



Machining

## New SGS Z-Carb XPR End Mill: One Tool, Many Applications

Brought To You by KYOCERA SGS Precision Tools | Apr 01, 2025

KYOCERA SGS Precision Tools proudly unveils the Z-Carb XPR high-performance end mill line with extreme plunging and ramping capabilities. These cutters allow machinists to utilize more aggressive tool paths and use a wider variety of roughing and finishing techniques while still maintaining precision and durability.

The Z-Carb XPR is designed to excel in advanced axial workpiece entry techniques, including plunging, ramping, and helical interpolation, thanks to its unique end tooth design. This innovative feature, combined with completely variable geometry, allows for increased speeds and feeds while minimizing chatter and resonant vibrations, resulting in smoother and more efficient machining operations. Its universal geometry makes it suitable for use across a wide range of material groups, providing versatility in various applications and delivers excellent performance in slotting, advanced roughing, general roughing, semi-finishing, and finishing operations.

Choose from two standard coatings developed for the ultimate protection and tool life. KYOCERA's proprietary MEGACOAT NANO coating technology features nano-layers for exceptional wear resistance and high oxidation resistance that allows for operation at high temperatures. The layered structure also gives the coating the toughness required to resist chipping. MEGACOAT NANO is particularly effective in high-efficiency machining applications. The Ti-NAMITE-X coating handles a diverse range of applications from high- and low-alloy steels to hardened materials and is suitable for operations which require high cutting speeds, high temperatures at the cutting edge, and high metal removal rates.

### Features & Benefits

- Open end tooth design facilitates smooth and efficient chip evacuation when used in axial applications such as plunging, ramping, and helical interpolation
- End teeth wiper flat increases corner strength and significantly improves workpiece floor surface finish
- Variable helix, rake, and flute indexing eliminates harmonics, suppresses chatter, produces ideal chip shape, and controls cutting zone temperature
- Specialized flute shape provides excellent chip evacuation up to 2xD depth of cut
- Proprietary PVD coating technology provides exceptionally long tool life in a wide range of material applications
- Available in **NEW** MEGACOAT NANO and Ti-NAMITE-X coatings for a wide range of materials and

applications

*Watch the Z-Carb XPR in action in this short video:*

## Product Details

- Cutting Diameter: 1/4" – 3/4" / 6,0 – 20,0
- Length of Cut: 1/2" – 1-1/2" / 13,0 – 38,0
- Overall Length: 2 1/2" – 4" / 57,0 – 104,0
- Shank Diameter: 1/4" – 3/4" / 6,0 – 20,0
- Corner Radius: 0.010"-0.125" / 0,5 – 3,0
- Coating(s): MEGACOAT NANO, Ti-NAMITE-X
- Special Options: Weldon Flat

*See what the Z-Carb XPR can do for you in this video.*

*Previously Featured on KYOCERA SGS Precision Tools' blog.*

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