



New Hampshire Ball Bearings, Inc.  
— MinebeaMitsumi Group —

# inside track

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## An Interview with NHBB's Sales Director



**Cathie Anderson,**  
**Sales Director, NHBB**

Cathie Anderson joined NHBB in the newly created role of sales director in November of 2017. She oversees a field sales organization that is responsible for selling not just NHBB's products but all machined component solutions offered by the MinebeaMitsumi Group. This includes a broad mix of plain bearings, rolling element bearings, machined parts, next-up assemblies and fasteners, as well as contract manufacturing goods and services. In this article, Cathie talks about her first year at NHBB, the successful sales team reorganization, and some of the opportunities that may exist for NHBB in the coming years.

### **Describe your first year as sales director. What have you learned about the market and NHBB's customers?**

The pace has been fast and furious. With the increasing complexity of the MinebeaMitsumi organization in recent years, we are being asked to do more with the same resources. Plus, the aerospace market is really unique in that it is not a true vertical supply chain; I liken it to more of a web. The bearings side is fairly straightforward in that we know who our competitors are, but the machined components and next up assemblies (NUA) side is where it gets complicated, as there are literally thousands of players. NHBB's customers range from the Fortune 100 all the way down to some smaller machine shops that are just working hard every day to keep products moving through the factory. However, all of our customers are a critical part of the supply chain, and that's what is so interesting about this industry. It's also why we must continually improve our performance—even the slightest misstep could have large consequences.

### **What are some of the most noticeable changes to the sales organization you've made so far?**

We have restructured the organization to combine a key account approach with the traditional "territory and market" focus. In our new organization, we have built a team of account specialists who focus on strategic and growth customers. As the customer's single point of contact, these salespeople are responsible for anything and everything that MinebeaMitsumi does for that customer. In addition, we have also kept a more traditional "regionally" focused sales effort. The members of this sales team are able to reach deeper into markets and more actively support mid-size and smaller customers. Lastly, we've separated out distribution sales to take a renewed look at how we can better position ourselves within this important customer/business partner network.

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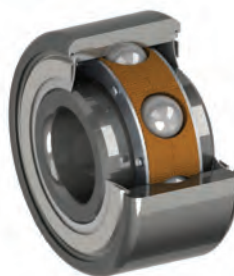
## Precision Division Expands Manufacturing Capabilities to Support Aerospace Customers

The Precision Division in Chatsworth, California is responding to rising demand and capacity constraints in the aerospace market by developing new capabilities and adding capacity. Investments are focused on processing aerospace grade materials and complex components as well as acquiring new machine centers and expanding key areas of production.

Precision recently launched the production of bearings made from M50 steel, a premium alloy that is used in high stress and high temperature applications. According to David Weitzel, operations manager for the HiTech and Precision Divisions, Precision has been working with advanced materials for awhile.

"M50 requires a different approach than the other materials we work with," says Weitzel. "So we've developed proprietary grind techniques to manufacture products from this premium alloy."

In a related development, Precision is phasing in surface temper etch (STE) inspection. STE is a nondestructive test method used to determine whether a material was manufactured within a



**Cutaway of Precision  
Ball Bearing with  
Riveted Retainer**

specified temperature range. It is an essential inspection method for M50 steel, which is more susceptible to overheating during production. Precision is leveraging NHBB HiTech's Level II STE inspection expertise to become certified, as well.

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**Also inside: Inroads in Additive Manufacturing**

## A Message From NHBB'S President

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**Dan Lemieux**

Like most successful companies, we work hard at aligning every part of our business—from technological solutions to production capabilities and front line sales activities—with the unique requirements of customers in our chosen markets. For us, this means fully understanding the needs of customers in the aerospace, medical, and select high technology industries, and engaging in activities that create value for them.

A good example of this focus is our targeted acquisition strategy. The approach we take while keeping in mind our customers' needs is to identify companies that have unique products, technologies, or production capabilities that will generate synergies among our businesses. In the past year alone the MinebeaMitsumi Group has added two new businesses to the fold. The Indiana-based C&A Tool is well positioned in our chosen markets. It brings high precision machining and additive manufacturing capabilities plus a new product line (orthopedic) to our Group. Mach Aero, an acquisition of our sister companies in Europe, is a specialized manufacturer of plain bearings and machined parts. Mach Aero's many contributions include the expansion of the Group's product offering and an increase in its global aerospace manufacturing capacity, with factories in France and India.

