Press Information

Kyocera Launches Solid Ball-Nose End Mill “2KMB” for High-Hardness Material Processing, Micromachining

Achieves long life, stable processing with new shape and coating

Kyoto/London, 06. April 2022. Kyocera has announced the launch of its “2KMB” solid ball-nose end mill for high-hardness material processing and micromachining. Used in the fine machining of precision parts and metallic molds, this new solid round tool product is now available globally by Kyocera.

Product Name	2KMB Solid Ball-Nose End Mill for Micromachining
Number of Models	Standard: Total 15 models Long Neck: Total 109 models
Price	Please contact with our sales agent
Launch Date	21 September 2021
Cutting Diameter	φ0.1(R0.05) mm ~ φ4.0(R2.0) mm
Applications	Injection Molds, Plastic Molds, Semiconductor Manufacturing Equipment Molds, Forged Parts, LED Molds
Recommended Work Pieces	Carbon Steel, Alloy Steel, Alloy Tool Steel, Stainless Steel, Heat-Resistant Alloy, Titanium Alloy, Cast Iron
Sales Target	JPY 500 million / year

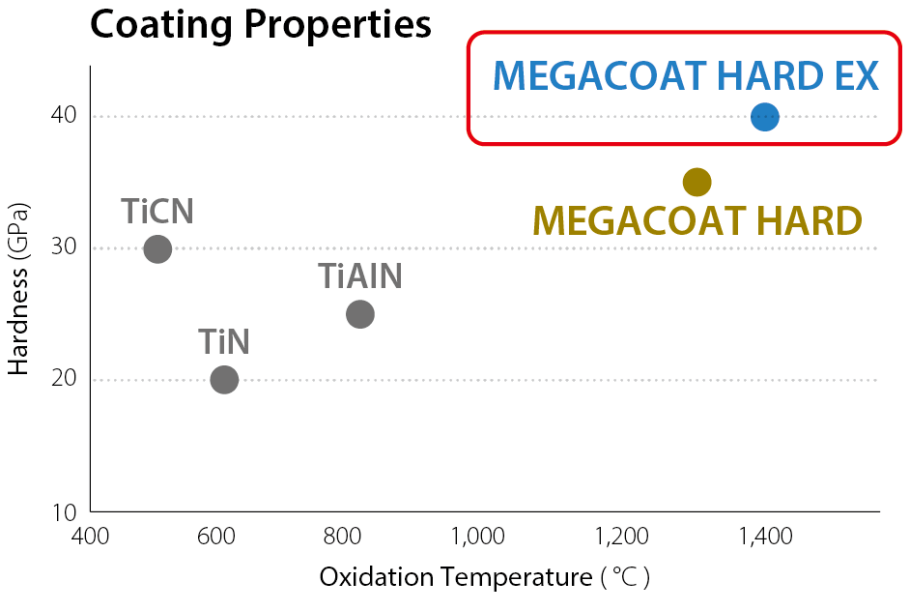
2KMB is the second product launch in Kyocera's "K-series" solid tool line, which combines new coating technology with a unique shape for the effective micromachining of various high-hardness materials such as alloy tool steel, stainless steel, and high-speed steel. Kyocera's new wear-resistant coating, "MEGACOAT ® HARD EX", features a unique two-layer structure to ensure stable processing with high toughness and exceptional chipping resistance. The wear resistance and chipping resistance both contribute to higher quality and longer tool life. In addition, the newly developed, unique S-shaped cutting edge with outstanding sharpness achieves a high-quality surface finish and maintains wear resistance. KYOCERA strives to improve customers' productivity with products that optimize performance, economy, and functionality.

Solid Ball End Mill "2KMB" (Long Neck)

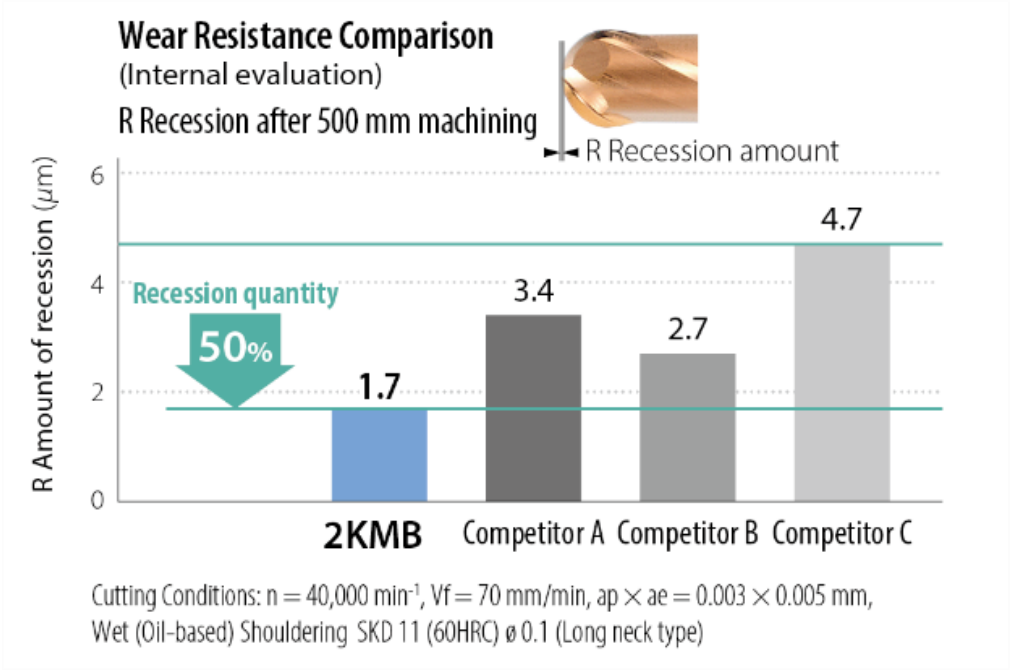
Features of 2KMB Solid Ball-Nose End Mill for Micromachining

