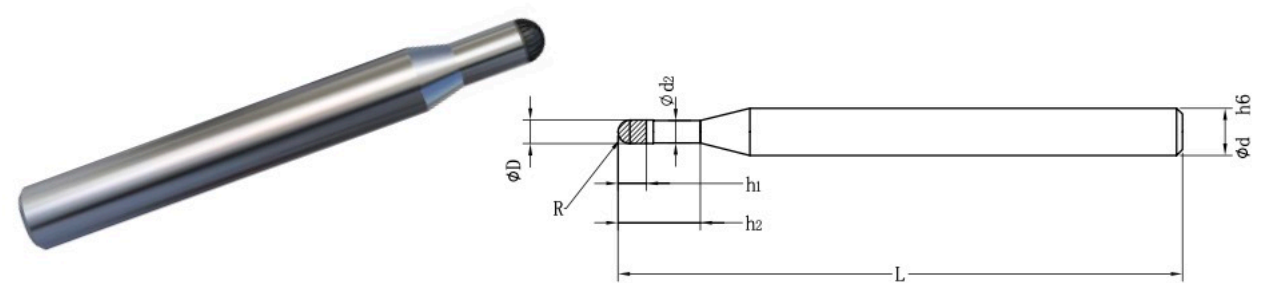


Solid PCD End Mill Series

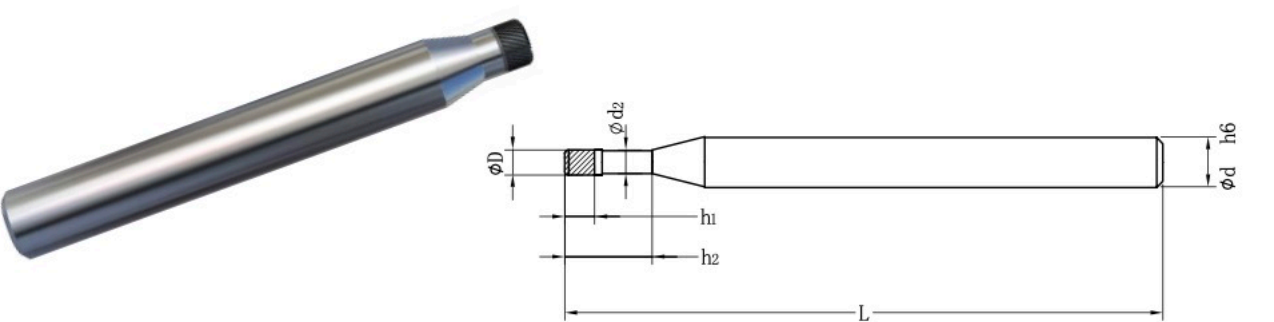
1. Solid PCD Ball End Mill



Specification List						
Cutting Edge Dia (D)	R Corner (R)	Avoidance Dia (d2)	Effective Blade Length (h1)	Avoidance Length (h2)	Total Length (L)	Shank Dia (d)
0.5	0.25	0.45	0.8	3	45	4
1	0.5	0.95	1.2	6	45	4
1.5	0.75	1.45	1.2	6	45	4
2	1	1.95	1.2	6	45	4
2.5	1.25	2.45	2.5	6	45	4
3	1.5	2.95	2.5	6	45	4
4	2	3.95	2.5	6	45	4
6	3	5.95	4	10	50	6
8	4	7.95	4	10	50	8

Non-standard Can Be Customized

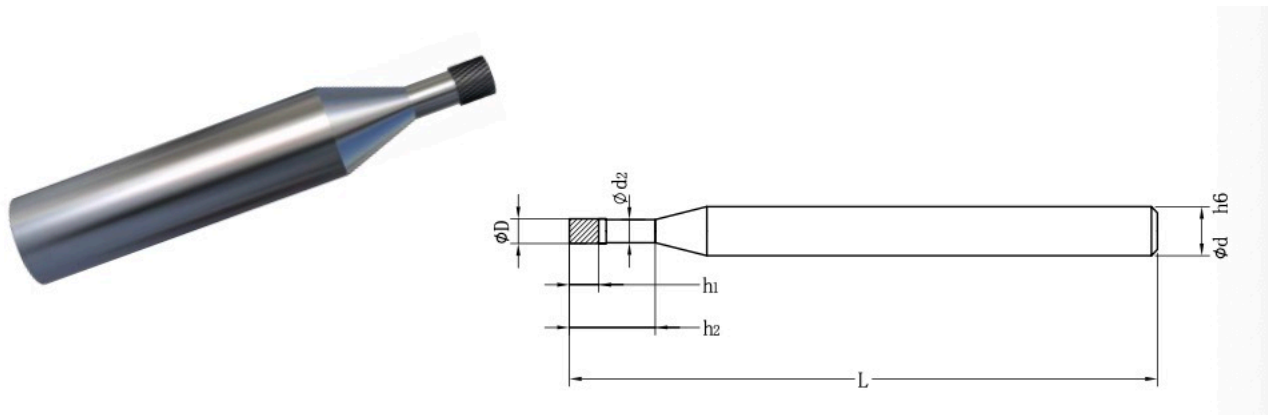
2. PCD End Mill with Corner Radius



Specification List						
Cutting Edge Dia (D)	R Corner (R)	Avoidance Dia (d2)	Effective Blade Length (h1)	Avoidance Length (h2)	Total Length (L)	Shank Dia (d)
0.5	0.05	0.45	0.8	3	45	4
1	0.05	0.95	1.2	6	45	4
1.5	0.1	1.45	1.2	6	45	4
2	0.1	1.95	1.2	6	45	4
2.5	0.15	2.45	2.5	6	45	4
3	0.15	2.95	2.5	6	45	4
4	0.2	3.95	2.5	6	45	4
6	0.5	5.95	2.5	10	50	6
8	0.5	7.95	2.5	10	50	8
10	1	9.95	2.5	10	50	10
12	1.5	11.95	2.5	10	50	12
16	2	15.95	2.5	10	60	16
20	5	19.95	2.5	10	60	20

