

Napoleon Engineering

ANNOUNCES AEROSPACE BEARING PRODUCTS

The ISO9001:2008 and AS9100C certified Napoleon Engineering Services (NES) recently announced the company's specially tailored bearing products and services for the aerospace industry, including aircraft bearing re-engineering for Federal Aviation Administration parts manufacturing approval (PMA-FAA); custom aerospace bearing manufacturing; First Article Inspection (FAI) per AS9102; and other aerospace bearing testing and bearing inspection services.

Reverse bearing engineering services for PMA-FAA Certification

One of the more comprehensive inspection programs offered by NES is the reverse engineering of Typed Certified aircraft ball and roller bearings for FAA Certification. Bearing suppliers which were not integrated into an aircraft at the point of original design must obtain an independent PMA from the FAA. PMA-FAA bearing reverse engineering is a method for ensuring that commercial aircraft replacement bearings can meet or exceed the same rigorous quality, design and performance standards as those originally specified. To support these requirements, a team of highly experienced NES engineers and technicians perform a thorough physical evaluation of aircraft bearings, using highly specialized equipment and data analysis tools. The end product is an accurate and detailed analysis which provides aircraft bearing suppliers with all of the necessary PMA-FAA certification inspection data, as well as added assurances that its aircraft bearing manufacturing meets or exceeds supplier standards for form, fit and function.

Custom aerospace bearing manufacturing

Aerospace bearing manufacturing typically requires the use of superior quality raw materials; the incorporation of extensive design and project review processes; and support for any required material or process traceability. To meet these needs, NES offers complete design, development

and manufacturing of custom high-precision aerospace ball and roller bearings, as well as custom bearing modification. The manufacturing process includes close collaboration with an aerospace OEM's own in-house engineering team, with full project management support from initial concept thru final delivery. Typical requirements range from all stainless steel full complement bearings; to M50 long life angular contact ball bearings; to superelastic Ni-Ti alloy designs which incorporate wear-resistant, high-life materials and coatings. Supported applications include satellite and UAV arm actuation, antennas, fuel pumps, ram air turbines, rocket engine valves, turbine engines, and rotorcraft transmissions. Expedited lead times are available upon request.

First article inspection (FAI) per AS9102

NES offers FAI as an integral part of its aerospace bearing inspection offerings. FAI is used by aerospace manufacturers to verify that a delivered bearing conforms to all engineering requirements. A physical and functional inspection further verifies that prescribed production methods have produced a part or item that is acceptable with respect to engineering drawings and specifications, purchase orders,

planning documents, or other relevant design documents. Using FAI, customers gain added confidence in the total conformance of first-run bearings to required end-use material, engineering, and quality standards. For companies requiring an FAI per AS9102, NES can provide a complete, independent, and documented FAI, with or without material specification and special process accountability.

Aerospace bearing inspection and bearing testing services

In addition to the aforementioned capabilities, the Olean, New York-based NES is also home to North America's largest independent aerospace bearing inspection and bearing testing facility. This includes over 40 active bearing test rigs. In-laboratory capabilities include bearing failure analysis and metallurgical testing; bearing stress analysis, including source qualification inspection (SQI); environmental testing; RCF and dynamic life cycle testing; and impact and static load testing. In addition, NES can design and manufacture a custom aerospace bearing test rig to suit virtually any in-house requirement.

For more information:

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www.nesbearings.com



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SKF

INTRODUCES SPEEDI-SLEEVES

New generation SKF Speedi-Sleeves used with radial shaft seals in rotating machinery resolve the micro-cracking issues typically associated with conventional chrome-plated sleeves. These sealing solutions enable users to quickly and efficiently replace worn sealing surfaces without requiring time-consuming and unproductive machine disassembly and subsequent

shaft regrinding. SKF Speedi-Sleeves install easily on shafts without using special equipment and can return machinery to service within minutes at a fraction of the cost of traditional shaft reworking.

