SKF

EXTENDS RANGE OF LARGE BEARINGS FOR ROLLER PRESSES

SKF has extended its range of large bearings for roller presses, with a sealed version that prolongs service life.

Its Explorer spherical roller bearings (SRBs) in the 241 series are now available up to 1,250 mm bore. This series and sizes are commonly used in high-pressure grinding rolls (HPGRs) in cement and mining industries.

"Using sealed bearings is the best way to increase mean time between failures," says Daniel Ortega, product line manager for Sealed SRBs at SKF. "It is a long-term investment that increases machine availability and reliability.

The new version — which is sealed on both sides — offers up to double the lifetime of an open bearing and have showed in tests that it reduces grease consumption up to 99 percent. In a high-pressure grinding roll, four large spherical roller bearings are usually used. During a maintenance interval of three months, normally 540 kg of grease is used for certain sizes. With SKF sealed Explorer spherical roller bearings, only seven kg of grease is needed during the same interval which reduce both cost and environmental impact.

In addition, the sealed SRB can be remanufactured twice, which further extends service life. This raises productivity and machine availability while lowering total cost of ownership.

The new bearing has been redesigned to have a higher load-carrying capacity. Bearings with a bore-diameter below 1,000 mm have an HNBR seal that is retained by a snap ring. Larger bearings use a G-ECOPUR seal that is bolted to the bearing's outer ring.

The sealed bearing can be used on its own, or as part of an SKF three-barrier solution. Typical end-use applications include the mining, mineral processing and cement industries

Roller press bearings often wear out because ineffective sealing leads to lubricant contamination. The sealed bearings overcome this problem — and this delivers several advantages:

Firstly, bearing failure relates to more maintenance interventions — which carries a higher risk of accident and injury and expensive shutdowns.

The new design also offers a maintenance benefit. Rather than stopping production for preventive maintenance of the bearing, the wear of the roller press roller determines when a service is needed.

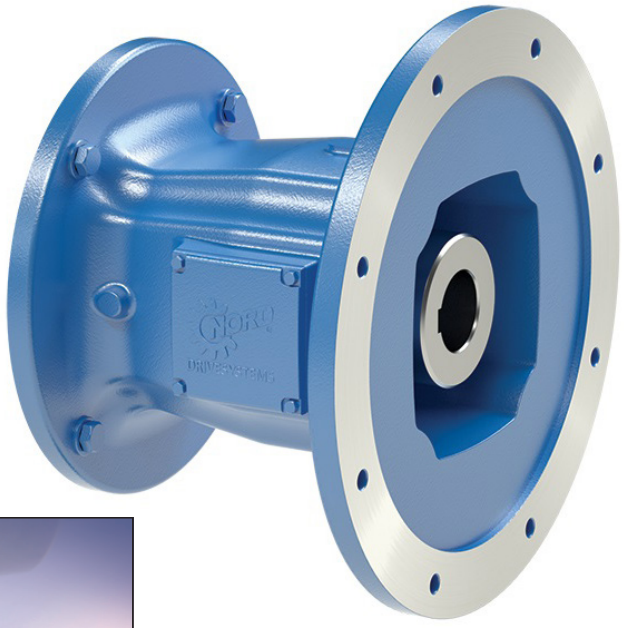
The bearings are available with short delivery times — even in the largest sizes.

www.skf.com


KRAN EF-309
ACUS
SKF

NORD

INPUT ADAPTERS ENHANCE PERFORMANCE AND FLEXIBILITY IN DRIVE SYSTEMS



NORD's newly improved NEMA and IEC input adapters offer improved mechanical and thermal performance, giving users more flexibility in designing drive systems and allowing for a broader range of application and environment-specific concepts through extended options such as integrated backstops and speed sensors. The redesigned input adapters are available NEMA sizes 250TC–400TC and from IEC sizes 160–315.

These innovative NEMA/IEC input adapters showcase improved technical capabilities — 3600 rpm max input speed, increased bearing life, and serviceability. They also come equipped with FKM seals as a standard and bearings that will last for a minimum of 25,000 hours, resulting in trouble-free operation for longer periods before requiring maintenance.

