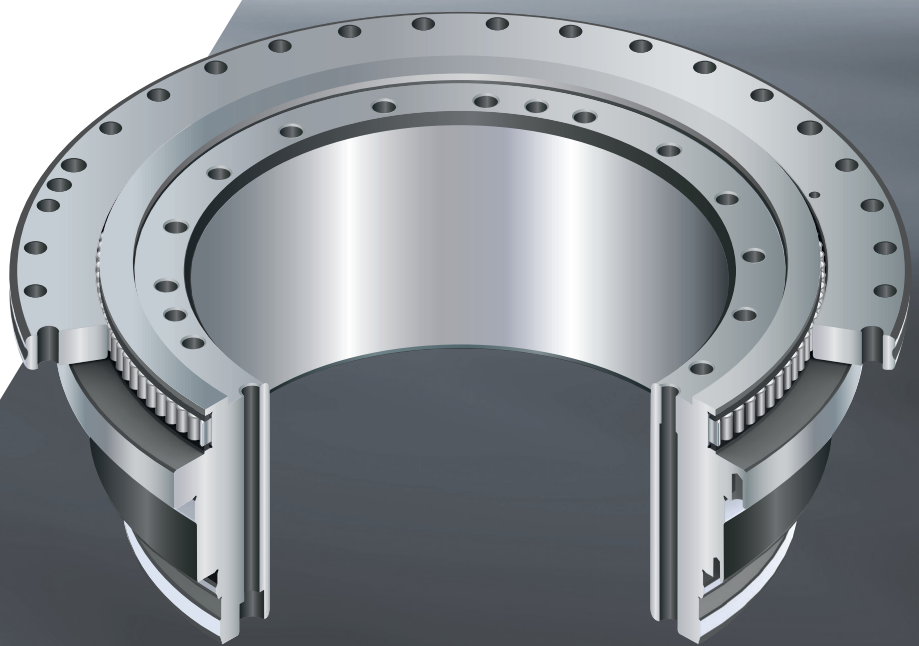
Product chapter

Special bearings



General

General

The production of myonic ultra precision bearings takes place on ultra modern machine tools in one clamping position.

This permits form accuracies to be achieved which cannot be achieved using conventional methods.
In the area of special bearing construction, the transmission of this accuracy onto the surrounding construction is a decisive criterion.

myonic features an extremely flexible set-up in the area of production for ultra high precision rotary axis bearings.
This permits the production of special bearings in smaller batch sizes.

Preloaded non-locating bearings/integration

General

For long axes or axes with high applications of pressure through tilting moments, a counter bearing can substantially increase the performance capacity.

The bearings are preloaded via the radial part and therefore run backlash-free, but can balance out via length expansions.

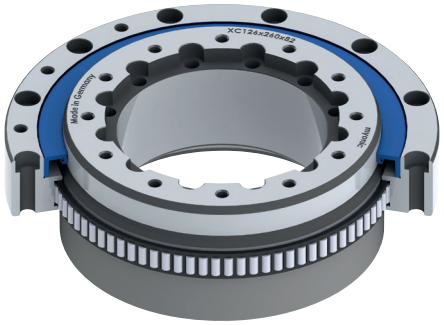
Integration

Further functions can be integrated into these bearing types:

- Fit seats for additional parts such as toothed wheels or measuring flanges
- Counter faces for shaft sealing rings
- Seals
- Toothings

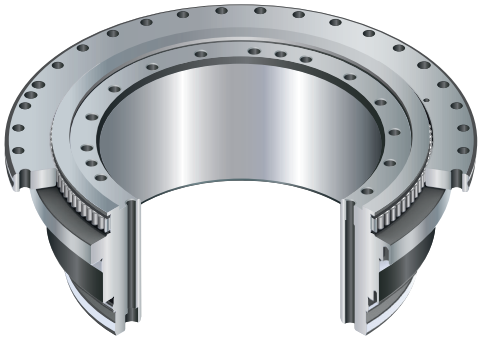
Advantages

The defined fixed/non-locating bearing setup avoids distortions in the rotary axis system. The assembly costs are lowered; the parts merely have to be centred once.



