

PRODUCT CATALOG

Specialized Tools for Semiconductor Production Equipment

<https://www.tokyodiamond.com>

CONCEPT

Diamond Tools Designed Around Your Material, Your Process.

High-precision processing across quartz, ceramics, SiC, and other advanced materials, delivering exceptional shape stability and flawless finishes through fully customized diamond tooling.

CONCEPT



TOKYO DIAMOND

Helical Machining



High-Hardness
Material
Solutions

☰ Tool Specifications



SIC PROCESSING

Tool Geometry	6D-1W-5X-20Y-111L-10H
Grain Size	#120
Bond	MF-560
Workpiece	SiC : 100 x 100 x 11t
Machining Diameter	Φ 10.1
Spindle Speed	6,000 rpm
Feed Rate	50 mm/min
Depth of Cut / Rev	0.02 mm
Cutting Depth	6 mm
Coolant	Water-Soluble
Processing Machine	Grinding Center

★ Key Features

Stable Continuous Machining

Ensures stability even when processing high-hardness materials such as SiC.

Excellent Cutting Performance

Minimizes chipping and ensures highquality surfaces through superior cutting action.

Optimized Specifications

Customizable specifications available for various workpieces and machining conditions.

Note:

Specially designed bond matrix for high-efficiency machining of hard-to-cut SiC materials.

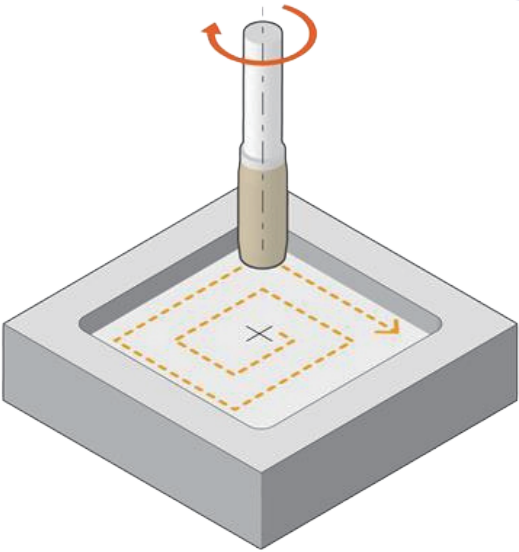
Sales Contact: sales@semistarcorp.com

Pocket Machining



Advanced
Material
Processing

☰ Tool Specifications



QUARTZ PROCESSING

★ Key Features

Exceptional Shape Stability

Maintains precise geometry over long processing cycles, ensuring consistent quality.

Flawless Finish

Delivers superior surface quality directly from the grinding process, reducing polishing time.

Tailored Solutions

Specifications can be customized to your specific processing needs and machinery.

Tool Geometry	30D-1W-6X-80L1-20DY-100L with 4 Slits
Grain Size	#270
Bond	M140
Workpiece	Quartz : 100 x 100 x 10t
Machining Size	60 x 60
Spindle Speed	3,000 rpm
Feed Rate	200 mm/min
Depth of Cut / Rev	0.03 mm
Cutting Depth	6mm
Coolant	Water-Soluble
Processing Machine	Grinding Center

Note:

Optimized for high-precision Quartz pocket milling applications requiring minimal subsurface damage.

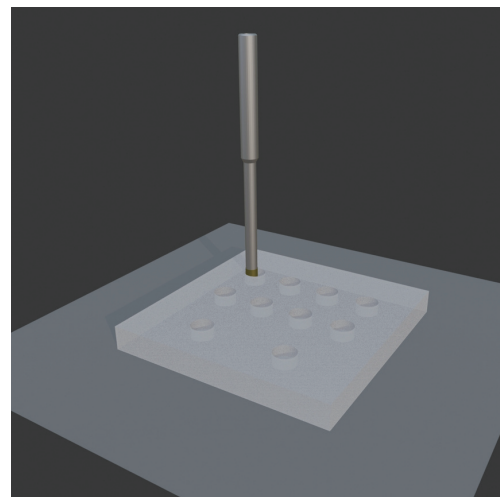
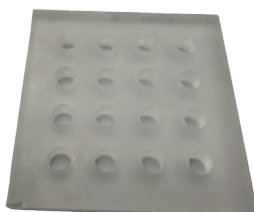
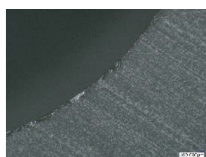
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Helical Machining



Precision
Engineering

☰ Tool Specifications



QUARTZ PROCESSING

Tool Geometry	6D-1W-7X-8DY-115L
	Shank Length: 60 mm
Grain Size	#140
Bond	M140
Workpiece	Quartz : 100 x 100 x 10t
Machining Diameter	Φ 10.1
Spindle Speed	6,000 rpm
Feed Rate	100 mm/min
Depth of Cut / Rev	0.05 mm
Cutting Depth	5 mm
Coolant	Water-Soluble
Processing Machine	Grinding Center

Note:

Optimized helical machining process ensures consistent bore quality and extends tool longevity.

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★ Key Features

Long Life for Continuous Use

Engineered durability allows for extended operation periods without compromising performance.

Sharp Cutting, Clean Finish

High-quality abrasive grains provide excellent cutting ability and superior surface finish.

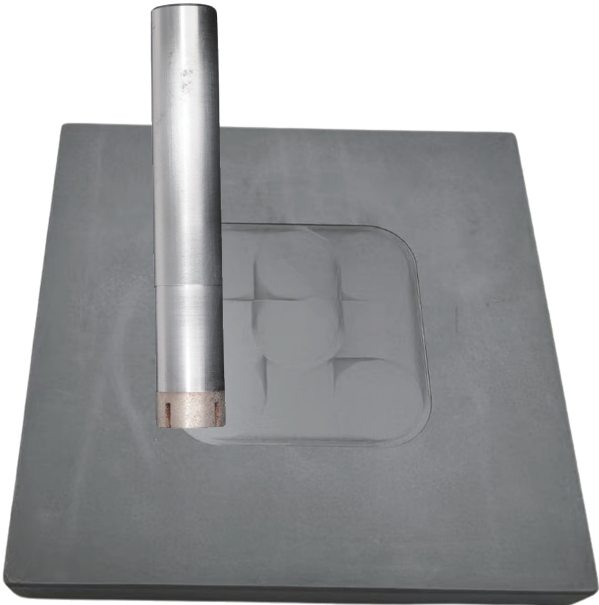
Specs Tailored to Your Process

Customizable tool specifications available to match your specific machining requirements.

Pocket Machining



☰ Tool Specifications



SIC PROCESSING

Tool Geometry	20D-2W-10X-20Y-120L with 4 Slits
Grain Size	#170
Bond	M140
Workpiece	SiC: 100 x 100 x 11t
Machining Diameter	50 x 50
Spindle Speed	3,000 rpm
Feed Rate	100 mm/min
Depth of Cut / Rev	0.01 mm
Cutting Depth	0.5 mm
Coolant	Water-Soluble
Processing Machine	Grinding Center

★ Key Features

High Shape Retention

Minimizes tool marks even during the processing of hard materials like SiC, ensuring geometric accuracy.

Optimal Specifications

We offer specifications tailored to machining depth and cutting conditions for maximum efficiency.

Note:

Designed specifically for SiC applications to ensure high shape retention and minimize tool marks.

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