



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

# inside track

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## Astro Earns Top Supplier Honor from Global Security Company

For the fourth time, NHBB's Astro Division was named a Platinum Source Preferred Supplier by Northrop Grumman Corporation. The award recognizes Astro for achieving distinction in product quality, on-time delivery, customer satisfaction, and robust lean processes.

"Northrop Grumman's Platinum Source Program places greater emphasis on performance measurements that are aligned with customer expectations," said Lisa Kohl, sector vice president, Global Supply Chain, Northrop Grumman Aerospace Systems. "We maintain a special relationship with our Platinum Source suppliers, a trust not afforded to others. This trust is based on suppliers' unqualified commitment to produce and deliver 100% conforming parts on schedule with acceptable supporting documentation."

Astro was one of 72 top-performing suppliers from the United States and Canada honored at Northrop Grumman's annual supplier awards program held earlier this year in Manhattan Beach, California. The suppliers provided products ranging from small aircraft parts to complicated spacecraft electronic subsystems, as well as everyday services.

"Achieving Northrop Grumman's highest supplier honor demands a dedication and commitment to excellence," said Gino Crecco, Astro's product sales manager. "It is truly an honor to receive their Platinum Source Preferred Supplier Award, and to be recognized as one of their very best suppliers."



Northrop Grumman provides innovative systems, products, and solutions in aerospace, electronics, information systems, and technical services to government and commercial customers worldwide. Astro manufactures precision bearings and complex bearing solutions for Northrop Grumman and other leading global aerospace and security companies.

*Walt Sweet, Western Region sales manager (second from left), and Cortland Strong, senior field sales engineer (third from left), were present to receive Northrop Grumman's Platinum Source Preferred Supplier award on behalf of NHBB's Astro Division. Standing next to Walt and Cortland are Colonel Glenn L. Graham, USAF, Commander, and Lisa V. Kohl, sector vice president, Global Supply Chain for Northrop Grumman Aerospace Systems.*

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## Precision Recognized as Exemplary Supplier

Lockheed Martin Corporation awarded NHBB's Precision Division its prestigious Electronic Systems Business Area STAR Supplier Award — given to suppliers who distinguish themselves by meeting some of the most stringent performance criteria in the aerospace industry. To join this elite group of STAR suppliers, Precision achieved 100% quality and 100% delivery for a minimum of one year, and met the established criteria for Lockheed Martin's Supplier Performance Evaluation metric, which evaluates quality, delivery, affordability, and management/administration.

Lockheed Martin Corporation, a global security company with approximately 132,000 employees worldwide, is principally engaged in the research, design, development, manufacture, integration, and sustainment of advanced technology systems, products, and services. NHBB's Precision Division manufactures ultraprecision specialty ball bearings, thin section duplex bearings, and complex bearing solutions for Lockheed Martin and many other leading global aerospace and security companies.

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Gary Yomantas

## A Message from NHBB's President

As recently as ten years ago, sustainability was viewed as an important concept, but it had not yet become a part of most companies' core business fundamentals. Since then, it has evolved into a pragmatic set of practices which are becoming more closely aligned with corporate strategies and objectives. The pace of this change has quickened, particularly within the aerospace and defense industries, and helping to drive this growth are customers like Boeing, Airbus, Lockheed Martin, Rockwell Collins (see story below), and the US Defense Department. No longer are most businesses and institutions treating environmental and social issues separate from financial goals or product life-cycle and total cost of ownership (TCO) calculations. Many are developing analytical tools that are turning environmental and employee satisfaction initiatives into a competitive advantage, and they are driving sustainability practices down through every layer of their supply chains.

NHBB's approach to sustainability has followed a similar course; ten years ago we recognized the inherent social good in the concept, but it has taken us a while to fully understand its strategic implications and perceptible value to our employees and customers. Having overcome this learning curve, I am pleased to report that we have published a vision of sustainability along with five related value-statements (see <http://nhbb.com/about/sustainability.aspx>). NHBB's vision is ardently supported by Minebea, our parent company, which has made a long-standing commitment to sustainability. At NHBB, we are integrating this vision within our core business strategies as part of a culture-change to foster greater employee engagement and long term economic viability. This has spawned several new initiatives, including product and process design for the environment, innovative employee wellness and safety programs, and green procurement, to name a few. As these initiatives evolve, we expect them to have a significant positive impact on our business. Ultimately, we view this shift toward a pragmatic approach to sustainability as a worthwhile and necessary means for providing added value to our customers, employees, and many other important stakeholders.

