

E140HX 超微粒鎢鋼塗層多用途立銑刀

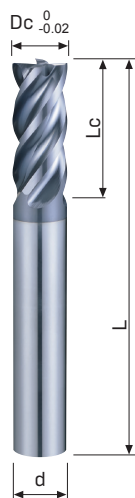
Multipurpose End Mills

MG
Carbide

AlTiCrN
HX



Type of Operation



Code No. E140HX-Dc

Dc	Lc	L	d	AlTiCrN	Dc	Lc	L	d	AlTiCrN
$\begin{matrix} 0 \\ -0.02 \end{matrix}$	mm	mm	h6	E140HX	$\begin{matrix} 0 \\ -0.02 \end{matrix}$	mm	mm	h6	E140HX
1	3	50	4	●	7.2	20	60	8	●
1.1	3	50	4	●	7.3	20	60	8	●
1.2	4	50	4	●	7.4	20	60	8	●
1.3	4	50	4	●	7.5	20	60	8	●
1.4	4	50	4	●	7.6	20	60	8	●
1.5	5	50	4	●	7.7	20	60	8	●
1.6	5	50	4	●	7.8	20	60	8	●
1.7	5	50	4	●	7.9	20	60	8	●
1.8	5	50	4	●	8	20	60	8	●
1.9	5	50	4	●	8.1	20	72	10	●
2	6	50	4	●	8.2	20	72	10	●
2.1	6	50	4	●	8.3	20	72	10	●
2.2	6	50	4	●	8.4	20	72	10	●
2.3	6	50	4	●	8.5	20	72	10	●
2.4	8	50	4	●	8.6	22	72	10	●
2.5	8	50	4	●	8.7	22	72	10	●
2.6	8	50	4	●	8.8	22	72	10	●
2.7	8	50	4	●	8.9	22	72	10	●
2.8	8	50	4	●	9	22	72	10	●
2.9	8	50	4	●	9.1	22	72	10	●
3A	8	50	4	●	9.2	22	72	10	●
4A	11	50	4	●	9.3	22	72	10	●
3	8	50	6	●	9.4	22	72	10	●
3.1	10	50	6	●	9.5	22	72	10	●
3.2	10	50	6	●	9.6	22	72	10	●
3.3	10	50	6	●	9.7	22	72	10	●
3.4	10	50	6	●	9.8	22	72	10	●
3.5	10	50	6	●	9.9	22	72	10	●
3.6	10	50	6	●	10	22	72	10	●
3.7	10	50	6	●	10-25	25	72	10	●
3.8	11	50	6	●	10.1	22	75	12	●
3.9	11	50	6	●	10.2	22	75	12	●
4	11	50	6	●	10.3	22	75	12	●
4.1	11	50	6	●	10.4	22	75	12	●
4.2	11	50	6	●	10.5	22	75	12	●
4.3	11	50	6	●	10.6	26	75	12	●
4.4	11	50	6	●	10.7	26	75	12	●
4.5	11	50	6	●	10.8	26	75	12	●
4.6	11	50	6	●	10.9	26	75	12	●
4.7	11	50	6	●	11	26	75	12	●
4.8	13	50	6	●	11.1	26	75	12	●
4.9	13	50	6	●	11.2	26	75	12	●
5	13	50	6	●	11.3	26	75	12	●
5.1	13	50	6	●	11.4	26	75	12	●
5.2	13	50	6	●	11.5	26	75	12	●
5.3	13	50	6	●	11.6	26	75	12	●
5.4	13	50	6	●	11.7	26	75	12	●
5.5	13	50	6	●	11.8	26	75	12	●
5.6	16	50	6	●	11.9	26	75	12	●
5.7	16	50	6	●	12	26	75	12	●
5.8	16	50	6	●	12-30	30	75	12	●
5.9	16	50	6	●	13	26	80	12	●
6	16	50	6	●	14	32	90	16	●
6.1	16	60	8	●	15	38	100	16	●
6.2	16	60	8	●	16	38	100	16	●
6.3	16	60	8	●	17	38	100	20	●
6.4	16	60	8	●	18	38	100	20	●
6.5	16	60	8	●	19	38	100	20	●
6.6	20	60	8	●	20	38	100	20	●
6.7	20	60	8	●	25	45	120	25	●
6.8	20	60	8	●					
6.9	20	60	8	●					
7	20	60	8	●					
7.1	20	60	8	●					

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 鋁
Aluminium

N 銅
Copper

S 鈦合金
Titanium

S 鎳
Nickel

S 高溫合金
High Temp Alloys

Feature of product:

