

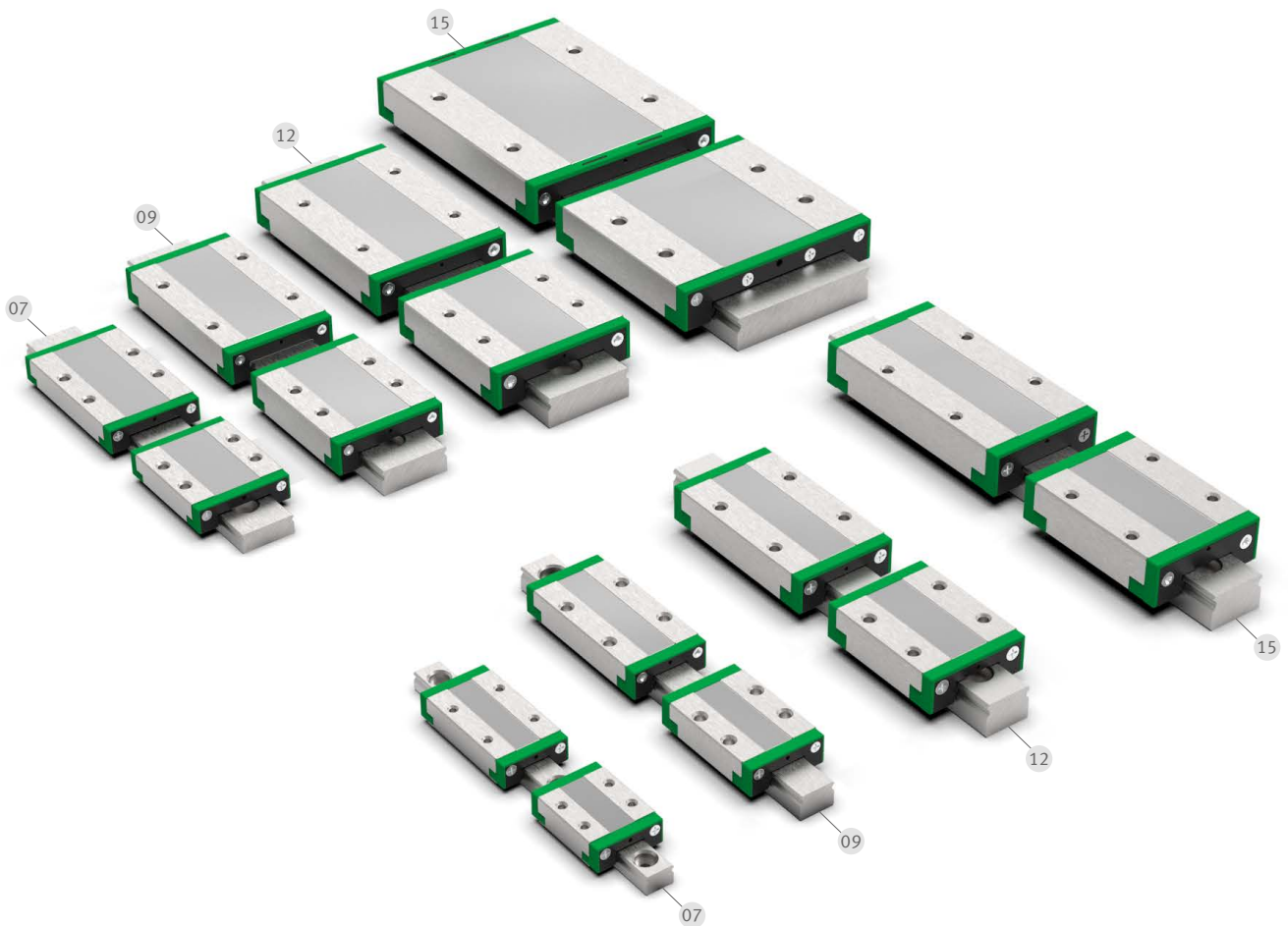
We pioneer motion

Miniature linear recirculating ball bearing and guideway assemblies

Easy to fit – economical – durable

Miniature linear recirculating ball bearing and guideway assemblies to suit every machine and every process

The introduction of new automation solutions in areas such as electronics production and medical technology has created an increased demand for miniature linear guidance systems. As a pioneer of linear technology and inventor of the linear guidance system guided by rolling elements, we are naturally on hand to assist our customers with the latest machine developments that require the use of miniature linear guidance systems. Our new range of two-row miniature linear recirculating ball bearing and guideway assemblies now includes four sizes, from 07 through to 15, in several designs.