## Precision Recognized as Exemplary Supplier

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*Ultraprecision Thinex bearings manufactured by NHBB's Precision Division.*

"We strive every day to provide exceptional service to all of our customers," said Mary Beth MacKenzie, Precision's product sales manager. "We are proud to receive this honor from such a respected customer, as only the very best of Lockheed Martin's suppliers achieve the STAR award."

## US Customer Recognizes myonic GmbH for Environmental Initiatives

myonic GmbH received a Green Supplier Award from Rockwell Collins at Rockwell's annual supplier conference held early this summer. The Minebea subsidiary and close business partner of NHBB was recognized for significantly reducing its consumption of energy and water, and for certifying its environmental management system to ISO 14001:2004.

This is the first time myonic has received this award, which was established by Rockwell Collins to recognize suppliers for implementing and sustaining rigorous and effective environmental, safety, and health programs and procedures. Soon after becoming a Minebea subsidiary in 2009, myonic adopted a written environmental policy and began implementing an environmental management system. Their program was certified to ISO 14001:2004 by an independent auditor in March of 2011, just six months after initiating the project.

## myonic's New Building Project on Schedule

On schedule for completion by December 2012, myonic GmbH's new building project is well underway. Adjacent to myonic's headquarters in Leutkirch, Germany, the new manufacturing facility will increase production space by 20% and enable myonic to boost efficiency by removing production operations from leased facilities and consolidating and restructuring them near the headquarters plant. See a current image of the new facility at [myonic.com](http://myonic.com).



# NHBB Expands its Ability to Support Customer Requirements With the Launch of a New Machinable Self-Lubricating Liner System

NHBB is pleased to announce the successful development and marketing of Oscimax®, a machinable self-lubricating liner system for use in a broad range of aerospace applications. NHBB has secured the first approval necessary to offer the technology to the global aerospace industry and has established manufacturing capabilities for the first of several planned production phases.

Oscimax® is rapidly earning a reputation for superb performance among industry associations, government agencies, and key aerospace customers. It also represents a significant expansion of NHBB's value proposition, as it increases the company's ability to solve customers' bearing wear and life issues, particularly within complex assemblies.



*Complex bushing with Oscimax® machinable self-lubricating liner*



*Custom fretting barrier plate with Oscimax® machinable self-lubricating liner*

The patent-pending Oscimax® system is a homogeneous liquid formulation consisting of a proprietary matrix of thermosetting polymeric resins, PTFE, and various other compounds. It can be applied to virtually any surface, including I.D.s, O.D.s, flanges, chamfers, and flat surfaces. Once applied, it produces a consistent, secure bond to aluminum and steel while promoting higher dynamic loads and significantly reduced wear rates.

Oscimax® is excellent for environmental conditions that expose a bearing to moisture, and for applications that require low torque and low friction. Such parameters are found in a broad range of aerospace applications, including engine controls, thrust reversers, wing surface controls, VGV systems, and mechanical and fly-by-wire flight control systems, to name a few.

Oscimax® offers several advantages over fabric-based self-lubricating liner systems: it is less susceptible to moisture gain, it performs more consistently through temperature changes and, because the liner is fully machinable, it can be held to tighter tolerances. When it comes to the critical factor of wear resistance, Oscimax® tests better than any of NHBB's fabric-based liners, plus it tests very well against other machinable self-lubricating liner solutions.

Oscimax® is currently approved to the two aerospace standards related to bushings, AS81934 (25,000 cycles) and AS81934 Type A (100,000 cycles).\* NHBB is pursuing additional industry and customer specifications, including the aerospace industry's standard for self-lubricating machinable liners for spherical bearings (AS81820/25,000 cycles) and Boeing's specification for bushings and bearings (BMS3-39). NHBB expects to achieve the AS81820 approval by mid 2013; qualification testing for Boeing's BMS3-39 certification should be completed by mid to late 2013.

This exciting new technology was developed through collaboration between the product engineering group at NHBB's Astro Division and the newly established New Product Development Center (NPDC), which was created to fully support the emerging technological requirements of its aerospace customers. The NPDC supports product development and testing throughout NHBB and all Minebea companies.

