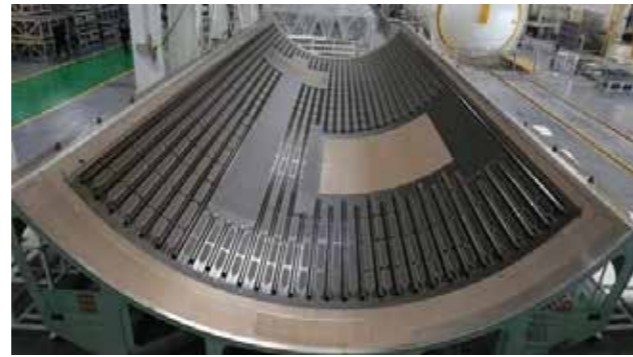


Machining CARBON FIBER COMPOSITE (HOLES)



Conprofe Ultrasonic Tool Holder +
Conprofe Solid PCD Micro Drill



Carbon Fiber

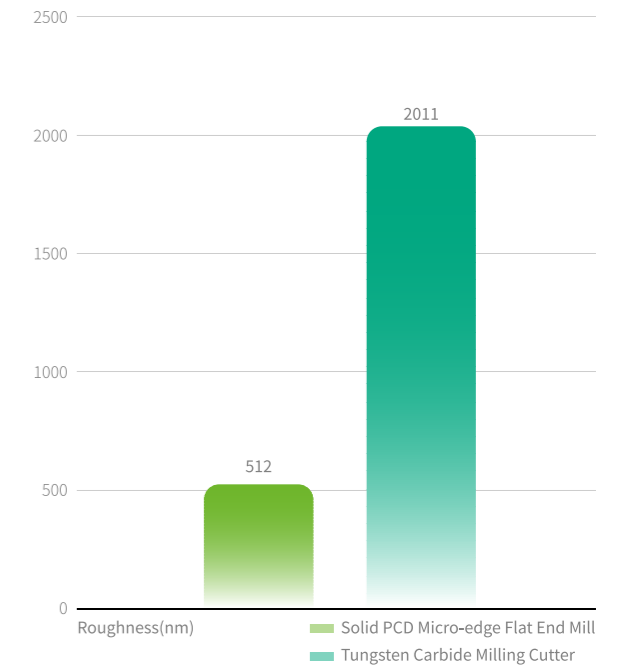
Machining CARBON FIBER COMPOSITE (BLIND GROOVES)



Conprofe Solid PCD Micro-edge Flat End Mill

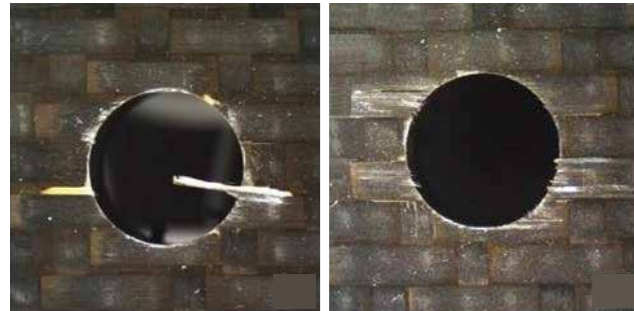
Ra Comparison

Solid PCD Micro-edge Flat End Mill vs. Tungsten Carbide Milling Cutter

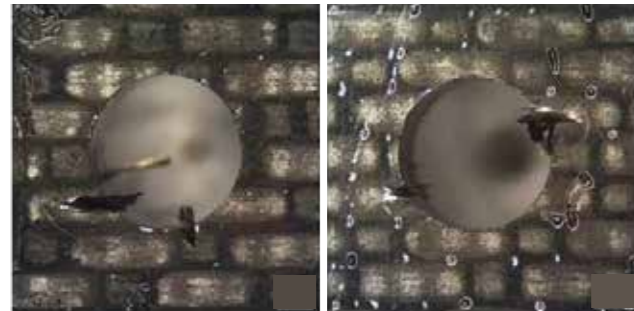


Conventional Machining

Entry hole



Exit hole

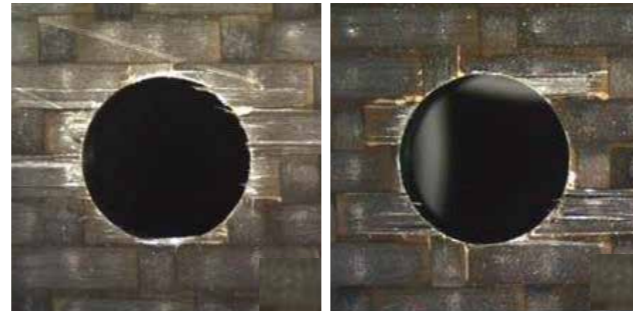


- Serious tool wear
- Short tool life
- Serious burrs

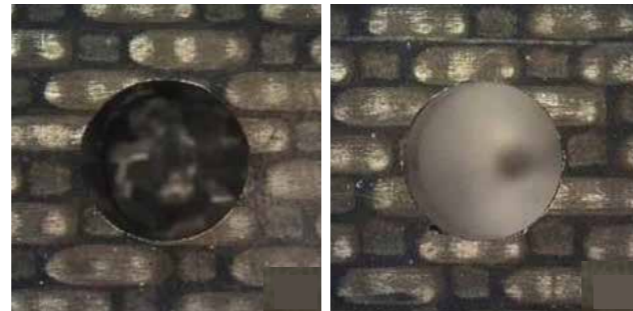
- Low efficiency
- Burr width of 0.44mm

Ultrasonic Machining System + Solid PCD Micro-drill

Entry hole

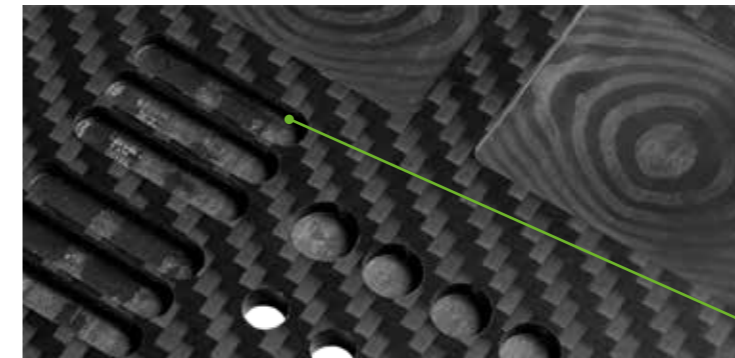


Exit hole



- Burrs on the hole edges greatly reduced
- Surface quality of the holes up by 300%

- No laminating or scorching
- Burr width of 0.08mm



By Conprofe Solid PCD Micro-edge Flat End Mill

Slight burrs formed on the notch edge
No chipping on the groove wall

By Tungsten Carbide Milling Cutter

Serious burrs formed on the notch edge
Chippings on the groove wall