Tested quality - for more efficiency in dental technology

Orakel III

- Test module to determine the lifetime of high-speed dental handpieces
- Allowing for fast and efficient comparison of a development
- Automated and with a minimum of personnel expenditure
- The module can be employed anywhere, since you only need electricity and clean, dry compressed air
- Test capacities can be expanded at any time without a great deal of effort
- Constant test-procedures which can be exactly reproduced
- Simple documentation via textfiles

Speedmaster

- Non-contact measuring instrument for the dental industry
- Determines the speeds of fast-running rotating instruments
- Also used for other fast-rotating components like motors, high-frequency spindles
- Speed range from 20,000 to 600,000 rpm
- Proved to be particularly useful in development and production as well as the repair of dental turbines and dental angular handpieces

Highest precision developed by GRW test-facilities

In order to be able to offer you products of the finest quality with the highest precision, GRW develops each new bearing design for dental technology using our own special testing process and equipment. Our dedicated test facilities are unique in the industry.

Our third generation test equipment provides efficient means to evaluate new and existing designs to meet each customer's exacting needs. Through this process an optimized bearing technology results in advanced efficiency and increased lifetime performance. High speed turbines and conventional handpieces are run through adjustable test cycles using state-of-the-art measurement systems to assure maximum performance.

Highly reliable and enormously effective – for years the high precision bearing from GRW has proven itself in many applications for dental technology.

Dental solutions

- Customized individual solutions
- Integrated space saving features suitable for extremely high speeds
- 100% noise tested
- Know-how and innovation in high-tech materials
- Temperature management designs
- Durability for most common cleaning processes
- Broad expertise in development of highly sophisticated test facilities
- Cutting-edge development partner for many OEM

Specifications

- Super precision ball bearings from 1 to 35 mm bore and 3 to 47 mm outer diameter, available in metric and inch sizes
- Precision Classes ISO P0 to P2 or alternatively AFBMA ABEC1 to ABEC9
- Angular contact and spindle ball bearings (separable and non-separable)
- Duplex bearings, special bearings
- Hybrid and full ceramic ball bearings
- Accessories (spring washers, spacers, retaining rings)
- Specialities (super precision bushings, needle roller assemblies)
- Standard deep groove ball bearings (single or double row)
- Ball bearings features with flanged outer and extended inner rings
- Numerous options for shields and seals
- Different cage designs and materials
- Bearings with customized oil or grease, dry film lubrications or coatings
- Matched and preloaded sets of bearings
- Bearing sub-assemblies and special bearings built with standard production components

Know-how

- Bearing assembly in class R10.000 (ISO 14644-1) Flow bench R100
- Fully automated manufacturing for economic production of large quantities
- Technical support and recommendations including bearing selection
- System solutions engineered uniquely for each customer
- Large selection of lubricants for all applications
- Highly corrosion-resistant SV30 bearing steel

QUALITY MANAGEMENTSYSTEM

DQS- certified
ISO 9001:2008 Reg.-Nr.283913

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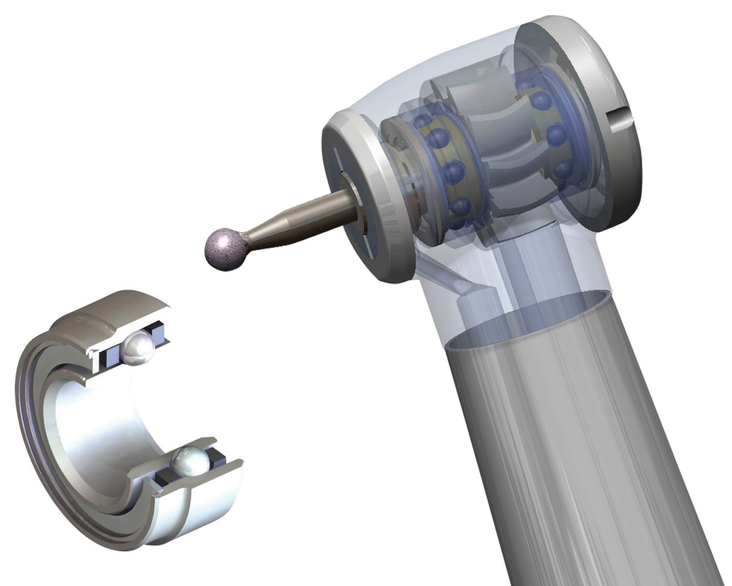
::DENTAL

...rotated by GRW.



