

Press Release

Annecy, France, June 2018

NTN-SNR to take part in Automatica trade fair in Munich

NTN-SNR's wide product range, modularity and innovations cover all automated movement needs

For the second time, NTN-SNR shall take part in Automatica, the international trade fair for robotics, automation and mechatronics to be held from 19 to 22 June in Munich. NTN-SNR is a major player in the automation market and has one of the widest ranges of high-performance Linear Guides and Linear Axis, including heavy load Linear Axis that can bear loads of more than 1,000 kg. In addition to its Linear Guides and Linear Axis, NTN-SNR will exhibit on its 72m² stand several robotic innovations, including its parallel link robot, which is already in operation on a manufacturing site in Japan, and its lightweight bearings for joints in industrial robotics. Drawing on the strengths of these products and applications, NTN-SNR also offers the automation market a range of global solutions through dedicated application engineers who can undertake on-site integration operations, produce ad hoc designs and provide an on-site maintenance service anywhere in Europe.

A Linear Axis for every industrial need

High-performance equipment and a competitive solution

Automatica represents an opportunity for NTN-SNR to highlight the breadth of its range of Linear Axis and to showcase a few of its flagship automation products, particularly its Linear Axis, AXS, AXC, AXLM and the latest AXE line, which is made for short delivery times. NTN-SNR Linear Axis boast a very high level of performance in terms of their velocity (5 m/s for Linear Axis with Linear Guides and up to 15 m/s for Linear Axis with Track Roller Guides), precision (2 to 5 microns repeatability) and load capacity (over 1,000 kg). All of these Linear Axis and the various possible combinations allow NTN-SNR to meet almost every automated movement configuration request. Furthermore, all of these products are very reliable and their service life has been extended by 50% thanks to a new generation of NTN-SNR Linear Guides equipped with the latest ball chain technology. Consequently, and above all, we have been able to reduce the number of maintenance operations required and optimise equipment productivity.

www.ntn-snr.com 1



From the high-precision Cartesian robot to very large Linear Axis

Thanks to the velocity and precision of the Linear Axis, we can assemble Cartesian robots that are perfectly adapted to pick-and-place operations in the automotive industry (gearbox assembly, for example) and even in the agri-food industry (fruit handling, in particular) or Semiconductor business. These Cartesian robots offer a wider range of actions and significant cost reduction.

NTN-SNR has also launched a new very-large AXS Gantry Axis (400 x 300 mm cross section) on steel base that reaches 10 meters length in one piece and has a load capacity of more than 1,000 kg. Due to the Rack & Pinion drive technology our AXS System could be enlarged easily, without affecting the equipment's load and dynamic properties.

NTN-SNR, a major player in robotic innovation: two major products at Automatica

PHACE* parallel link robot

NTN-SNR is demonstrating its parallel link robot at Automatica. This has an articulated head for particular applications requiring high-precision movement repeatability (up to 0.065°). A model fitted with a nozzle for the lubrication of gearboxes is already in use in a production facility in Japan. Its compactness, low inertia and its original architecture enables it to operate at high velocity. It has a 360° rotational freedom of movement and 90° vertically. All its wiring is at the centre of the device. It can thus execute successive rotations without any risk of entanglement. Various applications have already been identified, such as 3D printing machines, control applications using a camera, welding and gluing. Its programming terminal has a touch screen that enables tasks to be programmed simply and intuitively. Its performance, productivity operating costs make PHACE a competitive alternative to the articulated arm and Cartesian robots used in numerous applications.

*Parallel Link High Speed Angle Control Equipment

Lightweight bearing for robotic joint

NTN-SNR has developed a 60 % lighter bearing to meet the challenges of weight reduction in robotics and, in particular, in industrial cobotics. This ball bearing has been particularly designed for the reduction gears used in the joints of cobots. NTN-SNR has achieved this reduction in weight through the use of aluminium in the less stressed bearing surfaces. It retains the same internal geometry, the same number of balls and offers the same loadbearing capacity as the equivalent all-steel bearing. This innovation, the result of three years of development, has been patented by NTN-SNR. This demonstrator, with an external diameter of 78 mm and a bore diameter of 20 mm has been functionally validated. In addition, having fully developed the manufacturing processes for this bearing, NTN-SNR is ready to supply this product for new cobotic developments.

www.ntn-snr.com 2



AXE New efficiency line range

NTN-SNR is presenting the new AXE efficiency line range, which is designed for high quality standards and due to standardization linked to very low delivery times. Designed and manufactured in our Bielefeld Plant / Germany the new AXE range could be configured online and every order runs into our "fast routine" process for extreme short lead times. Single- or multi axis systems (X- Y –Z) could be created easily. The configuration process is shown at Automatica Fair.

Linear Guide online configurator

NTN-SNR shows a new multi talent in the field of configuration: The Linear Guide online configurator is a tool for the interchange of all kind of Linear Guides and in parallel a configuration and offering tool. Access for this "quick and easy" tool by NTN-SNR website. The use of this tool shows immediate results for: correct type code, delivery time, price indication, CAD files, and technical data. This configurator is shown at Automatica fair to public the first time.

NTN-SNR ROULEMENTS, with a head office at Annecy (Haute-Savoie, France), belongs to the Japanese group NTN Corporation, one of the world leaders in bearings. NTN-SNR ensures the management and development of all NTN activities for the EMEA region and Brazil. A major player as a designer, developer and manufacturer of bearings and sub-assemblies for automotive, industry and aeronautics, NTN-SNR offers a comprehensive range by also developing maintenance services and solutions. NTN-SNR employs 4,225 people at 9 production sites, including 6 in France, as well as 18 business representations.

PRESS CONTACT: Florian PORZYC - +33 (0) 4 50 65 97 89 - florian.porzyc@ntn-snr.fr

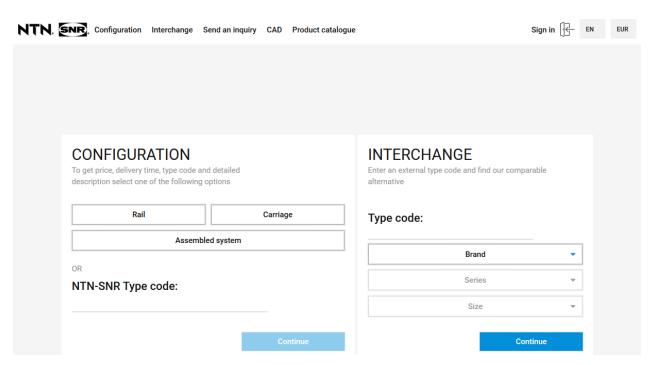
AXE "Efficiency Line Range"

www.ntn-snr.com 3





Linear Guide online configurator



PHACE* parallel link robot

<u>www.ntn-snr.com</u> 4





Lightweight bearing for robotic joint



<u>www.ntn-snr.com</u> 5