



Solid End Milling

整體式銑刀



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Coating Introduction 塗層介紹

Coating Type	Color	Coating	Coating Elements	Working Material					
				P	M	K	N	S	H
<i>UNICO</i>		PVD	TiAlN	●	○	●			○
<i>UNAX</i>		PVD	TiAlN	●	●	●		○	○
<i>TACO</i>		PVD	AlTiN	●	●	●			○
<i>ANAX</i>		PVD	AlTiCrN	●	●	●		●	○
<i>SNAX</i>		PVD	AlTiSiN	●	●	●		●	●
<i>PNAX</i>		PVD	AlTiXN+ZrN	○	●	○		●	
<i>NACO</i>		PVD	Nano AlTiSiN	●	○	●		○	●
<i>DIA</i>		CVD	Diamond				●		
<i>NDLC</i>		CVD	Diamond-like				●		

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H65X

Carbide Endmills for High Hardened Steel · High Speed · General Purpose
 鈎鋼銑刀 · 適用高硬度鋼 · 高速加工



	Square · High Helix · 2F / 4F 平銑刀 · 高導型 · 2 刃 / 4 刃	EHSSH	45°	Ø0.2~Ø20	ANAX	●	○	●		○	●	B107
	Square · High Helix · Long Shank · 4F 平銑刀 · 高導長柄型 · 4 刃	EHSLH	45°	Ø3~Ø20	ANAX	●	○	●		○	●	B108
	Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4 刃	EHCSH	30°	Ø1~Ø12	ANAX	●	○	●		○	●	B109
	Corner Radius · Short Flute · 4F 圓鼻銑刀 · 短刃型 · 4 刃	EHCUH	30°	Ø3~Ø12	ANAX	●	○	●		○	●	B020
	Corner Radius · Long Shank · 4F 圓鼻銑刀 · 長柄型 · 4 刃	EHCLH	30°	Ø4~Ø12	ANAX	●	○	●		○	●	B021
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	EHBSH	30°	0.1R~8R	ANAX	●	○	●		○	●	B022
	Ball Nose · Short Flute · 2F 球型銑刀 · 短刃型 · 2 刃	EHBUH	27°	1R~8R	ANAX	●	○	●		○	●	B023
	Ball Nose · Near Center Design · 3F / 4F 球型銑刀 · 刃近中心型 · 3 刃 / 4 刃	EBHBS	30°	1R~8R	ANAX	●	●	●		●	●	B024
	Ball Nose · Long Shank · 2F 球型銑刀 · 長柄型 · 2 刃	EBLH	30°	1R~10R	ANAX	●	○	●		○	●	B025
	Long Neck · Square · 2F 長頸型 · 平銑刀 · 2 刃	EHSRC	30°	Ø0.2~Ø12	ANAX	●	○	●		○	●	B026
	Long Neck · Square · 4F 長頸型 · 平銑刀 · 4 刃	EHSRC	30°	Ø1~Ø12	ANAX	●	○	●		○	●	B032
	Long Neck · Corner Radius · 2F 長頸型 · 圓鼻銑刀 · 2 刃	EHCRC	30°	Ø1~Ø12	ANAX	●	○	●		○	●	B034
	Long Neck · Corner Radius · 4F 長頸型 · 圓鼻銑刀 · 4 刃	EHCRC	30°	Ø2~Ø12	ANAX	●	○	●		○	●	B040
	Long Neck · Ball Nose · 2F 長頸型 · 球型銑刀 · 2 刃	EBHRC	30°	0.15R~6R	ANAX	●	○	●		○	●	B044
	Taper Neck · Corner Radius · 2F 斜頸型 · 圓鼻銑刀 · 2 刃	EHCRT	30°	Ø1~Ø6	ANAX	●	○	●		○	●	B049
	Taper Neck · Ball Nose · 2F 斜頸型 · 球型銑刀 · 2 刃	EBBRT	30°	0.5R~6R	ANAX	●	○	●		○	●	B051

H68X

Carbide Endmills for High Hardened Steel · High Precision Finishing
 鈎鋼銑刀 · 適用高硬度鋼 · 高精加工



	Square · High Precision · Standard · 4F 平銑刀 · 高精標準型 · 4 刃	EHSSF	45°	Ø1~Ø12	SNAX	●	○	●		○	●	B052
	Square · High Precision · High Helix · 6F / 8F 平銑刀 · 高精高導型 · 6 刃 / 8 刃	EHSMF	50°	Ø6~Ø16	SNAX	●	○	●		○	●	B053
	Square · High Precision · Long Shank · 4F 平銑刀 · 高精長柄型 · 4 刃	EHSLF	45°	Ø4~Ø16	SNAX	●	○	●		○	●	B054
	Corner Radius · High Precision · Standard · 4F 圓鼻銑刀 · 高精標準型 · 4 刃	EHCSF	30°	Ø1~Ø12	SNAX	●	○	●		○	●	B055
	Corner Radius · High Precision · Long Shank · 4F 圓鼻銑刀 · 高精長柄型 · 4 刃	EHCLF	30°	Ø4~Ø12	SNAX	●	○	●		○	●	B056
	Ball Nose · High Precision · Standard · 2F 球型銑刀 · 高精標準型 · 2 刃	EHBSF	30°	0.5R~6R	SNAX	●	○	●		○	●	B057
	Ball Nose · High Precision · Short with Neck · 2F 球型銑刀 · 高精短刃型 · 2 刃	EHBUF	30°	0.5R~6R	SNAX	●	○	●		○	●	B058
	Ball Nose · High Precision · Long Shank · 2F 球型銑刀 · 高精長柄型 · 2 刃	EBLBF	30°	2R~6R	SNAX	●	○	●		○	●	B059

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H70X

Carbide Endmills for High Hardened Steel · High Feed · Finishing
鈨鋼銑刀 · 適用高硬度鋼 · 高進給 · 精加工

ASIA
(Metric)

	Square · High Helix · 6F 平銑刀 · 高導型 · 6 刃	EHSSS	45°	Ø6~Ø12	SNAX	●	○	●		○	●	B060
	Square · High Helix · 8F 平銑刀 · 高導型 · 8 刃	EHSSS	45°	Ø16~Ø20	SNAX	●	○	●		○	●	B060
	Square · High Helix · Short Flute · 4F 平銑刀 · 高導短刃型 · 4 刃	EHSUS	45°	Ø1~Ø5	SNAX	●	○	●		○	●	B061
	Square · High Helix · Short Flute · 6F 平銑刀 · 高導短刃型 · 6 刃	EHSUS	45°	Ø6~Ø12	SNAX	●	○	●		○	●	B061
	Square · High Helix · Short Flute · 8F 平銑刀 · 高導短刃型 · 8 刃	EHSUS	45°	Ø16~Ø20	SNAX	●	○	●		○	●	B061
	Corner Radius · High Helix · 6F 圓鼻銑刀 · 高導型 · 6 刃	EHCSS	45°	Ø6~Ø20	SNAX	●	○	●		○	●	B062
	Corner Radius · High Feed · Short Flute · 4F 圓鼻銑刀 · 高進給直短刃型 · 4 刃	EHCUK	0°	Ø2~Ø12	SNAX	●	○	●		○	●	B063
	Corner Radius · High Feed · 4F 圓鼻銑刀 · 高進給直刃型 · 4 刃	EHCUS	0°	Ø1~Ø12	SNAX	●	○	●		○	●	B064
	Ball Nose · Low Helix · Short Flute · 2F 球型銑刀 · 低導短刃型 · 2 刃	EHBUS	15°	0.5R~8R	SNAX	●	○	●		○	●	B065

NEW

H800

CBN Endmills for High Hardened Steel · Fine Finishing
CBN 銑刀 · 適用高硬度鋼 · 精加工

ASIA
(Metric)

	CBN · Corner Radius · 4F / 6F CBN 圓鼻銑刀 · 4 刃 / 6 刃	EBBUA	0°	Ø1~Ø8	-							●	B066
	CBN · Ball Nose · 2F CBN 球型銑刀 · 2 刃	EBBUA	0°	0.1R~1.5R	-							●	B067

NEW

NEW

H810

PCD Endmills for High Hardened Steel · Mirror Finishing
PCD 銑刀 · 適用高硬度鋼 · 鏡面精加工

ASIA
(Metric)

	PCD · Ball PCD 圓球銑刀	EDBUA	-	0.5R~3.0R	-							●	B068
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NEW

V470 / V47X

Carbide Endmills for Exotic Material / Alloy Steel · Anti-Vibration · Variable Pitch
鈨鋼銑刀 · 適用不鏽鋼 / 合金鋼 / 鈦 / 鎳基合金 · 抗震 · 不等分割

ASIA
(Metric)

	Square · Variable Pitch · Helix 35° · 4F 不等分割平銑刀 · 4 刃	EPSSVB	35°	Ø4~Ø16	TACO	●	○	●				B071	
	Square · Variable Pitch · Helix 38° · 4F 不等分割平銑刀 · 4 刃	EPSSVC...T	38°	Ø1~Ø25	TACO	●	○	●				B072	
		EPSSVC...A			ANAX	●	●	●		●	○		
	Square · Variable Pitch · Helix 38° · 5F 不等分割平銑刀 · 5 刃	EPSSVC	38°	Ø6~Ø16	ANAX	●	●	●			●	○	B073
	Square · Variable Pitch · Helix 38° · Necked · 4F 不等分割平銑刀 · 帶頸型 · 4 刃	EPSUVC	38°	Ø6~Ø16	ANAX	●	●	●			●	○	B074
	Square · Variable Pitch · Helix 38° · Roughing & Finishing · 4F 不等分割平銑刀 · 粗精一體型 · 4 刃	EPSRVC	38°	Ø6~Ø16	ANAX	●	●	●			●	○	B075
	Square · Variable Pitch · Helix 45° · 4F 不等分割平銑刀 · 4 刃	EPSSVD	45°	Ø4~Ø16	ANAX	●	●	●			●	●	B076

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V470 / V47X

Carbide Endmills for Exotic Material / Alloy Steel · Anti-Vibration · Variable Pitch
 鈎鋼銑刀 · 適用不鏽鋼 / 合金鋼 / 鈦 / 鎳基合金 · 抗震 · 不等分割

ASIA
(Metric)

	Square · Variable Pitch · Helix 43° · 5F 不等分割平銑刀 · 5 刃	EPSSVD	43°	Ø6~Ø16	ANAX	●	●	●		●	●	B077
	Square · Variable Pitch · Helix 43° · 7F 不等分割平銑刀 · 7 刃	EPSSVD	43°	Ø10~Ø16	ANAX	●	●	●		●	●	B078
	Square · Variable Pitch · Helix 43° · Long Flute · 5F 不等分割平銑刀 · 長刃型 · 5 刃	EPSCVD	43°	Ø6~Ø16	ANAX	●	●	●		●	●	B079
	Square · Variable Pitch · Helix 43° · Long Flute · 7F 不等分割平銑刀 · 長刃型 · 7 刃	EPSCVD	43°	Ø10~Ø16	ANAX	●	●	●		●	●	B080
	Square · Variable Pitch · Chip Breaker · Helix 43° · Long Flute · 5F 不等分割平銑刀 · 斷屑長刃型 · 5 刃	EPSCVH	43°	Ø6~Ø16	ANAX	●	●	●		●	●	B081
	Corner Radius · Variable Pitch · Helix 35° · 4F 不等圓鼻分割銑刀 · 4 刃	EPSSVB	35°	Ø8~Ø16	TACO	●	○	●				B071
	Corner Radius · Variable Pitch · Helix 38° · 4F 不等分割圓鼻銑刀 · 4 刃	EPSSVC...T	38°	Ø4~Ø16	TACO	●	○	●				B082
		EPSSVC...A			ANAX	●	●	●		●	○	
	Corner Radius · Variable Pitch · Helix 38° · 5F 不等分割圓鼻銑刀 · 5 刃	EPSSVC	38°	Ø6~Ø16	ANAX	●	●	●		●	○	B083
	Corner Radius · Variable Pitch · Helix 38° · Necked · 4F 不等分割圓鼻銑刀 · 帶頸型 · 4 刃	EPSUVC	38°	Ø6~Ø16	ANAX	●	●	●		●	○	B084
	Corner Radius · Variable Pitch · Helix 45° · 4F 不等分割圓鼻銑刀 · 4 刃	EPSSVD	45°	Ø6~Ø16	ANAX	●	●	●		●	●	B085
	Corner Radius · Variable Pitch · Helix 43° · 7F 不等分割圓鼻銑刀 · 7 刃	EPSSVD	43°	Ø10~Ø12	ANAX	●	●	●		●	●	B078
	Corner Radius · Variable Pitch · Helix 43° · Long Flute · 5F 不等分割圓鼻銑刀 · 長刃型 · 5 刃	EPSCVD	43°	Ø6~Ø12	ANAX	●	●	●		●	●	B079
	Corner Radius · Variable Pitch · Helix 43° · Long Flute · 7F 不等分割圓鼻銑刀 · 長刃型 · 7 刃	EPSCVD	43°	Ø10~Ø16	ANAX	●	●	●		●	●	B080
	Corner Radius · Variable Pitch · Helix 52° · Standard · 4F 不等分割圓鼻銑刀 · 標準型 · 4 刃	EPSSVE	52°	Ø8~Ø16	ANAX	○	●	○		●	●	B086
	Ball Nose · Variable Pitch · Helix 38° · Standard · 4F 不等分割球銑刀 · 標準型 · 4 刃	EPBSVC	38°	2R ~ 8R	ANAX	●	●	●		●	○	B087

V47X

Carbide Endmills for Exotic Material / Alloy Steel · Anti-Vibration · Variable Pitch
 鈎鋼銑刀 · 適用不鏽鋼 / 合金鋼 / 鈦 / 鎳基合金 · 抗震 · 不等分割

DIN
(Metric)

NEW	Square · Variable Pitch · Helix 38° · Neck · 4F 不等分割平銑刀 · 帶頸型 · 4 刃	E114VC	38°	Ø4~Ø20	ANAX	●	●	●		●	○	B088
NEW	Corner Radius · Variable Pitch · Helix 38° · Neck · 4F 不等分割圓鼻銑刀 · 帶頸型 · 4 刃	E134VC	38°	Ø4~Ø20	ANAX	●	●	●		●	○	B089

V470

Carbide Endmills for Carbon Steel / Alloy Steel / Cast Iron · Anti-Vibration · Variable Pitch
 鈎鋼銑刀 · 適用碳鋼 / 合金鋼 / 鑄鐵 · 抗震 · 不等分割

ANSI
(Inch)

	Square · Variable Pitch · 4F (Inch) 不等分割平銑刀 · 4 刃 (英寸)	EPSSVD	38°	Ø1/8"~1"	UNICO	●	●	●		●	○	B090
	Ball Nose · Variable Pitch · 2F (Inch) 不等分割球型銑刀 · 2 刃 (英寸)	EPBSVD	38°	Ø1/8"~5/8"	UNICO	●	●	●		●	○	B093
	Ball Nose · Variable Pitch · 4F (Inch) 不等分割球型銑刀 · 4 刃 (英寸)	EPBSVD	38°	Ø1/8"~5/8"	UNICO	●	●	●		●	○	B093

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V53X

Carbide Endmills for Exotic Material · Anti-vibration · Variable Helix
 鈎鋼銑刀 · 適用鈦 / 鎳基合金 / 不鏽鋼 · 抗震 · 不等螺旋

ASIA
(Metric)

	Square · Variable Helix 30~32 · 4F 不等螺旋平銑刀 · 4 刃	ESSSVA	30°~32°	Ø6~Ø16	SNAX	●	●	●		○	○	B095
	Square · Variable Helix 35~38 · 4F 不等螺旋平銑刀 · 4 刃	ESSSVB	35°~38°	Ø4~Ø20	SNAX	●	●	●		○	○	B096
	Square · Variable Helix 38~41 · 4F 不等螺旋平銑刀 · 4 刃	ESSSVC	38°~41°	Ø1~Ø25	SNAX	●	●	●		●	○	B097
	Square · Variable Helix 38~42 · 5F 不等螺旋平銑刀 · 5 刃	ESSSVC	38°~42°	Ø6~Ø16	SNAX	○	●	○		●	○	B098
	Square · Variable Helix 43~46 · 4F 不等螺旋平銑刀 · 4 刃	ESSSVD	43°~46°	Ø4~Ø12	SNAX	●	●	●		●	○	B099
	Corner Radius · Variable Helix 35~38 · 4F 不等螺旋圓鼻銑刀 · 4 刃	ESSSVB	35°~38°	Ø4~Ø16	SNAX	●	●	●		○	○	B100
	Corner Radius · Variable Helix 35~38 · Necked · 4F 不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃	ESSUVB	35°~38°	Ø8~Ø12	SNAX	●	●	●		●	○	B101
	Corner Radius · Variable Helix 38~41 · 4F 不等螺旋圓鼻銑刀 · 4 刃	ESSSVC	38°~41°	Ø4~Ø12	SNAX	●	●	●		●	○	B102
	Corner Radius · Variable Helix 38~42 · 5F 不等螺旋圓鼻銑刀 · 5 刃	ESSSVC	38°~42°	Ø4~Ø16	SNAX	○	●	○		●	○	B103
	Corner Radius · Variable Helix 43~46 · 4F 不等螺旋圓鼻銑刀 · 4 刃	ESSSVD	43°~46°	Ø4~Ø12	SNAX	●	●	●		●	○	B104

V53X

Carbide Endmills for Exotic Material · Anti-vibration · Variable Helix
 鈎鋼銑刀 · 適用鈦 / 鎳基合金 / 不鏽鋼 · 抗震 · 不等螺旋

DIN
(Metric)

NEW		Square · Variable Helix 35~38 · Neck · 4F 不等螺旋平銑刀 · 帶頸型 · 4 刃	E514VB	35°~38°	Ø4~Ø12	ANAX	●	●	●		●	○	B105
NEW		Square · Variable Helix 39~42 · Neck · 4F 不等螺旋平銑刀 · 帶頸型 · 4 刃	E514VC	39°~42°	Ø4~Ø16	ANAX	●	●	●		●	○	B106
NEW		Square · Variable Helix 39~42 · Neck · 5F 不等螺旋平銑刀 · 帶頸型 · 5 刃	E514VC	39°~42°	Ø6~Ø16	ANAX	○	●	○		●	○	B107
NEW		Square · Variable Helix 43~46 · Neck · 4F 不等螺旋平銑刀 · 帶頸型 · 4 刃	E514VD	43°~46°	Ø4~Ø16	ANAX	●	●	●		●	○	B108
NEW		Corner Radius · Variable Helix 35~38 · Neck · 4F 不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃	E534VB	35°~38°	Ø4~Ø16	ANAX	●	●	●		●	○	B109
NEW		Corner Radius · Variable Helix 39~42 · Neck · 4F 不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃	E534VC	39°~42°	Ø4~Ø16	ANAX	●	●	●		●	○	B110
NEW		Corner Radius · Variable Helix 39~42 · Neck · 5F 不等螺旋圓鼻銑刀 · 帶頸型 · 5 刃	E534VC	39°~42°	Ø6~Ø16	ANAX	○	●	○		●	○	B111
NEW		Corner Radius · Variable Helix 43~46 · Neck · 4F 不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃	E534VD	43°~46°	Ø4~Ø16	ANAX	●	●	●		●	○	B112

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M50X

Carbide Endmills for Stainless Steel / Alloy Steel · General Milling
鈨鋼銑刀 · 適用不鏽鋼 / 合金鋼 · 泛用加工

ASIA
(Metric)

	Square · Standard · 2F 平銑刀 · 標準型 · 2 刃	ESSSA	35°	Ø0.5~Ø16	ANAX	●	●	●		○	○	B113
	Square · Standard · 4F 平銑刀 · 標準型 · 4 刃	ESSSA	35°	Ø1~Ø14	ANAX	●	●	●		○	○	B114
	Square · High Helix · 4F 平銑刀 · 高導高效能型 · 4 刃	ESSSB	45°	Ø1~Ø16	ANAX	●	●	●		○	○	B115
	Square · Wave Edge · 3F 平銑刀 · 波浪型 · 3 刃	ESSSW	30°~40°	Ø6~Ø20	ANAX	●	●	●		○	○	B116
	Square · Wave Edge · 4F 平銑刀 · 波浪型 · 4 刃	ESSSW	30°~40°	Ø6~Ø20	ANAX	●	●	●		○	○	B117
	Square · Chamfer · High Feed · 4F 平銑刀 · 高進給倒角型 · 4 刃	ESSSU	30°	Ø3~Ø16	ANAX	●	●	●		○	○	B118
	Square · Radius · High Feed · 4F 平銑刀 · 高進給圓角型 · 4 刃	ESCSU	40°	Ø3~Ø16	ANAX	●	●	●		○	○	B119
	Square · Short Flute · 4F 平銑刀 · 短刃型 · 4 刃	ESSHA	35°	Ø3~Ø16	ANAX	●	●	●		○	○	B120
	Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4 刃	ESCSA	35°	Ø1~Ø12	ANAX	●	●	●		○	○	B121
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	ESBSA	35°	0.25R~8R	ANAX	●	●	●		○	○	B122
	Ball Nose · Near Center Design · 3F / 4F 球型銑刀 · 刃近中心型 · 3 刃 / 4 刃	ESBHS	35°	1R~8R	ANAX	●	●	●		○	○	B123

Solid End Milling

G550 / G55X

Carbide Endmills for Carbon Steel / Alloy Steel / Cast Iron
鈨鋼銑刀 · 適用碳鋼 / 合金鋼 / 鑄鐵

ASIA
(Metric)

	Square · Standard · 2F 平銑刀 · 標準型 · 2 刃	EPSSC...U	30°	Ø0.2~Ø25	UNICO	●	○	●			○	B125
		EPSSC...UX			UNAX	●	●	●		○	○	
	Square · Standard · 2F 平銑刀 · 標準型 · 2 刃	EPSSA...U	35°	Ø1~Ø25	UNICO	●	○	●			○	B127
		EPSSA...UX			UNAX	●	●	●		○	○	
	Square · Standard · 3F 平銑刀 · 標準型 · 3 刃	EPSSC...U	30°	Ø1~Ø25	UNICO	●	○	●			○	B128
		EPSSC...UX			UNAX	●	●	●		○	○	
	Square · Standard · 3F 平銑刀 · 標準型 · 3 刃	EPSSA...U	35°	Ø1~Ø25	UNICO	●	○	●			○	B129
		EPSSA...UX			UNAX	●	●	●		○	○	
	Square · Standard · 4F 平銑刀 · 標準型 · 4 刃	EPSSC...U	30°	Ø1~Ø25	UNICO	●	○	●			○	B130
		EPSSC...UX			UNAX	●	●	●		○	○	
	Square · Standard · 4F 平銑刀 · 標準型 · 4 刃	EPSSA...U	35°	Ø1~Ø25	UNICO	●	○	●			○	B131
		EPSSA...UX			UNAX	●	●	●		○	○	
	Square · Sharp Edge · 4F 平銑刀 · 銳角型 · 4 刃	EPSPC...U	30°	Ø1~Ø16	UNICO	●	○	●			○	B132
		EPSPC...UX			UNAX	●	●	●		○	○	
	Square · High Helix · 4F 平銑刀 · 高導型 · 4 刃	EPSSH...U	45°	Ø1~Ø16	UNICO	●	○	●			○	B133
		EPSSH...UX			UNAX	●	●	●		○	○	
	Square · High Helix · 4F 平銑刀 · 高導高效能型 · 4 刃	EPSSB...U	45°	Ø1~Ø16	UNICO	●	○	●			○	B134
		EPSSB...UX			UNAX	●	●	●		○	○	
	Square · High Helix · 6F 平銑刀 · 高導型 · 6 刃	EPSSH...U	45°	Ø6~Ø12	UNICO	●	○	●			○	B135
		EPSSH...UX			UNAX	●	●	●		○	○	
	Square · Stub Length · 4F 平銑刀 · 短刃型 · 4 刃	EPSHC	30°	Ø1~Ø12	UNICO	●	○	●			○	B136
	Square · Short Flute · 4F 平銑刀 · 短刃型 · 4 刃	EPSHA	35°	Ø3~Ø16	UNICO	●	○	●			○	B137
	Square · Taper · 2F 平銑刀 · 斜度型 · 2 刃	EPSST	35°	Ø0.15~Ø10	UNICO	●	○	●			○	B138

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G550 / G55X

Carbide Endmills for Carbon Steel / Alloy Steel / Cast Iron
鈷鋼銑刀 · 適用碳鋼 / 合金鋼 / 鑄鐵



	Square · Roughing · 4F 平銑刀 · 粗銑型 · 4 刃	EPSRR	30°	Ø6~Ø20	UNICO	●	○	●			○	B141
	Square · Long Shank · 2F 平銑刀 · 長柄型 · 2 刃	EPSLC	30°	Ø1~Ø20	UNICO	●	○	●			○	B142
	Square · Long Shank · 4F 平銑刀 · 長柄型 · 4 刃	EPSLC	30°	Ø2~Ø25	UNICO	●	○	●			○	B143
	Square · Long Shank · 4F 平銑刀 · 長柄型 · 4 刃	EPSLA	35°	Ø4~Ø12	UNICO	●	○	●			○	B144
	Square · Long Flute · 4F 平銑刀 · 長刃型 · 4 刃	EPSCC...U	35°	Ø1~Ø25	UNICO	●	○	●			○	B145
		EPSCC...UX			UNAX	●	●	●		○	○	
	Square · High Helix · Long Flute · 6F 平銑刀 · 高導長刃型 · 6 刃	EPSCH...U	45°	Ø6~Ø16	UNICO	●	○	●			○	B146
		EPSCH...UX			UNAX	●	●	●		○	○	
	Square · High Helix · Extra Long Flute · 4F 平銑刀 · 高導超長刃型 · 4 刃	EPSCH...U	45°	Ø6~Ø12	UNAX	●	○	●			○	B147
		EPSCH...UX			SNAX	●	●	●		○	●	
	Corner Radius · Standard · 2F 圓鼻銑刀 · 標準型 · 2 刃	EPCSC...U	30°	Ø1~Ø12	UNICO	●	○	●			○	B148
		EPCSC...UX			UNAX	●	●	●		○	○	
	Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4 刃	EPCSC...U	30°	Ø1~Ø16	UNICO	●	○	●			○	B150
		EPCSC...UX			UNAX	●	●	●		○	○	
	Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4 刃	EPCSA...U	35°	Ø1~Ø12	UNICO	●	○	●			○	B152
		EPCSA...UX			UNAX	●	●	●		○	○	
	Corner Radius · Stub Length · 4F 圓鼻銑刀 · 短刃型 · 4 刃	EPCHC	30°	Ø2~Ø6	UNICO	●	○	●			○	B153
	Corner Radius · High Helix · 4F 圓鼻銑刀 · 高導型 · 4 刃	EPCSH...U	45°	Ø3~Ø12	UNICO	●	○	●			○	B154
		EPCSH...UX			UNAX	●	●	●		○	○	
	Corner Radius · Long Shank · 4F 圓鼻銑刀 · 長柄型 · 4 刃	EPCLC	30°	Ø2~Ø16	UNICO	●	○	●			○	B155
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	EPBSC...U	30°	0.1R~10R	UNICO	●	○	●			○	B156
		EPBSC...UX			UNAX	●	●	●		○	○	
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	EPBSA...U	35°	0.5R~6R	UNICO	●	○	●			○	B157
		EPBSA...UX			UNAX	●	●	●		○	○	
	Ball Nose · Standard · 4F 球型銑刀 · 標準型 · 4 刃	EPBSC...U	30°	1R~10R	UNICO	●	○	●			○	B158
		EPBSC...UX			UNAX	●	●	●		○	○	
	Ball Nose · Stub Length · 2F 球型銑刀 · 短刃型 · 2 刃	EPBHC	30°	0.1R~3R	UNICO	●	○	●			○	B159
	Ball Nose · Taper · 2F 球型銑刀 · 斜度型 · 2 刃	EPBST	30°	1R~3R	UNICO	●	○	●			○	B160
	Ball Nose · Long Shank · 2F 球型銑刀 · 長柄型 · 2 刃	EPBLC	30°	0.5R~10R	UNICO	●	○	●			○	B161
	Ball Nose · Long Shank · 4F 球型銑刀 · 長柄型 · 4 刃	EPBLC	30°	1R~8R	UNICO	●	○	●			○	B162
	Long Neck · Square · 2F 長頸型 · 平銑刀 · 2 刃	EPSRC	30°	Ø0.2~Ø12	UNICO	●	○	●			○	B163
	Long Neck · Square · 4F 長頸型 · 平銑刀 · 4 刃	EPSRC	30°	Ø1~Ø12	UNICO	●	○	●			○	B170
	Long Neck · Corner Radius · 2F 長頸型 · 圓鼻銑刀 · 2 刃	EPCRC	30°	Ø1~Ø12	UNICO	●	○	●			○	B174
	Long Neck · Corner Radius · 4F 長頸型 · 圓鼻銑刀 · 4 刃	EPCRC	30°	Ø2~Ø12	UNICO	●	○	●			○	B179
	Long Neck · Ball Nose · 2F 長頸型 · 球型銑刀 · 2 刃	EPBRC	30°	0.15R~6R	UNICO	●	○	●			○	B183
	Taper Neck · Corner Radius · 2F 斜頸型 · 圓鼻銑刀 · 2 刃	EPCRT	30°	Ø1~Ø6	UNICO	●	○	●			○	B190
	Taper Neck · Ball Nose · 2F 斜頸型 · 球型銑刀 · 2 刃	EPBRT	30°	0.5R~2R	UNICO	●	○	●			○	B192

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G55X Carbide Endmills for Carbon Steel / Alloy Steel / Cast Iron · High Efficiency
 鈎鋼銑刀 · 適用碳鋼 / 合金鋼 / 鑄鐵 · 高效率加工

DIN
(Metric)

NEW		Square · Neck · 2F 平銑刀 · 帶頸型 · 2 刃	E114C	30°	Ø1~Ø20	ANAX	●	●	●		○	B193
NEW		Ball Nose · Neck · 2F 球頭銑刀 · 帶頸型 · 2 刃	E124C	30°	1R~10R	ANAX	●	●	●		○	B194

G550 Carbide Endmills for Carbon Steel / Alloy Steel / Cast Iron
 鈎鋼銑刀 · 適用碳鋼 / 合金鋼 / 鑄鐵

ANSI
(Inch)

NEW		Square · Standard · 4F (Inch) 雙頭平銑刀 · 標準型 · 4 刃 (英吋)	EPS8A	30°	Ø1/16"~1/2"	TACO	●	●	●		○	B195
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G580 Cermet Endmills for Carbon Steel / Alloy Steel · Fine Finishing
 金屬陶瓷銑刀 · 適用碳鋼 / 合金鋼 · 超精加工

ASIA
(Metric)

NEW		Square · Standard · 4F 平銑刀 · 標準型 · 4 刃	EPSCM	30°	Ø4~Ø12	UNICO	●	○				B196
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A100 Carbide Endmills for Aluminum Alloy · Plastic · Copper
 鈎鋼銑刀 · 適用鋁合金 · 塑料 · 銅加工

ASIA
(Metric)

		Square · Standard · 1F 平銑刀 · 標準型 · 1 刃	ENSSC	30°	Ø1~Ø12	-			●			B198
		Square · Standard · 2F 平銑刀 · 標準型 · 2 刃	ENSSS	45°	Ø1~Ø20	-			●			B199
		Square · Standard · 3F 平銑刀 · 標準型 · 3 刃	ENSSS	45°	Ø2~Ø20	-			●			B200
		Square · High Helix · Finishing · 3F 平銑刀 · 高導精銑型 · 3 刃	ENSSH	55°	Ø4~Ø16	-			●			B201
		Square · High Performance Roughing · 3F 平銑刀 · 高效能粗銑型 · 3 刃	ENSSB	45°	Ø3~Ø20	-			●			B202
		Square · Finishing · 3F 平銑刀 · 精銑型 · 3 刃	ENSSF	45°	Ø1~Ø12	-			●			B203
		Square · Finishing & Roughing · 3F 平銑刀 · 精銑 & 粗銑型 · 3 刃	ENSSP	45°	Ø6~Ø16	-			●			B204
NEW		Square · Fine Finishing · 3F 平銑刀 · 超精銑型 · 3 刃	ENSSA	40°	Ø3~Ø20	-			●			B205
		Square · Virable Pitch · Standard · 3F 不等分割平銑刀 · 標準型 · 3 刃	ENSSV	40°	Ø3~Ø16	-			●			B206
		Square · Virable Pitch · Chip Breaker · 3F 不等分割平銑刀 · 斷屑型 · 3 刃	ENSSVG	40°	Ø6~Ø16	-			●			B207
		Square · Roughing · 3F 平銑刀 · 粗銑型 · 3 刃	ENSSR	30°	Ø6~Ø20	-			●			B208
		Square · Roughing · 4F 平銑刀 · 粗銑型 · 4 刃	ENSSR	30°	Ø6~Ø20	-			●			B209
		Square · Wave Edge · 3F 平銑刀 · 波浪型 · 3 刃	ENSSW	30°	Ø6~Ø12	-			●			B210
		Square · Long Flute · 3F 平銑刀 · 長刃型 · 3 刃	ENSCS	45°	Ø3~Ø20	-			●			B211

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A100 Carbide Endmills for Aluminum Alloy · Plastic · Copper
鈎鋼銑刀 · 適用鋁合金 · 塑料 · 銅加工

ASIA
(Metric)

	Corner Radius · Standard · 3F 圓鼻銑刀 · 標準型 · 3 刃	ENCSS	45°	Ø6~Ø16	-				●			B212
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	ENBSA	35°	0.5R~3R	-				●			B213
	Square · Standard · 4F (for CU & AL) 平銑刀 · 標準型 · 4 刃	ENSSC	30°	Ø5~Ø12	NDLC				●			B214
	Long Neck · Square · 2F (for CU & AL) 長頸型 · 平銑刀 · 2 刃	ENSRC	38°	Ø0.5~Ø4	NDLC				●			B215
	Long Neck · Corner Radius · 2F (for CU & AL) 長頸型 · 圓鼻銑刀 · 2 刃	ENCRC	38°	Ø0.5~Ø4	NDLC				●			B217
	Long Neck · Ball Nose · 2F (for CU & AL) 長頸型 · 球型銑刀 · 2 刃	ENBRC	30°	0.25R~2R	NDLC				●			B219

A100 Carbide Endmills for Aluminum Alloy · Plastic · Copper
鈎鋼銑刀 · 適用鋁合金 · 塑料 · 銅加工

DIN
(Metric)

NEW
NEW

	Square · Variable Pitch · Neck · 3F 不等分割平銑刀 · 帶頸型 · 3 刃	E414V	40°	Ø2~Ø20	-				●			B221
	Square · Variable Pitch · Neck · 3F 不等分割平銑刀 · 帶頸型 · 3 刃	E414V	40°	Ø2~Ø20	NDLC				●			B222

A100 Carbide Endmills for Aluminum Alloy · Plastic · Copper
鈎鋼銑刀 · 適用鋁合金 · 塑料 · 銅加工

ANSI
(Inch)

	Square · Virable Pitch · Standard · 3F (Inch) 不等分割平銑刀 · 標準型 · 3 刃 (英寸)	ENS11V	40°	Ø1/8"~Ø5/8"	-				●			B223
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A200 Carbide Endmills for Graphite
鈎鋼銑刀 · 適用石墨加工

ASIA
(Metric)

	Square · Standard · 4F 平銑刀 · 標準型 · 4 刃	EGSSC	30°	Ø3~Ø12	NDLC				●			B224
	Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4 刃	EGCSC	30°	Ø3~Ø12	NDLC				●			B225
	Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃	EGBSC	30°	0.1R~6R	NDLC				●			B226
	Long Neck · Square · 2F 長頸型 · 平銑刀 · 2 刃	EGSRC	30°	Ø0.5~Ø6	NDLC				●			B227
	Long Neck · Corner Radius · 2F 長頸型 · 圓鼻銑刀 · 2 刃	EGCRC	30°	Ø1~Ø6	NDLC				●			B228
	Long Neck · Ball Nose · 2F 長頸型 · 球型銑刀 · 2 刃	EGBRC	30°	0.25R~3R	NDLC				●			B229

A300 Carbide Endmills for CFRP/GFRP
鈎鋼銑刀 · 適用 CFRP/GFRP 複合材料加工

ASIA
(Metric)

	Square · Roughing · 8~17F 平銑刀 · 粗銑用 · 8~17 刃	ECSSR	±25°	Ø4~Ø12	NDLC				●			B230
	Square · Kevlar · 4F 平銑刀 · 克維拉纖維材料用 · 4 刃	ECSSK	0°	Ø4~Ø12	NDLC				●			B231
	Square · Finishing · 6F/8F 平銑刀 · 精銑用 · 6 刃 / 8 刃	ECSSF	8°	Ø6~Ø12	NDLC				●			B232
	Square · Compression · 2F/3F 複合平銑刀 · 2 刃 / 3 刃	ECSSD	-	Ø6~Ø12	NDLC				●			B233

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A830

PCD Endmills for Ceramics, Carbide and Glass
PCD 銑刀 · 適用陶瓷、鎢鋼和玻璃加工

ASIA
(Metric)







NEW

	PCD · Corner Radius PCD 圓鼻型銑刀	EDCUD	45°	Ø1~Ø3	-				●			B234
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S910

Carbide Modular Endmills for Deep Milling
鎢鋼模組化銑刀 · 適用深加工

ANSI
(Inch)












	Square Solid Head · 4F 平銑刀頭 · 4 刃	EHSWH	45°	Ø10~Ø20	SNAX	●	○	●		○	●	B236
	Square Solid Head (Unequal spacing) · 4F 不等分割平銑刀頭 (難削材用) · 4 刃	EPSWV	38°	Ø12~Ø20	SNAX	●	●	●		○	●	B236
	Square Solid Head (Unequal spacing) · 3F 不等分割平銑刀頭 (鋁用) · 3 刃	ENSWV	45°	Ø12~Ø20	-				●			B237
	Corner Radius Solid Head · 4F 圓鼻銑刀頭 · 4 刃	EHCWH	30°	Ø10~Ø20	SNAX	●	○	●		○	●	B237
	Ball Nose Solid Head · 2F 球型銑刀頭 · 2 刃	EHBWH	30°	Ø10~Ø20	SNAX	●	○	●		○	●	B238
	Chamfer Solid Head · 4F / 6F 倒角刀頭 · 4 刃 / 6 刃	EHFWH	0°	Ø10~Ø16	SNAX	●	●	●		○	○	B238

Solid End Milling

S930

Carbide Barrel Endmills for Profile Milling
鎢鋼酒桶銑刀 · 適用曲面加工

ASIA
(Metric)

	Barrel Shape · 4F 酒桶形 · 4 刃	EBASB	30°	Ø10~Ø12	ANAX	●	●	○		●	○	B242
	Barrel Shape · for Aluminum Alloy · 4F 酒桶形 · 鋁用 · 4 刃	EBNSB	40°	Ø10~Ø12	-				●			B242
	Oval Shape · 3F / 4F 橢圓形 · 3 刃 / 4 刃	EBASO	30°	Ø6~Ø12	ANAX	●	●	○		●	○	B243
	Oval Shape · for Aluminum Alloy · 3F / 4F 橢圓形 · 鋁用 · 3 刃 / 4 刃	EBNSO	40°	Ø6~Ø12	-				●			B243
	Lens Shape · 3F 透鏡形 · 3 刃	EBASL	30°	Ø6~Ø12	ANAX	●	●	○		●	○	B244
	Lens Shape · for Aluminum Alloy · 3F 透鏡形 · 鋁用 · 3 刃	EBNSL	40°	Ø6~Ø12	-				●			B244
	ST Taper Shape · 3F 圓錐形 · 3 刃	EBAST	20°	Ø6~Ø12	ANAX	●	●	○		●	○	B245
	ST Taper Shape · for Aluminum Alloy · 3F 圓錐形 · 鋁用 · 3 刃	EBNST	30°	Ø6~Ø12	-				●			B245
	HT Taper Shape · 2F 短錐形 · 2 刃	EBAHT	20°	Ø10	ANAX	●	●	○		●	○	B246
	HT Taper Shape · for Aluminum Alloy · 2F 短錐形 · 鋁用 · 2 刃	EBNHT	30°	Ø10	-				●			B246
	FT Taper Shape · for Aluminum Alloy · 3F 斜度球形 · 鋁用 · 3 刃	EBNFT	45°	0.5R~1.0R	-				●			B247

Index 索引

Appearance 外觀	Name 名稱	Code No. 編碼	Helix 螺旋角	Diameter 外徑	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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S950

Carbide Spherical Ball Endmills for Under Cutting
鈎鋼銑刀 · 適用陶瓷、鈎鋼和玻璃加工

ASIA
(Metric)

	Spherical Ball 220° · 2F 球型銑刀 · 220°全球頭球型 · 2 刃	EHRRC	15°	1R~6R	SNAX	●	●	●	○	○	○	B249
	Spherical Ball 260° · 2F 球型銑刀 · 260°全球頭球型 · 2 刃	EPRRC	15°	1R~8R	ANAX	●	●	●	○	○	○	B250
	Spherical Ball 300° · 2F 球型銑刀 · 300°全球頭球型 · 2 刃	EPRRC	10°	1R~6R	ANAX	●	●	●	○	○	○	B251

S960

Carbide Engraving & Chamfering Endmills for Engraving & Chamfering
鈎鋼雕刻及倒角銑刀 · 適用雕刻及倒角加工

ASIA
(Metric)

	Engraving Endmill 雕刻銑刀	EPESF	0°	Ø0.1~Ø1.5	TACO	●	●	●	○	○	○	B253
	Chamfer Endmill · 2F 倒角銑刀 · 2 刃	EPFSA	0°	Ø3~Ø12	UNICO	●	●	●	○	○	○	B254
	Chamfer Endmill · 4F / 5F / 6F 倒角銑刀 · 4 刃 / 5 刃 / 6 刃	EPFSA	0°	Ø4~Ø12	UNICO	●	●	●	○	○	○	B255
	Drill Mills · 2F 倒角兼用銑刀 · 2 刃	EPFSC	30°	Ø3~Ø12	UNICO	●	●	●	○	○	○	B256
	Dovetail Endmill · 4F 鳩尾槽銑刀 · 4 刃	EPSDT	0°, 15°	Ø3~Ø12	UNICO	●	●	●	○	○	○	B257
	Front Back Chamfer Endmill · 4F 上下倒角銑刀 · 4 刃	EPTSV	0°	Ø4~Ø10	UNICO	●	●	●	○	○	○	B258
	Inner Radius Endmill · 2F / 4F 內 R 角銑刀 · 2 刃 / 4 刃	EPISA	0°	Ø2.9~Ø3.9	UNICO	●	●	●	○	○	○	B259









S970

Carbide DuoFeed Endmills for High Feed Face Milling
鈎鋼 DuoFeed 高進給銑刀 · 適用高進給面銑加工

ASIA
(Metric)

	DuoFeed EndMill · 4F / 6F 高進給銑刀 · 4 刃 / 6 刃	EHWSA	38°	Ø3.175~Ø16	SNAX	●	●	●	○	○	○	B261
	DuoFeed EndMill · Internal Coolant · 4F / 6F 高進給銑刀 · 中心出水型 · 4 刃 / 6 刃	EHWCA	38°	Ø6~Ø12	SNAX	●	●	●	○	○	○	B262
	DuoFeed EndMill · Straight Flute · 4F / 6F 高進給銑刀 · 直刃型 · 4 刃 / 6 刃	EHWUS	0°	Ø1~Ø16	SNAX	●	○	●	○	○	○	B263









P Steel 鋼

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	V470 · EPSSVC4 · TACO 	G550 · EPSSC2 · UNICO 
Side Roughing 粗側銑削	V470 · EPSSVC4 · TACO 	G550 · EPSSC4 · UNICO 
Side Finishing 精側銑削	V47X · EPSSVD4 · ANAX 	G550 · EPSSH4 · UNICO 
Profiling 輪廓銑削	G550 · EPBSC2 · UNICO 	G450 · EPBSA2 · TACO 









M Stainless Steel 不鏽鋼

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	V47X · EPSSVC4 · ANAX 	V53X · ESSVC4 · SNAX 
Side Roughing 粗側銑削	V47X · EPSSVC4 · ANAX 	V53X · ESSVC4 · SNAX 
Side Finishing 精側銑削	V47X · EPSSVC5 · ANAX 	V53X · ESSVD4 · SNAX 
Profiling 輪廓銑削	M50X · ESBHS4 · ANAX 	M50X · EBSA2 · ANAX 

K Cast Iron 鑄鐵

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	V470 · EPSSVC4 · TACO 	G550 · EPSSC2 · UNICO 
Side Roughing 粗側銑削	V470 · EPSSVC4 · TACO 	G550 · EPSSC4 · UNICO 
Side Finishing 精側銑削	V47X · EPSSVD4 · ANAX 	G550 · EPSSH4 · UNICO 
Profiling 輪廓銑削	G550 · EPBSC2 · UNICO 	G450 · EPBSA2 · TACO 









N Aluminum alloy & Brass 鋁合金與銅

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	A100 · ENSSV3 · Uncoated 	A100 · ENSSS3 · Uncoated 
Side Roughing 粗側銑削	A100 · ENSSV3 · Uncoated 	A100 · ENSSP3 · Uncoated 
Side Finishing 精側銑削	A100 · ENSSF3 · Uncoated 	A100 · ENSSP3 · Uncoated 
Profiling 輪廓銑削	A100 · ENBSA2 · Uncoated 	G450 · EPBSA2 · Uncoated 

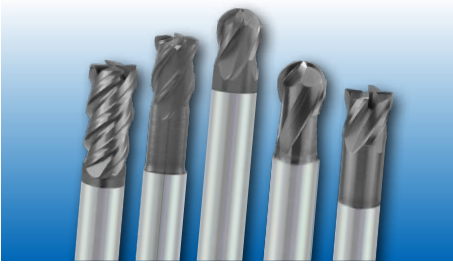
S High Temperature Alloy 高溫合金

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	V53X · ESSVC4 · SNAX 	V47X · EPSSVC4 · ANAX 
Side Roughing 粗側銑削	V53X · ESSVC4 · SNAX 	V47X · EPSSVC5 · ANAX 
Side Finishing 精側銑削	V47X · EPSSVD5 · ANAX 	V53X · ESSVD4 · SNAX 
Profiling 輪廓銑削	M50X · ESBHS4 · ANAX 	H65X · EHBHS4 · ANAX 

H Hardened Steel 高硬度鋼

Application 應用	1st Recommendation 第一推薦 (Series · Type · Coating)	2nd Recommendation 第二推薦 (Series · Type · Coating)
Slotting 溝銑削	H65X · EHCUH4 · ANAX 	H68X · EHCSF4 · SNAX 
Side Roughing 粗側銑削	H65X · EHSSH4 · ANAX 	V47X · EPSSVD5 · ANAX 
Side Finishing 精側銑削	H70X · EHSSS6 · SNAX 	V47X · EPSSVD5 · ANAX 
Profiling 輪廓銑削	H65X · EHBHS4 · ANAX 	H65X · EHBHS2 · ANAX 

H65X Carbide Endmills



- For high hardened steel, HRC 40~65.
- High speed general cutting.
- High rigidity design.
- ANAX smooth coating.
- 適用於高硬度鋼 (HRC 40~65)
- 高速泛用加工
- 高剛性設計
- 含鉻平滑塗層

→ Page B017

H68X Carbide Endmills



- For high hardened steel, HRC 50~68.
- High precision cutting.
- Ball nose tolerance $\pm 5\mu\text{m}$ ($d \leq 6$), $\pm 7\mu\text{m}$ ($d > 6$).
- SNAX smooth coating.
- 適用於高硬度鋼 (HRC 50~68)
- 高速高精加工
- 球型 R 公差 $\pm 5\mu\text{m}$ ($d \leq 6$), $\pm 7\mu\text{m}$ ($d > 6$)
- 含矽平滑塗層

→ Page B052

H70X Carbide Endmills



- 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

→ Page B060

H800 CBN Endmills



- Finishing for hardened steel (HRC ≤ 65).
- Low helix design
- Tool material : CBN
- 適用於 HRC ≤ 65 硬度鋼的精加工
- 低螺旋角設計
- 刀具材質：CBN

→ Page B066

H810 PCD Endmills



- Mirror finishing for hardened steel (HRC ≤ 65).
- High accuracy R $\pm 0.005\text{mm}$ realize high quality machining.
- Tool material : PCD
- 適用於 HRC ≤ 65 硬度鋼的鏡面精加工
- 高精度 R ($\pm 0.005\text{mm}$) 實現高品質加工
- 刀具材質：PCD

→ Page B068

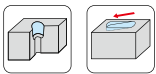
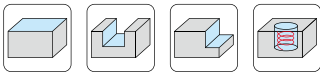
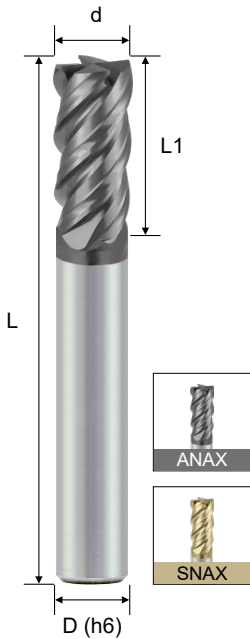
H65X - Square · High Helix · 2F / 4F

平銑刀 · 高導型 · 2 刃 / 4 刃

- UMG Carbide with Incredible toughness and wear resistance at high speed.
- Good surface and long tool life.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHSSH



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

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX					
EHSSH240200A	EHSSH240200S	0.2	0.4	50	4	2
EHSSH240300A	EHSSH240300S	0.3	0.6	50	4	2
EHSSH240400A	EHSSH240400S	0.4	0.8	50	4	2
EHSSH240500A	EHSSH240500S	0.5	1.0	50	4	2
EHSSH240600A	EHSSH240600S	0.6	1.5	50	4	2
EHSSH240700A	EHSSH240700S	0.7	2.0	50	4	2
EHSSH240800A	EHSSH240800S	0.8	2.0	50	4	2
EHSSH240900A	EHSSH240900S	0.9	2.0	50	4	2
EHSSH441000A	EHSSH441000S	1.0	3	50	4	4
EHSSH441500A	EHSSH441500S	1.5	4	50	4	4
EHSSH442000A	EHSSH442000S	2.0	5	50	4	4
EHSSH442500A	EHSSH442500S	2.5	6	50	4	4
EHSSH433000A	EHSSH433000S	3.0	8	50	3	4
EHSSH443000A	EHSSH443000S	3.0	8	50	4	4
EHSSH444000A	EHSSH444000S	4.0	10	50	4	4
EHSSH404000A	EHSSH404000S	4.0	10	50	6	4
EHSSH405000A	EHSSH405000S	5.0	13	50	6	4
EHSSH406000A	EHSSH406000S	6.0	15	50	6	4
EHSSH408000A	EHSSH408000S	8.0	20	60	8	4
EHSSH410000A	EHSSH410000S	10.0	25	75	10	4
EHSSH412000A	EHSSH412000S	12.0	30	75	12	4
EHSSH416000A	EHSSH416000S	16.0	35	100	16	4
EHSSH420000A	EHSSH420000S	20.0	45	100	20	4

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	HRC 35~45		HRC 40~55		HRC 55~65
Vc	145 m/min		125 m/min		105 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	3mm	15390	1415	13270	1220	11150
4mm	11550	1386	9950	1194	8360	1003
6mm	7700	1232	6630	1060	5570	891
8mm	5770	923	4980	796	4180	668
10mm	4620	924	3980	796	3345	669
12mm	3850	770	3320	664	2790	558

ap = 1d
ae = 0.05d

Solid End Milling

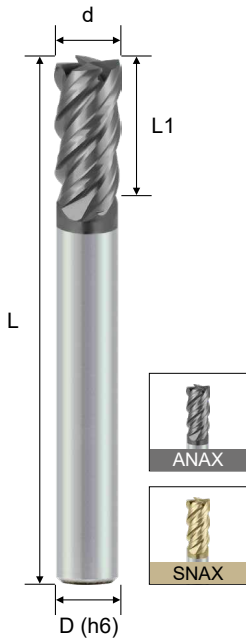
H65X - Square · High Helix · Long Shank · 4F

平銑刀 · 高導長柄型 · 4 刃

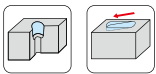
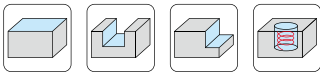
- UMG Carbide with Incredible toughness and wear resistance at high speeds.
- Good surface and long tool life.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHSLH



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX					
EHSLH443007A	EHSLH443007S	3.0	8	75	4	4
EHSLH443010A	EHSLH443010S	3.0	8	100	4	4
EHSLH444006A	EHSLH444006S	4.0	10	60	4	4
EHSLH444007A	EHSLH444007S	4.0	10	75	4	4
EHSLH444010A	EHSLH444010S	4.0	10	100	4	4
EHSLH406006A	EHSLH406006S	6.0	15	60	6	4
EHSLH406007A	EHSLH406007S	6.0	15	75	6	4
EHSLH406010A	EHSLH406010S	6.0	15	100	6	4
EHSLH408007A	EHSLH408007S	8.0	20	75	8	4
EHSLH408010A	EHSLH408010S	8.0	20	100	8	4
EHSLH408015A	EHSLH408015S	8.0	20	150	8	4
EHSLH410010A	EHSLH410010S	10.0	25	100	10	4
EHSLH410015A	EHSLH410015S	10.0	25	150	10	4
EHSLH412010A	EHSLH412010S	12.0	30	100	12	4
EHSLH412015A	EHSLH412015S	12.0	30	150	12	4
EHSLH416015A	EHSLH416015S	16.0	35	150	16	4
EHSLH420015A	EHSLH420015S	20.0	45	150	20	4



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

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	HRC 35~45		HRC 40~55		HRC 55~65
Vc	123 m/min		106 m/min		89 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	13080	1200	11280	1038	9480	871
4mm	9820	1178	8460	1015	7100	852
6mm	6545	1050	5635	900	4740	757
8mm	4905	785	4235	676	3555	568
10mm	3927	785	3385	676	2845	568
12mm	3270	655	2820	564	2370	474
			$ap = 1d$ $ae = 0.05d$			

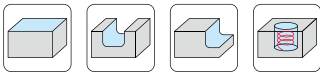
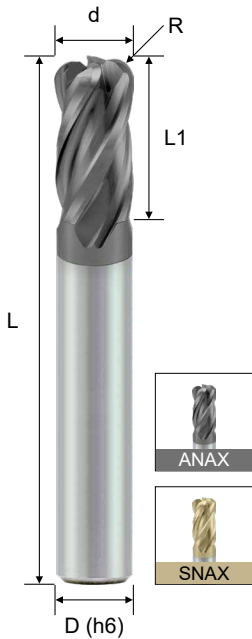
H65X - Corner Radius · Standard · 4F

圓鼻銑刀 · 標準型 · 4 刃

- Long tool life and wear resistant due to its negative angle with corner radius design.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHCSH



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHCSH441002A	EHCSH441002S	1	0.2R	2	50	4	4
EHCSH441003A	EHCSH441003S	1	0.3R	2	50	4	4
EHCSH441502A	EHCSH441502S	1.5	0.2R	3	50	4	4
EHCSH441503A	EHCSH441503S	1.5	0.3R	3	50	4	4
EHCSH442002A	EHCSH442002S	2	0.2R	4	50	4	4
EHCSH442003A	EHCSH442003S	2	0.3R	4	50	4	4
EHCSH442005A	EHCSH442005S	2	0.5R	4	50	4	4
EHCSH433002A	EHCSH433002S	3	0.2R	6	50	3	4
EHCSH443002A	EHCSH443002S	3	0.2R	6	50	4	4
EHCSH433003A	EHCSH433003S	3	0.3R	6	50	3	4
EHCSH443003A	EHCSH443003S	3	0.3R	6	50	4	4
EHCSH433005A	EHCSH433005S	3	0.5R	6	50	3	4
EHCSH443005A	EHCSH443005S	3	0.5R	6	50	4	4
EHCSH433010A	EHCSH433010S	3	1.0R	6	50	3	4
EHCSH443010A	EHCSH443010S	3	1.0R	6	50	4	4
EHCSH444002A	EHCSH444002S	4	0.2R	8	50	4	4
EHCSH444003A	EHCSH444003S	4	0.3R	8	50	4	4
EHCSH444005A	EHCSH444005S	4	0.5R	8	50	4	4
EHCSH444010A	EHCSH444010S	4	1.0R	8	50	4	4
EHCSH404003A	EHCSH404003S	4	0.3R	8	50	6	4
EHCSH404005A	EHCSH404005S	4	0.5R	8	50	6	4
EHCSH404010A	EHCSH404010S	4	1.0R	8	50	6	4
EHCSH405005A	EHCSH405005S	5	0.5R	10	50	6	4
EHCSH405010A	EHCSH405010S	5	1.0R	10	50	6	4
EHCSH406003A	EHCSH406003S	6	0.3R	12	50	6	4
EHCSH406005A	EHCSH406005S	6	0.5R	12	50	6	4
EHCSH406010A	EHCSH406010S	6	1.0R	12	50	6	4
EHCSH408005A	EHCSH408005S	8	0.5R	16	60	8	4
EHCSH408010A	EHCSH408010S	8	1.0R	16	60	8	4
EHCSH408015A	EHCSH408015S	8	1.5R	16	60	8	4
EHCSH410005A	EHCSH410005S	10	0.5R	20	75	10	4
EHCSH410010A	EHCSH410010S	10	1.0R	20	75	10	4
EHCSH410015A	EHCSH410015S	10	1.5R	20	75	10	4
EHCSH410020A	EHCSH410020S	10	2.0R	20	75	10	4
EHCSH412005A	EHCSH412005S	12	0.5R	24	75	12	4
EHCSH412010A	EHCSH412010S	12	1.0R	24	75	12	4
EHCSH412015A	EHCSH412015S	12	1.5R	24	75	12	4
EHCSH412020A	EHCSH412020S	12	2.0R	24	75	12	4

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
Hardness	HRC 35~45		HRC 40~55		HRC 55~65	
Vc	145 m/min		125 m/min		105 m/min	
Diameter (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	15390	1415	13270	1220	11150	1025
4mm	11550	1386	9950	1194	8360	1003
6mm	7700	1232	6630	1060	5570	891
8mm	5770	923	4980	796	4180	668
10mm	4620	924	3980	796	3345	669
12mm	3850	770	3320	664	2790	558

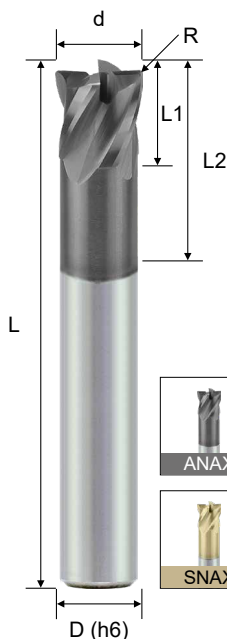
ap = 1d ae = 0.05d

H65X - Corner Radius · Short Flute · 4F 圓鼻銑刀 · 短刃型 · 4 刃

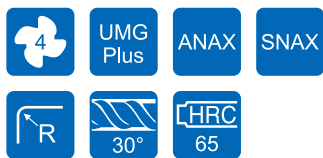
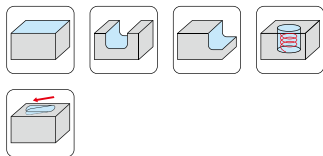
- Short cutting length with high rigidity is suitable for high speed cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHCUH



Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCUH403001A	EHCUH403001S	3	0.1R	3	7.5	50	6	4
EHCUH403005A	EHCUH403005S	3	0.5R	3	7.5	50	6	4
EHCUH404002A	EHCUH404002S	4	0.2R	4	10.0	50	6	4
EHCUH404005A	EHCUH404005S	4	0.5R	4	10.0	50	6	4
EHCUH405002A	EHCUH405002S	5	0.2R	5	12.5	50	6	4
EHCUH405005A	EHCUH405005S	5	0.5R	5	12.5	50	6	4
EHCUH406002A	EHCUH406002S	6	0.2R	6	15.0	50	6	4
EHCUH406005A	EHCUH406005S	6	0.5R	6	15.0	50	6	4
EHCUH406010A	EHCUH406010S	6	1.0R	6	15.0	50	6	4
EHCUH408003A	EHCUH408003S	8	0.3R	8	20.0	60	8	4
EHCUH408005A	EHCUH408005S	8	0.5R	8	20.0	60	8	4
EHCUH408010A	EHCUH408010S	8	1.0R	8	20.0	60	8	4
EHCUH408015A	EHCUH408015S	8	1.5R	8	20.0	60	8	4
EHCUH410003A	EHCUH410003S	10	0.3R	10	25.0	75	10	4
EHCUH410005A	EHCUH410005S	10	0.5R	10	25.0	75	10	4
EHCUH410010A	EHCUH410010S	10	1.0R	10	25.0	75	10	4
EHCUH410015A	EHCUH410015S	10	1.5R	10	25.0	75	10	4
EHCUH410020A	EHCUH410020S	10	2.0R	10	25.0	75	10	4
EHCUH412003A	EHCUH412003S	12	0.3R	12	30.0	75	12	4
EHCUH412005A	EHCUH412005S	12	0.5R	12	30.0	75	12	4
EHCUH412010A	EHCUH412010S	12	1.0R	12	30.0	75	12	4
EHCUH412015A	EHCUH412015S	12	1.5R	12	30.0	75	12	4
EHCUH412020A	EHCUH412020S	12	2.0R	12	30.0	75	12	4



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

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

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	HRC 35~45		HRC 40~55		HRC 55~65
Vc	123 m/min		106 m/min		89 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	15390	1415	13270	1220	11150	1025
4mm	11550	1386	9950	1194	8360	1003
6mm	7700	1232	6630	1060	5570	891
8mm	5770	923	4980	796	4180	668
10mm	4620	924	3980	796	3345	669
12mm	3850	770	3320	664	2790	558
			$ap = 1d$ $ae = 0.05d$			

H65X - Corner Radius · Long Shank · 4F

圓鼻銑刀 · 長柄型 · 4 刃

- Long tool life and wear resistant due to its negative angle with corner radius design.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

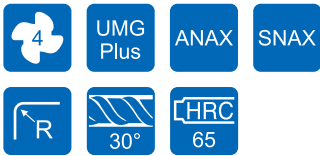
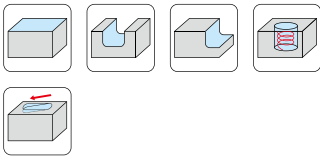
ASIA
(Metric)

EHCLH



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHCLH44400507A	EHCLH44400507S	4	0.5R	8	75	4	4
EHCLH44401007A	EHCLH44401007S	4	1.0R	8	75	4	4
EHCLH44400510A	EHCLH44400510S	4	0.5R	8	100	4	4
EHCLH44401010A	EHCLH44401010S	4	1.0R	8	100	4	4
EHCLH40600507A	EHCLH40600507S	6	0.5R	12	75	6	4
EHCLH40601007A	EHCLH40601007S	6	1.0R	12	75	6	4
EHCLH40600510A	EHCLH40600510S	6	0.5R	12	100	6	4
EHCLH40601010A	EHCLH40601010S	6	1.0R	12	100	6	4
EHCLH40800507A	EHCLH40800507S	8	0.5R	16	75	8	4
EHCLH40801007A	EHCLH40801007S	8	1.0R	16	75	8	4
EHCLH40800510A	EHCLH40800510S	8	0.5R	16	100	8	4
EHCLH40801010A	EHCLH40801010S	8	1.0R	16	100	8	4
EHCLH41000510A	EHCLH41000510S	10	0.5R	20	100	10	4
EHCLH41001010A	EHCLH41001010S	10	1.0R	20	100	10	4
EHCLH41000515A	EHCLH41000515S	10	0.5R	20	150	10	4
EHCLH41001015A	EHCLH41001015S	10	1.0R	20	150	10	4
EHCLH41200510A	EHCLH41200510S	12	0.5R	24	100	12	4
EHCLH41201010A	EHCLH41201010S	12	1.0R	24	100	12	4
EHCLH41200515A	EHCLH41200515S	12	0.5R	24	150	12	4
EHCLH41201015A	EHCLH41201015S	12	1.0R	24	150	12	4

Solid End Milling



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

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

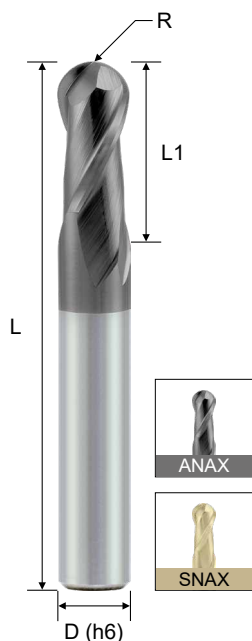
Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	HRC 35~45		HRC 40~55		HRC 55~65
Vc	123 m/min		106 m/min		89 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	13080	1200	11280	1038	9480	871
4mm	9820	1178	8460	1015	7100	852
6mm	6545	1050	5635	900	4740	757
8mm	4905	785	4235	676	3555	568
10mm	3927	785	3385	676	2845	568
12mm	3270	655	2820	564	2370	474
		$ap = 1d$ $ae = 0.05d$				

H65X - Ball Nose · Standard · 2F 球型銑刀 · 標準型 · 2 刃

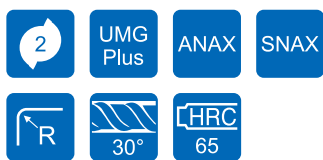
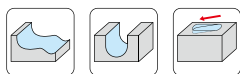
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHBSH

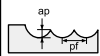


Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHBSH240200A	EHBSH240200S	0.10R	0.2	0.4	50	4	2
EHBSH240300A	EHBSH240300S	0.15R	0.3	0.6	50	4	2
EHBSH240400A	EHBSH240400S	0.20R	0.4	0.8	50	4	2
EHBSH240500A	EHBSH240500S	0.25R	0.5	1	50	4	2
EHBSH240600A	EHBSH240600S	0.30R	0.6	1.2	50	4	2
EHBSH240700A	EHBSH240700S	0.35R	0.7	1.4	50	4	2
EHBSH240800A	EHBSH240800S	0.40R	0.8	1.6	50	4	2
EHBSH240900A	EHBSH240900S	0.45R	0.9	1.8	50	4	2
EHBSH241000A	EHBSH241000S	0.50R	1.0	2	50	4	2
EHBSH241500A	EHBSH241500S	0.75R	1.5	3	50	4	2
EHBSH242000A	EHBSH242000S	1.00R	2.0	4	50	4	2
EHBSH233000A	EHBSH233000S	1.50R	3.0	6	50	3	2
EHBSH243000A	EHBSH243000S	1.50R	3.0	6	50	4	2
EHBSH244000A	EHBSH244000S	2.00R	4.0	8	50	4	2
EHBSH205000A	EHBSH205000S	2.50R	5.0	10	50	6	2
EHBSH206000A	EHBSH206000S	3.00R	6.0	12	50	6	2
EHBSH208000A	EHBSH208000S	4.00R	8.0	16	60	8	2
EHBSH210000A	EHBSH210000S	5.00R	10.0	20	75	10	2
EHBSH212000A	EHBSH212000S	6.00R	12.0	24	75	12	2
EHBSH216000A	EHBSH216000S	8.00R	16.0	32	100	16	2