Non-standard Can Be Customized

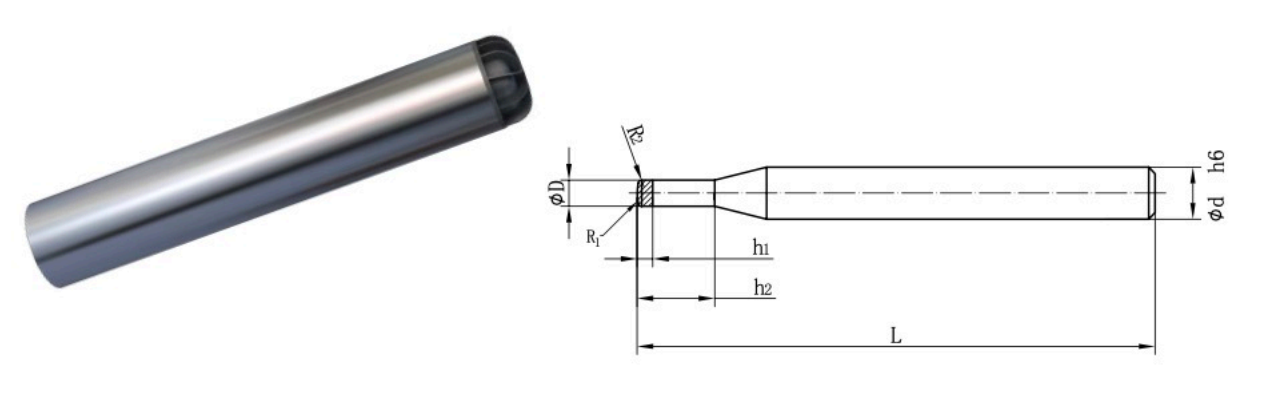
3. Solid PCD Flat End Mill



Specification List

Cutting Edge Dia (D)	Avoidance Dia (D)	Effective Blade Length (h1)	Avoidance Length (h2)	Total Length (L)	Shank Dia (d)
0.5	0.45	0.8	3	45	4
1	0.95	1.2	6	45	4
1.5	1.45	1.2	6	45	4
2	1.95	1.2	6	45	4
3	2.95	2.5	6	45	4
4	3.95	2.5	6	45	4
6	5.95	2.5	10	50	6
8	7.95	2.5	10	50	8
10	9.95	2.5	10	50	10
12	11.95	2.5	10	50	12
16	15.95	2.5	10	60	16
20	19.95	2.5	10	60	20

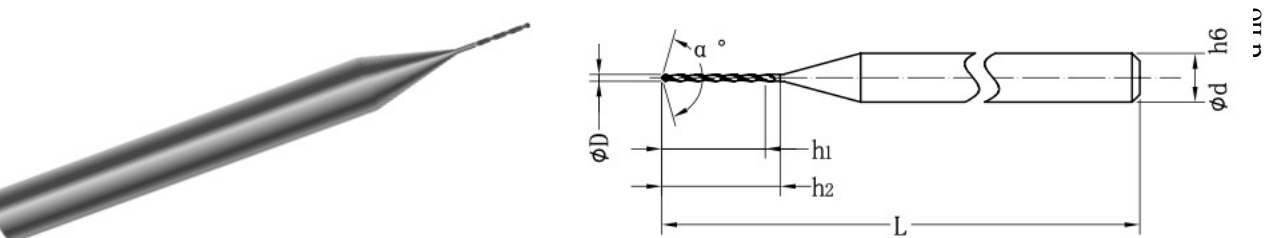
4. Solid PCD Ball End Mill with Corner Radius



Specification List

Cutting Edge Dia (D)	R Corner (R1)	R Corner (R2)	Effective Blade Length (h1)	Avoidance Length (h2)	Total Length (L)	Shank Dia (d)
2	4	0.3	1.2	6	40	4
4	10	0.3	2.5	6	40	4
4	10	0.5	2.5	6	40	4
6	20	0.5	2.5	6	40	6
8	20	1	2.5	6	40	8
10	40	2	2.5	6	40	10

5. Solid PCD Micro Drill



Specification List

Cutting Edge Dia (D)	Angle (α)	Blade Length (h1)	Avoidance Length (h2)	Total Length (L)	Shank Dia (d)
0.2	148°	4	4.5	38	3.175
0.3	148°	4	4.5	38	3.175
0.4	148°	4	4.5	38	3.175
0.5	148°	6.5	7.5	38	3.175
0.6	148°	6.5	7.5	38	3.175
0.8	148°	6.5	7.5	38	3.175
1.0	140°	6.5	7.5	45	4
1.2	140°	11	12	45	4
1.5	140°	11	12	45	4
2	140°	11	12	45	4
4	140°	20	22	60	4
6	140°	20	22	60	6
8	140°	20	22	60	8
10	140°	20	22	60	10
12	140°	20	22	75	12

Solid PCD Drill Processing Case
Gyroscope Processing

UHB200-5Axis

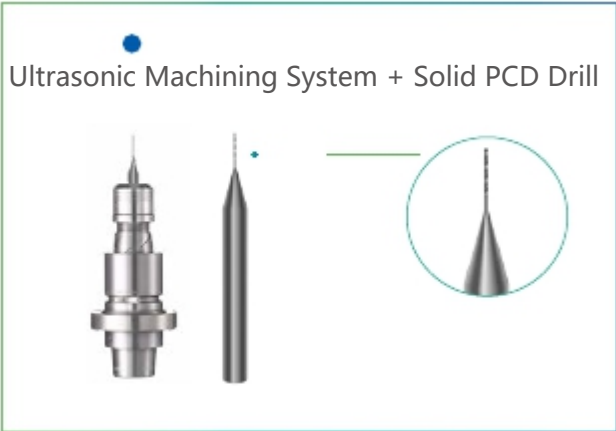
Material: Quartz Glass
Workpiece Size: 20*20*15.5mm
Wall Thickness: 0.7mm
Processing Advantages: No chipping, no cracks,
Reducing the depth of subsurface damage layer

