

Antifriction Bearings in Practice

After in-depth consultation and precise design and production, Franke Antifriction Bearings provide movement in diverse applications. For example, in computer tomography, processing centres, textile machinery, machinery for chip production, indexing tables or robots. Our Antifriction Bearings pass the practical test day after day – you can rely on that.

In Medical Technology: Computer Tomography

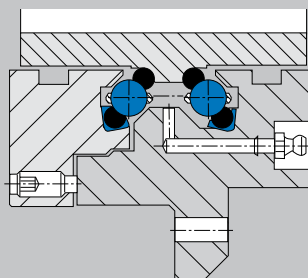


Photo credit: Siemens AG

The patented Franke **Fluesterlager**® as the main bearing in computer tomography contributes to exact x-rays thanks to its design tailor-made to the needs of medical technology.

The Features:

- Smooth and low-vibration running is even ensured at high rotary speeds thanks to CNC-ground raceways.
- The elastomer profiles between the race rings and the race ring bed form the basis for muted noise development and electrical insulation of the inner and outer ring.
- The silent bearing impresses with rotary speeds of up to 300 revolutions per minute.



Bearing diameter: 1500 mm

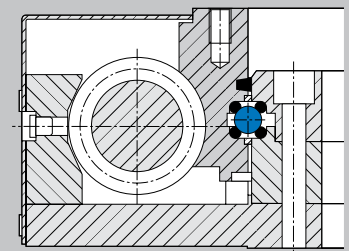
In Solar Industries: Tracking Systems



The best possible positioning to the sun is required for photovoltaic modules or solar panels to obtain an optimum yield in solar energy systems. Franke Antifriction Bearings in tracking systems automatically align solar collector systems such that radiation from the sun is collected in ideal fashion.

The Features:

- The 4-point system of Franke Antifriction Bearings makes for optimum swivelling of solar collector systems along with a high degree of rigidity.
- Built directly into the surrounding structure, these bearings are extremely space-saving.
- Good value for money tops off the benefits of this Franke product.



Bearing diameter: 170 mm

In the Textile Industry: Circular Knitting Machines

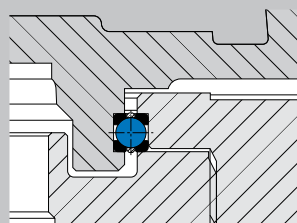


Photo credit: Mayer & Cie. GmbH & Co.KG

Our bearing elements for circular knitting machines have a decisive influence on the quality of the textiles due to their precision.

The Features:

- Even under severe thermal and mechanical loads, the bearing elements enable exact radial and axial guiding of the needles.
- The rotary speeds are up to 60 revolutions per minute.
- The quality of the machines is determined amongst other things by the quiet running of the bearing and the high surface quality of the raceways.



Bearing diameter: 960 mm

In Machinery: Machining Centres

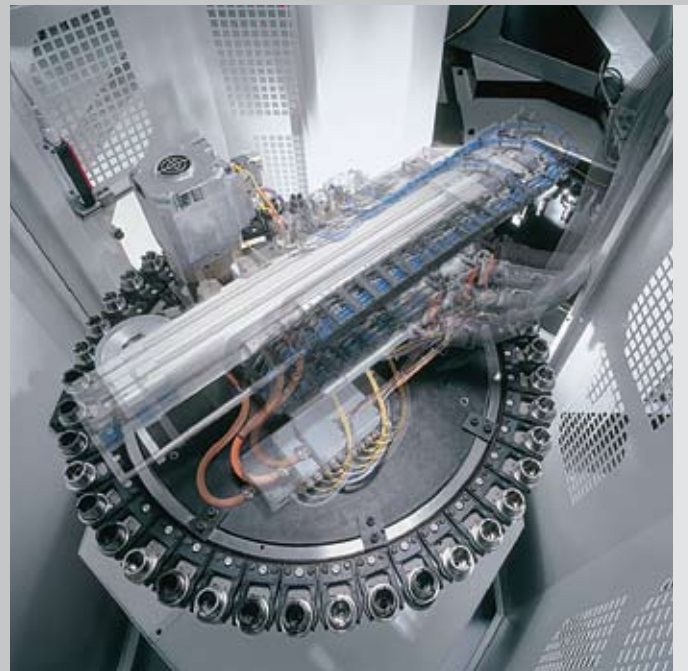
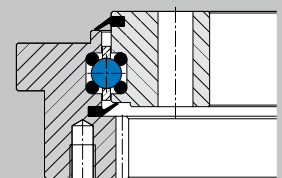


Photo credit: Hermle AG

In tool changers at machining centres, our bearing assemblies help to ensure that different tools are fed quickly and precisely into the machining head.