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

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	HRC 35~45	145 m/min				
	HRC 40~55	125 m/min				
	HRC 55~65	105 m/min				
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	45270	1130	39030	975	32780	820
2R	22636	1358	19500	1170	16400	984
3R	15090	1130	13000	975	10930	820
4R	11320	905	9750	780	8195	655
5R	9055	770	7800	663	6555	557
6R	7545	680	6500	585	5460	491



ap = 0.07d
pf = 0.1d

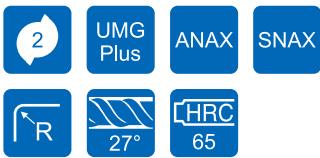
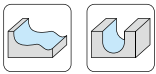
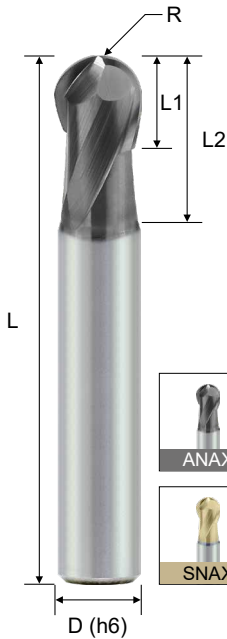
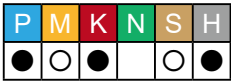
H65X - Ball Nose · Short Flute · 2F

球型銑刀 · 短刃型 · 2刃

- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- Short cutting length provides high resistance for high speed cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHBHU



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

Order No.		Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHBHU202000A	EHBHU202000S	1.0R	2	2	4	50	6	2
EHBHU203000A	EHBHU203000S	1.5R	3	3	6	50	6	2
EHBHU204000A	EHBHU204000S	2.0R	4	4	8	50	6	2
EHBHU205000A	EHBHU205000S	2.5R	5	5	10	50	6	2
EHBHU206000A	EHBHU206000S	3.0R	6	6	12	50	6	2
EHBHU208000A	EHBHU208000S	4.0R	8	8	16	60	8	2
EHBHU210000A	EHBHU210000S	5.0R	10	10	20	75	10	2
EHBHU212000A	EHBHU212000S	6.0R	12	12	24	75	12	2
EHBHU216000A	EHBHU216000S	8.0R	16	16	32	100	16	2

Solid End Milling

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	HRC 35~45	145 m/min				
			HRC 40~55	125 m/min		
					HRC 55~65	105 m/min
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	45270	1130	39030	975	32780	820
2R	22636	1358	19500	1170	16400	984
3R	15090	1130	13000	975	10930	820
4R	11320	905	9750	780	8195	655
5R	9055	770	7800	663	6555	557
6R	7545	680	6500	585	5460	491
			$ap = 0.07d$ $pf = 0.1d$			

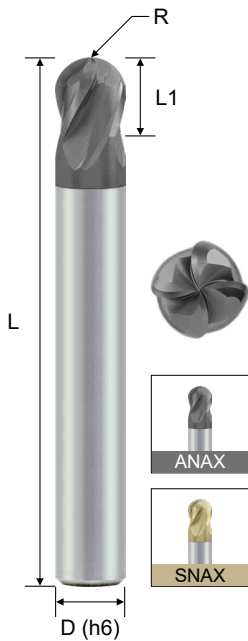
H65X - Ball Nose · Near Center Design · 3F / 4F

球型銑刀 · 刃近中心型 · 3刃 / 4刃

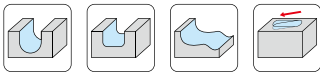
- For high temperature alloy and high hardened steel machining.
- Reach to center and near to center flutes design, significantly improves the tool life and surface finish in profile milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EBHBS

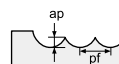


Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EBHBS342000A	EBHBS342000S	1R	2	2	50	4	3
EBHBS302000A	EBHBS302000S	1R	2	2	50	6	3
EBHBS303000A	EBHBS303000S	1.5R	3	3	50	6	3
EBHBS344000A	EBHBS344000S	2R	4	4	50	4	3
EBHBS304000A	EBHBS304000S	2R	4	4	50	6	3
EBHBS406000A	EBHBS406000S	3R	6	6	50	6	4
EBHBS408000A	EBHBS408000S	4R	8	8	60	8	4
EBHBS410000A	EBHBS410000S	5R	10	10	75	10	4
EBHBS412000A	EBHBS412000S	6R	12	12	75	12	4
EBHBS416000A	EBHBS416000S	8R	16	16	100	16	4



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Material	High temperature alloy			Hardened steel (HRC 40~55)			Hardened steel (HRC 50~60)			Hardened steel (HRC 60~65)		
	Radius (R)	RPM	Feed	ap	RPM	Feed	ap	RPM	Feed	ap	RPM	Feed
3R	15000	3400	0.25	21000	8400	0.25	16000	4800	0.2	8000	2300	0.09
4R	12000	2600	0.3	16000	6400	0.3	12000	3600	0.2	6000	1900	0.09
5R	9600	2200	0.5	13000	5200	0.5	10000	3200	0.2	4800	1500	0.1
6R	7200	1700	0.5	9000	3600	0.5	7000	2200	0.3	3600	1100	0.1
8R	5400	1300	0.7	6800	2700	0.7	5300	1700	0.4	2700	830	0.13



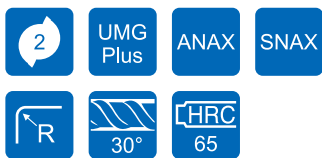
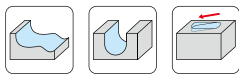
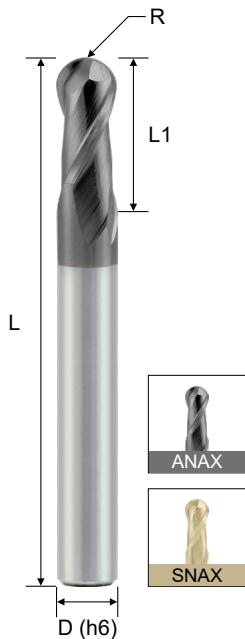
H65X - Ball Nose · Long Shank · 2F

球型銑刀 · 長柄型 · 2 刃

- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHBLH



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

Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHBLH242007A	EHBLH242007S	1.0R	2	4	75	4	2
EHBLH243007A	EHBLH243007S	1.5R	3	6	75	4	2
EHBLH243010A	EHBLH243010S	1.5R	3	6	100	4	2
EHBLH244006A	EHBLH244006S	2.0R	4	8	60	4	2
EHBLH244007A	EHBLH244007S	2.0R	4	8	75	4	2
EHBLH244010A	EHBLH244010S	2.0R	4	8	100	4	2
EHBLH206006A	EHBLH206006S	3.0R	6	12	60	6	2
EHBLH206007A	EHBLH206007S	3.0R	6	12	75	6	2
EHBLH206010A	EHBLH206010S	3.0R	6	12	100	6	2
EHBLH208007A	EHBLH208007S	4.0R	8	16	75	8	2
EHBLH208010A	EHBLH208010S	4.0R	8	16	100	8	2
EHBLH208015A	EHBLH208015S	4.0R	8	16	150	8	2
EHBLH210010A	EHBLH210010S	5.0R	10	20	100	10	2
EHBLH210015A	EHBLH210015S	5.0R	10	20	150	10	2
EHBLH212010A	EHBLH212010S	6.0R	12	24	100	12	2
EHBLH212015A	EHBLH212015S	6.0R	12	24	150	12	2
EHBLH216015A	EHBLH216015S	8.0R	16	32	150	16	2
EHBLH220015A	EHBLH220015S	10.0R	20	40	150	20	2

Solid End Milling

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	Hardness	HRC 35~45	Hardness	HRC 40~55	Hardness	HRC 55~65
Vc	145 m/min		125 m/min		105 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	1R	36200	904	31200	780	26200
2R	18100	1086	15600	930	13120	787
3R	12050	904	10400	780	8750	656
4R	9050	724	7800	624	6550	524
5R	7250	616	6250	530	5250	446
6R	6036	544	5200	468	4370	393
		ap = 0.07d pf = 0.1d				

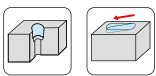
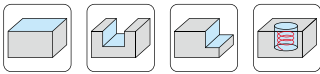
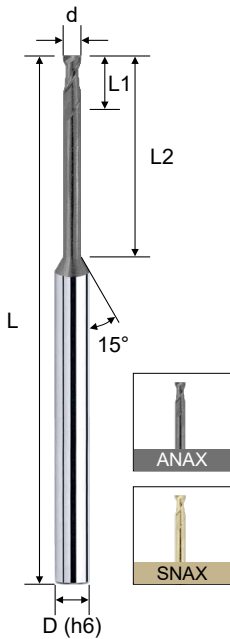
H65X - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC240201A	EHSRC240201S	0.2	0.3	1	50	4	2
EHSRC240202A	EHSRC240202S	0.2	0.3	2	50	4	2
EHSRC240301A	EHSRC240301S	0.3	0.4	1	50	4	2
EHSRC240302A	EHSRC240302S	0.3	0.4	2	50	4	2
EHSRC240303A	EHSRC240303S	0.3	0.4	3	50	4	2
EHSRC240304A	EHSRC240304S	0.3	0.4	4	50	4	2
EHSRC240305A	EHSRC240305S	0.3	0.4	5	50	4	2
EHSRC240401A	EHSRC240401S	0.4	0.5	1	50	4	2
EHSRC240402A	EHSRC240402S	0.4	0.5	2	50	4	2
EHSRC240403A	EHSRC240403S	0.4	0.5	3	50	4	2
EHSRC240404A	EHSRC240404S	0.4	0.5	4	50	4	2
EHSRC240405A	EHSRC240405S	0.4	0.5	5	50	4	2
EHSRC240406A	EHSRC240406S	0.4	0.5	6	50	4	2
EHSRC240408A	EHSRC240408S	0.4	0.5	8	50	4	2
EHSRC240410A	EHSRC240410S	0.4	0.5	10	50	4	2
EHSRC240502A	EHSRC240502S	0.5	0.6	2	50	4	2
EHSRC240503A	EHSRC240503S	0.5	0.6	3	50	4	2
EHSRC240504A	EHSRC240504S	0.5	0.6	4	50	4	2
EHSRC240505A	EHSRC240505S	0.5	0.6	5	50	4	2
EHSRC240506A	EHSRC240506S	0.5	0.6	6	50	4	2
EHSRC240508A	EHSRC240508S	0.5	0.6	8	50	4	2
EHSRC240510A	EHSRC240510S	0.5	0.6	10	50	4	2
EHSRC240512A	EHSRC240512S	0.5	0.6	12	50	4	2
EHSRC240514A	EHSRC240514S	0.5	0.6	14	50	4	2
EHSRC240602A	EHSRC240602S	0.6	0.7	2	50	4	2
EHSRC240603A	EHSRC240603S	0.6	0.7	3	50	4	2
EHSRC240604A	EHSRC240604S	0.6	0.7	4	50	4	2
EHSRC240605A	EHSRC240605S	0.6	0.7	5	50	4	2
EHSRC240606A	EHSRC240606S	0.6	0.7	6	50	4	2
EHSRC240608A	EHSRC240608S	0.6	0.7	8	50	4	2
EHSRC240610A	EHSRC240610S	0.6	0.7	10	50	4	2
EHSRC240612A	EHSRC240612S	0.6	0.7	12	50	4	2
EHSRC240614A	EHSRC240614S	0.6	0.7	14	50	4	2
EHSRC240616A	EHSRC240616S	0.6	0.7	16	50	4	2
EHSRC240702A	EHSRC240702S	0.7	0.8	2	50	4	2
EHSRC240704A	EHSRC240704S	0.7	0.8	4	50	4	2
EHSRC240706A	EHSRC240706S	0.7	0.8	6	50	4	2
EHSRC240708A	EHSRC240708S	0.7	0.8	8	50	4	2
EHSRC240710A	EHSRC240710S	0.7	0.8	10	50	4	2
EHSRC240712A	EHSRC240712S	0.7	0.8	12	50	4	2

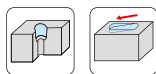
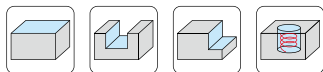
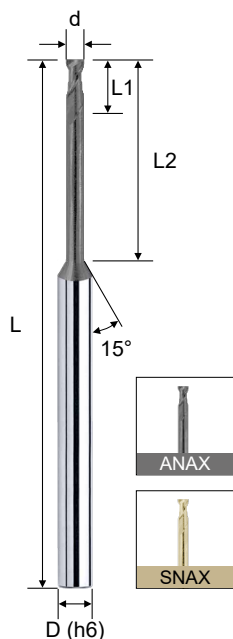
(continued)

H65X - Long Neck · Square · 2F 長頸型 · 平銑刀 · 2刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
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EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC240802A	EHSRC240802S	0.8	1.0	2	50	4	2
EHSRC240804A	EHSRC240804S	0.8	1.0	4	50	4	2
EHSRC240806A	EHSRC240806S	0.8	1.0	6	50	4	2
EHSRC240808A	EHSRC240808S	0.8	1.0	8	50	4	2
EHSRC240810A	EHSRC240810S	0.8	1.0	10	50	4	2
EHSRC240812A	EHSRC240812S	0.8	1.0	12	50	4	2
EHSRC240814A	EHSRC240814S	0.8	1.0	14	50	4	2
EHSRC240906A	EHSRC240906S	0.9	1.1	6	50	4	2
EHSRC240908A	EHSRC240908S	0.9	1.1	8	50	4	2
EHSRC240910A	EHSRC240910S	0.9	1.1	10	50	4	2
EHSRC241002A	EHSRC241002S	1.0	1.2	2	50	4	2
EHSRC241003A	EHSRC241003S	1.0	1.2	3	50	4	2
EHSRC241004A	EHSRC241004S	1.0	1.2	4	50	4	2
EHSRC241005A	EHSRC241005S	1.0	1.2	5	50	4	2
EHSRC241006A	EHSRC241006S	1.0	1.2	6	50	4	2
EHSRC241008A	EHSRC241008S	1.0	1.2	8	50	4	2
EHSRC241010A	EHSRC241010S	1.0	1.2	10	50	4	2
EHSRC241012A	EHSRC241012S	1.0	1.2	12	50	4	2
EHSRC241014A	EHSRC241014S	1.0	1.2	14	50	4	2
EHSRC241016A	EHSRC241016S	1.0	1.2	16	50	4	2
EHSRC241018A	EHSRC241018S	1.0	1.2	18	50	4	2
EHSRC241020A	EHSRC241020S	1.0	1.2	20	50	4	2
EHSRC241204A	EHSRC241204S	1.2	1.5	4	50	4	2
EHSRC241206A	EHSRC241206S	1.2	1.5	6	50	4	2
EHSRC241208A	EHSRC241208S	1.2	1.5	8	50	4	2
EHSRC241210A	EHSRC241210S	1.2	1.5	10	50	4	2
EHSRC241212A	EHSRC241212S	1.2	1.5	12	50	4	2
EHSRC241216A	EHSRC241216S	1.2	1.5	16	50	4	2
EHSRC241220A	EHSRC241220S	1.2	1.5	20	50	4	2
EHSRC241406A	EHSRC241406S	1.4	1.8	6	50	4	2
EHSRC241408A	EHSRC241408S	1.4	1.8	8	50	4	2
EHSRC241410A	EHSRC241410S	1.4	1.8	10	50	4	2
EHSRC241414A	EHSRC241414S	1.4	1.8	14	50	4	2
EHSRC241416A	EHSRC241416S	1.4	1.8	16	50	4	2
EHSRC241420A	EHSRC241420S	1.4	1.8	20	50	4	2
EHSRC241504A	EHSRC241504S	1.5	1.8	4	50	4	2
EHSRC241506A	EHSRC241506S	1.5	1.8	6	50	4	2
EHSRC241508A	EHSRC241508S	1.5	1.8	8	50	4	2
EHSRC241510A	EHSRC241510S	1.5	1.8	10	50	4	2
EHSRC241512A	EHSRC241512S	1.5	1.8	12	50	4	2

Solid End Milling

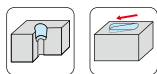
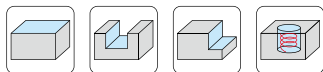
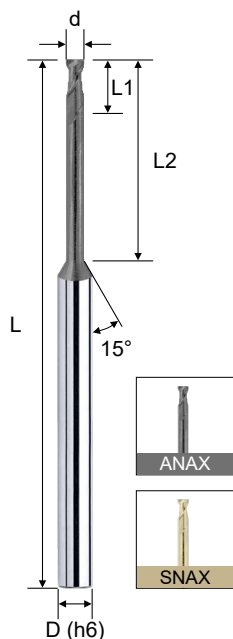
(continued)

H65X - Long Neck · Square · 2F 長頸型 · 平銑刀 · 2刃

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EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC241514A	EHSRC241514S	1.5	1.8	14	50	4	2
EHSRC241516A	EHSRC241516S	1.5	1.8	16	50	4	2
EHSRC241518A	EHSRC241518S	1.5	1.8	18	50	4	2
EHSRC241520A	EHSRC241520S	1.5	1.8	20	50	4	2
EHSRC241610A	EHSRC241610S	1.6	1.9	10	50	4	2
EHSRC241614A	EHSRC241614S	1.6	1.9	14	50	4	2
EHSRC241618A	EHSRC241618S	1.6	1.9	18	50	4	2
EHSRC241810A	EHSRC241810S	1.8	2.0	10	50	4	2
EHSRC241814A	EHSRC241814S	1.8	2.0	14	50	4	2
EHSRC241818A	EHSRC241818S	1.8	2.0	18	50	4	2
EHSRC242004A	EHSRC242004S	2.0	2.5	4	50	4	2
EHSRC242006A	EHSRC242006S	2.0	2.5	6	50	4	2
EHSRC242008A	EHSRC242008S	2.0	2.5	8	50	4	2
EHSRC242010A	EHSRC242010S	2.0	2.5	10	50	4	2
EHSRC242012A	EHSRC242012S	2.0	2.5	12	50	4	2
EHSRC242014A	EHSRC242014S	2.0	2.5	14	50	4	2
EHSRC242016A	EHSRC242016S	2.0	2.5	16	50	4	2
EHSRC242018A	EHSRC242018S	2.0	2.5	18	50	4	2
EHSRC242020A	EHSRC242020S	2.0	2.5	20	50	4	2
EHSRC242022A	EHSRC242022S	2.0	2.5	22	60	4	2
EHSRC242025A	EHSRC242025S	2.0	2.5	25	60	4	2
EHSRC242030A	EHSRC242030S	2.0	2.5	30	75	4	2
EHSRC242035A	EHSRC242035S	2.0	2.5	35	75	4	2
EHSRC242508A	EHSRC242508S	2.5	3.0	8	50	4	2
EHSRC242510A	EHSRC242510S	2.5	3.0	10	50	4	2
EHSRC242512A	EHSRC242512S	2.5	3.0	12	50	4	2
EHSRC242516A	EHSRC242516S	2.5	3.0	16	50	4	2
EHSRC242520A	EHSRC242520S	2.5	3.0	20	50	4	2
EHSRC242525A	EHSRC242525S	2.5	3.0	25	60	4	2
EHSRC242530A	EHSRC242530S	2.5	3.0	30	75	4	2
EHSRC242535A	EHSRC242535S	2.5	3.0	35	75	4	2
EHSRC203006A	EHSRC203006S	3.0	3.5	6	50	6	2
EHSRC203010A	EHSRC203010S	3.0	3.5	10	50	6	2
EHSRC203012A	EHSRC203012S	3.0	3.5	12	50	6	2
EHSRC203016A	EHSRC203016S	3.0	3.5	16	50	6	2
EHSRC203020A	EHSRC203020S	3.0	3.5	20	60	6	2
EHSRC203025A	EHSRC203025S	3.0	3.5	25	60	6	2
EHSRC203030A	EHSRC203030S	3.0	3.5	30	75	6	2
EHSRC203035A	EHSRC203035S	3.0	3.5	35	75	6	2

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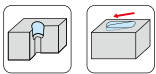
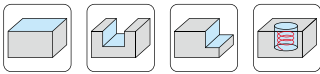
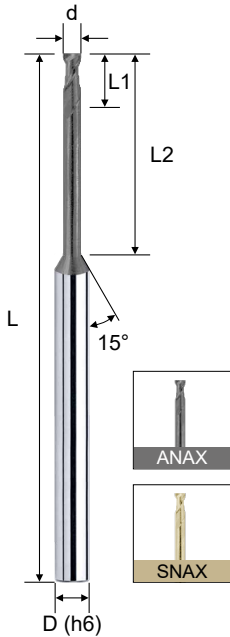
H65X - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC204008A	EHSRC204008S	4.0	4.5	8	50	6	2
EHSRC204010A	EHSRC204010S	4.0	4.5	10	50	6	2
EHSRC204012A	EHSRC204012S	4.0	4.5	12	50	6	2
EHSRC204016A	EHSRC204016S	4.0	4.5	16	50	6	2
EHSRC204020A	EHSRC204020S	4.0	4.5	20	60	6	2
EHSRC204025A	EHSRC204025S	4.0	4.5	25	60	6	2
EHSRC204030A	EHSRC204030S	4.0	4.5	30	75	6	2
EHSRC204035A	EHSRC204035S	4.0	4.5	35	75	6	2
EHSRC205016A	EHSRC205016S	5.0	7.0	16	50	6	2
EHSRC205020A	EHSRC205020S	5.0	7.0	20	60	6	2
EHSRC205025A	EHSRC205025S	5.0	7.0	25	60	6	2
EHSRC205030A	EHSRC205030S	5.0	7.0	30	75	6	2
EHSRC205035A	EHSRC205035S	5.0	7.0	35	75	6	2
EHSRC206020A	EHSRC206020S	6.0	10.0	20	60	6	2
EHSRC206030A	EHSRC206030S	6.0	10.0	30	75	6	2
EHSRC208020A	EHSRC208020S	8.0	15.0	20	60	8	2
EHSRC208030A	EHSRC208030S	8.0	15.0	30	75	8	2
EHSRC208040A	EHSRC208040S	8.0	15.0	40	100	8	2
EHSRC210025A	EHSRC210025S	10.0	20.0	25	75	10	2
EHSRC210035A	EHSRC210035S	10.0	20.0	35	75	10	2
EHSRC210045A	EHSRC210045S	10.0	20.0	45	100	10	2
EHSRC212030A	EHSRC212030S	12.0	25.0	30	75	12	2
EHSRC212040A	EHSRC212040S	12.0	25.0	40	100	12	2
EHSRC212050A	EHSRC212050S	12.0	25.0	50	100	12	2

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11			Hardened Steel SKD11,SKH51			
	HRC 35~45				HRC 40~55			HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.2mm	0.5	56000	270	0.003	44800	180	0.002	15000	10	0.001	0.160
	1	50900	230	0.004	40800	160	0.003	-	-	-	-
	1.5	48200	200	0.002	38500	140	0.002	-	-	-	-
0.3mm	1.5	50800	360	0.005	42700	260	0.004	14600	13	0.003	0.057
	3	31900	190	0.001	25500	130	0.001	14600	10	0.001	0.004
	5	20400	80	0.001	16300	60	0.001	-	-	-	-
0.4mm	1	48100	470	0.008	38500	320	0.005	14300	17	0.003	0.054
	5	30100	240	0.002	24100	160	0.001	14300	14	0.001	0.003
	10	24600	150	0.001	19700	100	0.001	14300	11	0.001	0.001



(continued)

Solid End Milling

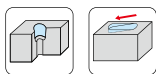
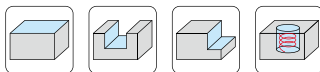
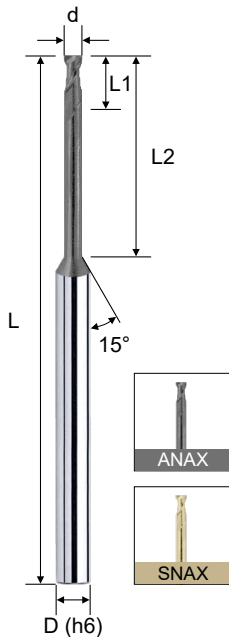
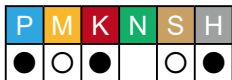
H65X - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2 刃

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ASIA
(Metric)

EHSRC



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

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61,SKD11			Hardened Steel SKD11,SKH51			
	HRC 35~45				HRC 40~55			HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.5mm	3	32200	370	0.008	25700	260	0.006	14000	19	0.004	0.016
	5	27200	290	0.006	21700	200	0.004	14000	17	0.003	0.008
	8	21600	190	0.001	17400	130	0.001	14000	14	0.001	0.002
	10	19600	150	0.001	15600	100	0.001	14000	12	0.001	0.001
	14	16300	70	0.001	13000	50	0.001	-	-	-	-
0.6mm	3	33500	500	0.013	26800	340	0.009	12000	22	0.005	0.114
	6	23000	290	0.005	18400	200	0.003	12000	19	0.002	0.008
	8	20000	230	0.003	16000	160	0.002	12000	17	0.001	0.003
	10	17900	180	0.002	14300	130	0.001	12000	15	0.001	0.002
	12	16400	150	0.001	13100	100	0.001	12000	13	0.001	0.001
	16	13500	70	0.001	10800	50	0.001	-	-	-	-
0.7mm	4	25800	440	0.012	20600	290	0.009	10000	22	0.006	0.047
	6	21200	330	0.007	16900	230	0.005	10000	20	0.003	0.014
	8	18400	260	0.004	14700	190	0.003	10000	18	0.002	0.006
	10	16500	220	0.003	13200	160	0.002	10000	16	0.001	0.003
	12	14100	180	0.002	11300	130	0.001	8000	14	0.001	0.001
0.8mm	4	24100	480	0.019	19300	330	0.013	8000	20	0.010	0.080
	8	17200	300	0.006	13800	200	0.004	8000	16	0.003	0.010
	12	14100	200	0.003	11300	140	0.002	8000	12	0.001	0.003
	14	12300	150	0.001	9800	100	0.001	-	-	-	-
0.9mm	6	18500	420	0.013	14800	290	0.010	7200	18	0.007	0.038
	8	16100	330	0.008	12900	230	0.006	7200	16	0.004	0.016
	10	14500	270	0.005	11600	190	0.004	7200	14	0.002	0.008
1.0mm	5	19600	510	0.022	15700	360	0.016	6500	15	0.009	0.013
	10	13800	300	0.007	11000	210	0.005	6500	12	0.003	0.013
	12	12600	250	0.005	10100	170	0.003	6500	11	0.002	0.007
	14	11700	210	0.003	9400	150	0.002	650	10	0.001	0.005
	16	11000	180	0.003	8800	130	0.002	-	-	-	-
	20	9800	130	0.002	7900	90	0.001	-	-	-	-
	20	9800	130	0.002	7900	90	0.001	-	-	-	-
1.2mm	6	16100	490	0.026	12800	340	0.019	9600	22	0.011	0.120
	12	11400	290	0.008	9100	200	0.005	-	-	-	-
	16	9800	220	0.004	7900	150	0.003	-	-	-	-
	20	8800	170	0.003	7000	120	0.002	-	-	-	-
1.4mm	8	12900	440	0.025	10300	310	0.018	9600	18	0.010	0.094
	10	11500	380	0.017	9200	260	0.012	-	-	-	0.048
	16	9100	250	0.007	7300	180	0.005	-	-	-	0.012
	20	7800	180	0.004	6200	120	0.003	-	-	-	0.005
1.5mm	8	12500	460	0.029	10000	320	0.020	9600	25	0.012	0.124
	12	10200	340	0.016	8200	240	0.011	-	-	-	-
	14	9500	300	0.012	7600	210	0.008	-	-	-	-
	16	8900	270	0.009	7100	190	0.007	-	-	-	-
	20	7900	220	0.006	6300	150	0.004	-	-	-	-



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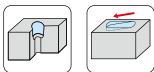
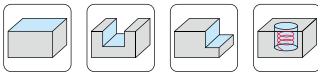
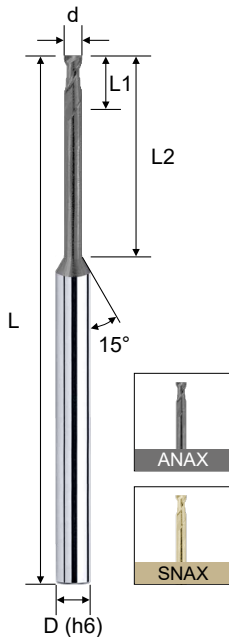
H65X - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHSRC



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

Material	PREHARDENED STEELS NAK80 CENA1				HARDENED STEELS SKD61, SKD11			Hardened Steel SKD11, SKH51			
	HRC 35~45				HRC 40~55			HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1.6mm	10	10800	410	0.025	8600	280	0.018	9600	15	0.010	0.082
	14	9100	320	0.014	7300	220	0.010	-	-	-	-
	18	8000	260	0.009	6400	180	0.006	-	-	-	-
2.0mm	6	12500	650	0.045	10000	450	0.032	9600	211	0.019	0.926
	10	9700	470	0.031	7800	330	0.022	9600	45	0.013	0.200
	12	8900	420	0.026	7100	290	0.019	9600	56	0.011	0.116
	14	8200	370	0.022	6600	260	0.016	9600	16	0.009	0.073
	20	6900	280	0.013	5500	190	0.009	-	-	-	-
	25	6200	230	0.008	4900	160	0.006	-	-	-	-
2.5mm	30	5600	180	0.005	4500	130	0.004	-	-	-	-
	8	9600	670	0.054	7700	460	0.039	9600	227	0.023	0.954
	12	7900	520	0.042	6300	360	0.030	9600	67	0.018	0.283
	16	6800	430	0.031	5500	290	0.022	9600	28	0.013	0.119
	20	6100	360	0.023	4900	250	0.017	9600	14	0.010	0.061
	25	5500	300	0.015	4400	210	0.011	-	-	-	-
3.0mm	30	5000	250	0.010	4000	170	0.007	-	-	-	-
	35	4800	190	0.007	3800	140	0.005	-	-	-	-
	6	8000	700	0.072	6400	480	0.052	8000	435	0.031	1.978
	10	7200	620	0.064	5800	430	0.046	8000	222	0.027	1.013
	16	5900	470	0.045	4700	320	0.032	8000	54	0.019	0.247
	20	5300	400	0.035	4300	280	0.025	8000	27	0.015	0.127
4.0mm	25	4800	340	0.025	3900	230	0.018	8000	14	0.010	0.065
	30	4500	290	0.018	3600	200	0.013	8000	10	0.007	0.038
	35	4200	250	0.013	3300	170	0.009	-	-	-	-
	8	6800	770	0.093	5300	500	0.070	6000	450	0.050	1.990
	12	5100	600	0.078	4100	410	0.056	6000	388	0.033	1.852
	16	4400	510	0.065	3600	350	0.046	6000	164	0.027	0.781
5.0mm	20	4000	440	0.054	3200	300	0.038	6000	84	0.022	0.400
	25	3600	380	0.042	2900	260	0.030	6000	43	0.018	0.205
	30	3300	330	0.033	2600	230	0.024	6000	24	0.014	0.119
	35	3100	290	0.026	2500	200	0.019	6000	15	0.011	0.075
	16	3500	520	0.089	2800	360	0.064	4800	457	0.038	1.907
	20	3100	440	0.085	2500	310	0.061	4800	234	0.036	0.977
6.0mm	25	2800	390	0.077	2200	270	0.055	4800	120	0.033	0.500
	30	2500	340	0.066	2000	230	0.047	4800	69	0.028	0.289
	35	2300	300	0.054	1900	210	0.038	4800	43	0.022	0.182
	20	2600	470	0.088	2100	330	0.063	4000	607	0.037	2.025
8.0mm	30	2000	340	0.077	1600	240	0.055	4000	180	0.033	0.600
	20	2300	450	0.130	1700	330	0.090	3400	580	0.050	1.600
	40	1500	250	0.800	1100	160	0.060	3400	84	0.035	0.200
10.0mm	25	2100	430	0.130	1500	310	0.080	3200	540	0.050	1.760
	45	1300	220	0.700	900	150	0.050	3200	76	0.030	0.240
12.0mm	30	2000	400	0.140	1400	280	0.080	3000	540	0.050	1.840
	50	1500	200	0.800	800	140	0.050	3000	72	0.030	0.280



Solid End Milling

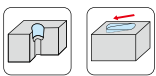
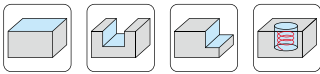
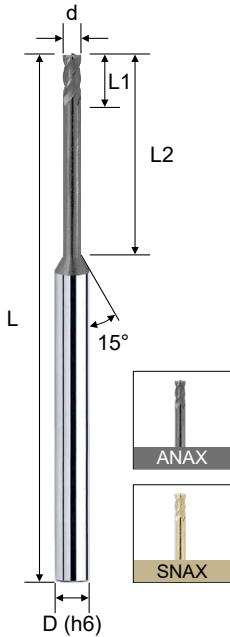
H65X - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4 刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC441003A	EHSRC441003S	1.0	1.0	3	50	4	4
EHSRC441004A	EHSRC441004S	1.0	1.0	4	50	4	4
EHSRC441006A	EHSRC441006S	1.0	1.0	6	50	4	4
EHSRC441008A	EHSRC441008S	1.0	1.0	8	50	4	4
EHSRC441010A	EHSRC441010S	1.0	1.0	10	50	4	4
EHSRC441012A	EHSRC441012S	1.0	1.0	12	50	4	4
EHSRC441016A	EHSRC441016S	1.0	1.0	16	50	4	4
EHSRC441020A	EHSRC441020S	1.0	1.0	20	50	4	4
EHSRC441025A	EHSRC441025S	1.0	1.0	25	60	4	4
EHSRC401004A	EHSRC401004S	1.0	1.0	4	50	6	4
EHSRC401006A	EHSRC401006S	1.0	1.0	6	50	6	4
EHSRC401008A	EHSRC401008S	1.0	1.0	8	50	6	4
EHSRC401010A	EHSRC401010S	1.0	1.0	10	50	6	4
EHSRC401012A	EHSRC401012S	1.0	1.0	12	50	6	4
EHSRC441506A	EHSRC441506S	1.5	1.5	6	50	4	4
EHSRC441508A	EHSRC441508S	1.5	1.5	8	50	4	4
EHSRC441510A	EHSRC441510S	1.5	1.5	10	50	4	4
EHSRC441512A	EHSRC441512S	1.5	1.5	12	50	4	4
EHSRC441516A	EHSRC441516S	1.5	1.5	16	50	4	4
EHSRC441520A	EHSRC441520S	1.5	1.5	20	50	4	4
EHSRC441525A	EHSRC441525S	1.5	1.5	25	60	4	4
EHSRC401506A	EHSRC401506S	1.5	1.5	6	50	6	4
EHSRC401508A	EHSRC401508S	1.5	1.5	8	50	6	4
EHSRC401510A	EHSRC401510S	1.5	1.5	10	50	6	4
EHSRC401512A	EHSRC401512S	1.5	1.5	12	50	6	4
EHSRC442006A	EHSRC442006S	2.0	2.0	6	50	4	4
EHSRC442008A	EHSRC442008S	2.0	2.0	8	50	4	4
EHSRC442010A	EHSRC442010S	2.0	2.0	10	50	4	4
EHSRC442012A	EHSRC442012S	2.0	2.0	12	50	4	4
EHSRC442016A	EHSRC442016S	2.0	2.0	16	50	4	4
EHSRC442020A	EHSRC442020S	2.0	2.0	20	50	4	4
EHSRC442025A	EHSRC442025S	2.0	2.0	25	60	4	4
EHSRC442030A	EHSRC442030S	2.0	2.0	30	75	4	4
EHSRC402006A	EHSRC402006S	2.0	2.0	6	50	6	4
EHSRC402008A	EHSRC402008S	2.0	2.0	8	50	6	4
EHSRC402010A	EHSRC402010S	2.0	2.0	10	50	6	4
EHSRC402016A	EHSRC402016S	2.0	2.0	16	50	6	4
EHSRC442510A	EHSRC442510S	2.5	2.5	10	50	4	4
EHSRC442512A	EHSRC442512S	2.5	2.5	12	50	4	4
EHSRC442516A	EHSRC442516S	2.5	2.5	16	50	4	4

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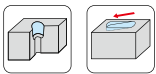
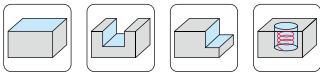
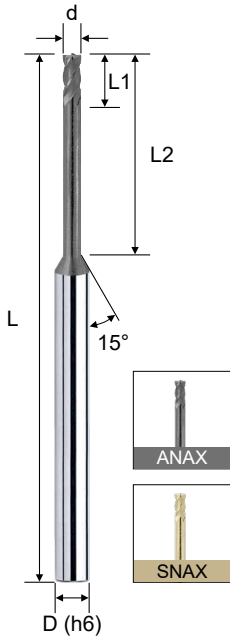
H65X - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4刃

- Long neck design is suitable for Rib cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHSRC



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX						
EHSRC442520A	EHSRC442520S	2.5	2.5	20	50	4	4
EHSRC442525A	EHSRC442525S	2.5	2.5	25	60	4	4
EHSRC442530A	EHSRC442530S	2.5	2.5	30	75	4	4
EHSRC402506A	EHSRC402506S	2.5	2.5	6	50	6	4
EHSRC402510A	EHSRC402510S	2.5	2.5	10	50	6	4
EHSRC403010A	EHSRC403010S	3.0	3.0	10	50	6	4
EHSRC403012A	EHSRC403012S	3.0	3.0	12	50	6	4
EHSRC403016A	EHSRC403016S	3.0	3.0	16	50	6	4
EHSRC403020A	EHSRC403020S	3.0	3.0	20	60	6	4
EHSRC403025A	EHSRC403025S	3.0	3.0	25	60	6	4
EHSRC403030A	EHSRC403030S	3.0	3.0	30	75	6	4
EHSRC403035A	EHSRC403035S	3.0	3.0	35	75	6	4
EHSRC404010A	EHSRC404010S	4.0	4.0	10	50	6	4
EHSRC404012A	EHSRC404012S	4.0	4.0	12	50	6	4
EHSRC404016A	EHSRC404016S	4.0	4.0	16	50	6	4
EHSRC404020A	EHSRC404020S	4.0	4.0	20	60	6	4
EHSRC404025A	EHSRC404025S	4.0	4.0	25	60	6	4
EHSRC404030A	EHSRC404030S	4.0	4.0	30	75	6	4
EHSRC405016A	EHSRC405016S	5.0	5.0	16	50	6	4
EHSRC405020A	EHSRC405020S	5.0	5.0	20	60	6	4
EHSRC405025A	EHSRC405025S	5.0	5.0	25	60	6	4
EHSRC405030A	EHSRC405030S	5.0	5.0	30	75	6	4
EHSRC406020A	EHSRC406020S	6.0	6.0	20	60	6	4
EHSRC406030A	EHSRC406030S	6.0	6.0	30	75	6	4
EHSRC408020A	EHSRC408020S	8.0	15.0	20	60	8	4
EHSRC408030A	EHSRC408030S	8.0	15.0	30	75	8	4
EHSRC408040A	EHSRC408040S	8.0	15.0	40	100	8	4
EHSRC410025A	EHSRC410025S	10.0	20.0	25	75	10	4
EHSRC410035A	EHSRC410035S	10.0	20.0	35	100	10	4
EHSRC410045A	EHSRC410045S	10.0	20.0	45	100	10	4
EHSRC412030A	EHSRC412030S	12.0	25.0	30	75	12	4
EHSRC412040A	EHSRC412040S	12.0	25.0	40	100	12	4
EHSRC412050A	EHSRC412050S	12.0	25.0	50	100	12	4

Material	PREHARDENED STEELS NAK80 CENA1		HARDENED STEELS SKD61,SKD11		Hardened Steel SKD11,SKH51	
	HRC 35~45		HRC 40~55		HRC 55~65	
Hardness	HRC 35~45		HRC 40~55		HRC 55~65	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	38000	1050	25500	710	20500	430
2mm	26000	1250	17500	840	14500	520
3mm	17300	1250	11500	840	9500	520
4mm	13200	1300	8800	880	7200	540
5mm	12500	1500	8300	1000	6400	580
6mm	10350	1400	6900	950	5300	560
8mm	7800	1350	5200	900	4000	520
10mm	6450	1260	4100	840	3200	480
12mm	5250	1260	3500	840	2650	480

Solid End Milling

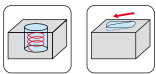
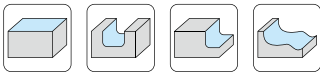
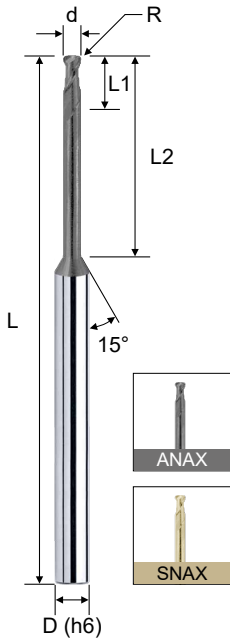
H65X - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2刃

- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC24100104A	EHCRC24100104S	1.0	0.1R	1.0	4	50	4	2
EHCRC24100106A	EHCRC24100106S	1.0	0.1R	1.0	6	50	4	2
EHCRC24100108A	EHCRC24100108S	1.0	0.1R	1.0	8	50	4	2
EHCRC24100110A	EHCRC24100110S	1.0	0.1R	1.0	10	50	4	2
EHCRC24100112A	EHCRC24100112S	1.0	0.1R	1.0	12	50	4	2
EHCRC24100204A	EHCRC24100204S	1.0	0.2R	1.0	4	50	4	2
EHCRC24100206A	EHCRC24100206S	1.0	0.2R	1.0	6	50	4	2
EHCRC24100208A	EHCRC24100208S	1.0	0.2R	1.0	8	50	4	2
EHCRC24100210A	EHCRC24100210S	1.0	0.2R	1.0	10	50	4	2
EHCRC24100212A	EHCRC24100212S	1.0	0.2R	1.0	12	50	4	2
EHCRC24100304A	EHCRC24100304S	1.0	0.3R	1.0	4	50	4	2
EHCRC24100306A	EHCRC24100306S	1.0	0.3R	1.0	6	50	4	2
EHCRC24100308A	EHCRC24100308S	1.0	0.3R	1.0	8	50	4	2
EHCRC24100310A	EHCRC24100310S	1.0	0.3R	1.0	10	50	4	2
EHCRC24100312A	EHCRC24100312S	1.0	0.3R	1.0	12	50	4	2
EHCRC24120104A	EHCRC24120104S	1.2	0.1R	1.2	4	50	4	2
EHCRC24120106A	EHCRC24120106S	1.2	0.1R	1.2	6	50	4	2
EHCRC24120108A	EHCRC24120108S	1.2	0.1R	1.2	8	50	4	2
EHCRC24120110A	EHCRC24120110S	1.2	0.1R	1.2	10	50	4	2
EHCRC24120112A	EHCRC24120112S	1.2	0.1R	1.2	12	50	4	2
EHCRC24120204A	EHCRC24120204S	1.2	0.2R	1.2	4	50	4	2
EHCRC24120206A	EHCRC24120206S	1.2	0.2R	1.2	6	50	4	2
EHCRC24120208A	EHCRC24120208S	1.2	0.2R	1.2	8	50	4	2
EHCRC24120210A	EHCRC24120210S	1.2	0.2R	1.2	10	50	4	2
EHCRC24120212A	EHCRC24120212S	1.2	0.2R	1.2	12	50	4	2
EHCRC24120304A	EHCRC24120304S	1.2	0.3R	1.2	4	50	4	2
EHCRC24120306A	EHCRC24120306S	1.2	0.3R	1.2	6	50	4	2
EHCRC24120308A	EHCRC24120308S	1.2	0.3R	1.2	8	50	4	2
EHCRC24120310A	EHCRC24120310S	1.2	0.3R	1.2	10	50	4	2
EHCRC24120312A	EHCRC24120312S	1.2	0.3R	1.2	12	50	4	2
EHCRC24150106A	EHCRC24150106S	1.5	0.1R	1.5	6	50	4	2
EHCRC24150108A	EHCRC24150108S	1.5	0.1R	1.5	8	50	4	2
EHCRC24150110A	EHCRC24150110S	1.5	0.1R	1.5	10	50	4	2
EHCRC24150112A	EHCRC24150112S	1.5	0.1R	1.5	12	50	4	2
EHCRC24150116A	EHCRC24150116S	1.5	0.1R	1.5	16	50	4	2
EHCRC24150206A	EHCRC24150206S	1.5	0.2R	1.5	6	50	4	2
EHCRC24150208A	EHCRC24150208S	1.5	0.2R	1.5	8	50	4	2
EHCRC24150210A	EHCRC24150210S	1.5	0.2R	1.5	10	50	4	2
EHCRC24150212A	EHCRC24150212S	1.5	0.2R	1.5	12	50	4	2
EHCRC24150216A	EHCRC24150216S	1.5	0.2R	1.5	16	50	4	2

(continued)

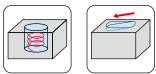
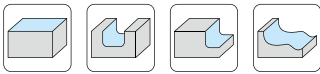
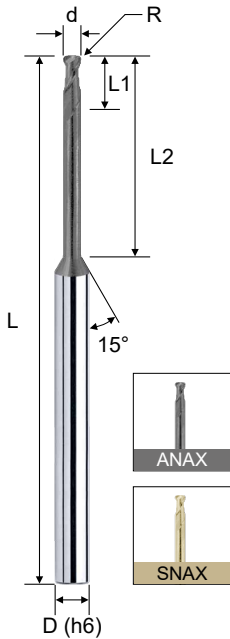
H65X - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC24150306A	EHCRC24150306S	1.5	0.3R	1.5	6	50	4	2
EHCRC24150308A	EHCRC24150308S	1.5	0.3R	1.5	8	50	4	2
EHCRC24150310A	EHCRC24150310S	1.5	0.3R	1.5	10	50	4	2
EHCRC24150312A	EHCRC24150312S	1.5	0.3R	1.5	12	50	4	2
EHCRC24150316A	EHCRC24150316S	1.5	0.3R	1.5	16	50	4	2
EHCRC24150506A	EHCRC24150506S	1.5	0.5R	1.5	6	50	4	2
EHCRC24150508A	EHCRC24150508S	1.5	0.5R	1.5	8	50	4	2
EHCRC24150510A	EHCRC24150510S	1.5	0.5R	1.5	10	50	4	2
EHCRC24150512A	EHCRC24150512S	1.5	0.5R	1.5	12	50	4	2
EHCRC24150516A	EHCRC24150516S	1.5	0.5R	1.5	16	50	4	2
EHCRC24200106A	EHCRC24200106S	2.0	0.1R	2.0	6	50	4	2
EHCRC24200108A	EHCRC24200108S	2.0	0.1R	2.0	8	50	4	2
EHCRC24200110A	EHCRC24200110S	2.0	0.1R	2.0	10	50	4	2
EHCRC24200112A	EHCRC24200112S	2.0	0.1R	2.0	12	50	4	2
EHCRC24200116A	EHCRC24200116S	2.0	0.1R	2.0	16	50	4	2
EHCRC24200120A	EHCRC24200120S	2.0	0.1R	2.0	20	50	4	2
EHCRC24200125A	EHCRC24200125S	2.0	0.1R	2.0	25	60	4	2
EHCRC24200206A	EHCRC24200206S	2.0	0.2R	2.0	6	50	4	2
EHCRC24200208A	EHCRC24200208S	2.0	0.2R	2.0	8	50	4	2
EHCRC24200210A	EHCRC24200210S	2.0	0.2R	2.0	10	50	4	2
EHCRC24200212A	EHCRC24200212S	2.0	0.2R	2.0	12	50	4	2
EHCRC24200216A	EHCRC24200216S	2.0	0.2R	2.0	16	50	4	2
EHCRC24200220A	EHCRC24200220S	2.0	0.2R	2.0	20	50	4	2
EHCRC24200225A	EHCRC24200225S	2.0	0.2R	2.0	25	60	4	2
EHCRC24200306A	EHCRC24200306S	2.0	0.3R	2.0	6	50	4	2
EHCRC24200308A	EHCRC24200308S	2.0	0.3R	2.0	8	50	4	2
EHCRC24200310A	EHCRC24200310S	2.0	0.3R	2.0	10	50	4	2
EHCRC24200312A	EHCRC24200312S	2.0	0.3R	2.0	12	50	4	2
EHCRC24200316A	EHCRC24200316S	2.0	0.3R	2.0	16	50	4	2
EHCRC24200320A	EHCRC24200320S	2.0	0.3R	2.0	20	50	4	2
EHCRC24200325A	EHCRC24200325S	2.0	0.3R	2.0	25	60	4	2
EHCRC24200506A	EHCRC24200506S	2.0	0.5R	2.0	6	50	4	2
EHCRC24200508A	EHCRC24200508S	2.0	0.5R	2.0	8	50	4	2
EHCRC24200510A	EHCRC24200510S	2.0	0.5R	2.0	10	50	4	2
EHCRC24200512A	EHCRC24200512S	2.0	0.5R	2.0	12	50	4	2
EHCRC24200516A	EHCRC24200516S	2.0	0.5R	2.0	16	50	4	2
EHCRC24200520A	EHCRC24200520S	2.0	0.5R	2.0	20	50	4	2
EHCRC24200525A	EHCRC24200525S	2.0	0.5R	2.0	25	60	4	2
EHCRC20200510A	EHCRC20200510S	2.0	0.5R	2.0	10	50	6	2
EHCRC20200515A	EHCRC20200515S	2.0	0.5R	2.0	15	50	6	2

(continued)

Solid End Milling

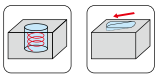
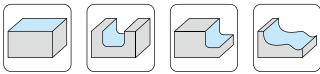
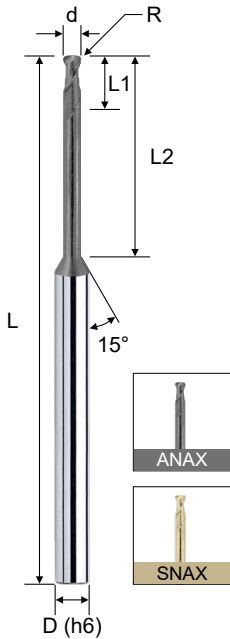
H65X - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2刃

- Available in various effective cutting lengths.
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EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC24250110A	EHCRC24250110S	2.5	0.1R	2.5	10	50	4	2
EHCRC24250116A	EHCRC24250116S	2.5	0.1R	2.5	16	50	4	2
EHCRC24250120A	EHCRC24250120S	2.5	0.1R	2.5	20	50	4	2
EHCRC24250125A	EHCRC24250125S	2.5	0.1R	2.5	25	60	4	2
EHCRC24250210A	EHCRC24250210S	2.5	0.2R	2.5	10	50	4	2
EHCRC24250216A	EHCRC24250216S	2.5	0.2R	2.5	16	50	4	2
EHCRC24250220A	EHCRC24250220S	2.5	0.2R	2.5	20	50	4	2
EHCRC24250225A	EHCRC24250225S	2.5	0.2R	2.5	25	60	4	2
EHCRC24250310A	EHCRC24250310S	2.5	0.3R	2.5	10	50	4	2
EHCRC24250316A	EHCRC24250316S	2.5	0.3R	2.5	16	50	4	2
EHCRC24250320A	EHCRC24250320S	2.5	0.3R	2.5	20	50	4	2
EHCRC24250325A	EHCRC24250325S	2.5	0.3R	2.5	25	60	4	2
EHCRC24250510A	EHCRC24250510S	2.5	0.5R	2.5	10	50	4	2
EHCRC24250516A	EHCRC24250516S	2.5	0.5R	2.5	16	50	4	2
EHCRC24250520A	EHCRC24250520S	2.5	0.5R	2.5	20	50	4	2
EHCRC24250525A	EHCRC24250525S	2.5	0.5R	2.5	25	60	4	2
EHCRC20300110A	EHCRC20300110S	3.0	0.1R	3.0	10	50	6	2
EHCRC20300116A	EHCRC20300116S	3.0	0.1R	3.0	16	60	6	2
EHCRC20300120A	EHCRC20300120S	3.0	0.1R	3.0	20	60	6	2
EHCRC20300125A	EHCRC20300125S	3.0	0.1R	3.0	25	60	6	2
EHCRC20300130A	EHCRC20300130S	3.0	0.1R	3.0	30	75	6	2
EHCRC20300135A	EHCRC20300135S	3.0	0.1R	3.0	35	75	6	2
EHCRC20300210A	EHCRC20300210S	3.0	0.2R	3.0	10	50	6	2
EHCRC20300216A	EHCRC20300216S	3.0	0.2R	3.0	16	60	6	2
EHCRC20300220A	EHCRC20300220S	3.0	0.2R	3.0	20	60	6	2
EHCRC20300225A	EHCRC20300225S	3.0	0.2R	3.0	25	60	6	2
EHCRC20300230A	EHCRC20300230S	3.0	0.2R	3.0	30	75	6	2
EHCRC20300235A	EHCRC20300235S	3.0	0.2R	3.0	35	75	6	2
EHCRC20300310A	EHCRC20300310S	3.0	0.3R	3.0	10	50	6	2
EHCRC20300316A	EHCRC20300316S	3.0	0.3R	3.0	16	60	6	2
EHCRC20300320A	EHCRC20300320S	3.0	0.3R	3.0	20	60	6	2
EHCRC20300325A	EHCRC20300325S	3.0	0.3R	3.0	25	60	6	2
EHCRC20300330A	EHCRC20300330S	3.0	0.3R	3.0	30	75	6	2
EHCRC20300335A	EHCRC20300335S	3.0	0.3R	3.0	35	75	6	2
EHCRC20300510A	EHCRC20300510S	3.0	0.5R	3.0	10	50	6	2
EHCRC20300516A	EHCRC20300516S	3.0	0.5R	3.0	16	60	6	2
EHCRC20300520A	EHCRC20300520S	3.0	0.5R	3.0	20	60	6	2
EHCRC20300525A	EHCRC20300525S	3.0	0.5R	3.0	25	60	6	2
EHCRC20300530A	EHCRC20300530S	3.0	0.5R	3.0	30	75	6	2
EHCRC20300535A	EHCRC20300535S	3.0	0.5R	3.0	35	75	6	2

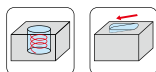
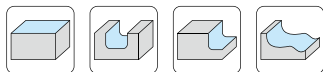
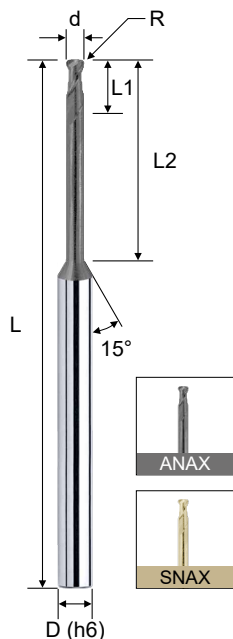
(continued)

H65X - Long Neck · Corner Radius · 2F 長頸型 · 圓鼻銑刀 · 2 刃

- Available in various effective cutting lengths.
- It is suitable for deep cutting.
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- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC20301010A	EHCRC20301010S	3.0	1.0R	3.0	10	50	6	2
EHCRC20301016A	EHCRC20301016S	3.0	1.0R	3.0	16	60	6	2
EHCRC20301020A	EHCRC20301020S	3.0	1.0R	3.0	20	60	6	2
EHCRC20301025A	EHCRC20301025S	3.0	1.0R	3.0	25	60	6	2
EHCRC20301030A	EHCRC20301030S	3.0	1.0R	3.0	30	75	6	2
EHCRC20301035A	EHCRC20301035S	3.0	1.0R	3.0	35	75	6	2
EHCRC20400113A	EHCRC20400113S	4.0	0.1R	4.0	13	50	6	2
EHCRC20400116A	EHCRC20400116S	4.0	0.1R	4.0	16	60	6	2
EHCRC20400120A	EHCRC20400120S	4.0	0.1R	4.0	20	60	6	2
EHCRC20400125A	EHCRC20400125S	4.0	0.1R	4.0	25	60	6	2
EHCRC20400130A	EHCRC20400130S	4.0	0.1R	4.0	30	75	6	2
EHCRC20400135A	EHCRC20400135S	4.0	0.1R	4.0	35	75	6	2
EHCRC20400213A	EHCRC20400213S	4.0	0.2R	4.0	13	50	6	2
EHCRC20400216A	EHCRC20400216S	4.0	0.2R	4.0	16	60	6	2
EHCRC20400220A	EHCRC20400220S	4.0	0.2R	4.0	20	60	6	2
EHCRC20400225A	EHCRC20400225S	4.0	0.2R	4.0	25	60	6	2
EHCRC20400230A	EHCRC20400230S	4.0	0.2R	4.0	30	75	6	2
EHCRC20400235A	EHCRC20400235S	4.0	0.2R	4.0	35	75	6	2
EHCRC20400313A	EHCRC20400313S	4.0	0.3R	4.0	13	50	6	2
EHCRC20400316A	EHCRC20400316S	4.0	0.3R	4.0	16	60	6	2
EHCRC20400320A	EHCRC20400320S	4.0	0.3R	4.0	20	60	6	2
EHCRC20400325A	EHCRC20400325S	4.0	0.3R	4.0	25	60	6	2
EHCRC20400330A	EHCRC20400330S	4.0	0.3R	4.0	30	75	6	2
EHCRC20400335A	EHCRC20400335S	4.0	0.3R	4.0	35	75	6	2
EHCRC20400513A	EHCRC20400513S	4.0	0.5R	4.0	13	50	6	2
EHCRC20400516A	EHCRC20400516S	4.0	0.5R	4.0	16	60	6	2
EHCRC20400520A	EHCRC20400520S	4.0	0.5R	4.0	20	60	6	2
EHCRC20400525A	EHCRC20400525S	4.0	0.5R	4.0	25	60	6	2
EHCRC20400530A	EHCRC20400530S	4.0	0.5R	4.0	30	75	6	2
EHCRC20400535A	EHCRC20400535S	4.0	0.5R	4.0	35	75	6	2
EHCRC20401013A	EHCRC20401013S	4.0	1.0R	4.0	13	50	6	2
EHCRC20401016A	EHCRC20401016S	4.0	1.0R	4.0	16	60	6	2
EHCRC20401020A	EHCRC20401020S	4.0	1.0R	4.0	20	60	6	2
EHCRC20401025A	EHCRC20401025S	4.0	1.0R	4.0	25	60	6	2
EHCRC20401030A	EHCRC20401030S	4.0	1.0R	4.0	30	75	6	2
EHCRC20401035A	EHCRC20401035S	4.0	1.0R	4.0	35	75	6	2
EHCRC20500116A	EHCRC20500116S	5.0	0.1R	5.0	16	60	6	2
EHCRC20500130A	EHCRC20500130S	5.0	0.1R	5.0	30	75	6	2
EHCRC20500216A	EHCRC20500216S	5.0	0.2R	5.0	16	60	6	2
EHCRC20500230A	EHCRC20500230S	5.0	0.2R	5.0	30	75	6	2

Solid End Milling

(continued)

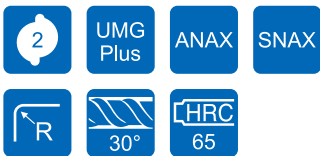
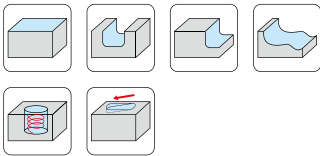
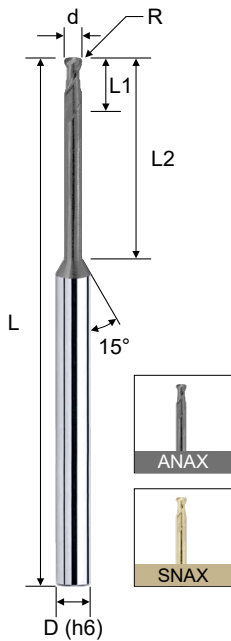
H65X - Long Neck · Corner Radius · 2F

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ASIA
(Metric)

EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC20500316A	EHCRC20500316S	5.0	0.3R	5.0	16	60	6	2
EHCRC20500330A	EHCRC20500330S	5.0	0.3R	5.0	30	75	6	2
EHCRC20500516A	EHCRC20500516S	5.0	0.5R	5.0	16	60	6	2
EHCRC20500530A	EHCRC20500530S	5.0	0.5R	5.0	30	75	6	2
EHCRC20501016A	EHCRC20501016S	5.0	1.0R	5.0	16	60	6	2
EHCRC20501030A	EHCRC20501030S	5.0	1.0R	5.0	30	75	6	2
EHCRC20600120A	EHCRC20600120S	6.0	0.1R	7.0	20	60	6	2
EHCRC20600130A	EHCRC20600130S	6.0	0.1R	7.0	30	75	6	2
EHCRC20600220A	EHCRC20600220S	6.0	0.2R	7.0	20	60	6	2
EHCRC20600230A	EHCRC20600230S	6.0	0.2R	7.0	30	75	6	2
EHCRC20600320A	EHCRC20600320S	6.0	0.3R	7.0	20	60	6	2
EHCRC20600330A	EHCRC20600330S	6.0	0.3R	7.0	30	75	6	2
EHCRC20600520A	EHCRC20600520S	6.0	0.5R	7.0	20	60	6	2
EHCRC20600530A	EHCRC20600530S	6.0	0.5R	7.0	30	75	6	2
EHCRC20601020A	EHCRC20601020S	6.0	1.0R	7.0	20	60	6	2
EHCRC20601030A	EHCRC20601030S	6.0	1.0R	7.0	30	75	6	2
EHCRC20601520A	EHCRC20601520S	6.0	1.5R	7.0	20	60	6	2
EHCRC20601530A	EHCRC20601530S	6.0	1.5R	7.0	30	75	6	2
EHCRC20800522A	EHCRC20800522S	8.0	0.5R	9.0	22	60	8	2
EHCRC20801022A	EHCRC20801022S	8.0	1.0R	9.0	22	60	8	2
EHCRC20801522A	EHCRC20801522S	8.0	1.5R	9.0	22	60	8	2
EHCRC20802022A	EHCRC20802022S	8.0	2.0R	9.0	22	60	8	2
EHCRC21000524A	EHCRC21000524S	10.0	0.5R	11.0	24	75	10	2
EHCRC21001024A	EHCRC21001024S	10.0	1.0R	11.0	24	75	10	2
EHCRC21001524A	EHCRC21001524S	10.0	1.5R	11.0	24	75	10	2
EHCRC21002024A	EHCRC21002024S	10.0	2.0R	11.0	24	75	10	2
EHCRC21200526A	EHCRC21200526S	12.0	0.5R	13.0	26	75	12	2
EHCRC21201026A	EHCRC21201026S	12.0	1.0R	13.0	26	75	12	2
EHCRC21201526A	EHCRC21201526S	12.0	1.5R	13.0	26	75	12	2
EHCRC21202026A	EHCRC21202026S	12.0	2.0R	13.0	26	75	12	2

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
	HRC 35~45					HRC 40~55				HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1.0mm	4	13800	805	0.029	0.264	11730	655	0.034	0.264	8280	78	0.017	0.264
	10	8625	311	0.011	0.123	7475	264	0.013	0.123	5290	31	0.006	0.123
1.2mm	6	9200	575	0.018	0.088	8165	483	0.215	0.088	6095	59	0.011	0.088
	12	6670	368	0.007	0.070	5980	299	0.008	0.070	4370	37	0.004	0.070



(continued)

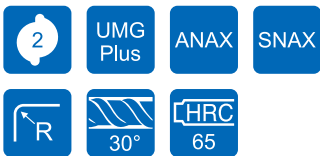
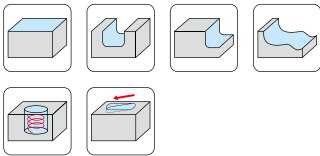
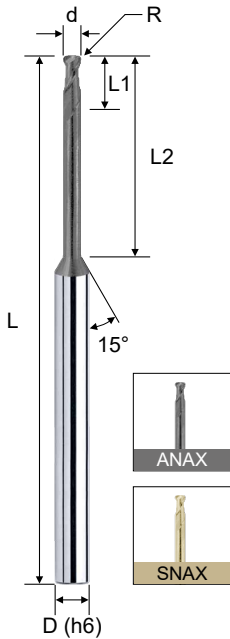
H65X - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHCRC



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

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

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
	HRC 35~45					HRC 40~55				HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
1.5mm	4	12880	1070	0.044	0.440	11730	920	0.059	0.440	8970	121	0.032	0.440
	10	8280	736	0.031	0.282	7590	633	0.041	0.282	5865	83	0.022	0.282
	16	5865	403	0.005	0.106	5405	345	0.006	0.106	4141	45	0.003	0.106
2.0mm	6	12535	1001	0.042	0.792	11730	909	0.095	0.792	9430	130	0.035	0.792
	12	9200	805	0.030	0.440	8280	725	0.043	0.440	6785	105	0.025	0.440
	20	6900	633	0.017	0.194	6440	564	0.023	0.194	5175	82	0.014	0.194
	25	5865	541	0.005	0.132	5405	495	0.005	0.132	4255	68	0.002	0.132
2.5mm	10	10350	1001	0.051	0.528	9775	943	0.073	0.528	8165	151	0.047	0.528
	25	6210	437	0.011	0.176	5865	414	0.016	0.176	4830	65	0.010	0.176
3.0mm	10	10350	1127	0.103	0.616	9775	874	0.103	0.655	8740	196	0.073	0.655
	20	8165	863	0.071	0.567	7705	667	0.071	0.567	6900	147	0.043	0.567
	30	6900	702	0.049	0.371	6325	541	0.049	0.371	5865	115	0.028	0.362
4.0mm	13	8740	1058	0.081	1.124	7360	920	0.117	1.124	6210	210	0.083	1.124
	20	6785	978	0.053	0.880	5750	840	0.078	0.880	4830	194	0.057	0.880
5.0mm	30	5750	748	0.028	0.671	4715	656	0.041	0.671	4025	149	0.030	0.708
	16	7705	1702	0.106	1.346	5520	1139	0.150	1.346	4600	342	0.110	1.346
6.0mm	30	5290	817	0.053	1.035	3795	541	0.075	1.035	3220	164	0.055	1.035
	20	5980	1219	0.476	1.356	3565	1035	0.186	1.356	3105	393	0.145	1.356
8.0mm	30	4600	909	0.410	1.304	2645	759	0.164	1.304	2300	304	0.123	1.304
	22	5520	1081	0.419	1.518	3220	909	0.164	1.518	2760	346	0.128	1.518
10.0mm	24	4485	920	0.356	1.645	2760	771	0.139	1.645	2300	294	0.108	1.645
12.0mm	26	3795	771	0.299	2.024	2300	644	0.117	2.024	1955	247	0.091	2.024



Solid End Milling

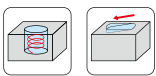
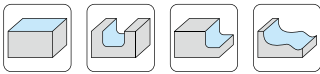
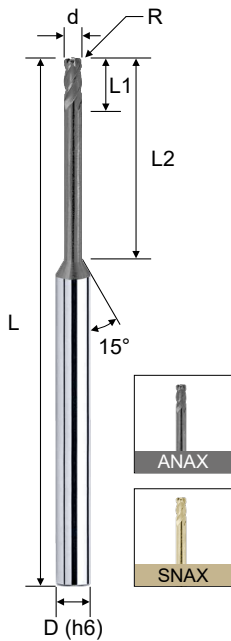
H65X - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4 刃