SKF Speedi-Sleeves combine a proprietary stainless steel base material with a high quality, non-chrome surface finish, which eliminates the



potential for development of micro-cracks common in chrome-plated versions. Such unwanted surface cracks (visible only by a scanning electron microscope) create a coarse surface finish, which tests show will accelerate seal wear by four times and, in turn, dramatically shorten seal life. In contrast, SKF Speedi-Sleeves introduce game-changing technology offering ideal surface hardness and sleeve durability without the pitfalls associated with chrome surface treatments. Ultimately, the unique SKF base sleeve material and surface finish serve to maximize resistance to wear, provide superior strength and ductility, and optimize overall seal performance and reliability.

Applications include industrial gearboxes, fans, pumps, electric motors, off-highway and construction equipment, mining and mineral processing machinery, and all others where existing sealing systems have been compromised.

Standard SKF Speedi-Sleeve sizes can be supplied for shaft diameters from 11.99mm / 0.472 in. to 203.33mm / 8 in. For abrasive environments and/or for applications integrating filled PTFE-filled seals, SKF Speedi-Sleeves are available in "Gold" versions integrating an enhanced surface coating for even higher performance. In addition to the standard product line, custom SKF Speedi-Sleeve solutions can be developed to satisfy the most demanding application challenges.

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SKF USA Inc.
Phone: (267) 436-6000
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Baldor Electric

ANNOUNCES QD BUSHED PARA-FLEX COUPLINGS

Baldor Electric Company recently announced a new addition to its Baldor-Dodge coupling product offering -- the QD bushed Para-Flex coupling. The QD flange design complements the company's Taper-Lock and bored-to-size style flanges. The QD flanges are available from stock and accommodate Baldor-Dodge Para-Flex elements. The Baldor-Dodge

Para-Flex QD (PXQD) product line is available in sizes PX50 through PX200, with torque ratings through 82,500 lbs. Para-Flex QD flanges offer greater bore capacity, allowing customers to save money by downsizing their coupling selections. Like the Taper-Lock bushing, the QD bushing allows for easy installation and removal with minimal shaft damage, reducing overall replacement costs. When used with the Para-Flex element, the complete Para-Flex couplings perform in difficult applications, providing greater misalignment capabilities than other styles of couplings. The flexible design is crucial in preventing damage to connected equipment. The Para-Flex coupling offers a five-year limited warranty.

For more information:
 Baldor Electric Company
 Phone: (479) 646-4711
www.baldor.com

Parker

EXPANDS XE LINE

Parker's Electromechanical Automation Division is pleased to announce the expansion of the XE line to include the 401 XE. The new 401 XE is now the smallest ball screw driven product Parker offers, measuring just 30 mm in width by 15 mm in height. The 401 XE design is based on the same mono-carrier construction as the 402 and 403 XE, just in a more condensed size.

"The 401 XE is ideal for customers looking for a high-precision, compact actuator that will stand the test of time," says Travis Schneider, product manager for Parker Hannifin. "Potential applications for this stage could



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range from electronics manufacturing to instruments performing diagnostic testing on biological samples.”

To complement the compactness of the 401 XE, Parker is also now offering parallel motor mounts for all of the XE series, as well as the LCR 30 series actuator. The parallel motor mount allows an instrument builder to maximize the amount of stroke per unit length of the actuator.

For more information:

Parker Hannifin
Phone: (800) 245-6903
www.parker.com

Mayr Corp.

INTRODUCES ROBA-DS SHAFT COUPLINGS

The high-performance Roba-DS shaft couplings transmit torque backlash-free and with high torsional rigidity. They compensate for shaft misalignment and are both wear- and maintenance-free. On the sizes up to 150 Newton meters, Mayr Power Transmission plans to extend its standard hubs for mounting the shafts by a radially divisible hub – for easy and fast installation, even in difficult ambient conditions.

Short dimensions, little installation space requirements, reduced weight and low mass moments of inertia – the Roba-DS servo couplings win over customers due to their high performance density. They are able to transmit high torques even at comparably small diameter, which makes them the ideal shaft couplings for dynamic drive systems with high speeds.



