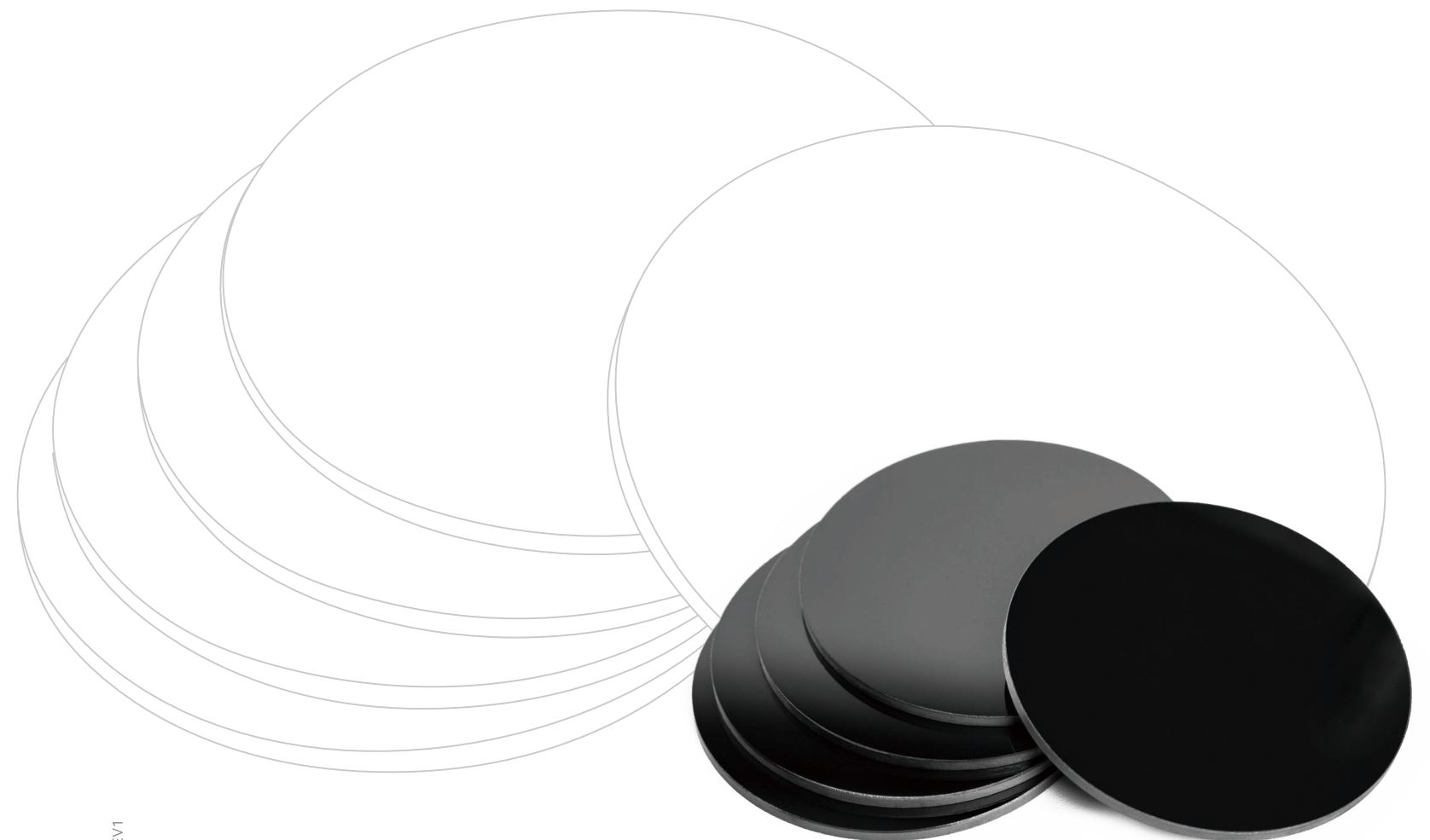




## Polycrystalline Diamond Compact



**CY CARBIDE MFG. CO., LTD.**

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25REV1

CY CARBIDE MFG. CO., LTD.

# DEVELOPMENT PROFILE

CY CARBIDE MFG. CO., LTD., Established in 2003, is a professional manufacturer and exporter of high performance tungsten carbide products, RTP powders and CERMET materials. CYC delivers globally a high performance standard and special products offering, that meet the most challenging demands from industry sectors including...metalworking, mining, construction, oil & gas, die & mold, and woodworking.

CYC has two production sites which located in Kunshan city, 50km away from Shanghai, together with the Jiangxi raw material production and Changshu inserts production, consist of production, laboratories and R&D facilities. 800+ skilled employees, including tooling and material grade design engineering on site.

CYC High performance products are guaranteed by a strong process management system, resulting in consistent quality for every batch and product. Strict control of our raw material supply chains and 100% traceability for every product batch throughout the entire manufacturing process. A philosophy of continuous improvements within every process is a core principle in our ways of working. CYC is an ISO 9001:2015(TUV), ISO 14001:2015, ISO 50001:2018 and ISO 45001:2018 certified business.