- Available in various effective cutting lengths.
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EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC44200106A	EHCRC44200106S	2.0	0.1R	2.0	6	50	4	4
EHCRC44200108A	EHCRC44200108S	2.0	0.1R	2.0	8	50	4	4
EHCRC44200110A	EHCRC44200110S	2.0	0.1R	2.0	10	50	4	4
EHCRC44200112A	EHCRC44200112S	2.0	0.1R	2.0	12	50	4	4
EHCRC44200116A	EHCRC44200116S	2.0	0.1R	2.0	16	50	4	4
EHCRC44200120A	EHCRC44200120S	2.0	0.1R	2.0	20	50	4	4
EHCRC44200125A	EHCRC44200125S	2.0	0.1R	2.0	25	60	4	4
EHCRC44200206A	EHCRC44200206S	2.0	0.2R	2.0	6	50	4	4
EHCRC44200208A	EHCRC44200208S	2.0	0.2R	2.0	8	50	4	4
EHCRC44200210A	EHCRC44200210S	2.0	0.2R	2.0	10	50	4	4
EHCRC44200212A	EHCRC44200212S	2.0	0.2R	2.0	12	50	4	4
EHCRC44200216A	EHCRC44200216S	2.0	0.2R	2.0	16	50	4	4
EHCRC44200220A	EHCRC44200220S	2.0	0.2R	2.0	20	50	4	4
EHCRC44200225A	EHCRC44200225S	2.0	0.2R	2.0	25	60	4	4
EHCRC44200306A	EHCRC44200306S	2.0	0.3R	2.0	6	50	4	4
EHCRC44200308A	EHCRC44200308S	2.0	0.3R	2.0	8	50	4	4
EHCRC44200310A	EHCRC44200310S	2.0	0.3R	2.0	10	50	4	4
EHCRC44200312A	EHCRC44200312S	2.0	0.3R	2.0	12	50	4	4
EHCRC44200316A	EHCRC44200316S	2.0	0.3R	2.0	16	50	4	4
EHCRC44200320A	EHCRC44200320S	2.0	0.3R	2.0	20	50	4	4
EHCRC44200325A	EHCRC44200325S	2.0	0.3R	2.0	25	60	4	4
EHCRC44200506A	EHCRC44200506S	2.0	0.5R	2.0	6	50	4	4
EHCRC44200508A	EHCRC44200508S	2.0	0.5R	2.0	8	50	4	4
EHCRC44200510A	EHCRC44200510S	2.0	0.5R	2.0	10	50	4	4
EHCRC44200512A	EHCRC44200512S	2.0	0.5R	2.0	12	50	4	4
EHCRC44200516A	EHCRC44200516S	2.0	0.5R	2.0	16	50	4	4
EHCRC44200520A	EHCRC44200520S	2.0	0.5R	2.0	20	50	4	4
EHCRC44200525A	EHCRC44200525S	2.0	0.5R	2.0	25	60	4	4
EHCRC40200510A	EHCRC40200510S	2.0	0.5R	2.0	10	50	6	4
EHCRC40200515A	EHCRC40200515S	2.0	0.5R	2.0	15	50	6	4
EHCRC44250110A	EHCRC44250110S	2.5	0.1R	2.5	10	50	4	4
EHCRC44250116A	EHCRC44250116S	2.5	0.1R	2.5	16	50	4	4
EHCRC44250120A	EHCRC44250120S	2.5	0.1R	2.5	20	50	4	4
EHCRC44250125A	EHCRC44250125S	2.5	0.1R	2.5	25	60	4	4
EHCRC44250210A	EHCRC44250210S	2.5	0.2R	2.5	10	50	4	4
EHCRC44250216A	EHCRC44250216S	2.5	0.2R	2.5	16	50	4	4
EHCRC44250220A	EHCRC44250220S	2.5	0.2R	2.5	20	50	4	4
EHCRC44250225A	EHCRC44250225S	2.5	0.2R	2.5	25	60	4	4
EHCRC44250310A	EHCRC44250310S	2.5	0.3R	2.5	10	50	4	4
EHCRC44250316A	EHCRC44250316S	2.5	0.3R	2.5	16	50	4	4

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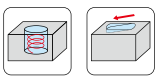
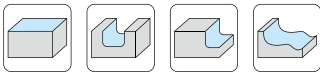
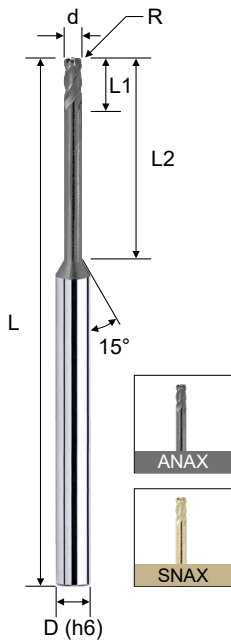
H65X - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4 刃

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EHCRC



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC44250320A	EHCRC44250320S	2.5	0.3R	2.5	20	50	4	4
EHCRC44250325A	EHCRC44250325S	2.5	0.3R	2.5	25	60	4	4
EHCRC44250510A	EHCRC44250510S	2.5	0.5R	2.5	10	50	4	4
EHCRC44250516A	EHCRC44250516S	2.5	0.5R	2.5	16	50	4	4
EHCRC44250520A	EHCRC44250520S	2.5	0.5R	2.5	20	50	4	4
EHCRC44250525A	EHCRC44250525S	2.5	0.5R	2.5	25	60	4	4
EHCRC40300110A	EHCRC40300110S	3.0	0.1R	3.0	10	50	6	4
EHCRC40300116A	EHCRC40300116S	3.0	0.1R	3.0	16	60	6	4
EHCRC40300120A	EHCRC40300120S	3.0	0.1R	3.0	20	60	6	4
EHCRC40300125A	EHCRC40300125S	3.0	0.1R	3.0	25	60	6	4
EHCRC40300130A	EHCRC40300130S	3.0	0.1R	3.0	30	75	6	4
EHCRC40300135A	EHCRC40300135S	3.0	0.1R	3.0	35	75	6	4
EHCRC40300210A	EHCRC40300210S	3.0	0.2R	3.0	10	50	6	4
EHCRC40300216A	EHCRC40300216S	3.0	0.2R	3.0	16	60	6	4
EHCRC40300220A	EHCRC40300220S	3.0	0.2R	3.0	20	60	6	4
EHCRC40300225A	EHCRC40300225S	3.0	0.2R	3.0	25	60	6	4
EHCRC40300230A	EHCRC40300230S	3.0	0.2R	3.0	30	75	6	4
EHCRC40300235A	EHCRC40300235S	3.0	0.2R	3.0	35	75	6	4
EHCRC40300310A	EHCRC40300310S	3.0	0.3R	3.0	10	50	6	4
EHCRC40300316A	EHCRC40300316S	3.0	0.3R	3.0	16	60	6	4
EHCRC40300320A	EHCRC40300320S	3.0	0.3R	3.0	20	60	6	4
EHCRC40300325A	EHCRC40300325S	3.0	0.3R	3.0	25	60	6	4
EHCRC40300330A	EHCRC40300330S	3.0	0.3R	3.0	30	75	6	4
EHCRC40300335A	EHCRC40300335S	3.0	0.3R	3.0	35	75	6	4
EHCRC40300510A	EHCRC40300510S	3.0	0.5R	3.0	10	50	6	4
EHCRC40300516A	EHCRC40300516S	3.0	0.5R	3.0	16	60	6	4
EHCRC40300520A	EHCRC40300520S	3.0	0.5R	3.0	20	60	6	4
EHCRC40300525A	EHCRC40300525S	3.0	0.5R	3.0	25	60	6	4
EHCRC40300530A	EHCRC40300530S	3.0	0.5R	3.0	30	75	6	4
EHCRC40300535A	EHCRC40300535S	3.0	0.5R	3.0	35	75	6	4
EHCRC40301010A	EHCRC40301010S	3.0	1.0R	3.0	10	50	6	4
EHCRC40301016A	EHCRC40301016S	3.0	1.0R	3.0	16	60	6	4
EHCRC40301020A	EHCRC40301020S	3.0	1.0R	3.0	20	60	6	4
EHCRC40301025A	EHCRC40301025S	3.0	1.0R	3.0	25	60	6	4
EHCRC40301030A	EHCRC40301030S	3.0	1.0R	3.0	30	75	6	4
EHCRC40301035A	EHCRC40301035S	3.0	1.0R	3.0	35	75	6	4
EHCRC40400113A	EHCRC40400113S	4.0	0.1R	4.0	13	50	6	4
EHCRC40400116A	EHCRC40400116S	4.0	0.1R	4.0	16	60	6	4
EHCRC40400120A	EHCRC40400120S	4.0	0.1R	4.0	20	60	6	4
EHCRC40400125A	EHCRC40400125S	4.0	0.1R	4.0	25	60	6	4

Solid End Milling

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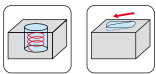
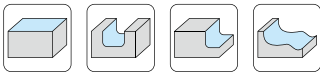
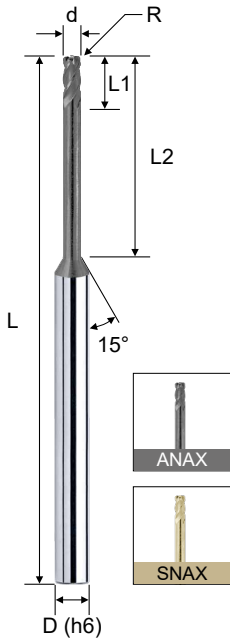
H65X - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4 刃

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EHCRC



d Tolerance	
d ≤ 12	0 ~ -0.02
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R Tolerance	
R < 2	±0.015
R ≥ 2	±0.020

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC40400130A	EHCRC40400130S	4.0	0.1R	4.0	30	75	6	4
EHCRC40400135A	EHCRC40400135S	4.0	0.1R	4.0	35	75	6	4
EHCRC40400213A	EHCRC40400213S	4.0	0.2R	4.0	13	50	6	4
EHCRC40400216A	EHCRC40400216S	4.0	0.2R	4.0	16	60	6	4
EHCRC40400220A	EHCRC40400220S	4.0	0.2R	4.0	20	60	6	4
EHCRC40400225A	EHCRC40400225S	4.0	0.2R	4.0	25	60	6	4
EHCRC40400230A	EHCRC40400230S	4.0	0.2R	4.0	30	75	6	4
EHCRC40400235A	EHCRC40400235S	4.0	0.2R	4.0	35	75	6	4
EHCRC40400313A	EHCRC40400313S	4.0	0.3R	4.0	13	50	6	4
EHCRC40400316A	EHCRC40400316S	4.0	0.3R	4.0	16	60	6	4
EHCRC40400320A	EHCRC40400320S	4.0	0.3R	4.0	20	60	6	4
EHCRC40400325A	EHCRC40400325S	4.0	0.3R	4.0	25	60	6	4
EHCRC40400330A	EHCRC40400330S	4.0	0.3R	4.0	30	75	6	4
EHCRC40400335A	EHCRC40400335S	4.0	0.3R	4.0	35	75	6	4
EHCRC40400513A	EHCRC40400513S	4.0	0.5R	4.0	13	50	6	4
EHCRC40400516A	EHCRC40400516S	4.0	0.5R	4.0	16	60	6	4
EHCRC40400520A	EHCRC40400520S	4.0	0.5R	4.0	20	60	6	4
EHCRC40400525A	EHCRC40400525S	4.0	0.5R	4.0	25	60	6	4
EHCRC40400530A	EHCRC40400530S	4.0	0.5R	4.0	30	75	6	4
EHCRC40400535A	EHCRC40400535S	4.0	0.5R	4.0	35	75	6	4
EHCRC40401013A	EHCRC40401013S	4.0	1.0R	4.0	13	50	6	4
EHCRC40401016A	EHCRC40401016S	4.0	1.0R	4.0	16	60	6	4
EHCRC40401020A	EHCRC40401020S	4.0	1.0R	4.0	20	60	6	4
EHCRC40401025A	EHCRC40401025S	4.0	1.0R	4.0	25	60	6	4
EHCRC40401030A	EHCRC40401030S	4.0	1.0R	4.0	30	75	6	4
EHCRC40401035A	EHCRC40401035S	4.0	1.0R	4.0	35	75	6	4
EHCRC40500116A	EHCRC40500116S	5.0	0.1R	5.0	16	60	6	4
EHCRC40500130A	EHCRC40500130S	5.0	0.1R	5.0	30	75	6	4
EHCRC40500216A	EHCRC40500216S	5.0	0.2R	5.0	16	60	6	4
EHCRC40500230A	EHCRC40500230S	5.0	0.2R	5.0	30	75	6	4
EHCRC40500316A	EHCRC40500316S	5.0	0.3R	5.0	16	60	6	4
EHCRC40500330A	EHCRC40500330S	5.0	0.3R	5.0	30	75	6	4
EHCRC40500516A	EHCRC40500516S	5.0	0.5R	5.0	16	60	6	4
EHCRC40500530A	EHCRC40500530S	5.0	0.5R	5.0	30	75	6	4
EHCRC40501016A	EHCRC40501016S	5.0	1.0R	5.0	16	60	6	4
EHCRC40501030A	EHCRC40501030S	5.0	1.0R	5.0	30	75	6	4
EHCRC40600120A	EHCRC40600120S	6.0	0.1R	7.0	20	60	6	4
EHCRC40600130A	EHCRC40600130S	6.0	0.1R	7.0	30	75	6	4
EHCRC40600220A	EHCRC40600220S	6.0	0.2R	7.0	20	60	6	4
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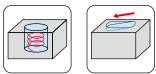
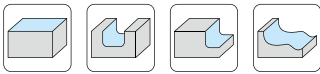
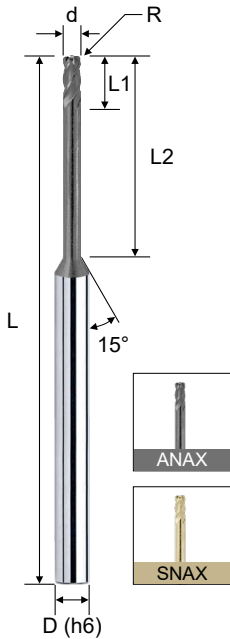
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(Metric)

EHCRC



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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHCRC40600320A	EHCRC40600320S	6.0	0.3R	7.0	20	60	6	4
EHCRC40600330A	EHCRC40600330S	6.0	0.3R	7.0	30	75	6	4
EHCRC40600520A	EHCRC40600520S	6.0	0.5R	7.0	20	60	6	4
EHCRC40600530A	EHCRC40600530S	6.0	0.5R	7.0	30	75	6	4
EHCRC40601020A	EHCRC40601020S	6.0	1.0R	7.0	20	60	6	4
EHCRC40601030A	EHCRC40601030S	6.0	1.0R	7.0	30	75	6	4
EHCRC40601520A	EHCRC40601520S	6.0	1.5R	7.0	20	60	6	4
EHCRC40601530A	EHCRC40601530S	6.0	1.5R	7.0	30	75	6	4
EHCRC40800522A	EHCRC40800522S	8.0	0.5R	9.0	22	60	8	4
EHCRC40801022A	EHCRC40801022S	8.0	1.0R	9.0	22	60	8	4
EHCRC40801522A	EHCRC40801522S	8.0	1.5R	9.0	22	60	8	4
EHCRC40802022A	EHCRC40802022S	8.0	2.0R	9.0	22	60	8	4
EHCRC41000524A	EHCRC41000524S	10.0	0.5R	11.0	24	75	10	4
EHCRC41001024A	EHCRC41001024S	10.0	1.0R	11.0	24	75	10	4
EHCRC41001524A	EHCRC41001524S	10.0	1.5R	11.0	24	75	10	4
EHCRC41002024A	EHCRC41002024S	10.0	2.0R	11.0	24	75	10	4
EHCRC41200526A	EHCRC41200526S	12.0	0.5R	13.0	26	75	12	4
EHCRC41201026A	EHCRC41201026S	12.0	1.0R	13.0	26	75	12	4
EHCRC41201526A	EHCRC41201526S	12.0	1.5R	13.0	26	75	12	4
EHCRC41202026A	EHCRC41202026S	12.0	2.0R	13.0	26	75	12	4

Material		PREHARDENED STEELS NAK80 CENA1				Hardened Steel SKD11,SKH51			
Hardness		HRC 35~45				HRC 55~65			
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
2.0mm	6	12650	1265	0.063	0.633	11730	1173	0.059	0.713
	12	8970	1012	0.045	0.396	8280	943	0.043	0.396
2.5mm	10	10580	1380	0.065	0.528	9775	1150	0.065	0.528
	20	7590	1150	0.047	0.640	7360	655	0.030	0.220
3.0mm	10	11040	2070	0.094	0.684	10235	2070	0.059	0.684
	20	8165	1495	0.057	0.567	7705	1495	0.035	0.567
4.0mm	13	9085	1576	0.105	1.150	7590	1530	0.082	1.150
	20	7130	1380	0.069	0.920	59801	1288	0.054	0.920
	30	6325	1104	0.043	0.745	5290	1058	0.033	0.745
6.0mm	20	5635	1691	0.176	2.305	3335	978	0.176	1.281
	30	2875	782	0.098	1.320	1610	460	0.098	0.733
8.0mm	22	4600	1840	0.212	2.921	2760	782	0.212	1.518
10.0mm	24	3680	2013	0.242	3.140	2185	621	0.253	1.645
12.0mm	26	2875	2070	0.265	3.105	1725	495	0.276	1.714



Solid End Milling

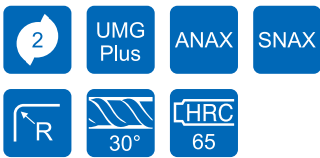
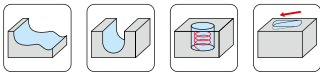
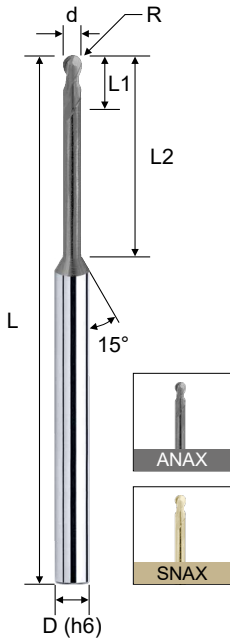
H65X - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.



EBHRC



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

Order No.		Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHBRC240301A	EHBRC240301S	0.15R	0.3	0.3	1	50	4	2
EHBRC240302A	EHBRC240302S	0.15R	0.3	0.3	2	50	4	2
EHBRC240303A	EHBRC240303S	0.15R	0.3	0.3	3	50	4	2
EHBRC240401A	EHBRC240401S	0.20R	0.4	0.4	1	50	4	2
EHBRC240402A	EHBRC240402S	0.20R	0.4	0.4	2	50	4	2
EHBRC240403A	EHBRC240403S	0.20R	0.4	0.4	3	50	4	2
EHBRC240404A	EHBRC240404S	0.20R	0.4	0.4	4	50	4	2
EHBRC240405A	EHBRC240405S	0.20R	0.4	0.4	5	50	4	2
EHBRC240406A	EHBRC240406S	0.20R	0.4	0.4	6	50	4	2
EHBRC240408A	EHBRC240408S	0.20R	0.4	0.4	8	50	4	2
EHBRC240501A	EHBRC240501S	0.25R	0.5	0.5	1	50	4	2
EHBRC240502A	EHBRC240502S	0.25R	0.5	0.5	2	50	4	2
EHBRC240503A	EHBRC240503S	0.25R	0.5	0.5	3	50	4	2
EHBRC240504A	EHBRC240504S	0.25R	0.5	0.5	4	50	4	2
EHBRC240505A	EHBRC240505S	0.25R	0.5	0.5	5	50	4	2
EHBRC240506A	EHBRC240506S	0.25R	0.5	0.5	6	50	4	2
EHBRC240508A	EHBRC240508S	0.25R	0.5	0.5	8	50	4	2
EHBRC240510A	EHBRC240510S	0.25R	0.5	0.5	10	50	4	2
EHBRC240601A	EHBRC240601S	0.30R	0.6	0.6	1	50	4	2
EHBRC240602A	EHBRC240602S	0.30R	0.6	0.6	2	50	4	2
EHBRC240603A	EHBRC240603S	0.30R	0.6	0.6	3	50	4	2
EHBRC240604A	EHBRC240604S	0.30R	0.6	0.6	4	50	4	2
EHBRC240605A	EHBRC240605S	0.30R	0.6	0.6	5	50	4	2
EHBRC240606A	EHBRC240606S	0.30R	0.6	0.6	6	50	4	2
EHBRC240608A	EHBRC240608S	0.30R	0.6	0.6	8	50	4	2
EHBRC240610A	EHBRC240610S	0.30R	0.6	0.6	10	50	4	2
EHBRC240612A	EHBRC240612S	0.30R	0.6	0.6	12	50	4	2
EHBRC240702A	EHBRC240702S	0.35R	0.7	0.7	2	50	4	2
EHBRC240704A	EHBRC240704S	0.35R	0.7	0.7	4	50	4	2
EHBRC240708A	EHBRC240708S	0.35R	0.7	0.7	8	50	4	2
EHBRC240710A	EHBRC240710S	0.35R	0.7	0.7	10	50	4	2
EHBRC240712A	EHBRC240712S	0.35R	0.7	0.7	12	50	4	2
EHBRC240802A	EHBRC240802S	0.40R	0.8	0.8	2	50	4	2
EHBRC240804A	EHBRC240804S	0.40R	0.8	0.8	4	50	4	2
EHBRC240806A	EHBRC240806S	0.40R	0.8	0.8	6	50	4	2
EHBRC240808A	EHBRC240808S	0.40R	0.8	0.8	8	50	4	2
EHBRC240810A	EHBRC240810S	0.40R	0.8	0.8	10	50	4	2
EHBRC240812A	EHBRC240812S	0.40R	0.8	0.8	12	50	4	2
EHBRC240904A	EHBRC240904S	0.45R	0.9	0.9	4	50	4	2
EHBRC241002A	EHBRC241002S	0.50R	1.0	1.0	2	50	4	2

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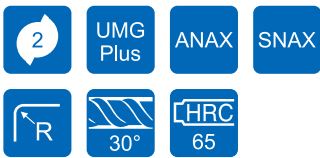
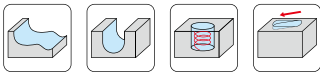
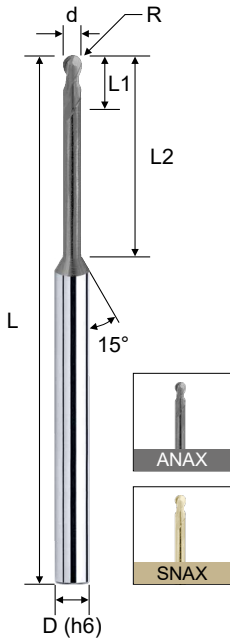
H65X - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2刃

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EHBRC



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

Order No.		Radius	Dia.	CL	EFF-L	OAL	Shank	Flutes
ANAX	SNAX	(R)	(d)	(L1)	(L2)	(L)	(D)	(Z)
EHBRC241003A	EHBRC241003S	0.50R	1.0	1.0	3	50	4	2
EHBRC241004A	EHBRC241004S	0.50R	1.0	1.0	4	50	4	2
EHBRC241005A	EHBRC241005S	0.50R	1.0	1.0	5	50	4	2
EHBRC241006A	EHBRC241006S	0.50R	1.0	1.0	6	50	4	2
EHBRC241008A	EHBRC241008S	0.50R	1.0	1.0	8	50	4	2
EHBRC241010A	EHBRC241010S	0.50R	1.0	1.0	10	50	4	2
EHBRC241012A	EHBRC241012S	0.50R	1.0	1.0	12	50	4	2
EHBRC241014A	EHBRC241014S	0.50R	1.0	1.0	14	50	4	2
EHBRC241016A	EHBRC241016S	0.50R	1.0	1.0	16	50	4	2
EHBRC241018A	EHBRC241018S	0.50R	1.0	1.0	18	50	4	2
EHBRC241020A	EHBRC241020S	0.50R	1.0	1.0	20	50	4	2
EHBRC241022A	EHBRC241022S	0.50R	1.0	1.0	22	60	4	2
EHBRC201004A	EHBRC201004S	0.50R	1.0	1.0	4	50	6	2
EHBRC201006A	EHBRC201006S	0.50R	1.0	1.0	6	50	6	2
EHBRC201008A	EHBRC201008S	0.50R	1.0	1.0	8	50	6	2
EHBRC201010A	EHBRC201010S	0.50R	1.0	1.0	10	50	6	2
EHBRC201012A	EHBRC201012S	0.50R	1.0	1.0	12	50	6	2
EHBRC241204A	EHBRC241204S	0.60R	1.2	1.2	4	50	4	2
EHBRC241206A	EHBRC241206S	0.60R	1.2	1.2	6	50	4	2
EHBRC241208A	EHBRC241208S	0.60R	1.2	1.2	8	50	4	2
EHBRC241210A	EHBRC241210S	0.60R	1.2	1.2	10	50	4	2
EHBRC241212A	EHBRC241212S	0.60R	1.2	1.2	12	50	4	2
EHBRC241216A	EHBRC241216S	0.60R	1.2	1.2	16	50	4	2
EHBRC241220A	EHBRC241220S	0.60R	1.2	1.2	20	50	4	2
EHBRC241224A	EHBRC241224S	0.60R	1.2	1.2	24	60	4	2
EHBRC241406A	EHBRC241406S	0.70R	1.4	1.4	6	50	4	2
EHBRC241408A	EHBRC241408S	0.70R	1.4	1.4	8	50	4	2
EHBRC241412A	EHBRC241412S	0.70R	1.4	1.4	12	50	4	2
EHBRC241416A	EHBRC241416S	0.70R	1.4	1.4	16	50	4	2
EHBRC241503A	EHBRC241503S	0.75R	1.5	1.5	3	50	4	2
EHBRC241504A	EHBRC241504S	0.75R	1.5	1.5	4	50	4	2
EHBRC241506A	EHBRC241506S	0.75R	1.5	1.5	6	50	4	2
EHBRC241508A	EHBRC241508S	0.75R	1.5	1.5	8	50	4	2
EHBRC241510A	EHBRC241510S	0.75R	1.5	1.5	10	50	4	2
EHBRC241512A	EHBRC241512S	0.75R	1.5	1.5	12	50	4	2
EHBRC241514A	EHBRC241514S	0.75R	1.5	1.5	14	50	4	2
EHBRC241516A	EHBRC241516S	0.75R	1.5	1.5	16	50	4	2
EHBRC241518A	EHBRC241518S	0.75R	1.5	1.5	18	50	4	2
EHBRC241520A	EHBRC241520S	0.75R	1.5	1.5	20	50	4	2
EHBRC241522A	EHBRC241522S	0.75R	1.5	1.5	22	60	4	2

Solid End Milling

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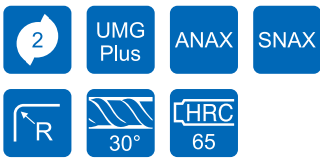
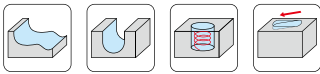
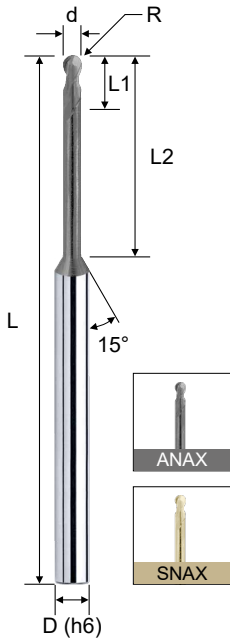
H65X - Long Neck · Ball Nose · 2F

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EHBRC



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

Order No.		Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX							
EHBRC241525A	EHBRC241525S	0.75R	1.5	1.5	25	60	4	2
EHBRC241530A	EHBRC241530S	0.75R	1.5	1.5	30	75	4	2
EHBRC201506A	EHBRC201506S	0.75R	1.5	1.5	6	50	6	2
EHBRC201508A	EHBRC201508S	0.75R	1.5	1.5	8	50	6	2
EHBRC201510A	EHBRC201510S	0.75R	1.5	1.5	10	50	6	2
EHBRC201512A	EHBRC201512S	0.75R	1.5	1.5	12	50	6	2
EHBRC241606A	EHBRC241606S	0.80R	1.6	1.6	6	50	4	2
EHBRC241608A	EHBRC241608S	0.80R	1.6	1.6	8	50	4	2
EHBRC241612A	EHBRC241612S	0.80R	1.6	1.6	12	50	4	2
EHBRC241616A	EHBRC241616S	0.80R	1.6	1.6	16	50	4	2
EHBRC241620A	EHBRC241620S	0.80R	1.6	1.6	20	50	4	2
EHBRC241806A	EHBRC241806S	0.90R	1.8	1.8	6	50	4	2
EHBRC241808A	EHBRC241808S	0.90R	1.8	1.8	8	50	4	2
EHBRC241812A	EHBRC241812S	0.90R	1.8	1.8	12	50	4	2
EHBRC241816A	EHBRC241816S	0.90R	1.8	1.8	16	50	4	2
EHBRC241820A	EHBRC241820S	0.90R	1.8	1.8	20	50	4	2
EHBRC242004A	EHBRC242004S	1.00R	2.0	2.0	4	50	4	2
EHBRC242006A	EHBRC242006S	1.00R	2.0	2.0	6	50	4	2
EHBRC242008A	EHBRC242008S	1.00R	2.0	2.0	8	50	4	2
EHBRC242010A	EHBRC242010S	1.00R	2.0	2.0	10	50	4	2
EHBRC242012A	EHBRC242012S	1.00R	2.0	2.0	12	50	4	2
EHBRC242014A	EHBRC242014S	1.00R	2.0	2.0	14	50	4	2
EHBRC242016A	EHBRC242016S	1.00R	2.0	2.0	16	50	4	2
EHBRC242018A	EHBRC242018S	1.00R	2.0	2.0	18	50	4	2
EHBRC242020A	EHBRC242020S	1.00R	2.0	2.0	20	50	4	2
EHBRC242022A	EHBRC242022S	1.00R	2.0	2.0	22	60	4	2
EHBRC242025A	EHBRC242025S	1.00R	2.0	2.0	25	60	4	2
EHBRC202006A	EHBRC202006S	1.00R	2.0	2.0	6	50	6	2
EHBRC202008A	EHBRC202008S	1.00R	2.0	2.0	8	50	6	2
EHBRC202010A	EHBRC202010S	1.00R	2.0	2.0	10	50	6	2
EHBRC202016A	EHBRC202016S	1.00R	2.0	2.0	16	50	6	2
EHBRC242508A	EHBRC242508S	1.25R	2.5	2.5	8	50	4	2
EHBRC242510A	EHBRC242510S	1.25R	2.5	2.5	10	50	4	2
EHBRC242516A	EHBRC242516S	1.25R	2.5	2.5	16	50	4	2
EHBRC242520A	EHBRC242520S	1.25R	2.5	2.5	20	60	4	2
EHBRC242525A	EHBRC242525S	1.25R	2.5	2.5	25	60	4	2
EHBRC242530A	EHBRC242530S	1.25R	2.5	2.5	30	75	4	2
EHBRC202506A	EHBRC202506S	1.25R	2.5	2.5	6	50	6	2
EHBRC202510A	EHBRC202510S	1.25R	2.5	2.5	10	50	6	2
EHBRC203006A	EHBRC203006S	1.50R	3.0	3.0	6	50	6	2

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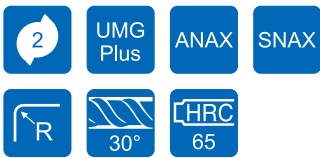
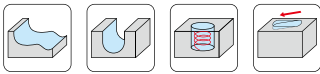
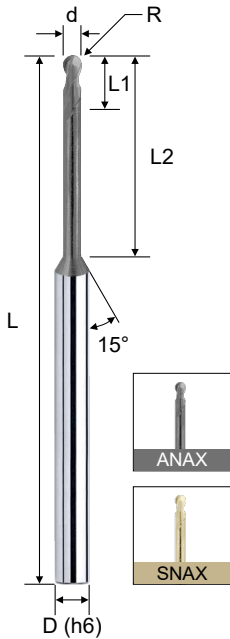
H65X - Long Neck · Ball Nose · 2F

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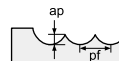
EHBRC



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

Order No.		Radius	Dia.	CL	EFF-L	OAL	Shank	Flutes
ANAX	SNAX	(R)	(d)	(L1)	(L2)	(L)	(D)	(Z)
EHBRC203008A	EHBRC203008S	1.50R	3.0	3.0	8	50	6	2
EHBRC203010A	EHBRC203010S	1.50R	3.0	3.0	10	50	6	2
EHBRC203012A	EHBRC203012S	1.50R	3.0	3.0	12	50	6	2
EHBRC203016A	EHBRC203016S	1.50R	3.0	3.0	16	60	6	2
EHBRC203020A	EHBRC203020S	1.50R	3.0	3.0	20	60	6	2
EHBRC203025A	EHBRC203025S	1.50R	3.0	3.0	25	60	6	2
EHBRC203030A	EHBRC203030S	1.50R	3.0	3.0	30	75	6	2
EHBRC203035A	EHBRC203035S	1.50R	3.0	3.0	35	75	6	2
EHBRC204008A	EHBRC204008S	2.00R	4.0	4.0	8	50	6	2
EHBRC204010A	EHBRC204010S	2.00R	4.0	4.0	10	50	6	2
EHBRC204012A	EHBRC204012S	2.00R	4.0	4.0	12	50	6	2
EHBRC204016A	EHBRC204016S	2.00R	4.0	4.0	16	60	6	2
EHBRC204020A	EHBRC204020S	2.00R	4.0	4.0	20	60	6	2
EHBRC204025A	EHBRC204025S	2.00R	4.0	4.0	25	60	6	2
EHBRC204030A	EHBRC204030S	2.00R	4.0	4.0	30	75	6	2
EHBRC204035A	EHBRC204035S	2.00R	4.0	4.0	35	75	6	2
EHBRC205015A	EHBRC205015S	2.50R	5.0	5.0	15	60	6	2
EHBRC205020A	EHBRC205020S	2.50R	5.0	5.0	20	60	6	2
EHBRC205025A	EHBRC205025S	2.50R	5.0	5.0	25	60	6	2
EHBRC205030A	EHBRC205030S	2.50R	5.0	5.0	30	75	6	2
EHBRC206015A	EHBRC206015S	3.00R	6.0	10.0	15	50	6	2
EHBRC208025A	EHBRC208025S	4.00R	8.0	12.0	25	60	8	2
EHBRC210030A	EHBRC210030S	5.00R	10.0	16.0	30	75	10	2
EHBRC212030A	EHBRC212030S	6.00R	12.0	18.0	30	75	12	2

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
	HRC 35~45					HRC 40~55				HRC 55~65			
Radius (R)	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)
0.15R	1	45000	552	0.010	0.010	38000	420	0.090	0.010	38000	348	0.007	0.009
	3	40800	360	0.006	0.007	33600	264	0.005	0.005	33600	216	0.004	0.005
0.2R	1	54000	768	0.016	0.022	39600	516	0.013	0.022	39600	432	0.011	0.021
	3	44400	480	0.010	0.010	32400	312	0.009	0.010	32400	264	0.008	0.010
	5	30000	372	0.008	0.010	26400	288	0.006	0.010	26400	228	0.004	0.005
0.25R	5	34800	552	0.008	0.008	31200	444	0.007	0.010	31200	216	0.006	0.009
	10	28800	456	0.007	0.010	28800	372	0.005	0.010	27600	216	0.005	0.009



(continued)

Solid End Milling

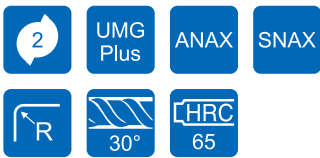
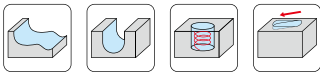
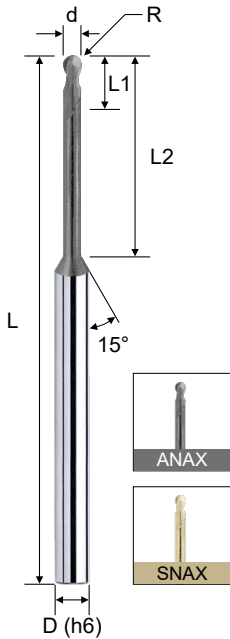
H65X - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

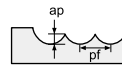
ASIA
(Metric)

EHBRC



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

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Hardened Steel SKD11,SKH51			
	HRC 35~45					HRC 40~55				HRC 55~65			
Radius (R)	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)
0.3R	1	39600	960	0.022	0.091	27600	600	0.019	0.091	26400	516	0.014	0.091
	5	28800	504	0.012	0.043	26400	396	0.008	0.042	26400	336	0.007	0.040
	10	24000	360	0.005	0.020	22800	312	0.004	0.020	22800	240	0.003	0.018
0.4R	2	34800	816	0.045	0.100	27600	552	0.038	0.100	26400	456	0.030	0.101
	6	28800	636	0.028	0.068	21600	420	0.020	0.068	21600	348	0.015	0.065
	10	2040	468	0.020	0.050	19200	408	0.015	0.050	16800	336	0.010	0.050
0.5R	5	33600	900	0.052	0.220	21600	540	0.040	0.220	18000	540	0.008	0.014
	10	16320	600	0.020	0.056	15000	456	0.014	0.056	13680	312	0.008	0.050
	16	13680	480	0.016	0.056	12360	384	0.012	0.056	11520	252	0.005	0.030
0.75R	10	14760	782	0.080	0.170	9720	480	0.062	0.170	9720	456	0.050	0.160
	18	12120	504	0.022	0.110	9600	432	0.020	0.110	9600	408	0.012	0.110
	30	9840	456	0.012	0.050	9480	420	0.010	0.050	9480	396	0.010	0.050
1.0R	4	21000	1392	0.180	0.350	14640	1080	0.140	0.350	14640	900	0.120	0.350
	10	21000	1224	0.140	0.230	14640	972	0.110	0.230	14640	792	0.090	0.230
	20	15960	600	0.060	0.110	12720	600	0.055	0.110	12720	492	0.035	0.110
1.5R	6	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.320
	10	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.300
	20	12360	1476	0.145	0.320	8520	1128	0.120	0.310	5760	660	0.080	0.300
2.0R	30	9360	816	0.100	0.150	8520	816	0.080	0.150	5760	384	0.070	0.300
	8	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	20	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	30	8880	1380	0.200	0.320	6600	1056	0.150	0.300	6600	816	0.130	0.300
2.5R	35	7200	1056	0.132	0.320	6600	1056	0.100	0.300	6600	816	0.090	0.300
	15	8400	1500	0.300	0.700	6000	1140	0.220	0.700	6000	900	0.200	0.650
	25	8400	1380	0.300	0.550	6000	1080	0.220	0.550	6000	816	0.200	0.500
3.0R	15	8160	1764	0.420	0.800	5760	1320	0.300	0.800	4440	864	0.300	0.800
4.0R	25	7200	1176	0.350	0.750	4920	912	0.180	0.600	4560	732	0.200	0.630
5.0R	30	5880	1128	0.370	0.900	4800	852	0.200	0.670	4200	708	0.200	0.650
6.0R	30	4800	984	0.420	0.900	4320	828	0.250	0.600	3600	600	0.250	0.600



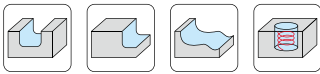
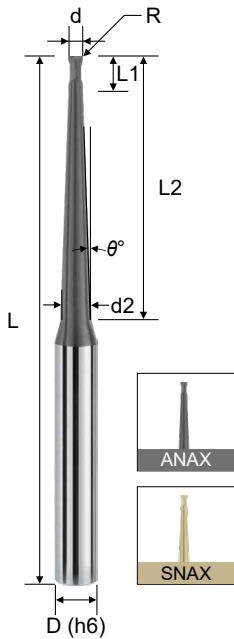
H65X - Taper Neck · Corner Radius · 2F

斜頸型 · 圓鼻銑刀 · 2 刃

- Various taper angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges, high strength of taper neck, can cut deep grooves without breaking.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHCRT



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHCRT20100120HA	1.0	0.10R	0.5°	2.0	20	60	6	2
EHCRT201001201A	1.0	0.10R	1.0°	2.0	20	60	6	2
EHCRT20100120AA	1.0	0.10R	1.5°	2.0	20	60	6	2
EHCRT201201230HA2C	1.2	0.12R	0.5°	2.0	30	75	6	2
EHCRT2012012301A2C	1.2	0.12R	1.0°	2.0	30	75	6	2
EHCRT201201230AA2C	1.2	0.12R	1.5°	2.0	30	75	6	2
EHCRT201501530HA2C	1.5	0.15R	0.5°	2.0	30	75	6	2
EHCRT2015015301A2C	1.5	0.15R	1.0°	2.0	30	75	6	2
EHCRT201501530AA2C	1.5	0.15R	1.5°	2.0	30	75	6	2
EHCRT201801830HA2C	1.8	0.18R	0.5°	2.0	30	75	6	2
EHCRT2018018301A2C	1.8	0.18R	1.0°	2.0	30	75	6	2
EHCRT201801830AA2C	1.8	0.18R	1.5°	2.0	30	75	6	2
EHCRT20200225AA	2.0	0.20R	1.5°	3.0	25	75	6	2
EHCRT20200239AA	2.0	0.20R	1.5°	3.0	39	75	6	2
EHCRT20200525AA	2.0	0.50R	1.5°	3.0	25	75	6	2
EHCRT20200539AA	2.0	0.50R	1.5°	3.0	39	75	6	2
EHCRT20200550AA	2.0	0.50R	1.5°	3.0	50	100	6	2
EHCRT20200535HA4C	2.0	0.50R	0.5°	4.0	35	75	6	2
EHCRT202005351A4C	2.0	0.50R	1.0°	4.0	35	75	6	2
EHCRT20200535AA4C	2.0	0.50R	1.5°	4.0	35	75	6	2
EHCRT20250535HA5C	2.5	0.50R	0.5°	5.0	35	75	6	2
EHCRT202505351A5C	2.5	0.50R	1.0°	5.0	35	75	6	2
EHCRT20250535AA5C	2.5	0.50R	1.5°	5.0	35	75	6	2
EHCRT20251035HA5C	2.5	1.00R	0.5°	5.0	35	75	6	2
EHCRT202510351A5C	2.5	1.00R	1.0°	5.0	35	75	6	2
EHCRT20251035AA5C	2.5	1.00R	1.5°	5.0	35	75	6	2

Solid End Milling

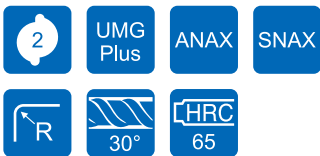
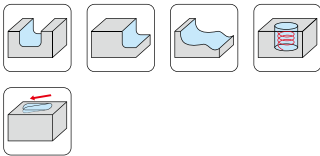
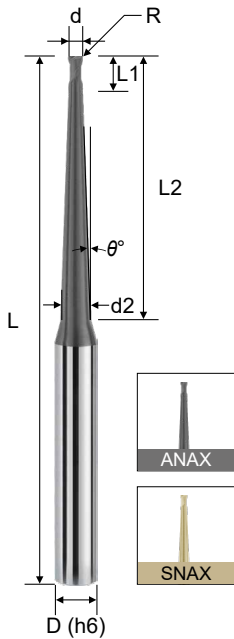
H65X - Taper Neck · Corner Radius · 2F

斜頸型 · 圓鼻銑刀 · 2 刃

- Various taper angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges, high strength of taper neck, can cut deep grooves without breaking.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EHCRT



Order No.	Dia. (d)	Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHCRT20300525AA	3.0	0.50R	1.5°	4.5	25	75	6	2
EHCRT20301025AA	3.0	1.00R	1.5°	4.5	25	75	6	2
EHCRT20301039AA	3.0	1.00R	1.5°	4.5	39	75	6	2
EHCRT20301050AA	3.0	1.00R	1.5°	4.5	50	100	6	2
EHCRT20300535HA5C	3.0	0.50R	0.5°	5.0	35	75	6	2
EHCRT203005351A5C	3.0	0.50R	1.0°	5.0	35	75	6	2
EHCRT20300535AA5C	3.0	0.50R	1.5°	5.0	35	75	6	2
EHCRT20301035HA5C	3.0	1.00R	0.5°	5.0	35	75	6	2
EHCRT203010351A5C	3.0	1.00R	1.0°	5.0	35	75	6	2
EHCRT20301035AA5C	3.0	1.00R	1.5°	5.0	35	75	6	2
EHCRT20350535HA	3.5	0.50R	0.5°	5.0	35	75	6	2
EHCRT203505351A	3.5	0.50R	1.0°	5.0	35	75	6	2
EHCRT20350535AA	3.5	0.50R	1.5°	5.0	35	75	6	2
EHCRT20351035HA	3.5	1.00R	0.5°	5.0	35	75	6	2
EHCRT203510351A	3.5	1.00R	1.0°	5.0	35	75	6	2
EHCRT20351035AA	3.5	1.00R	1.5°	5.0	35	75	6	2
EHCRT20400545HA	4.0	0.50R	0.5°	6.0	45	100	6	2
EHCRT204005451A	4.0	0.50R	1.0°	6.0	45	100	6	2
EHCRT20400525AA	4.0	0.50R	1.5°	6.0	25	75	6	2
EHCRT20400545AA	4.0	0.50R	1.5°	6.0	45	100	6	2
EHCRT20401045HA	4.0	1.00R	0.5°	6.0	45	100	6	2
EHCRT204010451A	4.0	1.00R	1.0°	6.0	45	100	6	2
EHCRT20401025AA	4.0	1.00R	1.5°	6.0	25	75	6	2
EHCRT20401045AA	4.0	1.00R	1.5°	6.0	45	100	6	2
EHCRT20501025AA	5.0	1.00R	1.5°	7.5	25	75	6	2
EHCRT20501050AA	5.0	1.00R	1.5°	7.5	50	100	8	2
EHCRT20601035AA	6.0	1.00R	1.5°	9.0	35	75	8	2
EHCRT20601050AA	6.0	1.00R	1.5°	9.0	50	100	10	2

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

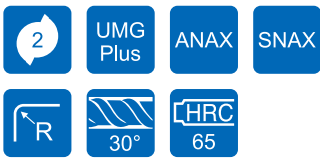
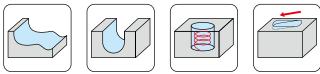
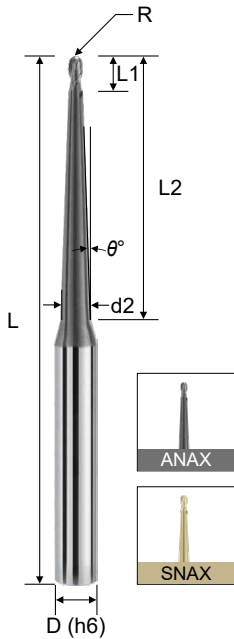
H65X - Taper Neck · Ball Nose · 2F

斜頸型 · 球型銑刀 · 2刃

- High strength of taper neck, can cut deep grooves without breaking.
- Suitable for cutting grooves at high speed.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance, for HRC < 55.
- The coating can change to SNAX (Al, Ti, Si, N) smooth coating, for HRC ≥ 55.

ASIA
(Metric)

EBHRT



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

Order No.		Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (Z)
ANAX	SNAX									
EBHRT201023AA	EBHRT201023AS	0.5R	1	1.5°	2	23	2.20	60	6	2
EBHRT202023AA	EBHRT202023AS	1.0R	2	1.5°	4	23	3.00	60	6	2
EBHRT2020423A	EBHRT2020423S	1.0R	2	3.0°	4	42	5.98	100	8	2
EBHRT203052AA	EBHRT203052AS	1.5R	3	1.5°	6	52	5.40	100	6	2
EBHRT2030473A	EBHRT2030473S	1.5R	3	3.0°	6	47	7.29	100	8	2
EBHRT204046AA	EBHRT204046AS	2.0R	4	1.5°	8	46	6.00	100	6	2
EBHRT2040383A	EBHRT2040383S	2.0R	4	3.0°	8	38	7.14	100	8	2
EBHRT2050283A	EBHRT2050283S	2.5R	5	3.0°	10	28	6.88	100	8	2
EBHRT2060383A	EBHRT2060383S	3.0R	6	3.0°	12	38	8.72	100	10	2
EBHRT2080383A	EBHRT2080383S	4.0R	8	3.0°	16	38	10.30	100	12	2
EBHRT2100573A	EBHRT2100573S	5.0R	10	3.0°	20	57	13.88	100	16	2
EBHRT2120383A	EBHRT2120383S	6.0R	12	3.0°	24	38	13.47	100	16	2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 35~45		HRC 45~55		HRC 55~60	
Vc	260 m/min		195 m/min		130 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1.0R	41,600	1,920	31,200	1,440	20,800	960
2.0R	20,800	1,920	15,600	1,440	10,335	955
3.0R	13,650	1,890	10,335	1,430	6,890	955
4.0R	10,335	1,910	7,735	1,430	5,200	960
5.0R	8,255	1,905	6,240	1,440	4,160	960
6.0R	6,890	1,910	5,200	1,440	3,445	955
8.0R	5,200	1,920	3,900	1,440	2,600	960
10.0R	4,160	1,920	3,120	1,440	2,080	960

ap = 0.05d
pf = 0.1d

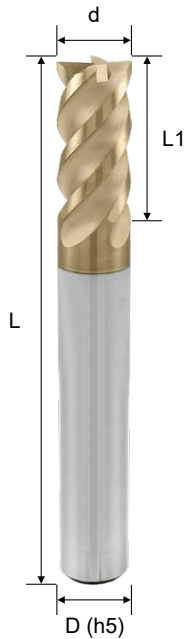
Solid End Milling

H68X - Square · High Precision · Standard · 4F 平銑刀 · 高精標準型 · 4 刃

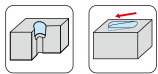
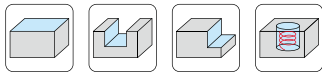
- High precision cutting for HRC 30~65 hardened steel.
- For general side finishing ($A_e < d \times 10\%$).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHSSF



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHSSF441000S	1.0	3	50	4	4
EHSSF441500S	1.5	4	50	4	4
EHSSF442000S	2.0	5	50	4	4
EHSSF442500S	2.5	6	50	4	4
EHSSF403000S	3.0	8	50	6	4
EHSSF404000S	4.0	10	50	6	4
EHSSF405000S	5.0	13	50	6	4
EHSSF406000S	6.0	15	50	6	4
EHSSF408000S	8.0	20	60	8	4
EHSSF410000S	10.0	25	75	10	4
EHSSF412000S	12.0	30	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.01
d > 6	0 ~ -0.02

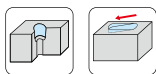
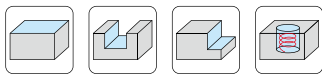
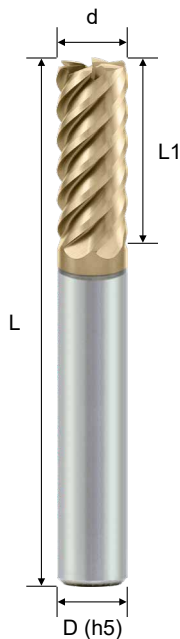
WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKD11,SKH51			
	HRC 35~45				HRC 45~60			
HARDNESS	HRC 35~45				HRC 45~60			
CONDITION RANGE	HIGH SPEED		GENERAL		HIGH SPEED		GENERAL	
Vc	110 m/min		80 m/min		100 m/min		70 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	35000	630	25500	460	32000	600	22000	360
2mm	17500	830	12700	510	16000	750	11200	440
3mm	12000	1000	8500	550	11000	800	7400	460
4mm	8700	1000	6350	600	8000	850	5600	500
6mm	5830	1100	4200	750	5300	900	3750	560
8mm	4380	1100	3200	800	4000	1000	2800	600
10mm	3500	1100	2500	750	3200	900	2200	580
12mm	2900	1100	2150	700	2750	850	2000	550
	ap = 1.5d ae ≤ 0.05d		ap = 1.5d ae ≤ 0.07d		ap = 1.5d ae ≤ 0.02d		ap = 1.5d ae ≤ 0.05d	

H68X - Square · High Precision · High Helix · 6F / 8F 平銑刀 · 高精高導型 · 6 刃 / 8 刃

- High precision cutting for HRC 30~65 hardened steel.
- 50° helix for general side finishing (Ae < d×10%), 50° helix for light side finishing (Ae < d×5%).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHSMF



d Tolerance	
d ≤ 6	0 ~ -0.02
d > 6	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHSMF606000S	6	15	50	6	6
EHSMF608000S	8	20	60	8	6
EHSMF610000S	10	25	75	10	6
EHSMF612000S	12	30	75	12	6
EHSMF816000S	16	40	100	16	8

WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKD11,SKH51			
	HRC 35~45				HRC 45~60			
CONDITION RANGE	HIGH SPEED		GENERAL		HIGH SPEED		GENERAL	
Vc	110 m/min		80 m/min		100 m/min		70 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	35000	630	25500	460	32000	600	22000	360
2mm	17500	830	12700	510	16000	750	11200	440
3mm	12000	1000	8500	550	11000	800	7400	460
4mm	8700	1000	6350	600	8000	850	5600	500
6mm	5830	1100	4200	750	5300	900	3750	560
8mm	4380	1100	3200	800	4000	1000	2800	600
10mm	3500	1100	2500	750	3200	900	2200	580
12mm	2900	1100	2150	700	2750	850	2000	550
	ap = 1.5d ae ≤ 0.05d		ap = 1.5d ae ≤ 0.07d		ap = 1.5d ae ≤ 0.02d		ap = 1.5d ae ≤ 0.05d	

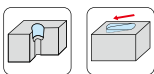
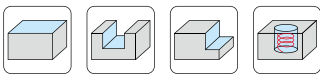
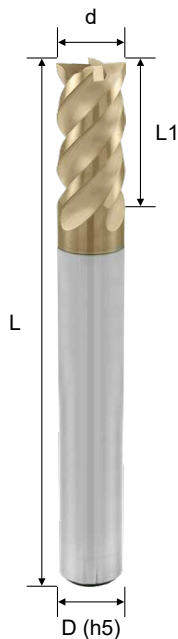
H68X - Square · High Precision · Long Shank · 4F

平銑刀 · 高精長柄型 · 4 刃

- High precision cutting for HRC 30~65 hardened steel.
- 45° helix for general side finishing (Ae < d×10%), 50° helix for light side finishing (Ae < d×5%).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.

ASIA
(Metric)

EHSLF



d Tolerance	
d ≤ 6	0 ~ -0.02
d > 6	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHSLF404007S	4	10	75	6	4
EHSLF406007S	6	15	75	6	4
EHSLF406010S	6	15	100	6	4
EHSLF408007S	8	20	75	8	4
EHSLF408010S	8	20	100	8	4
EHSLF410010S	10	25	100	10	4
EHSLF412010S	12	30	100	12	4

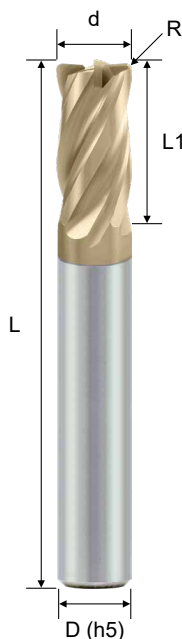
WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKD11,SKH51			
	HRC 35~45				HRC 45~60			
CONDITION RANGE	HIGH SPEED		GENERAL		HIGH SPEED		GENERAL	
Vc	110 m/min		80 m/min		100 m/min		70 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1mm	35000	630	25500	460	32000	600	22000	360
2mm	17500	830	12700	510	16000	750	11200	440
3mm	12000	1000	8500	550	11000	800	7400	460
4mm	8700	1000	6350	600	8000	850	5600	500
6mm	5830	1100	4200	750	5300	900	3750	560
8mm	4380	1100	3200	800	4000	1000	2800	600
10mm	3500	1100	2500	750	3200	900	2200	580
12mm	2900	1100	2150	700	2750	850	2000	550
	ap = 1.5d ae ≤ 0.05d		ap = 1.5d ae ≤ 0.07d		ap = 1.5d ae ≤ 0.02d		ap = 1.5d ae ≤ 0.05d	

H68X - Corner Radius · High Precision · Standard · 4F 圓鼻銑刀 · 高精標準型 · 4 刃

- High precision cutting for HRC 30~65 hardened steel.
- For general slot finishing.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.

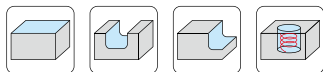


EHCSF



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHCSF441001S	1.0	0.1R	2	50	4	4
EHCSF441002S	1.0	0.2R	2	50	4	4
EHCSF441501S	1.5	0.1R	3	50	4	4
EHCSF441502S	1.5	0.2R	3	50	4	4
EHCSF442001S	2.0	0.1R	4	50	4	4
EHCSF442002S	2.0	0.2R	4	50	4	4
EHCSF442005S	2.0	0.5R	4	50	4	4
EHCSF443002S	3.0	0.2R	6	50	4	4
EHCSF443005S	3.0	0.5R	6	50	4	4
EHCSF403005S	3.0	0.5R	6	50	6	4
EHCSF444002S	4.0	0.2R	8	50	4	4
EHCSF444005S	4.0	0.5R	8	50	4	4
EHCSF404005S	4.0	0.5R	8	50	6	4
EHCSF404010S	4.0	1.0R	8	50	6	4
EHCSF406005S	6.0	0.5R	12	50	6	4
EHCSF406010S	6.0	1.0R	12	50	6	4
EHCSF406002S	6.0	0.2R	12	50	6	4
EHCSF406003S	6.0	0.3R	12	50	6	4
EHCSF408005S	8.0	0.5R	16	60	8	4
EHCSF408010S	8.0	1.0R	16	60	8	4
EHCSF410005S	10.0	0.5R	20	75	10	4
EHCSF410010S	10.0	1.0R	20	75	10	4
EHCSF412005S	12.0	0.5R	24	75	12	4
EHCSF412010S	12.0	1.0R	24	75	12	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.01
d > 6	0 ~ -0.02

R Tolerance	
R < 2	±0.010
R ≥ 2	±0.015

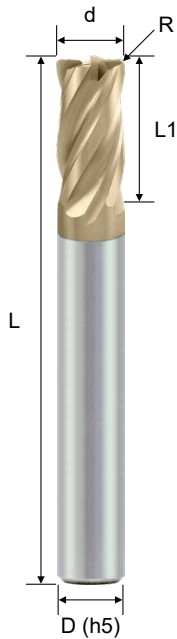
WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1		HARDENED STEEL SKD61,SKD11,SKH51	
	HRC 35~45		HRC 45~60	
Vc	60 m/min		40 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	7690	410	3990	200
4mm	5800	520	3000	240
5mm	4640	600	2430	300
6mm	3770	550	1950	330
8mm	2900	520	1500	300
10mm	2320	495	1200	270
12mm	1890	470	1020	240
	ap ≤ 0.5d ae = 1d		ap ≤ 0.2d ae = 1d	

H68X - Corner Radius · High Precision · Long Shank · 4F 圓鼻銑刀 · 高精長柄型 · 4刃

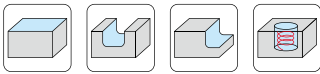
- High precision cutting for HRC 30~65 hardened steel.
- For general slot finishing.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHCLF



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHCLF40400507S	4	0.5R	8	75	6	4
EHCLF40600507S	6	0.5R	12	75	6	4
EHCLF40600510S	6	0.5R	12	100	6	4
EHCLF40800507S	8	0.5R	16	75	8	4
EHCLF40800510S	8	0.5R	16	100	8	4
EHCLF41000510S	10	0.5R	20	100	10	4
EHCLF41200510S	12	0.5R	24	100	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
d > 6	0 ~ -0.03

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

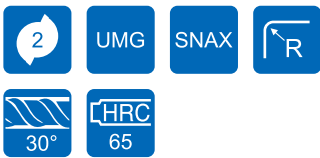
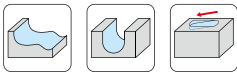
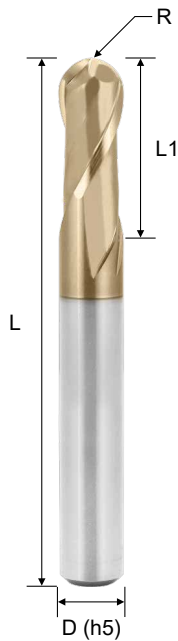
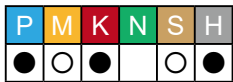
WORKING MATERIAL	PREHARDENED STEEL NAK80, CENA1		HARDENED STEEL SKD61, SKD11, SKH51	
	HRC 35~45		HRC 45~60	
Vc	60 m/min		40 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	7690	410	3990	200
4mm	5800	520	3000	240
5mm	4640	600	2430	300
6mm	3770	550	1950	330
8mm	2900	520	1500	300
10mm	2320	495	1200	270
12mm	1890	470	1020	240
	ap ≤ 0.5d ae = 1d		ap ≤ 0.2d ae = 1d	

H68X - Ball Nose · High Precision · Standard · 2F 球型銑刀 · 高精標準型 · 2 刃

- High precision cutting for HRC 30~65 hardened steel.
- The ball nose radius tolerance is within $\pm 5\mu\text{m}$ ($d \leq 6$) and $\pm 7\mu\text{m}$ ($d > 6$).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHBSF



R Tolerance	
R ≤ 3	±0.005
R > 3	±0.007

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHBSF241000S	0.5R	1	2	50	4	2
EHBSF242000S	1.0R	2	4	50	4	2
EHBSF244000S	2.0R	4	8	50	4	2
EHBSF203000S	1.5R	3	6	50	6	2
EHBSF204000S	2.0R	4	8	50	6	2
EHBSF206000S	3.0R	6	12	50	6	2
EHBSF208000S	4.0R	8	16	60	8	2
EHBSF210000S	5.0R	10	20	75	10	2
EHBSF212000S	6.0R	12	24	75	12	2

WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKT4				HARDENED STEEL SKD11,SKH51						
	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	3200	36000	1600	50000	2560	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			
					$ap = 0.05d \sim 0.1d$ $pf = 0.2d$				$ap = 0.05d \sim 0.1d$ $pf = 0.15d$						

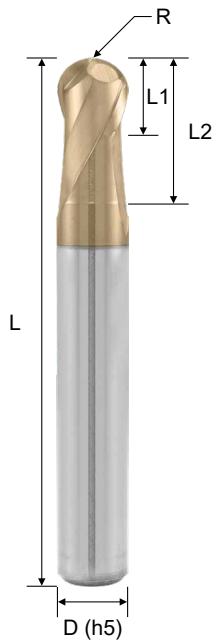
Solid End Milling

H68X - Ball Nose · High Precision · Short with Neck · 2F 球型銑刀 · 高精短刃型 · 2 刃

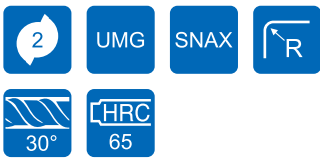
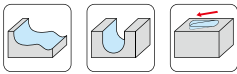
- High precision cutting for HRC 30~65 hardened steel.
- The ball nose radius tolerance is within $\pm 5\mu\text{m}$ ($d \leq 6$) and $\pm 7\mu\text{m}$ ($d > 6$).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHBUFF



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHBUFF240201S	0.10R	0.2	0.2	0.4	50	4	2
EHBUFF240401S	0.20R	0.4	0.4	0.8	50	4	2
EHBUFF240601S	0.30R	0.6	0.6	1.2	50	4	2
EHBUFF240801S	0.40R	0.8	0.8	1.6	50	4	2
EHBUFF241001S	0.50R	1.0	1.0	2	50	4	2
EHBUFF241501S	0.75R	1.5	1.5	3	50	4	2
EHBUFF242001S	1.00R	2.0	2.0	4	50	4	2
EHBUFF243001S	1.50R	3.0	3.0	6	50	4	2
EHBUFF244001S	2.00R	4.0	4.0	8	50	4	2
EHBUFF206001S	3.00R	6.0	6.0	12	50	6	2
EHBUFF208001S	4.00R	8.0	8.0	16	60	8	2
EHBUFF210001S	5.00R	10.0	10.0	20	75	10	2
EHBUFF212001S	6.00R	12.0	12.0	24	75	12	2
EHBUFF240200S	0.10R	0.2	0.2	-	50	4	2
EHBUFF240400S	0.20R	0.4	0.4	-	50	4	2
EHBUFF240600S	0.30R	0.6	0.6	-	50	4	2
EHBUFF240800S	0.40R	0.8	0.8	-	50	4	2
EHBUFF241000S	0.50R	1.0	1.0	-	50	4	2
EHBUFF241500S	0.75R	1.5	1.5	-	50	4	2
EHBUFF242000S	1.00R	2.0	2.0	-	50	4	2
EHBUFF243000S	1.50R	3.0	3.0	-	50	4	2
EHBUFF203000S	1.50R	3.0	3.0	-	50	6	2
EHBUFF244000S	2.00R	4.0	4.0	-	50	4	2
EHBUFF204000S	2.00R	4.0	4.0	-	50	6	2



R Tolerance	
R ≤ 3	±0.005
R > 3	±0.007

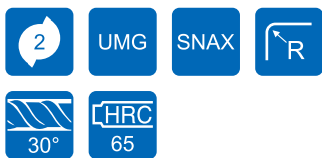
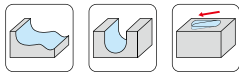
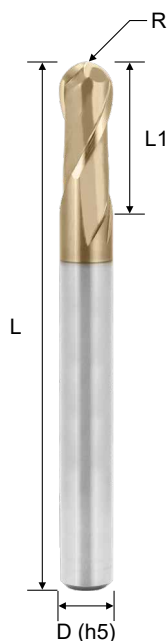
WORKING MATERIAL	PREHARDENED STEEL NAK80,CENA1				HARDENED STEEL SKD61,SKT4				HARDENED STEEL SKD11,SKH51			
HARDNESS	HRC 35~45				HRC 45~55				HRC 55~60			
CONDITION RANGE	HIGH SPEED		GENERAL		HIGH SPEED		GENERAL		HIGH SPEED		GENERAL	
Vc	50~95 m/min		25~70 m/min		40~95 m/min		20~70 m/min		30~95 m/min		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	3200	36000	1600	50000	2560	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
				$ap = 0.05d \sim 0.1d$ $pf = 0.2d$				$ap = 0.05d \sim 0.1d$ $pf = 0.15d$				

H68X - Ball Nose · High Precision · Long Shank · 2F 球型銑刀 · 高精長柄型 · 2刃

- High precision cutting for HRC 30~65 hardened steel.
- The ball nose radius tolerance is within $\pm 5\mu\text{m}$ ($d \leq 6$) and $\pm 7\mu\text{m}$ ($d > 6$).
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.



EHLBF



R Tolerance	
R ≤ 3	±0.007
R > 3	±0.010

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EHLBF204007S	2R	4	8	75	6	2
EHLBF206007S	3R	6	12	75	6	2
EHLBF206010S	3R	6	12	100	6	2
EHLBF208007S	4R	8	16	75	8	2
EHLBF208010S	4R	8	16	100	8	2
EHLBF210010S	5R	10	20	100	10	2
EHLBF212010S	6R	12	24	100	12	2

Solid End Milling

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	3200	36000	1600	50000	2560	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			
				$ap = 0.05d \sim 0.1d$ $pf = 0.2d$				$ap = 0.05d \sim 0.1d$ $pf = 0.15d$							

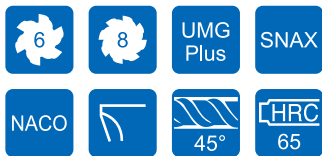
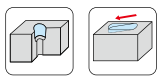
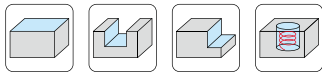
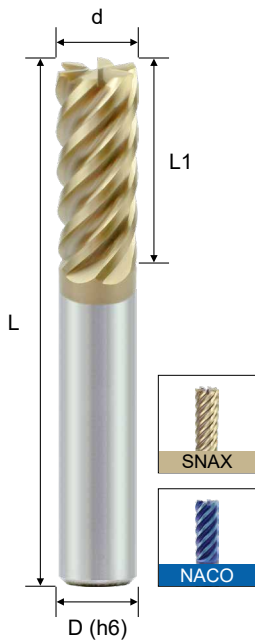
H70X - Square · High Helix · 6F / 8F

平銑刀 · 高導型 · 6 刃 / 8 刃

- 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.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear and heat resistance.
- The coating can change to Naco Blue coating is optional.