NORD's redesigned NEMA and IEC adapters are made of cast-iron and consist of a single casting that eliminates the need for adapter plates. This manufacturing process reduces the total number of parts that need to be stocked, resulting in a lower sell price and providing better overall value. The improved housing also results in a significant reduction in heat generation, nearly -20 K less temperature rise compared to the legacy version. The adapters come standard with a fail-safe ROTEX coupling and are designed for easy integration of backstops and speed sensors to meet application needs. To support commissioning and service, an inspection cover was added for quick feedback on engagement and spider condition. Permalubricators and grease drain cups will no longer be needed as the new adapters come prepared with lifetime grease as well as provisions for re-greasing if necessary, adding to the low maintenance advantages these NEMA and IEC adapters provide.

www.nord.com

IKO

INTRODUCES NEW CROSSED ROLLER BEARING

IKO International has unveiled its newest crossed roller bearing — the CRBT105A. This ultra-small, ultra-thin unit is designed to provide exceptional rigidity for space-constrained automated machine designs.

The CRBT105A features a 10 millimeter bore diameter, 21 millimeter outside diameter and a narrow width of 5 millimeters. Despite its compact size, the CRBT105A offers rigidity up to four times greater than doublerow angular contact ball-type bearings. This combination of small size and high rigidity makes the CRBT105A suitable for robots with articulating arms as well as compact surveillance cameras.

With rollers alternately crossed at right angles to each other between inner and outer rings, the CRBT105A produces a greater contact surface to allow the bearing to handle heavy or complex loads from any direction simultaneously. This orthogonal roller arrangement results in a bearing that occupies just half the sectional area of rear-mounted, 45-degree contact angle single-row roller or ball-type bearings.

The CRBT105A also features:

- Separators between cylindrical rollers to provide smooth rotation.
- Dynamic load rating of 1,120N and static load rating of 811N.
- Small coefficient of friction for high-speed rotation.
- Lightweight design.

Crossed Roller Bearings are advanced products that are ideal for space-constrained automated machine designs. In addition to the ultra-small, ultra-thin CRBT105A, IKO also offers a wide range of rigid, compact crossed roller bearings that are well-suited for machine tools, industrial robots, medical equipment, and other precision applications.

www.ikont.com

ETEL

OFFERS SHORT STROKE ACTUATORS FOR SEMICONDUCTOR MANUFACTURING

ETEL introduces two new short stroke actuators specifically for use as a unique solution for "Test and Scan" turret handlers in semiconductor manufacturing. Available in North America through parent company Heidenhain, the TUCANA ST and the AQUARIUS ST are an extension of its Z line of actuators, providing users a higher control of force repeatability and better throughput during back-end semiconductor processing, thus reducing the final cost of machine ownership.

In the back-end semiconductor applications, short move and settle times as well as smooth force limitation at low force levels are key parameters that can now be fulfilled with less compromise using these new actuators. The TUCANA ST and AQUARIUS ST have been mechanically optimized with fully symmetrical and balanced design to guarantee long-term friction behavior along with avoiding unwanted move and settle variations. Both these actuators can then cope with smaller nominal forces down to 0.5 N, improve force accuracy, drastically drop the force overshoot and increase the acceleration.

The semiconductor manufacturing processes that could commonly benefit from these new ETEL ST actuators are back-end "Final Test" turret handler applications which include device handling processes which pick up, transfer, test, inspect, mark and/or place key components.

Key specifications of the TUCANA ST and AQUARIUS ST include a total stroke of up to 10 mm, speeds up to 1 m/s, acceleration up to 40 G, and a move & settle time of 2.8 mm within ±10 µm in 6.7 ms. The TUCANA ST has a peak force of 68.4 N along with a continuous force of 12.1 N. The AQUARIUS ST has a peak force of 214 N, along with a continuous force of 31.4 N.