Cutter

Ultrasonic Machining System + Solid PCD Drill

Solid PCD Drill Processing Case

Carbon Fiber Hole Processing

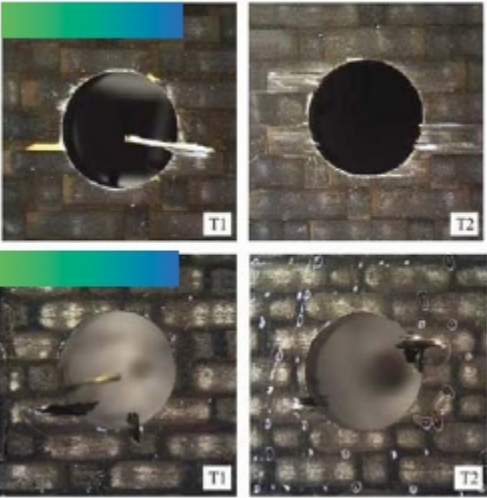


Solid PCD Drill Processing Case

Carbon Fiber Milling Case

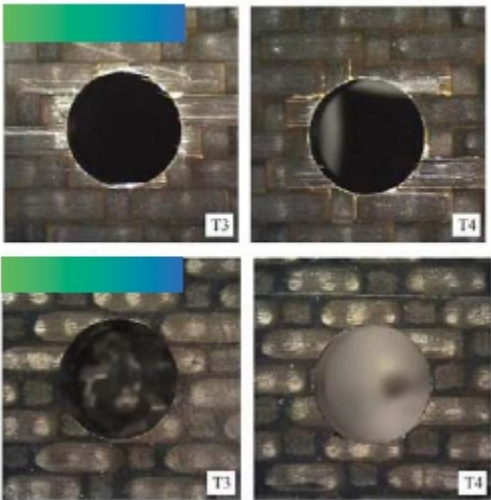


General Processing



- Tool wear is severe,
- low service life
- Serious glitch
- High product scrap rate

Ultrasonic Machining System + Solid PCD Drill



- The orifice is smooth and flat
- No tearing, delamination, burnt softening
- Greatly improved orifice burrs
- Orifice quality improved by 3 times

Blind Groove Processing



Solid PCD Mill

- Notch burrs are slight
- No cracks in the tank wall

Ra (μm)
0.512

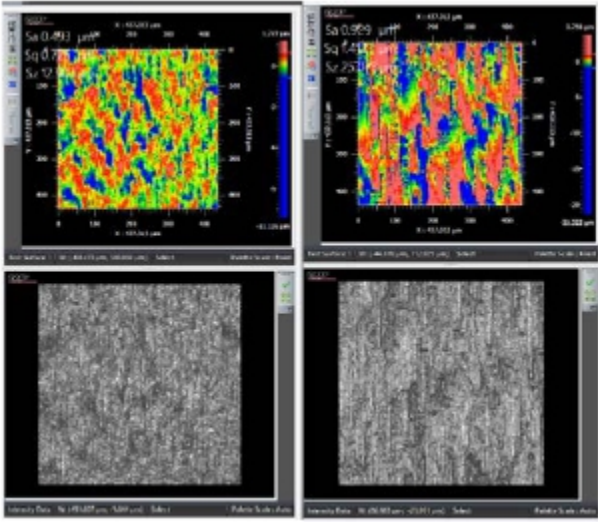


Tungsten Steel Mill

- Notch burrs are serious
- Having chip in the groove wall

2.011

Cavity Processing



Solid PCD Mill

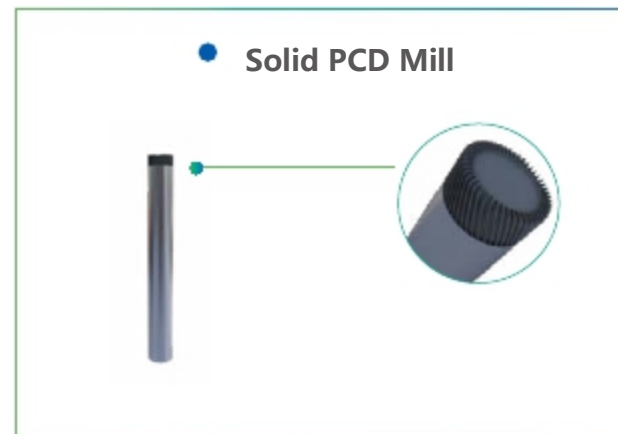
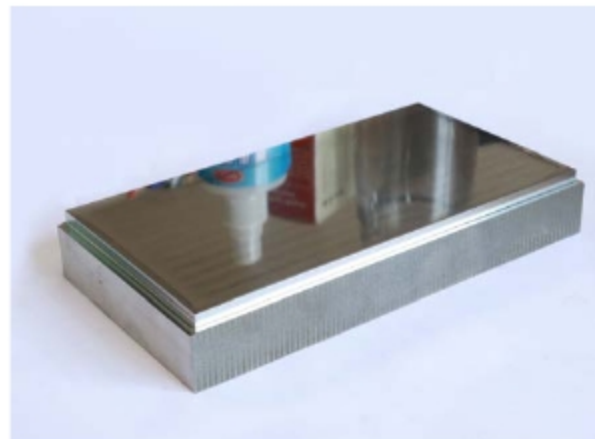
Ra 0.493μm