EHSSS



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

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO					
EHSSS606000S	EHSSS606000N	6	15	50	6	6
EHSSS608000S	EHSSS608000N	8	20	60	8	6
EHSSS610000S	EHSSS610000N	10	25	75	10	6
EHSSS612000S	EHSSS612000N	12	30	75	12	6
EHSSS816000S	EHSSS816000N	16	40	100	16	8
EHSSS818000S	EHSSS818000N	18	40	100	18	8
EHSSS820000S	EHSSS820000N	20	45	100	20	8
EHSSS825000S	EHSSS825000N	25	45	100	25	8

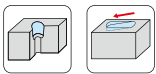
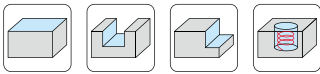
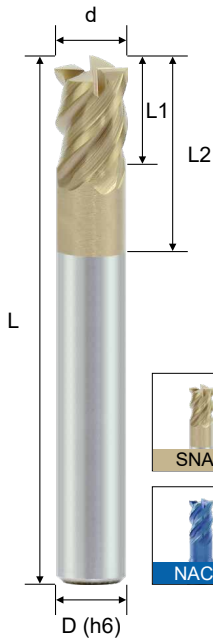
WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 m/min		98 m/min		65 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6mm	6,890	1,900	5,200	1,000	3,445	505
8mm	5,200	1,900	3,900	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	

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

- 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.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear and heat resistance.
- The coating can change to Naco Blue coating is optional.



EHSUS



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

Order No.		Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO						
EHSUS441000S	EHSUS441000N	1	1.5	2.5	50	4	4
EHSUS442000S	EHSUS442000N	2	3.0	5.0	50	4	4
EHSUS403000S	EHSUS403000N	3	4.5	7.5	50	6	4
EHSUS404000S	EHSUS404000N	4	6.0	10.0	50	6	4
EHSUS405000S	EHSUS405000N	5	7.5	12.5	50	6	4
EHSUS606000S	EHSUS606000N	6	9.0	15.0	50	6	6
EHSUS608000S	EHSUS608000N	8	12.0	20.0	60	8	6
EHSUS610000S	EHSUS610000N	10	15.0	25.0	75	10	6
EHSUS612000S	EHSUS612000N	12	18.0	30.0	75	12	6
EHSUS816000S	EHSUS816000N	16	24.0	40.0	100	16	8
EHSUS820000S	EHSUS820000N	20	30.0	50.0	100	20	8
EHSSH441000S	EHSSH441000N	1	3	3	50	4	4
EHSSH441500S	EHSSH441500N	1.5	4	4	50	4	4
EHSSH442000S	EHSSH442000N	2	5	5	50	4	4
EHSSH442500S	EHSSH442500N	2.5	6	6	50	4	4
EHSSH443000S	EHSSH443000N	3	8	8	50	4	4
EHSSH444000S	EHSSH444000N	4	10	10	50	4	4

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	

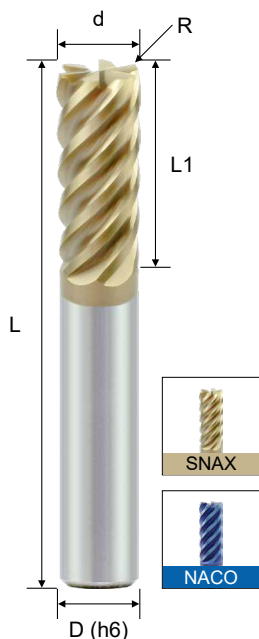
Solid End Milling

H70X - Corner Radius · High Helix · 6F 圓鼻銑刀 · 高導型 · 6 刃

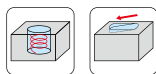
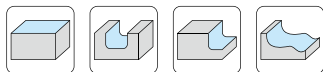
- Suitable for HRC 50 Hardened Steel, maximum up to HRC 65.
- Horsepower consumption will be decreased with greater shearing action.
- High Helix and 6 Flutes design gives a good finishing surface.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear and heat resistance.
- The coating can change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



EHCSS



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO						
EHCSS606005S	EHCSS606005N	6	0.5R	12	50	6	6
EHCSS606010S	EHCSS606010N	6	1.0R	12	50	6	6
EHCSS608005S	EHCSS608005N	8	0.5R	16	60	8	6
EHCSS608010S	EHCSS608010N	8	1.0R	16	60	8	6
EHCSS610005S	EHCSS610005N	10	0.5R	20	75	10	6
EHCSS610010S	EHCSS610010N	10	1.0R	20	75	10	6
EHCSS612005S	EHCSS612005N	12	0.5R	24	75	12	6
EHCSS612010S	EHCSS612010N	12	1.0R	24	75	12	6
EHCSS616020S	EHCSS616020N	16	2.0R	32	100	16	6
EHCSS620020S	EHCSS620020N	20	2.0R	40	100	20	6



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

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

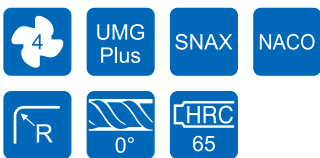
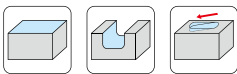
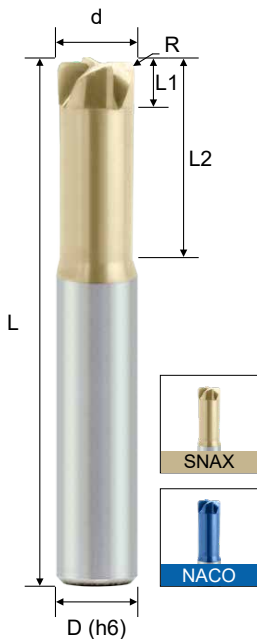
WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 m/min		98 m/min		65 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6mm	6,890	1,900	5,200	1,000	3,445	505
8mm	5,200	1,900	3,900	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	

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

- 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.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear and heat resistance.
- The coating can change to Naco Blue coating is optional.



EHCUK



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO							
EHCUK40200506S	EHCUK40200506N	2	0.5R	1.0	6	50	6	4
EHCUK40300508S	EHCUK40300508N	3	0.5R	1.5	8	50	6	4
EHCUK40400512S	EHCUK40400512N	4	0.5R	2.0	12	60	6	4
EHCUK40400516S	EHCUK40400516N	4	0.5R	2.0	16	60	6	4
EHCUK40401012S	EHCUK40401012N	4	1.0R	2.0	12	60	6	4
EHCUK40401016S	EHCUK40401016N	4	1.0R	2.0	16	60	6	4
EHCUK40600512S	EHCUK40600512N	6	0.5R	3.0	12	60	6	4
EHCUK40600515S	EHCUK40600515N	6	0.5R	3.0	15	60	6	4
EHCUK40601015S	EHCUK40601015N	6	1.0R	3.0	15	60	6	4
EHCUK40601515S	EHCUK40601515N	6	1.5R	3.0	15	60	6	4
EHCUK40800520S	EHCUK40800520N	8	0.5R	4.0	20	60	8	4
EHCUK40801020S	EHCUK40801020N	8	1.0R	4.0	20	60	8	4
EHCUK41000525S	EHCUK41000525N	10	0.5R	5.0	25	75	10	4
EHCUK41001025S	EHCUK41001025N	10	1.0R	5.0	25	75	10	4
EHCUK41201030S	EHCUK41201030N	12	1.0R	6.0	30	75	12	4
EHCUK41202030S	EHCUK41202030N	12	2.0R	6.0	30	75	12	4

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
	$\frac{ae}{R \leq 1} \mid 0.2 \times R \mid \frac{ap}{0.025d}$ $R > 1 \mid 0.4mm \mid 0.025d$		$\frac{ae}{R \leq 1} \mid 0.1 \times R \mid \frac{ap}{0.025d}$ $R > 1 \mid 0.2mm \mid 0.025d$			

Solid End Milling

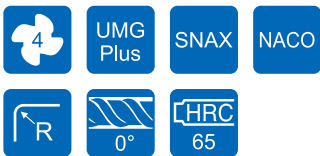
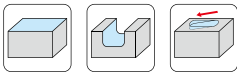
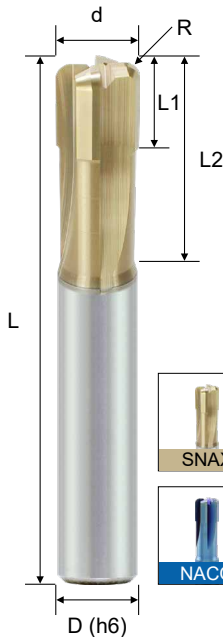
H70X - Corner Radius · High Feed · 4F

圓鼻銑刀 · 高進給直刃型 · 4 刃

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

ASIA
(Metric)

EHCUS



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

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

Order No.		Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO							
EHCUS441002S	EHCUS441002N	1	0.20R	1	2.5	50	4	4
EHCUS442002S	EHCUS442002N	2	0.25R	2	6.5	50	4	4
EHCUS403005S	EHCUS403005N	3	0.50R	3	7.5	50	6	4
EHCUS404005S	EHCUS404005N	4	0.50R	4	10.0	50	6	4
EHCUS404010S	EHCUS404010N	4	1.00R	4	10.0	50	6	4
EHCUS405010S	EHCUS405010N	5	1.00R	5	12.5	50	6	4
EHCUS406010S	EHCUS406010N	6	1.00R	6	15.0	50	6	4
EHCUS406015S	EHCUS406015N	6	1.50R	6	15.0	50	6	4
EHCUS408010S	EHCUS408010N	8	1.00R	8	20.0	60	8	4
EHCUS408015S	EHCUS408015N	8	1.50R	8	20.0	60	8	4
EHCUS408020S	EHCUS408020N	8	2.00R	8	20.0	60	8	4
EHCUS410010S	EHCUS410010N	10	1.00R	10	25.0	75	10	4
EHCUS410020S	EHCUS410020N	10	2.00R	10	25.0	75	10	4
EHCUS412010S	EHCUS412010N	12	1.00R	12	30.0	75	12	4
EHCUS412020S	EHCUS412020N	12	2.00R	12	30.0	75	12	4
EHCUS412030S	EHCUS412030N	12	3.00R	12	30.0	75	12	4

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

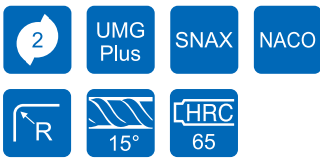
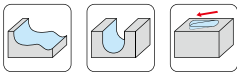
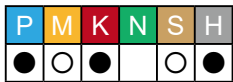
	ae	ap	
	$R \leq 2$ 0.2 x R 0.05d $R > 2$ 0.4mm 0.05d	$R \leq 2$ 0.1 x R 0.05d $R > 2$ 0.2mm 0.05d	

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

- 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.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear and heat resistance.
- The coating can change to Naco Blue coating is optional.



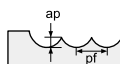
EBBUS



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

Order No.		Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	NACO							
EHBUS241000S	EHBUS241000N	0.50R	1.0	1.0	2	50	4	2
EHBUS241500S	EHBUS241500N	0.75R	1.5	1.5	3	50	4	2
EHBUS202000S	EHBUS202000N	1.00R	2.0	2.0	4	50	6	2
EHBUS203000S	EHBUS203000N	1.50R	3.0	3.0	6	50	6	2
EHBUS204000S	EHBUS204000N	2.00R	4.0	4.0	8	50	6	2
EHBUS205000S	EHBUS205000N	2.50R	5.0	5.0	10	50	6	2
EHBUS206000S	EHBUS206000N	3.00R	6.0	6.0	12	50	6	2
EHBUS208000S	EHBUS208000N	4.00R	8.0	8.0	16	60	8	2
EHBUS210000S	EHBUS210000N	5.00R	10.0	10.0	20	75	10	2
EHBUS212000S	EHBUS212000N	6.00R	12.0	12.0	24	75	12	2
EHBUS216000S	EHBUS216000N	8.00R	16.0	16.0	32	100	16	2

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

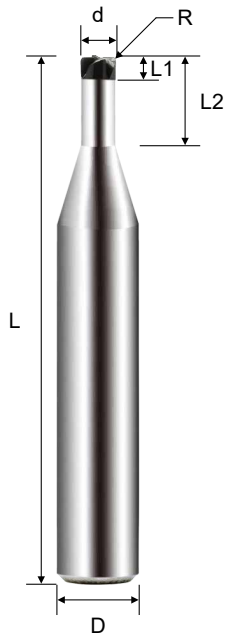
Solid End Milling

H800 - CBN · Corner Radius · 4F / 6F CBN 圓鼻銑刀 · 4 刃 / 6 刃

• Finishing for hardened steel (HRC ≤ 65).



EBCUA



Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
4 Flutes								
EBCUA441001	1	0.1	0.7	2.5	0.96	50	4	4
EBCUA441501	1.5	0.1	1	3.75	1.44	50	4	4
EBCUA442001	2	0.1	1.2	5	1.96	50	4	4
EBCUA443001	3	0.1	1.8	7.5	2.92	50	4	4
EBCUA443002	3	0.2	1.8	7.5	2.92	50	4	4

6 Flutes								
EBCUA604001	4	0.1	2	10	3.92	50	6	6
EBCUA604002	4	0.2	2	10	3.92	50	6	6
EBCUA606001	6	0.1	2	15	5.92	50	6	6
EBCUA606002	6	0.2	2	15	5.92	50	6	6
EBCUA608001	8	0.2	2	20	7.92	60	8	6

※Customized is available

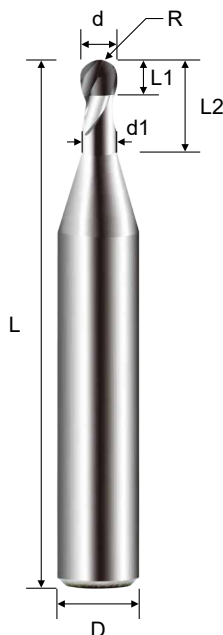
R Tolerance	
R	±0.005

H800 - CBN · Ball Nose · 2F CBN 球型銑刀 · 2 刃

- Finishing for hardened steel (HRC ≤ 65).
- Low helix design



EBBUA



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
EBBUA240200	0.1R	0.2	0.15	0.4	0.17	50	4	2
EBBUA240400	0.2R	0.4	0.3	0.8	0.37	50	4	2
EBBUA240600	0.3R	0.6	0.5	1.2	0.57	50	4	2
EBBUA240800	0.4R	0.8	0.6	1.6	0.77	50	4	2
EBBUA241000	0.5R	1	0.7	2	0.96	50	4	2
EBBUA241500	0.75R	1.5	1	3	1.44	50	4	2
EBBUA242000	1.0R	2	1.2	4	1.96	50	4	2
EBBUA203000	1.5R	3	1.8	6	2.92	50	6	2

※Customized is available



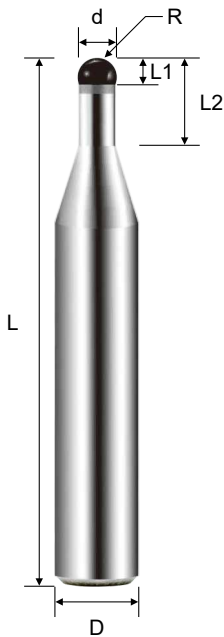
R Tolerance	
R	±0.005

H810 - PCD · Ball PCD 圓球銑刀

- Mirror finishing for hardened steel (HRC ≤ 65).
- High accuracy $R \pm 0.005\text{mm}$ realize high quality machining.



EDBUA



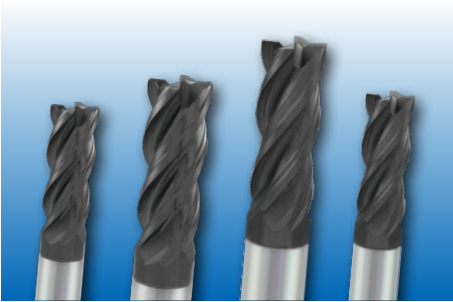
Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EDBUA041000	0.5R	1	0.5	2	50	4	-
EDBUA041500	0.75R	1.5	0.75	3	50	4	-
EDBUA042000	1.0R	2	1.0	4	50	4	-
EDBUA003000	1.5R	3	1.5	6	50	6	-
EDBUA004000	2.0R	4	2.0	8	50	6	-
EDBUA006000	3.0R	6	3.0	12	50	6	-

※Customized is available



R Tolerance	
R	± 0.005

V470 Carbide Endmills

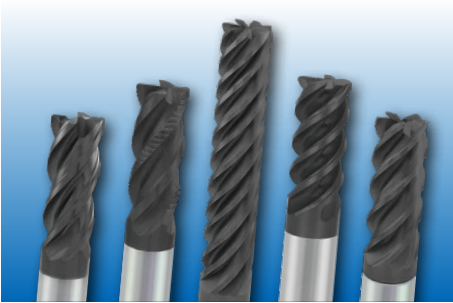


- For carbon steel, alloy steel & cast iron.
- General milling, HRC < 48
- Variable pitch for anti-vibration.
- TACO coating.

- 適用於碳鋼, 合金鋼 & 鑄鐵
- 泛用加工
- 抗震不等分割刃設計
- 高鋁鈦塗層

→ Page B070

V47X Carbide Endmills

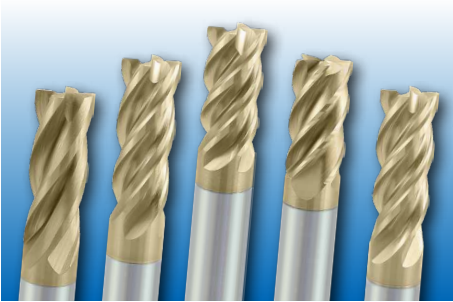


- For stainless steel, high temperature alloy & alloy steel.
- High efficiency milling.
- Variable pitch for anti-vibration.
- ANAX smooth coating.

- 適用於不鏽鋼, 鈦, 鎳基合金及合金鋼
- 高效益、高去除率加工
- 抗震不等分割刃設計
- 含鉻平滑塗層

→ Page B070

V53X Carbide Endmills

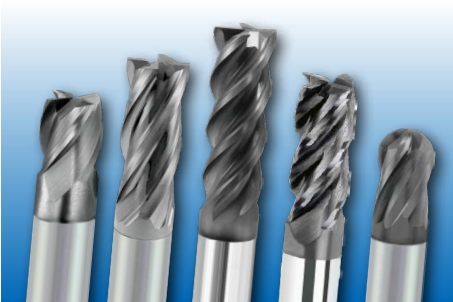


- For high temperature alloy & stainless steel.
- High efficiency milling.
- Variable pitch and variable helix for anti-vibration.
- SNAX smooth coating.

- 適用於鈦, 鎳基合金及不鏽鋼
- 高效益、高去除率加工
- 抗震不等分割刃與不等螺旋設計
- 含矽平滑塗層

→ Page B094

M50X Carbide Endmills



- For stainless steel & alloy steel.
- General milling.
- High rigidity design.
- ANAX smooth coating.

- 適用於不鏽鋼及合金鋼
- 泛用加工
- 高剛性設計
- 含鉻平滑塗層

→ Page B113

V470 / V47X - Tools selection

刀具選擇建議

Standard	Type Number		Helix Angle	Tool Type	Slot milling	Side milling	Copy milling	P	M	K	N	S	H
ASIA (Metric)	EPSSVB	 TACO Standard	35°	Square Corner Radius	✓	✓		●	○	●			
	EPSSVC	 TACO ANAX Standard	38°	Square Corner Radius	✓	✓		●	○	●			
	EPSUVC	 ANAX Necked	38°	Square Corner Radius	✓	✓		●	●	●		●	○
	EPSRVC	 ANAX Roughing/Finishing	38°	Square	✓	✓		●	●	●		●	○
	EPSSVD	 ANAX Standard	43° or 45°	Square Corner Radius		✓		●	●	●		●	●
	EPSCVD	 ANAX Long Flute	43°	Square Corner Radius		✓		●	●	●		●	●
	EPSCVH	 ANAX Chip Breaker	43°	Square		✓		●	●	●		●	●
	EPSSVE	 ANAX Standard	52°	Corner Radius		✓		○	●	○		●	●
	EPBSVC	 ANAX Standard	38°	Ballnose			✓	●	●	●		●	○
DIN (Metric)	E114VC E113VC	 ANAX Necked	38°	Square Corner Radius	✓	✓		●	●	●		●	○
ANSI (Inch)	EP \square IV	 UNICO Inch	38°	Square Corner Radius	✓	✓		●	●	●		●	○
	EPB \square IV	 UNICO Inch	38°	Ballnose			✓	●	●	●		●	○

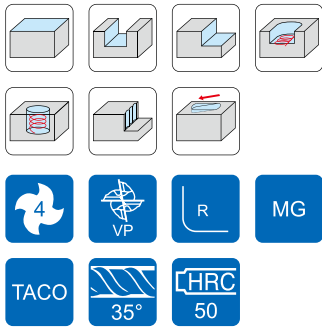
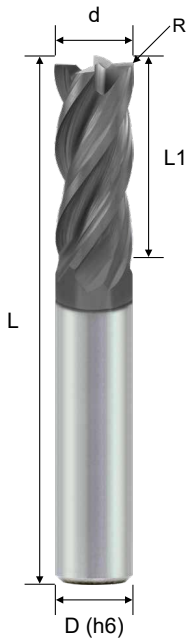
V470 - Variable Pitch · Helix 35° · 4F

不等分割銑刀 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- It is suitable for alloy steel and cast iron slot milling and side roughing.
- TACO (Al, Ti, Cr, N) coating provides superior wear resistance.

ASIA
(Metric)

EPSSVB

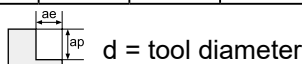


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
Square						
EPSSVB4440000T	4	-	10	50	4	4
EPSSVB4060000T	6	-	15	50	6	4
EPSSVB4080000T	8	-	20	60	8	4
EPSSVB4100000T	10	-	25	75	10	4
EPSSVB4120000T	12	-	30	75	12	4
EPSSVB4160000T	16	-	35	100	16	4
Corner Radius						
EPSSVB4080052T	8	0.5R	16	60	8	4
EPSSVB4080102T	8	1R	16	60	8	4
EPSSVB4080152T	8	1.5R	16	60	8	4
EPSSVB4100052T	10	0.5R	20	75	10	4
EPSSVB4120052T	12	0.5R	24	75	12	4
EPSSVB4160102T	16	1R	32	100	16	4

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 225	0.030	0.036	0.048	0.06	0.072	0.096
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	90 ~ 180	0.026	0.032	0.043	0.056	0.067	0.089
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 130	0.018	0.024	0.036	0.042	0.048	0.067
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.018	0.024	0.030	0.036	0.042	0.058



※If the machine not stable, please reduce the feed about 20%.

V470 / V47X - Square · Variable Pitch · Helix 38° · 4F

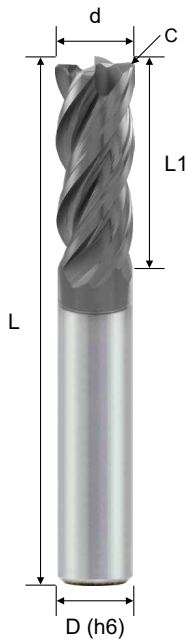
不等分割平銑刀 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.\
- V470 with TACO (Al, Ti, N) coating for alloy steel and cast iron general milling.
- V47X with ANAX (Al, Ti, Cr, N) smooth coating for stainless steel, alloy steel and cast iron milling.
- V47X is also useable for high efficiency slot and side milling.

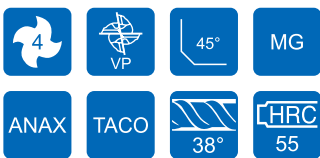
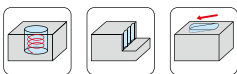
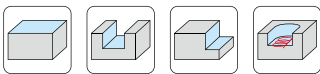
ASIA
(Metric)

EPSSVC

	P	M	K	N	S	H
V470	●	○	●			
V47X	●	●	●		○	○



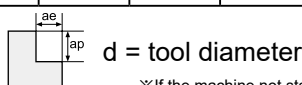
Order No.		Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V470	V47X						
EPSSVC4410000T	EPSSVC4410000A	1	-	3	50	4	4
EPSSVC4420000T	EPSSVC4420000A	2	-	5	50	4	4
EPSSVC4430000T	EPSSVC4430000A	3	-	8	50	4	4
EPSSVC4030000T	EPSSVC4030000A	3	-	8	50	6	4
EPSSVC4440000T	EPSSVC4440000A	4	-	10	50	4	4
EPSSVC4040000T	EPSSVC4040000A	4	-	10	50	6	4
EPSSVC4050000T	EPSSVC4050000A	5	-	13	50	6	4
EPSSVC4060000T	EPSSVC4060000A	6	-	15	50	6	4
EPSSVC4060011T	EPSSVC4060011A	6	0.10	15	50	6	4
EPSSVC4080000T	EPSSVC4080000A	8	-	20	60	8	4
EPSSVC4080003T	EPSSVC4080003A	8	-	24	60	8	4
EPSSVC4080011T	EPSSVC4080011A	8	0.15	20	60	8	4
EPSSVC4100000T	EPSSVC4100000A	10	-	25	75	10	4
EPSSVC4100003T	EPSSVC4100003A	10	-	30	75	10	4
EPSSVC4100011T	EPSSVC4100011A	10	0.15	25	75	10	4
EPSSVC4120000T	EPSSVC4120000A	12	-	30	75	12	4
EPSSVC4120003T	EPSSVC4120003A	12	-	36	75	12	4
EPSSVC4120021T	EPSSVC4120021A	12	0.20	30	75	12	4
EPSSVC4140000T	EPSSVC4140000A	14	-	30	75	14	4
EPSSVC4160000T	EPSSVC4160000A	16	-	35	100	16	4
EPSSVC4160021T	EPSSVC4160021A	16	0.25	35	100	16	4
EPSSVC4200000T	EPSSVC4200000A	20	-	45	100	20	4
EPSSVC4250000T	EPSSVC4250000A	25	-	45	100	25	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



※If the machine not stable, please reduce the feed about 20%.

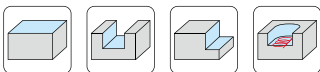
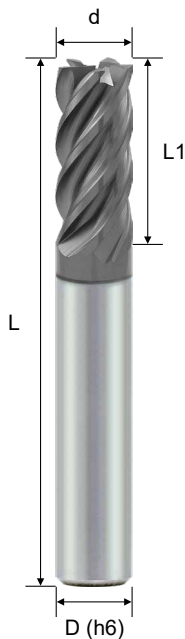
V47X - Square · Variable Pitch · Helix 38° · 5F

不等分割平銑刀 · 5 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSSVC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVC5060000A	6	15	50	6	5
EPSSVC5080000A	8	20	60	8	5
EPSSVC5100000A	10	25	75	10	5
EPSSVC5120000A	12	30	75	12	5
EPSSVC5160000A	16	35	100	16	5

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



d = tool diameter

※If the machine not stable, please reduce the feed about 20%.

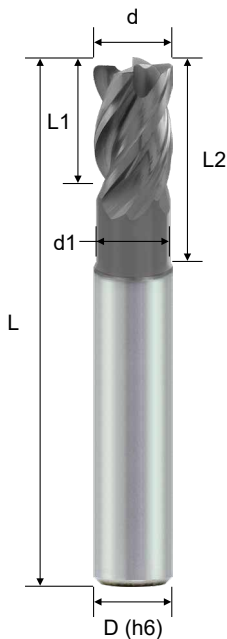
V47X - Square · Variable Pitch · Helix 38° · Necked · 4F

不等分割平銑刀 · 帶頸型 · 4 刃

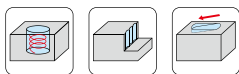
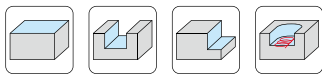
- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot and side milling.
- Necked design is able to increase feed rate.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSUVC



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	Neck Dia. (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSUVC4060000A	6	9	15	5.64	50	6	4
EPSUVC4080000A	8	12	20	7.52	60	8	4
EPSUVC4100000A	10	15	25	9.4	75	10	4
EPSUVC4120000A	12	18	30	11.28	75	12	4
EPSUVC4160000A	16	24	40	15.04	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.030	0.036	0.048	0.060	0.072	0.096
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 225	0.042	0.050	0.067	0.084	0.101	0.134
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.026	0.032	0.043	0.056	0.067	0.089
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	90 ~ 180	0.037	0.046	0.060	0.079	0.094	0.125
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.018	0.024	0.036	0.042	0.048	0.067
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 130	0.025	0.034	0.050	0.059	0.067	0.094
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.018	0.024	0.030	0.036	0.042	0.058
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.025	0.034	0.042	0.050	0.059	0.080



d = tool diameter

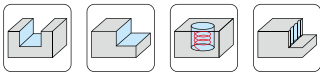
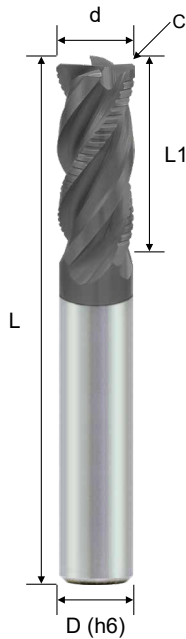
※If the machine not stable, please reduce the feed about 20%.

V47X - Square · Variable Pitch · Helix 38° · Roughing & Finishing · 4F 不等分割平銑刀 · 粗精一體型 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot milling and side roughing.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSRVC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Chamfer (C)	Flutes (Z)
EPSRVC4060021A	6	15	50	6	0.25	4
EPSRVC4080031A	8	20	60	8	0.30	4
EPSRVC4100041A	10	25	75	10	0.40	4
EPSRVC4120051A	12	30	75	12	0.50	4
EPSRVC4160061A	16	35	100	16	0.60	4

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C, S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.4	0.7 ~ 1.5	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.4	0.7 ~ 1.5	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



d = tool diameter

※If the machine not stable, please reduce the feed about 20%.

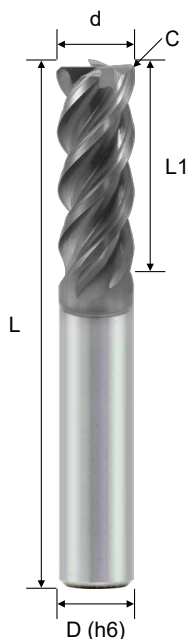
V47X - Square · Variable Pitch · Helix 45° · 4F

不等分割平銑刀 · 4 刃

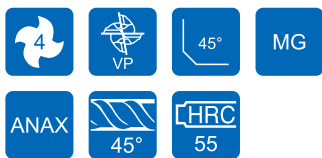
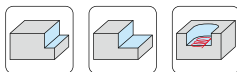
- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

EPSSVD

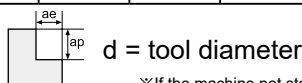


Order No.	Dia. (d)	Chamfer (C)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVD4440000A	4	-	10	50	4	4
EPSSVD4060000A	6	-	15	50	6	4
EPSSVD4060011A	6	0.10	15	50	6	4
EPSSVD4080000A	8	-	20	60	8	4
EPSSVD4080011A	8	0.15	20	60	8	4
EPSSVD4100000A	10	-	25	75	10	4
EPSSVD4100003A	10	-	30	75	10	4
EPSSVD4100011A	10	0.15	25	75	10	4
EPSSVD4120000A	12	-	30	75	12	4
EPSSVD4120021A	12	0.20	30	75	12	4
EPSSVD4160000A	16	-	35	100	16	4
EPSSVD4160021A	16	0.25	35	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C, S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.039	0.046	0.062	0.077	0.092	0.123
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.034	0.042	0.055	0.073	0.086	0.114
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.023	0.031	0.039	0.046	0.054	0.074



※If the machine not stable, please reduce the feed about 20%.

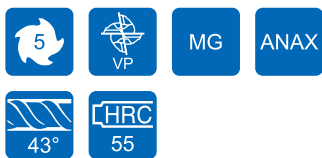
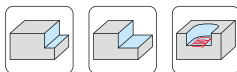
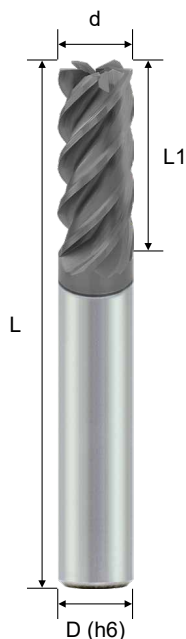
V47X - Square · Variable Pitch · Helix 43° · 5F

不等分割平銑刀 · 5 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSSVD



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVD5060000A	6	15	50	6	5
EPSSVD5080000A	8	20	60	8	5
EPSSVD5100000A	10	25	75	10	5
EPSSVD5120000A	12	30	75	12	5
EPSSVD5160000A	16	35	100	16	5

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.039	0.046	0.062	0.077	0.092	0.123
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.034	0.042	0.055	0.073	0.086	0.114
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.023	0.031	0.039	0.046	0.054	0.074



d = tool diameter

※If the machine not stable, please reduce the feed about 20%.

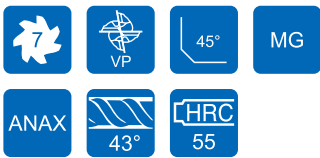
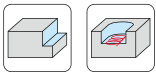
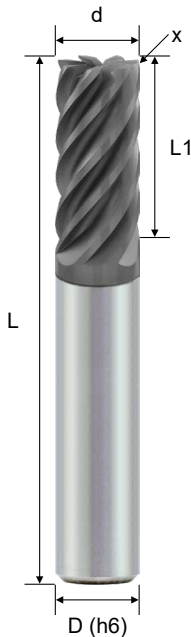
V47X - Variable Pitch · Helix 43° · 7F

不等分割銑刀 · 7刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSSVD



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Order No.	Dia. (d)	C / R (x)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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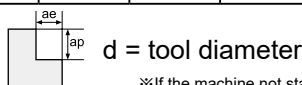
Square

EPSSVD7100000A	10	-	25	75	10	7
EPSSVD7100051A	10	0.5C	25	75	10	7
EPSSVD7120000A	12	-	30	75	12	7
EPSSVD7120051A	12	0.5C	30	75	12	7
EPSSVD7160000A	16	-	35	100	16	7

Corner Radius

EPSSVD7100052A	10	0.5R	25	75	10	7
EPSSVD7120052A	12	0.5R	30	75	12	7

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.039	0.046	0.062	0.077	0.092	0.123
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.034	0.042	0.055	0.073	0.086	0.114
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.023	0.031	0.039	0.046	0.054	0.074



※If the machine not stable, please reduce the feed about 20%.

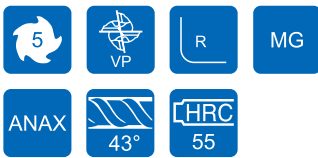
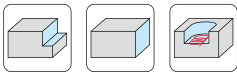
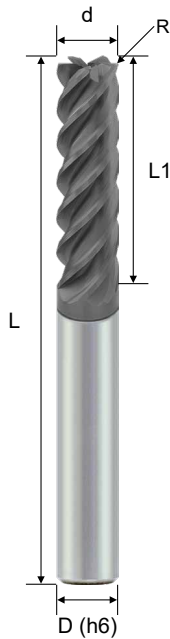
V47X - Variable Pitch · Helix 43° · Long Flute · 5F

不等分割銑刀 · 長刃型 · 5刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

EPSCVD

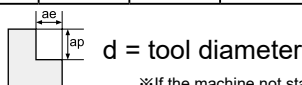


d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
Square						
EPSCVD5060000A	6	-	24	75	6	5
EPSCVD5080000A	8	-	32	75	8	5
EPSCVD5100000A	10	-	40	100	10	5
EPSCVD5120000A	12	-	48	100	12	5
EPSCVD5160000A	16	-	55	110	16	5
Corner Radius						
EPSCVD5060102A	6	1.0R	24	75	6	5
EPSCVD5080102A	8	1.0R	32	75	8	5
EPSCVD5120202A	12	2.0R	48	100	12	5

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	80 ~ 125	0.028	0.034	0.045	0.056	0.067	0.090
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	120 ~ 180	0.031	0.037	0.050	0.062	0.074	0.098
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	70 ~ 105	0.025	0.030	0.040	0.053	0.062	0.083
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	100 ~ 150	0.027	0.034	0.044	0.058	0.069	0.091
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	60 ~ 90	0.017	0.022	0.034	0.039	0.045	0.062
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	85 ~ 130	0.018	0.025	0.037	0.043	0.050	0.069
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	45 ~ 70	0.017	0.022	0.028	0.034	0.039	0.054
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	65 ~ 100	0.018	0.025	0.031	0.037	0.043	0.059



※If the machine not stable, please reduce the feed about 20%.

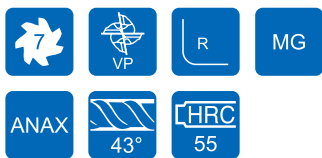
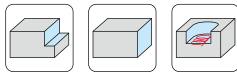
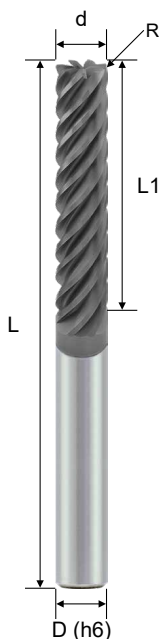
V47X - Variable Pitch · Helix 43° · Long Flute · 7F

不等分割銑刀 · 長刃型 · 7刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSCVD



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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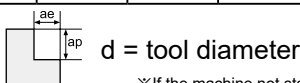
Square

EPSCVD7100000A	10	-	50	100	10	7
EPSCVD7120000A	12	-	60	110	12	7
EPSCVD7160000A	16	-	80	150	16	7

Corner Radius

EPSCVD7100052A	10	0.5R	50	100	10	7
EPSCVD7120052A	12	0.5R	60	110	12	7
EPSCVD7160052A	16	0.5R	80	150	16	7

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	80 ~ 125	0.028	0.034	0.045	0.056	0.067	0.090
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	120 ~ 180	0.031	0.037	0.050	0.062	0.074	0.098
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	70 ~ 105	0.025	0.030	0.040	0.053	0.062	0.083
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	100 ~ 150	0.027	0.034	0.044	0.058	0.069	0.091
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	60 ~ 90	0.017	0.022	0.034	0.039	0.045	0.062
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	85 ~ 130	0.018	0.025	0.037	0.043	0.050	0.069
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	45 ~ 70	0.017	0.022	0.028	0.034	0.039	0.054
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	65 ~ 100	0.018	0.025	0.031	0.037	0.043	0.059

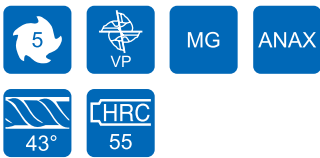
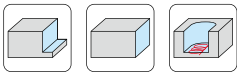
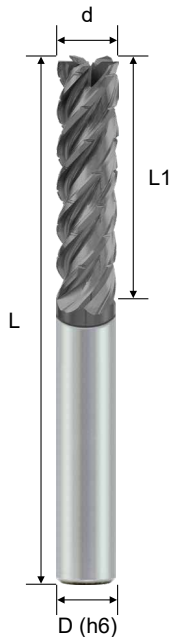
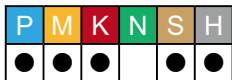


※If the machine not stable, please reduce the feed about 20%.

- The cutting edges incorporate chip breakers design.
- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency deep side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

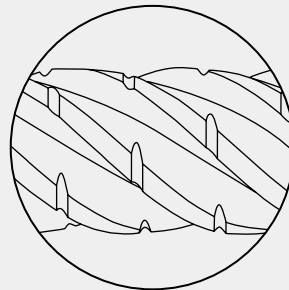


EPSCVH

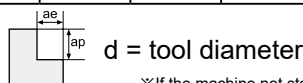


d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCVH5060000A	6	24	75	6	5
EPSCVH5080000A	8	32	75	8	5
EPSCVH5100000A	10	40	100	10	5
EPSCVH5120000A	12	48	100	12	5
EPSCVH5160000A	16	55	110	16	5



Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	80 ~ 125	0.028	0.034	0.045	0.056	0.067	0.090
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	120 ~ 180	0.031	0.037	0.050	0.062	0.074	0.098
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 3.0	70 ~ 105	0.025	0.030	0.040	0.053	0.062	0.083
	Side milling	0.05 ~ 0.3	0.7 ~ 2.5	100 ~ 150	0.027	0.034	0.044	0.058	0.069	0.091
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	60 ~ 90	0.017	0.022	0.034	0.039	0.045	0.062
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	85 ~ 130	0.018	0.025	0.037	0.043	0.050	0.069
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 2.5	45 ~ 70	0.017	0.022	0.028	0.034	0.039	0.054
	Side milling	0.05 ~ 0.3	0.7 ~ 2.0	65 ~ 100	0.018	0.025	0.031	0.037	0.043	0.059



※If the machine not stable, please reduce the feed about 20%.

V470 / V47X - Square · Variable Pitch · Helix 38° · 4F

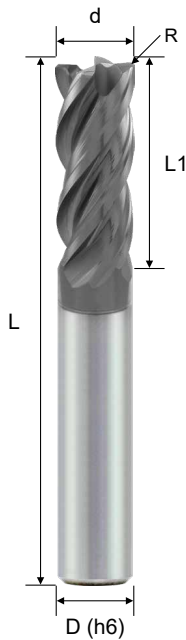
不等分割平銑刀 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- V470 with TACO (Al, Ti, N) coating for alloy steel and cast iron general milling.
- V47X with ANAX (Al, Ti, Cr, N) smooth coating for stainless steel, alloy steel and cast iron milling.
- V47X is also useable for high efficiency slot and side milling.

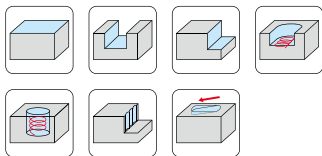
ASIA
(Metric)

EPSSVC

	P	M	K	N	S	H
V470	●	○	●			
V47X	●	●	●		○	○



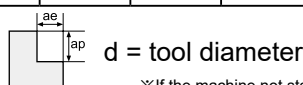
Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
V470	V47X						
EPSSVC4440052T	EPSSVC4440052A	4	0.5R	8	50	4	4
EPSSVC4060032T	EPSSVC4060032A	6	0.3R	12	50	6	4
EPSSVC4060052T	EPSSVC4060052A	6	0.5R	12	50	6	4
EPSSVC4060102T	EPSSVC4060102A	6	1.0R	12	50	6	4
EPSSVC4080052T	EPSSVC4080052A	8	0.5R	16	60	8	4
EPSSVC4080102T	EPSSVC4080102A	8	1.0R	16	60	8	4
EPSSVC4080152T	EPSSVC4080152A	8	1.5R	16	60	8	4
EPSSVC4100052T	EPSSVC4100052A	10	0.5R	20	75	10	4
EPSSVC4100102T	EPSSVC4100102A	10	1.0R	20	75	10	4
EPSSVC4100202T	EPSSVC4100202A	10	2.0R	20	75	10	4
EPSSVC4120052T	EPSSVC4120052A	12	0.5R	24	75	12	4
EPSSVC4120102T	EPSSVC4120102A	12	1.0R	24	75	12	4
EPSSVC4120202T	EPSSVC4120202A	12	2.0R	24	75	12	4
EPSSVC4160102T	EPSSVC4160102A	16	1.0R	32	100	16	4
EPSSVC4160202T	EPSSVC4160202A	16	2.0R	32	100	16	4
EPSSVC4160302T	EPSSVC4160302A	16	3.0R	32	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C, S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



※If the machine not stable, please reduce the feed about 20%.

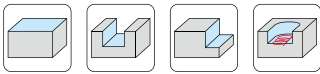
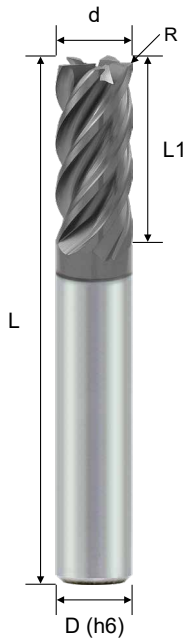
V47X - Corner Radius · Variable Pitch · Helix 38° · 5F

不等分割圓鼻銑刀 · 5 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSSVC

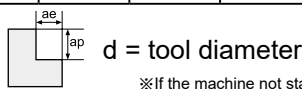


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVC5060032A	6	0.3R	12	50	6	5
EPSSVC5060052A	6	0.5R	12	50	6	5
EPSSVC5080052A	8	0.5R	16	60	8	5
EPSSVC5080102A	8	1.0R	16	60	8	5
EPSSVC5100052A	10	0.5R	20	75	10	5
EPSSVC5100102A	10	1.0R	20	75	10	5
EPSSVC5100202A	10	2.0R	20	75	10	5
EPSSVC5120052A	12	0.5R	24	75	12	5
EPSSVC5120102A	12	1.0R	24	75	12	5
EPSSVC5120202A	12	2.0R	24	75	12	5
EPSSVC5160102A	16	1.0R	32	100	16	5
EPSSVC5160202A	16	2.0R	32	100	16	5
EPSSVC5160302A	16	3.0R	32	100	16	5

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



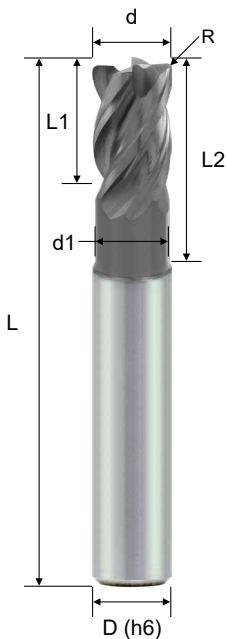
※If the machine not stable, please reduce the feed about 20%.

Solid End Milling

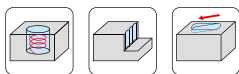
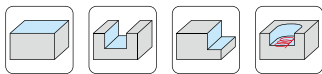
- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency slot and side milling.
- Necked design is able to increase feed rate.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

EPSUVC



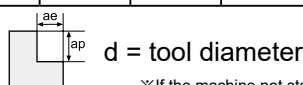
Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	Neck Dia. (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSUVC4060052A	6	0.50R	9	15	5.64	50	6	4
EPSUVC4080052A	8	0.50R	12	20	7.52	60	8	4
EPSUVC4080102A	8	1.00R	12	20	7.52	60	8	4
EPSUVC4100052A	10	0.50R	15	25	9.4	75	10	4
EPSUVC4100102A	10	1.00R	15	25	9.4	75	10	4
EPSUVC4100152A	10	1.50R	15	25	9.4	75	10	4
EPSUVC4120102A	12	1.00R	18	30	11.28	75	12	4
EPSUVC4120202A	12	2.00R	18	30	11.28	75	12	4
EPSUVC4160102A	16	1.00R	24	40	15.04	100	16	4
EPSUVC4160202A	16	2.00R	24	40	15.04	100	16	4
EPSUVC4160302A	16	3.00R	24	40	15.04	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.030	0.036	0.048	0.060	0.072	0.096
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 225	0.042	0.050	0.067	0.084	0.101	0.134
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.026	0.032	0.043	0.056	0.067	0.089
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	90 ~ 180	0.037	0.046	0.060	0.079	0.094	0.125
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.018	0.024	0.036	0.042	0.048	0.067
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 130	0.025	0.034	0.050	0.059	0.067	0.094
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.018	0.024	0.030	0.036	0.042	0.058
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.025	0.034	0.042	0.050	0.059	0.080



※If the machine not stable, please reduce the feed about 20%.

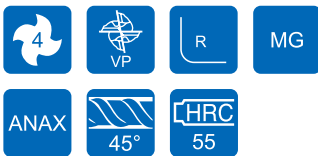
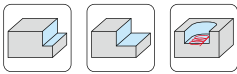
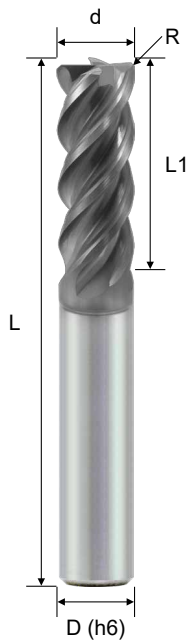
V47X - Corner Radius · Variable Pitch · Helix 45° · 4F

不等分割圓鼻銑刀 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron high efficiency side milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

EPSSVD

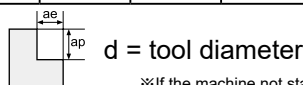


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVD4060052A	6	0.5R	12	50	6	4
EPSSVD4060102A	6	1.0R	12	50	6	4
EPSSVD4080052A	8	0.5R	16	60	8	4
EPSSVD4080102A	8	1.0R	16	60	8	4
EPSSVD4100052A	10	0.5R	20	75	10	4
EPSSVD4100102A	10	1.0R	20	75	10	4
EPSSVD4100202A	10	2.0R	20	75	10	4
EPSSVD4120052A	12	0.5R	24	75	12	4
EPSSVD4120102A	12	1.0R	24	75	12	4
EPSSVD4120202A	12	2.0R	24	75	12	4
EPSSVD4160102A	16	1.0R	32	100	16	4
EPSSVD4160202A	16	2.0R	32	100	16	4
EPSSVD4160302A	16	3.0R	32	100	16	4

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C, S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.039	0.046	0.062	0.077	0.092	0.123
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.034	0.042	0.055	0.073	0.086	0.114
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.023	0.031	0.039	0.046	0.054	0.074



※If the machine not stable, please reduce the feed about 20%.

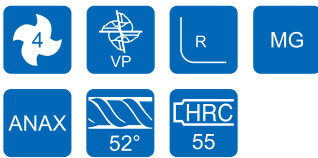
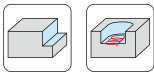
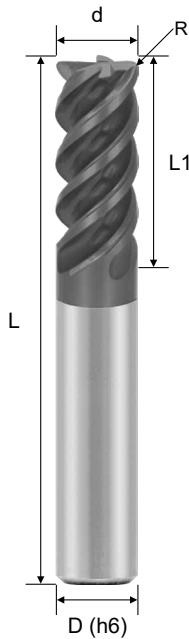
Solid End Milling

V47X - Corner Radius · Variable Pitch · Helix 52° · Standard · 4F 不等分割圓鼻銑刀 · 標準型 · 4刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Low cutting force design for stainless steel, alloy steel and cast iron, outstanding high efficiency side finishing.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



EPSSVE

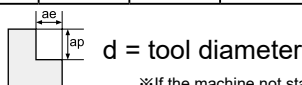


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

R Tolerance	
R	±0.020

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSSVE4080052A	8	0.5R	16	60	8	4
EPSSVE4100102A	10	1.0R	20	75	10	4
EPSSVE4120102A	12	1.0R	24	75	12	4
EPSSVE4160152A	16	1.5R	32	100	16	4

Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.035	0.042	0.056	0.070	0.084	0.112
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.039	0.046	0.062	0.077	0.092	0.123
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.031	0.038	0.050	0.066	0.078	0.104
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.034	0.042	0.055	0.073	0.086	0.114
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.021	0.028	0.042	0.049	0.056	0.078
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.023	0.031	0.046	0.054	0.062	0.086
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.021	0.028	0.035	0.042	0.049	0.067
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.023	0.031	0.039	0.046	0.054	0.074



※If the machine not stable, please reduce the feed about 20%.

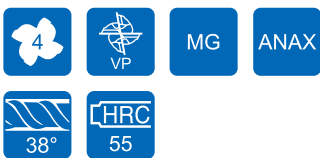
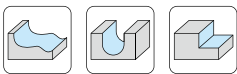
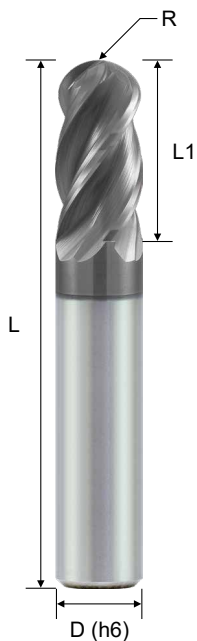
V47X - Ball Nose · Variable Pitch · Helix 38° · 4F

不等分割球銑刀 · 4 刃

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Suitable for stainless steel, alloy steel and cast iron, high efficiency profile milling.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



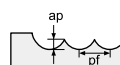
EPBSVC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPBSVC4440000A	2R	4	8	50	4	4
EPBSVC4060000A	3R	6	12	50	6	4
EPBSVC4080000A	4R	8	16	60	8	4
EPBSVC4100000A	5R	10	20	75	10	4
EPBSVC4120000A	6R	12	24	75	12	4
EPBSVC4160000A	8R	16	32	100	16	4

Working Material	Cutting Application	pf×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.5	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 1.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.5	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 1.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	0.4 ~ 0.5	0.3 ~ 1.0	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.3	0.7 ~ 1.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Superalloy & Hardened steel (HRC 40 ~ 50)	Slot milling	0.4 ~ 0.5	0.3 ~ 0.5	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.1 ~ 0.3	0.7 ~ 1.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



d = tool diameter

※If the machine not stable, please reduce the feed about 20%.

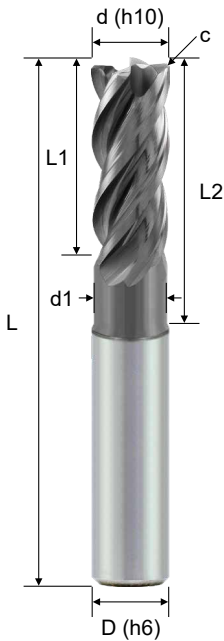
V47X - Square · Variable Pitch · Helix 38° · Neck · 4F

不等分割平銑刀 · 帶頸型 · 4 刃

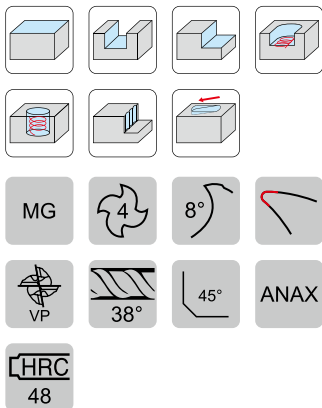
- Variable pitch is unequal flute spacing for anti-vibration machining.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.



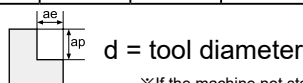
E114VC



Order No.	Order No.	Dia.	Chamfer	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(c)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E114VC404001A	-	4	0.10	11	18	3.8	57	6	4
E114VC406001A	E114VC406001AW	6	0.15	13	20	5.7	57	6	4
E114VC408001A	E114VC408001AW	8	0.15	19	26	7.7	63	8	4
E114VC410002A	E114VC410002AW	10	0.20	22	30	9.5	72	10	4
E114VC412002A	E114VC412002AW	12	0.20	26	36	11.5	83	12	4
E114VC416003A	E114VC416003AW	16	0.30	32	42	15.5	92	16	4
E114VC420004A	E114VC420004AW	20	0.40	38	52	19.5	104	20	4



Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067

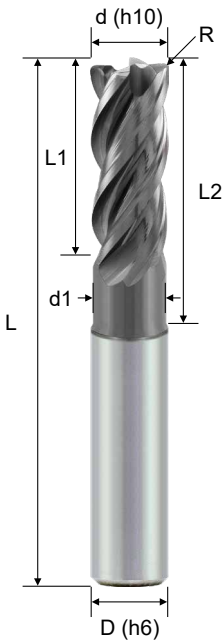


※If the machine not stable, please reduce the feed about 20%.

- Variable pitch is unequal flute spacing for anti-vibration machining.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

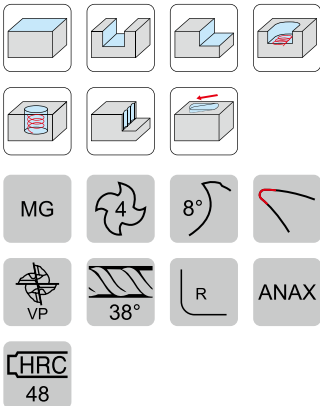
DIN
(Metric)

E134VC

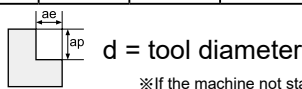


Order No.	Order No.	Dia.	Radius	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(R)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E134VC404005A	-	4	0.5R	11	18	3.8	57	6	4
E134VC406005A	E134VC406005AW	6	0.5R	13	20	5.7	57	6	4
E134VC408005A	E134VC408005AW	8	0.5R	19	26	7.7	63	8	4
E134VC408010A	E134VC408010AW	8	1.0R	19	26	7.7	63	8	4
E134VC410005A	E134VC410005AW	10	0.5R	22	30	9.5	72	10	4
E134VC410010A	E134VC410010AW	10	1.0R	22	30	9.5	72	10	4
E134VC412005A	E134VC412005AW	12	0.5R	26	36	11.5	83	12	4
E134VC412010A	E134VC412010AW	12	1.0R	26	36	11.5	83	12	4
E134VC412020A	E134VC412020AW	12	2.0R	26	36	11.5	83	12	4
E134VC416005A	E134VC416005AW	16	0.5R	32	42	15.5	92	16	4
E134VC416010A	E134VC416010AW	16	1.0R	32	42	15.5	92	16	4
E134VC416030A	E134VC416030AW	16	3.0R	32	42	15.5	92	16	4
E134VC420010A	E134VC420010AW	20	1.0R	38	52	19.5	104	20	4
E134VC420030A	E134VC420030AW	20	3.0R	38	52	19.5	104	20	4

Solid End Milling



Working Material	Cutting Application	ae×d	ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	80 ~ 145	0.025	0.030	0.040	0.050	0.060	0.080
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	130 ~ 225	0.035	0.042	0.056	0.070	0.084	0.112
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	65 ~ 130	0.022	0.027	0.036	0.047	0.056	0.074
	Side milling	0.1 ~ 0.3	0.7 ~ 2.0	90 ~ 180	0.031	0.038	0.050	0.066	0.078	0.104
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	50 ~ 100	0.015	0.020	0.030	0.035	0.040	0.056
	Side milling	0.1 ~ 0.2	0.7 ~ 2.0	80 ~ 130	0.021	0.028	0.042	0.049	0.056	0.078
Hardened steel (HRC 40 ~ 50)	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.015	0.020	0.025	0.030	0.035	0.048
	Side milling	0.05 ~ 0.1	0.7 ~ 2.0	65 ~ 100	0.021	0.028	0.035	0.042	0.049	0.067



※If the machine not stable, please reduce the feed about 20%.

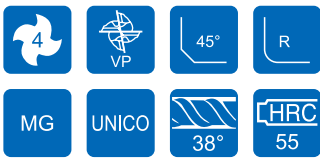
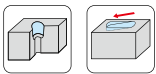
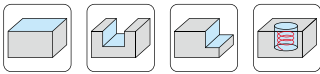
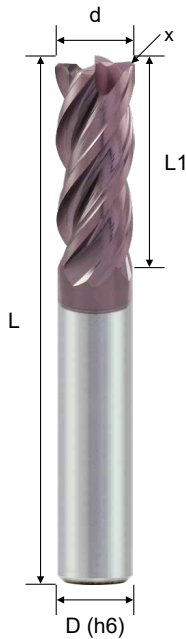
V470 - Variable Pitch · Helix 38° · 4F (Inch)

不等分割銑刀 · 4 刃 (英寸)

- Variable pitch is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

ANSI
(Inch)

EPV



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	C / R (x)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPF2V40120210U	1/8	.010C	1/4	1 1/2	1/8	4
EPS2V40120200U	1/8	-	1/4	1 1/2	1/8	4
EPC2V40120215U	1/8	.015R	1/4	2 1/2	1/8	4
EPC4V40120515U	1/8	.015R	1/2	2	1/8	4
EPS4V40120500U	1/8	-	1/2	2	1/8	4
EPF4V40120510U	1/8	.010C	1/2	2	1/8	4
EPS9V40120500U	1/8	-	1/2	2 1/2	1/8	4
EPF2V40180310U	3/16	.010C	5/16	2 1/2	3/16	4
EPC2V40180315U	3/16	.015R	5/16	2 1/2	3/16	4
EPS7V40180300U	3/16	-	5/16	2 1/2	3/16	4
EPF3V40180610U	3/16	.010C	5/8	2 1/2	3/16	4
EPC8V40180615U	3/16	.015R	5/8	2 1/2	3/16	4
EPC8V40180630U	3/16	.030R	5/8	2 1/2	3/16	4
EPS8V40180600U	3/16	-	5/8	2 1/2	3/16	4
EPC2V40250330U	1/4	.030R	3/8	2	1/4	4
EPS2V40250300U	1/4	-	3/8	2	1/4	4
EPF2V40250315U	1/4	.015C	3/8	2	1/4	4
EPC3V40250715U	1/4	.015R	3/4	2 1/2	1/4	4
EPC3V40250730U	1/4	.030R	3/4	2 1/2	1/4	4
EPC3V40250760U	1/4	.060R	3/4	2 1/2	1/4	4
EPF3V40250715U	1/4	.015C	3/4	2 1/2	1/4	4
EPS3V40250700U	1/4	-	3/4	2 1/2	1/4	4
EPC4V40251015U	1/4	.015R	1	3	1/4	4
EPS4V40251000U	1/4	-	1	3	1/4	4
EPC5V40251215U	1/4	.015R	1 1/4	3	1/4	4
EPC5V40251230U	1/4	.030R	1 1/4	3	1/4	4
EPS5V40251200U	1/4	-	1 1/4	3	1/4	4
EPC2V40310530U	5/16	.030R	1/2	2 1/2	5/16	4
EPF2V40310515U	5/16	.015C	1/2	2 1/2	5/16	4
EPS2V40310500U	5/16	-	1/2	2 1/2	5/16	4
EPC2V40310715U	5/16	.015R	3/4	2 1/2	5/16	4
EPC2V40310730U	5/16	.030R	3/4	2 1/2	5/16	4
EPC2V40310760U	5/16	.060R	3/4	2 1/2	5/16	4
EPF2V40310715U	5/16	.015C	3/4	2 1/2	5/16	4
EPS2V40310700U	5/16	-	3/4	2 1/2	5/16	4
EPC4V40311230U	5/16	.030R	1 1/4	3	5/16	4
EPS4V40311200U	5/16	-	1 1/4	3	5/16	4
EPC2V40370815U	3/8	.015R	7/8	2 1/2	3/8	4
EPC2V40370830U	3/8	.030R	7/8	2 1/2	3/8	4
EPC2V40370860U	3/8	.060R	7/8	2 1/2	3/8	4

(continued)

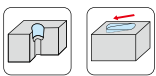
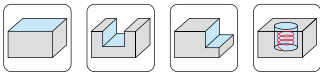
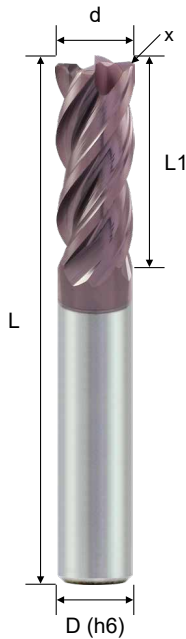
V470 - Variable Pitch · Helix 38° · 4F (Inch)

不等分割銑刀 · 4 刃 (英寸)

- Variable pitch is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

ANSI
(Inch)

EPV



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	C / R (x)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPC2V40370890U	3/8	.090R	7/8	2 1/2	3/8	4
EPF2V40370820U	3/8	.020C	7/8	2 1/2	3/8	4
EPS2V40370800U	3/8	-	7/8	2 1/2	3/8	4
EPC3V40371015U	3/8	.015R	1	3	3/8	4
EPC3V40371030U	3/8	.030R	1	3	3/8	4
EPC3V40371060U	3/8	.060R	1	3	3/8	4
EPS3V40371000U	3/8	-	1	3	3/8	4
EPC4V40371530U	3/8	.030R	1 1/2	4	3/8	4
EPC4V40371560U	3/8	.060R	1 1/2	4	3/8	4
EPS4V40371500U	3/8	-	1 1/2	4	3/8	4
EPC7V40372530U	3/8	.030R	2 1/2	4	3/8	4
EPC7V40372560U	3/8	.060R	2 1/2	4	3/8	4
EPF1V40430620U	7/16	.020C	5/8	2 3/4	7/16	4
EPS1V40430600U	7/16	-	5/8	2 3/4	7/16	4
EPF2V40430820U	7/16	.020C	7/8	2 3/4	7/16	4
EPS2V40430800U	7/16	-	7/8	2 3/4	7/16	4
EPC2V40501030U	1/2	.030R	1	3	1/2	4
EPC2V40501060U	1/2	.060R	1	3	1/2	4
EPS2V40501000U	1/2	-	1	3	1/2	4
EPF2V40501020U	1/2	.020C	1	3	1/2	4
EPC3V40501215U	1/2	.015R	1 1/4	3	1/2	4
EPC3V40501230U	1/2	.030R	1 1/4	3	1/2	4
EPC3V40501260U	1/2	.060R	1 1/4	3	1/2	4
EPC3V40501290U	1/2	.090R	1 1/4	3	1/2	4
EPC3V405012C0U	1/2	.120R	1 1/4	3	1/2	4
EPF3V40501220U	1/2	.020C	1 1/4	3	1/2	4
EPS3V40501200U	1/2	-	1 1/4	3	1/2	4
EPC3V40501530U	1/2	.030R	1 1/2	4	1/2	4
EPC3V40501560U	1/2	.060R	1 1/2	4	1/2	4
EPF3V40501520U	1/2	.020C	1 1/2	4	1/2	4
EPS3V40501500U	1/2	-	1 1/2	4	1/2	4
EPC4V40502030U	1/2	.030R	2	4	1/2	4
EPC4V40502060U	1/2	.060R	2	4	1/2	4
EPS4V40502000U	1/2	-	2	4	1/2	4
EPC2V40621230U	5/8	.030R	1 1/4	3 1/2	5/8	4
EPC2V40621260U	5/8	.060R	1 1/4	3 1/2	5/8	4
EPC2V40621290U	5/8	.090R	1 1/4	3 1/2	5/8	4
EPC2V406212C0U	5/8	.120R	1 1/4	3 1/2	5/8	4
EPS2V40621200U	5/8	-	1 1/4	3 1/2	5/8	4
EPF2V40621220U	5/8	.020C	1 1/4	3 1/2	5/8	4

Solid End Milling

(continued)

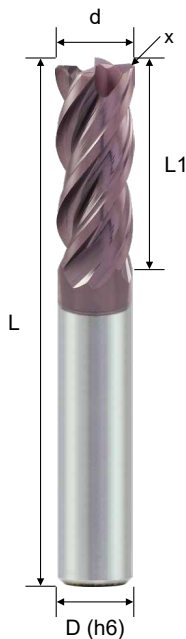
V470 - Variable Pitch · Helix 38° · 4F (Inch)

不等分割銑刀 · 4 刃 (英寸)

- Variable pitch is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- Low cutting force and burr prevention.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

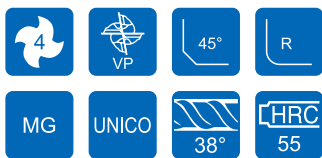
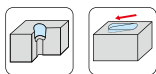
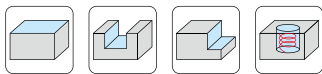
ANSI
(Inch)

EPV



Order No.	Dia. (d)	C / R (x)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPC2V40751530U	3/4	.030R	1 1/2	4	3/4	4
EPC2V40751560U	3/4	.060R	1 1/2	4	3/4	4
EPC2V40751590U	3/4	.090R	1 1/2	4	3/4	4
EPF2V40751520U	3/4	.020C	1 1/2	4	3/4	4
EPS2V40751500U	3/4	-	1 1/2	4	3/4	4
EPF2V41002020U	1	.020C	2	5	1	4
EPS2V41002000U	1	-	2	5	1	4
EPC2V41002230U	1	.030R	2 1/4	5	1	4
EPC2V41002260U	1	.060R	2 1/4	5	1	4
EPS2V41002200U	1	-	2 1/4	5	1	4
EPF2V41002220U	1	.020C	2 1/4	5	1	4

Working Material	Cutting Application	ae×d	ap×d	SFM	fz (inch/z)				
					1/8	1/4	5/16	3/8	1/2
Carbon steel (S45C, S55C)	Slot milling	1	0.5 ~ 1.0	260 ~ 475	.0008	.0012	.0016	.0019	.0025
	Side roughing	0.4 ~ 0.9	0.7 ~ 1.0	295 ~ 525	.0009	.0015	.0020	.0023	.0031
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.5	425 ~ 740	.0006	.0010	.0014	.0017	.0023
Alloy steel (SK, SCM)	Slot milling	1	0.5 ~ 1.0	230 ~ 430	.0007	.0011	.0015	.0018	.0024
	Side roughing	0.4 ~ 0.9	0.7 ~ 1.0	260 ~ 475	.0008	.0014	.0019	.0022	.0030
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.5	310 ~ 590	.0005	.0009	.0013	.0016	.0022
Tool Steel (SKD)	Slot milling	1	0.5 ~ 1.0	215 ~ 360	.0006	.0010	.0014	.0017	.0023
	Side roughing	0.4 ~ 0.9	0.7 ~ 1.0	230 ~ 430	.0009	.0015	.0018	.0021	.0029
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.5	295 ~ 525	.0006	.0010	.0014	.0015	.0021
Stainless steel (SUS304, SUS316)	Slot milling	1	0.5 ~ 1.0	165 ~ 215	.0005	.0008	.0012	.0013	.0017
	Side roughing	0.4 ~ 0.9	0.7 ~ 1.0	215 ~ 330	.0006	.0010	.0014	.0017	.0023
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.5	260 ~ 360	.0006	.0010	.0014	.0015	.0021
Hardened steel (HRC ≤ 45)	Slot milling	1	0.5 ~ 1.0	100 ~ 200	.0005	.0008	.0010	.0011	.0015
	Side roughing	0.4 ~ 0.9	0.7 ~ 1.0	165 ~ 300	.0005	.0008	.0012	.0013	.0017
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.5	215 ~ 395	.0006	.0010	.0014	.0015	.0021



d Tolerance	
d	.000 ~ -.002"



d = tool diameter

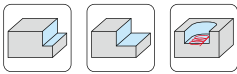
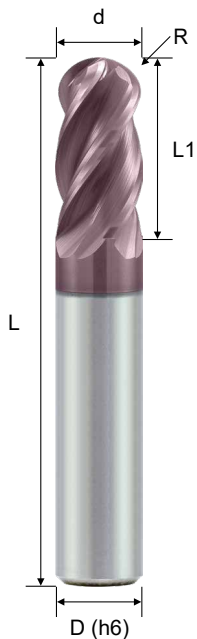
※If the machine not stable, please reduce the feed about 20%.