Example – non-locating bearing in a swing bridge

In addition to the non-locating bearing function, the bearing seals against the outside. The integrated high precision centring attachment in the bearing bore simplifies assembly.



Example – non-locating bearing in the machining axis of a transfer centre

In addition to the non-locating bearing function, mating surfaces for a toothed wheel and the measuring flange and a hardened, twist-free counter surface are designed for the shaft sealing ring.

Integrated axial/radial bearings

General

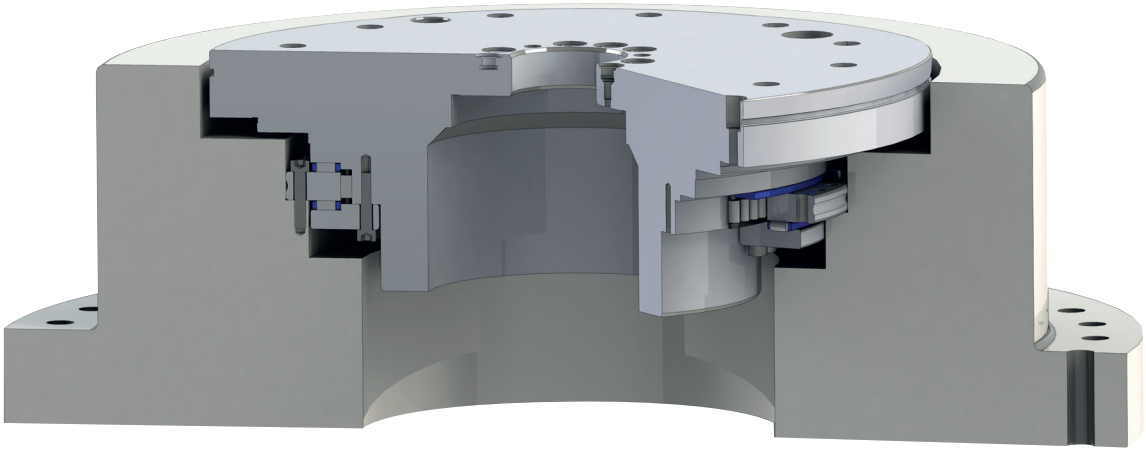
The manufacture of a suitable adjacent construction for ultra high precision bearings is complex; form irregularities worsen the radial and axial runout.

With the functional integration of the axial/radial bearings in the surrounding construction, better and less expensive solutions can be realised.

Advantages

The integration generates numerous advantages:

- Reduction of components
- Compact solution, ready to install
- Reduction in assembly effort
- Improved accuracy requirements
- Higher rigidities
- Seals
- Reduction of total costs



Example of table integration as inner ring

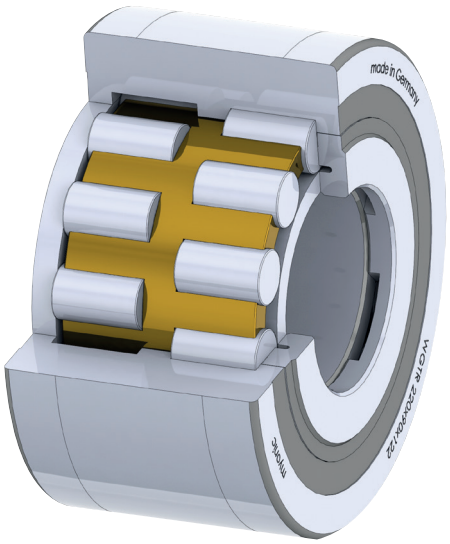
The machining table replaces the inner ring of the axial-radial bearings. The entire solution is more compact, rigid and accurate in axial and radial runout than the conventional solution with simultaneously lower total costs of the axis.

Support bearings

General

Support bearings from the roller mill sector are frequently used as accompanying support bearings for heavy workpieces.

Due to the extremely high production precision, these bearings can be supplied with minimum construction heights and lowest radial runout tolerances.



Further bearings for machine tools/ Accessories

Bearings for ball screw drives

myonic produces a complete program of needle axial cylindrical roller bearings, construction series AXZN and AXZF.
Please request these catalogues separately.

Spindle bearings

myonic produces ultra high precision spindle bearings in the smaller diameter range, suitable for maximum speeds.
Please request these catalogues separately.