



**DentX**  
High Precision Dental Bearings

# DentX

## Manufacturing Excellence in the Extreme

The DentX range from HQW Precision brings a new era in dental bearing design, quality and innovation to the market. Expertly designed to cope with the extreme environments in which dental handpieces operate, DentX bearings offer exceptional quality and reliability.

HQW Precision is a specialist manufacturer of high precision, miniature ball bearings for high performance applications. The company operates from a state-of-the-art facility in Kürnach, Germany, which offers a full range of engineering, design and testing services to customers across the world. The company's strength lies in its people and uncompromising customer focus, we are proud to be a "Made in Germany" manufacturer. With solutions for both low speed handpieces and high-speed dental turbines, HQW Precision is established as trusted supplier to the dental industry.





## EXtreme Environments

The operating environment for dental turbine bearings is undeniably harsh. DentX bearings offer exceptional performance in this extreme environment:

- Designed to run reliably at high speed (to 500,000 rpm) with low operating noise and low friction levels to ensure a more relaxed environment for patients.
- The use of special ring and cage materials supports a longer bearing lifetime, protecting against wear and the effects of sterilisation.
- DentX dental bearings are fully optimised to offer the longest possible lifetime. Maintenance intervals are reduced, enabling significant cost savings over the lifetime of the bearing.
- Products are finished to the highest specification and designed for low friction. This reduces operating temperatures and results in a more comfortable patient experience.



## EXceptional Quality

Critical conditions demand the highest quality standards and DentX dental bearings conform to all the specifications you would expect from a premium manufacturer:

- With assembly, testing and packaging all taking place in an ultra-modern Class 7 (10,000) clean room, our customers can be assured bearings are supplied to the highest hygiene and cleanliness standards.
- Bearings are manufactured to up to ABEC9 (ISO P2) tolerance standards for the ultimate in precision.
- HQW offers a flexible design approach, allowing for compactness, a low weight and integrated features where required, as well as full technical support in the application development process.
- The HQW Dental Laboratory includes dedicated test rigs to ensure all bearings meet specific performance requirements.



## Manufacturing EXcellence

The manufacturing capability at our facility in Kürnach, Germany is world-class; utilising modern, efficient machinery and sophisticated testing facilities:

- Our facilities offer advanced R&D, testing and QA programs and a culture of continuous improvement runs through everything we do.
- All products are 100% noise tested under clean room conditions.
- Our fast and flexible approach to manufacturing allows us to offer our DentX bearing range in both large and small quantities, depending on the requirements of our customers.
- With numerous performance benefits alongside a cost-competitive price, DentX bearings offer excellent value for money.



# Technology Features

## Balls

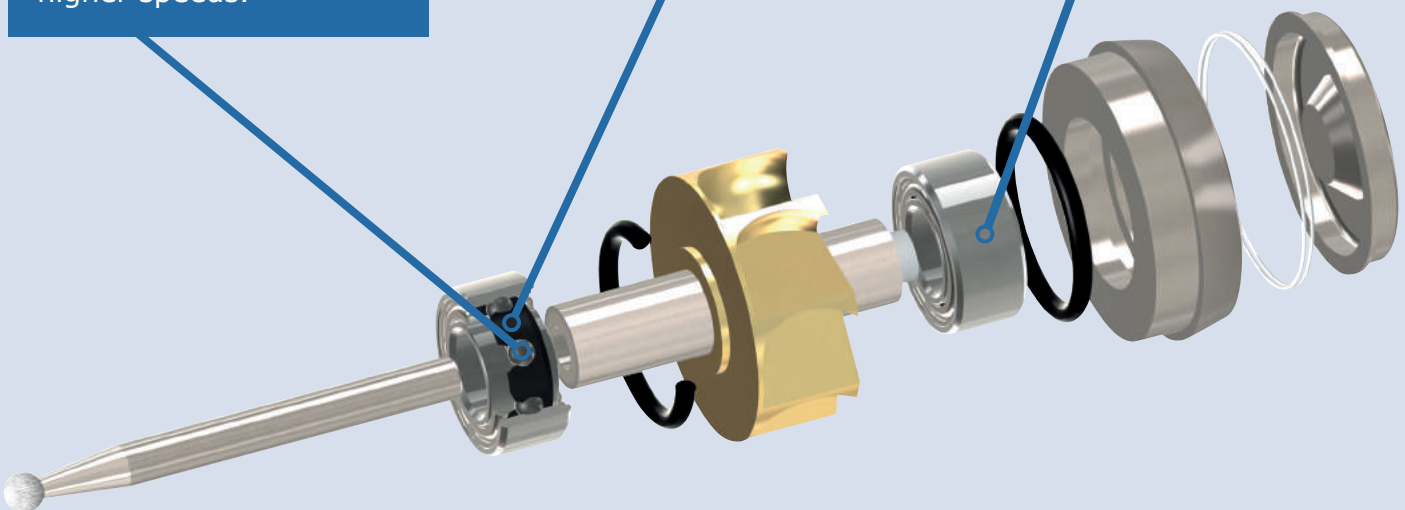
DentX bearings are supplied with steel balls as standard. Ceramic (silicon nitride) balls can also be used and are harder, lighter and highly wear resistant. They allow for significantly higher speeds.

## Cages

A wide variety of cage materials are available, including PEEK, TORLON® and Polyimide for the most demanding requirements.

## Ring Materials

Highly corrosion resistant steels are used to extend the operating life of our bearings and provide protection against the effects of multiple steam or chemical sterilisation cycles.



## Lubrication

DentX bearings are available with a range of lubricant options, with a high resistance to sterilisation and all considered safe for the application and patient.

## Interchangeability

The DentX bearing range offers exceptional variety. With so many options, it's easy to see why we can offer bearings suitable for any handpiece from all manufacturers.

## Technology Partner

HQW Precision is a technology partner to our customers, using our engineering expertise to develop dental bearing solutions that provide superior accuracy and precision, whilst also being cost-competitive.

# DentX Product Range



Angular contact ball bearing with Torlon® window cage and stepped outer ring.



Angular contact ball bearing with extended inner ring and phenolic window cage.



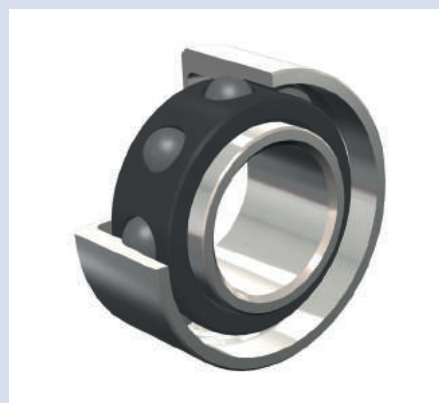
Angular contact ball bearing with stepped outer ring, Torlon® window cage and special sealing.



Deep groove ball bearing with Torlon® crown cage and two shields.



Angular contact ball bearing with flange, phenolic window cage and outer ring with integral shield.



Angular contact ball bearing with Torlon® window cage and outer ring with integral shield.



Deep groove ball bearing with Torlon® crown cage and shielded one side.



Deep groove ball bearing with gold-plated shield, groove in inner ring, offset raceway and Torlon® crown cage.



Wave spring washers.



HQW Precision GmbH  
Wachtelberg 23  
97273 Kürnach  
Germany

Phone: +49 (0) 93 67-98408-0  
Fax: +49 (0) 93 67-98408-199  
E-Mail: [info@hqw.gmbh](mailto:info@hqw.gmbh)  
Internet: [www.hqw.gmbh](http://www.hqw.gmbh)

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