The restructured sales reorganization is a good illustration of how we're aligning our sales and service activities with customer needs. The organization combines a key-account approach alongside a traditional territorial sales model. This new structure addresses the complex needs of our largest aerospace, medical, and industrial customers by providing them with a single point of contact to our business. It also maintains close working relationships and high service levels for the many valued customers that are not geographically dispersed.

The developments at NHBB's Precision Division highlight our alignment strategy within existing factories. By expanding its capabilities to include additional materials and processes, Precision is tackling the aerospace industry's capacity constraints, a critical issue for manufacturers of aero engines and accessory mechanical systems.

Aligning our capabilities so closely with our customers' requirements will definitely strengthen our position as a strategic supplier of highly complex products and solutions and is another step toward achieving our ultimate goal of becoming the number one supplier to all of our customers.

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## Numerous Facilities Renew ISO 14001 to Latest Standard

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This year, a wave of renewals to the new ISO 14001:2015 Environmental Management Systems (EMS) certification has taken place throughout the MinebeaMitsumi Group of companies. EMS certifications were renewed at all three of NHBB's manufacturing facilities in the US, at CEROBEAR and myonic, NHBB's sister companies in Germany, and at several other MinebeaMitsumi Group sites in England, Japan, and Thailand that manufacture bearings, fasteners and machined parts for the aerospace market.

ISO 14001 is aligned with MinebeaMitsumi's environmental policy, and holding the certification validates NHBB and MinebeaMitsumi's commitment to reducing their impacts on the environment, using resources more efficiently, and reducing waste. MinebeaMitsumi is committed to achieving and maintaining the certification to ISO 14001 at each of its major sites, worldwide.

ISO 14001 is a set of international policies that acts as a framework for companies to design and implement their own environmental management systems. The new 2015 edition places more requirements on leadership to ensure environmental responsibility is an integral part of business and emphasizes more proactive measures to protect the environment from harm.

## Company's Additive Manufacturing Experience Extends from Product Design to In-House Production Capability

Companies in the aerospace, medical, and other high technology industries are constantly pushing the performance envelope by developing products with less overall weight, higher temperature resistance, more complex designs, and shorter production cycles. In addition to undertaking numerous product and process development initiatives, NHBB and its sister companies within the MinebeaMitsumi Group are adopting advanced manufacturing technologies that offer unique advantages to achieving customers' objectives. One of the advanced manufacturing technologies the Group is utilizing is additive manufacturing.

C&A Tool, a highly specialized contract manufacturer based in Indiana and one of MinebeaMitsumi's newest acquisitions, operates no fewer than nine direct metal laser sintering printers that fabricate parts made from titanium, Inconel®, and 17-4 stainless steel. C&A has plans to add more printers in order to increase its capabilities for both aerospace and medical industries. According to Tim Kamleiter, C&A's aerospace unit manager, the company has turned additive manufacturing into a competitive advantage by combining this advanced manufacturing process with complex, high precision finish machining capabilities. "Most additive parts need finishing work, which is where C&A's foundational machining expertise really distinguishes us as a premier manufacturing partner," says Kamleiter.

One of the most significant benefits the technology provides is the ability for customers to reduce their supply chains. "We have companies coming to us with three or four parts that form an assembly," says Kamleiter. "Our additive manufacturing resources are taking those multi-sourced assemblies down to one single component."

Kamleiter sees some differences in the reasons why C&A's customers in the aerospace and medical markets opt for additive manufacturing. "With our aerospace customers, a great deal of focus is on rapid development and the optimization of traditionally machined parts or components," says Kamleiter. "In the medical industry, we've seen a shift from plastic implants to 3D printed metal implants because the complex and rough surfaces produced by additive printing are conducive to bone growth."



**3D Printed Prototype of Crown Retainer**

The implementation of Additive Manufacturing as an aid to product design and process improvement is taking place in other areas of the business. In Germany, for example, CEROBEAR is working with aerospace customers to improve bearing design using 3D printed cages. They are also assisting customers with redesigning other bearing components, leveraging additive manufacturing to create material and weight savings, optimized product design and performance, and reduced development and production times.

NHBB HiTech in Peterborough, NH is harnessing the technology to generate process improvements within its own manufacturing environment. The Advanced Manufacturing department is using additive manufacturing to speed up development of tooling for both R&D and production. The technology is being used by Manufacturing Engineering to generate model bearings to improve discussions with customers. The Gage engineering department is developing 3D printed tooling for select applications as an enhancement to traditional process methods to save time and cost.

