

MCD Straight Flute Mill $\Phi 6.00 * H4.0 * D6 * L50$ e.g.



Note: the single crystal tool is only suitable for finishing and the processing allowance is about 0.05-0.2. Too much processing allowance is easy to lead to too much cutting edge resistance, resulting in breakage.

Suitable for processing: gold, silver copper, aluminum non-ferrous metals, etc., can also process acrylic.

- $\Phi 1.00 * H2.0 * D6 * L50$
- $\Phi 2.00 * H3.0 * D6 * L50$
- $\Phi 4.00 * H3.0 * D6 * L50$
- $\Phi 6.00 * H3.0 * D6 * L50$
- $\Phi 8.00 * H3.0 * D6 * L50$
- $\Phi 6.00 * H4.0 * D6 * L50$
- $\Phi 14.0 * H3.0 * D12 * L50$
- $\Phi 30.0 * H3.0 * D12 * L50$
- $\Phi 4.00 * H4.0 * D6 * L50$
- $\Phi 8.00 * H4.0 * D8 * L50$
- $\Phi 10.0 * H5.0 * D10 * L50$
- $\Phi 12.0 * H10 * D12 * L50$
- $\Phi 6.00 * H6.0 * D6 * L50$
- $\Phi 8.00 * H8.0 * D8 * L50$

- $\Phi 1.50 * H3.0 * D6 * L50$
- $\Phi 3.00 * H3.0 * D6 * L50$
- $\Phi 5.00 * H3.0 * D6 * L50$
- $\Phi 7.00 * H3.0 * D6 * L50$
- $\Phi 10.0 * H3.0 * D10 * L50$
- $\Phi 12.0 * H3.0 * D12 * L50$
- $\Phi 20.0 * H3.0 * D12 * L50$
- $\Phi 50.0 * H3.0 * D12 * L50$
- $\Phi 5.00 * H4.0 * D6 * L50$
- $\Phi 10.0 * H4.0 * D10 * L50$
- $\Phi 10.0 * H10 * D10 * L50$
- $\Phi 6.00 * H5.0 * D6 * L50$
- $\Phi 4.00 * H8.0 * D10 * L50$
- $\Phi 10.0 * H10 * D10 * L50$

MCD Ball End Mill $\Phi 8.0 * R4.0 * H4.0 * D8 * L50$ e.g.



R3,R4,R5 cutting length is same with round radius

Currently R max is 5



Common Specification as follows:

- $\Phi 1.0 * R0.5 * H2.5 * D6 * L50$
- $\Phi 1.5 * R0.75 * H2.5 * D6 * L50$
- $\Phi 2.0 * R1.0 * H3.0 * D6 * L50$
- $\Phi 2.5 * R1.25 * H3.0 * D6 * L50$
- $\Phi 3.0 * R1.5 * H3.0 * D6 * L50$
- $\Phi 3.5 * R1.75 * H3.0 * D6 * L50$
- $\Phi 4.0 * R2.0 * H3.0 * D8 * L50$
- $\Phi 5.0 * R2.5 * H3.0 * D6 * L50$
- $\Phi 6.0 * R3.0 * H3.0 * D6 * L50$
- $\Phi 8.0 * R4.0 * H4.0 * D6 * L50$
- $\Phi 8.0 * R4.0 * H4.0 * D8 * L50$
- $\Phi 9.0 * R4.5 * H5.0 * D10 * L50$
- $\Phi 10.0 * R5.0 * H5.0 * D10 * L50$

MCD cutting tools & inserts series

In ultra-precision machining, the main factors to ensure the quality of the machined surface in addition to high-precision machine tools, ultra-stable processing environment, high-quality tools are also a very important aspect. MCD single crystal tool has high hardness, good wear resistance, high strength, good thermal conductivity, low friction coefficient with non-ferrous metals, good adhesion resistance and excellent corrosion resistance and chemical stability, and can also grind out sharp blades, is considered to be the ideal ultra-precision cutting tool material, especially in the field of machining, ultra-precision machining has been widely used



The use of MCD single crystal tools

1. The single crystal diamond tool is very sharp, and it is easy to produce a collapse edge when receiving an impact, so it is used under stable and shock-less working conditions as far as possible, and the amount of chips should not exceed 0.05mm.
2. Higher cutting speed can reduce the cutting force, while low-speed cutting will increase the cutting force, so the cutting speed should not be too low when using single crystal tool processing.
3. The use of a single crystal diamond tool in a static state should be avoided in contact with the workpiece or other hard objects to prevent damage to the cutting edge of the tool.

MCD welding highlight milling cutter series

d -- diameter of edge / blade
L1--blade length
L2--effective length
L--total length
D -- shank diameter



face milling, side milling

| Specification | d | L1 | L2 | L | D |
|---------------------|----|----|----|----|----|
| MCD-D3*50*D4*1T | 3 | - | 10 | 50 | 4 |
| MCD-D3*5*50*D4*1T | 3 | 5 | 10 | 50 | 4 |
| MCD-D4*50*D4*1T | 4 | - | 15 | 50 | 4 |
| MCD-D4*5*50*D4*1T | 4 | 5 | 15 | 50 | 4 |
| MCD-D6*50*D6*1T | 6 | - | 20 | 50 | 6 |
| MCD-D6*5*50*D6*1T | 6 | 5 | 20 | 50 | 6 |
| MCD-D8*50*D8*1T | 8 | - | 20 | 50 | 8 |
| MCD-D8*5*50*D8*1T | 8 | 5 | 20 | 50 | 8 |
| MCD-D10*75*D10*1T | 10 | - | 25 | 75 | 10 |
| MCD-D10*5*75*D10*1T | 10 | 5 | 25 | 75 | 10 |



Note: can be customized to the figure non-standard

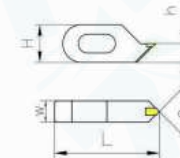
Due to the physical characteristics of single crystal diamond itself, the chip is not easy to stick to the knife and produce chip accumulation, the processing surface quality is good, and the surface roughness can reach Rz-0 when processing non-ferrous metals. 05μm, single crystal diamond can also effectively process ferrous metal materials, such as copper, aluminum and other non-ferrous metals and their alloys, ceramics, un-sintered MCD chamfered milling tool cemented carbide, various fiber and particle reinforced composite materials, plastics, rubber, graphite, glass and various wear-resistant wood (and when solid wood and plywood, MDF and other composite materials).



| L | L1 | α | D |
|----|----|------|---|
| 40 | 3 | 70° | 6 |
| 40 | 3 | 90° | 6 |
| 40 | 3 | 110° | 6 |
| 40 | 3 | 120° | 6 |
| 40 | 3 | 150° | 6 |



MCD batch tool / acrylic polishing cutter



| L | H | h | W | α |
|----|----|---|---|------|
| 32 | 12 | 6 | 6 | 110° |
| 32 | 12 | 6 | 6 | 120° |
| 32 | 12 | 6 | 6 | 135° |
| 32 | 12 | 6 | 6 | 150° |



SE series MCD insert



AP series MCD inserts



Model of MCD inserts

- DCGT / DCMW
- CCGT / VCGT
- APKT / WNMG
- TPGH / TNMN

Note: can be customized to the figure non-standard