Tungsten Steel Mill

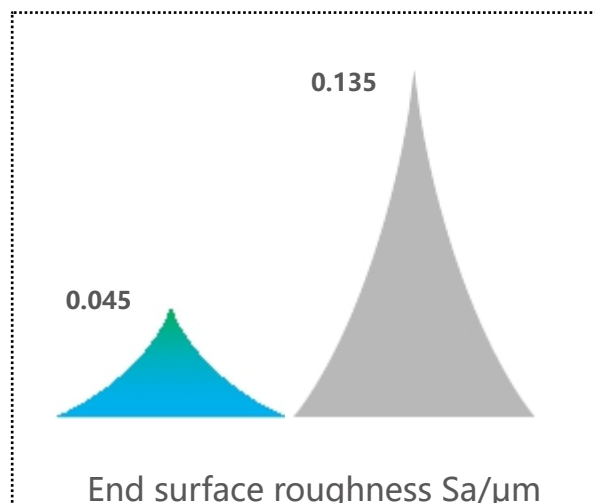
Ra 1.211μm

Solid PCD Mill Processing Case

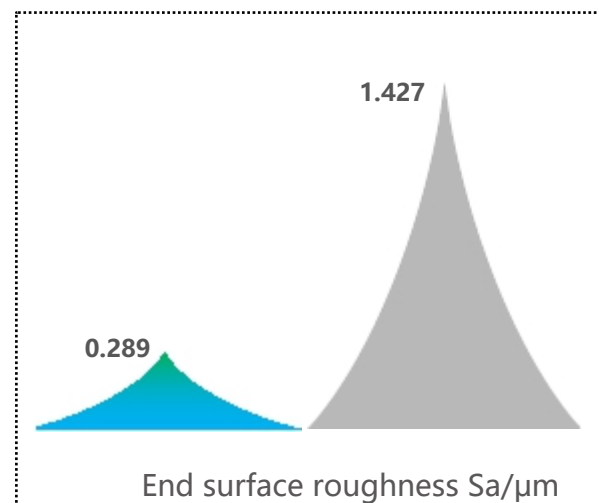
Superalloy



Solid PCD End Mill Diamond Coated Tool



Solid PCD End Mill Diamond Coated Tool



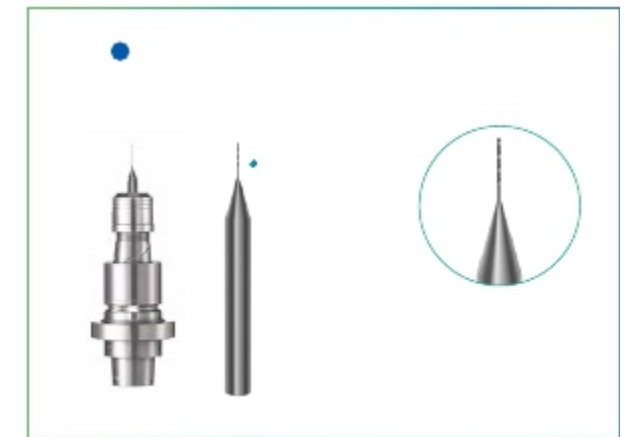
【 Test Conditions : S=5000rpm F=2000mm/min Ap=0.05mm Ae=0.3mm 】

