



Innovate

Manufacturing Spotlight: Innovating Together

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It's long been said that necessity is the mother of invention. But sometimes a more proactive and collaborative approach is required, especially when it comes to driving and implementing manufacturing innovation.

That's the thinking behind MSC Industrial Supply Co.'s Metalworking Innovation division, which was launched in 2019 to help the company's customers and industry partners navigate a rapidly changing and complex technical environment.

"It became clear that introducing new technologies to customers could substantially help them overcome their biggest challenges," explains Jamie Goettler, who leads the effort as MSC's senior director of metalworking sales and innovation. "As the industry's largest cutting-tool and metalworking product supply company, it was imperative for MSC to take the lead in moving the needle for manufacturers in America."

With more than 80 years of experience, MSC has the background, technical know-how and industry relationships to deliver the goods—a lot of goods. In fact, MSC has some 2.3 million product offerings, inventory management and supply chain solutions.

More importantly, the company is truly technology and provider agnostic. Over the years, MSC has developed partnerships with more than 3,000 suppliers, universities, government agencies and other leading organizations and institutions—including ACE, IACMI, SME and the University of Tennessee, as well as the United States Department of Energy and Department of Defense (DOE and DoD).

"MSC understands our focus for quality, improvement and growth," says Dave Jimpkoski, group operations manager for Gemini Group Inc.'s Aluminum Extrusion Tooling Division. "They work directly with our team to provide solutions they believe will help us achieve these goals and overcome new challenges."

Getting Started

Ever since Sid Jacobson founded MSC in 1941 as Sid Tool Co., the company has been known for providing high-quality metalworking products—it later expanded into MRO-type products.

In the early days, Jacobson sold cutting tools out of the trunk of his car. But even then, the focus was

always on operating with integrity, respect and a commitment to every customer—a philosophy maintained to this day.

At the same time, MSC has a long tradition of technological advances and industry firsts, such as:

- Computerized inventory management and order processing
- A fully integrated quality assurance department
- Total quality management
- Same-day-shipping guarantee

While Jacobson's son Mitchell took over as CEO in 1982 and was followed by long-time senior manager David Sandler in 2005, Sid remained an instrumental part of the company until he passed away in 2005. This included mentoring his grandson Erik Gershwind, who has been CEO since 2013.

"I spent a lot of time with him, learning all aspects of the business," Gershwind notes. "His spirit and passion are instilled throughout our organization in everything we do. This means building trust with our partners and being accountable to all of our stakeholders, as well as the greater manufacturing ecosystem."

In recent years, MSC has transitioned from being a leading "spot-buy" supplier or catalog house into a provider of integrated solutions and innovation partner. Through a combination of organic growth and strategic acquisitions, the company continues to expand its capabilities and now has more than 7,000 dedicated associates.

Innovative Solutions

Today, as the largest metalworking products provider in the U.S., MSC has a responsibility to help machining businesses of all sizes maximize profitability and capacity, while enhancing productivity. This enables these businesses and the domestic manufacturing economy to flourish. Supply chains can be optimized, while creating the resilience and agility needed to maximize homeland security.

The Innovation team works alongside an unmatched array of manufacturing leaders and organizations to ideate, develop, validate and/or deploy existing and future technologies that help improve the domestic manufacturing base.

As a critical component to help scale these technologies, more than 125 metalworking specialists work directly with customers to provide solutions and solve challenges. These highly trained professionals deliver more than \$80 million of profit improvements annually to U.S. machining companies.

"We've been a trusted distributor to the industry for years, so the innovation team is a natural extension of this partnership," Goettler says. "Now we can be a real broker of innovation and true partner that allows customers to implement the best technology for their needs and be globally competitive."

Tapping into the Best Tech

Since its formation, Goettler's team has worked with industry partners to deliver four innovative technologies. The first to come to fruition, MSC MillMax®, was deployed under a cooperative research and development agreement with the DOE's Oak Ridge (Tenn.) National Laboratory (ORNL). Known as tap testing, MillMax uses a modal hammer and accelerometer to measure the dynamic response of a milling assembly.



MSC's MillMax technology, deployed in conjunction with Oak Ridge National Laboratory, can cut cycle times in half, while tripling material removal rates.

Learn how you can optimize your milling operations with MSC MillMax

MSC specialists are trained and equipped to work with machining businesses to measure, evaluate and optimize performance on their CNC milling equipment. After testing, MSC is able to provide instantaneous dashboards that identify the ideal, stable operating conditions.

"Improving CNC machine tool performance will lead to energy and cost savings, extended tool life, improved productivity and greater competitiveness for U.S. manufacturers," notes Scott Smith, ORNL's group leader for machining and machine tooling research.

To date, the average customer outcomes from successful MSC MillMax measurements have been:

- A 50% reduction in cycle times
- More than 300% material removal rate
- 100-hour capacity increase per tool test

The choice to focus on milling was purposeful as these operations are the most common in machining, Goettler says, thus provide the most benefits to customers. And the MSC Innovation team and its partners are well on their way to developing and designing ways to improve productivity in turning and other common machining applications.

Using the same science as MillMax, the Accupro® ST Series is a readily available milling assembly that is calibrated for optimal results on the most common CAT40 machines in U.S. shops. Ideal for small job shops, Accupro identifies specific operating parameters to enable machining businesses to quote more accurate pricing and lead-time.



Accupro® ST Series is an all-in-one milling assembly calibrated for optimal machining operations.

Explore the Accupro ST Series

Meanwhile, Techmate® is a no-charge 3D CAD viewer with custom manufacturability assessment and collaboration portal. Part files and other documents can be securely shared digitally and users can gain recommendations from MSC's metalworking professionals as needed.

MSC's latest intelligent edge solution also promises to be a game changer. Customers are eager to adopt the digital machine monitoring system, which Goettler says offers a range of features and benefits that will help businesses improve their operational efficiency and bottom line.

Moving Forward

As the industry continues to evolve, MSC plans to work even closer with its partners. This includes co-locating some MSC associates directly in customer plants to help them throughout the development and production process.

"In addition to great products and technical expertise, we'll continue to add value through inventory management," Gershwind adds. "This helps alleviate workforce shortages by allowing manufacturers to optimize the use of their people."

Customers of all sizes and needs can be sure that MSC will stay true to its guiding principles, Gershwind says: "To be the best industrial distributor in the world as measured by our associates, customers, owners and suppliers."

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