

Press Release

Hannover Messe 2025

Schaeffler reaches final round of the Hermes Award with innovative angular contact needle roller bearing

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- Angular contact needle roller bearing XZU for industrial automation and robotics achieves top ranking in renowned industry award
- Double-row arrangement ensures significant improvement in load distribution and reduces skewing during operation
- XZU offers 30 percent higher tilting rigidity compared with conventional crossed roller bearings
- Nomination for final is further testimony to Schaeffler's innovative strength

The Motion Technology Company Schaeffler has made it into the final of the Hermes Award 2025 with its double-row angular contact needle roller bearing XZU. The globally renowned technology award was presented as part of the opening ceremony of the Hannover Messe run by Deutsche Messe AG and singles out outstanding products in respect of their level of technological innovation, benefits for the industry, and cost-effectiveness. The double-row angular contact needle roller bearing XZU from Schaeffler is an innovative rolling bearing that was designed specifically for robotics, industrial automation, and areas for the future such as humanoids. With its compact design, high efficiency, and low weight, it fulfills the increasing requirements placed on rotary joints in numerous areas of application.

Sascha Zaps, CEO Bearings & Industrial Solutions of Schaeffler AG, says: "We are delighted to be among the top three of the Hermes Award 2025. Our double-row angular contact needle roller bearing XZU represents the future viability of our bearing products and combines maximum innovative strength with cost-effectiveness. As such, Schaeffler facilitates progress in numerous future areas of the industry, sustainably creating added value for our customers."

Innovative bearing technology sets standards for precision and efficiency

The increasing number of robots and cobots worldwide is fueling demand for various types of rotary joints. These are subject to stringent requirements in terms of precision, positioning accuracy, and vibration behavior. Conventional crossed roller bearings with their almost square rolling elements tend to produce torque fluctuations, i.e., unstable motion and are prone to leaking as the direction of

rotation changes. With the XZU from Schaeffler, however, needle roller cages ensure smooth motion, thereby preventing skewing. The specially developed cages also provide space for lubricant, preventing the lubricant from leaking. Another special feature of the angular contact needle roller bearing XZU is that it has the same mounting dimensions as convention crossed roller bearings and can therefore be replaced easily. The XZU also exceeds the tilting rigidity of conventional models by more than 30 percent, thereby overcoming many disadvantages of crossed roller bearings.

Practical tests have shown that with a six-axis cobot, which was converted from a crossed roller bearing to the XZU, the deviation of the trajectory curve at a speed of 800 mm/s was reduced by 40 percent – without adjusting the control parameters. The innovative bearing technology therefore increases the accuracy of motion and in turn boosts the efficiency of machines. These advantages make the XZU particularly compelling for precision gearboxes and industrial spherical plain bearings, as can be used on humanoid robots, for instance.

The needle roller cage of the XZU also supports outstanding internal load distribution, ensuring more harmonious running with constant low frictional torque. This increases the life of the bearing and extends maintenance intervals. In applications with particular hygiene requirements, such as in food and medical technologies, the XZU offers an outstanding alternative to conventional bearings – the roller bearing cage also helps here to prevent contamination.

Schaeffler at the Hannover Messe

The innovative angular contact needle roller bearing XZU and other future technologies from Schaeffler will be on show from March 31 to April 4, 2025 in Hall 5, Booth D18 of the Hannover Messe. Schaeffler will also be present with a hydrogen booth in Hall 13, E41/1. Here, the focus will be on solutions for generating and using hydrogen.

Find out more about Schaeffler's trade show appearance at the Hannover Messe: [Schaeffler at the Hannover Messe 2025 | Schaeffler Group](#)

A photo of Sascha Zaps, CEO Bearings & Industrial Solutions of Schaeffler AG, can be found [here](#).

Schaeffler Group – We pioneer motion: The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and

sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: From bearing solutions and all types of linear guidance systems through to repair and monitoring services. Schaeffler is with around 110,000 employees and more than 250 locations in 55 countries, one of the world's largest family-owned companies and one of Germany's most innovative companies.

The XZU double-row angular contact needle bearing combines compact design with high efficiency. Picture: Schaeffler (Daniel Karmann)

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