1. Proprietary "MEGACOAT®[1] HARD EX" Coating Technology Extends Tool Life

- Achieves stable machining with high toughness and outstanding chipping resistance
- Long tool-life processing is possible due to superior oxidation resistance and wear resistance.
- Supports quenched hardened steel processing from tempered steel up to 70 HRC.

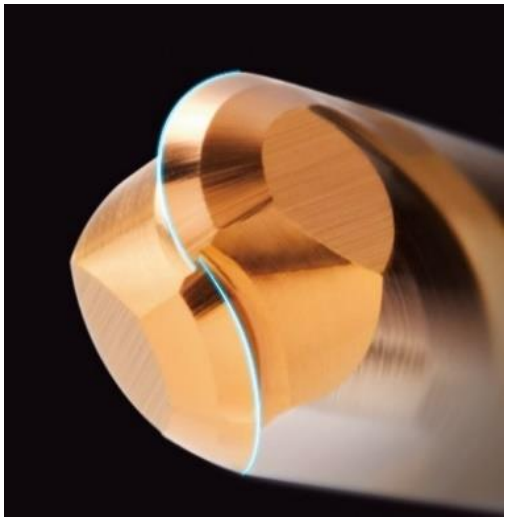


1 "MEGACOAT" is a registered trademark of KYOCERA Corporation.

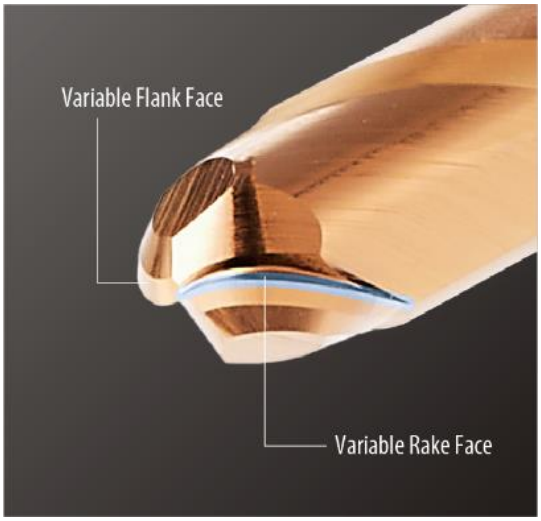


2. Unique Cutting-Edge Shape Achieves Superior Sharpness and Wear Resistance

- S-shaped cutting edge achieves high-quality surface finish and high wear resistance.
- Wide core thickness increases tool rigidity, which prevents collapse and ensures stable processing.
- Point cutting (strong back taper) reduces collapse and prevents chattering.
- Unique cutting-edge shape gradually changes rake angle and clearance angle, compatible with high blade edge strength and low resistance.



S-shaped Cutting Edge with Unique Shape



Variable Cutting Edge Shape

About End Mills

End mills have multiple cutting edges on the outer periphery and bottom. They are used in various industries, such as automotive, aerospace, and industrial machinery, to process grooves and shoulders on metal surfaces by rotating and sliding across the workpiece. To increase productivity, machinists require end mills that can handle a wide range of applications and materials. These high-performance tools must also deliver high-precision machining and long tool life. In addition, ball-nose style end mills are used to cut more complicated, three-dimensional, curved surfaces such as radii and spherical machining applications.

For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, KYOCERA Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the KYOCERA Group, which is comprised of 307 subsidiaries (as of March 31, 2021), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the most experienced producers of smart energy systems worldwide, with more than 45 years of know-how in the industry. The company is ranked #603 on Forbes magazine's 2021 "Global 2000" listing of the world's largest publicly traded companies.

With a global workforce of over 78,000 employees, Kyocera posted sales revenue of approximately €11,74 billion in fiscal year 2020/2021. The products marketed by the company in Europe include printers, digital copying systems, semiconductor-, fine ceramic-, automotive- and electronic components as well as printing devices and ceramic kitchen products. The KYOCERA Group has two independent companies in the United Kingdom: KYOCERA Fineceramics Ltd. and KYOCERA Document Solutions Ltd.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (approximately €763,000* per prize category).

*Date of Survey: June 18th, 2021

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