Solid PCD End Mill
Superalloys with Mirror Effect

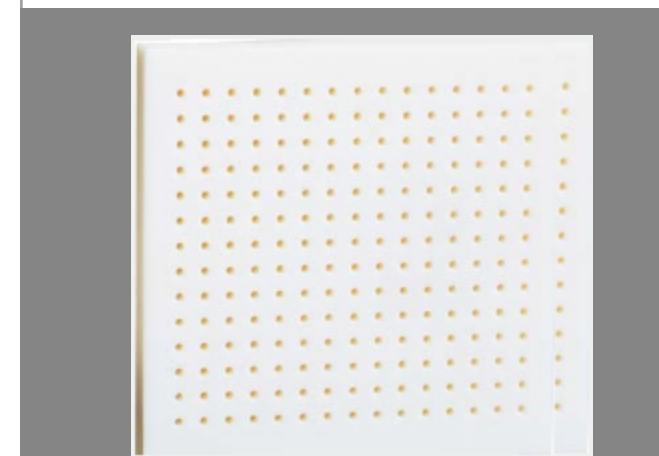
Solid PCD Mill Processing Case

Deep Microhole Processing of Sintered Ceramics

Ultrasonic Machining System + Solid PCD Drill



Ultrasonic Machining System + Solid PCD Drill

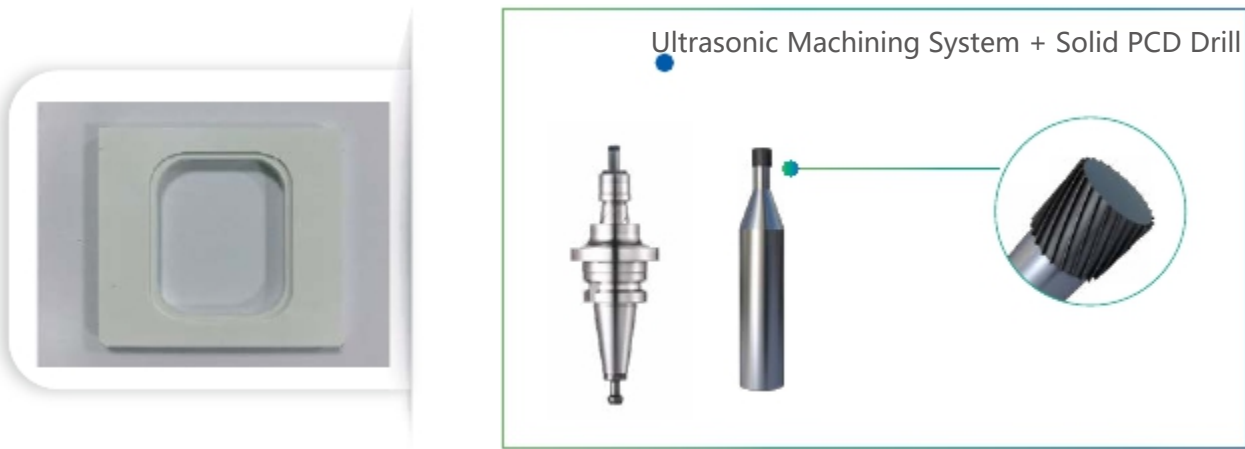


Processing conditions: S=25000rpm
F=30mm/min Ap=0.06mm

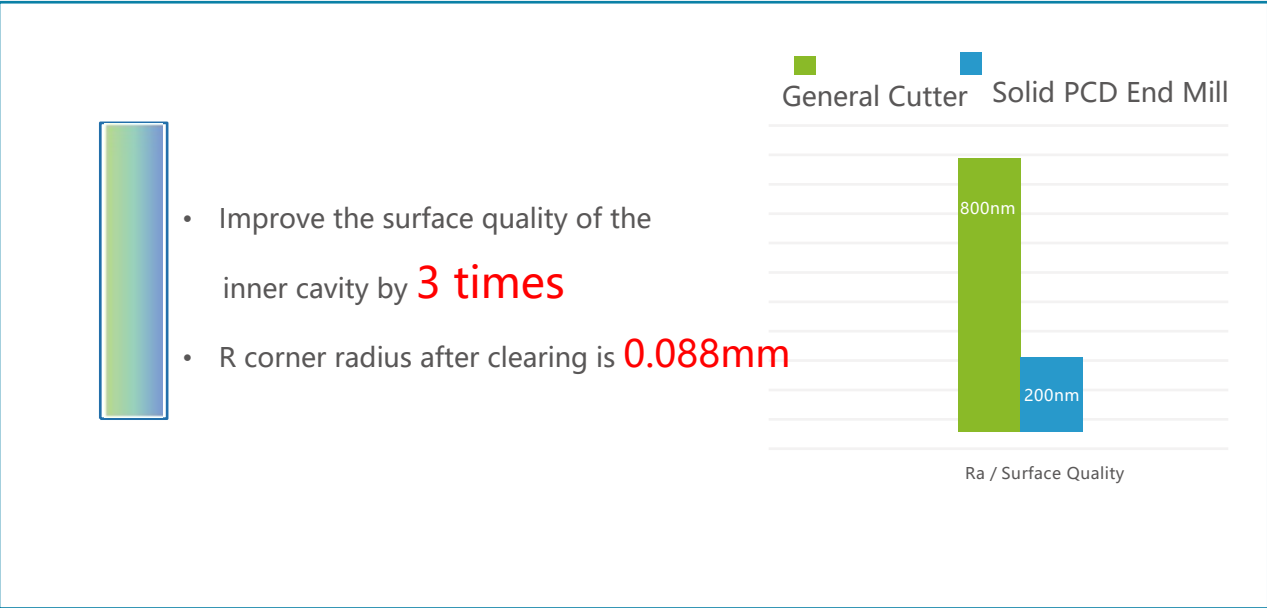
- Deep micropores with a depth-to-diameter ratio of **6:1**
- Sintered ceramic hardness up to **1400Hv**
- Drill life reaches **750+ pcs**

