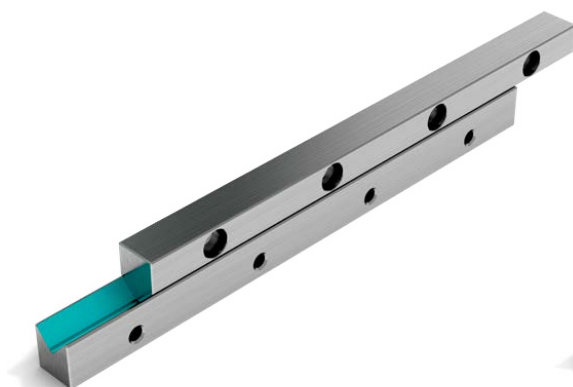


3 Overview of product

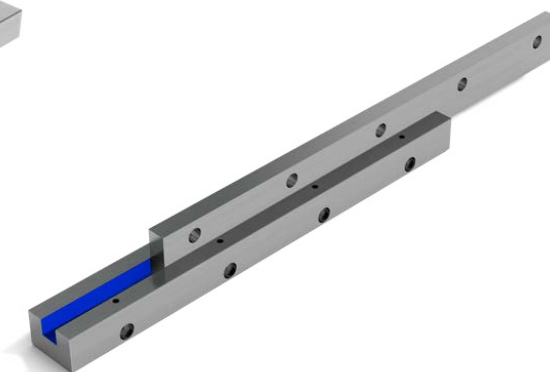
3.4 Slideways

In some applications slideways/slide bearings are more suitable than roller-contact bearings. For such applications SCHNEEBERGER produces steel strips, which are produced with a slideway lining selected by the customer (e.g. Turcite B, Glycodur or Ampco) and then re-ground.

The slideways can be supplied in standardised dimensions for the roller-contact bearing or on a customer-specific basis too.



Slideways



Flat strips

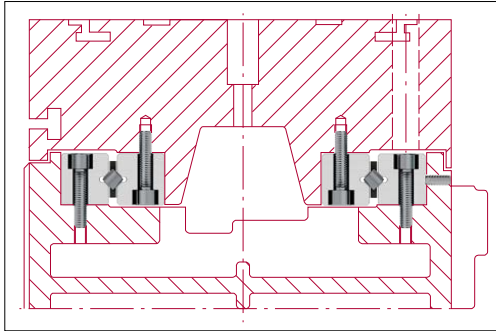
3.5 Application-specific solutions



Our linear guideways can be universally deployed, but can also be configured on a customer-specific basis ex works. Amongst other things, SCHNEEBERGER offers the following services:

- modified standard
- customer-specific design
- special greasing (cleanroom, vacuum, extraordinary temperature ranges, etc.)
- special packaging

4 Applications



Linear guideway for a tool grinding machine table

Precision-grinding on tool grinding machines requires a stick-slip-free and frictionless guideway to allow longitudinal movement of the table.

Possible SCHNEEBERGER products:

- 4 linear guideways type R 9-800
- 2 roller cages AC 9 x 33 rollers
- 8 end pieces GA 9, GB 9

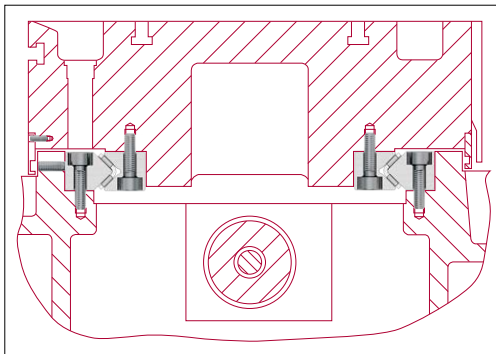


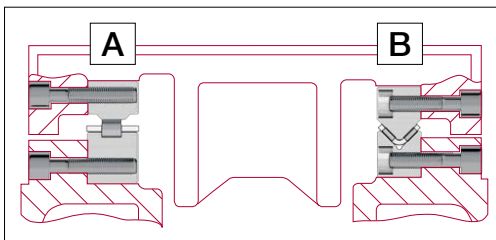
Table bearing for an internal cylindrical grinding machine

Internal cylindrical grinding robots require absolutely zero-backlash table guiding in order to meet the stringent requirements of today's grinding technology.