These couplings are made of steel and high-strength aluminum alloys which forms the basis for the extremely compact design.

Backlash-free torque transmission

The couplings compensate for radial, axial and angular shaft misalignments by means of the flexible disk packs. This way, they protect the bearings from unwanted wear and tear and prevent unnecessary downtimes and costs. In order to achieve backlash-free torque transmission, the disks in the fixing area are treated with a special blasting procedure. The Roba-DS disk pack couplings are robust and reliable. They are temperature-resistant, wear- and maintenance-free and transmit the torque with very high torsional rigidity. Therefore, they are especially suited for applications in extreme ambient conditions.

Fast and easy installation

The area of application for servo couplings is growing. Therefore, Mayr Power Transmission has extended the standard hubs for shaft attachment by a radially divisible hub, a so-called split clamping hub, also for sizes 3 to 15. At permitted speeds of 3,000 rotations per minute, these sizes for shaft diameters of 45 to 79 millimeters cover torques from 35 to 150 Newton meters. The half-shells guarantee easy and fast coupling installation, even in difficult ambient conditions. Therefore, the hubs are used preferably in applications, in which the drive aggregates such as the motor and the gearbox must not be moved after the positioning and aligning for coupling installation. These hubs are also recommended for large shaft distances, for example for cardan shafts in linear actuators, as in these cases the coupling is installed last and therefore has to be easy to install.



High performance density

Installation is carried out radially: To do this, the coupling is brought to the shafts and pre-assembled with the axially moveable half-shells. Here, it is important that the markings on the half-shells and on the hub bodies overlap. Then, the cap screws must be tightened evenly and in several sequences to the required tightening torque. The Roba-DS servo couplings are available as double-jointed couplings with a connection plate or a variable-length

sleeve. Their compact design, the short installation times and the high performance density make these couplings a particularly efficient and economic solution.

For more information:

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

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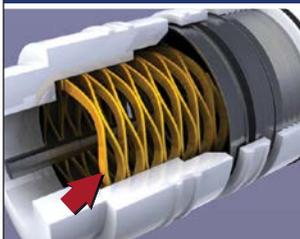
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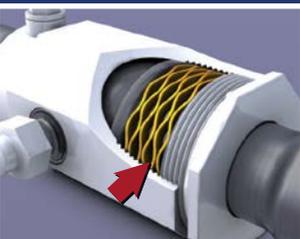
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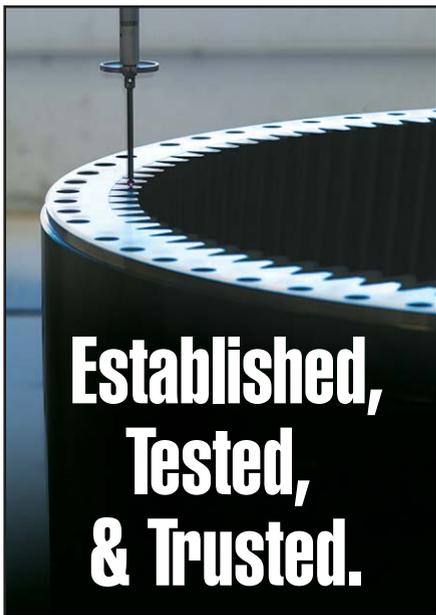
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Bosch Rexroth

OFFERS LATEST HMI SOLUTIONS

The compact IndraControl VR series of embedded terminals complement the existing IndraControl V portfolio of larger screen HMIs and the PC-based panels, including the IndraControl VEP, VDP, VSP, and VPP series. The VR HMI uses a modern 16:9 format and is available in 4", 7" and 9" sizes. The 7" and 9" panels also have a capacitive screen, multi-touch option. The multi-touch features provide the user familiarity of tablets and smart phones.



