

## E124X 超微粒鎢鋼塗層精加工立銑刀

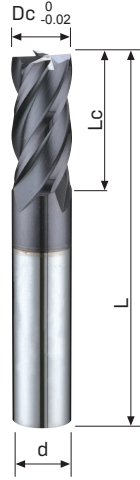
## Finishing End Mills

**MG**  
Carbide

**AlTiN**  
X-NaNo



## Type of Operation



Code No. E124X-Dc

Dc 0 -0.02	Lc mm	L mm	d h6	AlTiN E124X
1	3	50	4	●
1.2	4	50	4	●
1.4	4	50	4	●
1.5	5	50	4	●
1.6	5	50	4	●
1.8	5	50	4	●
2	6	50	4	●
2.2	6	50	4	●
2.4	8	50	4	●
2.5	8	50	4	●
2.6	8	50	4	●
2.8	8	50	4	●
3A	8	50	4	●
4A	11	50	4	●
3	8	50	6	●
3.5	10	50	6	●
4	11	50	6	●
4.5	11	50	6	●
5	13	50	6	●
5.5	13	50	6	●
6	16	50	6	●
6.5	16	60	8	●
7	20	60	8	●
7.5	20	60	8	●
8	20	60	8	●
8.5	20	72	10	●
9	22	72	10	●
9.5	22	72	10	●
10	22	72	10	●
10.5	22	75	12	●
11	26	75	12	●
12	26	75	12	●
13	26	80	12	●
14	32	90	16	●
15	32	90	16	●
16	38	100	16	●
17	38	100	20	●
18	38	100	20	●
19	38	100	20	●
20	38	100	20	●

## Work Material

P	H	M	K	N	S
●	●	○	●	○	○

**P** 鋼鐵  
Steel

**H** 硬化鋼 <38HRC  
Hardened Steel

**H** 硬化鋼 <48HRC  
Hardened Steel

**M** 不銹鋼  
Stainless Steel

**K** 鑄鐵  
Cast Iron

**N** 銅  
Copper

## Feature of product:

4刃精加工立銑刀

具有良好的切削表面，採用奈米多層膜塗層具有優異的耐磨性。

可廣泛用於一般傳統加工、精加工。

Code No. E124X-Dc

Dc 0 -0.02	Lc mm	L mm	d h6	AlTiN E124X	
1/8	3.175	8	50	6	●
3/16	4.760	12	50	6	●
1/4	6.350	18	60	8	●
5/16	7.940	20	60	8	●
3/8	9.525	22	72	10	●
1/2	12.700	26	75	12	●
5/8	15.880	38	100	16	●
3/4	19.050	38	100	20	●

