



New Hampshire Ball Bearings, Inc.  
— A Minebea Company —



**DENTAL BEARINGS**

## What does it take to produce a superior line of dental handpiece bearings today?



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### Synergy.

As a repair technician, small business owner, and entrepreneur, using only the best components is crucial to your success. But buying the right bearing has become more difficult than ever before. You are faced with more choices, thanks to a global supply of bearings, and competing claims of quality have blurred the distinction between marginally good and truly exceptional bearings.

At NHBB and myonic we aim to change all of that. We have joined together as Minebea subsidiaries to offer the widest selection of high quality dental handpiece bearings and assemblies in the industry. By combining not only our product offering but also our knowledge of and experience with the dental industry, our precision manufacturing practices, and our R&D efforts, NHBB and myonic are creating a new platform for delivering the best performing and longest lasting bearings available in the marketplace today.



- Radial
- Angular Contact
- High Speed
- Low Speed
- Hybrid Ceramic
- Turbine Assemblies
- Spindles
- Canister Bearings
- Customized Solutions

## Why Buy from Us?

### A COMPLETE SOLUTION

The partnership between NHBB and myonic has resulted in the industry's most comprehensive offering of high quality dental handpiece bearings and assemblies. Together, we are an approved source of bearings for just about every major handpiece manufacturer in the world today. Our broad solutions—including spindles and turbine assemblies—support everything that's needed in handpiece performance: precise fit, exceptionally smooth and quiet performance, high speed capabilities, autoclave resistance, and exceptionally long life. All components are made from scientifically advanced materials. Machining tolerances and surface finishes exceed industry standards. All bearings are assembled in a clean room environment. And numerous design options are available to further enhance performance and increase life.

### COMMITMENT TO THE DENTAL INDUSTRY



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Over forty years ago myonic got its start as a manufacturer of dental handpiece bearings and today the dental market accounts for a majority of its business. NHBB's commitment to the dental industry goes back over forty years as well, and NHBB is still the leading supplier of replacement bearings to the dental handpiece repair market in North America. As a single source, we are the most comprehensive supplier

of dental handpiece bearings to every major OEM in the dental handpiece manufacturing industry.

### WORLD CLASS R&D



NHBB and myonic are dedicated to meeting customer-specific requirements through unmatched technical support and design consulting services. Supporting this effort are two of the most sophisticated and active test/research labs in the industry. The facilities in Germany and the U.S. operate 24 hours a day, seven days a week. Our research into proprietary lubricants, new retainer materials, and sophisticated bearing designs have yielded many unique solutions which have increased bearing life and improved dental handpiece performance.

### STRENGTH OF DISTRIBUTION CHANNEL

NHBB and myonic are partnered with the largest and most visible distributors in the dental repair parts marketplace. Our Authorized Distributors carry an extensive inventory of our products and provide exceptional service through competitive pricing, timely shipping, and knowledgeable technical support. You can rely on them to provide you with the bearings you need, when you need them. To learn where to purchase myonic and NHBB bearings, visit our website, [nhbb.com](http://nhbb.com), or call 818.993.4100 (NHBB) or 818.701.4833 (myonic USA).

**EXCEPTIONAL CUSTOMER SERVICE:** As independent companies, NHBB and myonic have earned reputations for excellent quality and service, a focus on innovation, and an unwavering commitment to the dental industry. As partners, our strengths are magnified by our shared desire to meet the needs of dental handpiece customers. It's a partnership you can count on for providing excellent service to your clients.

## Technical Features and Performance Benefits

Using high precision bearings manufactured by NHBB and myonic can improve the performance of your customers' handpieces and reinforce your reputation as a quality repair business.

