

M520 極細鎢鋼圓鼻銑刀- 強重型- 4刃

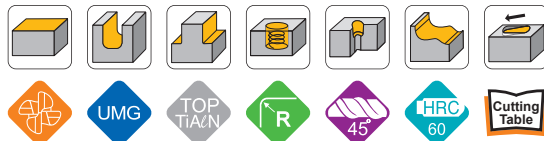
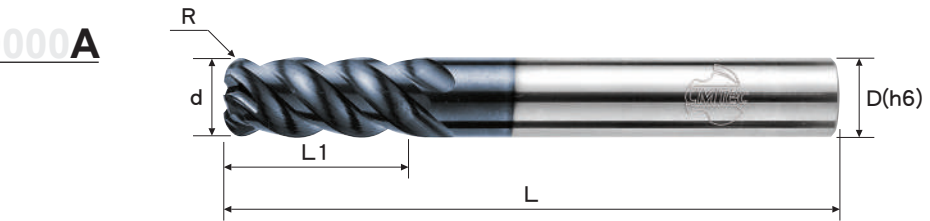
M520 ULTRA CARBIDE END MILLS- Corner Radius- For Heavy Duty Cutting- 4F

MEHHCR4000000A

刃徑 d	公差 Tolerance
$\phi < 3$	0 ~ -0.02
$3 \leq \phi \leq 10$	-0.01 ~ -0.03
$10 < \phi$	-0.01 ~ -0.04

半徑 R	公差 Tolerance
R	±0.02

超精銑 Bright Finishing	—
精銑 Finishing	◎
中銑 Semi Finishing	◎
粗銑 Roughing	◎



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刃徑 d	R角 R	刃長 L1	全長 L	柄徑 D	刃數 F	鍍膜訂購編號 Coated Order No.
3.0	0.2R	8	50	6	4	MEHHCR4030002A
3.0	0.5R	8	50	6	4	MEHHCR4030005A
4.0	0.2R	11	50	6	4	MEHHCR4040002A
4.0	0.5R	11	50	6	4	MEHHCR4040005A
4.0	1.0R	11	50	6	4	MEHHCR4040010A
5.0	0.2R	13	50	6	4	MEHHCR4050002A
5.0	0.5R	13	50	6	4	MEHHCR4050005A
5.0	1.0R	13	50	6	4	MEHHCR4050010A
6.0	0.3R	13	50	6	4	MEHHCR4060003A
6.0	0.5R	13	50	6	4	MEHHCR4060005A
6.0	1.0R	13	50	6	4	MEHHCR4060010A
8.0	0.3R	19	60	8	4	MEHHCR4080003A
8.0	0.5R	19	60	8	4	MEHHCR4080005A
8.0	1.0R	19	60	8	4	MEHHCR4080010A
8.0	1.5R	19	60	8	4	MEHHCR4080015A
8.0	2.0R	19	60	8	4	MEHHCR4080020A
10.0	0.3R	22	75	10	4	MEHHCR4100003A
10.0	0.5R	22	75	10	4	MEHHCR4100005A
10.0	1.0R	22	75	10	4	MEHHCR4100010A
10.0	1.5R	22	75	10	4	MEHHCR4100015A
10.0	2.0R	22	75	10	4	MEHHCR4100020A
10.0	3.0R	22	75	10	4	MEHHCR4100030A
12.0	0.5R	26	75	12	4	MEHHCR4120005A
12.0	1.0R	26	75	12	4	MEHHCR4120010A
12.0	1.5R	26	75	12	4	MEHHCR4120015A
12.0	2.0R	26	75	12	4	MEHHCR4120020A
12.0	3.0R	26	75	12	4	MEHHCR4120030A
16.0	1.0R	35	100	16	4	MEHHCR4160010A
16.0	1.5R	35	100	16	4	MEHHCR4160015A
16.0	2.0R	35	100	16	4	MEHHCR4160020A
16.0	3.0R	35	100	16	4	MEHHCR4160030A
20.0	1.0R	40	100	20	4	MEHHCR4200010A
20.0	1.5R	40	100	20	4	MEHHCR4200015A
20.0	2.0R	40	100	20	4	MEHHCR4200020A
20.0	3.0R	40	100	20	4	MEHHCR4200030A

→ 切削條件表 Cutting Condition P.550 → 技術資料 Technical Data P.622

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M520 Ultra Carbide End Mills