Solid PCD Mill Processing Case

Root Removal of Sintered Ceramic Cavity

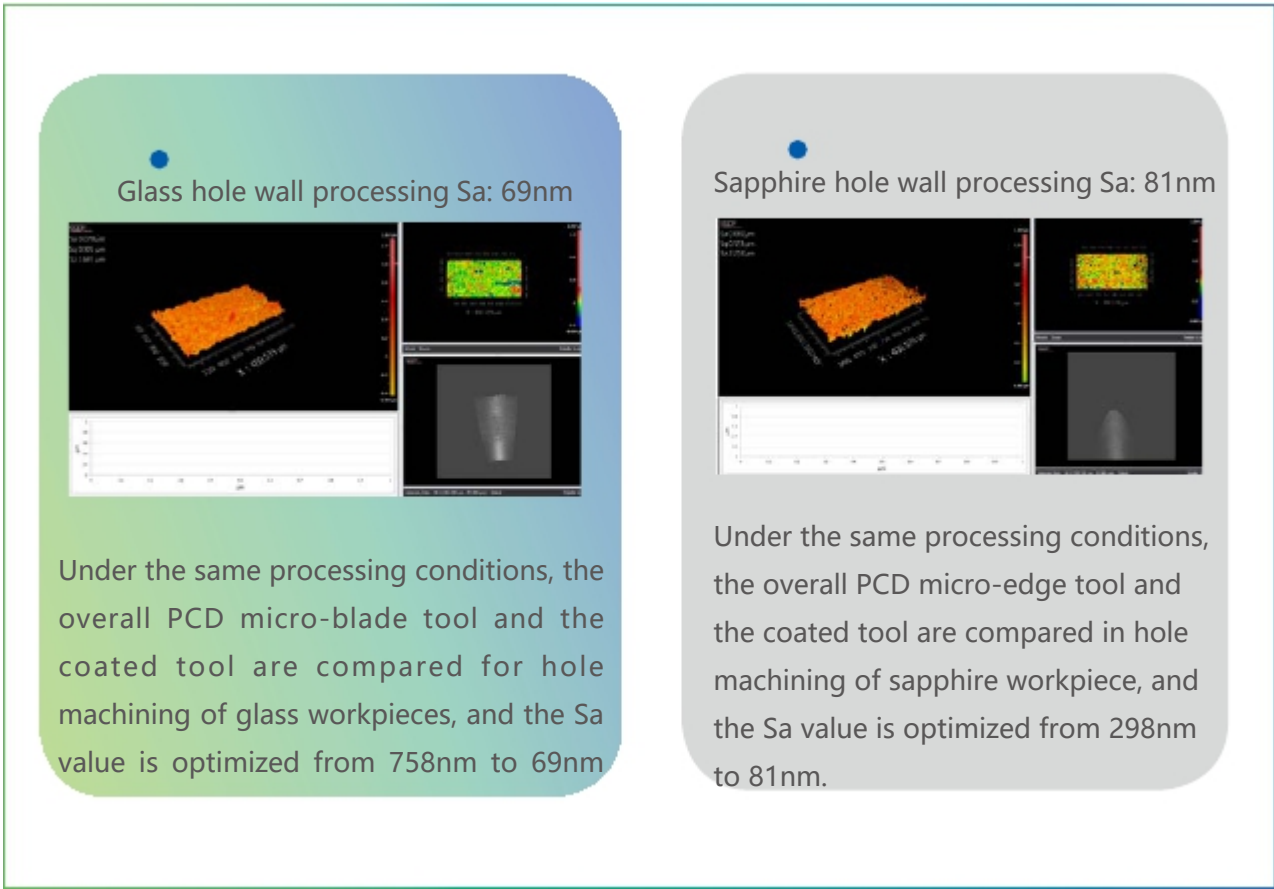


- ★ Machining Requirements - Ceramic Cavity for Cleaning and Finishing Finishing
- ★ Difficulties in processing - the surface quality of ordinary processing is low; the time of secondary processing increases and the efficiency is low