The grinding table displayed is mounted with type N/O linear guideways whose V-shaped needle cages are connected to an oil impulse lubrication system. This creates the conditions needed to control high table speeds with minimal force applied.

Possible SCHNEEBERGER products:

- 2 linear guideways type O 2535-1000
- 2 linear guideways type N 2535-1000
- 2 needle cages HW 20 x 725
- 4 end pieces GH 2535 without wipers



Open configuration (floating bearings) for heavy surface grinding machine

Surface-mounted roller guides then come into play particularly when large and heavy workpieces are being machined. The weights of table and workpiece and the grinding pressure have a vertical action on the roller guides.

Cost-effectiveness, simple assembly and a high level of running accuracy characterise this configuration. Expansion of the table resulting from the effect of heat without limitations is also prevented thanks to characterize expansion options.

Its construction is simple and cost-effective. The N/O linear guideway assumes the task of being the lateral linear guideway for the table. As the surface guideway is adjusted level with the N/O, the linear guideway systems can be interchanged - depending on whether the grinding spindle is mounted to the right or left.

Possible SCHNEEBERGER products:

A

- 1 linear guideway spec. 45 x 35 x 600-EG *
- 1 linear guideway spec. 45 x 42.5 x 1'000
- 1 roller cage H 25 x 810 mm
- 2 end pieces special

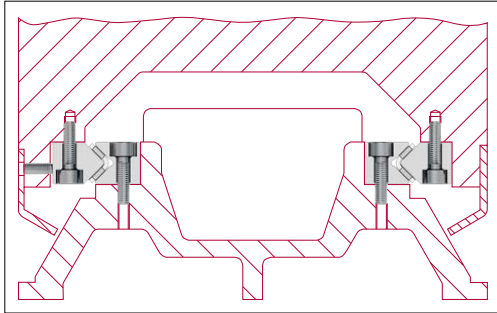
* Run-ins rounded

B

- 1 linear guideway type N 3555-600-EG *
- 1 linear guideway type O 3555-1000
- 1 needle cage SHW 30 x 810 mm
- 2 end pieces GW 3555

* Run-ins rounded

4 Applications



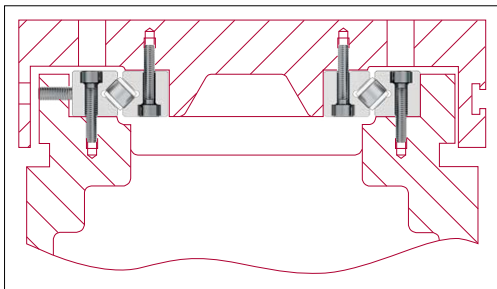
Possible SCHNEEBERGER products:

- 2 linear guideways N 3045-900
- 2 linear guideways O 3045-900
- 2 needle cages SHW 25 x730 mm
- 8 end pieces GF 3045

Closed V guideway for surface grinding machines

Economic perspectives also determine the structural design of the tables guideways for surface grinding machines. The V-shaped arrangement of the roller guideways creates a closed linear guideway that can be loaded for forces and moments from all directions.

The few components ensure rapid and simple assembly. The stroke and table length ratios are optimal for the use of roller guideways. The basic surfaces of the roof-shaped linear guideways can be machined with extreme efficiency and precision because they are on the same plane. These surfaces also form the basis for achieving high levels of running accuracy.



