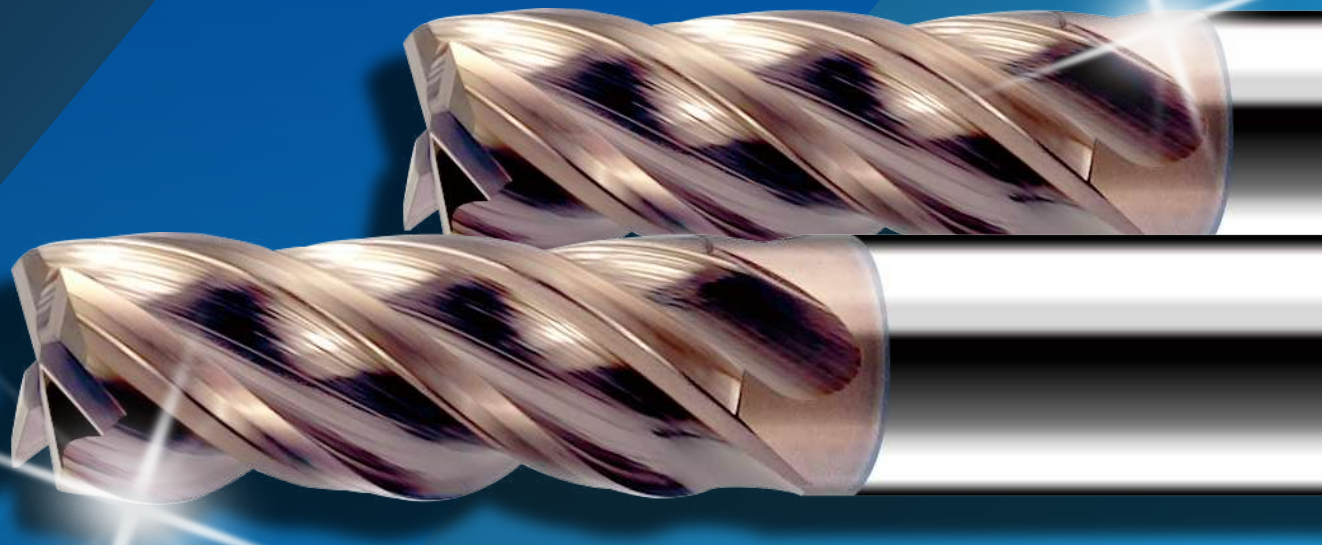
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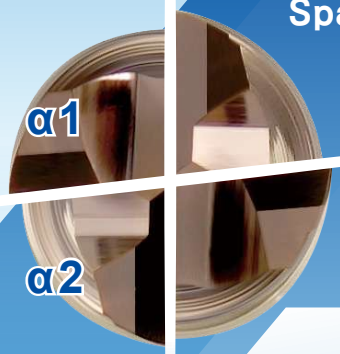
# MEMS

## FOR STAINLESS! ALL-NEW

STAINLESS STEEL END MILLS

For stainless steel and general steel(≦40HRC) machining.

# M520 ULTRA CARBIDE END MILLS For STAINLESS-
# Unequal Flute Spacing Angle




α 1 ≠ α 2 Unequal Flute Spacing Angle




- Chattering is decreased dramatically with unequal flute spacing, increase processing stability.
- Circular flute design for better chip disposal, reduces chip packing, release stress and improving rigidity of the tool.
- The new ALTISIN coating has both hardness and toughness, which is more suitable for processing in harsh environments. The low friction can also reduce the cutting resistance.

**Roughing** | **Semi Finishing** | **Finishing**

## MEMS Carbide End Mills Size

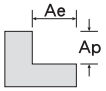
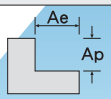
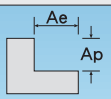
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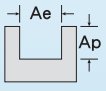
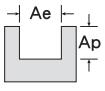
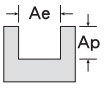
| Diameter | Cutting Length | O.A.L. | Shank Dia. | Flutes | Coated Order No. |
|---|---|---|---|---|---|
| 3.0 | 8 | 50 | 4 | 4 | MEMSM40300S |
| 4.0 | 10 | 50 | 4 | 4 | MEMSM40400S |
| 2.0 | 5 | 50 | 6 | 4 | MEMS40200S |
| 3.0 | 8 | 50 | 6 | 4 | MEMS40300S |
| 4.0 | 10 | 50 | 6 | 4 | MEMS40400S |
| 4.0 | 12 | 50 | 6 | 4 | MEMS40400120CS |
| 5.0 | 13 | 50 | 6 | 4 | MEMS40500S |
| 6.0 | 15 | 50 | 6 | 4 | MEMS40600S |
| 6.0 | 18 | 50 | 6 | 4 | MEMS40600180CS |
| 8.0 | 20 | 60 | 8 | 4 | MEMS40800S |
| 8.0 | 24 | 60 | 8 | 4 | MEMS40800240CS |
| 10.0 | 25 | 75 | 10 | 4 | MEMS41000S |
| 10.0 | 30 | 75 | 10 | 4 | MEMS41000300CS |
| 12.0 | 30 | 75 | 12 | 4 | MEMS41200S |
| 12.0 | 36 | 75 | 12 | 4 | MEMS41200360CS |
| 14.0 | 30 | 75 | 14 | 4 | MEMS4140014S |
| 15.0 | 35 | 100 | 16 | 4 | MEMS41500S |
| 16.0 | 35 | 100 | 16 | 4 | MEMS41600S |
| 20.0 | 45 | 100 | 20 | 4 | MEMS42000S |