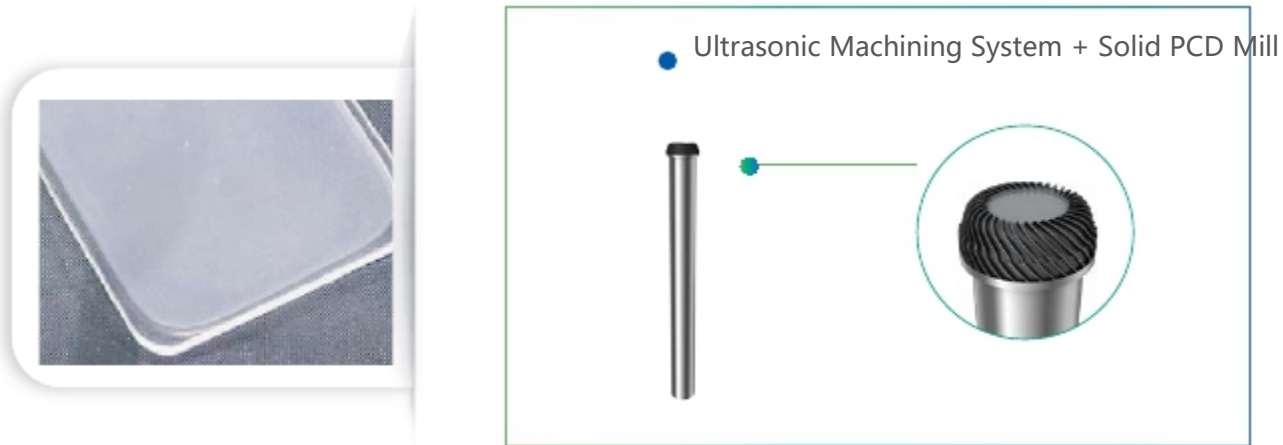
Solid PCD Mill Processing Case

Glass/Sapphire Hole Processing

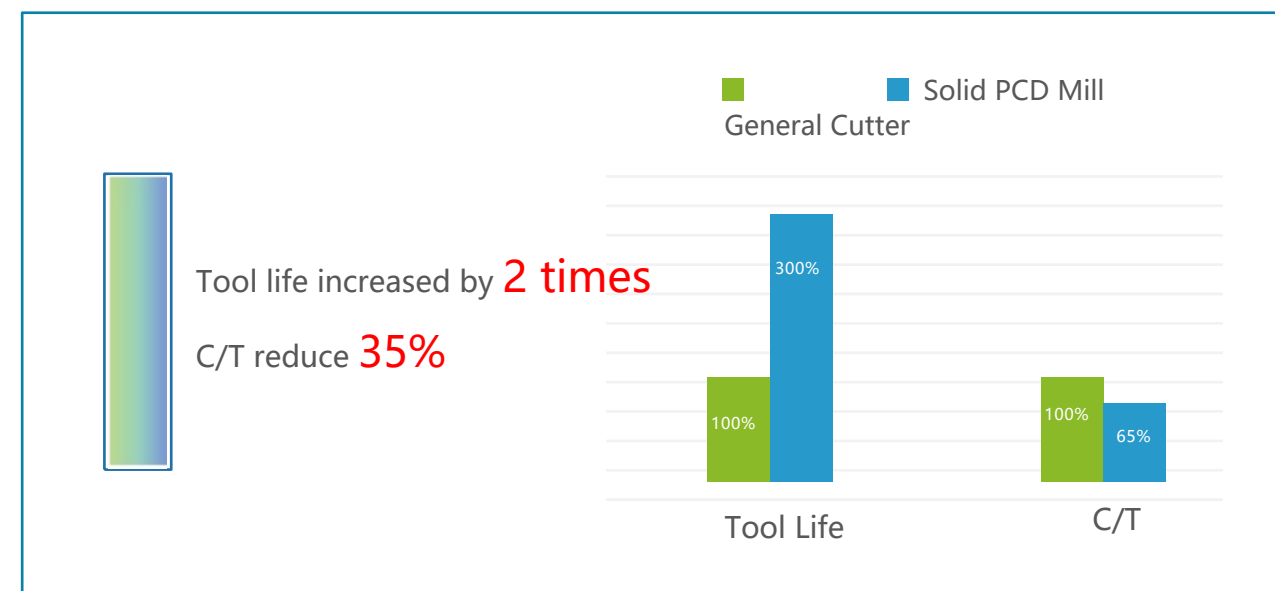


Solid PCD Mill Processing Case

Sapphire Cabochon Finishing

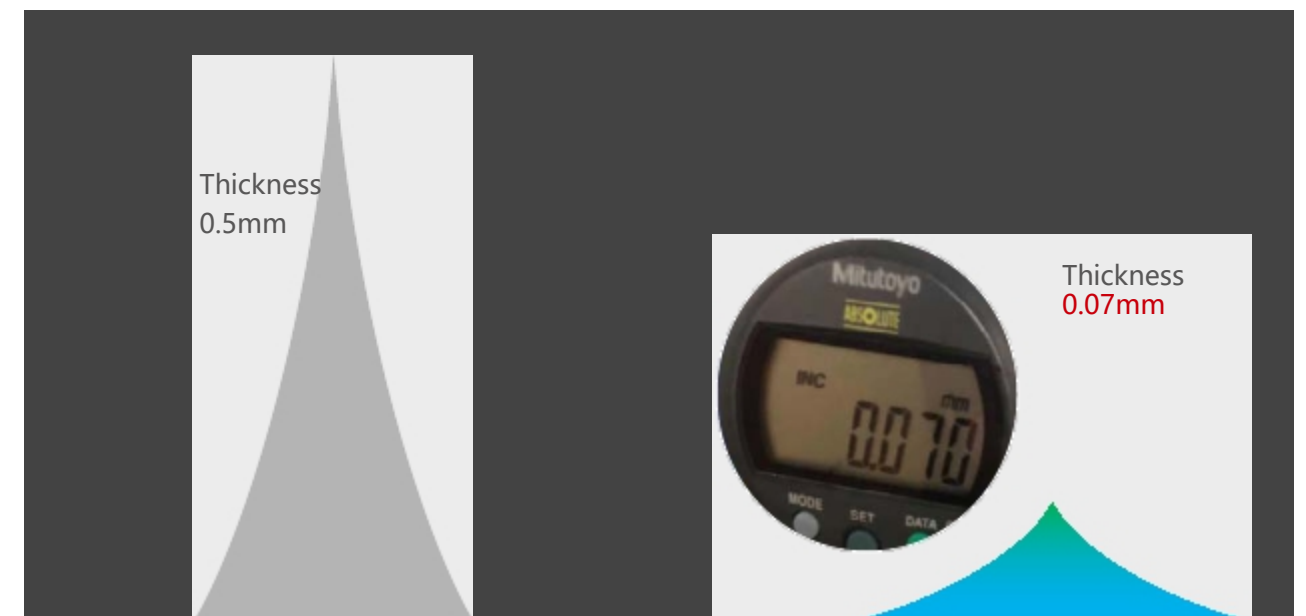


- ★ Machining Requirements - Sapphire Cabochons for Contouring and Surface Finishing
- ★ Difficulties in processing - the surface quality of ordinary processing is low, which increases the time for secondary processing



Solid PCD Mill Processing Case

Corning Glass

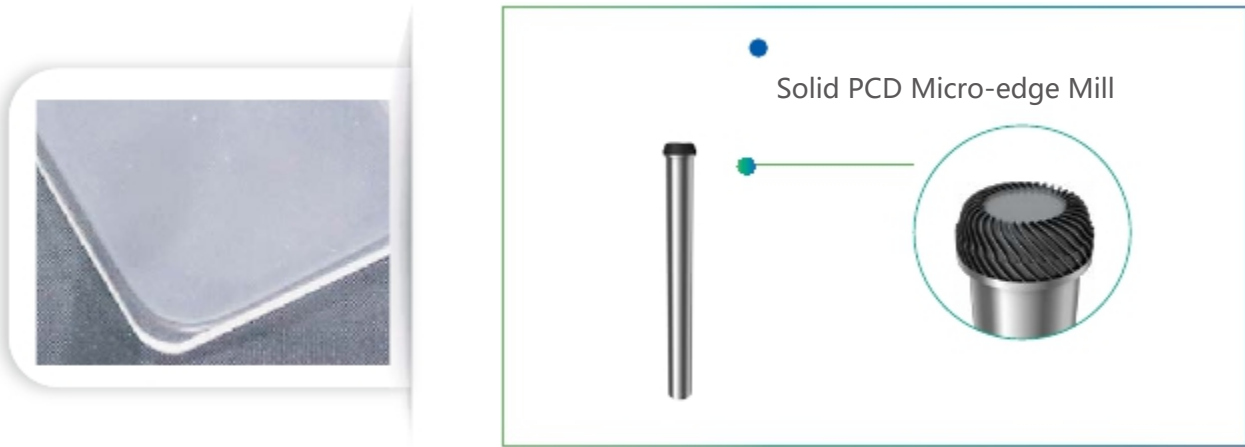


Ultra Thin Glass - Materials (Corning Glass)

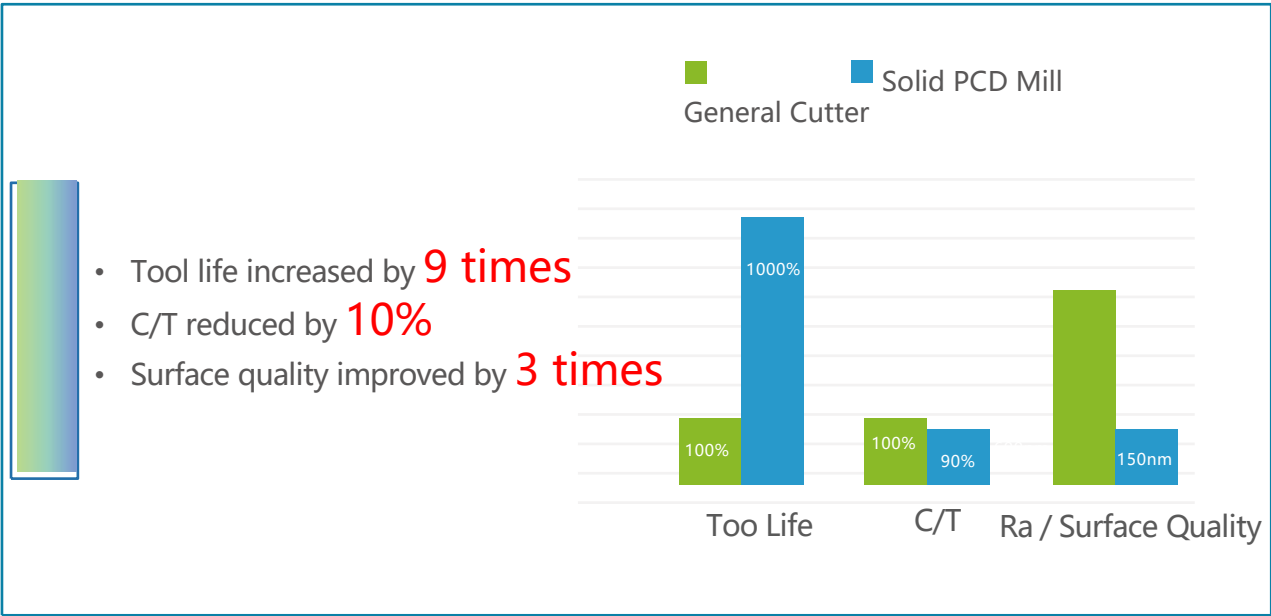
- As thin as **0.07mm**
- No knives on the surface of the workpiece, no cracks
- Roughness optimized from Ra **0.531 μ m** to Ra **0.254 μ m**