www.heidenhain.us

PBC Linear

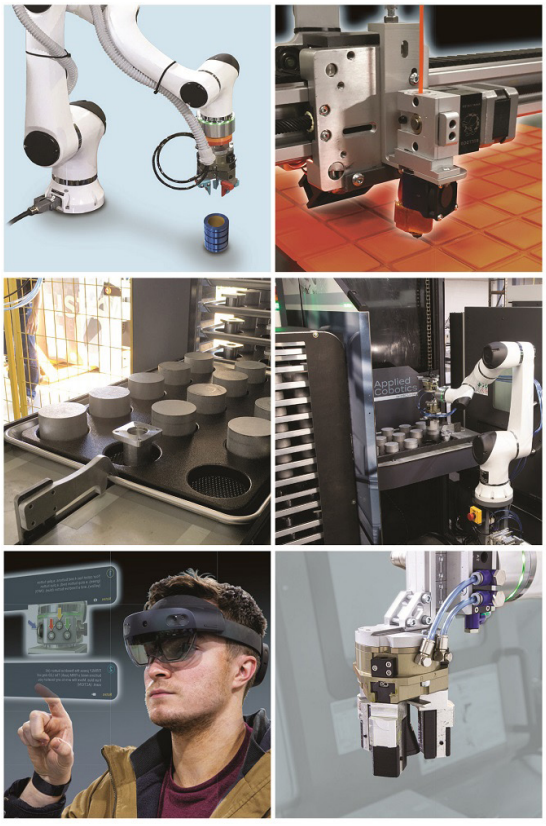
EXPANDS FACTORY OF THE FUTURE PROGRAM WITH APPLIED COBOTICS

PBC Linear continues to elevate their Factory of the Future Program with their newest venture, Applied Cobotics. Its mission aims to provide automation solutions by integrating collaborative robots (cobots), material lift systems, 3D printing, and other automation technologies into manufacturing systems.

Recent events have helped bring to light the unmet demand for skilled workers within the manufacturing industry. This labor shortage is coinciding with a rise in customer demand, creating a need for higher output with more competitive costs. In addition, shop floors are having to evolve on a dime, becoming more agile to fulfill custom orders and mitigate product fluctuations.

PBC Linear has developed its Factory of the Future Program in response to those needs. A significant focus of that program is Applied Cobotics, which looks to implement new and more efficient technologies to accommodate these new demands. This is being accomplished through relevant industry partnerships and home-made innovation that has been a hallmark of PBC Linear for decades.

www.pbclinear.com



Gates

INTRODUCES NEW HYDRAULIC HOSE SOLUTION

Gates has introduced its latest hydraulic hose, MegaSysTM MXGTM 5K, which is lighter, more flexible and more durable than a typical 5000 psi (350 bar) hydraulic hose.

The MXG 5K offers wire spiral performance in a flexible, lightweight, innovative, high-pressure hydraulic hose using Gates patented Xpiral woven spiral technology. MXG 5K was tested extensively in the laboratory and in real-world applications throughout its development, including rigorous field testing in tunnel boring, top drives, excavator and wheel loader applications.

"Our ongoing commitment to research and development has resulted in another world-first innovation from Gates. MXG 5K sets a new standard for hydraulic hose," said Mike Haen, vice president, industrial global product line management. "Combining industry-leading impulse cycle performance at these hydraulic pressures, with the XtraTuff Plus (XTP) cover and the weight and flexibility advantages, delivers a hydraulic solution for the most demanding applications. Nothing else on the market matches MXG 5K."

MXG 5K is a design-in option or replacement hose solution across a wide variety of industries, including injection molding, heavy manufacturing equipment, mining, forestry, construction, agriculture and logistics, among others. Tested to one million impulse cycles at 250 degrees Fahrenheit (121 degrees Celsius), twice the legacy industry standard for spiral hoses, and with a bend radius that is also 50% of the industry standard, MXG 5K offers truly unparalleled performance.

In addition, this new hose platform is 20% lighter, 25% more flexible and 5% more compact than legacy spiral hoses, improving the safety and ergonomics of hose installation while also enhancing the performance of machinery by reducing weight. Equipped with Gates' XTP cover as a standard offering, MXG 5K also offers 25 times the abrasion resistance of Gates' standard cover and more than 800 hours of ozone resistance to minimize downtime related to environmental conditions. As a result, MXG 5K will last longer in the factory or field, including applications in the most extreme conditions.