High degree of flexibility

As standard, we supply miniature linear recirculating ball bearing and guideway assemblies in accuracy class G2. All carriages and guideways belonging to this accuracy class are interchangeable, allowing replacement parts to be held in stock with minimal outlay and facilitating maintenance. For convenience, guideways and carriages can be ordered separately, enabling you to order guideways to the maximum length and customise your miniature guidance system as required. The guideways measure a maximum of 1 m in length up to size 07 and a maximum of 2 m in sizes 09 to 15.

The miniature linear recirculating ball bearing and guideway assembly is available in both a standard and wide version and as a miniature linear system with a long carriage for greater load capacity. For increased accuracy requirements, the miniature linear recirculating ball bearing and guideway assemblies are also available in accuracy class G1. Carriage and guideway are then matched, customised and mounted in-house prior to delivery.



Customer benefits

- Reduced mounting time and minimal reject rate during mounting
- Low stockholding costs for carriages and guideways
- Long running life
- Lifetime lubrication for most applications



Characteristics

- Carriages and guideways in accuracy class G2 are interchangeable as required
- Carriage and guideway have a locating face at each end
- Optimised ball return and new ball retention system
- Low levels of friction and reliable sealing concept
- Large lubricant reservoir
- Quiet and smooth running



Applications

- Machines for additive production processes (3D printers)
- Laser systems
- Optical inspection systems in electronics production
- Measuring machines
- Medical and food industries
- Laboratory analysis equipment in medical technology
- CNC denture manufacturing and dental X-ray equipment

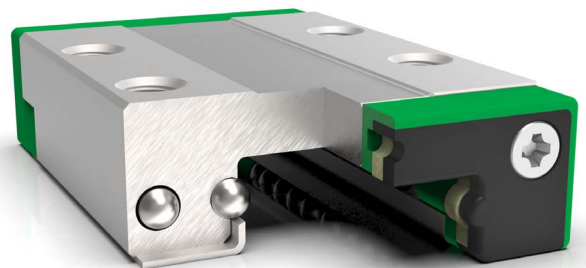
Simple and secure mounting

KUME-E miniature linear recirculating ball bearing and guideway assemblies in sizes 07 to 15 have a reference or locating face at each end of the guideway and carriage, allowing the guidance system to be installed and aligned in any position at any time. The interchangeability of the components and ease of mounting offer considerable logistical and monetary advantages in terms of procurement, storage and assembly.



Improved sealing and rolling element retention

A rolling element retention system not only prevents the loss of rolling elements and protects the rolling elements during transport, but also ensures that the carriages are easily and securely mounted on the guideway without the use of an additional dummy guideway. Our new rolling element retention system consists of a profiled L-section plate and is perfectly equipped to fulfil all of the aforementioned functions. The use of this secure and highly robust rolling element retention system means that no dummy guideway is required for the carriages. The rolling element retention system also assumes the function of the longitudinal gap seal, thus enabling very low friction compared with other solutions on the market.



Long operating life and low maintenance requirements

As standard, our miniature linear recirculating ball bearing and guideway assemblies are supplied with a lubricant reservoir, which is located in the end pieces. This ensures long-term and uniform distribution of the lubricant, allowing the assemblies to operate over particularly long distances without the need for relubrication. A gap seal is included in the end piece as standard and the optional use of an end wiper (suffix PP) is also available. There is no change in the length of the carriage when an end wiper is used. A special syringe is available as an accessory for use in replenishing the lubricant reservoir.