Possible SCHNEEBERGER products:

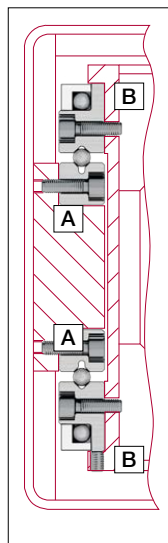
- 2 linear guideways RNG 9-700
- 2 linear guideways RNG 9-450-EG *
- 2 roller cages KBN 9 x 43 rollers
- 4 end pieces GCN 9

* Run-ins rounded

V guideway for heavy tool grinding machines

Tool grinding machines place very high demands on the roller guideway system of the machine table. High level of running accuracy, minimal friction, no stick-slip effect and protected arrangement of the roller guideways are the most important requirements.

The RNG roller guideways used here are ideally suited to this task thanks to their high load carrying capacity. The table construction allows drive mechanisms to be accommodated; the upper part of the table can also be installed with great ease. The preload of the linear guideway system can also be easily set subsequently.



Infeed device

The infeed device working in vacuum places high demands on the linear guideway system. A U-shaped support forms the supporting element and also acts as the take-up for the linear guideways. The whole system is made of a non-corrosive material and works vertically with a stroke of 2'700 mm.

Linear guideways, which are assembled in the U-shaped basic component, and 4 type SK rolling elements form the actual guide system. Two of the four rolling elements can be adjusted externally and so support optimal preload setting. All individual components of the rolling elements are made out of stainless steel or aluminium.

Possible SCHNEEBERGER products:

- [A] 4 linear guideways R 9-1400-RF*-ZG **
- [B] 4 recirculating units SK 9-150-RF*

* non-corrosive

** multi-part linear guideways

4 Applications



Patient tables

Highly developed, automatic patient tables are used, amongst other things, in computer tomography (CT), magnetic resonance tomography (MRT) or radiotherapy.

All kinematic processes place the highest demands on the linear guideway systems in terms of running accuracy, smoothness, maintenance-free operation, rigidity, ease of installation and radiation resistance.

Possible SCHNEEBERGER products:

R 9 linear guideways



Microtome

Microtomes are cutting devices used to create wafer-thin sections. They are used for microscopic preparations (for example, biological tissue) or analysis of plastics.

Biological material is normally hardened before being cut by means of fixing and then made sliceable by means of «embedding», i.e. inclusion with a fluid substance such as paraffin or synthetic resin. The thickness of the slices is significantly smaller than the diameter of a human hair and is typically around 1 to 100 µm.

Due to these extraordinary requirements, the most stringent demands in terms of smoothness and precision are placed on the linear guideway systems.

Possible SCHNEEBERGER products:

RNG 4 linear guideways



4 Applications



Wire bonder

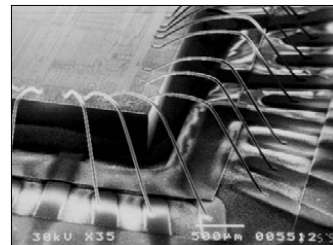
Wire bonding is the preferred method for making bonds between an integrated circuit (IC) and a printed circuit board. Wire bonding generally represents the most cost-effective and flexible bonding technology with which the thinnest wires are used for bonding electrical connections.

Aluminium, copper or gold wire from 15 μm in diameter is usually used for this technology. The requirements in respect of the linear guideway system for a wire bonder are correspondingly stringent.

- The highest precision and rigidity
- The highest speeds
- The highest level of smoothness
- The highest level of reliability.

Possible SCHNEEBERGER products:

SCHNEEBERGER supplies prestigious manufacturers of wire bonders with customer-specific linear guideway systems.



Aluminium wires with a diameter of 25 μm bond the electrodes of microchip with the conductor tracks of a carrier substrate.

Large-scale machining center

To ensure that it is possible to manufacture with high precision under the most stringent loads, rigid and precise linear guideway systems are critical.

Possible SCHNEEBERGER products:

- A** MONORAIL MR 65
- B** recirculating unit NRT with preload wedge NRV