www.gates.com/mxt

SDP/SI

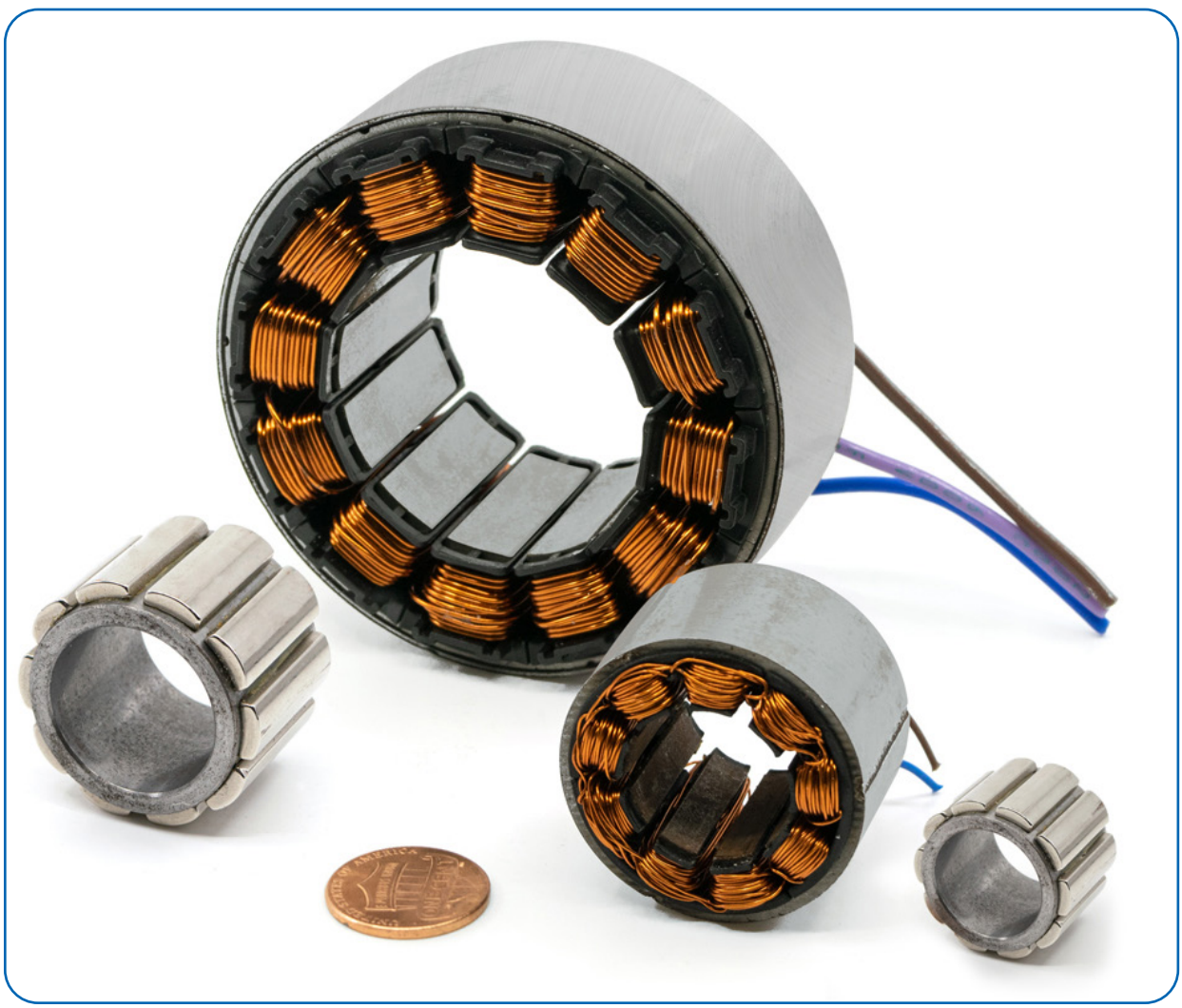
OFFERS BRUSHLESS MOTORS FOR ROBOTIC APPLICATIONS

Rapid growth in the industrial automation market is producing an urgent need for premium quality parts and services. Stock Drive Products/Sterling Instrument (SDP/SI), a leader in providing mechanical and electromechanical based design, engineering, and precision manufacturing for critical motion and power transmission applications is launching a series of Frameless Motors as a drop-in solution for robotics applications.

Designed to be pressed into a machine's housing, the SDP/SI NH1-D series Frameless Brushless Motors provide a compact, lightweight, and powerful motor solution. Available in standard sizes, 35 mm, 52 mm, 64 mm, 77 mm, and 100 mm, the frameless motors are machine wound with bondable magnet wire for superior dependability. Each motor features a large inner diameter rotor permitting easy cable management.

With their compact size the NH1-D series frameless motors fit easily into smaller machines requiring precision, high efficiency, low inertia, and high torque density. "Rated for continuous operation the frameless brushless DC motors are an ideal solution for many applications including the replacement of heavier, traditional motors by eliminating components, reducing torsional losses, decreasing weight, system inertia, and size envelope, while providing maximum speed control," said Jacques Lemire, business unit director, Motors & Motion Control. "Offering an assortment of motion control solutions that ensure accuracy and dependability the frameless motors provide an additional option to those in the robotics, industrial automation, and medical industries."

