

# Franke Whisper Bearing<sup>®</sup>

Bearings with elastomer inserts guarantee smooth running and ensure silence

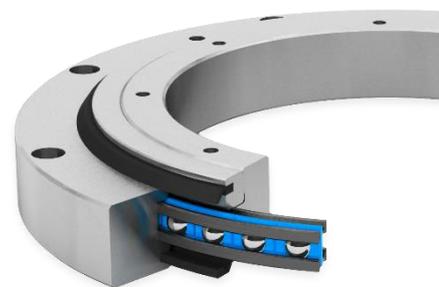


Machines and devices that have moving parts generate noise - be it through friction, vibration or structure-borne sound. Friction noise is effectively reduced by the optimal adaptation of the friction surfaces to each other and by sufficient lubrication of these surfaces.

The generation of vibration noise and structure-borne sound can be effectively prevented by insulating intermediate layers of damping materials. This design principle is also applied to Franke wire race bearings as whisper bearings.

Franke wire race bearings are based on a simple principle: race rings made of wire are provided with a raceway that is precisely matched to the diameter of the rolling elements. The rolling process therefore does not take place directly between the rolling elements and the enclosing structure, but on the four open races. This design principle allows free design of the enclosing construction with regard to geometry and choice of material.

Franke whisper bearings are the consistent further development of wire race bearing technology in terms of noise minimisation.



# Franke Whisper Bearing

Whispering bearings are also used successfully in the field of highly dynamic large-diameter bearings. **Franke special bearings for computer tomographs** are customised high-performance bearings. They impress with their particularly quiet running and actively contribute to minimising the noise exposure of patients during treatment. More than 50,000 Franke CT bearings are already in use in medical technology.

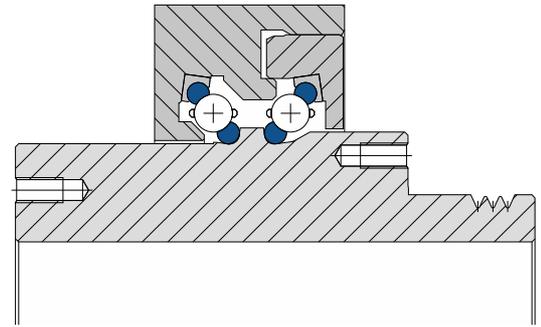
In modern computer tomographs, rotating loads of up to 1t in weight are moved at speeds of up to 400 rpm in the middle. The high speeds are necessary to produce high-resolution diagnostic images. The higher the resolution, the more precisely the X-ray detector must rotate to obtain sharp images. In addition to quiet running, a CT bearing is therefore also required to be highly precise. This means that exact axial and radial runout must be ensured.

Franke wire race bearings are the first choice for renowned manufacturers of computer tomographs worldwide. Quiet, light and highly dynamic, they meet all the requirements of modern components for high-performance medicine. Here, customers receive the complete assembly of lightweight bearing, motor and control coordinated with each other from a single source.

Numerous design variants of the whisper bearing have been implemented so far: 2-row angular contact ball bearings for very high speeds or a particularly space-saving slewing ring that runs at high circumferential speeds in luggage scanners, for example.

## The advantages of Franke Whisper bearings

- Compact design
- Noise reduction by 5dB (A) due to elastomer coating
- Inner and outer ring electrically insulated by elastomer coating
- Available as bearing element in diameters from 60 - 2,000 mm
- Available as ready-to-install bearing assembly with integrated direct drive



Highly dynamic angular contact ball bearings with elastomer damping, as used in medical technology. The running wires in the outer ring of the bearing receive an elastomer coating. The elastomer interrupts the transmission of structure-borne noise to the continuing construction and reduces the noise development considerably.

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## Franke Whisper Bearing in use:

Product advantage: extremely smooth running, low rotational resistance, electrical insulation, loads of more than 1,000 kg possible

In this application you can see a customised patented Franke whisper bearing with elastomer. In addition to the high running culture, Franke CT bearings have optimum rotational resistance. The radial and axial runout is a few hundredths of a millimetre, depending on the design and diameter. All Franke CT bearings are adjustable according to customer requirements. Due to the internal elasticity, the bearing is extremely robust even under the toughest operating conditions.



For more information on the application example  
Please click here:

