values of the pressure and speed. It controls the servo motor, which supplies the required torque in the shortest amount of time. This power is fed to the process as a function of the pressure or volume flow by way of the internal gear pump. As a result, classic valves are unnecessary, reducing the complexity of the system and the cooling capacity needed. The servo

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Power Transmission Engineering
Warner Linear Actuators

RECEIVE IP69K RATING

Warner Linear recently announced that select linear actuators and controls received the IP69K rating, the highest rating available for protection from high pressure washdowns, high temperature water and dust.

Specific Warner Linear products with the IP69K rating include B-Track K2 DC actuators and actuator-mounted controls, S-Track actuators, I-Track actuators and M-Track actuators. The new rating makes these models ideal for use in food processing, pharmaceutical, medical equipment, marine, construction equipment, agriculture and outdoor applications.

The IP69K rating insures ingress protection at 176°F/80°C (1450psi/100bars), ingress protection of solid foreign objects (including dust) and testing according to DIN 40505 Part 9 Standard.

For more information:
Warner Linear
Phone: (815) 847-7532
www.warnerlinear.com
Bell-Everman
INTRODUCES NEW SERVOSPLINE WITH BACKLASH-FREE MOTION

Bell-Everman’s new ServoSpline positioning stage offers a drive mechanism that provides backlash-free motion and simplified control.

ServoSpline is an extension of a classic rack-and-pinion design that provides simple motion commands and positions the stage in the X- and Y-axis by independently driving the two splines. It provides engineers with a stage that is easy to deploy. Technical advantages include no backlash, long wearing and easy implementation.

This positioning stage can serve in a variety of machines requiring easily-implemented motion stages. Applications include 3-D printers, automated assembly, dispensing, engraving, additive manufacturing, biomedical titer plate indexing and pipetting for diagnostic equipment.

For more information:
Bell-Everman, Inc
Phone: (805) 685-1029
www.bell-everman.com

Ruland
INTRODUCES CLAMP STYLE SHAFT COLLARS FOR MEDICAL EQUIPMENT

Ruland clamp-style shaft collars are manufactured from select materials with fine finishes, high-holding power and a precise face to bore relationship making them ideal for the demands of medical equipment. They are used for guiding, spacing, stopping and component alignment.

Medical equipment manufacturers benefit from the tightly controlled face to bore perpendicularity of Ruland shaft collars (TIR of ≤.002” or .05 mm) which is critical when the collar is used as a load-bearing face or for aligning components such as bearings or gears. Clamp style shaft collars distribute compressive forces evenly around the shaft for a tight fit and improved holding power when compared to set screw style collars. Two-piece style collars offer increased holding power, in-place installation and disassembly, and are mated throughout the manufacturing process for proper fit and alignment.
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- Shaft mounting Design
- Multi-Stage Ratios
- Modular Design

Bonfiglioli
ANNOUNCES NEW TQK SERIES RIGHT-ANGLE PRECISION GEARBOX

Bonfiglioli recently announced the new TQK series, Right-Angle Precision Gearbox version. This precision gearbox is complementary to the TQ series and offers maximum power density and features a space-saving installation solution.

TQK is particularly suitable for dynamic positioning applications for packaging and machine tooling as well as flat-bed machinery for wood working. In addition, it can carry out continuous running applications necessary for printing and paper converting.

TQK features a design in 5 sizes (060, 070, 090, 130 and 160), ratios from 6 up to 200 due to its design based on one and two reduction sizes, all this with a nominal torque from 30-800 Nm. Furthermore, its housing design and monoblock planetary carrier provide a high

Ruland shaft collars utilize fastening hardware that tests beyond industry standards for maximum torque capabilities and holding power. Shaft collars made from 303 or 316 stainless steel have hardware of like material for consistent corrosion resistance and to meet regulatory standards. All stainless steel hardware undergoes an in-house surface treatment process to prevent galling. Ruland uses a proprietary black oxide process on steel shaft collars to provide corrosion protection and ensure a smooth screw installation to increase the transfer of clamping forces from the screw to the collar/shaft interface while preventing stick-slip.