### TOP-QUALITY WORKMANSHIP

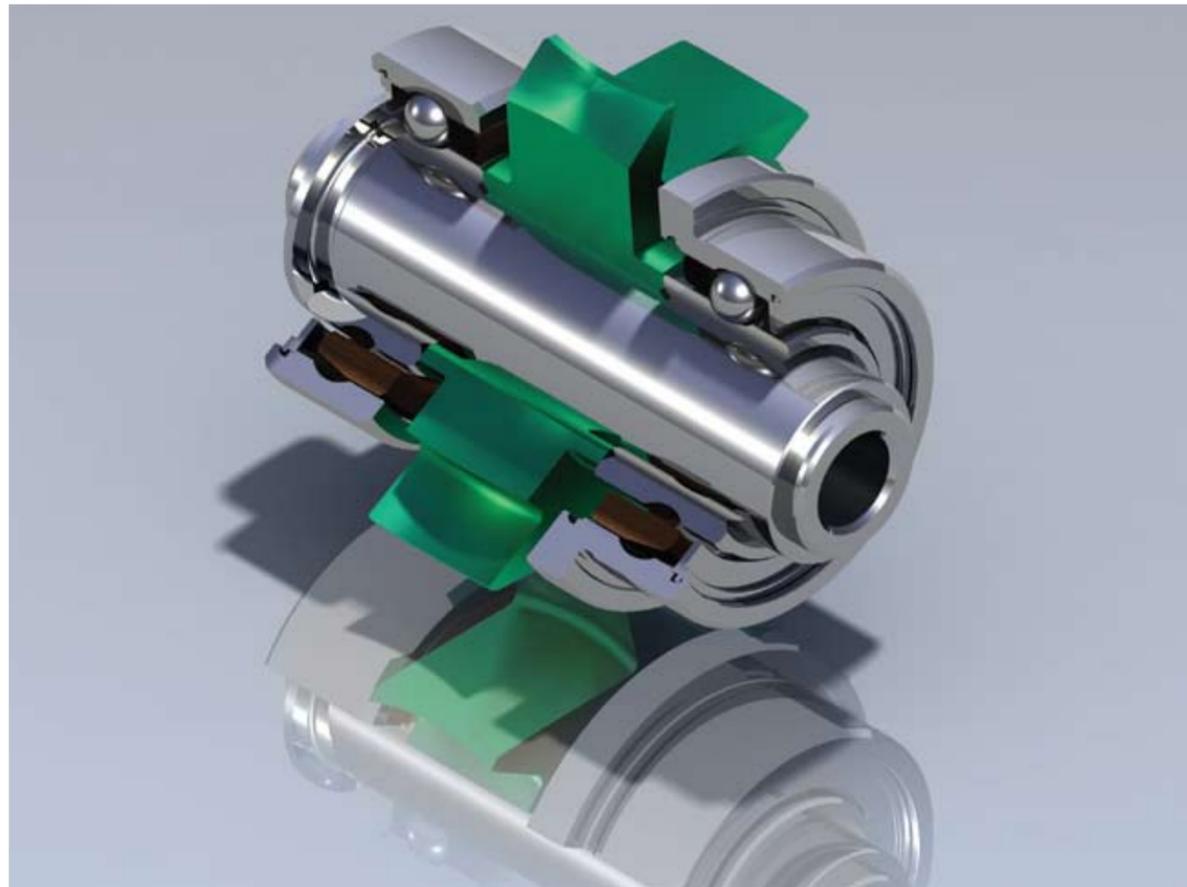
NHBB and myonic's bearings are designed and manufactured for smooth and quiet operation at speeds of up to **500,000 rpm**. The dimensional accuracy of critical bearing features is tightly controlled throughout the manufacturing process. The tolerances for ring roundness, radial and axial run-out, and surface finishes exceed **ABEC 9** requirements, and bore tolerances are held to 0.0001 inch. The bearings we produce undergo post-assembly testing for noise and vibration, which ensures you'll receive bearings that meet stringent performance standards.



**Integral Shield**

### EXTRA-PROTECTIVE SHIELD DESIGNS

NHBB and myonic's numerous shield designs do a superb job of retaining lubricants and preventing contamination from reaching critical bearing surfaces, which help to reduce bearing wear and minimize the potential for premature failure. While standard snap-in shield designs are adequate for most situations, NHBB and myonic offer premium designs, such as **integral** and **laser-welded shields**, for more demanding applications. The integral shield is machined into the outer ring; the tighter gap created by this design significantly increases protection and improves the bearing's noise characteristics. The laser-welded shield is spot welded to the face of the inner ring, which creates a virtually impenetrable labyrinthine layer of protection.



