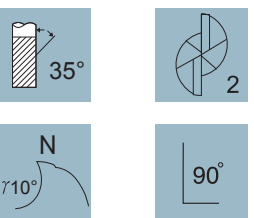


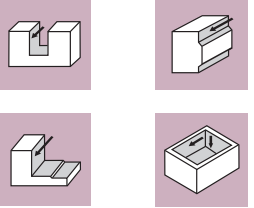
E122X 超微粒鎢鋼塗層通用立銑刀

Universal End Mills

MG Carbide **AlTiN X-NaNo**



Type of Operation



Work Material

P	H	M	K	N	S
●	●	○	●	○	○

P 鋼鐵
Steel

H 硬化鋼 <38HRC
Hardened Steel

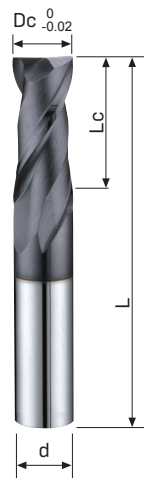
H 硬化鋼 <48HRC
Hardened Steel

M 不銹鋼
Stainless Steel

K 鑄鐵
Cast Iron

N 銅
Copper

Feature of product:
2刃一般通用立銑刀
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。
尺寸相當齊全，可廣泛使用在一般傳統加工、一般通用加工，且可用於鑽銑工法。




						Code No. E122X-Dc								
Dc	Lc	L	d	AITiN	Dc	Lc	L	d	AITiN	Dc	Lc	L	d	AITiN
⁰ / _{-0.02}	mm	mm	h6	E122X	⁰ / _{-0.02}	mm	mm	h6	E122X	⁰ / _{-0.02}	mm	mm	h6	E122X
0.1	0.3	50	4	●	6.9	20	60	8	●	13.9	26	80	12	●
0.2	0.5	50	4	●	7	20	60	8	●	14	32	90	16	●
0.3	0.8	50	4	●	7.1	20	60	8	●	14.1	32	90	16	●
0.4	1	50	4	●	7.2	20	60	8	●	14.2	32	90	16	●
0.5	1.2	50	4	●	7.3	20	60	8	●	14.3	32	90	16	●
0.6	1.5	50	4	●	7.4	20	60	8	●	14.4	32	90	16	●
0.7	1.8	50	4	●	7.5	20	60	8	●	14.5	32	90	16	●
0.8	2	50	4	●	7.6	20	60	8	●	14.6	32	90	16	●
0.9	2.5	50	4	●	7.7	20	60	8	●	14.7	32	90	16	●
1	3	50	4	●	7.8	20	60	8	●	14.8	32	90	16	●
1.1	3	50	4	●	7.9	20	60	8	●	14.9	32	90	16	●
1.2	4	50	4	●	8	20	60	8	●	15	32	90	16	●
1.3	4	50	4	●	8.1	20	72	10	●	15.1	38	100	16	●
1.4	4	50	4	●	8.2	20	72	10	●	15.2	38	100	16	●
1.5	5	50	4	●	8.3	20	72	10	●	15.3	38	100	16	●
1.6	5	50	4	●	8.4	20	72	10	●	15.4	38	100	16	●
1.7	5	50	4	●	8.5	20	72	10	●	15.5	38	100	16	●
1.8	5	50	4	●	8.6	22	72	10	●	15.6	38	100	16	●
1.9	5	50	4	●	8.7	22	72	10	●	15.7	38	100	16	●
2	6	50	4	●	8.8	22	72	10	●	15.8	38	100	16	●
2.1	6	50	4	●	8.9	22	72	10	●	15.9	38	100	16	●
2.2	6	50	4	●	9	22	72	10	●	16	38	100	16	●
2.3	6	50	4	●	9.1	22	72	10	●	16.1	38	100	20	●
2.4	8	50	4	●	9.2	22	72	10	●	16.2	38	100	20	●
2.5	8	50	4	●	9.3	22	72	10	●	16.3	38	100	20	●
2.6	8	50	4	●	9.4	22	72	10	●	16.4	38	100	20	●
2.7	8	50	4	●	9.5	22	72	10	●	16.5	38	100	20	●
2.8	8	50	4	●	9.6	22	72	10	●	16.6	38	100	20	●
2.9	8	50	4	●	9.7	22	72	10	●	16.7	38	100	20	●