V470 - Ball Nose · Variable Pitch · Helix 38° · 2F / 4F (Inch) 不等分割球型銑刀 · 2刃 / 4刃 (英寸)

- Variable pitch is unequal flute spacing for anti-vibration machining.
- High removal rate for steel and alloy steel machining.
- UNICO (Ti, Al, N) coating provides superior wear resistance.

ANSI
(Inch)

EPB□V



d Tolerance	
d	.000 ~ -.002"
R Tolerance	
R	.000 ~ -.001"

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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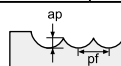
2 Flutes

EPB4V20120500U	1/16	1/8	1/2	2	1/8	2
EPB3V20180600U	3/32	3/16	5/8	2 1/2	3/16	2
EPB3V20250700U	1/8	1/4	3/4	2 1/2	1/4	2
EPB2V20310700U	5/32	5/16	3/4	2 1/2	5/16	2
EPB2V20370800U	3/16	3/8	7/8	2 1/2	3/8	2
EPB2V20430800U	7/32	7/16	7/8	2 3/4	7/16	2
EPB2V20501000U	1/4	1/2	1	3	1/2	2
EPB2V20621200U	5/16	5/8	1 1/4	3 1/2	5/8	2

4 Flutes

EPB4V40120500U	1/16	1/8	1/2	2	1/8	4
EPB3V40180600U	3/32	3/16	5/8	2 1/2	3/16	4
EPB3V40250700U	1/8	1/4	3/4	2 1/2	1/4	4
EPB2V40310700U	5/32	5/16	3/4	2 1/2	5/16	4
EPB2V40370800U	3/16	3/8	7/8	2 1/2	3/8	4
EPB2V40430800U	7/32	7/16	7/8	2 3/4	7/16	4
EPB2V40501000U	1/4	1/2	1	3	1/2	4
EPB2V40621200U	5/16	5/8	1 1/4	3 1/2	5/8	4

Working Material	Cutting Application	pf×d	ap×d	SFM	fz (inch/z)				
					1/8	1/4	5/16	3/8	1/2
Carbon steel (S45C, S55C)	Slot milling	0.5	0.5 ~ 1.0	260 ~ 475	.0008	.0012	.0016	.0019	.0025
	Side roughing	0.3 ~ 0.6	0.6 ~ 1.0	295 ~ 525	.0009	.0015	.0020	.0023	.0031
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.0	425 ~ 740	.0006	.0010	.0014	.0017	.0023
Alloy steel (SK, SCM)	Slot milling	0.5	0.5 ~ 1.0	230 ~ 430	.0007	.0011	.0015	.0018	.0024
	Side roughing	0.3 ~ 0.6	0.6 ~ 1.0	260 ~ 475	.0008	.0014	.0019	.0022	.0030
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.0	310 ~ 590	.0005	.0009	.0013	.0016	.0022
Tool Steel (SKD)	Slot milling	0.5	0.5 ~ 1.0	215 ~ 360	.0006	.0010	.0014	.0017	.0023
	Side roughing	0.3 ~ 0.6	0.6 ~ 1.0	230 ~ 430	.0009	.0015	.0018	.0021	.0029
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.0	295 ~ 525	.0006	.0010	.0014	.0015	.0021
Stainless steel (SUS304, SUS316)	Slot milling	0.4 ~ 0.5	0.3 ~ 1.0	165 ~ 215	.0005	.0008	.0012	.0013	.0017
	Side roughing	0.3 ~ 0.6	0.5 ~ 1.0	215 ~ 330	.0006	.0010	.0014	.0017	.0023
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.0	260 ~ 360	.0006	.0010	.0014	.0015	.0021
Superalloy & Hardened steel	Slot milling	0.4 ~ 0.5	0.3 ~ 0.5	100 ~ 200	.0005	.0008	.0010	.0011	.0015
	Side roughing	0.3 ~ 0.6	0.5 ~ 1.0	165 ~ 300	.0005	.0008	.0012	.0013	.0017
	Side finishing	0.1 ~ 0.3	0.7 ~ 1.0	215 ~ 395	.0006	.0010	.0014	.0015	.0021



d = tool diameter

※If the machine not stable, please reduce the feed about 20%.

V53X - Tools selection

刀具選擇建議

Standard	Type Number		Helix Angle	Tool Type	Slot milling	Side roughing	Side finishing	P	M	K	N	S	H
	ESSSVA	 Standard	30°~32°	Square	✓			●	●	●		○	○
	ESSSVB	 Standard	35°~38°	Square	✓	✓	✓	●	●	●		○	○
	ESSUVB	 Necked	35°~38°	Corner Radius	✓	✓	✓	●	●	●		●	○
	ESSSVC	 Standard	38°~41°	Square Corner Radius	✓	✓	✓	●	●	●		●	○
	ESSSVC	 Standard	38°~42°	Square Corner Radius		✓	✓	○	●	○		●	○
	ESSSVD	 Standard	43°~46°	Square Corner Radius		✓	✓	●	●	●		●	○
	E514VB E534VB	 Necked	35°~38°	Square Corner Radius	✓	✓	✓	●	●	●		○	○
	E514VC E534VC	 Necked	39°~42°	Square Corner Radius	✓	✓	✓	●	●	●		●	○
	E514VC E534VC	 Necked	39°~42°	Square Corner Radius		✓	✓	○	●	○		●	○
	E514VD E534VD	 Necked	43°~46°	Square Corner Radius		✓	✓	●	●	●		●	○

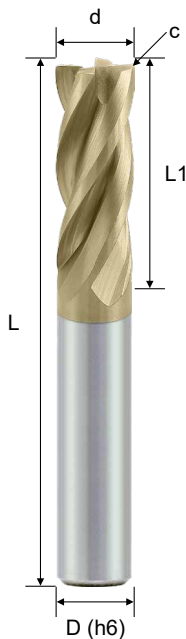
V53X - Square · Variable Helix 30~32 · 4F

不等螺旋平銑刀 · 4 刃

- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 30° ~ 32° is better for slotting.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

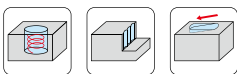
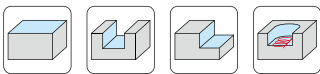
ASIA
(Metric)

ESSSVA



Order No.	Dia. (d)	Chamfer (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSVA4060011S	6	0.10	15	50	6	4
ESSSVA4080011S	8	0.15	20	60	8	4
ESSSVA4100021S	10	0.20	25	75	10	4
ESSSVA4120021S	12	0.20	30	75	12	4
ESSSVA4160031S	16	0.32	35	100	16	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.035	0.041	0.055	0.069	0.083	0.110
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.030	0.037	0.049	0.064	0.077	0.102
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.021	0.028	0.041	0.048	0.055	0.077
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.021	0.028	0.035	0.041	0.048	0.067

※If the machine not stable, please reduce the feed about 20%.

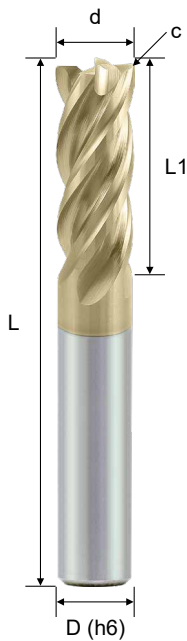
V53X - Square · Variable Helix 35 ~ 38 · 4F

不等螺旋平銑刀 · 4 刃

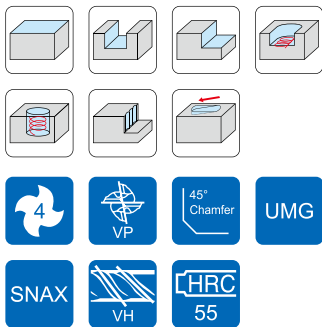
- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 35° ~ 38° for general purpose milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

ESSSVB



Order No.	Dia. (d)	Chamfer (c)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSVB4040000S	4	-	10	50	6	4
ESSSVB4040011S	4	0.10	10	50	6	4
ESSSVB4060000S	6	-	13	50	6	4
ESSSVB4060011S	6	0.15	13	50	6	4
ESSSVB4080000S	8	-	20	60	8	4
ESSSVB4080011S	8	0.15	20	60	8	4
ESSSVB4100000S	10	-	25	75	10	4
ESSSVB4100021S	10	0.20	25	75	10	4
ESSSVB4120000S	12	-	30	75	12	4
ESSSVB4120021S	12	0.20	30	75	12	4
ESSSVB4160000S	16	-	35	100	16	4
ESSSVB4160031S	16	0.32	35	100	16	4
ESSSVB4180000S	18	-	45	100	20	4
ESSSVB4200000S	20	-	45	100	20	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

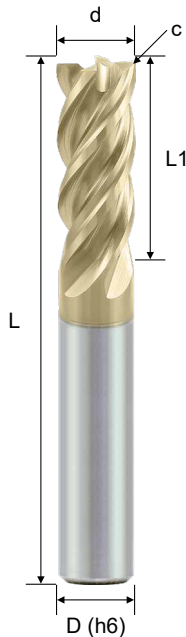
V53X - Square · Variable Helix 38~41 · 4F

不等螺旋平銑刀 · 4刃

- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 38° ~ 41° is better for side milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

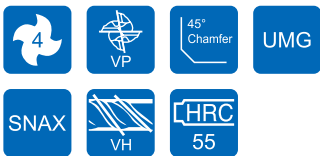
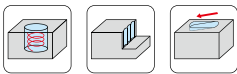
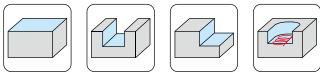
ASIA
(Metric)

ESSSVC



Order No.	Dia. (d)	Chamfer (c)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSVC4410000S	1	-	3	50	4	4
ESSSVC4420000S	2	-	5	50	4	4
ESSSVC4430000S	3	-	8	50	4	4
ESSSVC4440000S	4	-	10	50	4	4
ESSSVC4040011S	4	0.10	10	50	6	4
ESSSVC4050000S	5	-	13	50	6	4
ESSSVC4060000S	6	-	15	50	6	4
ESSSVC4060011S	6	0.15	15	50	6	4
ESSSVC4070000S	7	-	18	60	8	4
ESSSVC4080000S	8	-	20	60	8	4
ESSSVC4080011S	8	0.15	20	60	8	4
ESSSVC4090000S	9	-	22	75	10	4
ESSSVC4100000S	10	-	25	75	10	4
ESSSVC4100003S	10	-	30	75	10	4
ESSSVC4100021S	10	0.20	25	75	10	4
ESSSVC4120000S	12	-	30	75	12	4
ESSSVC4140000S	14	-	30	75	14	4
ESSSVC4160000S	16	-	35	100	16	4
ESSSVC4200000S	20	-	45	100	20	4
ESSSVC4250000S	25	-	45	100	25	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

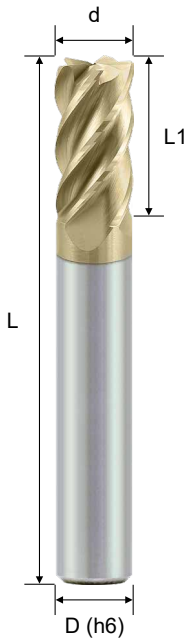
V53X - Square · Variable Helix 38~42 · 5F

不等螺旋平銑刀 · 5 刃

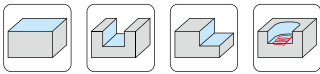
- Unequal flute spacing and variable helix design.
- High removal rate for M and S materials.
- Helix angle 38° ~ 42° is better for side milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.
- The coating can change to PNAX (Al, TiXN+ZrN) smooth coating, provides a anti-stick.

ASIA
(Metric)

ESSSVC



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	PNAX					
ESSSVC5060000S	ESSSVC5060000P	6	15	50	6	5
ESSSVC5080000S	ESSSVC5080000P	8	20	60	8	5
ESSSVC5100000S	ESSSVC5100000P	10	25	75	10	5
ESSSVC5120000S	ESSSVC5120000P	12	30	75	12	5
ESSSVC5160000S	ESSSVC5160000P	16	35	100	16	5



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

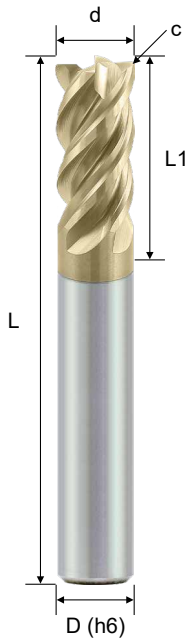
V53X - Square · Variable Helix 43~46 · 4F

不等螺旋平銑刀 · 4 刃

- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 43° ~ 46° is better for trochoidal milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.
- The coating can change to PNAX (Al, TiXN+ZrN) smooth coating, provides a anti-stick.

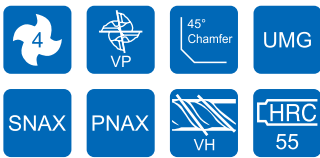
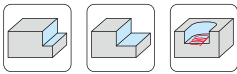


ESSSVD



Order No.		Dia. (d)	Chamfer (c)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	PNAX						
ESSSVD4040000S	ESSSVD4040000P	4	-	8	50	6	4
ESSSVD4040011S	ESSSVD4040011P	4	0.10	8	50	6	4
ESSSVD4060000S	ESSSVD4060000P	6	-	12	50	6	4
ESSSVD4060011S	ESSSVD4060011P	6	0.15	12	50	6	4
ESSSVD4080000S	ESSSVD4080000P	8	-	16	60	8	4
ESSSVD4080011S	ESSSVD4080011P	8	0.15	16	60	8	4
ESSSVD4100000S	ESSSVD4100000P	10	-	20	75	10	4
ESSSVD4100003S	ESSSVD4100003P	10	-	30	75	10	4
ESSSVD4100021S	ESSSVD4100021P	10	0.20	20	75	10	4
ESSSVD4120000S	ESSSVD4120000P	12	-	24	75	12	4
ESSSVD4120021S	ESSSVD4120021P	12	0.20	24	75	12	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.040	0.048	0.064	0.081	0.097	0.129
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.045	0.053	0.071	0.089	0.106	0.141
Alloy steel / Tool steel (SK, SCM, SKD)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.036	0.044	0.058	0.076	0.090	0.120
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.039	0.048	0.063	0.084	0.099	0.131
Stainless steel (SUS304, SUS316)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.024	0.032	0.048	0.056	0.064	0.090
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.026	0.036	0.053	0.062	0.071	0.099
Superalloy	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.024	0.032	0.040	0.048	0.056	0.077
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.026	0.036	0.045	0.053	0.062	0.085

※If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

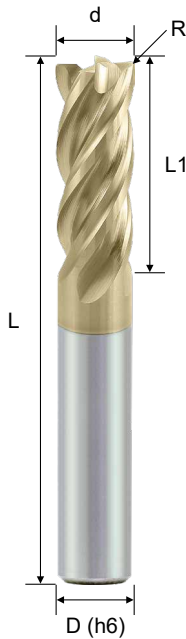
V53X - Corner Radius · Variable Helix 35~38 · 4F

不等螺旋圓鼻銑刀 · 4 刃

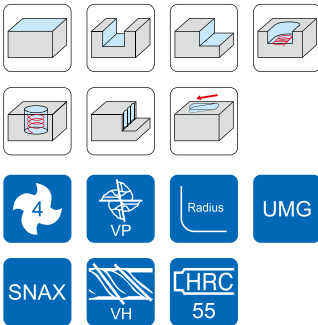
- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 35° ~ 38° for general purpose milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

ESSSVB



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSVB4040022S	4	0.20R	8	50	6	4
ESSSVB4040032S	4	0.30R	8	50	6	4
ESSSVB4040052S	4	0.50R	8	50	6	4
ESSSVB4060022S	6	0.20R	12	50	6	4
ESSSVB4060052S	6	0.50R	12	50	6	4
ESSSVB4080022S	8	0.20R	16	60	8	4
ESSSVB4080052S	8	0.50R	16	60	8	4
ESSSVB4100032S	10	0.30R	20	75	10	4
ESSSVB4100052S	10	0.50R	20	75	10	4
ESSSVB4120032S	12	0.30R	24	75	12	4
ESSSVB4120052S	12	0.50R	24	75	12	4
ESSSVB4120102S	12	1.00R	24	75	12	4
ESSSVB4120302S	12	3.00R	24	75	12	4
ESSSVB4160102S	16	1.00R	32	100	16	4
ESSSVB4160302S	16	3.00R	32	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

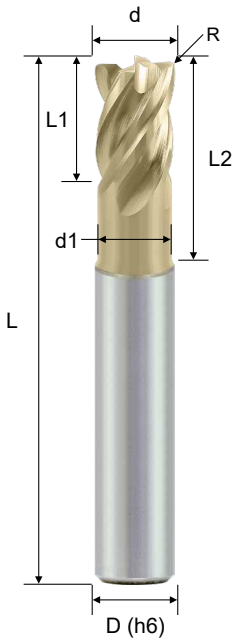
V53X - Corner Radius · Variable Helix 35~38 · Necked · 4F

不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃

- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 35° ~ 38° for general purpose milling.
- Necked design is able to increase feed rate.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

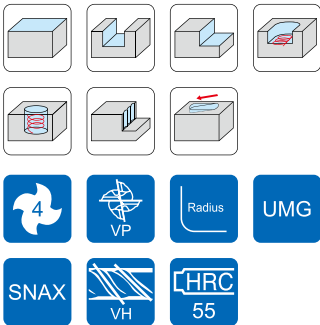
ASIA
(Metric)

ESSUVB



Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
ESSUVB4080052S	8	0.50R	12	20	7.52	60	8	4
ESSUVB4080102S	8	1.00R	12	20	7.52	60	8	4
ESSUVB4100052S	10	0.50R	15	25	9.4	75	10	4
ESSUVB4100102S	10	1.00R	15	25	9.4	75	10	4
ESSUVB4100152S	10	1.50R	15	25	9.4	75	10	4
ESSUVB4120102S	12	1.00R	18	30	11.28	75	12	4
ESSUVB4120202S	12	2.00R	18	30	11.28	75	12	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

※If the machine not stable, please reduce the feed about 20%.

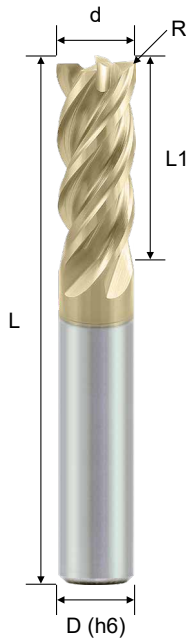
V53X - Corner Radius · Variable Helix 38~41 · 4F

不等螺旋圓鼻銑刀 · 4 刃

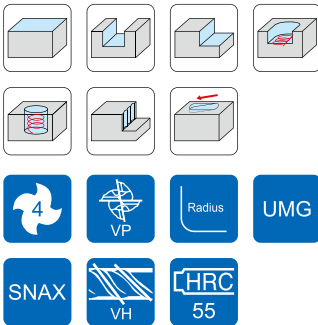
- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 38° ~ 41° is better for side milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

ESSSVC



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSVC4040012S	4	0.10R	10	50	6	4
ESSSVC4060012S	6	0.15R	15	50	6	4
ESSSVC4060052S	6	0.50R	12	50	6	4
ESSSVC4080012S	8	0.15R	20	60	8	4
ESSSVC4080052S	8	0.50R	16	60	8	4
ESSSVC4080102S	8	1.00R	16	60	8	4
ESSSVC4100022S	10	0.20R	25	75	10	4
ESSSVC4100052S	10	0.50R	20	75	10	4
ESSSVC4100102S	10	1.00R	20	75	10	4
ESSSVC4120022S	12	0.20R	30	75	12	4
ESSSVC4120052S	12	0.50R	30	75	12	4
ESSSVC4120102S	12	1.00R	24	75	12	4
ESSSVC4120202S	12	2.00R	24	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

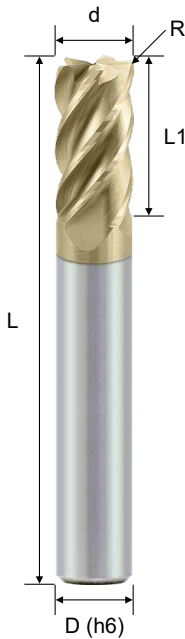
V53X - Corner Radius · Variable Helix 38~42 · 5F

不等螺旋圓鼻銑刀 · 5 刃

- Unequal flute spacing and variable helix design.
- High removal rate for M and S materials.
- Helix angle 38° ~ 42° is better for side milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.
- The coating can change to PNAX (Al, TiXN+ZrN) smooth coating, provides a anti-stick.

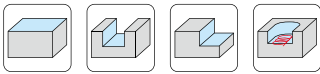
ASIA
(Metric)

ESSSVC



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	PNAX						
ESSSVC5040022S	ESSSVC5040022P	4	0.25R	8	50	6	5
ESSSVC5060042S	ESSSVC5060042P	6	0.40R	12	50	6	5
ESSSVC5080012S	ESSSVC5080012P	8	0.15R	16	60	8	5
ESSSVC5080052S	ESSSVC5080052P	8	0.50R	16	60	8	5
ESSSVC5100052S	ESSSVC5100052P	10	0.50R	20	75	10	5
ESSSVC5100102S	ESSSVC5100102P	10	1.00R	20	75	10	5
ESSSVC5120052S	ESSSVC5120052P	12	0.50R	24	75	12	5
ESSSVC5120072S	ESSSVC5120072P	12	0.75R	24	75	12	5
ESSSVC5120102S	ESSSVC5120102P	12	1.00R	24	75	12	5
ESSSVC5120202S	ESSSVC5120202P	12	2.00R	24	75	12	5
ESSSVC5160072S	ESSSVC5160072P	16	0.75R	32	100	16	5
ESSSVC5160102S	ESSSVC5160102P	16	1.00R	32	100	16	5
ESSSVC5160202S	ESSSVC5160202P	16	2.00R	32	100	16	5
ESSSVC5160302S	ESSSVC5160302P	16	3.00R	32	100	16	5

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.029	0.035	0.046	0.058	0.069	0.092
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	130 ~ 280	0.040	0.048	0.064	0.081	0.097	0.129
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.025	0.031	0.041	0.054	0.064	0.085
	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	110 ~ 220	0.036	0.044	0.058	0.076	0.090	0.120
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.017	0.023	0.035	0.040	0.046	0.064
	Side milling	0.1 ~ 0.2	0.7 ~ 1.5	80 ~ 140	0.024	0.032	0.048	0.056	0.064	0.090
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.017	0.023	0.029	0.035	0.040	0.055
	Side milling	0.05 ~ 0.1	0.7 ~ 1.5	65 ~ 100	0.024	0.032	0.040	0.048	0.056	0.077

※If the machine not stable, please reduce the feed about 20%.

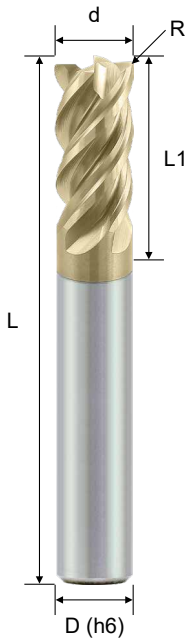
V53X - Corner Radius · Variable Helix 43~46 · 4F

不等螺旋圓鼻銑刀 · 4 刃

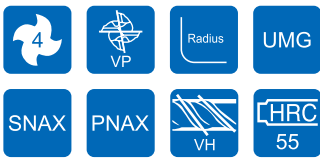
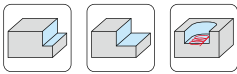
- Unequal flute spacing and variable helix design.
- High removal rate for P, M, K and S materials.
- Helix angle 43° ~ 46° is better for trochoidal milling.
- SNAX (Al, Ti, Si, N) smooth coating provides a superior wear resistance and extend tool life.
- The coating can change to PNAX (Al, TiXN+ZrN) smooth coating, provides a anti-stick.



ESSSVD



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
SNAX	PNAX						
ESSSVD4040032S	ESSSVD4040032P	4	0.30R	8	50	6	4
ESSSVD4060052S	ESSSVD4060052P	6	0.50R	12	50	6	4
ESSSVD4080052S	ESSSVD4080052P	8	0.50R	16	60	8	4
ESSSVD4100052S	ESSSVD4100052P	10	0.50R	20	75	10	4
ESSSVD4120052S	ESSSVD4120052P	12	0.50R	24	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.040	0.048	0.064	0.081	0.097	0.129
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.045	0.053	0.071	0.089	0.106	0.141
Alloy steel / Tool steel (SK, SCM, SKD)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.036	0.044	0.058	0.076	0.090	0.120
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.039	0.048	0.063	0.084	0.099	0.131
Stainless steel (SUS304, SUS316)	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.024	0.032	0.048	0.056	0.064	0.090
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.026	0.036	0.053	0.062	0.071	0.099
Superalloy	Side milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.024	0.032	0.040	0.048	0.056	0.077
	Side finishing	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.026	0.036	0.045	0.053	0.062	0.085

*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

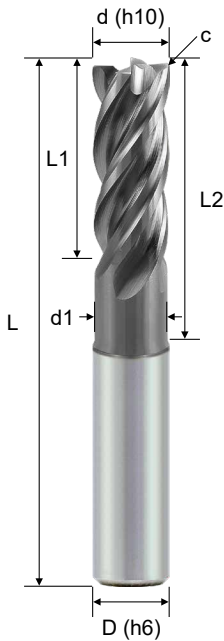
V53X - Square · Variable Helix 35~38 · Neck · 4F

不等螺旋平銑刀 · 帶頸型 · 4 刃

- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials general milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

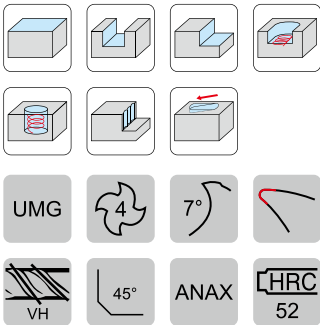
DIN
(Metric)

E514VB



Order No.	Order No.	Dia.	Chamfer	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(c)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E514VB404001A	-	4	0.10	11	18	3.8	57	6	4
E514VB406001A	E514VB406001AW	6	0.15	13	20	5.7	57	6	4
E514VB408001A	E514VB408001AW	8	0.15	19	26	7.7	63	8	4
E514VB410002A	E514VB410002AW	10	0.20	22	30	9.5	72	10	4
E514VB412002A	E514VB412002AW	12	0.20	26	36	11.5	83	12	4
E514VB416003A	E514VB416003AW	16	0.30	32	42	15.5	92	16	4

Solid End Milling



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

※If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

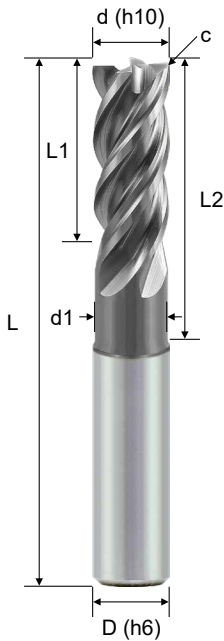
V53X - Square · Variable Helix 39~42 · Neck · 4F

不等螺旋平銑刀 · 帶頸型 · 4 刃

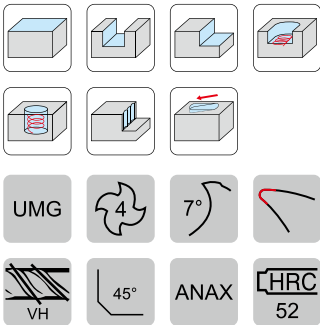
- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials side milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

DIN
(Metric)

E514VC



Order No.	Order No.	Dia.	Chamfer	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(c)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E514VC404001A	-	4	0.10	11	18	3.8	57	6	4
E514VC406001A	E514VC406001AW	6	0.15	13	20	5.7	57	6	4
E514VC408001A	E514VC408001AW	8	0.15	19	26	7.7	63	8	4
E514VC410002A	E514VC410002AW	10	0.20	22	30	9.5	72	10	4
E514VC412002A	E514VC412002AW	12	0.20	26	36	11.5	83	12	4
E514VC416003A	E514VC416003AW	16	0.30	32	42	15.5	92	16	4



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

※If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

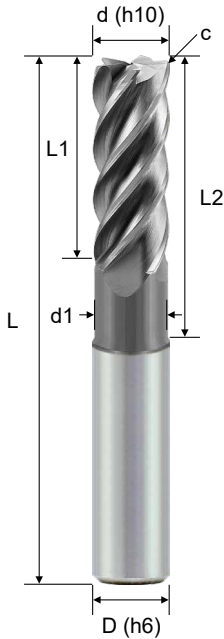
V53X - Square · Variable Helix 39~42 · Neck · 5F

不等螺旋平銑刀 · 帶頸型 · 5刃

- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials side milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

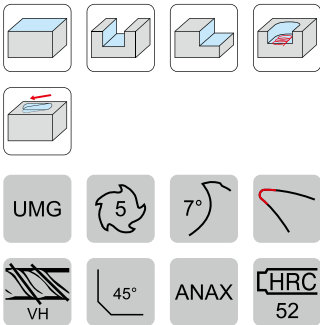
DIN (Metric)

E514VC



Order No.	Order No.	Dia.	Chamfer	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(c)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E514VC506001A	E514VC506001AW	6	0.15	13	20	5.7	57	6	5
E514VC508001A	E514VC508001AW	8	0.15	19	26	7.7	63	8	5
E514VC510002A	E514VC510002AW	10	0.20	22	30	9.5	72	10	5
E514VC512002A	E514VC512002AW	12	0.20	26	36	11.5	83	12	5
E514VC516003A	E514VC516003AW	16	0.30	32	42	15.5	92	16	5

Solid End Milling



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

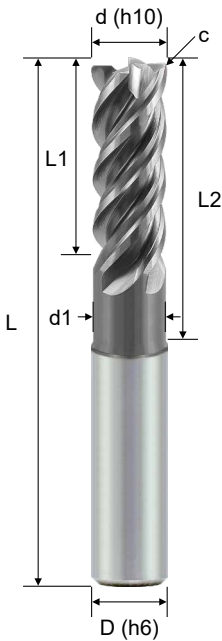
V53X - Square · Variable Helix 43~46 · Neck · 4F

不等螺旋平銑刀 · 帶頸型 · 4 刃

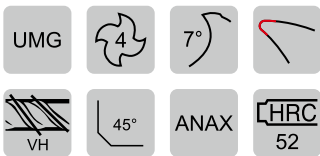
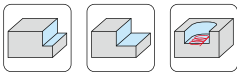
- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials trochoidal milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

DIN
(Metric)

E514VD



Order No.	Order No.	Dia.	Chamfer	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(c)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E514VD404001A	-	4	0.10	11	18	3.8	57	6	4
E514VD406001A	E514VD406001AW	6	0.15	13	20	5.7	57	6	4
E514VD408001A	E514VD408001AW	8	0.15	19	26	7.7	63	8	4
E514VD410002A	E514VD410002AW	10	0.20	22	30	9.5	72	10	4
E514VD412002A	E514VD412002AW	12	0.20	26	36	11.5	83	12	4
E514VD416003A	E514VD416003AW	16	0.30	32	42	15.5	92	16	4



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.040	0.048	0.064	0.081	0.097	0.129
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.045	0.053	0.071	0.089	0.106	0.141
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.036	0.044	0.058	0.076	0.090	0.120
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.039	0.048	0.063	0.084	0.099	0.131
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.024	0.032	0.048	0.056	0.064	0.090
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.026	0.036	0.053	0.062	0.071	0.099
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.024	0.032	0.040	0.048	0.056	0.077
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.026	0.036	0.045	0.053	0.062	0.085

*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

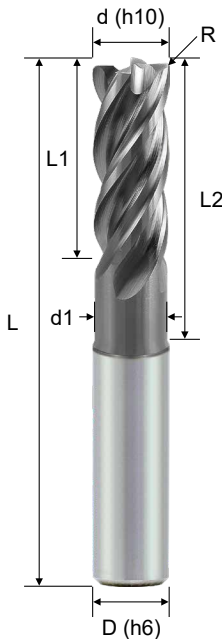
V53X - Corner Radius · Variable Helix 35~38 · Neck · 4F

不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃

- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials general milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

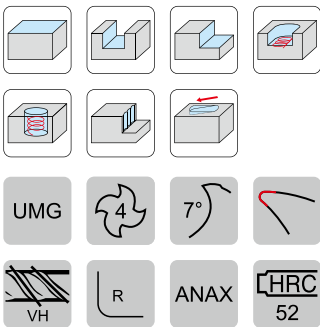
DIN
(Metric)

E534VB



Order No.	Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
E534VB404005A	-	4	0.5R	11	18	3.8	57	6	4
E534VB406005A	E534VB406005AW	6	0.5R	13	20	5.7	57	6	4
E534VB408005A	E534VB408005AW	8	0.5R	19	26	7.7	63	8	4
E534VB408010A	E534VB408010AW	8	1.0R	19	26	7.7	63	8	4
E534VB410005A	E534VB410005AW	10	0.5R	22	30	9.5	72	10	4
E534VB410010A	E534VB410010AW	10	1.0R	22	30	9.5	72	10	4
E534VB412005A	E534VB412005AW	12	0.5R	26	36	11.5	83	12	4
E534VB412010A	E534VB412010AW	12	1.0R	26	36	11.5	83	12	4
E534VB412020A	E534VB412020AW	12	2.0R	26	36	11.5	83	12	4
E534VB416005A	E534VB416005AW	16	0.5R	32	42	15.5	92	16	4
E534VB416010A	E534VB416010AW	16	1.0R	32	42	15.5	92	16	4
E534VB416030A	E534VB416030AW	16	3.0R	32	42	15.5	92	16	4

Solid End Milling



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

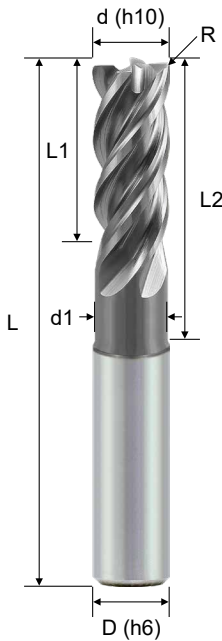
V53X - Corner Radius · Variable Helix 39~42 · Neck · 4F

不等螺旋螺旋銑刀 · 帶頸型 · 4 刃

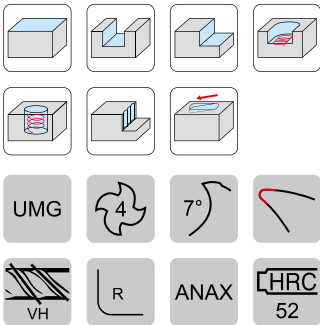
- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials side milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

DIN (Metric)

E534VC



Order No.	Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
Cylindrical	Weldon								
E534VC404005A	-	4	0.5R	11	18	3.8	57	6	4
E534VC406005A	E534VC406005AW	6	0.5R	13	20	5.7	57	6	4
E534VC408005A	E534VC408005AW	8	0.5R	19	26	7.7	63	8	4
E534VC408010A	E534VC408010AW	8	1.0R	19	26	7.7	63	8	4
E534VC410005A	E534VC410005AW	10	0.5R	22	30	9.5	72	10	4
E534VC410010A	E534VC410010AW	10	1.0R	22	30	9.5	72	10	4
E534VC412005A	E534VC412005AW	12	0.5R	26	36	11.5	83	12	4
E534VC412010A	E534VC412010AW	12	1.0R	26	36	11.5	83	12	4
E534VC412020A	E534VC412020AW	12	2.0R	26	36	11.5	83	12	4
E534VC416005A	E534VC416005AW	16	0.5R	32	42	15.5	92	16	4
E534VC416010A	E534VC416010AW	16	1.0R	32	42	15.5	92	16	4
E534VC416030A	E534VC416030AW	16	3.0R	32	42	15.5	92	16	4



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

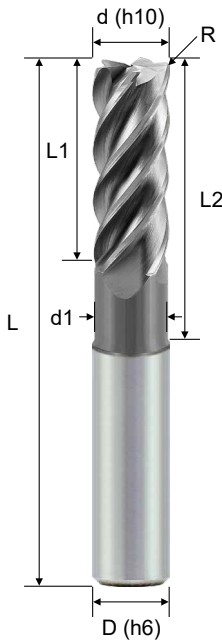
*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

V53X - Corner Radius · Variable Helix 39~42 · Neck · 5F 不等螺旋螺旋銑刀 · 帶頸型 · 5刃

- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials side milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

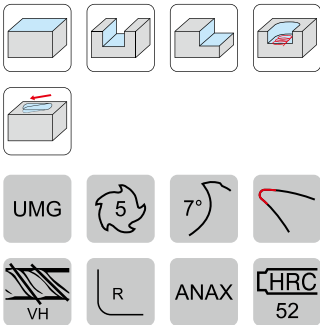
DIN
(Metric)

E534VC



Order No.	Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
E534VC506005A	E534VC506005AW	6	0.5R	13	20	5.7	57	6	5
E534VC508005A	E534VC508005AW	8	0.5R	19	26	7.7	63	8	5
E534VC508010A	E534VC508010AW	8	1.0R	19	26	7.7	63	8	5
E534VC510005A	E534VC510005AW	10	0.5R	22	30	9.5	72	10	5
E534VC510010A	E534VC510010AW	10	1.0R	22	30	9.5	72	10	5
E534VC512005A	E534VC512005AW	12	0.5R	26	36	11.5	83	12	5
E534VC512010A	E534VC512010AW	12	1.0R	26	36	11.5	83	12	5
E534VC512020A	E534VC512020AW	12	2.0R	26	36	11.5	83	12	5
E534VC516005A	E534VC516005AW	16	0.5R	32	42	15.5	92	16	5
E534VC516010A	E534VC516010AW	16	1.0R	32	42	15.5	92	16	5
E534VC516030A	E534VC516030AW	16	3.0R	32	42	15.5	92	16	5

Solid End Milling



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	1	0.5 ~ 1.0	100 ~ 180	0.035	0.041	0.055	0.069	0.083	0.110
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	130 ~ 280	0.048	0.058	0.077	0.097	0.116	0.154
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	1	0.5 ~ 1.0	80 ~ 160	0.030	0.037	0.049	0.064	0.077	0.102
	Side milling	0.1 ~ 0.3	0.7 ~ 1.2	110 ~ 220	0.043	0.053	0.069	0.091	0.108	0.144
Stainless steel (SUS304, SUS316)	Slot milling	1	0.3 ~ 0.6	60 ~ 120	0.021	0.028	0.041	0.048	0.055	0.077
	Side milling	0.1 ~ 0.2	0.7 ~ 1.2	80 ~ 140	0.029	0.039	0.058	0.068	0.077	0.108
Superalloy	Slot milling	1	0.2 ~ 0.4	30 ~ 60	0.021	0.028	0.035	0.041	0.048	0.067
	Side milling	0.05 ~ 0.1	0.7 ~ 1.2	65 ~ 100	0.029	0.039	0.048	0.058	0.068	0.092

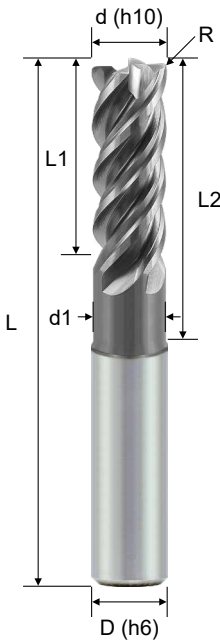
*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

V53X - Corner Radius · Variable Helix 43~46 · Neck · 4F 不等螺旋圓鼻銑刀 · 帶頸型 · 4 刃

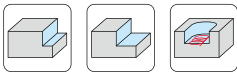
- Variable helix design for anti-vibration machining.
- High removal rate for P, M, K and S materials trochoidal milling.
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.



E514VD



Order No.	Order No.	Dia.	Radius	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(R)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E534VD404005A	-	4	0.5R	11	18	3.8	57	6	4
E534VD406005A	E534VD406005AW	6	0.5R	13	20	5.7	57	6	4
E534VD408005A	E534VD408005AW	8	0.5R	19	26	7.7	63	8	4
E534VD408010A	E534VD408010AW	8	1.0R	19	26	7.7	63	8	4
E534VD410005A	E534VD410005AW	10	0.5R	22	30	9.5	72	10	4
E534VD410010A	E534VD410010AW	10	1.0R	22	30	9.5	72	10	4
E534VD412005A	E534VD412005AW	12	0.5R	26	36	11.5	83	12	4
E534VD412010A	E534VD412010AW	12	1.0R	26	36	11.5	83	12	4
E534VD412020A	E534VD412020AW	12	2.0R	26	36	11.5	83	12	4
E534VD416005A	E534VD416005AW	16	0.5R	32	42	15.5	92	16	4
E534VD416010A	E534VD416010AW	16	1.0R	32	42	15.5	92	16	4
E534VD416030A	E534VD416030AW	16	3.0R	32	42	15.5	92	16	4



Working Material	Cutting Application	Ae×d	Ap×d	Vc (m/min)	fz (mm/z)					
					4mm	6mm	8mm	10mm	12mm	16mm
Carbon steel (S45C · S55C)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	80 ~ 125	0.040	0.048	0.064	0.081	0.097	0.129
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	120 ~ 180	0.045	0.053	0.071	0.089	0.106	0.141
Alloy steel / Tool steel (SK, SCM, SKD)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	70 ~ 105	0.036	0.044	0.058	0.076	0.090	0.120
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	100 ~ 150	0.039	0.048	0.063	0.084	0.099	0.131
Stainless steel (SUS304, SUS316)	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	60 ~ 90	0.024	0.032	0.048	0.056	0.064	0.090
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	85 ~ 130	0.026	0.036	0.053	0.062	0.071	0.099
Superalloy	Slot milling	0.1 ~ 0.3	0.7 ~ 1.5	45 ~ 70	0.024	0.032	0.040	0.048	0.056	0.077
	Side milling	0.05 ~ 0.2	0.7 ~ 1.5	65 ~ 100	0.026	0.036	0.045	0.053	0.062	0.085

*If the machine not stable, please reduce the feed about 20%.
If using trochoidal milling, please refer to the side milling cutting data.

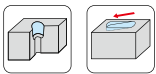
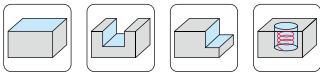
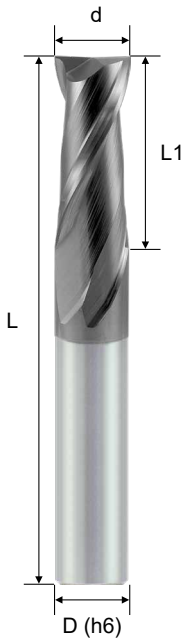
M50X - Square · Standard · 2F

平銑刀 · 標準型 · 2刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Alloy Steel & Mold Steel... etc.
- Edge treatment and vibration reduction at high speed machining.



ESSSA



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSA240500A	0.5	1	50	4	2
ESSSA240800A	0.8	2	50	4	2
ESSSA241000A	1	3	50	4	2
ESSSA242000A	2	5	50	4	2
ESSSA243000A	3	8	50	4	2
ESSSA244000A	4	10	50	4	2
ESSSA204000A	4	10	50	6	2
ESSSA205000A	5	13	50	6	2
ESSSA206000A	6	15	50	6	2
ESSSA208000A	8	20	60	8	2
ESSSA210000A	10	25	75	10	2
ESSSA212000A	12	30	75	12	2
ESSSA214000A	14	30	75	14	2
ESSSA216000A	16	35	100	16	2

WORKING MATERIAL	STAINLESS 304		Moderately Difficult SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature Alloys	
	Vc	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
Vc	72~90 m/min		56~70 m/min		48~60 m/min		40~56 m/min		120~160 m/min		96~120 m/min		20~25 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
4mm	7,452	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5mm	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6mm	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8mm	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10mm	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12mm	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14mm	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16mm	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62



ap = 0.2
ae = 1

Solid End Milling

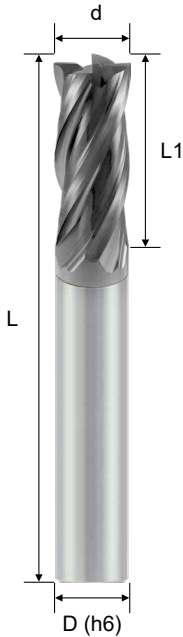
M50X - Square · Standard · 4F

平銑刀 · 標準型 · 4刃

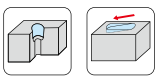
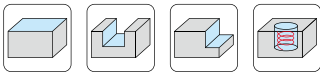
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Alloy Steel & Mold Steel... etc.
- Edge treatment and vibration reduction at high speed machining.



ESSSA

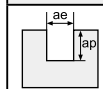


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSA441000A	1	3	50	4	4
ESSSA441500A	1.5	4	50	4	4
ESSSA442000A	2	5	50	4	4
ESSSA442500A	2.5	6	50	4	4
ESSSA443000A	3	8	50	4	4
ESSSA443500A	3.5	9	50	4	4
ESSSA444000A	4	10	50	4	4
ESSSA404000A	4	10	50	6	4
ESSSA405000A	5	13	50	6	4
ESSSA406000A	6	15	50	6	4
ESSSA408000A	8	20	60	8	4
ESSSA410000A	10	25	75	10	4
ESSSA412000A	12	30	75	12	4
ESSSA414000A	14	30	75	14	4
ESSSA416000A	16	35	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature Alloys	
	Vc	72~90 m/min	56~70 m/min	48~60 m/min	40~56 m/min	120~160 m/min	96~120 m/min	20~25 m/min						
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
4mm	5,732	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5mm	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6mm	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8mm	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10mm	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12mm	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14mm	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16mm	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62



ap = 0.2
ae = 1

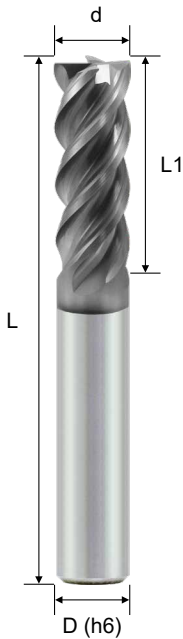
M50X - Square · High Helix · 4F

平銑刀 · 高導高性能型 · 4 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- U-flute design with high chips volume space and easy to remove chips.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- UMG carbide grade is suitable for cutting difficult materials.

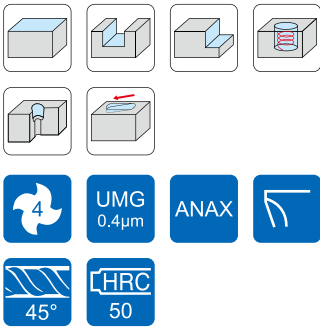
ASIA
(Metric)

ESSSB



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSB441000A	1	3	50	4	4
ESSSB442000A	2	5	50	4	4
ESSSB443000A	3	8	50	4	4
ESSSB444000A	4	10	50	4	4
ESSSB404000A	4	10	50	6	4
ESSSB405000A	5	13	50	6	4
ESSSB406000A	6	15	50	6	4
ESSSB408000A	8	20	60	8	4
ESSSB410000A	10	25	75	10	4
ESSSB412000A	12	30	75	12	4
ESSSB416000A	16	35	100	16	4

Solid End Milling



WORKING MATERIAL	Carbon steel (S45C)		Alloy Steel (SKD)		Stainless steel (SUS304, SUS316)	
	Vc	130 m/min	Vc	90 m/min	Vc	80 m/min
Diameter (d)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)
4mm	10350	0.020	7170	0.020	6370	0.020
6mm	6900	0.025	4780	0.025	4250	0.025
8mm	5180	0.035	3580	0.035	3190	0.035
10mm	4140	0.045	2870	0.040	2550	0.040
12mm	3450	0.055	2390	0.050	2120	0.050
16mm	2590	0.072	1790	0.064	1590	0.064

ap = 1d
ae = 0.1d

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

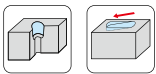
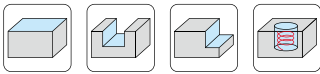
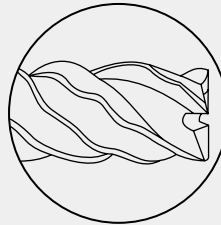
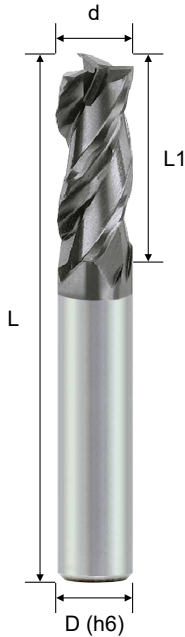
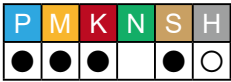
M50X - Square · Wave Edge · 3F

平銑刀 · 波浪型 · 3刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ASIA
(Metric)

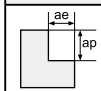
ESSSW



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSW306000A	6	15	50	6	3
ESSSW308000A	8	20	60	8	3
ESSSW310000A	10	25	75	10	3
ESSSW312000A	12	30	75	12	3
ESSSW316000A	16	40	100	16	3
ESSSW320000A	20	45	100	20	3

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		-		-	
Vc	88 m/min		71 m/min		59 m/min		35 m/min		71 m/min		103 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	1mm	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760
2mm	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3mm	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4mm	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5mm	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6mm	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8mm	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10mm	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
12mm	2,340	260	1,872	175	1,560	120	936	50	1,872	205	2,808	310
14mm	2,340	300	1,768	195	1,482	135	936	60	1,768	230	2,600	335
16mm	2,028	300	2,730	345	1,300	135	819	60	2,730	400	2,340	345
18mm	2,028	305	1,378	175	1,144	120	819	60	1,378	205	2,080	310
20mm	1,560	260	1,248	175	1,040	120	624	50	1,248	205	1,820	300



ap = 1d
ae = 0.2d

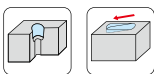
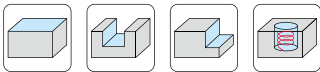
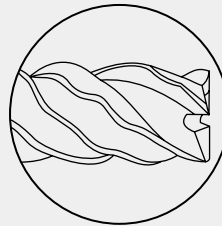
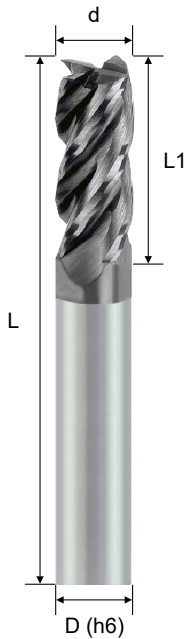
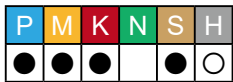
M50X - Square · Wave Edge · 4F

平銑刀 · 波浪型 · 4 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Pre-Hardened steel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ASIA
(Metric)

ESSSW



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSW406000A	6	15	50	6	4
ESSSW408000A	8	20	60	8	4
ESSSW410000A	10	25	75	10	4
ESSSW412000A	12	30	75	12	4
ESSSW416000A	16	40	100	16	4
ESSSW420000A	20	45	100	20	4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
	CODE	45C,S50C,SCM	SCM,SKT,SKD	SCM,SKT,SKD	SKT, SKD	SUS 304	FC / FCD					
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		-		-	
Vc	88 m/min		71 m/min		59 m/min		35 m/min		71 m/min		103 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	1mm	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760
2mm	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3mm	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4mm	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5mm	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6mm	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8mm	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10mm	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
12mm	2,340	260	1,872	175	1,560	120	936	50	1,872	205	2,808	310
14mm	2,340	300	1,768	195	1,482	135	936	60	1,768	230	2,600	335
16mm	2,028	300	2,730	345	1,300	135	819	60	2,730	400	2,340	345
18mm	2,028	305	1,378	175	1,144	120	819	60	1,378	205	2,080	310
20mm	1,560	260	1,248	175	1,040	120	624	50	1,248	205	1,820	300



ap = 1d
ae = 0.2d

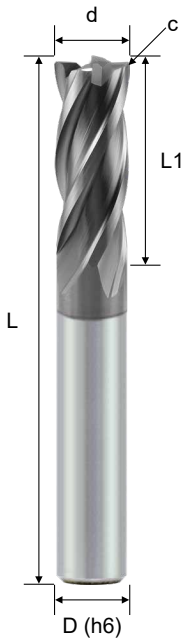
M50X - Square · Chamfer · High Feed · 4F

平銑刀 · 高進給倒角型 · 4刃

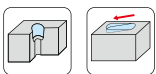
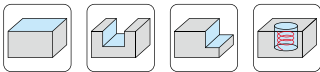
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- Honing & chamfering at the cutting edge geometries for high feed milling.
- Outstanding results for HRC 30 to HRC 55 steel, such as Alloy steel, cast Iron ...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.



ESSSU



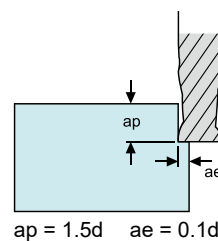
Order No.	Dia. (d)	Chamfer (c)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSSU403000A	3	0.10	8	50	6	4
ESSSU404000A	4	0.10	10	50	6	4
ESSSU405000A	5	0.15	13	50	6	4
ESSSU406000A	6	0.15	15	50	6	4
ESSSU408000A	8	0.15	20	60	8	4
ESSSU410000A	10	0.20	25	75	10	4
ESSSU412000A	12	0.20	30	75	12	4
ESSSU416000A	16	0.20	35	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Feed recommend table

Dia (d) (mm)	fz (mm/z)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25

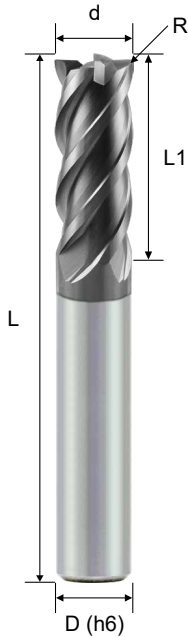
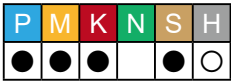


M50X - Square · Radius · High Feed · 4F 平銑刀 · 高進給圓角型 · 4 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- With "Small positive" rake angle and small corner radius geometries for high feed cutting.
- Outstanding results and tool life for 2-D and 3-D machining of HRC 30 to HRC 55 steel, such as Alloy steel, cast Iron...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

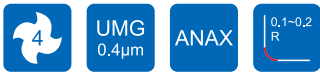
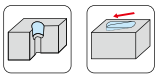
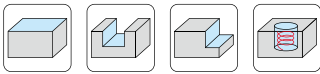


ESCSU



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESCSU403000A	3	0.10	8	50	6	4
ESCSU404000A	4	0.10	10	50	6	4
ESCSU405000A	5	0.15	13	50	6	4
ESCSU406000A	6	0.15	15	50	6	4
ESCSU408000A	8	0.15	20	60	8	4
ESCSU410000A	10	0.20	25	75	10	4
ESCSU412000A	12	0.20	30	75	12	4
ESCSU416000A	16	0.20	35	100	16	4

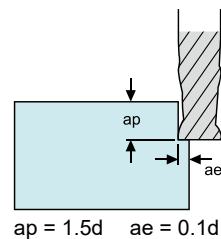
Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Feed recommend table

Dia (d) (mm)	fz (mm/z)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



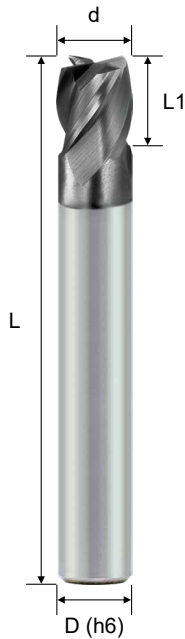
M50X - Square · Short Flute · 4F

平銑刀 · 短刃型 · 4刃

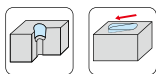
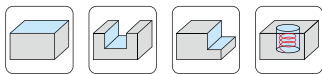
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Alloy Steel & Mold Steel... etc.
- Edge treatment and vibration reduction at high speed machining.



ESSHA

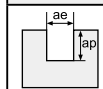


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESSHA443000A	3	3	50	4	4
ESSHA444000A	4	4	50	4	4
ESSHA404000A	4	4	50	6	4
ESSHA405000A	5	5	50	6	4
ESSHA406000A	6	7	50	6	4
ESSHA408000A	8	9	60	8	4
ESSHA410000A	10	11	75	10	4
ESSHA412000A	12	13	75	12	4
ESSHA414000A	14	15	75	14	4
ESSHA416000A	16	17	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature Alloys	
	Vc	72~90 m/min	56~70 m/min	48~60 m/min	40~56 m/min	120~160 m/min	96~120 m/min	20~25 m/min						
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
4mm	5,732	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5mm	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6mm	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8mm	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10mm	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12mm	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14mm	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16mm	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62



ap = 0.2
ae = 1

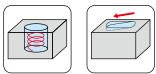
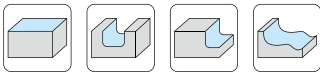
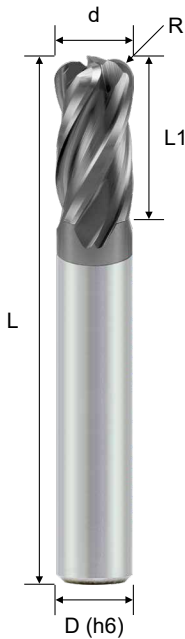
M50X - Corner Radius · Standard · 4F

圓鼻銑刀 · 標準型 · 4 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Alloy Steel & Mold Steel... etc.
- Edge treatment and vibration reduction at high speed machining.
- Corner geometry and stronger design makes it suitable for cutting stainless steel.

ASIA
(Metric)

ESCSA



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESCSA441002A	1	0.2R	2	50	4	4
ESCSA441502A	1.5	0.2R	3	50	4	4
ESCSA442002A	2	0.2R	4	50	4	4
ESCSA443002A	3	0.2R	6	50	4	4
ESCSA443003A	3	0.3R	6	50	4	4
ESCSA403003A	3	0.3R	6	50	6	4
ESCSA443005A	3	0.5R	6	50	4	4
ESCSA403005A	3	0.5R	6	50	6	4
ESCSA403010A	3	1.0R	6	50	6	4
ESCSA444002A	4	0.2R	8	50	4	4
ESCSA404003A	4	0.3R	8	50	6	4
ESCSA444005A	4	0.5R	8	50	4	4
ESCSA404005A	4	0.5R	8	50	6	4
ESCSA404010A	4	1.0R	8	50	6	4
ESCSA405003A	5	0.3R	10	50	6	4
ESCSA405005A	5	0.5R	10	50	6	4
ESCSA406003A	6	0.3R	12	50	6	4
ESCSA406005A	6	0.5R	12	50	6	4
ESCSA406010A	6	1.0R	12	50	6	4
ESCSA408005A	8	0.5R	16	60	8	4
ESCSA408010A	8	1.0R	16	60	8	4
ESCSA408015A	8	1.5R	16	60	8	4
ESCSA410005A	10	0.5R	20	75	10	4
ESCSA410010A	10	1.0R	20	75	10	4
ESCSA410015A	10	1.5R	20	75	10	4
ESCSA410020A	10	2.0R	20	75	10	4
ESCSA412005A	12	0.5R	24	75	12	4
ESCSA412010A	12	1.0R	24	75	12	4
ESCSA412015A	12	1.5R	24	75	12	4
ESCSA412020A	12	2.0R	24	75	12	4
ESCSA412030A	12	3.0R	24	75	12	4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		-		-	
Vc	88 m/min		71 m/min		59 m/min		35 m/min		71 m/min		103 m/min	
Diameter (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	9,828	455	7,098	295	6,084	195	3,900	90	7,488	345	11,232	520
4mm	7,020	430	5,616	295	4,680	200	2,808	85	5,616	345	8,424	520
5mm	5,850	450	4,446	290	3,744	200	2,340	90	4,446	345	6,552	505
6mm	4,680	430	3,744	295	3,042	195	1,872	85	3,744	345	5,616	520
8mm	3,510	430	2,808	295	2,340	200	1,404	85	2,808	345	4,212	520
10mm	2,808	430	2,223	290	1,872	200	1,131	85	2,223	340	3,276	505
12mm	2,340	430	1,872	295	1,560	200	936	85	1,872	345	2,808	520

ap = 1d

ae = 0.02d

Solid End Milling

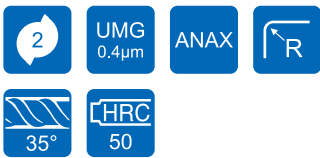
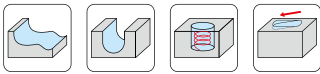
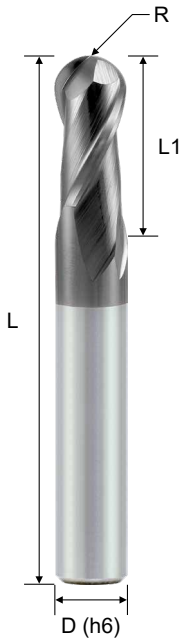
M50X - Ball Nose · Standard · 2F

球型銑刀 · 標準型 · 2 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For Stainless Steel, Alloy Steel & Mold Steel... etc.
- Edge treatment and vibration reduction at high speed machining, suitable for high performance profile milling.
- New ball nose geometry increases tool life and decreased cutting force.



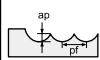
ESBSA



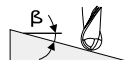
R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESBSA240500A	0.25R	0.5	1	50	4	2
ESBSA241000A	0.5R	1	2	50	4	2
ESBSA241500A	0.75R	1.5	3	50	4	2
ESBSA242000A	1.0R	2	4	50	4	2
ESBSA242500A	1.25R	2.5	5	50	4	2
ESBSA243000A	1.5R	3	6	50	4	2
ESBSA244000A	2.0R	4	8	50	4	2
ESBSA204000A	2.0R	4	8	50	6	2
ESBSA205000A	2.5R	5	10	50	6	2
ESBSA206000A	3.0R	6	12	50	6	2
ESBSA208000A	4.0R	8	16	60	8	2
ESBSA210000A	5.0R	10	20	75	10	2
ESBSA212000A	6.0R	12	24	75	12	2
ESBSA216000A	8.0R	16	32	100	16	2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL	ALLOY STEEL / TOOL STEEL	ALLOY STEEL / TOOL STEEL	HARDENED STEEL	STAINLESS STEEL	CAST IRON						
CODE	45C,S50C,SCM	SCM,SKT,SKD	SCM,SKT,SKD	SKT, SKD	SUS 304	FC / FCD						
HARDNESS	HRC < 20	HRC 20 ~ 30	HRC 30 ~ 40	HRC 45~55	-	-						
Vc	94 m/min	71 m/min	44 m/min	38 m/min	71 m/min	94 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	46,800	545	42,120	420	28,080	230	18,720	110	42,120	490	58,500	685
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
4.0R	7,488	875	5,616	560	3,744	305	2,990	175	5,616	655	7,488	875
5.0R	5,967	870	4,446	550	2,808	285	2,379	175	4,446	650	5,967	870
6.0R	4,914	860	3,744	560	2,340	285	1,976	175	3,744	655	4,914	860
8.0R	4,160	970	3,120	620	2,028	330	1,664	195	3,120	730	4,160	970
10.0R	3,380	890	2,496	560	1,690	310	1,352	175	2,496	655	3,380	890



ap = 0.02d
pf = 0.05d



When β is less than 15° milling speed and feed speed in the table can be increased 1.0-1.2 times.

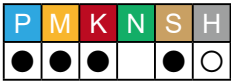
M50X - Ball Nose · Near Center Design · 3F / 4F

球型銑刀 · 刃近中心型 · 3 刃 / 4 刃

- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance.
- For high temperature alloy and high hardened steel machining.
- Reach to center and near to center flutes design, significantly improves the tool life and surface finish in profile milling.

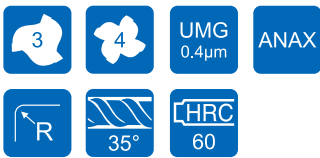
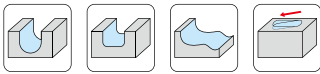
ASIA
(Metric)

ESBHS



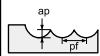
Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ESBHS342000A	1R	2	2	50	4	3
ESBHS302000A	1R	2	2	50	6	3
ESBHS303000A	1.5R	3	3	50	6	3
ESBHS344000A	2R	4	4	50	4	3
ESBHS304000A	2R	4	4	50	6	3
ESBHS406000A	3R	6	6	50	6	4
ESBHS406007A	3R	6	6	75	6	4
ESBHS408000A	4R	8	8	60	8	4
ESBHS408010A	4R	8	8	100	8	4
ESBHS410000A	5R	10	10	75	10	4
ESBHS410010A	5R	10	10	100	10	4
ESBHS412000A	6R	12	12	75	12	4
ESBHS412010A	6R	12	12	100	12	4
ESBHS416000A	8R	16	16	100	16	4

Solid End Milling



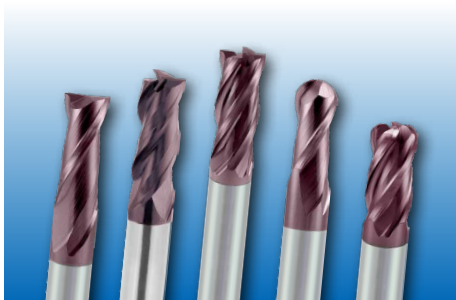
R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Work Material	High temperature alloy (Nickel Titanium)		Hardened steel (HRC 40 ~55) (SKD11, SKD61)		Hardened steel (HRC 50~60) (SKD11, SUS420)		Hardened steel (HRC 60~65) (SKS, SKH)	
	Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM
3R	15000	3400	21000	8400	16000	4800	8000	2300
4R	12000	2600	16000	6400	12000	3600	6000	1900
5R	9600	2200	13000	5200	10000	3200	4800	1500
6R	7200	1700	9000	3600	7000	2200	3600	1100
8R	5400	1300	6800	2700	5300	1700	2700	830



ap = 0.04d
pf ≤ 0.2R

G550 Carbide Endmills

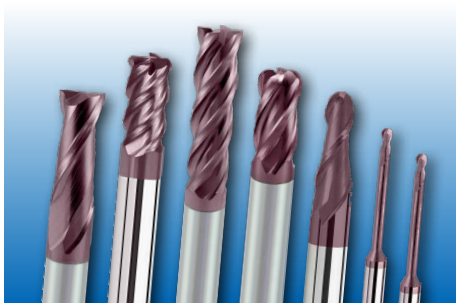


- For carbon steel, alloy steel & cast iron.
- General milling.
- High rigidity design.
- UNICO coating.