MEMS

## Cutting Condition Table

| Material | Carbon Steels | | Alloy Steels | | Alloy Steels | | Stainless Steels | |
|---|---|---|---|---|---|---|---|---|
| Material Code | S35C,S45C,S50C | | SCM,SKT,SKD | | SCM,SKT,SKD | | SUS304 | |
| Hardness | HRC<20 | | HRC20~30 | | HRC30~45 | | — | |
| Vc | 110m/min | | 90m/min | | 75m/min | | 70m/min | |
| Diameter | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) |
| 3mm | 11,670 | 1,100 | 9,550 | 840 | 7,960 | 620 | 7,430 | 610 |
| 4mm | 8,750 | 1,200 | 7,160 | 980 | 5,970 | 680 | 5,570 | 710 |
| 5mm | 7,000 | 1,300 | 5,730 | 1,050 | 4,770 | 720 | 4,450 | 770 |
| 6mm | 5,830 | 1,600 | 4,770 | 1,200 | 3,980 | 890 | 3,710 | 830 |
| 8mm | 4,370 | 1,550 | 3,580 | 1,100 | 2,980 | 810 | 2,780 | 810 |
| 10mm | 3,500 | 1,450 | 2,860 | 1,050 | 2,380 | 720 | 2,220 | 710 |
| 12mm | 2,910 | 1,400 | 2,380 | 1,000 | 1,990 | 720 | 1,850 | 675 |
| 16mm | 2,180 | 1,200 | 1,790 | 940 | 1,490 | 630 | 1,390 | 550 |
| 20mm | 1,750 | 980 | 1,430 | 750 | 1,190 | 590 | 1,110 | 510 |
| 25mm | 1,400 | 880 | 1,140 | 670 | 955 | 530 | 890 | 480 |
| Cutting Amount (mm) | Ap≦1.5D<br>Ae≦0.2D |  | | | Ap≦1.5D<br>Ae≦0.1D |  | Ap≦1.5D<br>Ae≦0.1D |  |

| Material | Carbon Steels | | Alloy Steels | | Alloy Steels | | Stainless Steels | |
|---|---|---|---|---|---|---|---|---|
| Material Code | S35C,S45C,S50C | | SCM,SKT,SKD | | SCM,SKT,SKD | | SUS304 | |
| Hardness | HRC<20 | | HRC20~30 | | HRC30~45 | | — | |
| Vc | 95m/min | | 75m/min | | 70m/min | | 60m/min | |
| Diameter | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) | S (rpm) | F (mm/min) |
| 3mm | 10,080 | 730 | 7,960 | 680 | 7,430 | 520 | 6,360 | 460 |
| 4mm | 7,560 | 730 | 5,970 | 770 | 5,570 | 520 | 4,770 | 510 |
| 5mm | 6,050 | 730 | 4,770 | 750 | 4,450 | 540 | 3,820 | 540 |
| 6mm | 5,040 | 740 | 3,980 | 630 | 3,710 | 570 | 3,180 | 570 |
| 8mm | 3,780 | 600 | 2,980 | 550 | 2,780 | 550 | 2,380 | 520 |
| 10mm | 3,020 | 580 | 2,380 | 540 | 2,220 | 480 | 1,910 | 470 |
| 12mm | 2,520 | 560 | 1,990 | 470 | 1,850 | 460 | 1,590 | 440 |
| 16mm | 1,890 | 550 | 1,490 | 430 | 1,390 | 370 | 1,190 | 370 |
| 20mm | 1,510 | 470 | 1,190 | 380 | 1,110 | 350 | 955 | 330 |
| 25mm | 1,210 | 450 | 950 | 360 | 890 | 310 | 760 | 280 |
| Cutting Amount (mm) | Ap≦1D |  | | | Ap≦0.5D |  | Ap≦0.5D |  |

**CHIN MING PRECISION TOOLS CO., LTD.**
Head Office：TEL/ +886-6-7940726 FAX/ +886-6-7941217
Taipei Branch：TEL/ +886-2-29043033 FAX/ +886-2-29030963
JingLi(Xiamen)Cutting Hardware：TEL/ +002-86-5926-155335~7
Overseas Sales E-Mail：telesales@cmtools.com.tw

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