

Press Release

Schaeffler at EMO 2025 (Hall 6, Booth I46)

## **New series for automation: Four-row linear recirculating ball bearing and guideway assembly in X arrangement**

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- New KLLT four-row linear recirculating ball bearing and guideway assembly is ideal for a wide range of handling axes
- New series can deal with larger tolerances in the mounting geometry
- Maximum flexibility thanks to eight different carriages

As the inventor of the rolling element linear guidance system, the Motion Technology Company Schaeffler has decisively shaped the development of monorail guidance systems for more than 50 years and is one of the world's leading vendors in this field. For the rapidly growing automation market surrounding machine tools – with its numerous handling systems – as well as for additive manufacturing machines and many other applications, Schaeffler will present its new KLLT four-row linear recirculating bearing and guideway assembly in X arrangement at EMO 2025.

### **The all-rounder among four-row linear recirculating ball bearing and guideway systems**

In terms of design, the standout features of the new variant are the X arrangement of the raceways and an improved lubrication and sealing system. In conjunction with a robust structure, the new KLLT series performs the job of an “all-round linear recirculating bearing and guideway assembly” for applications with larger tolerances in the mounting geometry. Eight different carriages (KWLT) – in long, short, high and low versions, and with and without flange – offer maximum design scope and flexibility. All carriages are interchangeable within ISO 12090-1. A lubricant reservoir has been integrated into the end pieces to allow especially long re-lubrication intervals. The arrangement of the raceways in a 45° angle ensures uniform load distribution, load-bearing capacity and rigidity in all four main load directions, and as a result provides great design flexibility.

### **Tolerant of adjacent structures with geometrical deviations**

Unlike the particularly rigid KUVE-B four-row recirculating ball bearing and guideway assemblies in O arrangement, the new KLLT recirculating ball bearing and guideway assemblies are in an X arrangement. In combination with the larger rolling elements and the resulting lower rigidity, the KLLT recirculating ball bearing

and guideway assemblies can better compensate for larger tolerances in the adjacent geometry. When mounted, this results in lower reactive forces. This makes the KLLT ideal for handling when using drawn structural profiles in aluminum or welded structures with higher tolerances.

**Easy to install and inexpensive spare parts inventory**

The KLLT four-row linear recirculating ball bearing and guideway assemblies are available in six sizes: 15, 20, 25, 30, 35, 45. For all sizes, the maximum length of the monorails is around 4,000 millimeters. Longer monorails are put together from several sections. The patented plastic caps KA-TN/B allow efficient closure of the mounting holes in the guide rails. The necessary number are enclosed loose with every standard TKLT rail.

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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, CO<sub>2</sub>-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 standout features of Schaeffler's KLLT four-row linear recirculating ball bearing and guideway assembly are the X arrangement of the raceways and an optimized lubrication and sealing system. This product complements Schaeffler's range of monorail guidance systems, consisting of KUVE-B four-row monorail guidance systems (O arrangement), six-row KUSE-XL monorail guidance systems, RUE-F linear recirculating roller bearing and guideway assemblies, and KUEM-E two-row miniature recirculating ball bearing and guideway assemblies. Image: Schaeffler

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