CYC Adheres to responsible and sustainable business practices, including conflict free raw material sourcing, proactive health management for our employees, and continuous concern about the environmental impacts of our business. Our open and transparent business philosophy allows our customers, employees, and external suppliers, to have confidence in our business, ways of working, and our products.



North of Kunshan-Headquarter



South of Kunshan-Hard materials factory



Fuzhou, Jiangxi-RTP factory



Changshu, Jiangsu-Inserts factory

# PROJECT DESCRIPTION

CYC is now partnering with superhard material experts from Europe in the development of PCD and PCBN materials for cutting tools. Equipped with high-end cubic press, we use premium-grade micron diamond powders and in-house developed cemented carbide substrates to produce PCD and PCBN materials under 6 Gpa of ultra-high pressure conditions, which ensures the overall quality and durability of our products.

## Expert Team



Our team is made up of experts in the areas of superhard materials and cemented carbide, and highly skilled specialists in processing, testing and other technical fields. Together with the establishment of a long-term partnership with premium universities, this well-roundedly professional team, that possesses extensive expertise in R&D, and a wide range of knowledge in production management and industrialization, is able to develop materials for specific applications and maintain consistency in production and quality.



GRADE & APPLICATION



Applications

Non-ferrous metals, wood, stone, ceramics, glass etc.



Technologies


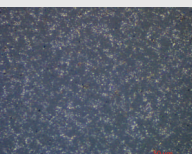
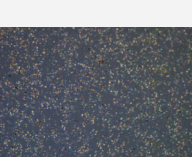

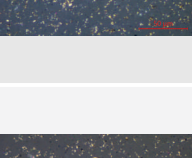
Over ten years of R&D and production of PCD, with advanced technologies and experience.



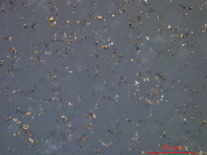
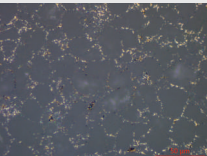
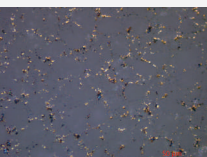
Quality Control

Advanced production and inspection equipment, along with a well-established quality management system.

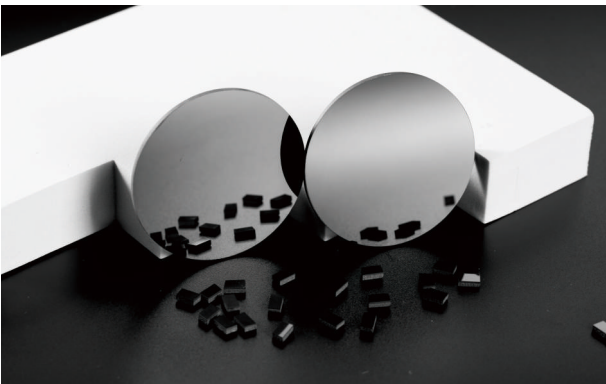
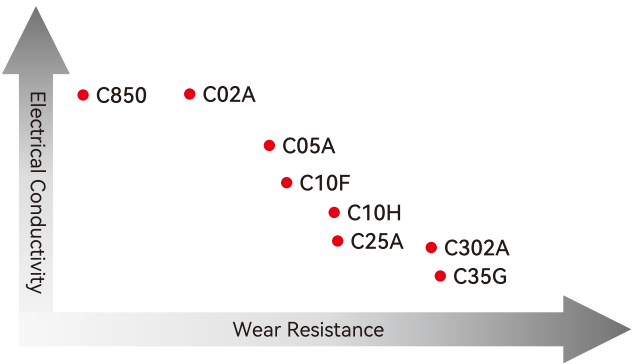


Grade	Grain size (μm)	Outside Diameter (mm)	Total thickness (±0.05mm)											Thickness Range of Diamond Layer(mm)	Industry	Main Application	Microstructure
			0.8	1	1.2	1.4	1.6	2	3.2	4	5	8					
C850	0.85	55	✓	✓	✓	✓	✓						0.2~0.45	Metalworking	Ultra-precision machining for copper, aluminium, magnesium, magnesium-aluminium alloys, plastic, and acrylic.		
						✓	✓	✓	✓								0.4~0.65
C02A	2	55	✓	✓	✓	✓	✓						0.2~0.45	Metalworking	Ultra-precision machining for copper, aluminium, magnesium, magnesium-aluminium alloys, plastic, and acrylic.		
						✓	✓	✓	✓								0.4~0.65
C05A	5	55	✓	✓	✓	✓	✓	✓	✓				0.4~0.65	Metalworking& Woodworking	Precision machining of low-to-medium silicon aluminium alloys, copper alloys, and precious metals. Melamine decorative laminate.		
							✓	✓	✓				0.4~0.75				
C10F	10	55	✓	✓	✓								0.2~0.45	Metalworking& Woodworking	Good versatility, suitable for most materials, including medium-to-high silicon aluminium alloys and others.		
			✓	✓	✓	✓	✓	✓	✓				0.4~0.65				
					✓	✓	✓	✓	✓				0.4~0.75				
									✓	✓	✓	✓	0.8~1.1				
C10H	10	55	✓	✓	✓	✓	✓	✓	✓				0.4~0.65	Metalworking& Woodworking	Good versatility, suitable for most materials, including medium-to-high silicon aluminium alloys and others.		
					✓	✓	✓	✓	✓				0.4~0.75				
									✓	✓	✓	✓	0.8~1.1				

● Please contact us for more specifications.