Clamp-style shaft collars from Ruland are available in 1215 lead-free steel with a black oxide or zinc plated finish, 303 and 316 stainless steel, 2024 aluminum with a bright or anodized finish, grade 5 titanium, and engineered plastic. They are machined to a fine burr free finish that complements or enhances the appearance of medical devices. Ruland offers clamp shaft collars with smooth or threaded bores ranging in size from ¼” (3 mm) to 6” (150 mm).

Shaft collars are part of Ruland’s complete product line which includes rigid couplings with precision honed bores and five styles of motion control couplings: beam, bellows, disc and zero-backlash jaw. All Ruland products are manufactured in its Marlborough, Massachusetts factory and are RoHS2 and REACH compliant.

For more information:
Ruland Manufacturing Co., Inc.
Phone: (508) 485-1000
www.ruland.com
Klüber Lubrication
INTRODUCES SYNTHETIC GREASE FOR EXTREME CLIMATIC CONDITIONS

Klüber Lubrication recently introduced Klübersynth EM 94-102, a fully synthetic lubricating grease incorporating a calcium complex soap thickener. The thickener enables formation of a resilient lubricating film that provides high resistance to mechanical-dynamic loads while enabling wear protection.

Klübersynth EM 94-102 can be used in a variety of applications under different climatic conditions due to its wide service temperature range. As a result, various friction points can be supplied with one single lubricant, avoiding confusion due to multiple lubricant selection and use.

The resistance to water and corrosion protection properties of Klübersynth EM 94-102 make it suitable for use in wet and humid areas. Examples include rolling and plain bearings for winter sport applications, like ski lift equipment and snow grooming vehicles, or industrial offshore and marine applications.

Klübersynth EM 94-102 is suitable for a variety of applications due to its wear protection, adhesion characteristics, load capacity and low-temperature behavior.

For more information:
Klüber Lubrication North America L.P.
Phone: (603) 647-4104
www.klubersolutions.com

Harry Major Machine
DEBUTS CABLE-LESS ROBOT GANTRY TECHNOLOGY AT AUTOMATE

For the first time, global automated systems provider Harry Major Machine (HMM) displayed a new cable-less robot gantry technology for the manufacturing industry during Automate 2015 in Chicago, IL. The technology is the first of its kind available in North America.

HMM is the provider in North America for the cable-less gantry, which is made by MaxRoTec Co Ltd., a manufacturer if gantry robots and a HMM partner since 2014.

“The benefits that the cable-less gantry system provides to our customers are numerous,” said H. Curtis Major, president of HMM. “The system is not only compatible with a variety of robot technologies, it also has a compact footprint and helps to lower maintenance and infrastructure expenses. The system is a speedy, reliable workhorse that maximizes productivity while reducing downtime.”

With the cable-less gantry, power is supplied to the system via an insulated trolley and collector arm and its communication is powered by an optical Ethernet transmitter using infrared light. The system can work at faster speeds than traditional cabled gantries and has the ability to handle up to five carriages on a single track.

The line configuration and programming are easy to change, since no cable-laying is required, even if the beam length is changed due to line modification. Since no cable track and guarding is needed and multi-carriages can be handled on a single track, less space is required for the system, which allows for a more compact line configuration.

The system is compatible with a variety of robot technologies such as ABB, Fanuc, Kawasaki, Kuka, Nachi and Yaskawa Motoman and can be utilized by manufacturers in various industry sectors in their operations.

HMM is also highlighting several of its other technologies at Automate 2015, including its solutions in the areas of automated parts handling systems, robot integration, industrial parts washers and assembly machines.

For more information:
Harry Major Machine
Phone: (586) 783-7030
www.harrymajormachine.com

Bonfiglioli USA
DEBUTS MODULAR TRANSMISSION SOLUTIONS AT AUTOMATE 2015

Bonfiglioli USA is highlighting several of its modular transmission solutions at Automate 2015 in Chicago, IL, including its TQK Series and new cable-less robot gantry technology.

