Index 索引

H70X Series

- For high hardened steel, HRC 50~70.
- High feed finishing.
- Low helix, multiple flutes design.
- NACO coating, SNAX smooth coating .

- 適用於高硬度鋼 (HRC 50~70)
- 高進給側銑及端銑加工
- 低螺旋、多刃設計
- NACO 為含矽藍色塗層 , SNAX 為含矽古銅色平滑塗層

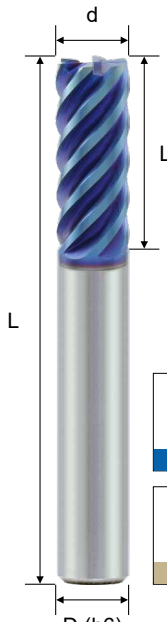
Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Helix 螺旋角	Coating 塗層	P	M	K	N	S	H	Page 頁碼
H70X Series for High Hardened Steel · High Feed · Finishing 適用高硬度鋼・高進給・精加工												
	Square · High Helix · 6F 平銑刀・高導型・6 刃	EHSSS	Ø6~Ø12	45°	NACO	●	○	●		○	●	B139
	Square · High Helix · 8F 平銑刀・高導型・8 刃	EHSSS	Ø16~Ø20	45°	SNAX	●	○	●		○	●	B139
	Square · High Helix · Short Flute · 4F 平銑刀・高導短刃型・4 刃	EHSUS	Ø1~Ø5	45°	NACO	●	○	●		○	●	B140
	Square · High Helix · Short Flute · 6F 平銑刀・高導短刃型・6 刃	EHSUS	Ø6~Ø12	45°	NACO	●	○	●		○	●	B140
	Square · High Helix · Short Flute · 8F 平銑刀・高導短刃型・8 刃	EHSUS	Ø16~Ø20	45°	SNAX	●	○	●		○	●	B140
	Ball Nose · Low Helix · Short Flute · 2F 球型銑刀・低導短刃型・2 刃	EHBUS	0.5R~8R	15°	NACO	●	○	●		○	●	B141
	Corner Radius · High Feed · Short Flute · 4F 圓鼻銑刀・高進給直短刃型・4 刃	EHCUK	Ø2~Ø12	0°	SNAX	●	○	●		○	●	B142
	Corner Radius · High Feed · 4F 圓鼻銑刀・高進給直刃型・4 刃	EHCUS	Ø1~Ø12	0°	NACO	●	○	●		○	●	B143

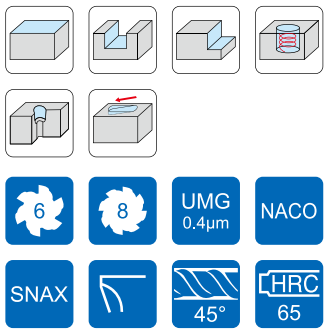
H70X - Square · High Helix · 6F / 8F 平銑刀・高導型・6 刃 / 8 刃

- Naco Blue provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Horsepower consumption will be decreased with greater shearing action.
- High Helix and 6 Flutes design gives a good finishing surface.
- The coating can change to SNAX smooth coating (Al, Ti, Si, Cr, N) is optional.

EHSSS

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No. 訂購編碼	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHSSS606000N	6	15	50	6	6
EHSSS608000N	8	20	60	8	6
EHSSS610000N	10	25	75	10	6
EHSSS612000N	12	30	75	12	6
EHSSS816000S	16	40	100	16	8
EHSSS818000S	18	40	100	18	8
EHSSS820000S	20	45	100	20	8
EHSSS825000S	25	45	100	25	8

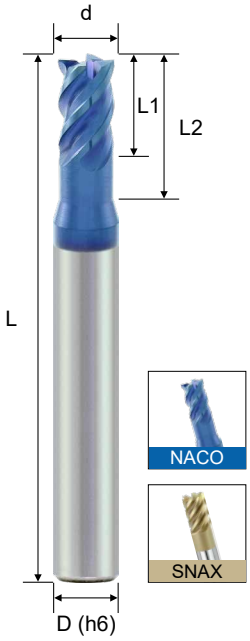
Cutting conditions：Page B253

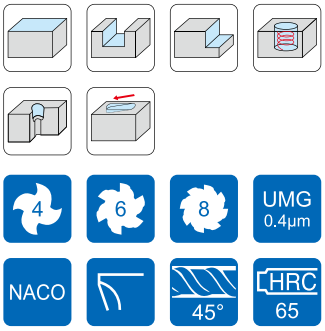
H70X - Square · High Helix · Short Flute · 4F / 6F / 8F 平銑刀・高導短刃型・4 刃 / 6 刃 / 8 刃

- Naco Blue provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Prevents clogging of the flutes.
- The coating can change to SNAX smooth coating (Al, Ti, Si, Cr, N) is optional.