Grade	Grain size (μm)	Outside Diameter (mm)	Total thickness (±0.05mm)											Thickness Range of Diamond Layer(mm)	Industry	Main Application	Microstructure
			0.8	1	1.2	1.4	1.6	2	3.2	4	5	8					
C025A	25	55	✓	✓	✓	✓	✓	✓	✓				0.4~0.65	Metalworking& Woodworking	High-silicon aluminum alloys, composite materials, silicon carbide-reinforced aluminium alloys, and more.		
							✓	✓	✓	✓	✓						0.4~0.75
C302A	30+2	55	✓	✓	✓	✓	✓	✓	✓				0.4~0.65	Stoneworking& Woodworking	Graphite and graphite composites, composite materials, and more.		
							✓	✓	✓				0.4~0.75				
									✓	✓	✓	✓	0.8~1.1				
C35G	35	55	✓	✓	✓	✓	✓	✓	✓				0.4~0.65	Stoneworking& Woodworking	Graphite and graphite composites, silicon-aluminum alloys (with silicon content above 12%), ceramics, tungsten carbide, and more.		
							✓	✓	✓				0.4~0.75				
									✓	✓	✓	✓	0.8~1.1				

● Please contact us for more specifications.



# CAPABILITIES & SERVICES

With over 20 years of experience in R&D and manufacturing of hard materials, CYC has built up a global team of technical and business experts, dedicated to providing high-quality products and services to our customers.

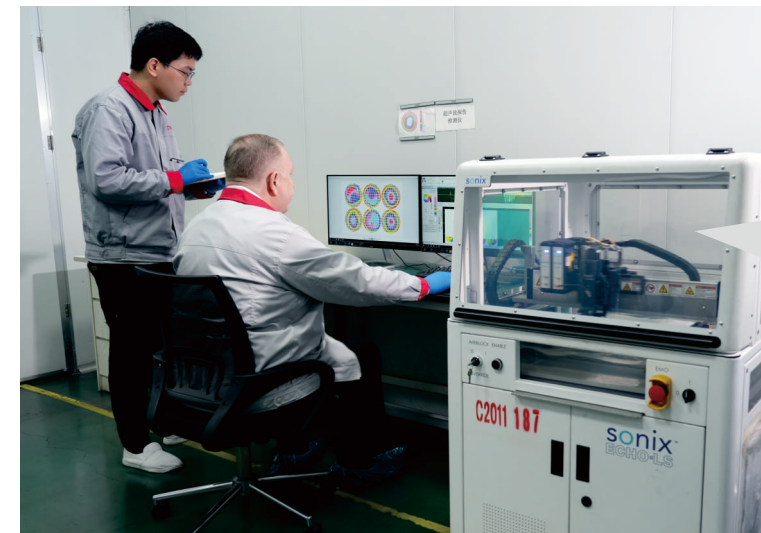


**Expertise × Quality × Stability**

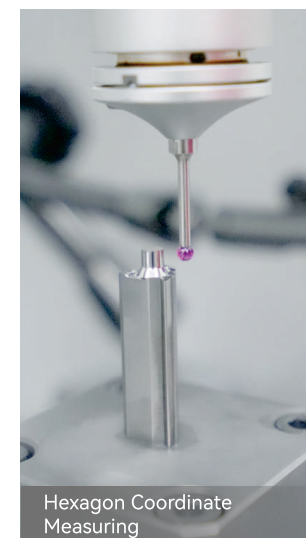
Our processes are fully controlled by ISO9001:2015 (TÜV) management system requirements. Consistency and traceability of quality are our commitments to customers.

"Meeting and exceeding customer expectations" is our consistent mission. With professional and diverse production capabilities, we provide customers with more value-added services.

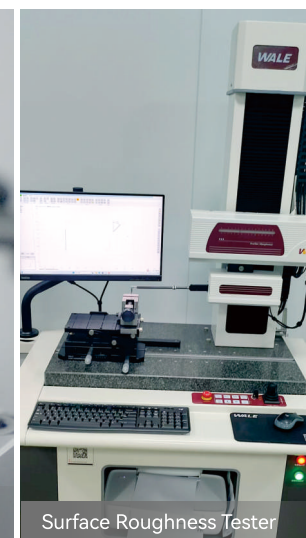
- 01/ Tailor-made materials for specific applications
- 02/ 24/7 cutting capabilities, one day delivery for urgent orders
- 03/ Customized geometric design
- 04/ Free-of-charge samples
- 05/ 2D & 3D drawings



SONIX Ultrasonic Scanner



Hexagon Coordinate Measuring



Surface Roughness Tester



Leica Metallographic Microscope



SEM Tester (JEOL-Japan)

Innovatest Hardness Tester

BT Laser Particle Analyzer