## E124X 切削條件參考表

## Recommended Milling Conditions

## Side Milling 側面切削

被削材 Work Material		GR.1 碳鋼 Carbon Steel		GR.2 低合金鋼 Low-alloyed Steel (~24HRC)		GR.3 高合金鋼 Hi-alloyed Steel (~30HRC)		GR.4 硬化鋼 Hardened Steel (30~38HRC)		GR.5 硬化鋼 Hardened Steel (38~48HRC)		GR.8 不銹鋼 Stainless Steel		GR.9 鑄鐵 Cast Iron		GR.11 銅 Copper	
切削速度 Vc m/min		85		85		75		60		50		60		85		150	
型號 Code No.	刃徑 Dc	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)	RPM 迴轉速度 (min-1)	Feed 進給速度 (mm/min)
E124X-1	1	20,000	240	20,000	240	15,000	210	11,000	85	7,100	40	11,000	85	20,000	240	47,600	420
E124X-1.5	1.5	13,500	250	13,500	250	12,500	215	8,000	90	6,900	80	8,000	90	13,500	250	31,800	620
E124X-2	2	13,000	300	13,000	300	11,000	280	7,000	110	6,350	100	7,000	110	13,000	300	24,000	590
E124X-2.5	2.5	11,000	370	11,000	370	9,500	245	6,300	110	5,500	105	6,300	110	11,000	370	19,200	960
E124X-3	3	9,000	480	9,000	480	7,400	350	5,300	120	4,800	110	5,300	120	9,000	480	15,800	860
E124X-3.5	3.5	7,800	490	7,800	490	6,500	350	4,800	130	4,300	110	4,800	130	7,800	490	13,600	860
E124X-4	4	6,650	500	6,650	500	5,500	350	4,250	135	3,700	115	4,250	135	6,650	500	12,000	900
E124X-4.5	4.5	6,000	550	6,000	550	5,000	385	3,870	130	3,450	120	3,870	130	5,950		10,700	970
E124X-5	5	5,300	600	5,300	600	4,500	420	3,500	130	3,200	120	3,500	130	5,300	600	9,400	1,040
E124X-5.5	5.5	4,900	600	4,900	600	4,100	420	3,250	135	2,920	125	3,250	135	4,900		8,600	1,040
E124X-6	6	4,500	600	4,500	600	3,700	425	3,000	140	2,650	125	3,000	140	4,500	600	7,800	1,040
E124X-7	7	3,900	575	3,900	575	2,950	410	2,420	130	2,250	125	2,420	130	3,900		6,800	1,025
E124X-8	8	3,300	550	3,300	550	2,600	410	1,850	120	1,900	125	1,850	120	3,300	550	5,800	1,010
E124X-9	9	2,950	535	2,950	535	2,350	405	1,650	125	1,700	130	1,650	125	2,950		5,300	1,010
E124X-10	10	2,600	520	2,600	520	2,100	400	1,500	125	1,500	130	1,500	125	2,600	520	4,800	1,010
E124X-11	11	2,400	520	2,400	520	1,950	405	1,350	125	1,350	120	1,350	120	2,400		4,400	1,010
E124X-12	12	2,200	520	2,200	520	1,800	405	1,200	120	1,200	120	1,200	120	2,200	520	4,000	1,010
E124X-13	13	2,050	535	2,050	535	1,700	410	1,200	130	1,150	120	1,200	130	2,050		3,700	1,000
E124X-14	14	1,900	550	1,900	550	1,600	410	1,200	140	1,100	120	1,200	140	1,900	550	3,400	990
E124X-15	15	1,800	540	1,800	540	1,500	410	1,150	130	1,050	100	1,050	135	1,800		3,200	975
E124X-16	16	1,700	530	1,700	530	1,400	410	1,100	130	1,000	100	1,100	130	1,700	530	3,000	960
E124X-17	17	1,600	525	1,600	525	1,300	405	1,020	100	940	95	1,020	115	1,600		2,800	950
E124X-18	18	1,500	520	1,500	520	1,200	405	950	100	880	95	950	100	1,500	520	2,600	940
E124X-19	19	1,400	510	1,400	510	1,150	385	925	90	840	90	925	95	1,400		2,500	910
E124X-20	20	1,300	500	1,300	500	1,100	370	900	90	800	90	900	90	1,300	500	2,400	890
切入深度 $a_p$ (mm) 		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D		ap:1.5D	
		ae:<3 0.05D ≥3 0.1D		ae:<3 0.05D ≥3 0.1D		ae:<3 0.05D ≥3 0.1D		ae:<3 0.05D ≥3 0.1D		ae:<3 0.01D ≥3 0.02D		ae:<3 0.05D ≥3 0.1D		ae:<3 0.05D ≥3 0.1D		ae:<3 0.05D ≥3 0.1D	

1. Please work with good rigidity / high precision facilities and collet chuck.
  2. Please choose proper cutting fluid.
  3. The cutting data is reference value only. Please adjust it according to your real working conditions.
  4. If RPM is lower the reference value, the Feed rate (fz) and RPM should be reduced by the same proportion.
  5. If vibration occurs during cutting, please reduce cutting parameter.
1. 請使用剛性好、精度高的設備和夾具。
  2. 請選擇適用於工件材料的切削液。
  3. 此切削條件表中的數值為切削條件的基準值，實際加工時，請考慮加工形狀、目的、使用機台等因素，對切削條件進行調整。
  4. 如果機台轉速低於表中所列數值，則進給速度應與轉速按同一比例降低。
  5. 切削加工時如果發生振顫，請降低切削條件。