The Features:

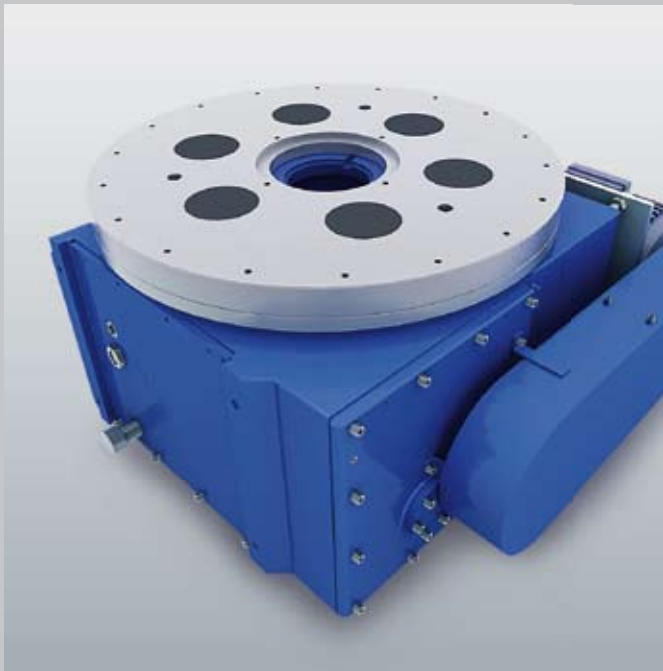
- Larger bore possibility of the bearing assemblies, the drive system can be installed to the inside.
- Labyrinth seals protect the raceways of the bearing assemblies from chipping and coolants.
- The preload of the bearing guarantees high accuracy and even adjustment – thus, nothing stands in the way of quiet running and maximum precision.



Bearing diameter: 970 mm

Antifriction Bearings in Practice

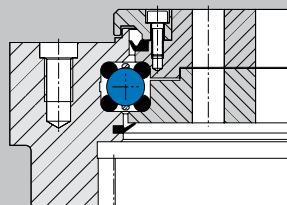
In Machinery: Indexing Tables



By using indexing tables, also called Rotary Tables, tools are moved precisely. The constant and precise movement of these indexing tables is based on our bearing elements amongst other things.

The Features:

- The bearing elements are precisely adjusted to the different loads. Enormous loads can easily be borne from all directions.
- The Antifriction Bearings guarantee that the Rotary Table can move without jerks or shocks, high repeat accuracy is included.



Bearing diameter: 800 mm

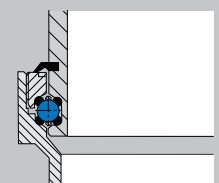
In Automation: Robots



Our bearing elements are ideally suited for use in the mobile axes of small robots.

The Features:

- The ingenious 4-point system from Franke facilitates high capacity from all directions of movement.
- As the bearing element is integrated into the existing robot design, only minimal installation space is needed.
- The larger bore possibility of the bearing enables cables and supply pipes to be fed through.



Bearing diameter: 240 mm

In Clean Room Technology: Machinery for Chip Production

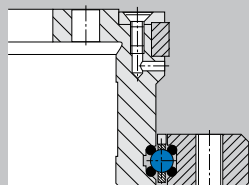
In the Aviation Industry: Turbine Testing



Wafer steppers are used for microchip production in the clean room. The illumination optics form the heart of this machine. They produce the filigree chip structures. A component of the optics: a Franke Antifriction Bearing.

The Features:

- So that the illumination optics can work with extremely low tolerances, the bearing has good radial and axial accuracy and high stiffness.
- Low-abrasion materials, special balls, a special ball cage and freedom from lubricants meet the necessary requirements for the clean room.
- The final cleaning and packing of the bearing is effected for clean room level 10000.
- Weight is saved by using aluminium.



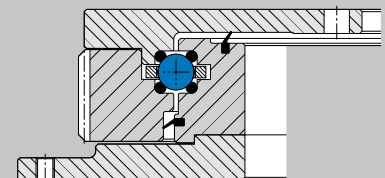
Bearing diameter: 138 mm



Franke Special Bearings of 700 to 1500 mm are used in testing stations for turbines. They are used to position the conducting segments and rotating blades. The bearings are integrated in precise housing contours to record the complex measuring and testing sensors.

The Features:

- The bearings withstand temperatures up to 200 °C.
- High accuracy requirements for radial and axial running are fulfilled.
- The bearings can optionally be adjusted to all interface dimensions.



Bearing diameter: 850 mm