

High Speed Spindle Bearings

The precision of a machine tool's spindle is key to its performance. Due to the increasing complexities of industrial machine tool design, HQW Precision offers a range of super precision bearings which are specially optimised to meet these requirements.

HQW Precision spindle bearings are single row angular contact ball bearings which support thrust loads in one direction. At very high speeds, they can simultaneously absorb high radial forces and single direction axial forces.

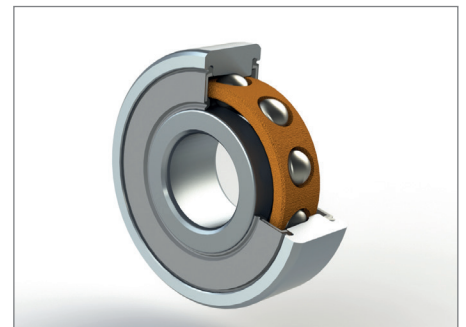
Spindle bearings need at least one counterpart bearing so that a system is preloaded and capable of absorbing axial forces in both directions, making the entire system free of clearance.

Spindle bearings have one open shoulder on the outer ring as standard and this design permits the use of a higher number of balls and thus a higher load rating.

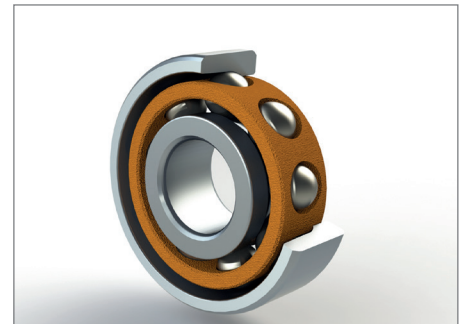
The addition of a window cage maximises the bearing's speed limit. In terms of the design, running accuracy and the materials used, HQW spindle bearings deliver the highest speeds and highest load ratings, while requiring the minimum of maintenance. HQW spindle bearings are produced in precision classes P4, P4S and P2.

Bearing Specifications:

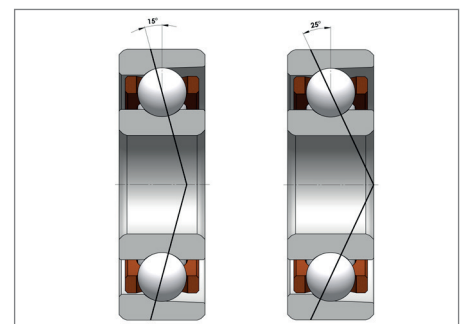
- High nitrogen steel rings (X30CrMoN15-1) for excellent corrosion resistance
- Ceramic (Si_3N_4) ball versions ensure low wear and highspeed capability
- Multiple preload options
- Reliable operation with a maximised load rating
- Extensive high performance lubricant range, suitable for all applications and industries
- Non-contact fluororubber (FKM) seals as an option on both sides allow use at high temperatures while minimising friction and wear



Spindle bearing with seals made of FKM on both sides



Open spindle bearing



15° & 25° contact angles are available

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