Solid Micro-edge Mill Processing Case

Finishing Of Inner Cavity Of Glass Front Cover

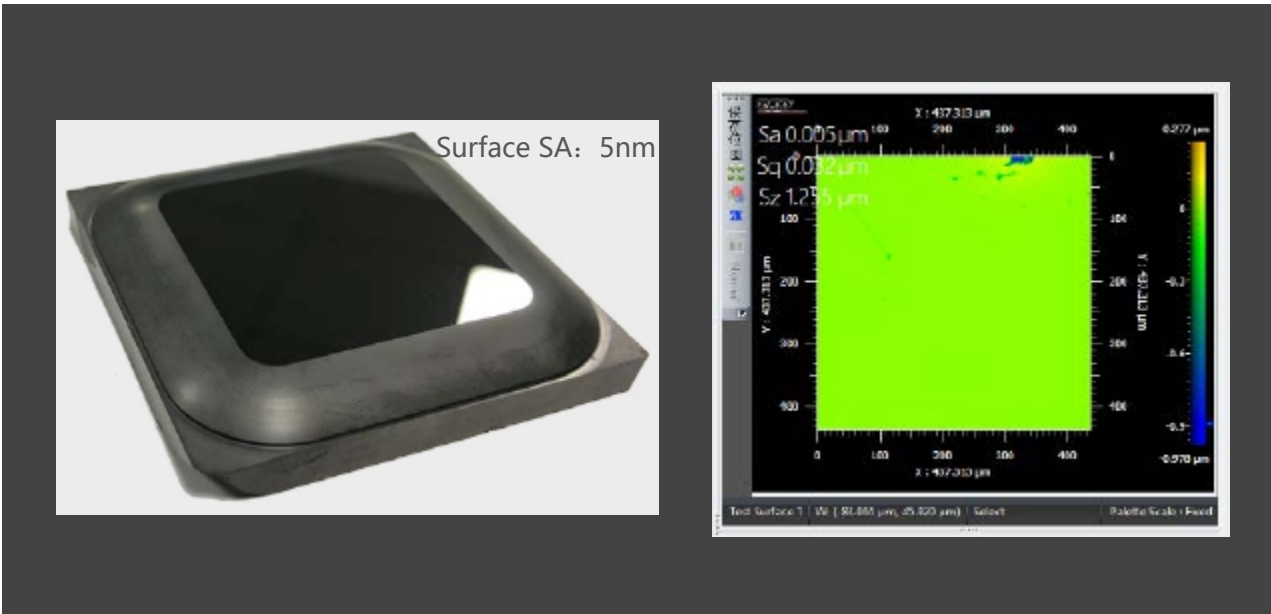


- ★ Machining Requirements - Ceramic Cavity for Cleaning and Finishing Finishing
- ★ Difficulties in processing - the surface quality of ordinary processing is low, which increases the time for secondary processing



Solid Micro-edge Mill Processing Case

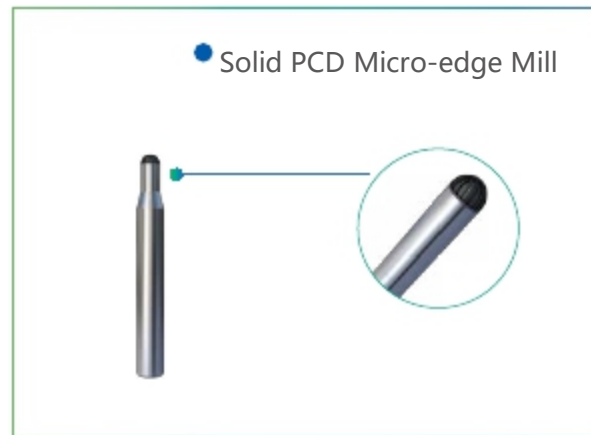
Silicon Carbide Ceramics



Unprecedented **5nm** mirror effect of super-hard silicon carbide material, derived from overall PCD micro-edge tool technology.

Solid PCD Micro-edge Mill Processing Case Solid PCD Micro-edge Mill

Graphite Mirror Finishing



Innovative Solutions for Graphite Precision Processing



- Surface roughness of graphite molds significantly reduced by **70%**
- Processing efficiency increased by up to **3 times**



Higher Surface Quality

- Realize the effect of mirror surface processing
- Edge width at least **0.01nm**
- Tool contour accuracy can be controlled within **3μm**



Longer Tool Life

- The unique blade structure improves the rigidity and sharpness of the tool
- The life of the solid PCD micro-edge mill is **3-8 times** higher than that of the diamond-coated tool