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## Manufacturing Capabilities to Support Aerospace Customers continued...

Precision is also working toward the production of fractured outer race bearings and bearings containing machined riveted retainers. The fractured outer race configuration allows a radial bearing to accommodate a higher number of balls and use a one-piece cage in order to support greater loads. A riveted retainer permits a bearing to perform at higher speeds and with greater cage loads. A new riveting machine and additional production equipment will help grow the operation in 2019. Both of these solutions are used in various aerospace applications, including small gearboxes for engines, auxiliary power units, hot air valves, and many other accessories.



**Precision Division Grind Floor**

According to Weitzel, these recent developments are crucial to broadening NHBB's capacity as a whole and are essential to creating more value for all of NHBB's customers. "Strong demand from aerospace customers in the one to three inch size range has supported capital investments aimed at raising capacity and broadening our wheelhouse," says Weitzel. "The Precision Division is definitely transforming into a more formidable aerospace supplier, and we have no intention of slowing down."

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## Three Familiar Faces Join the Field Sales Team

The newest members of the field sales team include two current NHBB employees who moved outside from the inside sales department and a former engineer who has returned to the company:



**Ryan Nay**

Ryan Nay is a key account executive for Bell Helicopter and Spirit Aerosystems. He joined the field sales team after working for three years as an inside sales representative at HiTech, where he gained valuable experience managing and maintaining customer relationships at some of HiTech's key OEM customers. Ryan holds a Bachelor's degree in Business Management and is currently working on achieving his MBA through Southern New Hampshire University. He is now based out of Oklahoma City, OK.



**Bryan Dela Cruz**

Bryan Dela Cruz has made the transition from inside sales supervisor for the Precision Division to technical sales engineer in the central region of the United States. He is responsible for calling on various OEM customers in the aerospace, medical, and industrial markets. He joined NHBB as an inside sales representative in 2010 and was promoted to Supervisor in 2015. Bryan relocated to the central region of the US after graduating in May with a Bachelor of Science in Business Management magna cum laude from California Lutheran University.



**Mike Poreba**

Mike Poreba has returned to NHBB as a senior field applications engineer. He works closely with field sales to build strong engineering relationships at our current and targeted customers. Mike joined NHBB as an intern in 2007 and over the course of 10 years progressively increased his responsibility to Senior Applications Engineer for HiTech. Mike holds a Bachelor of Science degree in Mechanical Engineering from UNH.

## Anderson Interview continued...

**Customers have likely taken notice of these changes. What benefits of the new organization have they seen or should they expect?**

The key accounts I've met with say they really appreciate the single point of contact and the new approach to strategic account partnership that we are taking. Regional accounts have responded positively to the more active service we're providing. Going forward, our customers should expect us to continue working directly and collaboratively with them in order to provide total solutions that meet the challenging performance requirements of the aerospace industry. From light-weight ceramic bearings to wear sensor technology and complex machined parts and next-up assemblies, we are a solutions provider and our customers are really starting to take notice.

**Are there new faces and roles within the group?**

Almost everyone has a new role in the organization and we do have a couple of new faces. I promoted two employees, Ryan Nay, who worked in the Inside Sales department at our HiTech facility, and Bryan Dela Cruz, who worked in Inside Sales at our Precision factory. Both have relocated to service key accounts and regional customers in our central US territory.

**What opportunities do you see out there for the organization?**

We're seeing countless technological advancements in aerospace, such as the development of air taxi concepts, quieter and more fuel efficient commercial airplanes and the commercial space launch industry. Innovative production technologies like additive manufacturing are becoming more widely adopted, as well. NHBB is in a pretty strong market position in our categories and also has room for growth. We have the backing of a multibillion dollar parent company, world class design engineering, and best-in-class high precision manufacturing capabilities throughout the globe. These strengths will enable the businesses within our Group to partner with customers on the development of more advanced products and solutions that add lasting value to the industry.

## In-House Production Capability continued...



While it appears as though the benefits of additive manufacturing are never ending, Tim Kamleiter cautions that not every part is a good candidate for 3D printing. "If a printed product doesn't take advantage of time or cost savings, or design benefits afforded by additive, then it's worthwhile to

reconsider traditional manufacturing methods," says Kamleiter. "The adoption of additive manufacturing is not about printing everything under the sun because we can, it's ultimately about maximizing customer value."