EHSUS

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

Order No. 訂購編碼	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHSUS441000N	1	1.5	2.5	50	4	4
EHSUS442000N	2	3.0	5.0	50	4	4
EHSUS403000N	3	4.5	7.5	50	6	4
EHSUS404000N	4	6.0	10.0	50	6	4
EHSUS405000N	5	7.5	12.5	50	6	4
EHSUS606000N	6	9.0	15.0	50	6	6
EHSUS608000N	8	12.0	20.0	60	8	6
EHSUS610000N	10	15.0	25.0	75	10	6
EHSUS612000N	12	18.0	30.0	75	12	6
EHSUS816000S	16	24.0	40.0	100	16	8
EHSUS820000S	20	30.0	50.0	100	20	8
EHSSH441000N	1	3	-	50	4	4
EHSSH441500N	1.5	4	-	50	4	4
EHSSH442000N	2	5	-	50	4	4
EHSSH442500N	2.5	6	-	50	4	4
EHSSH443000N	3	8	-	50	4	4
EHSSH444000N	4	10	-	50	4	4

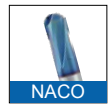
Cutting conditions：Page B254

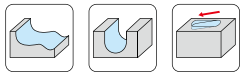
H70X - Ball Nose · Low Helix · Short Flute · 2F 球型銑刀・低導短刃型・2 刃

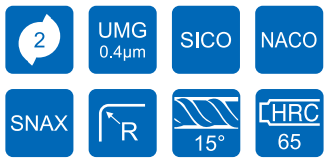
- Naco Blue provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Due to short cutting length it provides an excellent surface roughness of the work pieces.
- Low helix design is suitable for hardened steel cutting.
- The coating can change to SNAX smooth coating (Al, Ti, Si, Cr, N) is optional.

EHBUS

P	M	K	N	S	H
●	○	●		○	●







R Tolerance	
R ≤ 3	±0.010
R > 3	±0.015

Order No. 訂購編碼	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHBUS241000N	0.50R	1.0	1.0	2	50	4	2
EHBUS241500N	0.75R	1.5	1.5	3	50	4	2
EHBUS202000N	1.00R	2.0	2.0	4	50	6	2
EHBUS203000N	1.50R	3.0	3.0	6	50	6	2
EHBUS204000N	2.00R	4.0	4.0	8	50	6	2
EHBUS205000N	2.50R	5.0	5.0	10	50	6	2
EHBUS206000N	3.00R	6.0	6.0	12	50	6	2
EHBUS208000N	4.00R	8.0	8.0	16	60	8	2
EHBUS210000N	5.00R	10.0	10.0	20	75	10	2
EHBUS212000N	6.00R	12.0	12.0	24	75	12	2
EHBUS216000N	8.00R	16.0	16.0	32	100	16	2

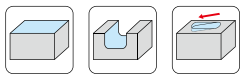
Cutting conditions：Page B254

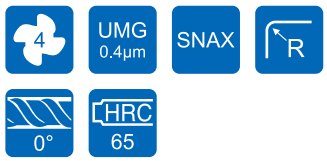
H70X - Corner Radius · High Feed · Short Flute · 4F 圓鼻銑刀・高進給直短刃型・4 刃

- SNAX smooth coating (Al, Ti, Si, Cr, N) provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Cutting edges are very strong and wear resistant.
- For High speed and high feed cutting.

EHCUK

P	M	K	N	S	H
●	○	●		○	●





d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No. 訂購編碼	Dia. (d)	RADIUS (R)	Flute Length (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHCUK40200506S	2	0.5R	1.0	6	50	6	4
EHCUK40300508S	3	0.5R	1.5	8	50	6	4
EHCUK40400512S	4	0.5R	2.0	12	60	6	4
EHCUK40400516S	4	0.5R	2.0	16	60	6	4
EHCUK40401012S	4	1.0R	2.0	12	60	6	4
EHCUK40401016S	4	1.0R	2.0	16	60	6	4
EHCUK40600512S	6	0.5R	3.0	12	60	6	4
EHCUK40600515S	6	0.5R	3.0	15	60	6	4
EHCUK40601015S	6	1.0R	3.0	15	60	6	4
EHCUK40601515S	6	1.5R	3.0	15	60	6	4
EHCUK40800520S	8	0.5R	4.0	20	60	8	4
EHCUK40801020S	8	1.0R	4.0	20	60	8	4
EHCUK41000525S	10	0.5R	5.0	25	75	10	4
EHCUK41001025S	10	1.0R	5.0	25	75	10	4
EHCUK41201030S	12	1.0R	6.0	30	75	12	4
EHCUK41202030S	12	2.0R	6.0	30	75	12	4