Sdp-si.com



Siemens Digital

RELEASES 2022 VERSION OF SOLID EDGE SOFTWARE

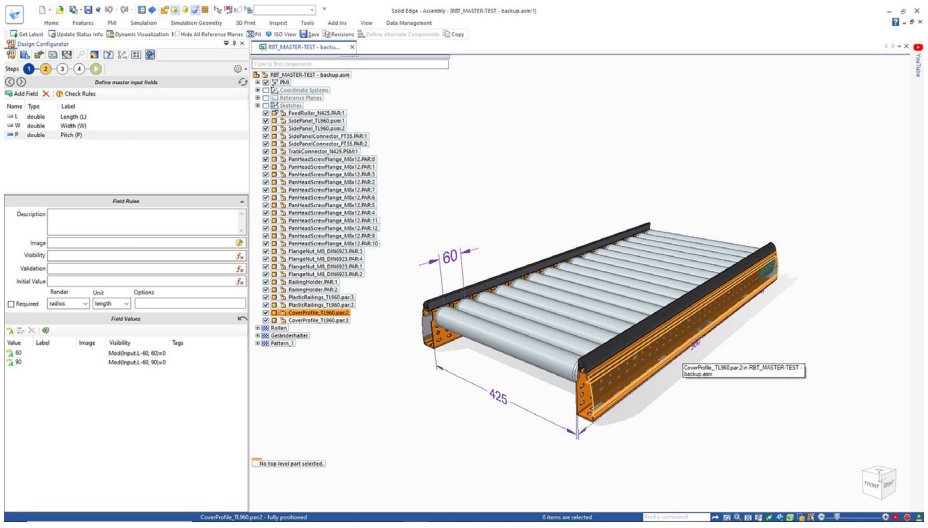
Siemens Digital Industries Software has released the 2022 version of Solid Edge software, which brings embedded rules-based design automation, greater capabilities to work with point-cloud, mesh and imported data without the need for translation alongside new tools to for 2.5 axis machining and ultra-efficient upfront fluid flow simulation. Part of Siemens' Xcelerator portfolio of products, Solid Edge is an intuitive product development platform for accelerating all aspects of product creation, including 3D design, simulation, visualization, manufacturing, and design management.

Highlights for Solid Edge 2022 include:

The new embedded Solid Edge Design Configurator adds rule-based automation and enables quick customization of products based on design parameters and rules, saving time and enabling the capture and reuse of intellectual property in intelligent models.

CAM Pro 2.5 Axis milling is now included in Solid Edge Classic, Foundation and Premium for customers with active maintenance. Fully integrated, it maintains full associativity with design data and provides automated tool path creation combined with machining simulation to help achieve optimized machining operations.

New CAD Direct capabilities allow insertion of third-party data formats



without the need for translation while maintaining associativity. Solid Edge 2022 continues to integrate Siemens' leading Convergent modeling technology, allowing users to mix b-rep and mesh geometries in the same model, again without conversion, making mesh data more useful and reducing product modelling time. Full-color point cloud data can also now be used for visualization purposes directly within Solid Edge, especially useful when retrofitting factories or plants, allowing the positioning of design equipment in the context of the point clouds.

Solid Edge 2022 is available through Xcelerator as a Service, providing access to Siemens' next-generation, cloud-based collaboration solution including Xcelerator Share, that brings design-focused capabilities (such as 3D/2D CAD view/markup), augmented reality and secure project-based sharing to the Solid Edge community.

"We have been working with and listening to our customers, and in response Solid Edge 2022 has been engineered to help them grow their businesses," said John Miller, senior vice president, mainstream engineering, Siemens. "The enhancements to Solid Edge 2022 better support modern product development and manufacturing processes, allowing our community of users to do more with available resources and to enable new ways of working that will foster greater innovation."

Assembly modelling is a constant focus and the 2022 release of Solid Edge delivers the third straight release of improvement. The new Assembly preview mode reduces the amount of data that is loaded, while multi-body assembly modeling mode is a new environment to model internal components within an assembly file. When it comes to locating those hard-to-find parts, the new component finder puts intuitive search at the fingertips with auto-complete suggestive filters.

Finally, Solid Edge 2022 introduces Simcenter Flomaster for Solid Edge software, which brings easy analysis of fluid and thermal flows in piping systems. System-level models are extracted from 3D models (reducing preparation time by up to 90 percent). Built in wizards guide new users towards successful results, while retaining advanced capabilities, such as simulation of rapid dynamic events and pressure surge, for experienced users.

solidedge.siemens.com/en/