- 適用於碳鋼, 合金鋼 & 鑄鐵
- 泛用加工
- 高剛性設計
- 高鋁鈦塗層

→ Page B125

G55X Carbide Endmills



- For carbon steel, alloy steel & cast iron.
- High efficiency milling.
- High rigidity design.
- UNAX smooth coating.

- 適用於碳鋼, 合金鋼 & 鑄鐵
- 高效率加工
- 高剛性設計
- 高鋁鈦平滑塗層

→ Page B125

G580 Cermet Endmills



- For alloy steel finishing of air blow.
- For stainless steel finishing of wet cutting.
- UNICO coating.

- 適用於合金鋼精加工, 採用氣冷方式
- 適用於不鏽鋼精加工, 採用水冷方式
- 高鋁鈦塗層

→ Page B196

G550 / G55X - Square · Standard · 2F

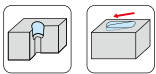
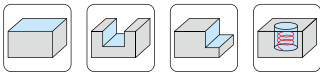
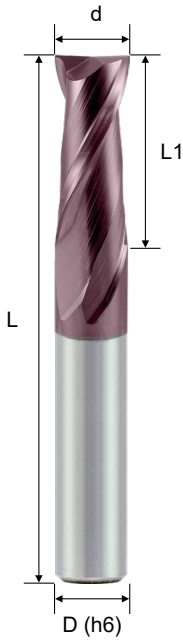
平銑刀 · 標準型 · 2 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

ASIA
(Metric)

EPSSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSC240200U	EPSSC240200UX	0.2	0.4	50	4	2
EPSSC240300U	EPSSC240300UX	0.3	0.6	50	4	2
EPSSC240400U	EPSSC240400UX	0.4	0.8	50	4	2
EPSSC240500U	EPSSC240500UX	0.5	1.0	50	4	2
EPSSC240600U	EPSSC240600UX	0.6	1.5	50	4	2
EPSSC240700U	EPSSC240700UX	0.7	2.0	50	4	2
EPSSC240800U	EPSSC240800UX	0.8	2.0	50	4	2
EPSSC240900U	EPSSC240900UX	0.9	2.0	50	4	2
EPSSC241000U	EPSSC241000UX	1.0	3.0	50	4	2
EPSSC201000U	EPSSC201000UX	1.0	3.0	50	6	2
EPSSC241500U	EPSSC241500UX	1.5	4.0	50	4	2
EPSSC242000U	EPSSC242000UX	2.0	5.0	50	4	2
EPSSC202000U	EPSSC202000UX	2.0	5.0	50	6	2
EPSSC242500U	EPSSC242500UX	2.5	6.0	50	4	2
EPSSC233000U	EPSSC233000UX	3.0	8.0	50	3	2
EPSSC243000U	EPSSC243000UX	3.0	8.0	50	4	2
EPSSC203000U	EPSSC203000UX	3.0	8.0	50	6	2
EPSSC243500U	EPSSC243500UX	3.5	9.0	50	4	2
EPSSC203500U	EPSSC203500UX	3.5	9.0	50	6	2
EPSSC244000U	EPSSC244000UX	4.0	10.0	50	4	2
EPSSC204000U	EPSSC204000UX	4.0	10.0	50	6	2
EPSSC204500U	EPSSC204500UX	4.5	11.0	50	6	2
EPSSC205000U	EPSSC205000UX	5.0	13.0	50	6	2
EPSSC205500U	EPSSC205500UX	5.5	14.0	50	6	2
EPSSC206000U	EPSSC206000UX	6.0	15.0	50	6	2

(continued)

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Solid End Milling

G550 / G55X - Square · Standard · 2F

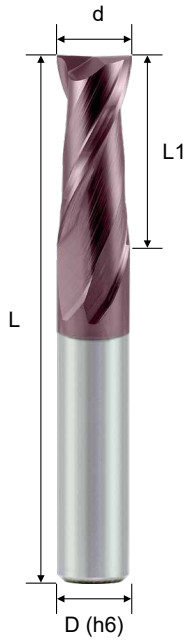
平銑刀 · 標準型 · 2刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

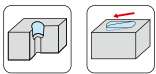
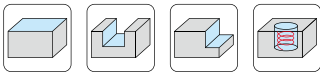


EPSSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSC206500U	EPSSC206500UX	6.5	16.0	60	8	2
EPSSC207000U	EPSSC207000UX	7.0	18.0	60	8	2
EPSSC208000U	EPSSC208000UX	8.0	20.0	60	8	2
EPSSC209000U	EPSSC209000UX	9.0	22.0	75	10	2
EPSSC210000U	EPSSC210000UX	10.0	25.0	75	10	2
EPSSC211000U	EPSSC211000UX	11.0	25.0	75	12	2
EPSSC212000U	EPSSC212000UX	12.0	30.0	75	12	2
EPSSC214000U	EPSSC214000UX	14.0	30.0	75	14	2
EPSSC216000U	EPSSC216000UX	16.0	40.0	100	16	2
EPSSC218000U	EPSSC218000UX	18.0	40.0	100	20	2
EPSSC220000U	EPSSC220000UX	20.0	45.0	100	20	2
EPSSC225000U	EPSSC225000UX	25.0	45.0	100	25	2



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min	95 m/min		79 m/min		48 m/min		79 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	380	10000	300	8386	251	5095	152	8386	251
4mm	9550	382	7560	302	6290	251	3820	152	6290	251
6mm	6370	445	5040	352	4200	294	2548	178	4200	294
8mm	4770	333	3780	264	3140	220	1910	133	3140	220
10mm	3820	230	3020	181	2515	150	1528	92	2515	150
12mm	3180	190	2520	151	2100	126	1274	76	2100	126
	ap = 0.5d ae = 1d		ap = 0.3d ae = 1d		ap = 0.5d ae = 1d		ap = 0.5d ae = 1d		ap = 0.5d ae = 1d	

G550 / G55X - Square · Standard · 2F

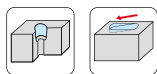
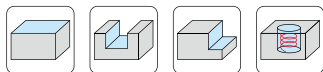
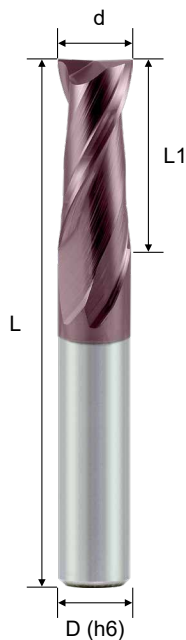
平銑刀 · 標準型 · 2 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)

EPSSA

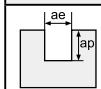
	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSA241000U	EPSSA241000UX	1	3	50	4	2
EPSSA241500U	EPSSA241500UX	1.5	4	50	4	2
EPSSA242000U	EPSSA242000UX	2	5	50	4	2
EPSSA242500U	EPSSA242500UX	2.5	6	50	4	2
EPSSA243000U	EPSSA243000UX	3	8	50	4	2
EPSSA243500U	EPSSA243500UX	3.5	9	50	4	2
EPSSA244000U	EPSSA244000UX	4	10	50	4	2
EPSSA204500U	EPSSA204500UX	4.5	11	50	6	2
EPSSA205000U	EPSSA205000UX	5	13	50	6	2
EPSSA205500U	EPSSA205500UX	5.5	14	50	6	2
EPSSA206000U	EPSSA206000UX	6	15	50	6	2
EPSSA206500U	EPSSA206500UX	6.5	16	60	8	2
EPSSA207000U	EPSSA207000UX	7	18	60	8	2
EPSSA208000U	EPSSA208000UX	8	20	60	8	2
EPSSA209000U	EPSSA209000UX	9	22	75	10	2
EPSSA210000U	EPSSA210000UX	10	25	75	10	2
EPSSA212000U	EPSSA212000UX	12	30	75	12	2
EPSSA214000U	EPSSA214000UX	14	30	75	14	2
EPSSA216000U	EPSSA216000UX	16	40	100	16	2
EPSSA218000U	EPSSA218000UX	18	40	100	20	2
EPSSA220000U	EPSSA220000UX	20	45	100	20	2
EPSSA225000U	EPSSA225000UX	25	45	100	25	2

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	HB 180~250	120 m/min	10000	380	7560	302	6290	251	3820	152
	HRC 25~35	95 m/min	3780	264	3140	220	1910	133	3140	220
	HRC 35~45	79 m/min	2515	150	1528	92	2515	150	2515	150
	HRC 40~55	48 m/min	2100	126	1274	76	2100	126	2100	126
	79 m/min									



Solid End Milling

G550 / G55X - Square · Standard · 3F

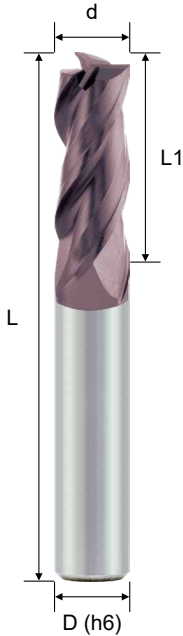
平銑刀 · 標準型 · 3 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

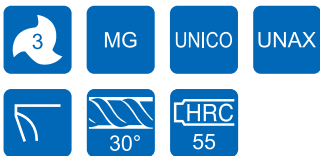
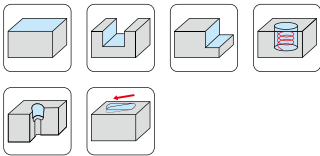


EPSSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSC331000U	EPSSC331000UX	1.0	3	50	3	3
EPSSC331500U	EPSSC331500UX	1.5	4	50	3	3
EPSSC332000U	EPSSC332000UX	2.0	5	50	3	3
EPSSC333000U	EPSSC333000UX	3.0	8	50	3	3
EPSSC341000U	EPSSC341000UX	1.0	3	50	4	3
EPSSC341500U	EPSSC341500UX	1.5	4	50	4	3
EPSSC342000U	EPSSC342000UX	2.0	5	50	4	3
EPSSC342500U	EPSSC342500UX	2.5	6	50	4	3
EPSSC343000U	EPSSC343000UX	3.0	8	50	4	3
EPSSC343500U	EPSSC343500UX	3.5	9	50	4	3
EPSSC344000U	EPSSC344000UX	4.0	10	50	4	3
EPSSC303000U	EPSSC303000UX	3.0	8	50	6	3
EPSSC303500U	EPSSC303500UX	3.5	9	50	6	3
EPSSC304000U	EPSSC304000UX	4.0	10	50	6	3
EPSSC304500U	EPSSC304500UX	4.5	11	50	6	3
EPSSC305000U	EPSSC305000UX	5.0	13	50	6	3
EPSSC305500U	EPSSC305500UX	5.5	14	50	6	3
EPSSC306000U	EPSSC306000UX	6.0	15	50	6	3
EPSSC306500U	EPSSC306500UX	6.5	16	60	8	3
EPSSC307000U	EPSSC307000UX	7.0	18	60	8	3
EPSSC308000U	EPSSC308000UX	8.0	20	60	8	3
EPSSC309000U	EPSSC309000UX	9.0	22	75	10	3
EPSSC310000U	EPSSC310000UX	10.0	25	75	10	3
EPSSC311000U	EPSSC311000UX	11.0	25	75	12	3
EPSSC312000U	EPSSC312000UX	12.0	30	75	12	3
EPSSC314000U	EPSSC314000UX	14.0	30	75	14	3
EPSSC316000U	EPSSC316000UX	16.0	40	100	16	3
EPSSC318000U	EPSSC318000UX	18.0	40	100	20	3
EPSSC320000U	EPSSC320000UX	20.0	45	100	20	3
EPSSC325000U	EPSSC325000UX	25.0	45	100	25	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252
					ap = 1d ae = 0.05d					

G550 / G55X - Square · Standard · 3F

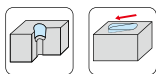
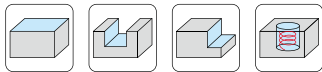
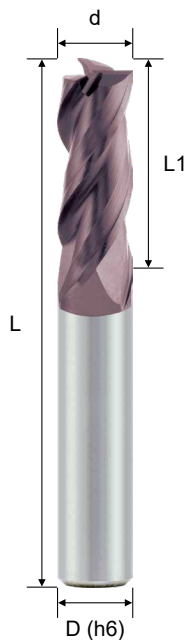
平銑刀 · 標準型 · 3刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)

EPSSA

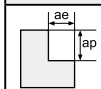
	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSA341000U	EPSSA341000UX	1	3	50	4	3
EPSSA341500U	EPSSA341500UX	1.5	4	50	4	3
EPSSA342000U	EPSSA342000UX	2	5	50	4	3
EPSSA342500U	EPSSA342500UX	2.5	6	50	4	3
EPSSA343000U	EPSSA343000UX	3	8	50	4	3
EPSSA344000U	EPSSA344000UX	4	10	50	4	3
EPSSA305000U	EPSSA305000UX	5	13	50	6	3
EPSSA306000U	EPSSA306000UX	6	15	50	6	3
EPSSA308000U	EPSSA308000UX	8	20	60	8	3
EPSSA310000U	EPSSA310000UX	10	25	75	10	3
EPSSA312000U	EPSSA312000UX	12	30	75	12	3
EPSSA314000U	EPSSA314000UX	14	30	75	14	3
EPSSA316000U	EPSSA316000UX	16	40	100	16	3
EPSSA320000U	EPSSA320000UX	20	45	100	20	3
EPSSA325000U	EPSSA325000UX	25	45	100	25	3

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

Solid End Milling

G550 / G55X - Square · Standard · 4F

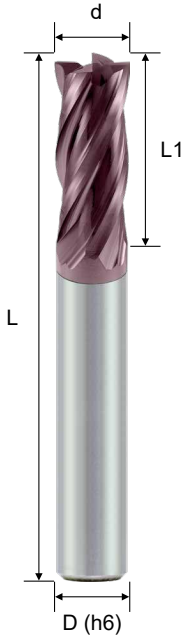
平銑刀 · 標準型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

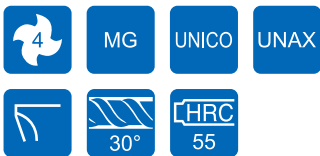
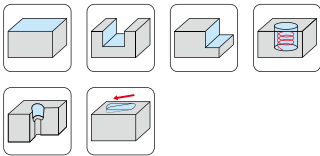
ASIA
(Metric)

EPSSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSC431000U	EPSSC431000UX	1.0	3	50	3	4
EPSSC431500U	EPSSC431500UX	1.5	4	50	3	4
EPSSC432000U	EPSSC432000UX	2.0	5	50	3	4
EPSSC433000U	EPSSC433000UX	3.0	8	50	3	4
EPSSC441000U	EPSSC441000UX	1.0	3	50	4	4
EPSSC441500U	EPSSC441500UX	1.5	4	50	4	4
EPSSC442000U	EPSSC442000UX	2.0	5	50	4	4
EPSSC442500U	EPSSC442500UX	2.5	6	50	4	4
EPSSC443000U	EPSSC443000UX	3.0	8	50	4	4
EPSSC443500U	EPSSC443500UX	3.5	9	50	4	4
EPSSC444000U	EPSSC444000UX	4.0	10	50	4	4
EPSSC403000U	EPSSC403000UX	3.0	8	50	6	4
EPSSC403500U	EPSSC403500UX	3.5	9	50	6	4
EPSSC404000U	EPSSC404000UX	4.0	10	50	6	4
EPSSC404500U	EPSSC404500UX	4.5	11	50	6	4
EPSSC405000U	EPSSC405000UX	5.0	13	50	6	4
EPSSC405500U	EPSSC405500UX	5.5	14	50	6	4
EPSSC406000U	EPSSC406000UX	6.0	15	50	6	4
EPSSC406500U	EPSSC406500UX	6.5	16	60	8	4
EPSSC407000U	EPSSC407000UX	7.0	18	60	8	4
EPSSC408000U	EPSSC408000UX	8.0	20	60	8	4
EPSSC409000U	EPSSC409000UX	9.0	22	75	10	4
EPSSC410000U	EPSSC410000UX	10.0	25	75	10	4
EPSSC411000U	EPSSC411000UX	11.0	25	75	12	4
EPSSC412000U	EPSSC412000UX	12.0	30	75	12	4
EPSSC414000U	EPSSC414000UX	14.0	30	75	14	4
EPSSC416000U	EPSSC416000UX	16.0	40	100	16	4
EPSSC418000U	EPSSC418000UX	18.0	40	100	20	4
EPSSC420000U	EPSSC420000UX	20.0	45	100	20	4
EPSSC425000U	EPSSC425000UX	25.0	45	100	25	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

G550 / G55X - Square · Standard · 4F

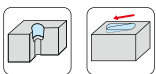
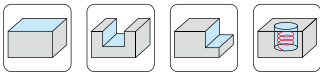
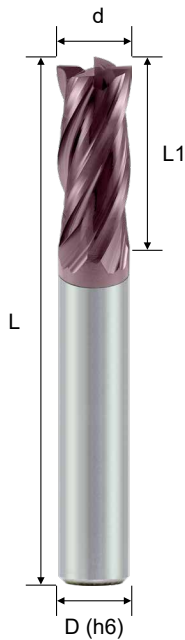
平銑刀 · 標準型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)

EPSSA

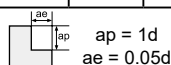
	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSA441000U	EPSSA441000UX	1	3	50	4	4
EPSSA441100U	EPSSA441100UX	1.1	3	50	4	4
EPSSA441200U	EPSSA441200UX	1.2	3	50	4	4
EPSSA441300U	EPSSA441300UX	1.3	3	50	4	4
EPSSA441400U	EPSSA441400UX	1.4	3	50	4	4
EPSSA441500U	EPSSA441500UX	1.5	4	50	4	4
EPSSA441600U	EPSSA441600UX	1.6	4	50	4	4
EPSSA441700U	EPSSA441700UX	1.7	4	50	4	4
EPSSA441800U	EPSSA441800UX	1.8	4	50	4	4
EPSSA441900U	EPSSA441900UX	1.9	4	50	4	4
EPSSA442000U	EPSSA442000UX	2	5	50	4	4
EPSSA442100U	EPSSA442100UX	2.1	5	50	4	4
EPSSA442200U	EPSSA442200UX	2.2	5	50	4	4
EPSSA442300U	EPSSA442300UX	2.3	5	50	4	4
EPSSA442400U	EPSSA442400UX	2.4	5	50	4	4
EPSSA442500U	EPSSA442500UX	2.5	6	50	4	4
EPSSA442600U	EPSSA442600UX	2.6	6	50	4	4
EPSSA442700U	EPSSA442700UX	2.7	6	50	4	4
EPSSA442800U	EPSSA442800UX	2.8	6	50	4	4
EPSSA442900U	EPSSA442900UX	2.9	6	50	4	4
EPSSA443000U	EPSSA443000UX	3	8	50	4	4
EPSSA444000U	EPSSA444000UX	4	10	50	4	4
EPSSA405000U	EPSSA405000UX	5	13	50	6	4
EPSSA406000U	EPSSA406000UX	6	15	50	6	4
EPSSA408000U	EPSSA408000UX	8	20	60	8	4
EPSSA410000U	EPSSA410000UX	10	25	75	10	4
EPSSA412000U	EPSSA412000UX	12	30	75	12	4
EPSSA414000U	EPSSA414000UX	14	30	75	14	4
EPSSA416000U	EPSSA416000UX	16	40	100	16	4
EPSSA420000U	EPSSA420000UX	20	45	100	20	4
EPSSA425000U	EPSSA425000UX	25	45	100	25	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
Hardness	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	3mm	12700		762		10000		600		8386
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



Solid End Milling

G550 / G55X - Square · Shape Edge · 4F

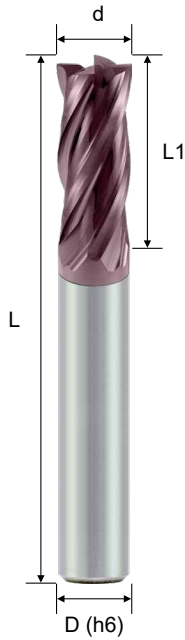
平銑刀 · 銳角型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
High precision cutting for side milling.

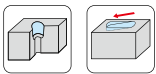
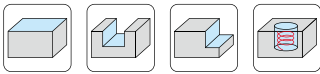
ASIA
(Metric)

EPSPC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○




Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSPC441000U	EPSPC441000UX	1	3	50	4	4
EPSPC442000U	EPSPC442000UX	2	5	50	4	4
EPSPC443000U	EPSPC443000UX	3	8	50	4	4
EPSPC444000U	EPSPC444000UX	4	10	50	4	4
EPSPC405000U	EPSPC405000UX	5	13	50	6	4
EPSPC406000U	EPSPC406000UX	6	15	50	6	4
EPSPC408000U	EPSPC408000UX	8	20	60	8	4
EPSPC410000U	EPSPC410000UX	10	25	75	10	4
EPSPC412000U	EPSPC412000UX	12	30	75	12	4
EPSPC416000U	EPSPC416000UX	16	40	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

G550 / G55X - Square · High Helix · 4F

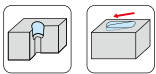
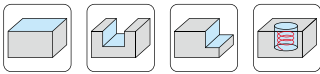
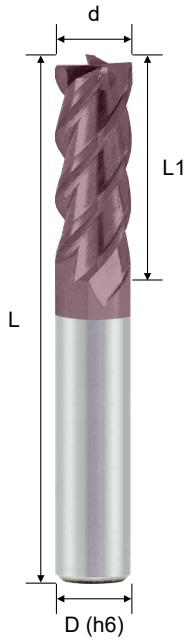
平銑刀 · 高導型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides high speed milling capabilities.

ASIA
(Metric)

EPSSH

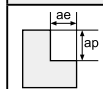
	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSH441000U	EPSSH441000UX	1.0	3	50	4	4
EPSSH442000U	EPSSH442000UX	2.0	5	50	4	4
EPSSH443000U	EPSSH443000UX	3.0	8	50	4	4
EPSSH444000U	EPSSH444000UX	4.0	10	50	4	4
EPSSH405000U	EPSSH405000UX	5.0	13	50	6	4
EPSSH406000U	EPSSH406000UX	6.0	15	50	6	4
EPSSH407000U	EPSSH407000UX	7.0	18	60	8	4
EPSSH408000U	EPSSH408000UX	8.0	20	60	8	4
EPSSH409000U	EPSSH409000UX	9.0	22	75	10	4
EPSSH410000U	EPSSH410000UX	10.0	25	75	10	4
EPSSH411000U	EPSSH411000UX	11.0	25	75	12	4
EPSSH412000U	EPSSH412000UX	12.0	30	75	12	4
EPSSH414000U	EPSSH414000UX	14.0	30	75	14	4
EPSSH416000U	EPSSH416000UX	16.0	35	100	16	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	7430	743
4mm	9550	764	7560	604	6290	503	3820	305	5570	577
6mm	6370	890	5040	705	4200	588	2548	356	3720	595
8mm	4770	668	3780	529	3140	440	1910	267	2780	556
10mm	3820	458	3020	362	2515	301	1528	183	2230	535
12mm	3180	380	2520	302	2100	252	1274	152	1860	484



ap = 1.5d
ae = 0.05d

Solid End Milling

G550 / G55X - Square · High Helix · 4F

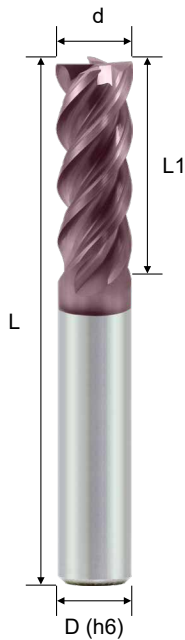
平銑刀 · 高導型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.
- U-flute design with high chips volume space and easy to remove chips.

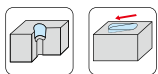
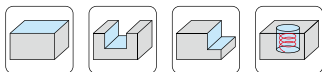


EPSSB

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSB441000U	EPSSB441000UX	1	3	50	4	4
EPSSB442000U	EPSSB442000UX	2	5	50	4	4
EPSSB443000U	EPSSB443000UX	3	8	50	4	4
EPSSB444000U	EPSSB444000UX	4	10	50	4	4
EPSSB404000U	EPSSB404000UX	4	10	50	6	4
EPSSB405000U	EPSSB405000UX	5	13	50	6	4
EPSSB406000U	EPSSB406000UX	6	15	50	6	4
EPSSB408000U	EPSSB408000UX	8	20	60	8	4
EPSSB410000U	EPSSB410000UX	10	25	75	10	4
EPSSB412000U	EPSSB412000UX	12	30	75	12	4
EPSSB416000U	EPSSB416000UX	16	35	100	16	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

WORKING MATERIAL	Carbon steel (S45C)		Alloy Steel (SKD)		Stainless steel (SUS304, SUS316)	
	Vc	130 m/min	Vc	90 m/min	Vc	80 m/min
Diameter (d)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)
4mm	10350	0.020	7170	0.020	6370	0.020
6mm	6900	0.025	4780	0.025	4250	0.025
8mm	5180	0.035	3580	0.035	3190	0.035
10mm	4140	0.045	2870	0.040	2550	0.040
12mm	3450	0.055	2390	0.050	2120	0.050
16mm	2590	0.072	1790	0.064	1590	0.064

ap = 1d

ae = 0.1d

G550 / G55X - Square · High Helix · 6F

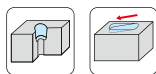
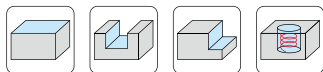
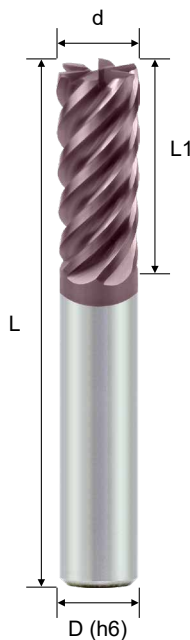
平銑刀 · 高導型 · 6刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides high speed milling capabilities.
- Six flute for good surface milling.



EPSSH

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSSH606000U	EPSSH606000UX	6	15	50	6	6
EPSSH608000U	EPSSH608000UX	8	20	60	8	6
EPSSH610000U	EPSSH610000UX	10	25	75	10	6
EPSSH612000U	EPSSH612000UX	12	30	75	12	6

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min	95 m/min		79 m/min		48 m/min		79 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	7430	743
4mm	9550	764	7560	604	6290	503	3820	305	5570	577
6mm	6370	890	5040	705	4200	588	2548	356	3720	595
8mm	4770	668	3780	529	3140	440	1910	267	2780	556
10mm	3820	458	3020	362	2515	301	1528	183	2230	535
12mm	3180	380	2520	302	2100	252	1274	152	1860	484
					ap = 1.5d ae = 0.05d					

Solid End Milling

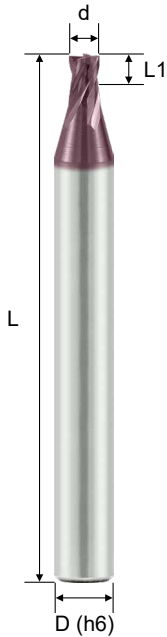
G550 - Square · Stub Length · 4F

平銑刀 · 短刃型 · 4刃

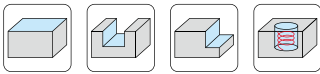
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

ASIA
(Metric)

EPSHC

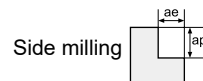


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSHC441000U	1.0	1.0	50	4	4
EPSHC441500U	1.5	1.5	50	4	4
EPSHC442000U	2.0	2.0	50	4	4
EPSHC442500U	2.5	2.5	50	4	4
EPSHC403000U	3.0	3.0	50	6	4
EPSHC404000U	4.0	4.0	50	6	4
EPSHC405000U	5.0	5.0	50	6	4
EPSHC406000U	6.0	6.0	50	6	4
EPSHC408000U	8.0	8.0	60	8	4
EPSHC410000U	10.0	10.0	75	10	4
EPSHC412000U	12.0	12.0	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	Slot milling	1×d	≤ 0.5×d	50 ~ 90	0.007	0.013	0.018	0.024	0.030	0.036
	Side milling	≤ 0.3×d	≤ 0.3×d	55 ~ 100	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	Slot milling	1×d	≤ 0.5×d	40 ~ 70	0.006	0.012	0.017	0.022	0.028	0.033
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 80	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	Slot milling	1×d	≤ 0.5×d	30 ~ 40	0.006	0.011	0.015	0.020	0.025	0.030
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 60	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	Slot milling	1×d	≤ 0.5×d	20 ~ 40	0.005	0.010	0.014	0.018	0.023	0.027
	Side milling	≤ 0.3×d	≤ 0.3×d	30 ~ 55	0.005	0.010	0.014	0.018	0.023	0.027



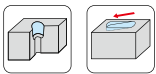
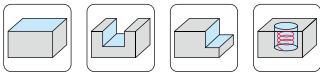
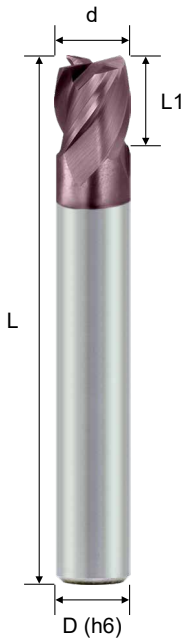
G550 - Square · Short Flute · 4F

平銑刀 · 短刃型 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)


EPSHA



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSHA443000U	3	3	50	4	4
EPSHA444000U	4	4	50	4	4
EPSHA404000U	4	4	50	6	4
EPSHA405000U	5	5	50	6	4
EPSHA406000U	6	7	50	6	4
EPSHA408000U	8	9	60	8	4
EPSHA410000U	10	11	75	10	4
EPSHA412000U	12	13	75	12	4
EPSHA414000U	14	15	75	14	4
EPSHA416000U	16	17	100	16	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

Solid End Milling

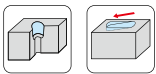
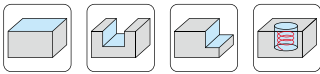
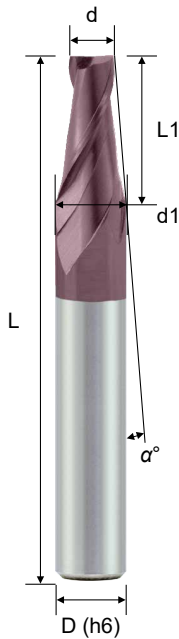
G550 - Square · Taper · 2F

平銑刀 · 斜度型 · 2刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.



EPSST



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSST24015CU	0.15	20°	5.29	-	42	4	2
EPSST24030CU	0.30	20°	5.08	-	42	4	2
EPSST24030DU	0.30	25°	3.96	-	42	4	2
EPSST24060BU	0.60	15°	4.50	-	42	4	2
EPSST24060CU	0.60	20°	4.67	-	42	4	2
EPSST24120CU	1.20	20°	3.84	-	42	4	2
EPSST241005U	1.0	0.5°	4.0	1.07	50	4	2
EPSST241010U	1.0	1.0°	4.0	1.14	50	4	2
EPSST241015U	1.0	1.5°	4.0	1.21	50	4	2
EPSST241020U	1.0	2.0°	4.0	1.28	50	4	2
EPSST241025U	1.0	2.5°	4.0	1.35	50	4	2
EPSST241030U	1.0	3.0°	4.0	1.42	50	4	2
EPSST241050U	1.0	5.0°	4.0	1.70	50	4	2
EPSST241070U	1.0	7.0°	4.0	1.98	50	4	2
EPSST2410A0U	1.0	10.0°	4.0	2.41	50	4	2
EPSST2410A5U	1.0	15.0°	4.0	3.14	50	4	2
EPSST241505U	1.5	0.5°	5.0	1.59	50	4	2
EPSST241510U	1.5	1.0°	5.0	1.68	50	4	2
EPSST241515U	1.5	1.5°	5.0	1.76	50	4	2
EPSST241520U	1.5	2.0°	5.0	1.85	50	4	2
EPSST241525U	1.5	2.5°	5.0	1.93	50	4	2
EPSST241530U	1.5	3.0°	5.0	2.02	50	4	2
EPSST241550U	1.5	5.0°	5.0	2.37	50	4	2
EPSST242005U	2.0	0.5°	6.0	2.10	50	4	2
EPSST242010U	2.0	1.0°	6.0	2.21	50	4	2
EPSST242015U	2.0	1.5°	6.0	2.31	50	4	2
EPSST242020U	2.0	2.0°	6.0	2.41	50	4	2
EPSST242025U	2.0	2.5°	6.0	2.52	50	4	2
EPSST242030U	2.0	3.0°	6.0	2.62	50	4	2
EPSST242050U	2.0	5.0°	6.0	3.05	50	4	2
EPSST242070U	2.0	7.0°	6.0	3.47	50	4	2
EPSST2020A0U	2.0	10.0°	6.0	4.11	50	6	2
EPSST2020A5U	2.0	15.0°	6.0	5.22	50	6	2
EPSST242505U	2.5	0.5°	8.0	2.64	50	4	2
EPSST242510U	2.5	1.0°	8.0	2.78	50	4	2
EPSST242515U	2.5	1.5°	8.0	2.91	50	4	2
EPSST242520U	2.5	2.0°	8.0	3.05	50	4	2
EPSST242525U	2.5	2.5°	8.0	3.20	50	4	2
EPSST242530U	2.5	3.0°	8.0	3.33	50	4	2
EPSST242550U	2.5	5.0°	8.0	3.90	50	4	2

(continued)

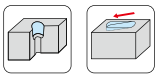
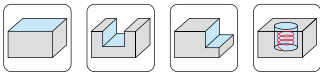
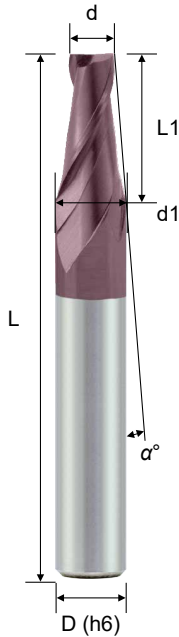
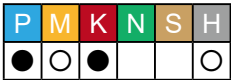
G550 - Square · Taper · 2F

平銑刀 · 斜度型 · 2刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

ASIA
(Metric)

EPSST



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSST203005U	3.0	0.5°	10.0	3.17	50	6	2
EPSST203010U	3.0	1.0°	10.0	3.35	50	6	2
EPSST203015U	3.0	1.5°	10.0	3.52	50	6	2
EPSST203020U	3.0	2.0°	10.0	3.69	50	6	2
EPSST203025U	3.0	2.5°	10.0	3.87	50	6	2
EPSST203030U	3.0	3.0°	10.0	4.05	50	6	2
EPSST203050U	3.0	5.0°	10.0	4.75	50	6	2
EPSST203070U	3.0	7.0°	12.0	6.00	50	6	2
EPSST2030A0U	3.0	10.0°	12.0	7.22	60	8	2
EPSST2030A5U	3.0	15.0°	12.0	9.40	75	10	2
EPSST204005U	4.0	0.5°	15.0	4.26	50	6	2
EPSST204010U	4.0	1.0°	15.0	4.52	50	6	2
EPSST204015U	4.0	1.5°	15.0	4.79	50	6	2
EPSST204020U	4.0	2.0°	15.0	5.04	50	6	2
EPSST204025U	4.0	2.5°	15.0	5.31	50	6	2
EPSST204030U	4.0	3.0°	15.0	5.57	50	6	2
EPSST204050U	4.0	5.0°	15.0	6.62	60	8	2
EPSST204070U	4.0	7.0°	16.0	8.00	60	8	2
EPSST2040A0U	4.0	10.0°	17.0	10.00	75	10	2
EPSST2040A5U	4.0	15.0°	14.9	12.00	75	12	2
EPSST205005U	5.0	0.5°	20.0	5.34	60	6	2
EPSST205010U	5.0	1.0°	20.0	5.70	60	6	2
EPSST205015U	5.0	1.5°	19.6	6.00	60	6	2
EPSST205020U	5.0	2.0°	20.0	6.39	60	8	2
EPSST205025U	5.0	2.5°	20.0	6.74	60	8	2
EPSST205030U	5.0	3.0°	20.0	7.10	60	8	2
EPSST205050U	5.0	5.0°	20.0	8.50	75	10	2
EPSST205070U	5.0	7.0°	20.0	10.00	75	10	2
EPSST2050A0U	5.0	10.0°	20.0	12.00	75	12	2
EPSST206005U	6.0	0.5°	20.0	6.35	60	8	2
EPSST206010U	6.0	1.0°	20.0	6.70	60	8	2
EPSST206015U	6.0	1.5°	20.0	7.05	60	8	2
EPSST206020U	6.0	2.0°	20.0	7.40	60	8	2
EPSST206025U	6.0	2.5°	20.0	7.75	60	8	2
EPSST206030U	6.0	3.0°	20.0	8.10	75	10	2
EPSST206050U	6.0	5.0°	20.0	9.50	75	10	2
EPSST206070U	6.0	7.0°	24.0	12.00	75	12	2
EPSST2060A0U	6.0	10.0°	22.0	14.00	75	14	2

Solid End Milling

(continued)

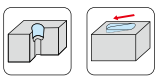
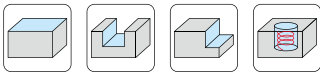
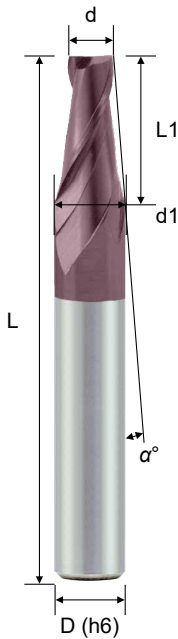
G550 - Square · Taper · 2F

平銑刀 · 斜度型 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

ASIA
(Metric)

EPSST



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	α°	CL (L1)	NL (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSST208005U	8.0	0.5°	25.0	8.44	75	10	2
EPSST208010U	8.0	1.0°	25.0	8.87	75	10	2
EPSST208015U	8.0	1.5°	25.0	9.31	75	10	2
EPSST208020U	8.0	2.0°	25.0	9.75	75	10	2
EPSST208030U	8.0	3.0°	25.0	10.62	75	12	2
EPSST208050U	8.0	5.0°	25.0	12.37	75	14	2
EPSST208070U	8.0	7.0°	32.0	16.00	100	16	2
EPSST2080A0U	8.0	10.0°	28.0	18.00	100	18	2
EPSST210005U	10.0	0.5°	35.0	10.61	75	12	2
EPSST210010U	10.0	1.0°	35.0	11.22	75	12	2
EPSST210015U	10.0	1.5°	35.0	11.83	75	12	2
EPSST210020U	10.0	2.0°	35.0	12.44	75	14	2
EPSST210030U	10.0	3.0°	35.0	13.67	75	14	2
EPSST210050U	10.0	5.0°	34.2	16.00	100	16	2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20~30		HRC 30~40		HRC 45~45		-		-	
Vc	88 m/min		71 m/min		59 m/min		35 m/min		71 m/min		103 m/min	
DIAMETER (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	1mm	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760
2mm	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3mm	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4mm	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5mm	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6mm	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8mm	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10mm	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300

	$\frac{ap}{\leq 0.05d} \quad \frac{ae}{1d}$		$\frac{ap}{0.1d} \quad \frac{ae}{1d}$		$\frac{ap}{\leq 0.25d} \quad \frac{ae}{1d}$		$\frac{ap}{0.5d} \quad \frac{ae}{1d}$	
	d < 3		d ≥ 3		d < 3		d ≥ 3	

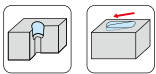
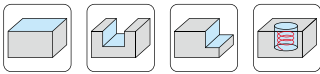
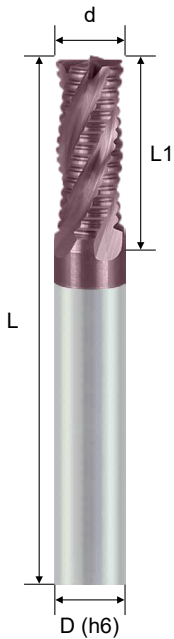
G550 - Square · Roughing · 4F

平銑刀 · 粗銑型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides high performance and avoids tip fracture.

ASIA
(Metric)

EPSRR



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSRR406000U	6	15	50	6	4
EPSRR408000U	8	20	60	8	4
EPSRR410000U	10	25	75	10	4
EPSRR412000U	12	30	75	12	4
EPSRR416000U	16	40	100	16	4
EPSRR420000U	20	45	100	20	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	68 m/min		54 m/min		45 m/min		27 m/min		54 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6mm	3600	430	2880	295	2340	200	1440	85	2880	295
8mm	2700	430	2160	295	1800	200	1080	85	2160	295
10mm	2160	430	1710	295	1440	200	860	85	1710	295
12mm	1800	430	1440	295	1200	200	720	85	1440	295
	ap = 1d ae = 0.1d		ap = 1d ae = 0.1d		ap = 1d ae = 0.1d		ap = 1d ae = 0.2d		ap = 1d ae = 0.1d	

Solid End Milling

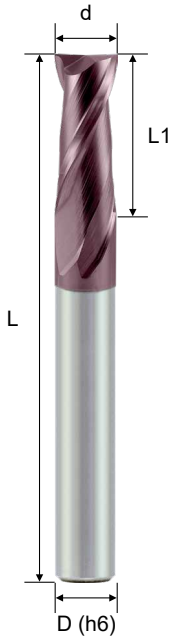
G550 - Square · Long Shank · 2F

平銑刀 · 長柄型 · 2刃

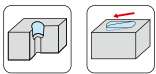
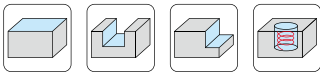
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.



EPSLC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSLC241006U	1	3	60	4	2
EPSLC241007U	1	3	75	4	2
EPSLC242006U	2	5	60	4	2
EPSLC242007U	2	5	75	4	2
EPSLC243006U	3	8	60	4	2
EPSLC243007U	3	8	75	4	2
EPSLC244006U	4	10	60	4	2
EPSLC244007U	4	10	75	4	2
EPSLC244010U	4	10	100	4	2
EPSLC204006U	4	10	60	6	2
EPSLC204007U	4	10	75	6	2
EPSLC204010U	4	10	100	6	2
EPSLC206006U	6	15	60	6	2
EPSLC206007U	6	15	75	6	2
EPSLC206010U	6	15	100	6	2
EPSLC208007U	8	20	75	8	2
EPSLC208010U	8	20	100	8	2
EPSLC208015U	8	20	150	8	2
EPSLC210010U	10	25	100	10	2
EPSLC210015U	10	25	150	10	2
EPSLC212010U	12	30	100	12	2
EPSLC212015U	12	30	150	12	2
EPSLC216015U	16	40	150	16	2
EPSLC220015U	20	40	150	20	2



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316			
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)		
	HB 180~250	102 m/min	8500	323	8500	255	7128	213	4330	130	7128	213
	HRC 25~35	80 m/min	4626	324	4626	256	5346	213	3247	130	5346	213
	HRC 35~45	67 m/min	4284	378	4284	300	3570	250	2165	151	3570	250
	HRC 40~55	40 m/min	3210	283	3210	224	2670	187	1624	113	2670	187
	—	67 m/min	2568	195	2568	154	2138	127	1298	78	2138	127
			2142	160	2142	128	1785	107	1082	65	1785	107
			ap = 0.5d ae = 1d		ap = 0.3d ae = 1d		ap = 0.05d ae = 1d		ap = 0.05d ae = 1d		ap = 0.05d ae = 1d	

G550 - Square · Long Shank · 4F

平銑刀 · 長柄型 · 4刃

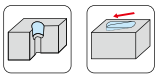
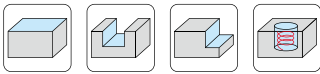
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

ASIA
(Metric)

EPSLC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSLC442007U	2	5	75	4	4
EPSLC443007U	3	8	75	4	4
EPSLC443010U	3	8	100	4	4
EPSLC444006U	4	10	60	4	4
EPSLC444007U	4	10	75	4	4
EPSLC444010U	4	10	100	4	4
EPSLC404006U	4	10	60	6	4
EPSLC404007U	4	10	75	6	4
EPSLC404010U	4	10	100	6	4
EPSLC406006U	6	15	60	6	4
EPSLC406007U	6	15	75	6	4
EPSLC406010U	6	15	100	6	4
EPSLC408007U	8	20	75	8	4
EPSLC408010U	8	20	100	8	4
EPSLC408015U	8	20	150	8	4
EPSLC410010U	10	25	100	10	4
EPSLC410015U	10	25	150	10	4
EPSLC412010U	12	30	100	12	4
EPSLC412015U	12	30	150	12	4
EPSLC414010U	14	30	100	14	4
EPSLC414015U	14	30	150	14	4
EPSLC416015U	16	40	150	16	4
EPSLC420015U	20	40	150	20	4
EPSLC425015U	25	45	150	25	4



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316			
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)		
	HB 180~250	102 m/min	8500	647	8500	510	7128	427	4330	260	7128	427
	HRC 25~35	80 m/min	4626	649	4626	513	5346	427	3247	260	5346	427
	HRC 35~45	67 m/min	4284	756	4284	600	3570	500	2165	302	3570	500
	HRC 40~55	40 m/min	3210	568	3210	450	2670	340	1624	226	2670	340
	—	67 m/min	2568	389	2568	307	2138	255	1298	155	2138	255
			2142	323	2142	256	1785	214	1082	129	1785	214



ap = 1d
ae = 0.05d

Solid End Milling

G550 - Square · Long Shank · 4F

平銑刀 · 長柄型 · 4刃

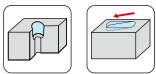
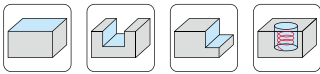
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)

EPSLA



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EP550A444007U	4	10	75	4	4
EP550A406007U	6	15	75	6	4
EP550A408010U	8	20	100	8	4
EP550A410010U	10	25	100	10	4
EP550A412010U	12	30	100	12	4



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	102 m/min		80 m/min		67 m/min		40 m/min		67 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	10800	647	8500	510	7128	427	4330	260	7128	427
4mm	8118	649	4626	513	5346	427	3247	260	5346	427
6mm	5414	756	4284	600	3570	500	2165	302	3570	500
8mm	4054	568	3210	450	2670	340	1624	226	2670	340
10mm	3248	389	2568	307	2138	255	1298	155	2138	255
12mm	2700	323	2142	256	1785	214	1082	129	1785	214

$ap = 1d$

$ae = 0.05d$

G550 / G55X - Square · Long Flute · 4F

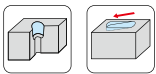
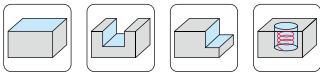
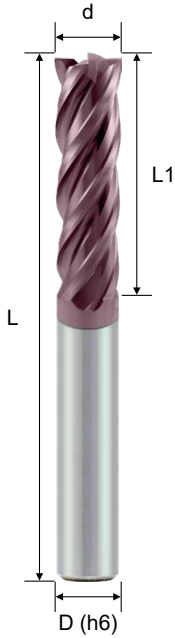
平銑刀 · 長刃型 · 4刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Available in various length of cut and overall length end mills.
- Long cutting length is suitable for deep side milling.

ASIA
(Metric)

EPSCC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSCC401000U	EPSCC401000UX	1	5	60	6	4
EPSCC402000U	EPSCC402000UX	2	10	60	6	4
EPSCC443000U	EPSCC443000UX	3	15	60	4	4
EPSCC403000U	EPSCC403000UX	3	15	60	6	4
EPSCC444000U	EPSCC444000UX	4	20	60	4	4
EPSCC404000U	EPSCC404000UX	4	20	60	6	4
EPSCC405000U	EPSCC405000UX	5	25	75	6	4
EPSCC406000U	EPSCC406000UX	6	30	75	6	4
EPSCC408000U	EPSCC408000UX	8	35	100	8	4
EPSCC410000U	EPSCC410000UX	10	45	100	10	4
EPSCC412000U	EPSCC412000UX	12	45	100	12	4
EPSCC414000U	EPSCC414000UX	14	70	150	14	4
EPSCC416000U	EPSCC416000UX	16	70	150	16	4
EPSCC420000U	EPSCC420000UX	20	75	150	20	4
EPSCC425000U	EPSCC425000UX	25	75	150	25	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	96 m/min		76 m/min		63 m/min		38 m/min		63 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	10160	610	8000	480	6708	402	4076	244	6708	402
4mm	7640	610	6048	483	5032	402	3056	244	5032	402
6mm	5096	712	4032	564	3360	470	2038	285	3360	470
8mm	3816	534	3024	423	2512	352	1528	214	2512	352
10mm	3056	366	2416	290	2012	240	1222	146	2012	240
12mm	2544	304	2016	242	1680	202	1016	122	1680	202

ap = 1d

ae = 0.05d

Solid End Milling

G550 / G55X - Square · High Helix · Long Flute · 6F

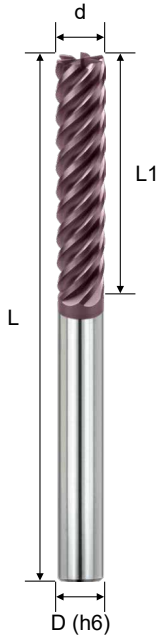
平銑刀 · 高導長刃型 · 6 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides high speed milling capabilities.
- Six flute for good surface milling.

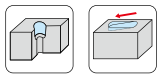
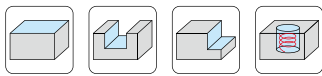
ASIA
(Metric)

EPSCH

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X					
EPSCH606000U	EPSCH606000UX	6	30	75	6	6
EPSCH608000U	EPSCH608000UX	8	35	100	8	6
EPSCH610000U	EPSCH610000UX	10	45	100	10	6
EPSCH612000U	EPSCH612000UX	12	45	100	12	6
EPSCH616000U	EPSCH616000UX	16	70	150	16	6



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	96 m/min	76 m/min		63 m/min		38 m/min		63 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	10160	610	8000	480	67010	402	4076	244	5944	594
4mm	7640	611	6048	483	5032	402	3056	244	4456	462
6mm	5096	712	4032	564	3360	470	2040	285	2976	476
8mm	3816	534	3024	423	2512	352	1528	214	2224	445
10mm	3056	366	2416	290	2012	241	1220	146	1784	428
12mm	2544	304	2016	242	1680	202	1020	122	1488	387
					ap = 1.5d ae = 0.05d					

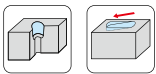
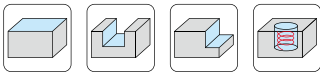
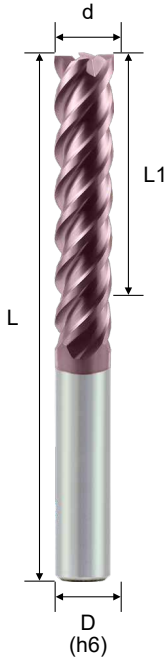
G550 / G55X - Square · High Helix · Extra Long Flute · 4F 平銑刀 · 高導超長刃型 · 4 刃

- UNAX (Ti, Al, N) smooth coating provides superior wear resistance and low friction.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.
- Suitable for roughing to medium milling.
- Special geometry design, outstanding anti-vibrations and high surface finish quality.
- For deep side milling and finishing.



EPSCH

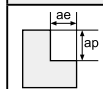
	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.		Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
UNAX	SNAX					
EPSCH406035UX	EPSCH406035S	6	35	100	6	4
EPSCH408040UX	EPSCH408040S	8	40	100	8	4
EPSCH410035UX	EPSCH410035S	10	35	75	10	4
EPSCH410050UX	EPSCH410050S	10	50	100	10	4
EPSCH412035UX	EPSCH412035S	12	35	75	12	4
EPSCH412055UX	EPSCH412055S	12	55	100	12	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	96 m/min		76 m/min		63 m/min		38 m/min		63 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	10160	610	8000	480	6708	402	4076	244	6708	402
4mm	7640	610	6048	483	5032	402	3056	244	5032	402
6mm	5096	712	4032	564	3360	470	2038	285	3360	470
8mm	3816	534	3024	423	2512	352	1528	214	2512	352
10mm	3056	366	2416	290	2012	240	1222	146	2012	240
12mm	2544	304	2016	242	1680	202	1016	122	1680	202



ap = 1d
ae = 0.05d

Solid End Milling

G550 / G55X - Corner Radius · Standard · 2F

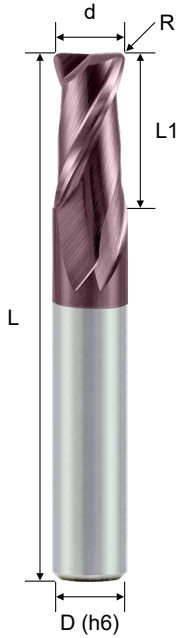
圓鼻銑刀 · 標準型 · 2 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Corner radius design is suitable for roughing to medium milling.

ASIA
(Metric)

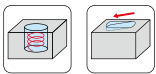
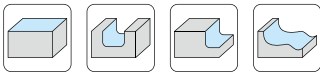
EPCSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPCSC241001U	EPCSC241001UX	1.0	0.1R	2	50	4	2
EPCSC241002U	EPCSC241002UX	1.0	0.2R	2	50	4	2
EPCSC241003U	EPCSC241003UX	1.0	0.3R	2	50	4	2
EPCSC241502U	EPCSC241502UX	1.5	0.2R	3	50	4	2
EPCSC241503U	EPCSC241503UX	1.5	0.3R	3	50	4	2
EPCSC241505U	EPCSC241505UX	1.5	0.5R	3	50	4	2
EPCSC242002U	EPCSC242002UX	2.0	0.2R	4	50	4	2
EPCSC242003U	EPCSC242003UX	2.0	0.3R	4	50	4	2
EPCSC242005U	EPCSC242005UX	2.0	0.5R	4	50	4	2
EPCSC243002U	EPCSC243002UX	3.0	0.2R	6	50	4	2
EPCSC243003U	EPCSC243003UX	3.0	0.3R	6	50	4	2
EPCSC243005U	EPCSC243005UX	3.0	0.5R	6	50	4	2
EPCSC244002U	EPCSC244002UX	4.0	0.2R	8	50	4	2
EPCSC244003U	EPCSC244003UX	4.0	0.3R	8	50	4	2
EPCSC244005U	EPCSC244005UX	4.0	0.5R	8	50	4	2
EPCSC244010U	EPCSC244010UX	4.0	1R	8	50	4	2
EPCSC204003U	EPCSC204003UX	4.0	0.3R	8	50	6	2
EPCSC204005U	EPCSC204005UX	4.0	0.5R	8	50	6	2
EPCSC204010U	EPCSC204010UX	4.0	1.0R	8	50	6	2
EPCSC205005U	EPCSC205005UX	5.0	0.5R	10	50	6	2
EPCSC205010U	EPCSC205010UX	5.0	1.0R	10	50	6	2

(continued)



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

G550 / G55X - Corner Radius · Standard · 2F

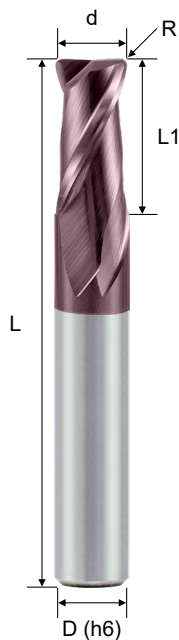
圓鼻銑刀 · 標準型 · 2刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Corner radius design is suitable for roughing to medium milling.

ASIA
(Metric)

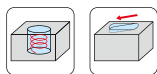
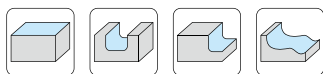
EPCSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPCSC206003U	EPCSC206003UX	6.0	0.3R	12	50	6	2
EPCSC206005U	EPCSC206005UX	6.0	0.5R	12	50	6	2
EPCSC206010U	EPCSC206010UX	6.0	1.0R	12	50	6	2
EPCSC208005U	EPCSC208005UX	8.0	0.5R	16	60	8	2
EPCSC208010U	EPCSC208010UX	8.0	1.0R	16	60	8	2
EPCSC208015U	EPCSC208015UX	8.0	1.5R	16	60	8	2
EPCSC210005U	EPCSC210005UX	10.0	0.5R	20	75	10	2
EPCSC210010U	EPCSC210010UX	10.0	1.0R	20	75	10	2
EPCSC210015U	EPCSC210015UX	10.0	1.5R	20	75	10	2
EPCSC212020U	EPCSC212020UX	10.0	2.0R	20	75	10	2
EPCSC212005U	EPCSC212005UX	12.0	0.5R	20	75	12	2
EPCSC212010U	EPCSC212010UX	12.0	1.0R	20	75	12	2
EPCSC212015U	EPCSC212015UX	12.0	1.5R	20	75	12	2
EPCSC212020U	EPCSC212020UX	12.0	2.0R	20	75	12	2

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min	95 m/min		79 m/min		48 m/min		79 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	380	10000	300	8386	251	5095	152	8386	251
4mm	9550	382	7560	302	6290	251	3820	152	6290	251
6mm	6370	445	5040	352	4200	294	2548	178	4200	294
8mm	4770	333	3780	264	3140	220	1910	133	3140	220
10mm	3820	230	3020	181	2515	150	1528	92	2515	150
12mm	3180	190	2520	151	2100	126	1274	76	2100	126
	ap = 0.5d ae = 1d		ap = 0.3d ae = 1d		ap = 0.05d ae = 1d		ap = 0.05d ae = 1d		ap = 0.05d ae = 1d	

G550 / G55X - Corner Radius · Standard · 4F

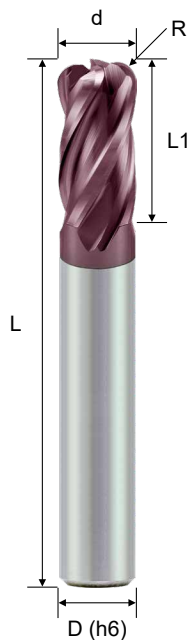
圓鼻銑刀 · 標準型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Corner radius design is suitable for roughing to medium milling.



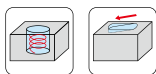
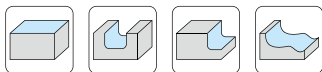
EPCSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPCSC441002U	EPCSC441002UX	1.0	0.2R	2	50	4	4
EPCSC441003U	EPCSC441003UX	1.0	0.3R	2	50	4	4
EPCSC441502U	EPCSC441502UX	1.5	0.2R	3	50	4	4
EPCSC441503U	EPCSC441503UX	1.5	0.3R	3	50	4	4
EPCSC441505U	EPCSC441505UX	1.5	0.5R	3	50	4	4
EPCSC442002U	EPCSC442002UX	2.0	0.2R	4	50	4	4
EPCSC442003U	EPCSC442003UX	2.0	0.3R	4	50	4	4
EPCSC442005U	EPCSC442005UX	2.0	0.5R	4	50	4	4
EPCSC443002U	EPCSC443002UX	3.0	0.2R	6	50	4	4
EPCSC443003U	EPCSC443003UX	3.0	0.3R	6	50	4	4
EPCSC433005U	EPCSC433005UX	3.0	0.5R	6	50	3	4
EPCSC443005U	EPCSC443005UX	3.0	0.5R	6	50	4	4
EPCSC443010U	EPCSC443010UX	3.0	1.0R	6	50	4	4
EPCSC403003U	EPCSC403003UX	3.0	0.3R	6	50	6	4
EPCSC403005U	EPCSC403005UX	3.0	0.5R	6	50	6	4
EPCSC403010U	EPCSC403010UX	3.0	1.0R	6	50	6	4
EPCSC444001U	EPCSC444001UX	4.0	0.1R	8	50	4	4
EPCSC444002U	EPCSC444002UX	4.0	0.2R	8	50	4	4
EPCSC444003U	EPCSC444003UX	4.0	0.3R	8	50	4	4
EPCSC444005U	EPCSC444005UX	4.0	0.5R	8	50	4	4
EPCSC444010U	EPCSC444010UX	4.0	1.0R	8	50	4	4
EPCSC404003U	EPCSC404003UX	4.0	0.3R	8	50	6	4
EPCSC404005U	EPCSC404005UX	4.0	0.5R	8	50	6	4
EPCSC404010U	EPCSC404010UX	4.0	1.0R	8	50	6	4

(continued)



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

G550 / G55X - Corner Radius · Standard · 4F

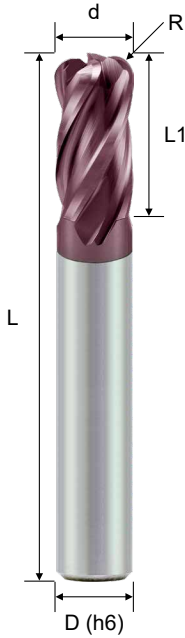
圓鼻銑刀 · 標準型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Corner radius design is suitable for roughing to medium milling.

ASIA
(Metric)

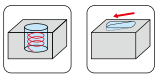
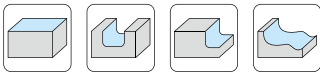
EPCSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPSC405005U	EPSC405005UX	5.0	0.5R	10	50	6	4
EPSC405010U	EPSC405010UX	5.0	1.0R	10	50	6	4
EPSC406003U	EPSC406003UX	6.0	0.3R	12	50	6	4
EPSC406005U	EPSC406005UX	6.0	0.5R	12	50	6	4
EPSC406010U	EPSC406010UX	6.0	1.0R	12	50	6	4
EPSC408002U	EPSC408002UX	8.0	0.2R	16	60	8	4
EPSC408005U	EPSC408005UX	8.0	0.5R	16	60	8	4
EPSC408010U	EPSC408010UX	8.0	1.0R	16	60	8	4
EPSC408015U	EPSC408015UX	8.0	1.5R	16	60	8	4
EPSC410002U	EPSC410002UX	10.0	0.2R	20	75	10	4
EPSC410005U	EPSC410005UX	10.0	0.5R	20	75	10	4
EPSC410010U	EPSC410010UX	10.0	1.0R	20	75	10	4
EPSC410015U	EPSC410015UX	10.0	1.5R	20	75	10	4
EPSC410020U	EPSC410020UX	10.0	2.0R	20	75	10	4
EPSC412005U	EPSC412005UX	12.0	0.5R	24	75	12	4
EPSC412010U	EPSC412010UX	12.0	1.0R	24	75	12	4
EPSC412015U	EPSC412015UX	12.0	1.5R	24	75	12	4
EPSC412020U	EPSC412020UX	12.0	2.0R	24	75	12	4
EPSC412030U	EPSC412030UX	12.0	3.0R	24	75	12	4
EPSC416010U	EPSC416010UX	16.0	1.0R	32	100	16	4
EPSC416020U	EPSC416020UX	16.0	2.0R	32	100	16	4
EPSC416030U	EPSC416030UX	16.0	3.0R	32	100	16	4

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252
				ap = 1d ae = 0.05d						

G550 / G55X - Corner Radius · Standard · 4F

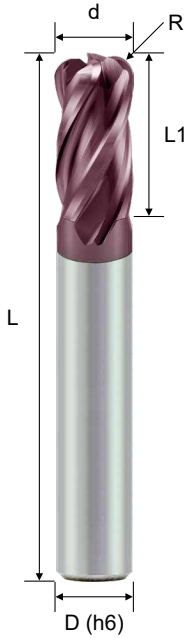
圓鼻銑刀 · 標準型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Corner radius design is suitable for semi-finishing to medium.

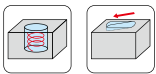
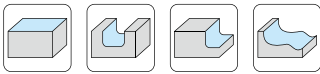
ASIA
(Metric)

EPCSA

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



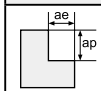
Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPCSA441002U	EPCSA441002UX	1	0.2R	2	50	4	4
EPCSA441502U	EPCSA441502UX	1.5	0.2R	3	50	4	4
EPCSA442002U	EPCSA442002UX	2	0.2R	4	50	4	4
EPCSA443002U	EPCSA443002UX	3	0.2R	6	50	4	4
EPCSA443005U	EPCSA443005UX	3	0.5R	6	50	4	4
EPCSA444002U	EPCSA444002UX	4	0.2R	8	50	4	4
EPCSA444005U	EPCSA444005UX	4	0.5R	8	50	4	4
EPCSA406005U	EPCSA406005UX	6	0.5R	12	50	6	4
EPCSA406010U	EPCSA406010UX	6	1.0R	12	50	6	4
EPCSA408005U	EPCSA408005UX	8	0.5R	16	60	8	4
EPCSA408010U	EPCSA408010UX	8	1.0R	16	60	8	4
EPCSA410005U	EPCSA410005UX	10	0.5R	20	75	10	4
EPCSA410010U	EPCSA410010UX	10	1.0R	20	75	10	4
EPCSA412005U	EPCSA412005UX	12	0.5R	24	75	12	4
EPCSA412010U	EPCSA412010UX	12	1.0R	24	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

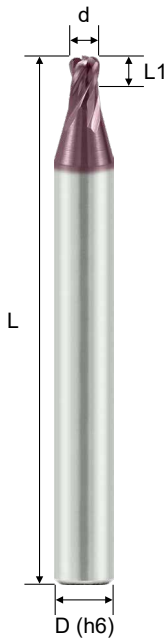
G550 - Corner Radius · Stub Length · 4F

圓鼻銑刀 · 短刃型 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

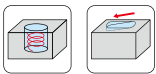
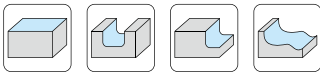
ASIA
(Metric)

EPCHC



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPCHC442001U	2.0	0.1R	2.0	50	4	4
EPCHC442002U	2.0	0.2R	2.0	50	4	4
EPCHC442003U	2.0	0.3R	2.0	50	4	4
EPCHC442005U	2.0	0.5R	2.0	50	4	4
EPCHC442501U	2.5	0.1R	2.5	50	4	4
EPCHC442502U	2.5	0.2R	2.5	50	4	4
EPCHC442503U	2.5	0.3R	2.5	50	4	4
EPCHC442505U	2.5	0.5R	2.5	50	4	4
EPCHC403001U	3.0	0.1R	3.0	50	6	4
EPCHC403002U	3.0	0.2R	3.0	50	6	4
EPCHC403003U	3.0	0.3R	3.0	50	6	4
EPCHC403005U	3.0	0.5R	3.0	50	6	4
EPCHC403010U	3.0	1.0R	3.0	50	6	4
EPCHC404001U	4.0	0.1R	4.0	50	6	4
EPCHC404002U	4.0	0.2R	4.0	50	6	4
EPCHC404003U	4.0	0.3R	4.0	50	6	4
EPCHC404005U	4.0	0.5R	4.0	50	6	4
EPCHC404010U	4.0	1.0R	4.0	50	6	4
EPCHC405001U	5.0	0.1R	5.0	50	6	4
EPCHC405002U	5.0	0.2R	5.0	50	6	4
EPCHC405003U	5.0	0.3R	5.0	50	6	4
EPCHC405005U	5.0	0.5R	5.0	50	6	4
EPCHC405010U	5.0	1.0R	5.0	50	6	4
EPCHC406001U	6.0	0.1R	7.0	50	6	4
EPCHC406002U	6.0	0.2R	7.0	50	6	4
EPCHC406003U	6.0	0.3R	7.0	50	6	4
EPCHC406005U	6.0	0.5R	7.0	50	6	4
EPCHC406010U	6.0	1.0R	7.0	50	6	4
EPCHC406015U	6.0	1.5R	7.0	50	6	4

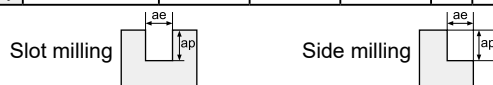
Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Working Material	Cutting Application	ae (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
					1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	Slot milling	1×d	≤ 0.5×d	50 ~ 90	0.007	0.013	0.018	0.024	0.030	0.036
	Side milling	≤ 0.3×d	≤ 0.3×d	55 ~ 100	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	Slot milling	1×d	≤ 0.5×d	40 ~ 70	0.006	0.012	0.017	0.022	0.028	0.033
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 80	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	Slot milling	1×d	≤ 0.5×d	30 ~ 40	0.006	0.011	0.015	0.020	0.025	0.030
	Side milling	≤ 0.3×d	≤ 0.3×d	40 ~ 60	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	Slot milling	1×d	≤ 0.5×d	20 ~ 40	0.005	0.010	0.014	0.018	0.023	0.027
	Side milling	≤ 0.3×d	≤ 0.3×d	30 ~ 55	0.005	0.010	0.014	0.018	0.023	0.027



G550 / G55X - Corner Radius · High Helix · 4F

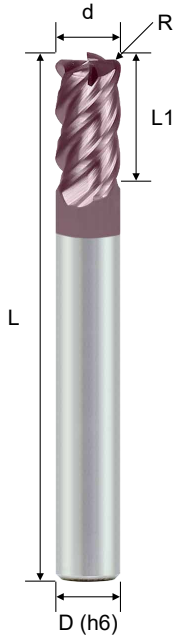
圓鼻銑刀 · 高導型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Corner radius with high helix angle improves the side milling quality.