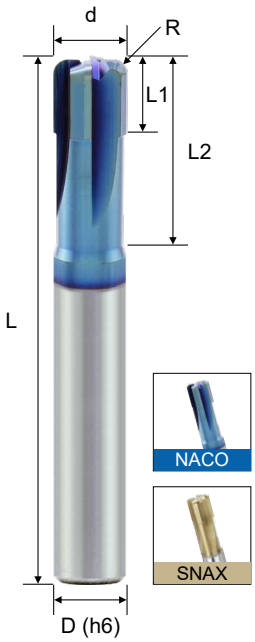
Cutting conditions：Page B255

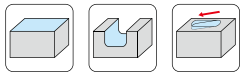
H70X - Corner Radius · High Feed · 4F 圓鼻銑刀・高進給直刃型・4 刃

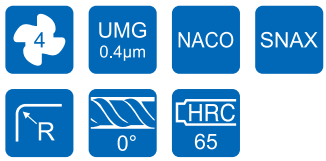
- Naco Blue provides a superior wear and heat resistance.
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Non-Helix Design.
- Cutting edges are very strong and wear resistant.
- The coating can change to SNAX smooth coating (Al, Ti, Si, Cr, N) is optional.

EHCUS

P	M	K	N	S	H
●	○	●		○	●







Order No. 訂購編碼	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHCUS441002N	1	0.20R	1	2.5	50	4	4
EHCUS442002N	2	0.25R	2	6.5	50	4	4
EHCUS403005N	3	0.50R	3	7.5	50	6	4
EHCUS404005N	4	0.50R	4	10.0	50	6	4
EHCUS404010N	4	1.00R	4	10.0	50	6	4
EHCUS405010N	5	1.00R	5	12.5	50	6	4
EHCUS406010N	6	1.00R	6	15.0	50	6	4
EHCUS406015N	6	1.50R	6	15.0	50	6	4
EHCUS408010N	8	1.00R	8	20.0	60	8	4
EHCUS408015N	8	1.50R	8	20.0	60	8	4
EHCUS408020N	8	2.00R	8	20.0	60	8	4
EHCUS410010N	10	1.00R	10	25.0	75	10	4
EHCUS410020N	10	2.00R	10	25.0	75	10	4
EHCUS412010N	12	1.00R	12	30.0	75	12	4
EHCUS412020N	12	2.00R	12	30.0	75	12	4
EHCUS412030N	12	3.00R	12	30.0	75	12	4

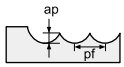
Cutting conditions：Page B255

d Tolerance	
d ≤ 12	0 ~ -0.02
d > 12	0 ~ -0.03

R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Recommended Cutting Conditions 建議切削參數

H68X Seires EHBSF2, EHBLF2, EHBUF2

WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKT4				HARDENED STEEL SKD11,SKH51			
HARDNESS	HRC 35~45				HRC 45~55				HRC 55~60			
CONDITION RANGE	HIGH SPEED		GENERAL		HIGH SPEED		GENERAL		HIGH SPEED		GENERAL	
Vc	50~95 m/min		25~70 m/min		40~95 m/min		20~70 m/min		30~95 m/min		20~50 m/min	
RADIUS (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
0.5R	50000	4000	36000	1600	50000	3200	36000	1280	50000	2000	25000	1000
1R	32000	3000	20000	1500	32000	2560	20000	1280	32000	2000	15000	1000
2R	22000	2850	13000	1500	20000	2500	10000	1280	16000	1920	9500	960
3R	16000	2800	8500	1400	13000	2200	6800	1160	11000	1760	6500	960
4R	12000	2400	6400	1200	10000	1840	5200	960	8000	1400	4800	840
5R	10000	2000	5000	1060	8000	1600	4000	820	6400	1200	3800	720
6R	8000	1600	4200	920	6600	1400	3500	730	5300	1060	3200	640
	ap = 0.05~0.1d pf = 0.02d		ap = 0.05~0.1d pf = 0.02d		ap = 0.05~0.1d pf = 0.02d		ap = 0.05~0.1d pf = 0.02d		ap = 0.05~0.1d pf = 0.15d		ap = 0.05~0.1d pf = 0.15d	