The IndraControl VR series of embedded terminals are a cost-saving alternative to the PC-based panels and utilize the Windows 7 Compact Embedded operating system. The ARM Cortex-A8 800 MHz processor provides excellent performance and reliability. 512 MB of RAM, 256 MB of flash memory as well as an integrated SD card memory slot ensure plenty of space for a robust application. Rexroth's HMI programming software, WinStudio, can be used to develop applications for the VR controller, moving all Rexroth operator interfaces to the same programming development software. Maximize your connectivity with a standard on-board Ethernet 10/100 Mbit port and 2 USB interfaces. There are +100 drivers available to connect the VR HMI to the controller of your choice. Small installation depths of 54 mm and IP65/20-protected displays make these HMIs very attractive to various industries.

For more information:

Bosch Rexroth
Phone: (800) 739-7684
www.boschrexroth.com

Atlanta Drive Systems

OFFERS HIGH-PERFORMANCE SCREW-JACKS

Atlanta Drive Systems, Inc. recently announced a new range of High-Performance Screw-Jacks, offering precise linear positioning and high dynamic performance by means of a servo-worm reducer and precision ballscrew spindle. Linear speeds up to 590 inches per minute can be achieved with ballscrews diameters up to 50 mm and axial load capacities up to 22,500 lb. are possible, with higher load capacities reached by using two screw-jacks in tandem to share the loads. These screw-jacks are available in four sizes with rotating ballscrews and translating nut, or non-rotating ballscrew in a lifting cylinder design. Both designs can be used with 100% duty cycles. The ballscrew spindles are protected against contamination by bellows or protective tubes and are continuously lubricated with an automatic lubrication system. Applications requiring precise, controlled linear motion with high dynamic performance are perfect for these drives. Typical applications include sheet metal bending, hydraulic cylinder replacements, conveyor tensioning, and lifting table drives. Industries served include Material Handling, Automation and Automotive.

For more information:

Atlanta Drive Systems
Phone: (800) 505-1715
www.atlantadrives.com



Curtiss-Wright

SUPPLIES POSITION SENSORS FOR BRIGGS AUTOMOTIVE

Curtiss-Wright Corporation has announced that its Industrial division is supplying customized position sensors to Briggs Automotive Company (BAC) for use on the company's central-seat Mono road car. Featuring a special connector cable and unique configured output range to match the specific shaft position, the contactless rotary position sensor installed on BAC's Mono is a customized version of the standard Penny+Giles SRH280P model.

Commenting for Curtiss-Wright, Senior Vice President & General Manager of the Industrial division, Kevin Rayment says: "The Industrial division has more than 50 years experience in providing control and feedback solutions for numerous applications and we're no newcomer to high-octane and motorsport applications where custom sensors are often specified."

Curtiss-Wright's sensors are utilized for motorsport applications and are used in numerous race series including the American Le Mans Series (ALMS), Formula One (F1) and Formula Student. "With a performance to match today's Formula racing cars, the single-seat Mono required an equivalent level of intuitive direct control, so BAC designers and engineers specified components that were themselves designed and engineered for the race-track," says Rayment.

With motorsport very much in mind during its evolution, Mono was the vision of BAC design director Ian Briggs. However, he also wanted the car to feel at home as much on country lanes as it does on the race track. Briggs noted, "I wanted Mono to be high tech and totally fresh in its approach. A car for people who want to feel a connection, and be really involved in the character of the car they drive. It had to be a car people would be consistently excited by, and would experience pride in owning. In short, Mono is a totally immersive experience, from start to finish."

Operated via steering wheel-mounted paddles, Mono uses an F3-specification, six-speed sequential Hewland gearbox with an electronic/pneumatic

semi-automatic, closed-loop gear selection system that delivers paddle-shift changes in 35 milliseconds. This is coupled to a 2.3 litre, 285bhp four-cylinder Cosworth engine enabling the Mono to achieve a 0-60 mph time of less than three seconds.

For more information:

Curtiss-Wright Corporation
Phone: (973) 541-3700
www.curtisswright.com



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