

S220 MICRO GRAIN CARBIDE END MILLS FOR ALUMINUM- Extra High Helix- 3F

Technical drawing of a double-flute drill bit. The drawing shows the bit from the side, highlighting its double-flute design. Key dimensions are labeled: d for the cutting edge diameter, L_1 for the length of the cutting edge, L for the total length, and $D(h6)$ for the shank diameter with a tolerance of $h6$. A logo is visible on the shank.

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



➡ 切削條件表 P.540
Cutting Condition

➡ 技術資料 P.622
Technical Data

Table 11

S220 鎢鋼鋁用(特)高導型銑刀- 2 / 3刃(白刀) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

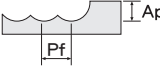
加工材質 Material	鋁合金 Aluminum Alloys		銅合金 Copper Alloys	
工件料號 Material Code	Al 5052 / 6061 / 7075		C1100	
硬度 Hardness	—		—	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
3mm	18,000	810	7,200	290
4mm	13,500	950	5,400	320
5mm	10,800	990	4,320	340
6mm	9,000	1,080	3,600	360
8mm	7,200	1,170	2,700	410
10mm	5,760	1,260	2,030	430
12mm	4,680	1,350	1,710	460
16mm	3,510	1,350	1,260	460
切削量 Cutting Amount (mm)	Ap=1.5D Ae=0.1D 			

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

Table 12

S220 鎢鋼鋁用球刀- 2刃(白刀) 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

加工材質 Material	鋁合金 Aluminum Alloys		銅合金 Copper Alloys	
工件料號 Material Code	Al 5052 / 6061 / 7075		—	
切削速度 Vc	100~200m/min		70~110m/min	
半徑 R	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
1.0R	21,420	1,485	17,190	630
2.0R	10,800	1,485	8,550	810
3.0R	7,200	1,485	5,760	810
4.0R	5,400	1,485	4,320	810
5.0R	7,320	1,485	3,420	810
6.0R	3,780	1,485	2,880	810
8.0R	2,980	1,170	1,790	500
切削量 Cutting Amount (mm)	Ap=0.02D Pf=0.05D 			

※ 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.