H70X Seires EHSSS6, EHSSS8

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 m/min		98 m/min		65 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6mm	6,890	1,900	5,200	1,000	3,445	505
8mm	5,200	1,900	3,900	1,000	2,600	505
10mm	4,160	1,900	3,120	1,000	2,080	505
12mm	3,445	1,900	2,600	1,000	1,755	505
14mm	2,925	1,800	2,210	1,000	1,430	505
16mm	2,535	1,700	2,015	930	1,294	505
18mm	2,275	1,600	1,885	895	1,151	505
20mm	2,015	1,500	1,495	845	1,040	505
25mm	1,625	1,500	1,242	915	826	505
	ap = 1.5d ae = 0.05d		ap = 1.5d ae = 0.03d		ap = 1d ae = 0.02d	

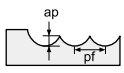
1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions 建議切削參數

H70X Seires EHSUS4, EHSUS6, EHSUS8

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	208 m/min		195 m/min		129 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6mm	11,050	2,450	10,335	2,000	6,890	1,210
8mm	8,255	2,440	7,735	1,995	5,200	1,215
10mm	6,630	2,450	6,110	1,970	4,160	1,215
12mm	5,525	2,450	5,135	1,985	3,445	1,210
14mm	4,680	2,420	4,420	1,995	2,925	1,200
16mm	4,095	2,420	3,900	2,000	2,535	1,285
18mm	3,640	2,420	3,445	2,000	2,275	1,200
20mm	3,250	2,400	3,055	1,970	2,015	1,180
25mm	2,600	2,400	2,470	1,990	1,625	1,190
	ap = 1.5d ae = 0.05d		ap = 1.5d ae = 0.03d		ap = 1d ae = 0.02d	

H70X Seires EHBUS2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	86~129 m/min		77~116 m/min		42~63 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
0.5R	41,600	960	39,000	850	33,150	500
1.0R	40,950	1,900	37,050	1,880	20,150	600
1.5R	27,300	2,080	24,700	1,880	13,650	625
2.0R	20,150	2,050	18,200	1,850	10,335	630
2.5R	16,250	2,060	14,300	1,815	8,255	630
3.0R	13,650	2,080	12,350	1,880	6,890	630
4.0R	10,335	1,550	9,295	1,400	5,135	470
5.0R	8,255	1,250	7,410	1,100	4,095	375
6.0R	6,890	1,050	6,175	950	3,445	315
8.0R	5,135	790	4,745	710	2,535	230
	ap = 0.02d pf = 0.1d					

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

Recommended Cutting Conditions 建議切削參數

H70X Seires EHCUK4

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
HARDNESS	HRC 40~50		HRC 50~55		HRC 55~60	
Vc	90~130 m/min		55~78 m/min		36~52 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
2mm	20,700	5,750	12,420	3,450	8,280	2,310
3mm	13,800	6,050	8,280	3,640	5,520	2,420
4mm	10,350	7,030	6,210	4,220	4,140	2,810
6mm	6,900	6,900	4,140	4,140	2,760	2,760
8mm	5,200	6,850	3,105	4,090	2,070	2,730
10mm	4,150	6,600	2,500	3,970	1,650	2,640
12mm	3,450	6,900	2,070	4,140	1,380	2,760

	ae	ap
R ≦ 1	0.2 x R	0.025d
R > 1	0.4mm	0.025d

	ae	ap
R ≦ 1	0.1 x R	0.025d
R > 1	0.2mm	0.025d

H70X Seires EHCUS4

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	65 M/min		39 M/min		26 M/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	20,670	2,150	12,350	980	8,281	500
2mm	10,335	2,145	6,175	980	4,134	500
3mm	6,890	2,150	4,160	990	2,756	500
4mm	5,200	2,160	3,120	990	2,067	500
6mm	4,350	2,150	2,600	990	1,750	500
8mm	3,260	2,160	1,950	990	1,310	500
10mm	2,600	2,160	1,560	980	1,050	500
12mm	2,175	2,190	1,300	980	875	500

	ae	ap
R ≦ 2	0.2 x R	0.05d
R > 2	0.4mm	0.05d

	ae	ap
R ≦ 2	0.1 x R	0.05d
R > 2	0.2mm	0.05d

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.