The TQK Series is equipped with higher-rating bearings that can handle higher radial and axial loads, and the reinforced bearing options extend higher performance. Its design is also suited for S1 & S5 operation with a very reliable catalog rating and selection procedure.

For more information:
Bonfiglioli USA
Phone: (859) 334-3333
www.bonfiglioliusa.com/en-us

Power Transmission Engineering
Mesys AG
WILL PRESENT NEW SHAFT AND BEARING ANALYSIS SOFTWARE
AT HANNOVER MESSE

Mesys AG will present its new version of shaft and bearing analysis software in Hall 25, Stand A21 at Hannover Messe.

The bearing analysis software allows the calculation of bearing load distribution and bearing life according ISO/TS 16281 and is integrated in a shaft system calculation with additional possibilities like strength calculation for shafts, modal analysis and interfaces to gear calculation programs.

Mesys AG can now do a variation of clearance within bearing tolerances, consider misalignment of one bearing up to 0.1mm and use a tolerance for loading. For all cases a normal distribution is used with three times standard deviation fitting into the tolerance field.

The number of calculations can be specified by the user. A first insight is already possible with a smaller number of calculations, but for nice-looking curves several thousand calculations are needed. The probability for the results of basic reference life were calculated with 20,000 load cases, which took about 12 minutes on a standard desktop computer. For the initial calculation the maxima of the curves are close to each other, but the variance for the roller bearing B2 is much larger. The reason is the misalignment of the shaft, which has a larger influence on the roller bearing. The report will also show minimum, maximum, mean value and standard deviation for each selected result.

The default version of parameter variation is helpful to visualize the influence of one parameter on one or multiple results. The statistical version can be used if the influence of multiple uncertainties should be evaluated. Instead of manually checking multiple parameters an automatic calculation of the whole ranges can be done. In order to understand the reasons behind the results it will still be necessary to carry out additional evaluations, but the software shows the ranges of results that have to be expected.

In addition to the shaft and rolling bearing calculation software a new calculation of load distribution for ball screws is available now. Life is calculated from load distribution analogously to ISO/TS 16281. This allows the consideration of radial and moment loads in addition to axial loads. As in the other programs, an automatic parameter variation is available as well.

For more information:
Mesys AG
Phone: +41 44 4556800

Ringfeder
OFFERS NEW SERIES OF FLANGE COUPLINGS FOR HEAVY DUTY APPLICATIONS

Ringfeder Power Transmission is now offering its new RfN 5571 series of flange couplings for heavy duty applications. These couplings offer easier installation and have higher torque capacity than standard press fits.

Equipped with Ringfeder shrink discs, the RfN 5571 flange couplings can be integrated into machines without any heating or cooling, making them easily installable for engineers. They are slip fit and come with either hexagon-head or hexagon socket-head cap screws. Other advantages include no wear parts, backlash-free shaft-hub connections, high true running accuracy and elimination of additional components such as keyways or shims.

For more information:
Ringfeder Power Transmission USA
Phone: (201) 666-3320
www.ringfeder.com

AKGears
UNVEILS LATEST TOOTH ROOT FILLET OPTIMIZATION SOFTWARE

AKGears recently introduced the only commercially available tooth root fillet optimization software that defines the tooth root fillet profile to provide minimum bending stress concentration.

The software allows increasing gear load capacity by 15-25% and is applicable to involute and non-involute gears with external and internal, symmetric and asymmetric teeth. This optimization technique is presently employed in various gear drives for aerospace (Boeing), automotive (Delphi), medical devices (Abbott Labs), consumer products (Panasonic), and many other industries.

For a free, downloadable demonstration version of this program, go to www.akgears.com/software.htm.

For more information:
AKGears, LLC
Phone: (651) 308-8899
www.akgears.com