Our Company

The GRW Group with its head office in Rimpar near Würzburg is one of the global technology leaders in the development and manufacture of high-precision miniature ball bearings.

With its more than 400 employees, a production site in Prachatice (Czech Republic), and a branch establishment in the USA, the company secures its innovative power and know-how.

The standard product range comprises a wide variety of deep groove ball bearings with 1 mm to 35 mm bore and outside diameter of 3 mm to 47 in metric and Inch dimensions.

With our state-of-the-art production processes, we manufacture not only accessories but also bearing units and special ball bearings based on an extensive modular system.

Customers trusting in GRW dental bearings

anthogyr · Bien-Air Dental · Chirana · madri med · MK-dent GERMANY · MM MICRO MEGA · NSK · NOUVAG Dental and Medical Equipment · BATTELEC ACTEON Equipment · SCHICK Dentalgeräte · SIROLL · sirona The Dental Company · StarDental · TT BIO · W&H

Products

Turbine handpieces

Cutting-edge solutions for high speed

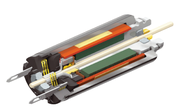
Straight and contra-angle handpieces

Dental handpieces
Special solutions for space limited applications

OMS handpieces
(oral and maxillofacial surgery)

OMS handpieces
Highly corrosion-resistant bearing materials

Dental micro motors
(electric & air driven)



Lubricated for life

Laboratory handpieces

Special proprietary sealing technology provides a cooler running environment and extends bearing lifetime

Applications

Turbine handpieces
High precision bearings ensure that turbines with speeds up to 500,000 rpm and above maintain their precision for extended life projections. Customer driven demands have made the use of special materials and tailor-made solutions common at GRW for these applications. Therefore GRW offers lifetime optimized bearings in stainless steel as well as high-end products using ceramic balls. Based on the foundation of detailed research and the intelligent application of corrosion resistant steels combined with ceramic materials, customized high performance polymers, and high-tech lubricants, all of our products are exactingly engineered for the harsh environment of sterilization. With our in-house testing and industry partnerships, we have minimized concerns of corrosion, autoclaving and thermo-disinfection ability, re-lubrication, and perfomance. Through GRW initiated research in lubrication and retainer materials as well as cooperations with external development partners, from industry and science, GRW continues to work on innovative solutions in the premium field of dental applications. This ongoing effort to achieve excellence has made GRW a renowned and highly respected partner for dental OEM all over the world.

Straight and contra-angle handpieces
Whether "low speed" (≤ 40.000 rqm) or "highspeed" (~ 200,000 rpm) – GRW offers the optimal system solution for any application. GRW has developed products that withstand the most extreme environments including sterilization and thermo-disinfection while maintaining our reputation for long life. Also available are design configurations that eliminate or minimize the need for re-lubrication.

OMS handpieces (oral and maxillofacial surgery)
Ceramic balls in combination with our highly corrosion resistant SV30 stainless steel and for high speed applications also customized high performance polymers provide the highest degree of chemical resistance available. Even when exposed to extreme conditions such as contamination, lube deprivation, aggressive solutions and cleaning agents this combination out-performs other configurations. GRW bearings have been thoroughly tested under these conditions and have a rich and long proven clinical history with our customers regarding its resistance against autoclaving and thermo-disinfection, in special cases even under maintenance-free conditions.

Dental micro motors
Decades of experience and cooperation with almost all name brand manufacturers in the field of micro motors has catapulted GRW to the most demanded European bearing producer for high quality medical motors. GRW continues to provide a high quality bearing at competitive prices. Customer specific requirements (e.g. sterilization resistance or lifetime lubrication) are always welcome.

Laboratory handpieces
GRW offers highly advanced bearing solutions for any challenge in modern laboratory technology. GRW thus provides you with an extensive product portfolio for laboratory handpieces and their micro motors. Also available are specialized solutions for high work loads, custom seals and low friction applications. GRW has developed proven solutions for applications between 1,000 and 60,000 rpm. Additional areas of expertise include dental lab technologies related to CAD/CAM-systems used for manufacturing mainly ceramic dental prostheses.
These highly automated production centers use milling spindles which incorporate specialized duplexed spindle bearings that have been optimized with for-life lubrication and special retainers for high precision machining of dental crowns and inlays. GRW has developed proven solutions for these applications between 5,000 – 80,000 rpm.

www.grw.de