



Metalworking

How Kennametal's Newest Turning Inserts Boost Productivity and Tool Life

Donna Behen | Aug 26, 2025

Kennametal, founded as a turning company more than 80 years ago, is getting back to its roots with a new generation of turning inserts aimed at meeting the evolving needs of the metalworking industry.

Manufacturing facilities today face a constant challenge of balancing tool longevity with productivity, says Greg Sage, regional product manager for turning at **Kennametal**, and the company's latest turning inserts were created to address both concerns at once.

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Greg Sage
Kennametal

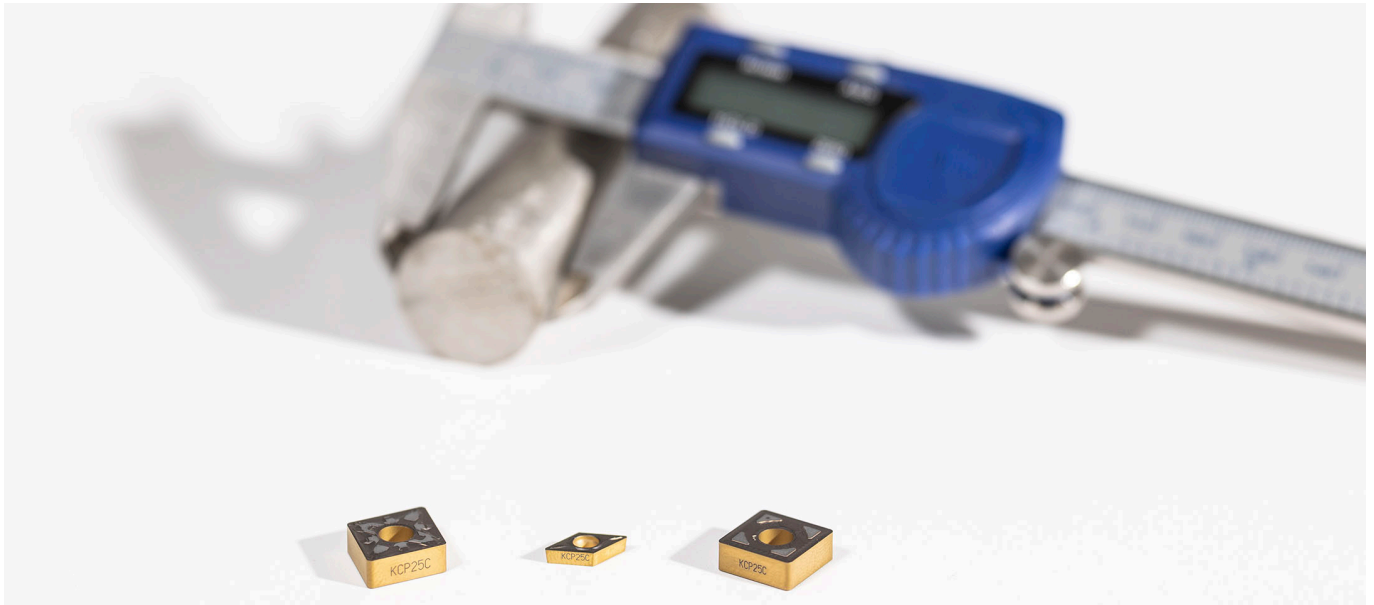
Sage says the new grades are engineered to withstand longer runs and higher speeds, helping shops reduce downtime and get more parts out the door. "Not only can we give them longer tool life, but we're also seeing productivity increases, which is making the customers more money and providing them cost savings," he says. "So really, it's a win-win."

A Big Step Forward in Steel Machining

The first of the newly introduced inserts is **KCP25C**, a chemical vapor deposition (CVD)-coated grade designed specifically for machining steel alloys. "I think of the KCP25C as the go-to, do-it-all insert," says Sage. "If I'm walking into an account and they're turning steel, that's the grade that I'm going to start with."

