

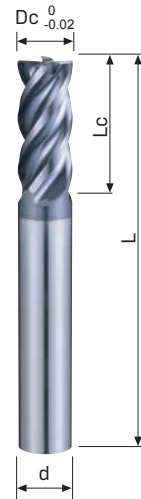
E140HX 超微粒鎢鋼塗層多用途立銑刀

Multipurpose End Mills



Code No. E140HX-Dc

Dc 0 -0.02	Lc mm	L mm	d h6	AlTiCrN E140HX	Dc 0 -0.02	Lc mm	L mm	d h6	AlTiCrN 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	75	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	●					



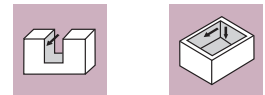
Steel < 48HRC

P	H	M	K	N	S
●	●	●	●	○	○

MG Carbide	AlTiCrN HX
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
Type of Operation




Work Material

P	GR1	碳鋼 Carbon Steel	●
	GR2	低合金鋼 < 24HRC Low-alloyed Steel	●
	GR3	高合金鋼 < 30HRC Hi-alloyed Steel	●
H	GR4	硬化鋼 30-38HRC Hardened Steel	●
	GR5	硬化鋼 38-48HRC Hardened Steel	●
	GR6	硬化鋼 48-56HRC Hardened Steel	
	GR7	硬化鋼 56-68HRC Hardened Steel	
M	GR8	不銹鋼 Stainless Steel	●
K	GR9	鑄鐵 Cast Iron	●
N	GR10	鋁 Aluminium	○
	GR11	銅 Copper	○
	GR12	塑膠 Plastics	
	GR13	複合材料 FRP CFRP Composite Material	
	GR14	石墨 Graphite	
S	GR15	鈦合金 Titanium	○
	GR16	鎳 Nickel	○
	GR17	耐熱鋼 Heat-resistant Steel	○

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 不鏽鋼 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 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)
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 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: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 不鏽鋼 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 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)
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 a_p (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	