M520 極細鎢鋼銑刀系列

Table 31

M520 極細鎢鋼強重型銑刀- 3 / 4刃(鍍膜) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels		合金鋼 Alloy Steels		合金鋼 Alloy Steels		調質鋼 Hardened Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels		鑄鐵 Cast Iron	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD		SKT,SKD		SUS304		FC,FCD	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55		HRC55~63		—		HRC<30	
切削速度 Vc	94m/min		75m/min		63m/min		37m/min		28m/min		75m/min		110m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	10,500	675	8,000	475	6,500	225	4,200	250	3,150	200	8,000	475	12,000	1,250
4mm	7,500	675	6,000	475	5,000	225	3,000	275	2,250	200	6,000	475	9,000	1,500
5mm	6,250	675	4,000	475	4,000	225	2,500	275	1,875	200	4,750	475	7,000	1,500
6mm	5,000	675	3,250	475	3,250	225	2,000	275	1,500	200	4,000	475	6,000	1,500
8mm	3,750	675	3,000	475	2,500	238	1,500	275	1,125	200	3,000	475	4,500	1,500
10mm	3,000	700	2,375	500	2,000	238	1,200	275	900	213	2,375	500	3,500	1,625
12mm	2,500	700	2,000	500	1,650	238	1,000	275	750	213	2,000	500	3,000	1,750
14mm	2,250	700	1,700	500	1,425	238	900	275	675	213	1,700	500	2,500	1,750
16mm	1,950	750	1,500	525	1,250	250	800	300	575	225	1,500	525	2,250	1,875
18mm	1,750	750	1,325	525	1,100	250	700	300	525	225	1,325	525	2,000	1,875
20mm	1,500	750	1,200	525	1,000	250	600	300	450	225	1,200	525	1,750	2,000
切削量 Cutting Amount (mm)	Ap=1.5D Ap≤0.1D				Ap=1D Ae≤0.05D				Ap=1.5D Ae≤0.1D				Ap=1.5D Ae≤0.1D	

Table 32

M520 極細鎢鋼圓鼻銑刀- 2刃(鍍膜) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels		合金鋼 Alloy Steels		合金鋼 Alloy Steels		調質鋼 Hardened Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels		鑄鐵 Cast Iron	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD		SKT,SKD		SUS304		FC,FCD	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55		HRC55~63		—		HRC<30	
切削速度 Vc	95m/min		75m/min		63m/min		38m/min		28m/min		75m/min		110m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
1mm	28,000	170	23,940	140	20,160	90	11,200	70	8,400	50	23,940	140	35,280	380
2mm	15,120	220	12,100	170	10,080	120	6,050	90	4,540	60	12,100	170	17,640	410
3mm	10,580	220	8,060	190	6,550	125	4,200	90	3,120	60	8,060	190	12,100	410
4mm	7,560	230	6,050	190	5,040	140	3,020	90	2,270	70	6,050	190	9,070	410
5mm	6,300	250	4,790	190	4,030	140	2,520	105	1,890	80	4,790	190	7,060	455
6mm	5,040	250	4,030	190	3,280	140	2,020	105	1,510	80	4,030	190	6,050	500
8mm	3,780	250	3,020	220	2,520	150	1,510	105	1,130	80	3,020	220	4,540	500
10mm	3,020	250	2,390	220	2,020	170	1,220	105	910	80	2,390	220	3,530	530
12mm	2,520	250	2,020	220	1,680	170	1,010	105	760	80	2,020	220	3,020	560
14mm	2,520	280	1,900	240	1,600	180	1,010	110	760	80	1,900	240	2,800	620
16mm	2,180	310	1,680	250	1,400	200	880	130	660	90	1,680	250	2,520	670
18mm	2,180	310	1,480	250	1,230	200	880	130	660	90	1,480	250	2,240	670
20mm	1,680	310	1,340	250	1,120	200	670	130	500	90	1,340	250	1,960	670
切削量 Cutting Amount (mm)	Ap=0.5D (D<3, Ae≤0.25D)				Ap=0.1D (D<3, Ae≤0.05D)				Ap=0.5D (D<3, Ae≤0.25D)				Ap=0.5D (D<3, Ae≤0.25D)	

- 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。When the sound is piercing, please lower the spindle speed(S) (10~40%).
- 當機台震動太大時，請調降進給速度(F) (10~40%)。When the machine is vibrating, please decrease the feed rate(F) (10~40%).
- 當主軸負載太大時，請調降進給速度(F) (10~40%)。When the spindle load is high, please decrease the feed rate(F) (10~40%).
- 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統...等而改變。

These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.