### HIGH PERFORMANCE GREASE LUBRICANTS

NHBB and myonic offer **pre-lubricated bearings** with autoclave-resistant grease applied during final assembly. The grease lubricants consist of proprietary formulas developed specifically for dental handpieces by NHBB and myonic. We have found that grease facilitates smoother run-in and improved life, even at high speeds. It also reduces your customers' maintenance demands because, unlike oil, grease doesn't require constant replenishment.



**Spindles and complete turbine assemblies are available from myonic.**



**Hybrid Ceramic**

### CERAMIC BALLS

Stainless steel (440C) balls are still the industry's standard, offering solid performance and affordable prices, but **hybrid ceramic bearings** made by NHBB and myonic are fast becoming the preferred option. Ceramic balls are harder, smoother, lighter, and more wear resistant than stainless steel. They generate less bearing wear and lubricant degradation, produce lower internal bearing temperatures, and increase the bearing's speed capabilities, even in the absence of lubrication. Repair facilities are taking advantage of ceramic's performance benefits by offering longer warranties for hybrid ceramic replacement bearings in order to differentiate their service from the competition.

### PROPRIETARY MACHINED RETAINER DESIGNS

NHBB and myonic offer one of the broadest selections of retainer designs, including proprietary solutions, all of which are carefully engineered and manufactured for optimum performance. The best performing retainers are machined designs made from the following scientifically advanced materials:

- **Torlon®** (polyamide-imide) delivers superior performance at high temperatures and high speeds. It's an excellent choice for dental applications because of its increased strength and durability; it can withstand repeated autoclaving.
- **Phenolic** retainers offer superb performance at high speeds thanks to phenolic's low wear and enhanced lubricity properties; its porosity allows for oil absorption through vacuum impregnation.
- NHBB's patented **composite silver-polymer** retainer offers up to 70% increased life and superior performance when specified in a maintenance-free bearing design. This proprietary retainer—available only from NHBB and myonic—combines the lubricant retaining properties of an anti-friction coating with the solid lubricating and anti-microbial properties of silver.



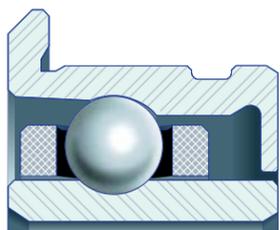
**Composite Silver-polymer Retainers**

Offer your customers longer lasting performance from their dental handpieces by specifying hybrid ceramic bearings made by NHBB and myonic.

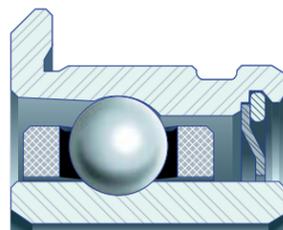
Torlon® is a registered trademark of Solvay Advanced Polymers, L.L.C.

## Common Configurations

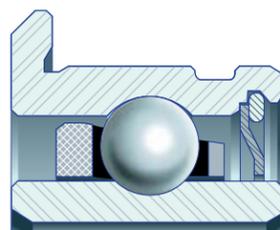
Together, NHBB and myonic possess the industry's broadest offering of high quality dental handpiece bearings and assemblies. We have limited the selection of bearings in this brochure to the most common configurations required to meet your customers' handpiece repair and overhaul needs. If the bearing you are looking for is not listed here, please contact one of our authorized dental bearing distributors. They are listed on our website, nhbb.com.