He likens the microscopic structure of a typical CVD coating to a pile of pick-up sticks, with tiny points sticking out in all directions and spaces in between. "If the growth of the coating isn't carefully controlled, these spaces can allow heat to penetrate, which can reduce the insert's effectiveness and lifespan," says Sage.

By precisely aligning and orienting the coating layers, Kennametal has been able to minimize these gaps, keeping heat out and ensuring that the insert wears more evenly. “That’s why we’re seeing good increases in our speed capability, so it can run faster than our previous grades, as well as much better wear resistance to chipping and cratering. So, it’s really a big step forward for us in steel machining,” Sage says.



The KCP25C steel turning grade insert is suitable for a wide range of steel turning applications. (Image courtesy of Kennametal)

Two New PVD Grades Offer Versatility

The **KCU10B** and **KCU25B** inserts are two new physical vapor deposition (PVD)-coated grades that are designed for universal use across a wide range of materials.

“These are PVD coatings that are extremely thin—microns thin in terms of coating—but they’re also multilayer coatings, so they are really hard coatings that have excellent wear resistance,” Sage says.

“The 10 series has a really hard substrate with that really hard coating for your finishing work, your continuous cuts, while the 25 series has that same hard coating so you get really good wear resistance, but a tougher substrate to hold up to roughing cuts and interruptions,” he says.



Kennametal's KCU10B insert offers higher hardness and wear resistance, making it ideal for applications where minimizing abrasive wear is crucial. (Image courtesy of Kennametal)

The U in the name stands for universal, meaning the inserts can be used with a wide range of materials. "They can be used in steels, stainless steels, high-temp alloys, cast irons and even aluminum depending on the geometry," Sage notes. "Job shops that need that versatility can use them across the board and get excellent results."



The KCU25B insert provides enhanced toughness, making it more resistant to chipping and flank wear, especially in interrupted cuts or when machining tougher materials. (Image courtesy of Kennametal)

Gold Isn't Just for Looks

One of the standout features of Kennametal's inserts is their distinctive gold coloring. While the gold hue might seem like a branding choice, it serves a much more practical purpose on the shop floor, according to Sage.

"With the two KCU grades, the entire insert is gold-colored, while with the KCP grade, just the sides of the insert are gold," Sage says. The lighter gold coating makes it easier for operators to quickly see which edges of the insert still have wear life on them, helping to prevent premature disposal and maximize tool life.

Says Sage: "You can look at it, and you can say, 'Oh, yeah, we haven't run that edge yet. OK, let's make sure and use that one.' You'd be surprised how often you can go through a bucket of used inserts and find two or three corners that haven't been used."

Coming Soon: New Top Notch Grades

Sage says beginning in late 2025, the new grades will be launched in Kennametal's Top Notch™ platform, which is used for shallow grooving operations such as cutting O-ring and snap ring grooves.

"Top Notch is a rectangular-shaped insert, and it has a notch that runs diagonally across the top of it, which is where the name comes from," Sage says. "And what it provides is an extremely rigid style of insert. The way that it gets clamped into the pocket means that it's held extremely tightly and is very rigid."

Adds Sage: "Top Notch is an industry standard that is celebrating its 60th anniversary in 2025, and so it's kind of cool to marry the legacy of that platform and how well it has worked for the last 60 years with these newest generations of grades. It's really bringing this new technology to a proven legacy platform that has performed extremely well."

The two KCU Top Notch grades are expected to launch in fall 2025, with the KCP Top Notch grade launch scheduled for spring 2026.

Global Giveaway

To celebrate the launch of these next-generation inserts, Kennametal is running a ***global giveaway*** featuring custom toolboxes filled with select Kennametal brand merchandise and bestselling turning products, including the new grades. The promotion is open for entries until the end of December, with winners to be announced by Jan. 15, 2026.

It's all part of the company's efforts to shine a brighter light on its turning products, Sage says. "We really want to focus on getting back to the core of our business and making sure that customers and suppliers know that Kennametal is still the turning company of choice to go with."

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