Oscimax® builds on NHBB's commitment to supporting the needs of its aerospace customers, and joins a broad offering of self-lubricating liner solutions for commercial and military aircraft and helicopters. As NHBB researchers continue their drive to increase bearing system life and performance, customers continue to benefit through improved performance and reduced maintenance and repair costs.

## NHBB's Oscimax® Machinable Self-Lubricating Liner System

<b>Principal Uses:</b>	Oscimax® is a machinable self-lubricating liner system for bushings, rod ends, spherical bearings, complex bearing assemblies, and machined parts utilized in a broad range of aerospace applications, such as engine controls, thrust reversers, wing surface controls, VGV systems, and mechanical and fly-by-wire flight control systems.
<b>Attributes:</b>	Compared to fabric-based liners, Oscimax® is less susceptible to moisture gain, performs more consistently through temperature changes, and can be held to tighter tolerances because the liner is fully machinable using conventional milling, turning, drilling, reaming, and honing techniques.
<b>Benefits:</b>	Benefits include reduced wear and increased life for bearing assemblies, which support better performance and lower maintenance and repair costs for the customer.

\*The version of Oscimax® qualified to AS81934 and AS81934 Type A is identified with the extension "XT."



### Scott Jarvie

Inside Sales Representative – Precision Division  
Chatsworth, CA • Years at NHBB: 7

## NHBB in Person

I enjoy coming up with solutions to my customers' problems. By turning them into opportunities, I can better understand my customers' expectations and continuously improve the service I provide.

Through the years, I've developed a positive relationship with my customers because of my responsiveness to their needs. Whenever they have questions or issues, they know I'll give them accurate information in a timely manner.

I am primarily responsible for supporting customers on the East Coast and in the Northwestern United States. My current challenge and future goal is to continue providing excellent customer service. Because the company as a whole strives to exceed expectations with on-time delivery, scheduling flexibility, and high quality products, I can address my customers' needs with the utmost confidence.

Prior to joining NHBB seven years ago, I worked for 12 years in customer service for NMB Technologies, a sister company to NHBB that is located on the same campus in Chatsworth, California.

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Arafat "Neal" Amin

## Experienced Product Engineer Joins Precision's AE team

The Precision Division is pleased to announce the hiring of Arafat "Neal" Amin as applications engineer. Neal assists customers with specifying precision ball bearings and specialty solutions for their unique applications. Prior to joining NHBB, Neal was a product engineer for a company that designs military tactical watches. He holds a BS in mechanical engineering from UC Berkeley. His first day on the job was April 30.

## Recent ME Graduate Accepts AAE Role with HiTech



Nicholas Dusza

HiTech has hired Nicholas Dusza as associate applications engineer, filling the position vacated by Marcus Proctor's promotion to senior development engineer with NHBB's New Product Development Center (NPDC). Nicholas began work on June 25, just four weeks after graduating with a BS in mechanical engineering from the University of New Hampshire. For the past two summers, he was a mechanical operations intern at Hamilton Sundstrand in Windsor Locks, CT, where he led a variety of automation, lean, and continuous improvement projects. At UNH, he was the building manager and supervisor of the Memorial Union Building. Nicholas led a staff of 20 building managers and was awarded both Rookie of the Year and Employee of the Month.

## HiTech Receives Business-Education Partnership Award

NHBB recently received the 2012 Business-Education Partnership of the Year award from the Greater Peterborough (NH) Chamber of Commerce. The award was presented to HiTech in recognition of its exemplary support for student career education and for partnering with the community in career education. HiTech is consistently involved with local school career fairs, and provides tours to area schools (grades K-12). Furthermore, HiTech has implemented its own summer intern program and scholarship fund and is in the process of creating a workforce development program with ConVal, the regional public school in Peterborough, NH.

## High Achievers Honored at Annual Sales Meeting

Join us in congratulating the following individuals for their exceptional efforts in FY2011:

- Sales Engineer of the Year**  
Cortland Strong – Western Region
- myonic USA Achievement Award**  
Josh King – Central Region
- Outstanding Achievement**  
Ken Petersen – Eastern Region

- Customer Service Representative of the Year**  
Laura Lavigne – HiTech Division
- Extra Mile Award**  
Pierangelo Tumino – NHBB Europe (Italy)