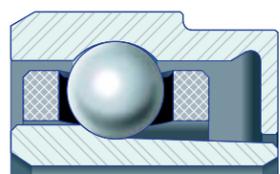
**Angular Contact  
Flanged, Integral Shield**



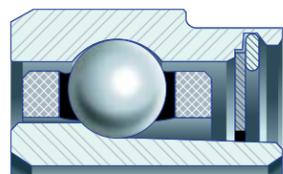
**Angular Contact  
Flanged, Removable Shield**



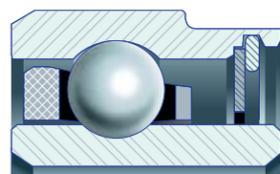
**Radial, Flanged  
Removable Shield**



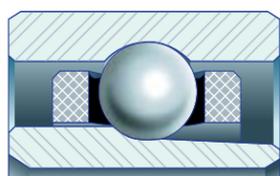
**Angular Contact  
Stepped, Integral Shield**



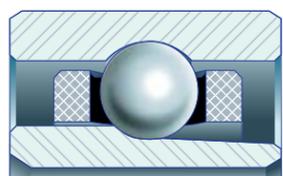
**Angular Contact  
Stepped, Removable Shield**



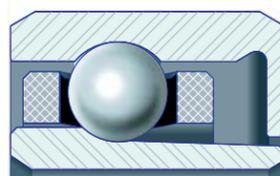
**Radial, Stepped  
Removable Shield**



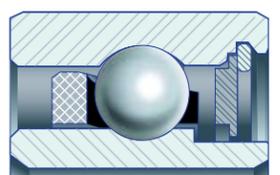
**Angular Contact, Open  
OEM Burr Tube (Larger Bore)**



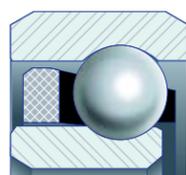
**Angular Contact, Open  
Aftermarket Burr Tube**



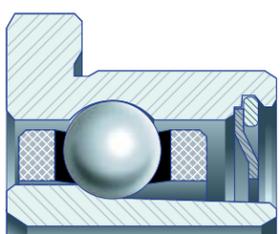
**Angular Contact  
Straight, Integral Shield**



**Radial, Straight  
Removable Shield**



**Radial  
Open**



**Angular Contact  
Flanged, Removable Shield**

## Facility Highlights



### New Hampshire Ball Bearings, Inc.

Precision Division/Corporate Headquarters  
Chatsworth, California

- 130,000 sq. ft. of manufacturing space
- 317 employees, 2+ shifts
- Class 1,000 Clean Room
- In-house R&D/Test Facility
- Quality Certifications:
  - ISO 9001:2008
  - AS9100, Rev B
  - Nadcap—Heat-treat
- ISO 14001:2004
  - Environmental Management



### myonic GmbH/myonic s.r.o.

Leutkirch, Germany &  
Roznov, Czech Republic

- Leutkirch, Germany**
- 74,486 sq. ft. of manufacturing space
  - 250 employees
  - Class 10,000 Clean Rooms
    - Class 100 Laminar Flow Benches
  - Certified ISO 9001:2008
  - AS9100, Rev B
- Roznov, Czech Republic**
- 22,389 sq. ft. of manufacturing space
  - 135 employees
  - Class 10,000 Clean Rooms
    - Class 100 Laminar Flow Benches
  - Certified ISO 9001:2008



New Hampshire Ball Bearings and myonic are an integral part of an international business. The parent company, Minebea Co., Ltd., is the world's leading manufacturer of miniature ball bearings and high precision components for the telecommunications, aerospace, automotive and electrical appliance industries.

The Minebea Group is comprised of 40 subsidiaries in 16 countries, and employs 50,000 people. In addition to its worldwide manufacturing capabilities, Minebea's vision is to lead the competition through extensive research and development of new methods and technologies.



New Hampshire Ball Bearings, Inc.

— *A Minebea Company* —

**Precision Division and  
Corporate Headquarters**

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**myonic USA**

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**Other NHBB Divisions**

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155 Lexington Drive  
Laconia, NH 03246  
tel: 603.524.0004 fax: 603.524.9025

**HiTech Division**

175 Jaffrey Road  
Peterborough, NH 03458  
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**[nhbb.com](http://nhbb.com)**