3A	8	50	4	●	9.8	22	72	10	●	16.8	38	100	20	●
4A	11	50	4	●	9.9	22	72	10	●	16.9	38	100	20	●
3	8	50	6	●	10	22	72	10	●	17	38	100	20	●
3.1	10	50	6	●	10.1	22	75	12	●	17.1	38	100	20	●
3.2	10	50	6	●	10.2	22	75	12	●	17.2	38	100	20	●
3.3	10	50	6	●	10.3	22	75	12	●	17.3	38	100	20	●
3.4	10	50	6	●	10.4	22	75	12	●	17.4	38	100	20	●
3.5	10	50	6	●	10.5	22	75	12	●	17.5	38	100	20	●
3.6	10	50	6	●	10.6	26	75	12	●	17.6	38	100	20	●
3.7	10	50	6	●	10.7	26	75	12	●	17.7	38	100	20	●
3.8	11	50	6	●	10.8	26	75	12	●	17.8	38	100	20	●
3.9	11	50	6	●	10.9	26	75	12	●	17.9	38	100	20	●
4	11	50	6	●	11	26	75	12	●	18	38	100	20	●
4.1	11	50	6	●	11.1	26	75	12	●	18.1	38	100	20	●
4.2	11	50	6	●	11.2	26	75	12	●	18.2	38	100	20	●
4.3	11	50	6	●	11.3	26	75	12	●	18.3	38	100	20	●
4.4	11	50	6	●	11.4	26	75	12	●	18.4	38	100	20	●
4.5	11	50	6	●	11.5	26	75	12	●	18.5	38	100	20	●
4.6	11	50	6	●	11.6	26	75	12	●	18.6	38	100	20	●
4.7	11	50	6	●	11.7	26	75	12	●	18.7	38	100	20	●
4.8	13	50	6	●	11.8	26	75	12	●	18.8	38	100	20	●
4.9	13	50	6	●	11.9	26	75	12	●	18.9	38	100	20	●
5	13	50	6	●	12	26	75	12	●	19	38	100	20	●
5.1	13	50	6	●	12.1	26	80	12	●	19.1	38	100	20	●
5.2	13	50	6	●	12.2	26	80	12	●	19.2	38	100	20	●
5.3	13	50	6	●	12.3	26	80	12	●	19.3	38	100	20	●
5.4	13	50	6	●	12.4	26	80	12	●	19.4	38	100	20	●
5.5	13	50	6	●	12.5	26	80	12	●	19.5	38	100	20	●
5.6	16	50	6	●	12.6	26	80	12	●	19.6	38	100	20	●
5.7	16	50	6	●	12.7	26	80	12	●	19.7	38	100	20	●
5.8	16	50	6	●	12.8	26	80	12	●	19.8	38	100	20	●
5.9	16	50	6	●	12.9	26	80	12	●	19.9	38	100	20	●
6	16	50	6	●	13	26	80	12	●	20	38	100	20	●
6.1	16	60	8	●	13.1	26	80	12	●	1/8 3.175	8	50	6	●
6.2	16	60	8	●	13.2	26	80	12	●	3/16 4.760	12	50	6	●
6.3	16	60	8	●	13.3	26	80	12	●	1/4 6.350	18	60	8	●
6.4	16	60	8	●	13.4	26	80	12	●	5/16 7.940	20	60	8	●
6.5	16	60	8	●	13.5	26	80	12	●	3/8 9.525	22	72	10	●
6.6	20	60	8	●	13.6	26	80	12	●	1/2 12.700	26	75	12	●
6.7	20	60	8	●	13.7	26	80	12	●	5/8 15.880	38	100	16	●
6.8	20	60	8	●	13.8	26	80	12	●	3/4 19.050	38	100	20	●

