

Press Information

KYOCERA's New Industrial Cutting Tool with Ultra-Durable Coating Materials Maximizes Steel Cutting Performance

New CA025P CVD coating technology and base material with excellent durability ensures long-term cutting performance for automotive and industrial machining

Kyoto/London – May 10th, 2018. Kyocera announced today that it has developed a new ultra-durable coating technology and base material for indexable industrial cutting tool inserts to improve steel machining. The new CA025P CVD Coated Carbide grade will be available to the European market from the middle of May 2018.

Steel is often used in numerous industries including automotive and industrial machining. There is a growing demand for long-lasting inserts with excellent resistance against wear, fracturing and chipping capable of stable machining performance over a wide range of cutting conditions. Kyocera's new industrial cutting tool series features multilayer CVD coatings with a layer using a thick film of aluminum oxide (Al₂O₃) for excellent heat resistance. Utilizing cemented carbide as a base material ensures excellent fracture resistance, long-term performance, and longer tool life. These new cutting tools can accommodate a wide range of machining applications from roughing to finishing by using a variety of chipbreakers. Kyocera aims to support customers by reducing the frequency of insert replacements and improving production yield.



Carbide inserts with new coating material CA025P

Product Overview

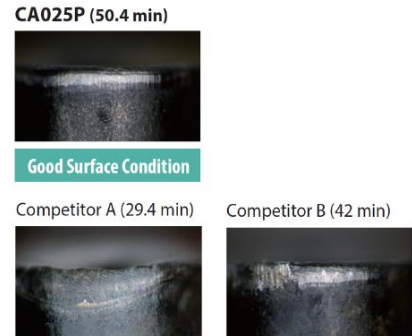
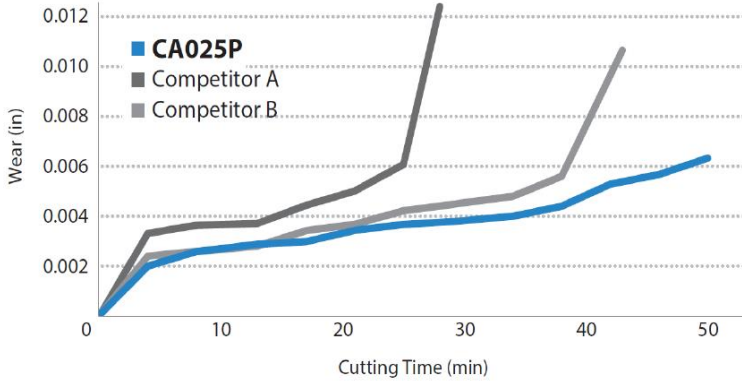
Product name	CA025P
Complete number of insert types	74
Recommended application	Interrupted to continuous machining
Availability	May 2018
Annual sales target	300 million yen
Production facility	Kagoshima Sendai Plant

Main Features

1. New CVD coating with enhanced chipping and wear resistance

The thick film aluminum oxide (Al₂O₃) with excellent heat resistance is applied to the new base material as one of its coating layers. This material ensures longer tool life by reducing the

amount of wear. During the cutting process, the unique surface structure of the coating resists welding and chipping of the insert.



Cutting Conditions: VC = 980 sfm, D.O.C. = 0.059", f = 0.012 ipr, Wet, Workpiece: 4137

Wear resistance comparison (internal)

Surface condition after cutting

2. New base material ensures excellent fracture resistance

The optimized composition of the cemented carbide base material is resistant to high temperatures. This helps prevent fracturing of the insert.

3. A wide range of applications with four chipbreaker styles

The new CVD inserts can accommodate a wide range of steel machining applications from roughing to finishing with the availability of four different chipbreaker styles (PG, GS, PQ, and PP).

Chipbreaker	Application	Overview
PG	Medium to roughing (recommended for interrupted machining)	Excellent chip control and a tough cutting edge provides stable machining
GS	Medium to roughing (Recommended for continuous machining)	Low resistance with complex land
PQ	Finishing to medium	Prevents chip clogging and lowers cutting resistance during high feed machining
PP	Finishing	Prevents chip clogging and chip recutting at higher feed rates and small depths of cut



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 264 subsidiaries (as of March 31, 2018), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #522 on Forbes magazine's 2017 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 75,000 employees, Kyocera posted net sales of approximately €12.04 billion in fiscal year 2017/2018. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

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 and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €764,000 per prize category).

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