4刃多用途立銑刀

採不等螺旋、不等分劃設計，有效抑制振動。

大排屑溝使其排屑順暢，可應對各式材料。

搭配AlTiCrN奈米多層膜塗層，有效提升刀具壽命。

適用於多種類材料切削加工。

E140HX 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.15 鈦合金 Titanium	
切削速度 Vc m/min		120		120		80		65		60		65		120		30	
型號 Code No.	刃徑 Dc	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed
		迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)
E140HX-1	1	31,800	240	31,800	240	25,000	210	19,750	180	19,000	85	19,750	180	31,800	240	7,100	50
E140HX-1.5	1.5	21,200	245	21,200	245	16,500	210	13,000	180	12,700	90	13,000	180	21,200	245	5,100	100
E140HX-2	2	15,900	245	15,900	245	12,420	210	9,850	180	9,550	90	9,850	180	15,900	245	4,000	120
E140HX-2.5	2.5	12,700	370	12,700	370	9,930	300	7,900	275	7,600	90	7,900	275	12,700	370	3,200	150
E140HX-3	3	10,600	683	10,600	683	8,280	530	6,550	389	6,400	105	6,550	389	10,600	683	3,200	180
E140HX-4	4	6,350	735	6,350	735	4,950	590	3,950	413	3,800	120	3,950	413	6,350	735	2,400	180
E140HX-5	5	4,550	875	4,550	875	3,550	625	2,800	448	2,730	125	2,800	448	4,550	875	2,000	190
E140HX-6	6	3,540	875	3,540	875	2,760	600	2,200	413	2,100	125	2,200	413	3,540	875	1,600	190
E140HX-7	7	3,360	820	3,360	820	2,620	600	2,075	413	2,000	125	2,075	413	3,360	820	1,400	180
E140HX-8	8	3,185	770	3,185	770	2,480	600	1,975	413	1,900	125	1,975	413	3,185	770	1,200	170
E140HX-9	9	3,410	770	3,410	770	2,280	595	1,800	390	1,750	120	1,800	390	3,410	770	1,100	165
E140HX-10	10	3,650	770	3,650	770	2,070	595	1,645	375	1,595	120	1,645	375	3,650	770	1,000	160
E140HX-11	11	2,950	720	2,950	720	1,920	575	1,520	360	1,475	120	1,520	360	2,275	720	900	160
E140HX-12	12	2,275	670	2,275	670	1,770	560	1,410	350	1,365	120	1,410	350	2,275	670	800	160
E140HX-14	14	2,040	670	2,040	670	1,590	540	1,360	320	1,250	100	1,360	350	2,040	670	700	150
E140HX-16	16	1,990	670	1,990	670	1,550	520	1,230	312	1,190	100	1,230	312	1,990	670	600	150
E140HX-18	18	1,770	550	1,770	550	1,410	450	1,060	300	1,060	90	1,060	330	1,770	550	500	150
E140HX-20	20	1,590	535	1,590	535	1,240	415	985	277	950	90	985	277	1,590	535	480	160
E140HX-25	25	1,270	420	1,270	420	1,000	330	760	210	750	70	790	210	1,270	420	380	120
切入深度 (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:0.2D		ae:0.2D		ae:0.2D		ae:0.2D		ae:0.1D		ae:0.2D		ae:0.2D		ae:0.1D	

Slotting 溝切

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.15 鈦合金 Titanium	
切削速度 Vc m/min		120		120		80		65		60		65		120		30	
型號 Code No.	刃徑 Dc	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed	RPM	Feed
		迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)	迴轉速度 (min-1)	進給速度 (mm/min)
E140HX-1	1	31,800	200	31,800	200	25,000	180	19,750	150	19,000	85	19,750	150	31,800	200	7,100	50
E140HX-1.5	1.5	21,200	200	21,200	200	16,500	180	13,000	150	12,700	90	13,000	150	21,200	200	5,100	80
E140HX-2	2	15,900	220	15,900	220	12,420	180	9,850	150	9,550	90	9,850	150	15,900	220	4,000	100
E140HX-2.5	2.5	12,700	330	12,700	330	9,930	220	7,900	175	7,600	90	7,900	175	12,700	330	3,200	100
E140HX-3	3	10,600	600	10,600	600	8,280	430	6,550	290	6,400	105	6,550	290	10,600	600	3,200	130
E140HX-4	4	6,350	635	6,350	635	4,950	500	3,950	325	3,800	120	3,950	325	6,350	635	2,400	150
E140HX-5	5	4,550	775	4,550	775	3,550	525	2,800	348	2,730	125	2,800	348	4,550	775	2,000	160
E140HX-6	6	3,540	775	3,540	775	2,760	500	2,200	313	2,100	125	2,200	313	3,540	775	1,600	145
E140HX-7	7	3,360	710	3,360	710	2,620	500	2,075	313	2,000	125	2,075	313	3,360	710	1,400	130
E140HX-8	8	3,185	650	3,185	650	2,480	500	1,975	313	1,900	125	1,975	313	3,185	650	1,200	120
E140HX-9	9	3,410	660	3,410	660	2,280	495	1,800	300	1,750	120	1,800	300	3,410	660	1,100	130
E140HX-10	10	3,650	670	3,650	670	2,070	490	1,645	288	1,595	120	1,645	288	3,650	670	1,000	145
E140HX-11	11	2,950	615	2,950	615	1,920	475	1,520	280	1,475	120	1,520	280	2,275	615	900	150
E140HX-12	12	2,275	560	2,275	560	1,770	460	1,410	275	1,365	120	1,410	275	2,275	560	800	150
E140HX-14	14	2,040	500	2,040	500	1,590	440	1,360	250	1,250	100	2,040	250	2,040	660	700	150
E140HX-16	16	1,990	660	1,990	660	1,550	420	1,230	240	1,190	100	1,230	240	1,990	660	600	150
E140HX-18	18	1,770	550	1,770	550	1,410	400	1,060	230	970	90	1,770	220	1,770	500	500	140
E140HX-20	20	1,590	500	1,590	500	1,240	360	985	200	950	90	985	200	1,590	500	480	130
切入深度 (mm)		ap:0.5D		ap:0.5D		ap:0.5D		ap:0.5D		ap:0.05D		ap:0.5D		ap:0.5D		ap:0.05D	