

M520 ULTRA CARBIDE END MILLS FOR ALLOY STEEL- Ball Nose- High Performance- 4F

Technical drawing of a double-flute drill bit. The drawing shows the bit from the side with the following dimensions labeled:

- R : Radius of the tip.
- $L1$: Length of the cutting edge.
- $L2$: Length of the flute.
- L : Total length of the bit.
- $D(h6)$: Diameter of the bit.

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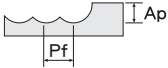
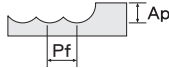
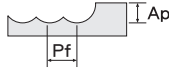
→ 技術資料
Technical Data

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M520 極細鎢鋼高效型球刀- 4刃(鍍膜) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

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		不銹鋼 Stainless Steels		鈦合金 Titanium Alloys		鎳基合金 Nickel-Based Alloys	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SCM,SKT,SKD		SUS304		Ti-6Al-4V		Inconel 718	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		—		HRC<30		HRC<30	
半徑 R	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)
2.5R	5,565	910	4,305	735	3,675	508	3,465	543	3,360	469	1,715	172
3.0R	4,725	1,120	3,675	840	3,115	623	2,940	585	2,835	487	1,470	175
4.0R	3,535	1,085	2,765	770	2,345	571	2,205	567	2,135	473	1,120	158
5.0R	2,870	1,015	2,240	735	1,890	508	1,785	501	1,715	445	875	151
6.0R	2,380	980	1,855	700	1,575	504	1,470	473	1,435	424	735	147
8.0R	1,785	840	1,400	658	1,190	445	1,120	389	1,085	354	536	147
10.0R	1,435	690	1,120	529	945	413	875	361	875	322	445	140
切削量 Cutting Amount (mm)	Ap=1D Pf=0.5D 						Ap=1D Pf=0.4D 		Ap=1D Pf=0.2D 			

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

1. 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%).
2. 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%).
3. 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%).
4. 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.