E122X 切削條件參考表

Recommended Milling Conditions

Slotting 溝切削

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 ※切削液使用		GR.9 鑄鐵 Cast Iron		GR.11 銅 Copper	
切削速度 Vc m/min		Ø0.1~0.7 20~50 Ø0.8~3.0 55~65 Ø3.1~20 65~80		Ø0.1~0.7 20~50 Ø0.8~3.0 55~65 Ø3.1~20 65~80		Ø0.1~0.7 20~50 Ø0.8~3.0 55~65 Ø3.1~20 65~80		Ø0.1~0.7 20~40 Ø0.8~3.0 40~50 Ø3.1~20 55~60		Ø0.1~0.7 20~35 Ø0.8~3.0 35~45 Ø3.1~20 45~50		Ø0.1~0.7 20~40 Ø0.8~3.0 40~50 Ø3.1~20 55~60		Ø0.1~0.7 20~50 Ø0.8~3.0 55~65 Ø3.1~20 80~100		Ø0.1~0.7 30~95 Ø0.8~20 125~150	
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)	
		E122X-0.1	0.1	35,000	60	35,000	60	35,000	60	35,000	50	35,000	20	35,000	50	35,000	60
E122X-0.2	0.2	32,000	85	32,000	85	32,000	80	32,000	75	32,000	30	32,000	75	32,000	85	50,000	140
E122X-0.3	0.3	32,000	100	32,000	100	32,000	90	32,000	80	32,000	55	32,000	80	32,000	100	50,000	170
E122X-0.4	0.4	32,000	110	32,000	110	32,000	100	32,000	90	27,500	60	32,000	90	32,000	110	50,000	190
E122X-0.5	0.5	31,000	115	31,000	115	31,000	150	25,000	90	22,000	60	25,000	90	31,000	115	50,000	200
E122X-0.6	0.6	27,000	118	27,000	118	27,000	105	19,500	90	17,000	60	19,500	90	27,000	118	50,000	230
E122X-0.8	0.8	21,500	120	21,500	120	21,500	108	15,500	90	13,500	60	15,500	90	21,500	120	50,000	290
E122X-1	1	17,500	120	17,500	120	17,500	108	12,500	90	11,000	60	12,500	90	17,500	120	47,500	300
E122X-1.2	1.2	15,000	118	15,000	118	15,000	106	10,500	90	9,300	60	10,500	90	15,000	118	40,500	300
E122X-1.5	1.5	12,500	122	12,500	122	12,500	110	8,900	90	7,900	60	8,900	90	12,500	122	32,000	300
E122X-1.8	1.8	10,500	125	10,500	125	10,500	115	7,500	90	6,800	60	7,500	90	10,500	125	28,000	300
E122X-2	2	9,700	130	9,700	130	9,700	117	7,000	90	6,300	70	7,000	90	9,700	130	24,000	300
E122X-2.5	2.5	8,200	155	8,200	155	8,200	140	6,100	90	5,300	70	6,100	90	8,200	155	20,000	350
E122X-3	3	6,900	170	6,900	170	6,900	153	5,300	100	4,400	70	5,300	100	8,493	200	16,000	400
E122X-3.5	3.5	6,000	190	6,000	190	6,000	190	4,700	100	3,860	70	4,700	100	7,280	210	13,650	415
E122X-4	4	5,400	210	5,400	210	5,400	190	4,200	120	3,500	90	4,200	120	6,370	215	12,000	430
E122X-4.5	4.5	4,850	240	4,850	240	4,850	240	3,800	120	3,200	90	3,800	120	5,660	220	10,600	465
E122X-5	5	4,500	265	4,500	265	4,500	240	3,500	130	3,000	95	3,500	130	5,096	225	9,500	500
E122X-5.5	5.5	4,200	268	4,200	268	4,200	268	3,200	130	2,720	95	3,200	130	4,630	225	8,700	510
E122X-6	6	4,000	270	4,000	270	4,000	243	2,900	130	2,500	100	2,900	130	4,247	230	7,900	520
E122X-7	7	3,500	265	3,500	265	3,500	265	2,550	120	2,200	100	2,550	120	3,640	235	6,900	520
E122X-8	8	3,000	265	3,000	265	3,000	265	2,200	120	1,900	100	2,200	120	3,185	235	5,900	520
E122X-9	9	2,700	260	2,700	260	2,700	260	1,950	120	1,650	95	1,950	120	2,830	215	5,300	500
E122X-10	10	2,400	255	2,400	255	2,400	255	1,700	120	1,400	95	1,700	120	2,548	215	4,700	500
E122X-11	11	2,200	250	2,200	250	2,200	250	1,550	120	1,300	95	1,550	120	2,310	215	4,350	500
E122X-12	12	2,000	246	2,000	246	2,000	246	1,400	120	1,200	95	1,400	120	2,123	215	4,000	500
E122X-13	13	1,850	240	1,850	240	1,850	240	1,300	90	1,100	80	1,300	90	1,960	210	3,750	400
E122X-14	14	1,700	240	1,700	240	1,700	240	1,200	90	1,000	80	1,200	90	1,820	210	3,500	400
E122X-15	15	1,600	220	1,600	220	1,600	220	1,050	90	900	80	1,050	90	1,700	210	3,250	400
E122X-16	16	1,500	200	1,500	200	1,500	200	1,100	90	800	80	1,100	90	1,593	210	3,000	400
E122X-17	17	1,400	190	1,400	190	1,400	190	1,000	90	750	70	1,000	90	1,500	205	2,850	350
E122X-18	18	1,300	180	1,300	180	1,300	180	900	90	700	70	900	90	1,416	205	2,700	350
E122X-19	19	1,100	165	1,100	165	1,100	165	850	90	650	60	850	90	1,340	205	2,550	300
E122X-20	20	1,200	155	1,200	155	1,200	155	800	90	600	60	800	90	1,274	205	2,400	300
切入深度 (mm)		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.01D <3 0.02D ≥3 0.05D		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.1D <3 0.3D ≥3 0.5D		ap:<1 0.1D <3 0.3D ≥3 0.5D	

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。