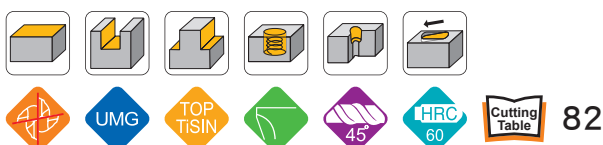


M520 ULTRA CARBIDE END MILLS- Unequal Flute Spacing Angle & High Helix- 4F

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



➡ 切削條件表 P.579
Cutting Condition

➡ 技術資料 P.622
Technical Data

Table 82

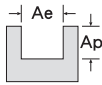
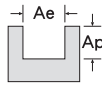
M520 極細鎢鋼不等距高導型銑刀-4刃(鍍膜) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

側銑加工 Side Milling

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	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55	
切削速度 Vc	110m/min		90m/min		75m/min		70m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	11,670	770	9,550	580	7,960	430	7,430	380
4mm	8,750	840	7,160	680	5,970	470	5,570	440
5mm	7,000	910	5,730	730	4,770	500	4,450	460
6mm	5,830	1,120	4,770	840	3,980	620	3,710	480
8mm	4,370	1,080	3,580	770	2,980	570	2,780	470
10mm	3,500	1,010	2,860	730	2,380	500	2,220	440
12mm	2,910	980	2,380	700	1,990	500	1,850	420
16mm	2,180	840	1,790	650	1,490	440	1,390	350
20mm	1,750	680	1,430	520	1,190	410	1,110	320
25mm	1,400	610	1,140	470	955	370	890	270
切削量 Cutting Amount (mm)	$A_p \leq 1.5D$ $A_e \leq 0.2D$ 				$A_p \leq 1.5D$ $A_e \leq 0.05D$ 			

溝銑加工 Slot Milling

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	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SKT,SKD	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		HRC45~55	
切削速度 Vc	95m/min		75m/min		70m/min		60m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	10,080	510	7,960	480	7,430	360	6,360	310
4mm	7,560	510	5,970	540	5,570	360	4,770	340
5mm	6,050	510	4,770	530	4,450	380	3,820	370
6mm	5,040	520	3,980	440	3,710	400	3,180	380
8mm	3,780	420	2,980	390	2,780	390	2,380	360
10mm	3,020	410	2,380	380	2,220	340	1,910	320
12mm	2,520	390	1,990	330	1,850	320	1,590	300
16mm	1,890	380	1,490	300	1,390	260	1,190	250
20mm	1,510	330	1,190	270	1,110	250	955	230
25mm	1,210	320	950	250	890	220	760	160
切削量 Cutting Amount (mm)	$A_p \leq 1D$ 				$A_p \leq 0.2D$ 			

※ 切削公式 Cutting Formula : $S(\text{主軸轉速}) = Vc(\text{切削速度}) \times 1000 / D(\text{外徑}) / \pi (3.14)$ $F(\text{進給速度}) = fz(\text{每刃進給量}) \times Z(\text{刃數}) \times S(\text{主軸轉速})$

- 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.