



Metalworking

New Accupro® Indexable Cutting Tools Meld High Performance and Affordability

James Langford | Aug 01, 2024

One of the challenges of running a machining business is finding high-performance cutting tools that are both cost-effective and capable of handling metals from aluminum to heat-resistant superalloys.

It's a challenge that MSC's new *Accupro® Indexables* line of more than 650 milling, turning and grooving tools meets head-on.

Because the steel body of an indexable cutting tool is reusable, customers only need to replace the cutting edge, or insert, when it wears out, says Dr. Michael Gomez, principal research and development engineer for MSC's manufacturing research and technology team.

That design also allows Accupro® Indexables users to pair the same body with varied carbide inserts designed for specific metals.

"We know our customers aren't necessarily focused on one material group versus another so it's important to offer them a solution that works well with all sorts of materials," he says. "That gives them a bigger bang for their buck."

Balancing high performance and affordability, which often seem like opposing qualities, is a hallmark of the *Accupro® brand*, Gomez explains.

Indexables are the latest expansion of that brand, which MSC developed in the mid-1990s with an offering of drills and end mills, later adding taps and tool holders.

More recently, MSC introduced the *Accupro® ST Series*, a 3-piece milling assembly sold pre-set, pre-balanced and ready to use that leverages standardization and machining dynamics to show customers

which operating parameters will maximize productivity and throughput across a range of common metals and machining centers.

Read More: *Accupro® ST Series Helps Machining Businesses Power Up Performance by Ditching Guesswork*

The new Indexables line “optimizes the performance of, and increases capabilities with, inserts in a wide variety of sizes to cover a wide variety of applications,” Gomez says.

Cost-Effectiveness

“At MSC, we’re always interested in doing what’s best for our customers,” he adds. “For those who emphasize cost-effectiveness, the new line of indexable cutting tools may be particularly appealing.”

The proprietary design of the inserts, including grades and geometries for a range of specific applications, not only prolongs tool life but also improves cutting performance, he says.



One of the milling inserts, for example, has multiple radii around the nose, which leads to a distributed chip and a better finish on the surface that’s left behind. Because of that, customers can use the same tool for both roughing and finishing.

Indexable milling products also include two face-milling options, one with eight cutting edges and one with 12; high-feed milling cutters with four cutting edges for helical plunging and ramping operations; and shoulder and face milling inserts with four cutting edges that deliver up to 80 percent engagement.

The line of grooving inserts, meanwhile, can also be used in profiling, facing and parting. Inserts are available in single- and double-ended options.

Advanced Geometry

Along with affordability, Accupro® tools are known for their reliability and durability, Gomez notes, qualities that are prized by customers—especially in a market grappling with a widening labor

shortage, price inflation and interest rates at a **23-year high**.

“The tools are crafted from premium-grade materials,” he says. “Coupling that with advanced coatings, you start to realize the benefits of advanced machining technology through benefits such as enhanced tool life, reduced wear on the insert and improved performance even in challenging machining environments or on a range of different machines. This really is a jack-of-all-trades.”

Typically, each upgrade in coating or geometry drives up the cost of a cutting tool, Gomez says, but “the inserts we’re offering with Accupro® Indexables have advanced geometry features without the price increase that you might expect. Customers can access them affordably without sacrificing performance.”

Additionally, the tools can be coupled with MSC technology offerings such as **MillMax®**, which uses data from a tap test to show **optimum operating zones**.

“At the end of the day, it’s about maximizing efficiency and productivity,” he says. “We’re always trying to push ourselves to be better. We love to take technology from the lab and put it into the customers’ hands.”

What challenges could Accupro® Indexables help your business overcome? Tell us in the comments below.

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