Particularly smooth and quiet running

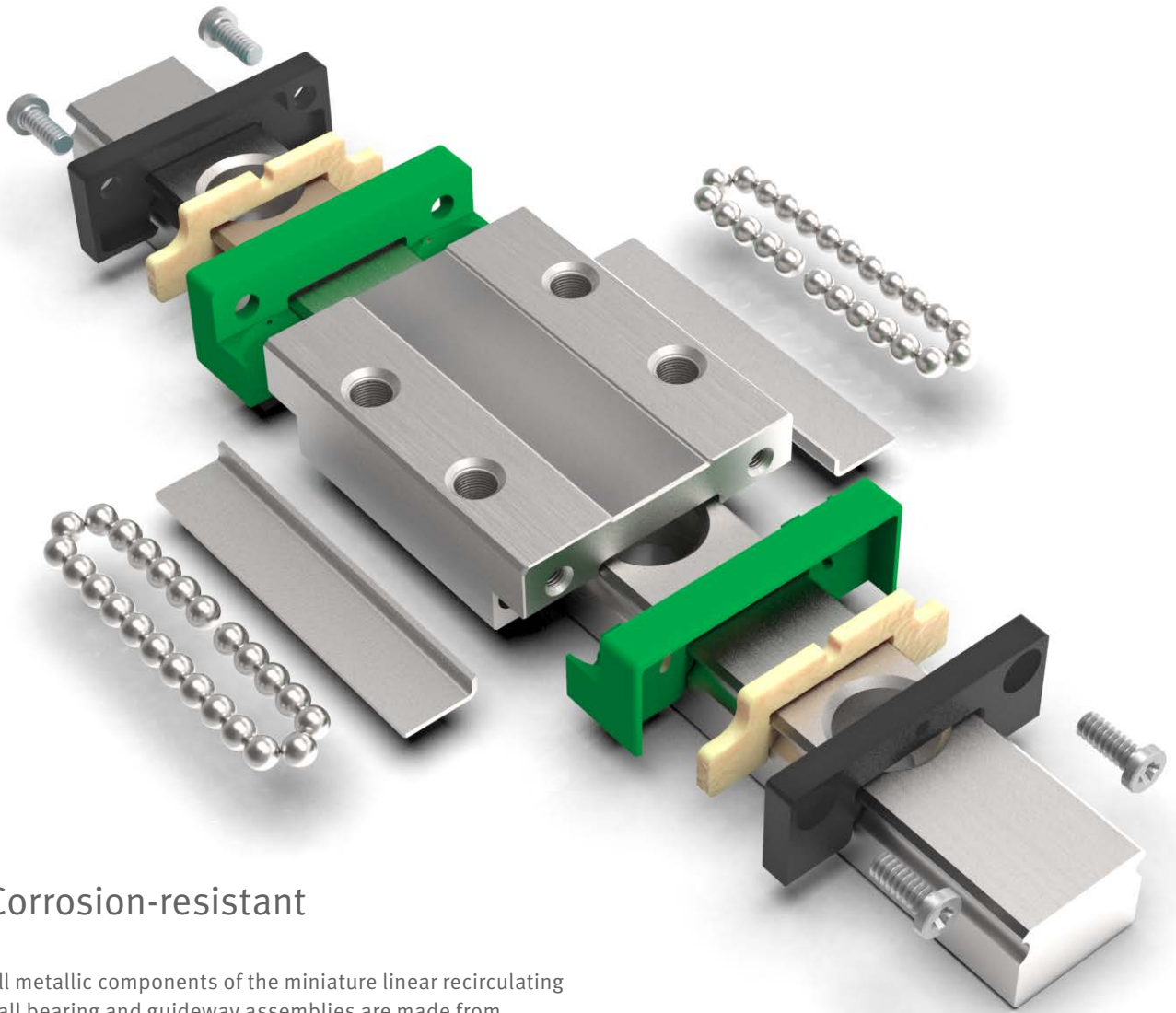
We pay particular attention to ensuring optimum rolling element recirculation during the development of our monorail guidance systems – a principle that we apply in equal measure to our miniature linear recirculating ball bearing and guideway assemblies. Thanks to an optimised internal construction, these assemblies run particularly quietly, uniformly and with minimal friction.



Data, figures, facts

Miniature linear recirculating ball bearing and guideway assemblies	Units	Series KUEM-E	Series KWEM, TKDM ¹
Size		07, 09, 12, 15	05
Basic static load rating C_0	N	1,460 to 12,500	1,090
Basic dynamic load rating C	N	915 to 6,550	534
Max. acceleration	m/s^2	140	50
Max. speed	m/s	5	3

¹ The existing series and size 05 round off the range



Corrosion-resistant

All metallic components of the miniature linear recirculating ball bearing and guideway assemblies are made from corrosion-resistant steel, which makes them particularly suitable for applications with corrosion protection requirements, such as those encountered in medical technology and the food industry.

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Issued: 2024, June

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