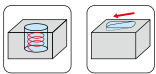
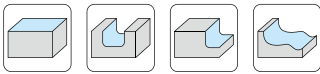
ASIA
(Metric)

EPCSH

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



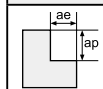
Order No.		Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPCSH443005U	EPCSH443005UX	3.0	0.5R	6	50	4	4
EPCSH444005U	EPCSH444005UX	4.0	0.5R	8	50	4	4
EPCSH405005U	EPCSH405005UX	5.0	0.5R	10	50	6	4
EPCSH405010U	EPCSH405010UX	5.0	1.0R	10	50	6	4
EPCSH406005U	EPCSH406005UX	6.0	0.5R	12	50	6	4
EPCSH406010U	EPCSH406010UX	6.0	1.0R	12	50	6	4
EPCSH408005U	EPCSH408005UX	8.0	0.5R	16	60	8	4
EPCSH408010U	EPCSH408010UX	8.0	1.0R	16	60	8	4
EPCSH410005U	EPCSH410005UX	10.0	0.5R	20	75	10	4
EPCSH410010U	EPCSH410010UX	10.0	1.0R	20	75	10	4
EPCSH410015U	EPCSH410015UX	10.0	1.5R	20	75	10	4
EPCSH410020U	EPCSH410020UX	10.0	2.0R	20	75	10	4
EPCSH412010U	EPCSH412010UX	12.0	1.0R	24	75	12	4
EPCSH412020U	EPCSH412020UX	12.0	2.0R	24	75	12	4
EPCSH412030U	EPCSH412030UX	12.0	3.0R	24	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min	95 m/min		79 m/min		48 m/min		79 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	762	10000	600	8386	503	5095	305	8386	503
4mm	9550	764	7560	604	6290	503	3820	305	6290	503
6mm	6370	890	5040	705	4200	588	2548	356	4200	588
8mm	4770	668	3780	529	3140	440	1910	267	3140	440
10mm	3820	458	3020	362	2515	301	1528	183	2515	301
12mm	3180	380	2520	302	2100	252	1274	152	2100	252



ap = 1d
ae = 0.05d

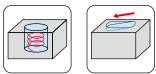
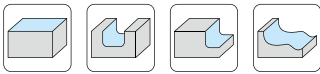
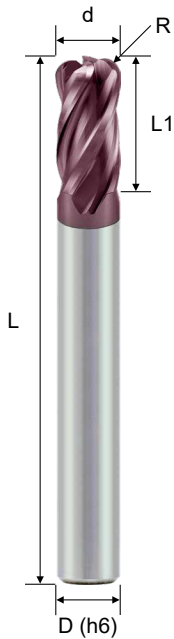
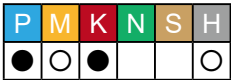
G550 - Corner Radius · Long Shank · 4F

圓鼻銑刀 · 長柄型 · 4 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- Corner radius with multiple flutes is suitable for general cutting and 3D milling.

ASIA
(Metric)

EPCLC



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

R Tolerance	
R < 2	±0.020
R ≥ 2	±0.025

Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPCLC44200307U	2	0.3R	4	75	4	4
EPCLC40300507U	3	0.5R	6	75	6	4
EPCLC40301007U	3	1.0R	6	75	6	4
EPCLC444400507U	4	0.5R	8	75	4	4
EPCLC40400507U	4	0.5R	8	75	6	4
EPCLC40401007U	4	1.0R	8	75	6	4
EPCLC444400510U	4	0.5R	8	100	4	4
EPCLC40500507U	5	0.5R	10	75	6	4
EPCLC40501007U	5	1.0R	10	75	6	4
EPCLC40600507U	6	0.5R	12	75	6	4
EPCLC40601007U	6	1.0R	12	75	6	4
EPCLC40600510U	6	0.5R	12	100	6	4
EPCLC40800507U	8	0.5R	16	75	8	4
EPCLC40800510U	8	0.5R	16	100	8	4
EPCLC40801010U	8	1.0R	16	100	8	4
EPCLC40801510U	8	1.5R	16	100	8	4
EPCLC41000510U	10	0.5R	20	100	10	4
EPCLC41001010U	10	1.0R	20	100	10	4
EPCLC41001510U	10	1.5R	20	100	10	4
EPCLC41002010U	10	2.0R	20	100	10	4
EPCLC41000515U	10	0.5R	20	150	10	4
EPCLC41200510U	12	0.5R	24	100	12	4
EPCLC41201010U	12	1.0R	24	100	12	4
EPCLC41201510U	12	1.5R	24	100	12	4
EPCLC41202010U	12	2.0R	24	100	12	4
EPCLC41203010U	12	3.0R	24	100	12	4
EPCLC41200515U	12	0.5R	24	150	12	4
EPCLC41601015U	16	1.0R	32	150	16	4
EPCLC41602015U	16	2.0R	32	150	16	4
EPCLC41603015U	16	3.0R	32	150	16	4

Material	CARBON STEEL / CAST IRON			ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250			HRC 25~35		HRC 35~45		HRC 40~55		-
Vc	102 m/min			80 m/min		67 m/min		40 m/min		67 m/min	
Dia	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	
3mm	10800	647	8500	510	7128	427	4330	260	7128	427	
4mm	8118	649	4626	513	5346	427	3247	260	5346	427	
6mm	5414	756	4284	600	3570	500	2165	302	3570	500	
8mm	4054	568	3210	450	2670	340	1624	226	2670	340	
10mm	3248	389	2568	307	2138	255	1298	155	2138	255	
12mm	2700	323	2142	256	1785	214	1082	129	1785	214	

ap = 1d
ae = 0.05d

Solid End Milling

G550 / G55X - Ball Nose · Standard · 2F

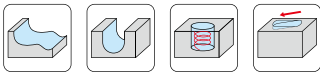
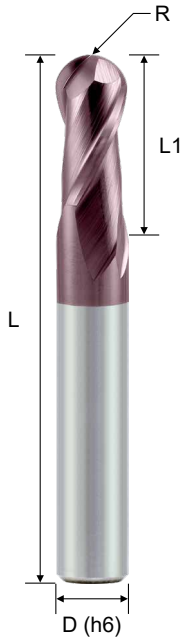
球型銑刀 · 標準型 · 2 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.

ASIA
(Metric)

EPBSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



2 MG UNICO UNAX

R 30° HRC 55

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPBSC240200U	EPBSC240200UX	0.10R	0.2	0.4	50	4	2
EPBSC240300U	EPBSC240300UX	0.15R	0.3	0.6	50	4	2
EPBSC240400U	EPBSC240400UX	0.20R	0.4	0.8	50	4	2
EPBSC240500U	EPBSC240500UX	0.25R	0.5	1.0	50	4	2
EPBSC240600U	EPBSC240600UX	0.30R	0.6	1.2	50	4	2
EPBSC240700U	EPBSC240700UX	0.35R	0.7	1.4	50	4	2
EPBSC240800U	EPBSC240800UX	0.40R	0.8	1.6	50	4	2
EPBSC240900U	EPBSC240900UX	0.45R	0.9	1.8	50	4	2
EPBSC241000U	EPBSC241000UX	0.50R	1.0	2.0	50	4	2
EPBSC241500U	EPBSC241500UX	0.75R	1.5	3.0	50	4	2
EPBSC242000U	EPBSC242000UX	1.00R	2.0	4.0	50	4	2
EPBSC233000U	EPBSC233000UX	1.50R	3.0	6.0	50	3	2
EPBSC243000U	EPBSC243000UX	1.50R	3.0	6.0	50	4	2
EPBSC244000U	EPBSC244000UX	2.00R	4.0	8.0	50	4	2
EPBSC203000U	EPBSC203000UX	1.50R	3.0	6.0	50	6	2
EPBSC204000U	EPBSC204000UX	2.00R	4.0	8.0	50	6	2
EPBSC205000U	EPBSC205000UX	2.50R	5.0	10.0	50	6	2
EPBSC206000U	EPBSC206000UX	3.00R	6.0	12.0	50	6	2
EPBSC207000U	EPBSC207000UX	3.50R	7.0	14.0	60	8	2
EPBSC208000U	EPBSC208000UX	4.00R	8.0	16.0	60	8	2
EPBSC210000U	EPBSC210000UX	5.00R	10.0	20.0	75	10	2
EPBSC212000U	EPBSC212000UX	6.00R	12.0	24.0	75	12	2
EPBSC216000U	EPBSC216000UX	8.00R	16.0	32.0	100	16	2
EPBSC220000U	EPBSC220000UX	10.00R	20.0	40.0	100	20	2

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
Hardness	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	37470	936	29660	740	24660	616	14990	374	24660	616
2R	18730	1120	14830	890	12330	740	7490	450	12330	740
3R	12490	936	9890	740	8220	616	4995	374	8220	616
4R	9366	750	7415	593	6170	494	3750	300	6170	494
5R	7490	636	5930	504	4930	420	3000	255	4930	420
6R	6244	560	4940	444	4110	370	2500	225	4110	370
		ap = 0.07d pf = 0.1d								

G550 / G55X - Ball Nose · Standard · 2F

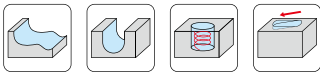
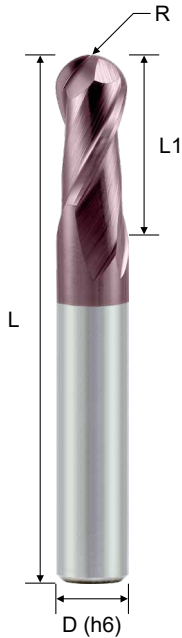
球型銑刀 · 標準型 · 2 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for semi-finishing to medium.
- Sharp geometry design has semi-finishing ability of cutting edges.

ASIA
(Metric)

EPBSA

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



2 MG UNICO UNAX

R 35° HRC 45

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPBSA241000U	EPBSA241000UX	0.5R	1	2	50	4	2
EPBSA241500U	EPBSA241500UX	0.75R	1.5	3	50	4	2
EPBSA242000U	EPBSA242000UX	1.0R	2	4	50	4	2
EPBSA242500U	EPBSA242500UX	1.25R	2.5	5	50	4	2
EPBSA243000U	EPBSA243000UX	1.5R	3	6	50	4	2
EPBSA244000U	EPBSA244000UX	2.0R	4	8	50	4	2
EPBSA205000U	EPBSA205000UX	2.5R	5	10	50	6	2
EPBSA206000U	EPBSA206000UX	3.0R	6	12	50	6	2
EPBSA208000U	EPBSA208000UX	4.0R	8	16	60	8	2
EPBSA210000U	EPBSA210000UX	5.0R	10	20	75	10	2
EPBSA212000U	EPBSA212000UX	6.0R	12	24	75	12	2

Solid End Milling

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	37470	936	29660	740	24660	616	14990	374	24660	616
2R	18730	1120	14830	890	12330	740	7490	450	12330	740
3R	12490	936	9890	740	8220	616	4995	374	8220	616
4R	9366	750	7415	593	6170	494	3750	300	6170	494
5R	7490	636	5930	504	4930	420	3000	255	4930	420
6R	6244	560	4940	444	4110	370	2500	225	4110	370
	ap = 0.07d pf = 0.1d									

G550 / G55X - Ball Nose · Standard · 4F

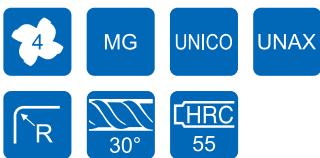
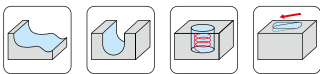
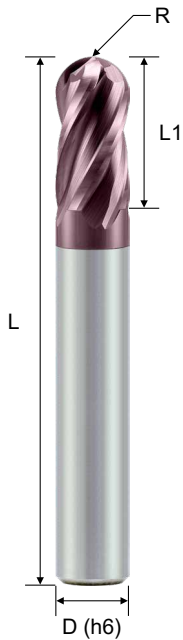
球型銑刀 · 標準型 · 4 刃

- G550 with UNICO (Ti, Al, N) coating for general milling.
- G55X with UNAX (Ti, Al, N) smooth coating for high efficiency milling.
- Suitable for roughing to medium milling.
- Strong geometry design has excellent cutting ability of cutting edges.

ASIA
(Metric)

EPBSC

	P	M	K	N	S	H
G550	●	○	●			○
G55X	●	●	●		○	○



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.		Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
G550	G55X						
EPBSC442000U	EPBSC442000UX	1.0R	2	4	50	4	4
EPBSC443000U	EPBSC443000UX	1.5R	3	6	50	4	4
EPBSC444000U	EPBSC444000UX	2.0R	4	8	50	4	4
EPBSC404000U	EPBSC404000UX	2.0R	4	8	50	6	4
EPBSC405000U	EPBSC405000UX	2.5R	5	10	50	6	4
EPBSC406000U	EPBSC406000UX	3.0R	6	12	50	6	4
EPBSC408000U	EPBSC408000UX	4.0R	8	16	60	8	4
EPBSC410000U	EPBSC410000UX	5.0R	10	20	75	10	4
EPBSC412000U	EPBSC412000UX	6.0R	12	24	75	12	4
EPBSC416000U	EPBSC416000UX	8.0R	16	32	100	16	4
EPBSC420000U	EPBSC420000UX	10.0R	20	40	100	20	4

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Radius	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	37470	936	29660	740	24660	616	14990	374	24660	616
2R	18730	1120	14830	890	12330	740	7490	450	12330	740
3R	12490	936	9890	740	8220	616	4995	374	8220	616
4R	9366	750	7415	593	6170	494	3750	300	6170	494
5R	7490	636	5930	504	4930	420	3000	255	4930	420
6R	6244	560	4940	444	4110	370	2500	225	4110	370
		 $ap = 0.07d$ $pf = 0.1d$								

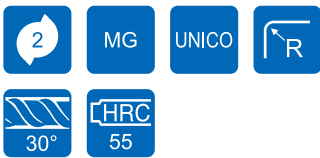
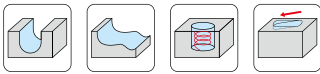
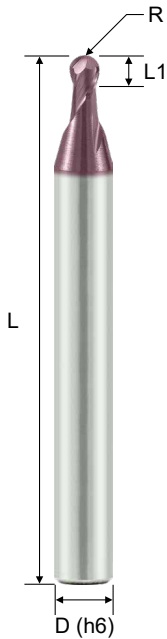
G550 - Ball Nose · Stub Length · 2F

球型銑刀 · 短刃型 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- The cutting length of approximately 1×D.
- Short cutting length with high rigidity is suitable for high feed milling.
- For die, mold, mechanical and electronic parts made of steel.
- Good for surface milling.

ASIA
(Metric)

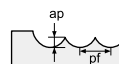
EPBHC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPBHC240200U	0.10R	0.2	0.2	50	4	2
EPBHC240300U	0.15R	0.3	0.3	50	4	2
EPBHC240400U	0.20R	0.4	0.4	50	4	2
EPBHC240500U	0.25R	0.5	0.5	50	4	2
EPBHC240600U	0.30R	0.6	0.6	50	4	2
EPBHC240700U	0.35R	0.7	0.7	50	4	2
EPBHC240800U	0.40R	0.8	0.8	50	4	2
EPBHC240900U	0.45R	0.9	0.9	50	4	2
EPBHC241000U	0.50R	1.0	1.0	50	4	2
EPBHC241200U	0.60R	1.2	1.2	50	4	2
EPBHC241400U	0.70R	1.4	1.4	50	4	2
EPBHC241500U	0.75R	1.5	1.5	50	4	2
EPBHC241600U	0.80R	1.6	1.6	50	4	2
EPBHC241800U	0.90R	1.8	1.8	50	4	2
EPBHC242000U	1.00R	2.0	2.0	50	4	2
EPBHC242500U	1.25R	2.5	2.5	50	4	2
EPBHC203000U	1.50R	3.0	3.0	50	6	2
EPBHC204000U	2.00R	4.0	4.0	50	6	2
EPBHC205000U	2.50R	5.0	5.0	50	6	2
EPBHC206000U	3.00R	6.0	9.0	50	6	2

Working Material	pf (mm)	ap (mm)	Vc (m/min)	fz (mm/z)					
				1mm	2mm	3mm	4mm	5mm	6mm
Carbon steel (S45C, S50C)	≤ 0.3×d	≤ 0.1×d	80 ~ 135	0.007	0.013	0.018	0.024	0.030	0.036
Alloy steel & Tool steel (SCM, SKT, SKD)	≤ 0.3×d	≤ 0.1×d	55 ~ 100	0.006	0.012	0.017	0.022	0.028	0.033
Stainless steel (SUS304, SUS316)	≤ 0.3×d	≤ 0.1×d	50 ~ 70	0.006	0.011	0.015	0.020	0.025	0.030
Hardened steel & High temperature alloy	≤ 0.3×d	≤ 0.1×d	40 ~ 70	0.005	0.010	0.014	0.018	0.023	0.027



Solid End Milling

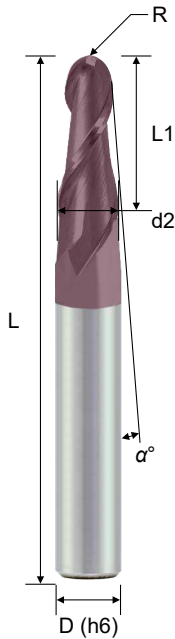
G550 - Ball Nose · Taper · 2F

球型銑刀 · 斜度型 · 2 刃

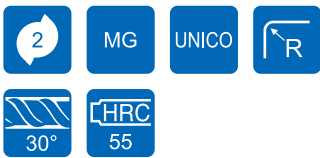
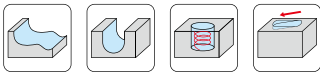
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- Tape cutting length is convenient for high performance 3D milling.
- Stronger geometry design gives good wear resistance.



EPBST



Order No.	Radius (R)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (Z)
EPBST242010U	1.00R	1°	8	2.24	50	4	2
EPBST242030U	1.00R	3°	8	2.74	50	4	2
EPBST242050U	1.00R	5°	8	3.23	50	4	2
EPBST242510U	1.25R	1°	10	2.81	50	4	2
EPBST242530U	1.25R	3°	10	3.42	50	4	2
EPBST202550U	1.25R	5°	10	4.04	50	6	2
EPBST243010U	1.50R	1°	12	3.37	50	4	2
EPBST203030U	1.50R	3°	12	4.10	50	6	2
EPBST203050U	1.50R	5°	12	4.85	50	6	2
EPBST204010U	2.00R	1°	16	4.49	60	6	2
EPBST204030U	2.00R	3°	16	5.47	60	6	2
EPBST204050U	2.00R	5°	16	6.46	60	8	2
EPBST206010U	3.00R	1°	24	6.73	75	8	2
EPBST206030U	3.00R	3°	24	8.20	75	10	2
EPBST206050U	3.00R	5°	24	9.67	75	10	2



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20~30		HRC 30~40		HRC 45~45		-		-	
Vc	94 m/min		71 m/min		34 m/min		38 m/min		71 m/min		94 m/min	
RADIUS (R)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
							ap = 0.05d pf = 0.1d					

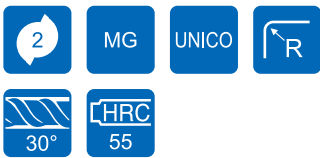
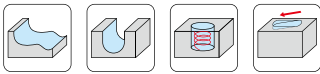
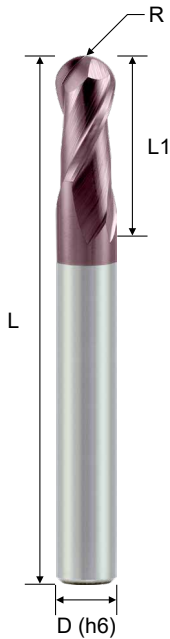
G550 - Ball Nose · Long Shank · 2F

球型銑刀 · 長柄型 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.



EPBLC



R Tolerance	
R ≤ 3	±0.020
R > 3	±0.025

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPBLC241006U	0.5R	1	2	60	4	2
EPBLC241007U	0.5R	1	2	75	4	2
EPBLC242006U	1.0R	2	4	60	4	2
EPBLC242007U	1.0R	2	4	75	4	2
EPBLC243007U	1.5R	3	6	75	4	2
EPBLC243010U	1.5R	3	6	100	4	2
EPBLC244006U	2.0R	4	8	60	4	2
EPBLC244007U	2.0R	4	8	75	4	2
EPBLC244010U	2.0R	4	8	100	4	2
EPBLC204006U	2.0R	4	8	60	6	2
EPBLC204007U	2.0R	4	8	75	6	2
EPBLC204010U	2.0R	4	8	100	6	2
EPBLC206006U	3.0R	6	12	60	6	2
EPBLC206007U	3.0R	6	12	75	6	2
EPBLC206010U	3.0R	6	12	100	6	2
EPBLC208007U	4.0R	8	16	75	8	2
EPBLC208010U	4.0R	8	16	100	8	2
EPBLC208015U	4.0R	8	16	150	8	2
EPBLC210010U	5.0R	10	20	100	10	2
EPBLC210015U	5.0R	10	20	150	10	2
EPBLC212010U	6.0R	12	24	100	12	2
EPBLC212015U	6.0R	12	24	150	12	2
EPBLC216015U	8.0R	16	32	150	16	2
EPBLC220015U	10.0R	20	40	150	20	2

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35	HRC 35~45	HRC 40~55	-				
Vc	102 m/min		80 m/min		67 m/min		40 m/min		67 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	31850	796	25210	629	20960	524	12740	318	20960	524
2R	15920	952	12606	757	10480	629	6370	383	10480	629
3R	10620	796	8400	629	6990	524	4245.8	318	6990	524
4R	7960	638	6300	504	5244.5	420	3187.5	255	5244.5	420
5R	6370	540	5040	428	4190	357	2550	217	4190	357
6R	5308	476	4200	377	3495	315	2125	191	3495	315
					ap = 0.07d pf = 0.1d					

Solid End Milling

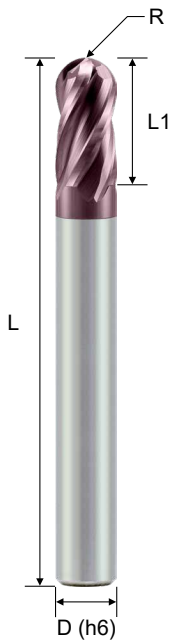
G550 - Ball Nose · Long Shank · 4F

球型銑刀 · 長柄型 · 4 刃

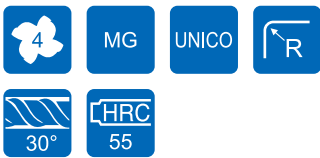
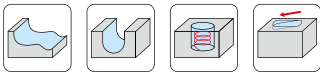
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for roughing to medium milling.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Multiple flutes design and long shank design makes possible deep surface cutting.

ASIA
(Metric)

EPBLC



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPBLC442007U	1R	2	4	75	4	4
EPBLC443007U	1.5R	3	6	75	4	4
EPBLC444007U	2R	4	8	75	4	4
EPBLC444010U	2R	4	8	100	4	4
EPBLC404007U	2R	4	8	75	6	4
EPBLC404010U	2R	4	8	100	6	4
EPBLC406007U	3R	6	12	75	6	4
EPBLC406010U	3R	6	12	100	6	4
EPBLC408007U	4R	8	16	75	8	4
EPBLC408010U	4R	8	16	100	8	4
EPBLC408015U	4R	8	16	150	8	4
EPBLC410010U	5R	10	20	100	10	4
EPBLC410015U	5R	10	20	150	10	4
EPBLC412010U	6R	12	24	100	12	4
EPBLC412015U	6R	12	24	150	12	4
EPBLC416015U	8R	16	32	150	16	4



R Tolerance	
R ≤ 3	±0.020
R > 3	±0.025

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	Vc	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
Hardness	HB 180~250	102 m/min	HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc		102 m/min	80 m/min		67 m/min		40 m/min		67 m/min	
Radius (R)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1R	31850	796	25210	629	20960	524	12740	318	20960	524
2R	15920	952	12606	757	10480	629	6370	383	10480	629
3R	10620	796	8400	629	6990	524	4246	318	6990	524
4R	7960	638	6300	504	5245	420	3188	255	5245	420
5R	6370	540	5040	428	4190	357	2550	217	4190	357
6R	5308	476	4200	377	3495	315	2125	191	3495	315
		<p>ap = 0.07d pf = 0.1d</p>								

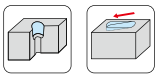
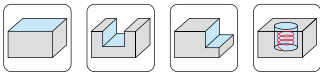
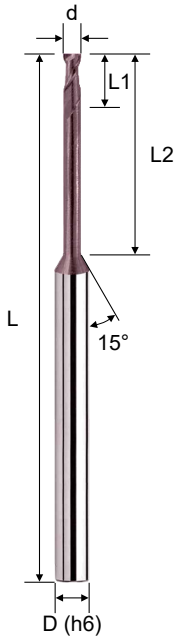
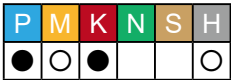
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC240201U	0.2	0.3	1	50	4	2
EPSRC240202U	0.2	0.3	2	50	4	2
EPSRC240301U	0.3	0.4	1	50	4	2
EPSRC240302U	0.3	0.4	2	50	4	2
EPSRC240303U	0.3	0.4	3	50	4	2
EPSRC240304U	0.3	0.4	4	50	4	2
EPSRC240305U	0.3	0.4	5	50	4	2
EPSRC240401U	0.4	0.5	1	50	4	2
EPSRC240402U	0.4	0.5	2	50	4	2
EPSRC240403U	0.4	0.5	3	50	4	2
EPSRC240404U	0.4	0.5	4	50	4	2
EPSRC240405U	0.4	0.5	5	50	4	2
EPSRC240406U	0.4	0.5	6	50	4	2
EPSRC240408U	0.4	0.5	8	50	4	2
EPSRC240410U	0.4	0.5	10	50	4	2
EPSRC240502U	0.5	0.6	2	50	4	2
EPSRC240503U	0.5	0.6	3	50	4	2
EPSRC240504U	0.5	0.6	4	50	4	2
EPSRC240505U	0.5	0.6	5	50	4	2
EPSRC240506U	0.5	0.6	6	50	4	2
EPSRC240508U	0.5	0.6	8	50	4	2
EPSRC240510U	0.5	0.6	10	50	4	2
EPSRC240512U	0.5	0.6	12	50	4	2
EPSRC240514U	0.5	0.6	14	50	4	2
EPSRC240602U	0.6	0.7	2	50	4	2
EPSRC240603U	0.6	0.7	3	50	4	2
EPSRC240604U	0.6	0.7	4	50	4	2
EPSRC240605U	0.6	0.7	5	50	4	2
EPSRC240606U	0.6	0.7	6	50	4	2
EPSRC240608U	0.6	0.7	8	50	4	2
EPSRC240610U	0.6	0.7	10	50	4	2
EPSRC240612U	0.6	0.7	12	50	4	2
EPSRC240614U	0.6	0.7	14	50	4	2
EPSRC240616U	0.6	0.7	16	50	4	2

(continued)

Solid End Milling

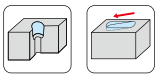
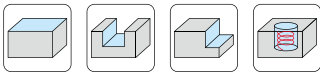
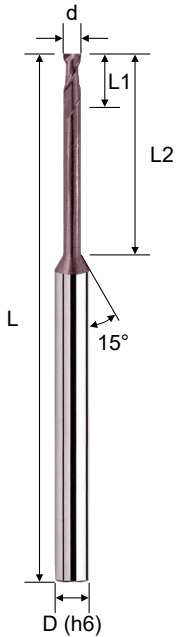
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
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ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC240702U	0.7	0.8	2	50	4	2
EPSRC240704U	0.7	0.8	4	50	4	2
EPSRC240706U	0.7	0.8	6	50	4	2
EPSRC240708U	0.7	0.8	8	50	4	2
EPSRC240710U	0.7	0.8	10	50	4	2
EPSRC240712U	0.7	0.8	12	50	4	2
EPSRC240802U	0.8	1.0	2	50	4	2
EPSRC240804U	0.8	1.0	4	50	4	2
EPSRC240806U	0.8	1.0	6	50	4	2
EPSRC240808U	0.8	1.0	8	50	4	2
EPSRC240810U	0.8	1.0	10	50	4	2
EPSRC240812U	0.8	1.0	12	50	4	2
EPSRC240814U	0.8	1.0	14	50	4	2
EPSRC240906U	0.9	1.1	6	50	4	2
EPSRC240908U	0.9	1.1	8	50	4	2
EPSRC240910U	0.9	1.1	10	50	4	2
EPSRC241002U	1.0	1.2	2	50	4	2
EPSRC241003U	1.0	1.2	3	50	4	2
EPSRC241004U	1.0	1.2	4	50	4	2
EPSRC241005U	1.0	1.2	5	50	4	2
EPSRC241006U	1.0	1.2	6	50	4	2
EPSRC241008U	1.0	1.2	8	50	4	2
EPSRC241010U	1.0	1.2	10	50	4	2
EPSRC241012U	1.0	1.2	12	50	4	2
EPSRC241014U	1.0	1.2	14	50	4	2
EPSRC241016U	1.0	1.2	16	50	4	2
EPSRC241018U	1.0	1.2	18	50	4	2
EPSRC241020U	1.0	1.2	20	50	4	2
EPSRC241204U	1.2	1.5	4	50	4	2
EPSRC241206U	1.2	1.5	6	50	4	2
EPSRC241208U	1.2	1.5	8	50	4	2
EPSRC241210U	1.2	1.5	10	50	4	2
EPSRC241212U	1.2	1.5	12	50	4	2
EPSRC241216U	1.2	1.5	16	50	4	2
EPSRC241220U	1.2	1.5	20	50	4	2

(continued)

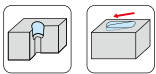
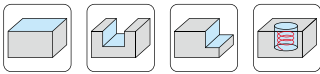
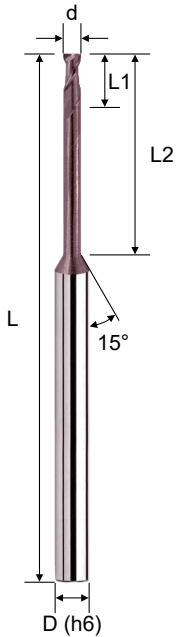
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
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ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC241406U	1.4	1.8	6	50	4	2
EPSRC241408U	1.4	1.8	8	50	4	2
EPSRC241410U	1.4	1.8	10	50	4	2
EPSRC241414U	1.4	1.8	14	50	4	2
EPSRC241416U	1.4	1.8	16	50	4	2
EPSRC241420U	1.4	1.8	20	50	4	2
EPSRC241504U	1.5	1.8	4	50	4	2
EPSRC241506U	1.5	1.8	6	50	4	2
EPSRC241508U	1.5	1.8	8	50	4	2
EPSRC241510U	1.5	1.8	10	50	4	2
EPSRC241512U	1.5	1.8	12	50	4	2
EPSRC241514U	1.5	1.8	14	50	4	2
EPSRC241516U	1.5	1.8	16	50	4	2
EPSRC241518U	1.5	1.8	18	50	4	2
EPSRC241520U	1.5	1.8	20	50	4	2
EPSRC241610U	1.6	1.9	10	50	4	2
EPSRC241614U	1.6	1.9	14	50	4	2
EPSRC241618U	1.6	1.9	18	50	4	2
EPSRC241810U	1.8	2.0	10	50	4	2
EPSRC241814U	1.8	2.0	14	50	4	2
EPSRC241818U	1.8	2.0	18	50	4	2
EPSRC242004U	2.0	2.5	4	50	4	2
EPSRC242006U	2.0	2.5	6	50	4	2
EPSRC242008U	2.0	2.5	8	50	4	2
EPSRC242010U	2.0	2.5	10	50	4	2
EPSRC242012U	2.0	2.5	12	50	4	2
EPSRC242014U	2.0	2.5	14	50	4	2
EPSRC242016U	2.0	2.5	16	50	4	2
EPSRC242018U	2.0	2.5	18	50	4	2
EPSRC242020U	2.0	2.5	20	50	4	2
EPSRC242022U	2.0	2.5	22	60	4	2
EPSRC242025U	2.0	2.5	25	60	4	2
EPSRC242030U	2.0	2.5	30	75	4	2
EPSRC242035U	2.0	2.5	35	75	4	2

(continued)

Solid End Milling

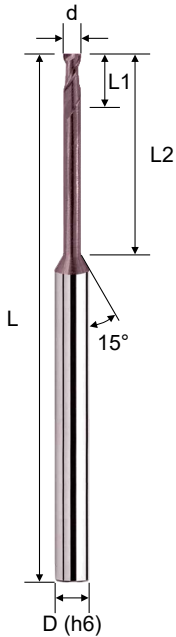
G550 - Long Neck · Square · 2F

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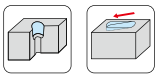
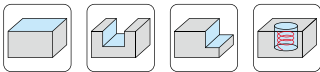
ASIA
(Metric)

EPSRC



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC242508U	2.5	3.0	8	50	4	2
EPSRC242510U	2.5	3.0	10	50	4	2
EPSRC242512U	2.5	3.0	12	50	4	2
EPSRC242516U	2.5	3.0	16	50	4	2
EPSRC242520U	2.5	3.0	20	50	4	2
EPSRC242525U	2.5	3.0	25	60	4	2
EPSRC242530U	2.5	3.0	30	75	4	2
EPSRC242535U	2.5	3.0	35	75	4	2
EPSRC203006U	3.0	3.5	6	50	6	2
EPSRC203010U	3.0	3.5	10	50	6	2
EPSRC203012U	3.0	3.5	12	50	6	2
EPSRC203016U	3.0	3.5	16	50	6	2
EPSRC203020U	3.0	3.5	20	60	6	2
EPSRC203025U	3.0	3.5	25	60	6	2
EPSRC203030U	3.0	3.5	30	75	6	2
EPSRC203035U	3.0	3.5	35	75	6	2
EPSRC204008U	4.0	4.5	8	50	6	2
EPSRC204010U	4.0	4.5	10	50	6	2
EPSRC204012U	4.0	4.5	12	50	6	2
EPSRC204016U	4.0	4.5	16	50	6	2
EPSRC204020U	4.0	4.5	20	60	6	2
EPSRC204025U	4.0	4.5	25	60	6	2
EPSRC204030U	4.0	4.5	30	75	6	2
EPSRC204035U	4.0	4.5	35	75	6	2

(continued)



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

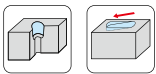
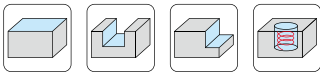
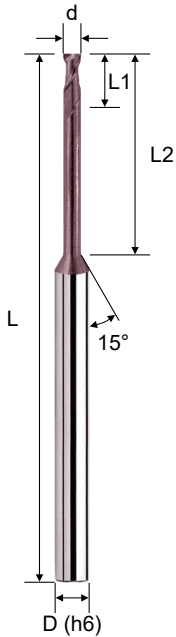
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
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ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC205016U	5.0	7.0	16	50	6	2
EPSRC205020U	5.0	7.0	20	60	6	2
EPSRC205025U	5.0	7.0	25	60	6	2
EPSRC205030U	5.0	7.0	30	75	6	2
EPSRC205035U	5.0	7.0	35	75	6	2
EPSRC206020U	6.0	10.0	20	60	6	2
EPSRC206030U	6.0	10.0	30	75	6	2
EPSRC208020U	8.0	15.0	20	60	8	2
EPSRC208030U	8.0	15.0	30	75	8	2
EPSRC208040U	8.0	15.0	40	100	8	2
EPSRC210025U	10.0	20.0	25	75	10	2
EPSRC210035U	10.0	20.0	35	75	10	2
EPSRC210045U	10.0	20.0	45	100	10	2
EPSRC212030U	12.0	25.0	30	75	12	2
EPSRC212040U	12.0	25.0	40	100	12	2
EPSRC212050U	12.0	25.0	50	100	12	2

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)
0.2mm	1	40000	400	0.001
	2	40000	200	0.005
0.3mm	1	40000	650	0.007
	2	40000	550	0.004
	3	40000	500	0.002
	4	30000	200	0.001
0.4mm	2	40000	800	0.007
	4	40000	800	0.003
	6	28000	350	0.001
	8	20000	200	0.001
	10	17000	150	0.001



(continued)

Solid End Milling

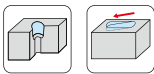
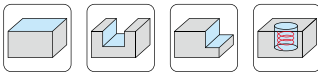
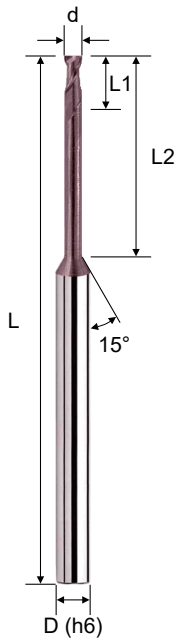
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
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- Suitable for deep cutting application.



EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)
0.5mm	4	40000	850	0.003
	6	40000	700	0.003
	8	30000	500	0.002
	12	20000	300	0.001
0.6mm	4	40000	950	0.010
	8	35000	500	0.004
	10	25000	450	0.003
	12	20000	300	0.002
0.7mm	4	40000	150	0.001
	8	12000	150	0.001
	8	40000	950	0.015
	8	30000	700	0.005
0.8mm	12	9000	200	0.002
	4	40000	1100	0.015
	8	40000	1000	0.010
	12	25000	400	0.030
0.9mm	14	20000	300	0.020
	6	40000	1300	0.020
	8	38000	1200	0.010
	10	35000	1000	0.010
1.0mm	6	40000	1600	0.040
	8	40000	1600	0.030
	10	38000	1300	0.025
	12	30000	1000	0.02
	16	23000	600	0.010
1.2mm	20	15000	400	0.005
	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.020
1.4mm	20	6500	150	0.01
	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.02
1.5mm	20	6500	150	0.01
	6	40000	2400	0.1
	10	30000	1800	0.05
	12	28000	1300	0.04
1.6mm	16	20000	800	0.02
	20	15000	600	0.02
	10	30000	1800	0.07
	14	25000	1500	0.05
1.8mm	18	20000	1000	0.04
	10	30000	1800	0.07
	14	25000	1500	0.05
	18	20000	1000	0.04



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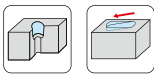
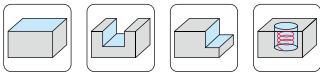
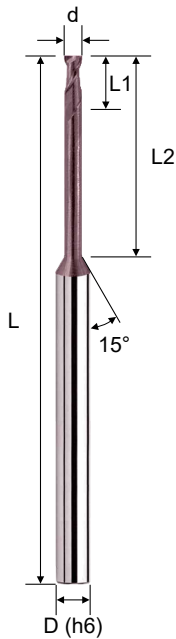
G550 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2 刃

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ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)
2.0mm	6	40000	2400	0.18
	10	30000	1800	0.1
	12	25000	1500	0.08
	16	20000	1000	0.06
	20	12000	800	0.05
	25	9000	600	0.04
	30	8000	500	0.04
2.5mm	35	6500	300	0.02
	8	25000	2500	0.2
	12	20000	2000	0.15
	16	18000	1700	0.1
	20	12000	1000	0.08
	25	10000	700	0.07
3.0mm	30	9000	600	0.06
	35	8500	500	0.05
	8	20000	2000	0.3
	12	20000	1500	0.18
	16	15000	1400	0.15
	20	10000	800	0.1
	25	8000	600	0.08
4.0mm	30	7000	450	0.06
	35	6000	300	0.05
	10	20000	3200	0.3
	16	13000	2500	0.25
	20	11000	2200	0.22
	25	8000	1500	0.15
5.0mm	30	6400	1200	0.12
	35	5000	700	0.08
	16	12000	2500	0.35
	20	10000	1200	0.3
	25	8000	1000	0.25
6.0mm	30	6000	900	0.2
	35	5100	750	0.15
	20	10000	2000	0.4
	30	6000	1200	0.3
8.0mm	20	3200	910	0.18
	30	3000	800	0.15
	40	2600	600	0.12
10.0mm	25	2900	890	0.20
	35	2500	700	0.16
	45	2200	580	0.14
12.0mm	30	2500	710	0.22
	40	2300	500	0.18
	50	1900	420	0.16



Solid End Milling

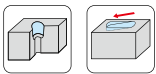
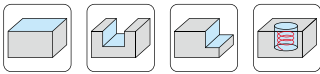
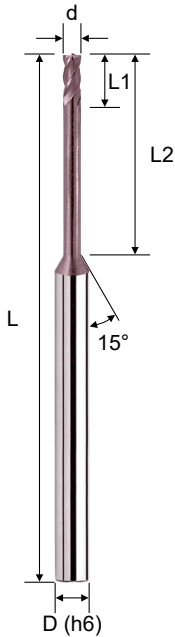
G550 - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC441003U	1.0	1.0	3	50	4	4
EPSRC441004U	1.0	1.0	4	50	4	4
EPSRC441006U	1.0	1.0	6	50	4	4
EPSRC441008U	1.0	1.0	8	50	4	4
EPSRC441010U	1.0	1.0	10	50	4	4
EPSRC441012U	1.0	1.0	12	50	4	4
EPSRC441016U	1.0	1.0	16	50	4	4
EPSRC441020U	1.0	1.0	20	50	4	4
EPSRC441025U	1.0	1.0	25	60	4	4
EPSRC401004U	1.0	1.0	4	50	6	4
EPSRC401006U	1.0	1.0	6	50	6	4
EPSRC401008U	1.0	1.0	8	50	6	4
EPSRC401010U	1.0	1.0	10	50	6	4
EPSRC401012U	1.0	1.0	12	50	6	4
EPSRC441506U	1.5	1.5	6	50	4	4
EPSRC441508U	1.5	1.5	8	50	4	4
EPSRC441510U	1.5	1.5	10	50	4	4
EPSRC441512U	1.5	1.5	12	50	4	4
EPSRC441516U	1.5	1.5	16	50	4	4
EPSRC441520U	1.5	1.5	20	50	4	4
EPSRC441525U	1.5	1.5	25	60	4	4
EPSRC401506U	1.5	1.5	6	50	6	4
EPSRC401508U	1.5	1.5	8	50	6	4
EPSRC401510U	1.5	1.5	10	50	6	4
EPSRC401512U	1.5	1.5	12	50	6	4
EPSRC442006U	2.0	2.0	6	50	4	4
EPSRC442008U	2.0	2.0	8	50	4	4
EPSRC442010U	2.0	2.0	10	50	4	4
EPSRC442012U	2.0	2.0	12	50	4	4
EPSRC442016U	2.0	2.0	16	50	4	4
EPSRC442020U	2.0	2.0	20	50	4	4
EPSRC442025U	2.0	2.0	25	60	4	4
EPSRC442030U	2.0	2.0	30	75	4	4
EPSRC402006U	2.0	2.0	6	50	6	4
EPSRC402008U	2.0	2.0	8	50	6	4
EPSRC402010U	2.0	2.0	10	50	6	4
EPSRC402016U	2.0	2.0	16	50	6	4

(continued)

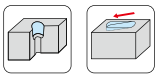
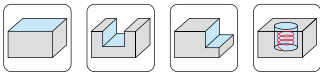
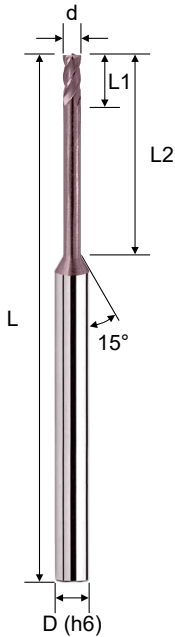
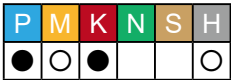
G550 - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

ASIA
(Metric)

EPSRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPSRC442510U	2.5	2.5	10	50	4	4
EPSRC442512U	2.5	2.5	12	50	4	4
EPSRC442516U	2.5	2.5	16	50	4	4
EPSRC442520U	2.5	2.5	20	50	4	4
EPSRC442525U	2.5	2.5	25	60	4	4
EPSRC442530U	2.5	2.5	30	75	4	4
EPSRC402506U	2.5	2.5	6	50	6	4
EPSRC402510U	2.5	2.5	10	50	6	4
EPSRC403010U	3.0	3.0	10	50	6	4
EPSRC403012U	3.0	3.0	12	50	6	4
EPSRC403016U	3.0	3.0	16	50	6	4
EPSRC403020U	3.0	3.0	20	60	6	4
EPSRC403025U	3.0	3.0	25	60	6	4
EPSRC403030U	3.0	3.0	30	75	6	4
EPSRC403035U	3.0	3.0	35	75	6	4
EPSRC404010U	4.0	4.0	10	50	6	4
EPSRC404012U	4.0	4.0	12	50	6	4
EPSRC404016U	4.0	4.0	16	50	6	4
EPSRC404020U	4.0	4.0	20	60	6	4
EPSRC404025U	4.0	4.0	25	60	6	4
EPSRC404030U	4.0	4.0	30	75	6	4
EPSRC405016U	5.0	5.0	16	50	6	4
EPSRC405020U	5.0	5.0	20	60	6	4
EPSRC405025U	5.0	5.0	25	60	6	4
EPSRC405030U	5.0	5.0	30	75	6	4
EPSRC406020U	6.0	6.0	20	60	6	4
EPSRC406030U	6.0	6.0	30	75	6	4
EPSRC408020U	8.0	15.0	20	60	8	4
EPSRC408030U	8.0	15.0	30	75	8	4
EPSRC408040U	8.0	15.0	40	100	8	4
EPSRC410025U	10.0	20.0	25	75	10	4
EPSRC410035U	10.0	20.0	35	100	10	4
EPSRC410045U	10.0	20.0	45	100	10	4
EPSRC412030U	12.0	25.0	30	75	12	4
EPSRC412040U	12.0	25.0	40	100	12	4
EPSRC412050U	12.0	25.0	50	100	12	4

Solid End Milling

(continued)

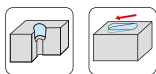
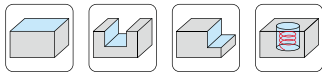
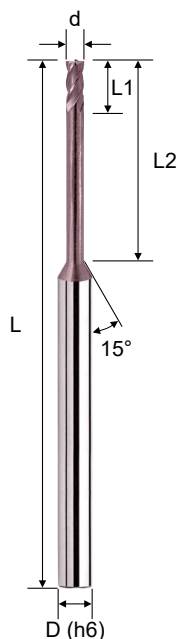
G550 - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.



EPSRC



Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)
1.0mm	4	40000	3000	0.040
	8	36000	2400	0.030
	10	30000	1500	0.025
	12	20000	1000	0.020
	16	10000	500	0.005
1.5mm	6	40000	3200	0.060
	10	35000	2500	0.050
	12	32000	2400	0.050
	16	16000	1100	0.030
	20	10000	600	0.010
	25	9000	500	0.009
2.0mm	6	40000	4000	0.100
	10	35000	3500	0.080
	12	32000	3200	0.070
	16	24000	2400	0.050
	20	12000	1200	0.030
	25	10000	800	0.020
	30	5000	500	0.010
2.5mm	10	32000	4000	0.200
	12	28000	2500	0.120
	16	23000	1800	0.100
	20	20000	1500	0.060
	25	9000	1100	0.040
	30	2500	300	0.005
3.0mm	10	25000	3600	0.400
	12	23000	3000	0.300
	16	18000	2500	0.200
	20	15000	2000	0.150
	25	12000	1700	0.100
	30	7000	800	0.050
	35	5000	300	0.030



(continued)

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

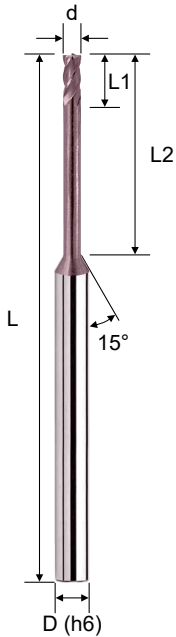
G550 - Long Neck · Square · 4F

長頸型 · 平銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

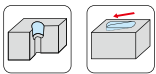
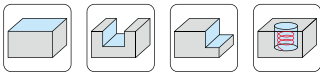
ASIA
(Metric)

EPSRC



Material		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness		HRC 35~45		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)
4mm	10	20000	3200	1.200
	12	18000	3000	1.000
	16	15000	2500	1.000
	20	12000	2000	0.500
	25	10000	1800	0.400
5mm	30	8000	1300	0.200
	20	12000	2300	1.000
	25	9500	1800	0.500
6mm	30	6400	1200	0.200
	20	11000	2200	1.200
8mm	30	8000	1600	0.600
	20	8000	1600	1.000
10mm	40	4000	800	0.500
	45	4000	800	0.500
	25	6400	1300	1.000
12mm	35	3200	640	0.600
	45	3200	640	0.600
	30	6000	1200	2.000
	40	3200	640	0.600
	50	3200	640	0.600

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

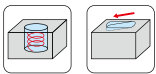
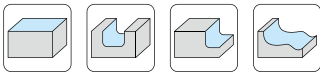
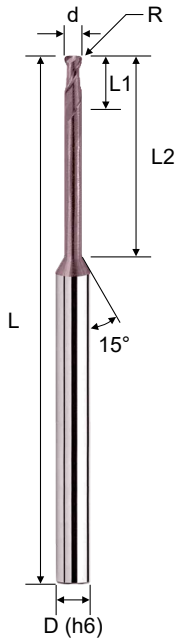
G550 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

ASIA
(Metric)

EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC24100104U	1.0	0.1R	1.0	4	50	4	2
EPCRC24100106U	1.0	0.1R	1.0	6	50	4	2
EPCRC24100108U	1.0	0.1R	1.0	8	50	4	2
EPCRC24100110U	1.0	0.1R	1.0	10	50	4	2
EPCRC24100112U	1.0	0.1R	1.0	12	50	4	2
EPCRC24100204U	1.0	0.2R	1.0	4	50	4	2
EPCRC24100206U	1.0	0.2R	1.0	6	50	4	2
EPCRC24100208U	1.0	0.2R	1.0	8	50	4	2
EPCRC24100210U	1.0	0.2R	1.0	10	50	4	2
EPCRC24100212U	1.0	0.2R	1.0	12	50	4	2
EPCRC24100304U	1.0	0.3R	1.0	4	50	4	2
EPCRC24100306U	1.0	0.3R	1.0	6	50	4	2
EPCRC24100308U	1.0	0.3R	1.0	8	50	4	2
EPCRC24100310U	1.0	0.3R	1.0	10	50	4	2
EPCRC24100312U	1.0	0.3R	1.0	12	50	4	2
EPCRC24120104U	1.2	0.1R	1.2	4	50	4	2
EPCRC24120106U	1.2	0.1R	1.2	6	50	4	2
EPCRC24120108U	1.2	0.1R	1.2	8	50	4	2
EPCRC24120110U	1.2	0.1R	1.2	10	50	4	2
EPCRC24120112U	1.2	0.1R	1.2	12	50	4	2
EPCRC24120204U	1.2	0.2R	1.2	4	50	4	2
EPCRC24120206U	1.2	0.2R	1.2	6	50	4	2
EPCRC24120208U	1.2	0.2R	1.2	8	50	4	2
EPCRC24120210U	1.2	0.2R	1.2	10	50	4	2
EPCRC24120212U	1.2	0.2R	1.2	12	50	4	2
EPCRC24120304U	1.2	0.3R	1.2	4	50	4	2
EPCRC24120306U	1.2	0.3R	1.2	6	50	4	2
EPCRC24120308U	1.2	0.3R	1.2	8	50	4	2
EPCRC24120310U	1.2	0.3R	1.2	10	50	4	2
EPCRC24120312U	1.2	0.3R	1.2	12	50	4	2
EPCRC24150106U	1.5	0.1R	1.5	6	50	4	2
EPCRC24150108U	1.5	0.1R	1.5	8	50	4	2
EPCRC24150110U	1.5	0.1R	1.5	10	50	4	2
EPCRC24150112U	1.5	0.1R	1.5	12	50	4	2
EPCRC24150116U	1.5	0.1R	1.5	16	50	4	2
EPCRC24150206U	1.5	0.2R	1.5	6	50	4	2
EPCRC24150208U	1.5	0.2R	1.5	8	50	4	2
EPCRC24150210U	1.5	0.2R	1.5	10	50	4	2
EPCRC24150212U	1.5	0.2R	1.5	12	50	4	2
EPCRC24150216U	1.5	0.2R	1.5	16	50	4	2

(continued)

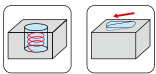
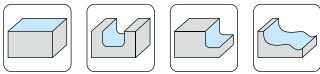
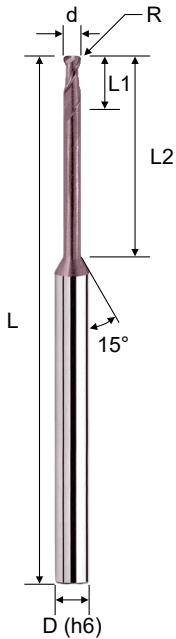
G550 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

ASIA
(Metric)

EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC24150306U	1.5	0.3R	1.5	6	50	4	2
EPCRC24150308U	1.5	0.3R	1.5	8	50	4	2
EPCRC24150310U	1.5	0.3R	1.5	10	50	4	2
EPCRC24150312U	1.5	0.3R	1.5	12	50	4	2
EPCRC24150316U	1.5	0.3R	1.5	16	50	4	2
EPCRC24150506U	1.5	0.5R	1.5	6	50	4	2
EPCRC24150508U	1.5	0.5R	1.5	8	50	4	2
EPCRC24150510U	1.5	0.5R	1.5	10	50	4	2
EPCRC24150512U	1.5	0.5R	1.5	12	50	4	2
EPCRC24150516U	1.5	0.5R	1.5	16	50	4	2
EPCRC24200106U	2.0	0.1R	2.0	6	50	4	2
EPCRC24200108U	2.0	0.1R	2.0	8	50	4	2
EPCRC24200110U	2.0	0.1R	2.0	10	50	4	2
EPCRC24200112U	2.0	0.1R	2.0	12	50	4	2
EPCRC24200116U	2.0	0.1R	2.0	16	50	4	2
EPCRC24200120U	2.0	0.1R	2.0	20	50	4	2
EPCRC24200125U	2.0	0.1R	2.0	25	60	4	2
EPCRC24200206U	2.0	0.2R	2.0	6	50	4	2
EPCRC24200208U	2.0	0.2R	2.0	8	50	4	2
EPCRC24200210U	2.0	0.2R	2.0	10	50	4	2
EPCRC24200212U	2.0	0.2R	2.0	12	50	4	2
EPCRC24200216U	2.0	0.2R	2.0	16	50	4	2
EPCRC24200220U	2.0	0.2R	2.0	20	50	4	2
EPCRC24200225U	2.0	0.2R	2.0	25	60	4	2
EPCRC24200306U	2.0	0.3R	2.0	6	50	4	2
EPCRC24200308U	2.0	0.3R	2.0	8	50	4	2
EPCRC24200310U	2.0	0.3R	2.0	10	50	4	2
EPCRC24200312U	2.0	0.3R	2.0	12	50	4	2
EPCRC24200316U	2.0	0.3R	2.0	16	50	4	2
EPCRC24200320U	2.0	0.3R	2.0	20	50	4	2
EPCRC24200325U	2.0	0.3R	2.0	25	60	4	2
EPCRC24200506U	2.0	0.5R	2.0	6	50	4	2
EPCRC24200508U	2.0	0.5R	2.0	8	50	4	2
EPCRC24200510U	2.0	0.5R	2.0	10	50	4	2
EPCRC24200512U	2.0	0.5R	2.0	12	50	4	2
EPCRC24200516U	2.0	0.5R	2.0	16	50	4	2
EPCRC24200520U	2.0	0.5R	2.0	20	50	4	2
EPCRC24200525U	2.0	0.5R	2.0	25	60	4	2
EPCRC20200510U	2.0	0.5R	2.0	10	50	6	2
EPCRC20200515U	2.0	0.5R	2.0	15	50	6	2

(continued)

Solid End Milling

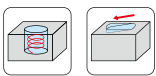
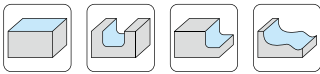
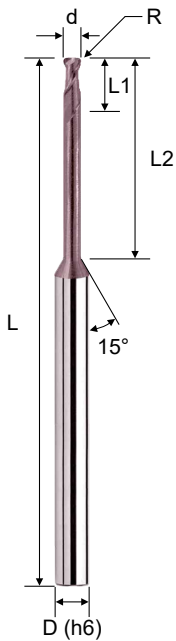
G550 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.



EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC24250110U	2.5	0.1R	2.5	10	50	4	2
EPCRC24250116U	2.5	0.1R	2.5	16	50	4	2
EPCRC24250120U	2.5	0.1R	2.5	20	50	4	2
EPCRC24250125U	2.5	0.1R	2.5	25	60	4	2
EPCRC24250210U	2.5	0.2R	2.5	10	50	4	2
EPCRC24250216U	2.5	0.2R	2.5	16	50	4	2
EPCRC24250220U	2.5	0.2R	2.5	20	50	4	2
EPCRC24250225U	2.5	0.2R	2.5	25	60	4	2
EPCRC24250310U	2.5	0.3R	2.5	10	50	4	2
EPCRC24250316U	2.5	0.3R	2.5	16	50	4	2
EPCRC24250320U	2.5	0.3R	2.5	20	50	4	2
EPCRC24250325U	2.5	0.3R	2.5	25	60	4	2
EPCRC24250510U	2.5	0.5R	2.5	10	50	4	2
EPCRC24250516U	2.5	0.5R	2.5	16	50	4	2
EPCRC24250520U	2.5	0.5R	2.5	20	50	4	2
EPCRC24250525U	2.5	0.5R	2.5	25	60	4	2
EPCRC20300110U	3.0	0.1R	3.0	10	50	6	2
EPCRC20300116U	3.0	0.1R	3.0	16	60	6	2
EPCRC20300120U	3.0	0.1R	3.0	20	60	6	2
EPCRC20300125U	3.0	0.1R	3.0	25	60	6	2
EPCRC20300130U	3.0	0.1R	3.0	30	75	6	2
EPCRC20300135U	3.0	0.1R	3.0	35	75	6	2
EPCRC20300210U	3.0	0.2R	3.0	10	50	6	2
EPCRC20300216U	3.0	0.2R	3.0	16	60	6	2
EPCRC20300220U	3.0	0.2R	3.0	20	60	6	2
EPCRC20300225U	3.0	0.2R	3.0	25	60	6	2
EPCRC20300230U	3.0	0.2R	3.0	30	75	6	2
EPCRC20300235U	3.0	0.2R	3.0	35	75	6	2
EPCRC20300310U	3.0	0.3R	3.0	10	50	6	2
EPCRC20300316U	3.0	0.3R	3.0	16	60	6	2
EPCRC20300320U	3.0	0.3R	3.0	20	60	6	2
EPCRC20300325U	3.0	0.3R	3.0	25	60	6	2
EPCRC20300330U	3.0	0.3R	3.0	30	75	6	2
EPCRC20300335U	3.0	0.3R	3.0	35	75	6	2
EPCRC20300510U	3.0	0.5R	3.0	10	50	6	2
EPCRC20300516U	3.0	0.5R	3.0	16	60	6	2
EPCRC20300520U	3.0	0.5R	3.0	20	60	6	2
EPCRC20300525U	3.0	0.5R	3.0	25	60	6	2
EPCRC20300530U	3.0	0.5R	3.0	30	75	6	2
EPCRC20300535U	3.0	0.5R	3.0	35	75	6	2

(continued)

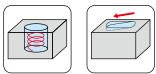
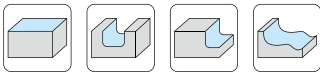
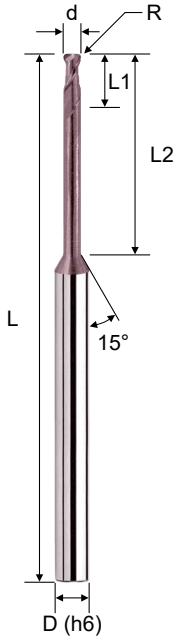
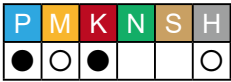
G550 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

ASIA
(Metric)

EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC20301010U	3.0	1.0R	3.0	10	50	6	2
EPCRC20301016U	3.0	1.0R	3.0	16	60	6	2
EPCRC20301020U	3.0	1.0R	3.0	20	60	6	2
EPCRC20301025U	3.0	1.0R	3.0	25	60	6	2
EPCRC20301030U	3.0	1.0R	3.0	30	75	6	2
EPCRC20301035U	3.0	1.0R	3.0	35	75	6	2
EPCRC20400113U	4.0	0.1R	4.0	13	50	6	2
EPCRC20400116U	4.0	0.1R	4.0	16	60	6	2
EPCRC20400120U	4.0	0.1R	4.0	20	60	6	2
EPCRC20400125U	4.0	0.1R	4.0	25	60	6	2
EPCRC20400130U	4.0	0.1R	4.0	30	75	6	2
EPCRC20400135U	4.0	0.1R	4.0	35	75	6	2
EPCRC20400213U	4.0	0.2R	4.0	13	50	6	2
EPCRC20400216U	4.0	0.2R	4.0	16	60	6	2
EPCRC20400220U	4.0	0.2R	4.0	20	60	6	2
EPCRC20400225U	4.0	0.2R	4.0	25	60	6	2
EPCRC20400230U	4.0	0.2R	4.0	30	75	6	2
EPCRC20400235U	4.0	0.2R	4.0	35	75	6	2
EPCRC20400313U	4.0	0.3R	4.0	13	50	6	2
EPCRC20400316U	4.0	0.3R	4.0	16	60	6	2
EPCRC20400320U	4.0	0.3R	4.0	20	60	6	2
EPCRC20400325U	4.0	0.3R	4.0	25	60	6	2
EPCRC20400330U	4.0	0.3R	4.0	30	75	6	2
EPCRC20400335U	4.0	0.3R	4.0	35	75	6	2
EPCRC20400513U	4.0	0.5R	4.0	13	50	6	2
EPCRC20400516U	4.0	0.5R	4.0	16	60	6	2
EPCRC20400520U	4.0	0.5R	4.0	20	60	6	2
EPCRC20400525U	4.0	0.5R	4.0	25	60	6	2
EPCRC20400530U	4.0	0.5R	4.0	30	75	6	2
EPCRC20400535U	4.0	0.5R	4.0	35	75	6	2
EPCRC20401013U	4.0	1.0R	4.0	13	50	6	2
EPCRC20401016U	4.0	1.0R	4.0	16	60	6	2
EPCRC20401020U	4.0	1.0R	4.0	20	60	6	2
EPCRC20401025U	4.0	1.0R	4.0	25	60	6	2
EPCRC20401030U	4.0	1.0R	4.0	30	75	6	2
EPCRC20401035U	4.0	1.0R	4.0	35	75	6	2
EPCRC20500116U	5.0	0.1R	5.0	16	60	6	2
EPCRC20500130U	5.0	0.1R	5.0	30	75	6	2
EPCRC20500216U	5.0	0.2R	5.0	16	60	6	2
EPCRC20500230U	5.0	0.2R	5.0	30	75	6	2

(continued)

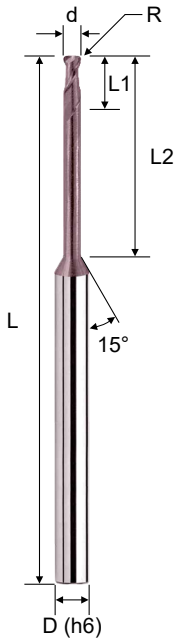
G550 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

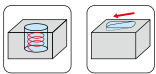
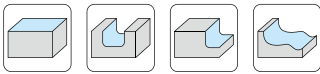
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.



EPCRC



Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC20500316U	5.0	0.3R	5.0	16	60	6	2
EPCRC20500330U	5.0	0.3R	5.0	30	75	6	2
EPCRC20500516U	5.0	0.5R	5.0	16	60	6	2
EPCRC20500530U	5.0	0.5R	5.0	30	75	6	2
EPCRC20501016U	5.0	1.0R	5.0	16	60	6	2
EPCRC20501030U	5.0	1.0R	5.0	30	75	6	2
EPCRC20600120U	6.0	0.1R	7.0	20	60	6	2
EPCRC20600130U	6.0	0.1R	7.0	30	75	6	2
EPCRC20600220U	6.0	0.2R	7.0	20	60	6	2
EPCRC20600230U	6.0	0.2R	7.0	30	75	6	2
EPCRC20600320U	6.0	0.3R	7.0	20	60	6	2
EPCRC20600330U	6.0	0.3R	7.0	30	75	6	2
EPCRC20600520U	6.0	0.5R	7.0	20	60	6	2
EPCRC20600530U	6.0	0.5R	7.0	30	75	6	2
EPCRC20601020U	6.0	1.0R	7.0	20	60	6	2
EPCRC20601030U	6.0	1.0R	7.0	30	75	6	2
EPCRC20601520U	6.0	1.5R	7.0	20	60	6	2
EPCRC20601530U	6.0	1.5R	7.0	30	75	6	2
EPCRC20800522U	8.0	0.5R	9.0	22	60	8	2
EPCRC20801022U	8.0	1.0R	9.0	22	60	8	2
EPCRC20801522U	8.0	1.5R	9.0	22	60	8	2
EPCRC20802022U	8.0	2.0R	9.0	22	60	8	2
EPCRC21000524U	10.0	0.5R	11.0	24	75	10	2
EPCRC21001024U	10.0	1.0R	11.0	24	75	10	2
EPCRC21001524U	10.0	1.5R	11.0	24	75	10	2
EPCRC21002024U	10.0	2.0R	11.0	24	75	10	2
EPCRC21200526U	12.0	0.5R	13.0	26	75	12	2
EPCRC21201026U	12.0	1.0R	13.0	26	75	12	2
EPCRC21201526U	12.0	1.5R	13.0	26	75	12	2
EPCRC21202026U	12.0	2.0R	13.0	26	75	12	2



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / ALLOY STEEL SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1	
	~HRC 35		HRC 35~45		HRC 45~55	
Hardness	~HRC 35		HRC 35~45		HRC 45~55	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1.0mm	33100	280	21600	120	13200	70
1.2mm	30000	300	18000	125	12000	70
1.5mm	26400	300	16200	130	10200	70
2.0mm	21600	310	13800	140	8640	80
2.5mm	18000	320	11400	150	7320	80
3.0mm	15900	330	10300	160	6300	80
4.0mm	12800	400	8200	200	5150	95
5.0mm	11000	500	7000	240	4560	120
6.0mm	9500	600	6000	300	3930	140
8.0mm	7200	640	4550	300	3020	140
10.0mm	6000	640	4000	300	2420	140
12.0mm	5000	500	3340	270	2000	120

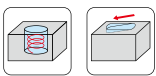
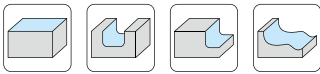
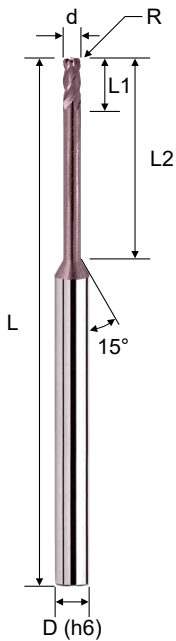
G550 - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.



EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC44200106U	2.0	0.1R	2.0	6	50	4	4
EPCRC44200108U	2.0	0.1R	2.0	8	50	4	4
EPCRC44200110U	2.0	0.1R	2.0	10	50	4	4
EPCRC44200112U	2.0	0.1R	2.0	12	50	4	4
EPCRC44200116U	2.0	0.1R	2.0	16	50	4	4
EPCRC44200120U	2.0	0.1R	2.0	20	50	4	4
EPCRC44200125U	2.0	0.1R	2.0	25	60	4	4
EPCRC44200206U	2.0	0.2R	2.0	6	50	4	4
EPCRC44200208U	2.0	0.2R	2.0	8	50	4	4
EPCRC44200210U	2.0	0.2R	2.0	10	50	4	4
EPCRC44200212U	2.0	0.2R	2.0	12	50	4	4
EPCRC44200216U	2.0	0.2R	2.0	16	50	4	4
EPCRC44200220U	2.0	0.2R	2.0	20	50	4	4
EPCRC44200225U	2.0	0.2R	2.0	25	60	4	4
EPCRC44200306U	2.0	0.3R	2.0	6	50	4	4
EPCRC44200308U	2.0	0.3R	2.0	8	50	4	4
EPCRC44200310U	2.0	0.3R	2.0	10	50	4	4
EPCRC44200312U	2.0	0.3R	2.0	12	50	4	4
EPCRC44200316U	2.0	0.3R	2.0	16	50	4	4
EPCRC44200320U	2.0	0.3R	2.0	20	50	4	4
EPCRC44200325U	2.0	0.3R	2.0	25	60	4	4
EPCRC44200506U	2.0	0.5R	2.0	6	50	4	4
EPCRC44200508U	2.0	0.5R	2.0	8	50	4	4
EPCRC44200510U	2.0	0.5R	2.0	10	50	4	4
EPCRC44200512U	2.0	0.5R	2.0	12	50	4	4
EPCRC44200516U	2.0	0.5R	2.0	16	50	4	4
EPCRC44200520U	2.0	0.5R	2.0	20	50	4	4
EPCRC44200525U	2.0	0.5R	2.0	25	60	4	4
EPCRC40200510U	2.0	0.5R	2.0	10	50	6	4
EPCRC40200515U	2.0	0.5R	2.0	15	50	6	4
EPCRC44250110U	2.5	0.1R	2.5	10	50	4	4
EPCRC44250116U	2.5	0.1R	2.5	16	50	4	4
EPCRC44250120U	2.5	0.1R	2.5	20	50	4	4
EPCRC44250125U	2.5	0.1R	2.5	25	60	4	4
EPCRC44250210U	2.5	0.2R	2.5	10	50	4	4
EPCRC44250216U	2.5	0.2R	2.5	16	50	4	4
EPCRC44250220U	2.5	0.2R	2.5	20	50	4	4
EPCRC44250225U	2.5	0.2R	2.5	25	60	4	4
EPCRC44250310U	2.5	0.3R	2.5	10	50	4	4
EPCRC44250316U	2.5	0.3R	2.5	16	50	4	4

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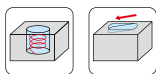
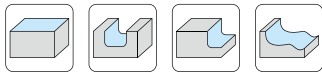
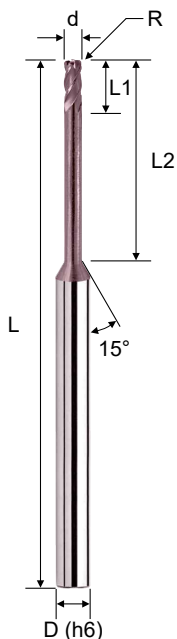
G550 - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.



EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC44250320U	2.5	0.3R	2.5	20	50	4	4
EPCRC44250325U	2.5	0.3R	2.5	25	60	4	4
EPCRC44250510U	2.5	0.5R	2.5	10	50	4	4
EPCRC44250516U	2.5	0.5R	2.5	16	50	4	4
EPCRC44250520U	2.5	0.5R	2.5	20	50	4	4
EPCRC44250525U	2.5	0.5R	2.5	25	60	4	4
EPCRC40300110U	3.0	0.1R	3.0	10	50	6	4
EPCRC40300116U	3.0	0.1R	3.0	16	60	6	4
EPCRC40300120U	3.0	0.1R	3.0	20	60	6	4
EPCRC40300125U	3.0	0.1R	3.0	25	60	6	4
EPCRC40300130U	3.0	0.1R	3.0	30	75	6	4
EPCRC40300135U	3.0	0.1R	3.0	35	75	6	4
EPCRC40300210U	3.0	0.2R	3.0	10	50	6	4
EPCRC40300216U	3.0	0.2R	3.0	16	60	6	4
EPCRC40300220U	3.0	0.2R	3.0	20	60	6	4
EPCRC40300225U	3.0	0.2R	3.0	25	60	6	4
EPCRC40300230U	3.0	0.2R	3.0	30	75	6	4
EPCRC40300235U	3.0	0.2R	3.0	35	75	6	4
EPCRC40300310U	3.0	0.3R	3.0	10	50	6	4
EPCRC40300316U	3.0	0.3R	3.0	16	60	6	4
EPCRC40300320U	3.0	0.3R	3.0	20	60	6	4
EPCRC40300325U	3.0	0.3R	3.0	25	60	6	4
EPCRC40300330U	3.0	0.3R	3.0	30	75	6	4
EPCRC40300335U	3.0	0.3R	3.0	35	75	6	4
EPCRC40300510U	3.0	0.5R	3.0	10	50	6	4
EPCRC40300516U	3.0	0.5R	3.0	16	60	6	4
EPCRC40300520U	3.0	0.5R	3.0	20	60	6	4
EPCRC40300525U	3.0	0.5R	3.0	25	60	6	4
EPCRC40300530U	3.0	0.5R	3.0	30	75	6	4
EPCRC40300535U	3.0	0.5R	3.0	35	75	6	4
EPCRC40301010U	3.0	1.0R	3.0	10	50	6	4
EPCRC40301016U	3.0	1.0R	3.0	16	60	6	4
EPCRC40301020U	3.0	1.0R	3.0	20	60	6	4
EPCRC40301025U	3.0	1.0R	3.0	25	60	6	4
EPCRC40301030U	3.0	1.0R	3.0	30	75	6	4
EPCRC40301035U	3.0	1.0R	3.0	35	75	6	4
EPCRC40400113U	4.0	0.1R	4.0	13	50	6	4
EPCRC40400116U	4.0	0.1R	4.0	16	60	6	4
EPCRC40400120U	4.0	0.1R	4.0	20	60	6	4
EPCRC40400125U	4.0	0.1R	4.0	25	60	6	4

(continued)

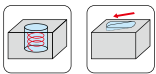
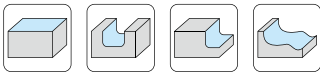
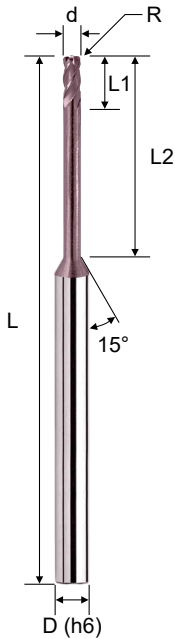
G550 - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.



EPCRC



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC40400130U	4.0	0.1R	4.0	30	75	6	4
EPCRC40400135U	4.0	0.1R	4.0	35	75	6	4
EPCRC40400213U	4.0	0.2R	4.0	13	50	6	4
EPCRC40400216U	4.0	0.2R	4.0	16	60	6	4
EPCRC40400220U	4.0	0.2R	4.0	20	60	6	4
EPCRC40400225U	4.0	0.2R	4.0	25	60	6	4
EPCRC40400230U	4.0	0.2R	4.0	30	75	6	4
EPCRC40400235U	4.0	0.2R	4.0	35	75	6	4
EPCRC40400313U	4.0	0.3R	4.0	13	50	6	4
EPCRC40400316U	4.0	0.3R	4.0	16	60	6	4
EPCRC40400320U	4.0	0.3R	4.0	20	60	6	4
EPCRC40400325U	4.0	0.3R	4.0	25	60	6	4
EPCRC40400330U	4.0	0.3R	4.0	30	75	6	4
EPCRC40400335U	4.0	0.3R	4.0	35	75	6	4
EPCRC40400513U	4.0	0.5R	4.0	13	50	6	4
EPCRC40400516U	4.0	0.5R	4.0	16	60	6	4
EPCRC40400520U	4.0	0.5R	4.0	20	60	6	4
EPCRC40400525U	4.0	0.5R	4.0	25	60	6	4
EPCRC40400530U	4.0	0.5R	4.0	30	75	6	4
EPCRC40400535U	4.0	0.5R	4.0	35	75	6	4
EPCRC40401013U	4.0	1.0R	4.0	13	50	6	4
EPCRC40401016U	4.0	1.0R	4.0	16	60	6	4
EPCRC40401020U	4.0	1.0R	4.0	20	60	6	4
EPCRC40401025U	4.0	1.0R	4.0	25	60	6	4
EPCRC40401030U	4.0	1.0R	4.0	30	75	6	4
EPCRC40401035U	4.0	1.0R	4.0	35	75	6	4
EPCRC40500116U	5.0	0.1R	5.0	16	60	6	4
EPCRC40500130U	5.0	0.1R	5.0	30	75	6	4
EPCRC40500216U	5.0	0.2R	5.0	16	60	6	4
EPCRC40500230U	5.0	0.2R	5.0	30	75	6	4
EPCRC40500316U	5.0	0.3R	5.0	16	60	6	4
EPCRC40500330U	5.0	0.3R	5.0	30	75	6	4
EPCRC40500516U	5.0	0.5R	5.0	16	60	6	4
EPCRC40500530U	5.0	0.5R	5.0	30	75	6	4
EPCRC40501016U	5.0	1.0R	5.0	16	60	6	4
EPCRC40501030U	5.0	1.0R	5.0	30	75	6	4
EPCRC40600120U	6.0	0.1R	7.0	20	60	6	4
EPCRC40600130U	6.0	0.1R	7.0	30	75	6	4
EPCRC40600220U	6.0	0.2R	7.0	20	60	6	4
EPCRC40600230U	6.0	0.2R	7.0	30	75	6	4

(continued)

Solid End Milling

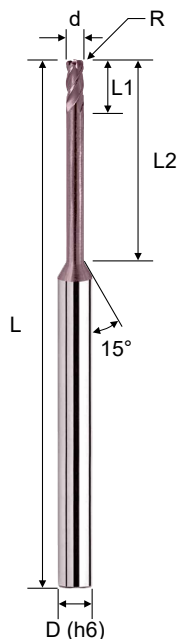
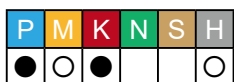
G550 - Long Neck · Corner Radius · 4F

長頸型 · 圓鼻銑刀 · 4 刃

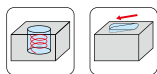
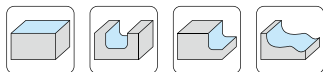
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.



EPCRC



Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRC40600320U	6.0	0.3R	7.0	20	60	6	4
EPCRC40600330U	6.0	0.3R	7.0	30	75	6	4
EPCRC40600520U	6.0	0.5R	7.0	20	60	6	4
EPCRC40600530U	6.0	0.5R	7.0	30	75	6	4
EPCRC40601020U	6.0	1.0R	7.0	20	60	6	4
EPCRC40601030U	6.0	1.0R	7.0	30	75	6	4
EPCRC40601520U	6.0	1.5R	7.0	20	60	6	4
EPCRC40601530U	6.0	1.5R	7.0	30	75	6	4
EPCRC40800522U	8.0	0.5R	9.0	22	60	8	4
EPCRC40801022U	8.0	1.0R	9.0	22	60	8	4
EPCRC40801522U	8.0	1.5R	9.0	22	60	8	4
EPCRC40802022U	8.0	2.0R	9.0	22	60	8	4
EPCRC41000524U	10.0	0.5R	11.0	24	75	10	4
EPCRC41001024U	10.0	1.0R	11.0	24	75	10	4
EPCRC41001524U	10.0	1.5R	11.0	24	75	10	4
EPCRC41002024U	10.0	2.0R	11.0	24	75	10	4
EPCRC41200526U	12.0	0.5R	13.0	26	75	12	4
EPCRC41201026U	12.0	1.0R	13.0	26	75	12	4
EPCRC41201526U	12.0	1.5R	13.0	26	75	12	4
EPCRC41202026U	12.0	2.0R	13.0	26	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	CARBON STEEL / ALLOY STEEL SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1	
	~HRC 35		HRC 35~45		HRC 45~55	
Hardness	~HRC 35		HRC 35~45		HRC 45~55	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
2mm	21600	380	13800	280	8640	150
2.5mm	18000	390	11400	300	7320	150
3mm	15900	400	10300	310	6300	150
4mm	12800	500	8200	360	5150	160
5mm	11000	510	7000	430	4560	200
6mm	9500	510	6000	430	3930	200
8mm	7200	550	4550	430	3020	200
10mm	6000	550	4000	430	2420	200
12mm	5000	430	3340	380	2000	160

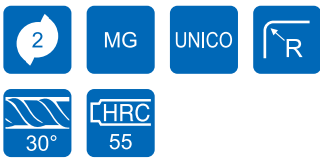
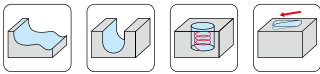
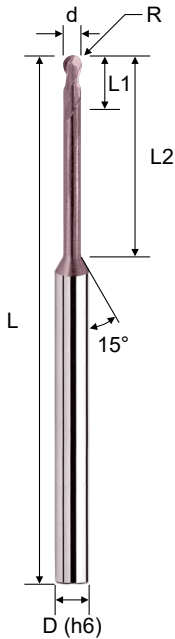
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.



EPBRC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRC240301U	0.15R	0.3	0.3	1	50	4	2
EPBRC240302U	0.15R	0.3	0.3	2	50	4	2
EPBRC240303U	0.15R	0.3	0.3	3	50	4	2
EPBRC240401U	0.20R	0.4	0.4	1	50	4	2
EPBRC240402U	0.20R	0.4	0.4	2	50	4	2
EPBRC240403U	0.20R	0.4	0.4	3	50	4	2
EPBRC240404U	0.20R	0.4	0.4	4	50	4	2
EPBRC240405U	0.20R	0.4	0.4	5	50	4	2
EPBRC240406U	0.20R	0.4	0.4	6	50	4	2
EPBRC240408U	0.20R	0.4	0.4	8	50	4	2
EPBRC240501U	0.25R	0.5	0.5	1	50	4	2
EPBRC240502U	0.25R	0.5	0.5	2	50	4	2
EPBRC240503U	0.25R	0.5	0.5	3	50	4	2
EPBRC240504U	0.25R	0.5	0.5	4	50	4	2
EPBRC240505U	0.25R	0.5	0.5	5	50	4	2
EPBRC240506U	0.25R	0.5	0.5	6	50	4	2
EPBRC240508U	0.25R	0.5	0.5	8	50	4	2
EPBRC240510U	0.25R	0.5	0.5	10	50	4	2
EPBRC240601U	0.30R	0.6	0.6	1	50	4	2
EPBRC240602U	0.30R	0.6	0.6	2	50	4	2
EPBRC240603U	0.30R	0.6	0.6	3	50	4	2
EPBRC240604U	0.30R	0.6	0.6	4	50	4	2
EPBRC240605U	0.30R	0.6	0.6	5	50	4	2
EPBRC240606U	0.30R	0.6	0.6	6	50	4	2
EPBRC240608U	0.30R	0.6	0.6	8	50	4	2
EPBRC240610U	0.30R	0.6	0.6	10	50	4	2
EPBRC240612U	0.30R	0.6	0.6	12	50	4	2
EPBRC240702U	0.35R	0.7	0.7	2	50	4	2
EPBRC240704U	0.35R	0.7	0.7	4	50	4	2
EPBRC240708U	0.35R	0.7	0.7	8	50	4	2
EPBRC240710U	0.35R	0.7	0.7	10	50	4	2
EPBRC240712U	0.35R	0.7	0.7	12	50	4	2
EPBRC240802U	0.40R	0.8	0.8	2	50	4	2
EPBRC240804U	0.40R	0.8	0.8	4	50	4	2
EPBRC240806U	0.40R	0.8	0.8	6	50	4	2
EPBRC240808U	0.40R	0.8	0.8	8	50	4	2
EPBRC240810U	0.40R	0.8	0.8	10	50	4	2
EPBRC240812U	0.40R	0.8	0.8	12	50	4	2

(continued)

Solid End Milling

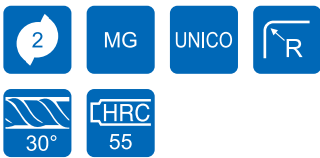
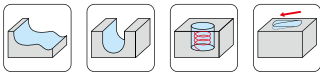
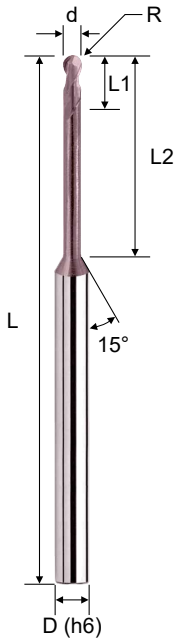
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.



EPBRC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRC240904U	0.45R	0.9	0.9	4	50	4	2
EPBRC241002U	0.50R	1.0	1.0	2	50	4	2
EPBRC241003U	0.50R	1.0	1.0	3	50	4	2
EPBRC241004U	0.50R	1.0	1.0	4	50	4	2
EPBRC241005U	0.50R	1.0	1.0	5	50	4	2
EPBRC241006U	0.50R	1.0	1.0	6	50	4	2
EPBRC241008U	0.50R	1.0	1.0	8	50	4	2
EPBRC241010U	0.50R	1.0	1.0	10	50	4	2
EPBRC241012U	0.50R	1.0	1.0	12	50	4	2
EPBRC241014U	0.50R	1.0	1.0	14	50	4	2
EPBRC241016U	0.50R	1.0	1.0	16	50	4	2
EPBRC241018U	0.50R	1.0	1.0	18	50	4	2
EPBRC241020U	0.50R	1.0	1.0	20	50	4	2
EPBRC241022U	0.50R	1.0	1.0	22	60	4	2
EPBRC201004U	0.50R	1.0	1.0	4	50	6	2
EPBRC201006U	0.50R	1.0	1.0	6	50	6	2
EPBRC201008U	0.50R	1.0	1.0	8	50	6	2
EPBRC201010U	0.50R	1.0	1.0	10	50	6	2
EPBRC201012U	0.50R	1.0	1.0	12	50	6	2
EPBRC241204U	0.60R	1.2	1.2	4	50	4	2
EPBRC241206U	0.60R	1.2	1.2	6	50	4	2
EPBRC241208U	0.60R	1.2	1.2	8	50	4	2
EPBRC241210U	0.60R	1.2	1.2	10	50	4	2
EPBRC241212U	0.60R	1.2	1.2	12	50	4	2
EPBRC241216U	0.60R	1.2	1.2	16	50	4	2
EPBRC241220U	0.60R	1.2	1.2	20	50	4	2
EPBRC241224U	0.60R	1.2	1.2	24	60	4	2
EPBRC241406U	0.70R	1.4	1.4	6	50	4	2
EPBRC241408U	0.70R	1.4	1.4	8	50	4	2
EPBRC241412U	0.70R	1.4	1.4	12	50	4	2
EPBRC241416U	0.70R	1.4	1.4	16	50	4	2
EPBRC241503U	0.75R	1.5	1.5	3	50	4	2
EPBRC241504U	0.75R	1.5	1.5	4	50	4	2
EPBRC241506U	0.75R	1.5	1.5	6	50	4	2
EPBRC241508U	0.75R	1.5	1.5	8	50	4	2
EPBRC241510U	0.75R	1.5	1.5	10	50	4	2

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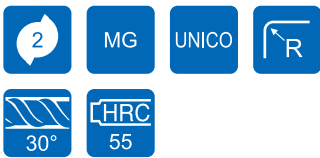
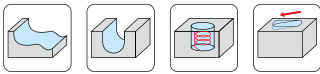
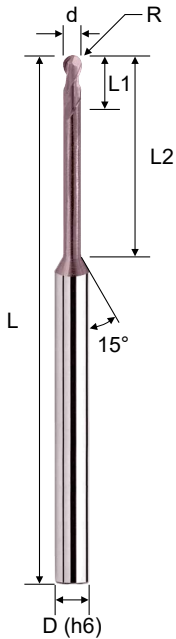
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
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ASIA
(Metric)

EPBRC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRC241512U	0.75R	1.5	1.5	12	50	4	2
EPBRC241514U	0.75R	1.5	1.5	14	50	4	2
EPBRC241516U	0.75R	1.5	1.5	16	50	4	2
EPBRC241518U	0.75R	1.5	1.5	18	50	4	2
EPBRC241520U	0.75R	1.5	1.5	20	50	4	2
EPBRC241522U	0.75R	1.5	1.5	22	60	4	2
EPBRC241525U	0.75R	1.5	1.5	25	60	4	2
EPBRC241530U	0.75R	1.5	1.5	30	75	4	2
EPBRC201506U	0.75R	1.5	1.5	6	50	6	2
EPBRC201508U	0.75R	1.5	1.5	8	50	6	2
EPBRC201510U	0.75R	1.5	1.5	10	50	6	2
EPBRC201512U	0.75R	1.5	1.5	12	50	6	2
EPBRC241606U	0.80R	1.6	1.6	6	50	4	2
EPBRC241608U	0.80R	1.6	1.6	8	50	4	2
EPBRC241612U	0.80R	1.6	1.6	12	50	4	2
EPBRC241616U	0.80R	1.6	1.6	16	50	4	2
EPBRC241620U	0.80R	1.6	1.6	20	50	4	2
EPBRC241806U	0.90R	1.8	1.8	6	50	4	2
EPBRC241808U	0.90R	1.8	1.8	8	50	4	2
EPBRC241812U	0.90R	1.8	1.8	12	50	4	2
EPBRC241816U	0.90R	1.8	1.8	16	50	4	2
EPBRC241820U	0.90R	1.8	1.8	20	50	4	2
EPBRC242004U	1.00R	2.0	2.0	4	50	4	2
EPBRC242006U	1.00R	2.0	2.0	6	50	4	2
EPBRC242008U	1.00R	2.0	2.0	8	50	4	2
EPBRC242010U	1.00R	2.0	2.0	10	50	4	2
EPBRC242012U	1.00R	2.0	2.0	12	50	4	2
EPBRC242014U	1.00R	2.0	2.0	14	50	4	2
EPBRC242016U	1.00R	2.0	2.0	16	50	4	2
EPBRC242018U	1.00R	2.0	2.0	18	50	4	2
EPBRC242020U	1.00R	2.0	2.0	20	50	4	2
EPBRC242022U	1.00R	2.0	2.0	22	60	4	2
EPBRC242025U	1.00R	2.0	2.0	25	60	4	2

(continued)

Solid End Milling

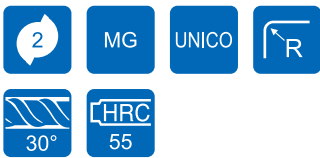
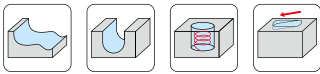
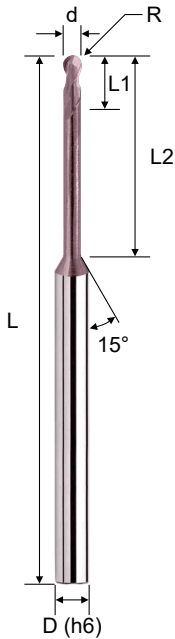
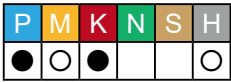
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.



EPBRC



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRC202006U	1.00R	2.0	2.0	6	50	6	2
EPBRC202008U	1.00R	2.0	2.0	8	50	6	2
EPBRC202010U	1.00R	2.0	2.0	10	50	6	2
EPBRC202016U	1.00R	2.0	2.0	16	50	6	2
EPBRC242508U	1.25R	2.5	2.5	8	50	4	2
EPBRC242510U	1.25R	2.5	2.5	10	50	4	2
EPBRC242516U	1.25R	2.5	2.5	16	50	4	2
EPBRC242520U	1.25R	2.5	2.5	20	60	4	2
EPBRC242525U	1.25R	2.5	2.5	25	60	4	2
EPBRC242530U	1.25R	2.5	2.5	30	75	4	2
EPBRC202506U	1.25R	2.5	2.5	6	50	6	2
EPBRC202510U	1.25R	2.5	2.5	10	50	6	2
EPBRC203006U	1.50R	3.0	3.0	6	50	6	2
EPBRC203008U	1.50R	3.0	3.0	8	50	6	2
EPBRC203012U	1.50R	3.0	3.0	12	50	6	2
EPBRC203016U	1.50R	3.0	3.0	16	60	6	2
EPBRC203020U	1.50R	3.0	3.0	20	60	6	2
EPBRC203025U	1.50R	3.0	3.0	25	60	6	2
EPBRC203030U	1.50R	3.0	3.0	30	75	6	2
EPBRC203035U	1.50R	3.0	3.0	35	75	6	2
EPBRC204008U	2.00R	4.0	4.0	8	50	6	2
EPBRC204010U	2.00R	4.0	4.0	10	50	6	2
EPBRC204012U	2.00R	4.0	4.0	12	50	6	2
EPBRC204016U	2.00R	4.0	4.0	16	60	6	2
EPBRC204020U	2.00R	4.0	4.0	20	60	6	2
EPBRC204025U	2.00R	4.0	4.0	25	60	6	2
EPBRC204030U	2.00R	4.0	4.0	30	75	6	2
EPBRC204035U	2.00R	4.0	4.0	35	75	6	2
EPBRC205015U	2.50R	5.0	5.0	15	60	6	2
EPBRC205020U	2.50R	5.0	5.0	20	60	6	2
EPBRC205025U	2.50R	5.0	5.0	25	60	6	2
EPBRC205030U	2.50R	5.0	5.0	30	75	6	2

(continued)

R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

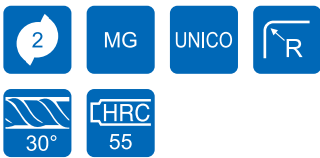
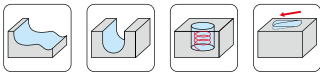
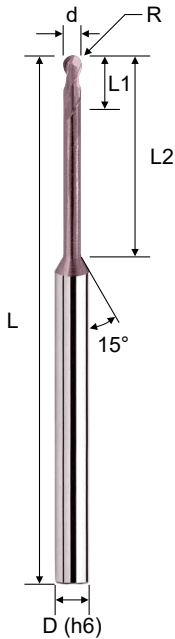
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

ASIA
(Metric)

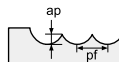
EPBRC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRC206015U	3.00R	6.0	10.0	15	50	6	2
EPBRC208025U	4.00R	8.0	12.0	25	60	8	2
EPBRC210030U	5.00R	10.0	16.0	30	75	10	2
EPBRC212030U	6.00R	12.0	18.0	30	75	12	2

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Copper										
	Hardness																			
HRC 35~45													HRC 40~55				-			
Radius (R)	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)							
0.15R	1.5	48000	480	0.010	0.010	41000	370	0.009	0.010	54000	640	0.014	0.015							
	2	43000	370	0.008	0.008	37000	270	0.008	0.008	49000	530	0.011	0.011							
	3	38000	320	0.007	0.006	32000	240	0.006	0.006	43000	460	0.009	0.010							
	4	28000	200	0.003	0.004	24000	160	0.003	0.004	37000	300	0.004	0.006							
	5	26000	125	0.001	0.003	18000	110	0.002	0.003	31000	200	0.002	0.004							
0.2R	2	48000	590	0.018	0.024	37000	400	0.015	0.020	54000	790	0.022	0.036							
	4	38000	400	0.009	0.012	30000	270	0.009	0.012	50000	640	0.012	0.018							
	6	29000	260	0.005	0.006	26000	200	0.004	0.006	37000	360	0.006	0.010							
0.25R	2	42000	750	0.022	0.036	32000	500	0.018	0.036	57000	1250	0.028	0.054							
	4	38000	580	0.017	0.024	31000	400	0.014	0.024	55000	1010	0.021	0.036							
	6	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	610	0.009	0.018							
	10	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	460	0.009	0.018							
0.3R	2	37000	770	0.027	0.144	37000	770	0.027	0.096	57000	1540	0.034	0.144							
	4	35000	600	0.020	0.108	35000	600	0.020	0.072	54000	1130	0.026	0.108							
	6	28000	460	0.016	0.072	28000	460	0.016	0.048	46000	960	0.019	0.072							
	8	24000	400	0.009	0.054	24000	400	0.009	0.036	30000	570	0.010	0.054							
	10	24000	330	0.006	0.036	24000	330	0.006	0.024	30000	490	0.007	0.036							
0.35R	4	33000	600	0.035	0.042	26500	410	0.029	0.096	54500	1500	0.045	0.063							
	8	12215	420	0.020	0.048	22500	355	0.012	0.048	32000	800	0.019	0.072							
	10	22500	380	0.014	0.042	21500	330	0.011	0.042	26500	540	0.017	0.063							
	12	21500	380	0.012	0.032	21500	320	0.010	0.042	23000	420	0.017	0.063							
0.4R	4	31000	600	0.050	0.012	27000	440	0.041	0.120	55000	1860	0.063	0.018							
	8	21000	430	0.021	0.060	22000	390	0.018	0.060	34000	1040	0.027	0.090							
	12	19000	430	0.018	0.040	20000	350	0.016	0.060	16000	350	0.027	0.090							
	16	16000	430	0.013	0.018	20000	310	0.014	0.060	7600	115	0.027	0.090							
0.45R	4	32000	685	0.054	0.130	24500	460	0.043	0.180	50500	1900	0.067	0.190							



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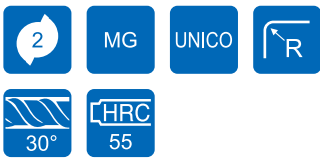
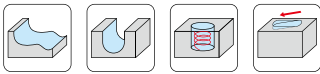
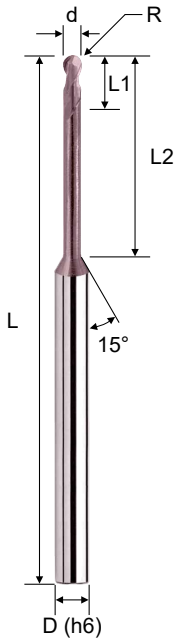
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

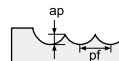


EPBRC



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Copper			
	HRC 35~45					HRC 40~55				-			
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)
0.5R	4	32000	770	0.057	0.240	22000	480	0.045	0.240	46000	2000	0.071	0.360
	6	26000	760	0.055	0.120	17600	480	0.009	0.120	39000	1500	0.071	0.180
	8	26000	760	0.034	0.120	17600	480	0.027	0.120	39000	1500	0.043	0.180
	12	17600	530	0.024	0.060	16500	420	0.018	0.060	18700	660	0.027	0.090
	16	15400	440	0.018	0.060	14300	360	0.014	0.060	18700	640	0.022	0.090
0.6R	22	14300	360	0.013	0.036	13200	300	0.009	0.036	18700	540	0.017	0.054
	6	26000	770	0.068	0.240	18200	480	0.054	0.240	38000	2000	0.085	0.360
	10	16400	530	0.027	0.120	15100	420	0.022	0.120	24000	1080	0.036	0.180
	12	15300	530	0.027	0.120	14100	420	0.022	0.120	24000	1080	0.036	0.180
	16	13100	460	0.019	0.096	11900	380	0.016	0.096	15400	580	0.024	0.144
0.7R	20	12100	380	0.013	0.060	11000	320	0.009	0.096	15400	580	0.017	0.090
	24	11100	320	0.009	0.040	9800	290	0.070	0.040	15400	580	0.010	0.060
	6	17600	680	0.076	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	8	17600	680	0.079	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	12	13800	530	0.033	0.180	13600	420	0.027	0.180	19800	1080	0.042	0.270
0.75R	16	13100	480	0.027	0.120	11900	390	0.021	0.120	13200	620	0.033	0.180
	4	21000	1060	0.137	0.216	14800	660	0.110	0.216	30000	2200	0.171	0.324
	8	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	12	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	16	12400	480	0.027	0.120	11600	390	0.022	0.120	12100	620	0.036	0.180
	20	12400	480	0.016	0.060	11600	390	0.012	0.060	12100	620	0.019	0.090
0.8R	25	12400	440	0.016	0.060	11000	390	0.012	0.060	11000	500	0.019	0.090
	30	10900	400	0.016	0.060	11000	390	0.012	0.060	10700	450	0.019	0.090
	8	18900	940	0.126	0.216	13800	580	0.102	0.216	26000	1970	0.157	0.324
	12	15100	700	0.09	0.120	11500	440	0.072	0.120	25000	1490	0.112	0.180
	16	12300	530	0.036	0.096	11400	440	0.030	0.096	17600	110	0.046	0.144
0.9R	20	11500	480	0.030	0.060	10900	400	0.024	0.060	11000	630	0.036	0.090
	6	18400	1200	0.185	0.320	18400	738	0.150	0.320	32000	2600	0.230	0.021
	12	13800	700	0.094	0.180	10300	440	0.077	0.180	21000	1480	0.120	0.270
	16	10800	530	0.039	0.120	9900	420	0.031	0.120	15400	1080	0.048	0.180
	20	10200	480	0.031	0.060	9700	400	0.025	0.060	10500	630	0.039	0.090
1.0R	6	18500	1260	0.185	0.360	13200	960	0.150	0.360	22000	2140	0.232	0.540
	10	18500	1120	0.147	0.240	13200	870	0.120	0.240	22000	1920	0.185	0.360
	12	16000	990	0.133	0.240	11700	780	0.107	0.240	18700	1470	0.166	0.360
	16	16000	990	0.118	0.240	11700	780	0.090	0.240	18700	1470	0.148	0.360
	18	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
	20	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
25	10600	450	0.058	0.120	10200	450	0.045	0.120	9500	630	0.074	0.180	



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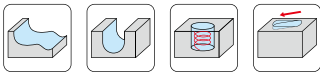
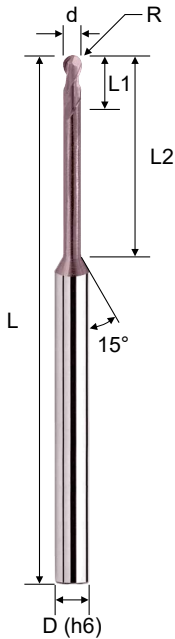
G550 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

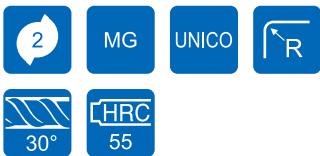
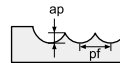
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

ASIA
(Metric)

EPBRC



Material	PREHARDENED STEELS NAK80 CENA1					HARDENED STEELS SKD61,SKD11				Copper			
	HRC 35~45					HRC 40~55				-			
Radius	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)
1.25R	8	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	10	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	16	13500	1230	0.166	0.240	8400	980	0.135	0.240	16100	1810	0.208	0.360
	20	10200	950	0.093	0.120	8400	980	0.074	0.120	11500	1330	0.116	0.180
	25	8400	540	0.074	0.120	8400	560	0.061	0.120	6900	770	0.093	0.180
1.5R	30	8400	540	0.033	0.060	8400	560	0.026	0.060	6900	770	0.040	0.090
	8	12900	1680	0.222	0.360	9200	1300	0.180	0.360	15000	2890	0.278	0.540
	12	12900	1510	0.222	0.360	9200	1170	0.180	0.360	15000	2600	0.278	0.540
	16	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	20	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	25	8800	1040	0.111	0.180	8100	1040	0.090	0.180	10100	1450	0.139	0.270
	30	8800	780	0.111	0.180	8100	780	0.090	0.180	10100	1450	0.139	0.270
2.0R	35	7900	62	0.055	0.180	7500	650	0.045	0.180	6600	840	0.073	0.270
	8	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.370	0.900
	12	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	16	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	20	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	25	8400	1250	0.223	0.360	6000	980	0.180	0.36	10300	1850	0.279	0.540
2.5R	30	8400	1250	0.223	0.360	6000	980	0.180	0.361	10300	1850	0.279	0.540
	35	6600	950	0.148	0.360	6000	700	0.120	0.360	7500	1360	0.185	0.540
	15	7800	1350	0.324	0.800	5600	1050	0.252	0.800	9600	2590	0.406	0.900
	20	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
3.0R	25	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
	30	7800	760	0.243	0.600	4800	600	0.197	0.600	8200	1320	0.305	0.900
	4.0R	15	7400	1670	0.443	1.200	5200	1300	0.360	1.200	8000	2530	0.555
5.0R	25	7200	1200	0.5	1.000	5200	920	0.350	1.000	9000	2400	0.600	1.500
6.0R	30	6800	720	0.23	0.600	4600	570	0.190	0.570	7800	1300	0.300	0.900
6.0R	30	6350	684	0.210	0.570	4370	541.5	0.181	0.550	7410	1235	0.285	0.855



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Solid End Milling

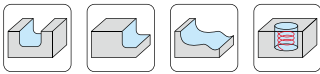
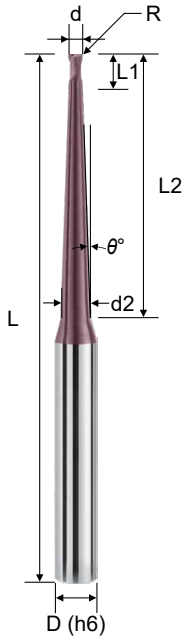
G550 - Taper Neck · Corner Radius · 2F

斜頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Various taper angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
- High strength of taper neck, can cut deep grooves without breaking.

ASIA
(Metric)

EPCRT



Order No.	Dia. (d)	Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRT20100120HU	1.0	0.10R	0.5°	2.0	20	60	6	2
EPCRT201001201U	1.0	0.10R	1.0°	2.0	20	60	6	2
EPCRT20100120AU	1.0	0.10R	1.5°	2.0	20	60	6	2
EPCRT201201230HU2C	1.2	0.12R	0.5°	2.0	30	75	6	2
EPCRT2012012301U2C	1.2	0.12R	1.0°	2.0	30	75	6	2
EPCRT201201230AU2C	1.2	0.12R	1.5°	2.0	30	75	6	2
EPCRT201501530HU2C	1.5	0.15R	0.5°	2.0	30	75	6	2
EPCRT2015015301U2C	1.5	0.15R	1.0°	2.0	30	75	6	2
EPCRT201501530AU2C	1.5	0.15R	1.5°	2.0	30	75	6	2
EPCRT201801830HU2C	1.8	0.18R	0.5°	2.0	30	75	6	2
EPCRT2018018301U2C	1.8	0.18R	1.0°	2.0	30	75	6	2
EPCRT201801830AU2C	1.8	0.18R	1.5°	2.0	30	75	6	2
EPCRT20200225AU	2.0	0.20R	1.5°	3.0	25	75	6	2
EPCRT20200239AU	2.0	0.20R	1.5°	3.0	39	75	6	2
EPCRT20200525AU	2.0	0.50R	1.5°	3.0	25	75	6	2
EPCRT20200539AU	2.0	0.50R	1.5°	3.0	39	75	6	2
EPCRT20200550AU	2.0	0.50R	1.5°	3.0	50	100	6	2
EPCRT20200535HU4C	2.0	0.50R	0.5°	4.0	35	75	6	2
EPCRT202005351U4C	2.0	0.50R	1.0°	4.0	35	75	6	2
EPCRT20200535AU4C	2.0	0.50R	1.5°	4.0	35	75	6	2
EPCRT20250535HU5C	2.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT202505351U5C	2.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20250535AU5C	2.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20251035HU5C	2.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT202510351U5C	2.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20251035AU5C	2.5	1.00R	1.5°	5.0	35	75	6	2

(continued)

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

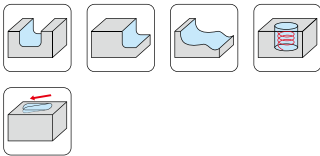
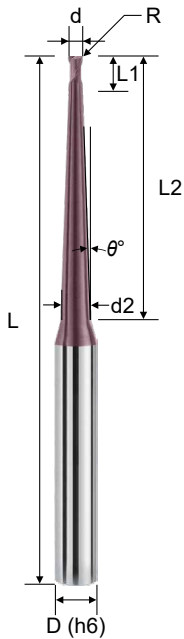
G550 - Taper Neck · Corner Radius · 2F

斜頸型 · 圓鼻銑刀 · 2 刃

- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Various taper angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
- High strength of taper neck, can cut deep grooves without breaking.



EPCRT



Order No.	Dia. (d)	Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPCRT20300525AU	3.0	0.50R	1.5°	4.5	25	75	6	2
EPCRT20301025AU	3.0	1.00R	1.5°	4.5	25	75	6	2
EPCRT20301039AU	3.0	1.00R	1.5°	4.5	39	75	6	2
EPCRT20301050AU	3.0	1.00R	1.5°	4.5	50	100	6	2
EPCRT20300535HU5C	3.0	0.50R	0.5°	5.0	35	75	6	2
EPCRT203005351U5C	3.0	0.50R	1.0°	5.0	35	75	6	2
EPCRT20300535AU5C	3.0	0.50R	1.5°	5.0	35	75	6	2
EPCRT20301035HU5C	3.0	1.00R	0.5°	5.0	35	75	6	2
EPCRT203010351U5C	3.0	1.00R	1.0°	5.0	35	75	6	2
EPCRT20301035AU5C	3.0	1.00R	1.5°	5.0	35	75	6	2
EPCRT20350535HU	3.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT203505351U	3.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20350535AU	3.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20351035HU	3.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT203510351U	3.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20351035AU	3.5	1.00R	1.5°	5.0	35	75	6	2
EPCRT20400545HU	4.0	0.50R	0.5°	6.0	45	100	6	2
EPCRT204005451U	4.0	0.50R	1.0°	6.0	45	100	6	2
EPCRT20400525AU	4.0	0.50R	1.5°	6.0	25	75	6	2
EPCRT20400545AU	4.0	0.50R	1.5°	6.0	45	100	6	2
EPCRT20401045HU	4.0	1.00R	0.5°	6.0	45	100	6	2
EPCRT204010451U	4.0	1.00R	1.0°	6.0	45	100	6	2
EPCRT20401025AU	4.0	1.00R	1.5°	6.0	25	75	6	2
EPCRT20401045AU	4.0	1.00R	1.5°	6.0	45	100	6	2
EPCRT20501025AU	5.0	1.00R	1.5°	7.5	25	75	6	2
EPCRT20501050AU	5.0	1.00R	1.5°	7.5	50	100	8	2
EPCRT20601035AU	6.0	1.00R	1.5°	9.0	35	75	8	2
EPCRT20601050AU	6.0	1.00R	1.5°	9.0	50	100	10	2

Solid End Milling

d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

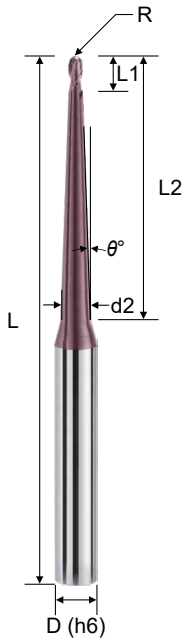
G550 - Taper Neck · Ball Nose · 2F

斜頸型 · 球型銑刀 · 2 刃

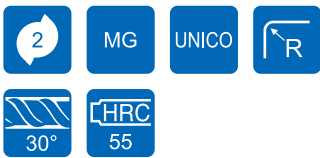
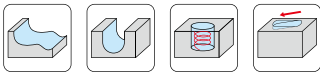
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Suitable for high performance profile milling.
- High strength of taper neck, can cut deep grooves without breaking.



EPBRT



Order No.	Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (Z)
EPBRT201023AU	0.5R	1	1.5°	2	23	2.10	60	6	2
EPBRT2010235U	0.5R	1	5.0°	2	23	4.67	60	6	2
EPBRT2010423U	0.5R	1	3.0°	2	42	5.19	75	6	2
EPBRT202035HU	1.0R	2	0.5°	4	35	2.54	75	6	2
EPBRT2020351U	1.0R	2	1.0°	4	35	3.08	75	6	2
EPBRT202023AU	1.0R	2	1.5°	4	23	3.00	60	6	2
EPBRT202035AU	1.0R	2	1.5°	4	35	3.62	75	6	2
EPBRT2020235U	1.0R	2	5.0°	4	23	5.32	60	6	2
EPBRT2020413U	1.0R	2	3.0°	4	41	5.88	75	6	2
EPBRT203052AU	1.5R	3	1.5°	6	52	5.40	100	6	2
EPBRT2030323U	1.5R	3	3.0°	6	32	5.73	75	6	2
EPBRT204046AU	2.0R	4	1.5°	8	46	6.00	100	6	2
EPBRT2040273U	2.0R	4	3.0°	8	27	6.00	75	6	2



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20~30		HRC 30~40		HRC 45~45		-		-	
Vc	94 m/min		71 m/min		34 m/min		38 m/min		71 m/min		94 m/min	
RADIUS (R)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860

ap = 0.05d
pf = 0.1d

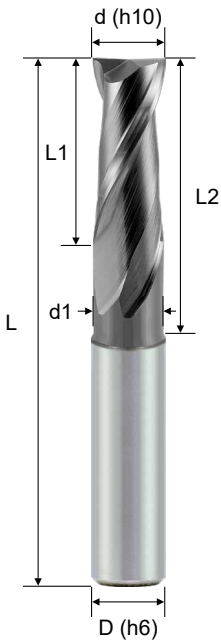
G55X - Square · Neck · 2F

平銑刀 · 帶頸型 · 2刃

- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

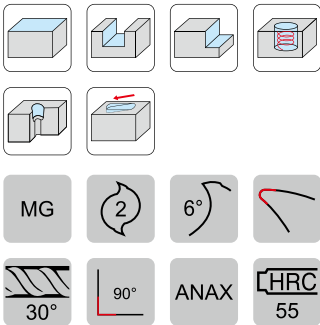
DIN (Metric)

E 114C



Order No. Cylindrical	Order No. Weldon	Dia. (d)	CL (L1)	EFF-L (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
E111C201000A	-	1	3	-	-	38	3	2
E111C201500A	-	1.5	3	-	-	38	3	2
E111C202000A	-	2	3	-	-	38	3	2
E114C202500A	-	2.5	7	10	2.3	57	6	2
E114C203000A	-	3	7	10	2.8	57	6	2
E114C204000A	-	4	8	11	3.8	57	6	2
E114C204500A	-	4.5	8	11	4.3	57	6	2
E114C205000A	-	5	10	13	4.8	57	6	2
E114C206000A	E114C206000AW	6	10	20	5.7	57	6	2
E114C207000A	E114C207000AW	7	13	24	6.7	63	8	2
E114C208000A	E114C208000AW	8	16	27	7.7	63	8	2
E114C209000A	E114C209000AW	9	16	27	8.7	72	10	2
E114C210000A	E114C210000AW	10	19	32	9.5	72	10	2
E114C212000A	E114C212000AW	12	22	38	11.5	83	12	2
E114C214000A	E114C214000AW	14	22	38	13.5	83	14	2
E114C216000A	E114C216000AW	16	26	44	15.5	92	16	2
E114C218000A	E114C218000AW	18	26	44	17.5	92	18	2
E114C220000A	E114C220000AW	20	32	54	19.5	104	20	2

Solid End Milling



Material	CARBON STEEL / CAST IRON		ALLOY STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
Hardness	HB 180~250		HRC 25~35		HRC 35~45		HRC 40~55		-	
Vc	120 m/min		95 m/min		79 m/min		48 m/min		79 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
3mm	12700	380	10000	300	8386	251	5095	152	8386	251
4mm	9550	382	7560	302	6290	251	3820	152	6290	251
6mm	6370	445	5040	352	4200	294	2548	178	4200	294
8mm	4770	333	3780	264	3140	220	1910	133	3140	220
10mm	3820	230	3020	181	2515	150	1528	92	2515	150
12mm	3180	190	2520	151	2100	126	1274	76	2100	126
	ap = 0.5d ae = 1d		ap = 0.3d ae = 1d		ap = 0.5d ae = 1d		ap = 0.5d ae = 1d		ap = 0.5d ae = 1d	

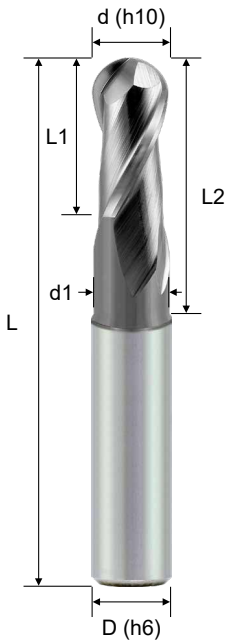
G55X - Ball Nose · Neck · 2F

球型銑刀 · 帶頸型 · 2刃

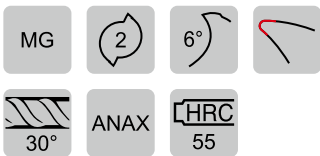
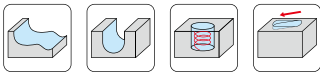
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and low friction cutting.

DIN
(Metric)

E 124C



Order No.	Order No.	Radius	Dia.	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(R)	(d)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E124C202000A	-	1R	2	6	8	1.8	57	6	2
E124C203000A	-	1.5R	3	7	10	2.8	57	6	2
E124C204000A	-	2R	4	8	11	3.8	57	6	2
E124C205000A	-	2.5R	5	10	13	4.8	57	6	2
E124C206000A	E124C206000AW	3R	6	10	20	5.7	57	6	2
E124C207000A	E124C207000AW	3.5R	7	13	24	6.7	63	8	2
E124C208000A	E124C208000AW	4R	8	16	27	7.7	63	8	2
E124C210000A	E124C210000AW	5R	10	19	32	9.5	72	10	2
E124C212000A	E124C212000AW	6R	12	22	38	11.5	83	12	2
E124C214000A	E124C214000AW	7R	14	22	38	13.5	83	14	2
E124C216000A	E124C216000AW	8R	16	26	44	15.5	92	16	2
E124C220000A	E124C220000AW	10R	20	32	54	19.5	104	20	2



Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1	HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316		
Hardness	HB 180~250		HRC 25~35		HRC 35~45	HRC 40~55		-		
Vc	120 m/min		95 m/min		79 m/min	48 m/min		79 m/min		
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
2mm	37470	936	29660	740	24660	616	14990	374	24660	616
4mm	18730	1120	14830	890	12330	740	7490	450	12330	740
6mm	12490	936	9890	740	8220	616	4995	374	8220	616
8mm	9366	750	7415	593	6170	494	3750	300	6170	494
10mm	7490	636	5930	504	4930	420	3000	255	4930	420
12mm	6244	560	4940	444	4110	370	2500	225	4110	370
					$ap = 0.07d$ $pf = 0.1d$					

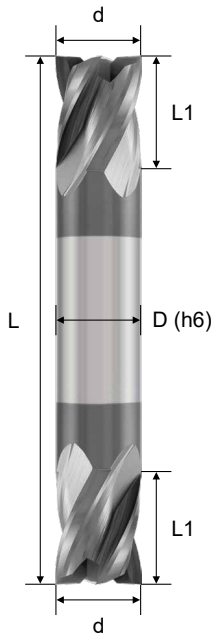
G550 - Double-End · Square · Standard · 4F (Inch)

雙頭平銑刀 · 標準型 · 4 刃 (英寸)

- Double-End endmills have two cutting ends instead of single end and give double tool life.
- A cost saving is obvious as compared to using Single-End endmills.
- Positive rake angle and high rigidity design is suitable for CNC or manual machining.
- TACO (Al, Ti, Cr, N) coating provides superior wear resistance.

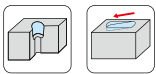
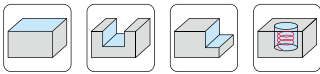
ANSI
(Inch)

EPS8A



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPS8A40060100T	1/16	1/8	1 1/2	1/8	4
EPS8A40090100T	3/32	3/16	1 1/2	1/8	4
EPS8A40120200T	1/8	1/4	1 1/2	1/8	4
EPS8A40150300T	5/32	5/16	2	3/16	4
EPS8A40180300T	3/16	5/16	2	3/16	4
EPS8A40210500T	7/32	1/2	2 1/2	1/4	4
EPS8A40250500T	1/4	1/2	2 1/2	1/4	4
EPS8A40280500T	9/32	1/2	2 1/2	5/16	4
EPS8A40310500T	5/16	1/2	2 1/2	5/16	4
EPS8A40370500T	3/8	9/16	2 1/2	3/8	4
EPS8A40500600T	1/2	5/8	3	1/2	4

Solid End Milling



d Tolerance	
d	.000" ~ -.002"

Material	CARBON STEEL / CAST IRON		ALLOY STEEL / TOOL STEEL SCM, SKT, SKD		PREHARDENED STEEL NAK80 CENA1		HARDENED STEEL SKD61, SKD11		STAINLESS STEEL SUS304 316	
	Hardness	HB 180~250	HRC 25~35		HRC 35~45		HRC 40~55		-	
SFM	390 ft/min		310 ft/min		260 ft/min		-		260 ft/min	
Dia. (d)	RPM	Feed (in/min)	RPM	Feed (in/min)	RPM	Feed (in/min)	RPM	Feed (in/min)	RPM	Feed (in/min)
1/8	12700	30	10000	24	8386	20	-	-	8386	20
5/32	9550	30	7560	24	6290	20	-	-	6290	20
1/4	6370	35	5040	28	4200	23	-	-	4200	23
5/16	4770	26	3780	21	3140	17	-	-	3140	17
3/8	3820	18	3020	14	2515	12	-	-	2515	12
1/2	3180	15	2520	12	2100	10	-	-	2100	10

ap = 1d
ae = 0.05d

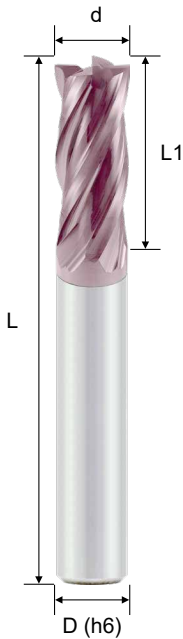
G580 - Cermet · Square · Standard · 4F

金屬陶瓷平銑刀 · 標準型 · 4 刃

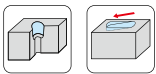
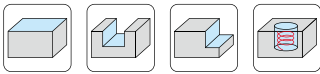
- Suitable for air blow of alloy steel finishing, wet cutting for stainless steel finishing.
- UNICO (Ti, Al, N) coating provides superior wear resistance and reduces the coefficient of friction.



EPSCM



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EPSCM444000U	4	10	50	4	4
EPSCM406000U	6	15	50	6	4
EPSCM408000U	8	20	60	8	4
EPSCM410000U	10	25	75	10	4
EPSCM412000U	12	30	75	12	4



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

A100 Carbide Endmills

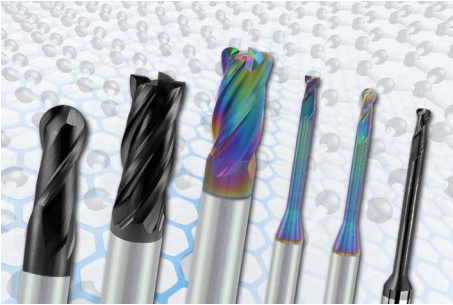


- For aluminum, copper, plastic.
- High speed cutting.
- Excellent chip evacuation design.
- NDLC coating is available.

- 適用鋁，銅及塑料
- 高速加工
- 深溝槽易排屑設計
- 彩鑽塗層可供選擇

→ Page B198

A200 Carbide Endmills



- For graphite.
- General cutting.
- Provide think Diamond coating.
- Provide NDLC coating.

- 適用於石墨
- 一般泛用加工
- 提供高耐磨的鑽石塗層
- 提供較經濟的彩鑽塗層

→ Page B224

A300 Carbide Endmills



- For CFRP / GFRP / Kevlar composite material.
- Provide think Diamond coating.
- Provide NDLC coating.

- 適用於 CFRP / GFRP / 克維拉複合材料
- 提供高耐磨的鑽石塗層
- 提供較經濟的彩鑽塗層

→ Page B230

A830 PCD Endmills



- For ceramics, carbide and glass machining.
- Tool material : PCD

- 適用於陶瓷、硬質合金和玻璃
- 刀具材質：PCD

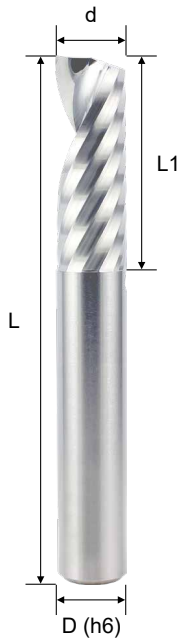
→ Page B234

A100 - Square · Standard · 1F 平銑刀 · 標準型 · 1刃

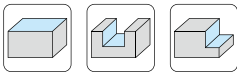
- 30° helix design for general milling.
- Single flute endmill has large chip evacuation.
- Sharp and polishing cutting edge produces an excellent surface finish.
- Suitable for aluminum, copper and plastic material.



ENSSC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSC141000	1	3	50	4	1
ENSSC142000	2	6	50	4	1
ENSSC143000	3	9	50	4	1
ENSSC144000	4	12	50	4	1
ENSSC104000	4	12	50	6	1
ENSSC105000	5	13	50	6	1
ENSSC106000	6	15	50	6	1
ENSSC108000	8	20	60	8	1
ENSSC110000	10	30	75	10	1
ENSSC112000	12	30	75	12	1



d Tolerance	
d ≤ 10	0 ~ -0.03
d > 10	0 ~ -0.04

Material	Aluminum		
Vc	150 ~ 250 m/min		
Dia. (d)	RPM	Feed (mm/min)	fz (mm/tooth)
4	15000	5000	0.33
6	10000	5000	0.50
8	8400	4000	0.48
10	6700	4000	0.60
12	5000	4000	0.80
		ap = 0.5d ae = 1d	

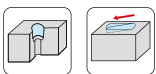
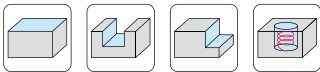
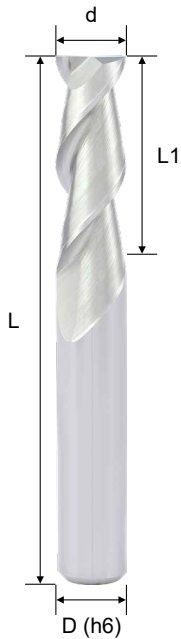
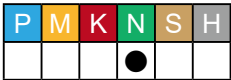
A100 - Square · Standard · 2F

平銑刀 · 標準型 · 2刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20).
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing increase cutting surface and feed rate.

ASIA
(Metric)

ENSSS



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSS241000	1	3	50	4	2
ENSSS242000	2	6	50	4	2
ENSSS233000	3	9	50	3	2
ENSSS243000	3	9	50	4	2
ENSSS244000	4	12	50	4	2
ENSSS204000	4	12	50	6	2
ENSSS205000	5	15	50	6	2
ENSSS206000	6	15	50	6	2
ENSSS208000	8	20	60	8	2
ENSSS210000	10	30	75	10	2
ENSSS212000	12	30	75	12	2
ENSSS216000	16	40	100	16	2
ENSSS220000	20	45	100	20	2

Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Vc				
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

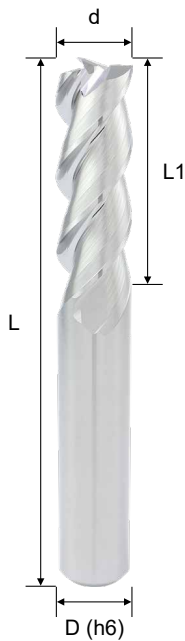
Solid End Milling

A100 - Square · Standard · 3F 平銑刀 · 標準型 · 3刃

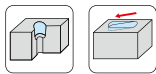
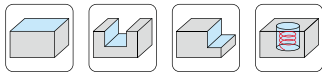
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.



ENSSS



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSS342000	2	6	50	4	3
ENSSS333000	3	9	50	3	3
ENSSS343000	3	9	50	4	3
ENSSS344000	4	12	50	4	3
ENSSS304000	4	12	50	6	3
ENSSS305000	5	15	50	6	3
ENSSS306000	6	15	50	6	3
ENSSS308000	8	20	60	8	3
ENSSS310000	10	30	75	10	3
ENSSS312000	12	30	75	12	3
ENSSS316000	16	40	100	16	3
ENSSS320000	20	45	100	20	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

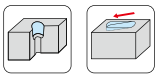
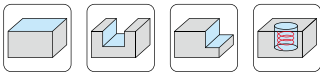
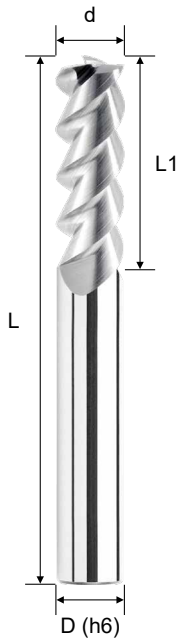
	$ap = 1 \sim 2d$ $ae = 0.05 \sim 0.15d$		$ap = 0.2 \sim 0.5d$ $ae = 1d$
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A100 - Square · High Helix · Finishing · 3F 平銑刀 · 高導精銑型 · 3 刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20).
- 55° degree Helix offers excellent and stable finished surfaces in high speed side milling.
- Flute polishing gives a very good cutting surface and high feed rate.



ENSSH



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSH304000	4	12	50	6	3
ENSSH305000	5	15	50	6	3
ENSSH306000	6	15	50	6	3
ENSSH308000	8	20	60	8	3
ENSSH310000	10	30	75	10	3
ENSSH312000	12	30	75	12	3
ENSSH316000	16	40	100	16	3

Solid End Milling

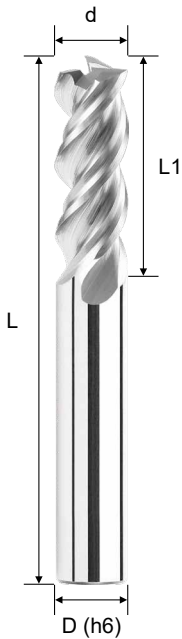
Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

A100 - Square · High Performance Roughing · 3F 平銑刀 · 高效能粗銑型 · 3 刃

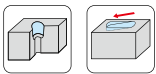
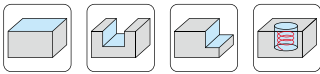
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20).
- **Polished and U flute designs** provide excellent chip evacuation.
- Excellent for high feed rough milling.
- Also suitable for surface finish in high speed milling.



ENSSB



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSB343000	3	9	50	4	3
ENSSB344000	4	12	50	4	3
ENSSB304000	4	12	50	6	3
ENSSB305000	5	13	50	6	3
ENSSB306000	6	15	50	6	3
ENSSB308000	8	20	60	8	3
ENSSB310000	10	30	75	10	3
ENSSB312000	12	30	75	12	3
ENSSB316000	16	40	100	16	3
ENSSB320000	20	45	100	20	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	Aluminum Alloy			
	200 ~ 400 m/min		150 ~ 300 m/min	
Vc				
Dia. (d)	RPM	fz (mm/z)	RPM	fz (mm/z)
4	23870	0.0200	17900	0.030
5	10900	0.0250	14320	0.040
6	15910	0.0350	11930	0.057
8	11930	0.0450	8950	0.075
10	9550	0.0570	7160	0.096
12	7960	0.0670	5970	0.110
16	5970	0.0880	4480	0.145
20	4770	0.1200	3580	0.180

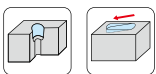
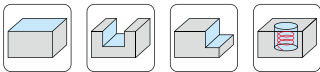
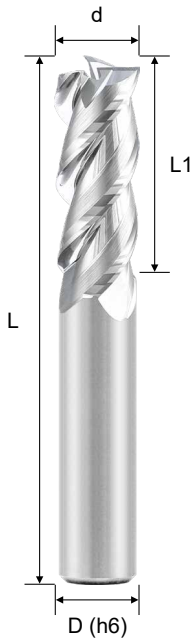
<p>ap ≤ 1.5d ae ≤ 0.3d</p>	<p>ap ≤ 1d ae = 1d</p>
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A100 - Square · Finishing · 3F 平銑刀 · 精銑型 · 3 刃

- Mirror-like flute surface design.
- For finishing cutting of aluminum alloys.
- Medium to high speed cutting.



ENSSF



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSF301000	1	3	50	6	3
ENSSF302000	2	6	50	6	3
ENSSF303000	3	11	60	6	3
ENSSF304000	4	13	60	6	3
ENSSF305000	5	17	60	6	3
ENSSF306000	6	17	60	6	3
ENSSF308000	8	22	75	8	3
ENSSF310000	10	27	75	10	3
ENSSF312000	12	32	75	12	3

Solid End Milling

Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

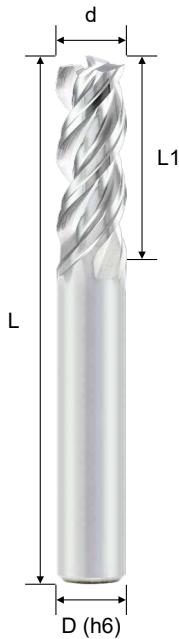
	$ap = 1 \sim 2d$ $ae = 0.05 \sim 0.15d$		$ap = 0.2 \sim 0.5d$ $ae = 1d$
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A100 - Square · Finishing & Roughing · 3F 平銑刀 · 精銑 & 粗銑型 · 3 刃

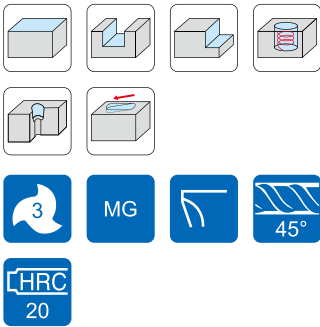
- U-flute and Mirror-like flute surface design.
- For medium to finishing cutting of aluminum alloys.
- High speed cutting.
- Is better for Aluminum alloy with Si ≥ 8%.



ENSSP



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSP303000	3	9	50	6	3
ENSSP304000	4	12	50	6	3
ENSSP305000	5	15	50	6	3
ENSSP306000	6	15	50	6	3
ENSSP307000	7	18	60	8	3
ENSSP308000	8	20	60	8	3
ENSSP309000	9	23	75	10	3
ENSSP310000	10	30	75	10	3
ENSSP312000	12	30	75	12	3
ENSSP316000	16	40	100	16	3
ENSSP318000	18	40	100	20	3
ENSSP320000	20	45	100	20	3
ENSSP325000	25	45	100	25	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

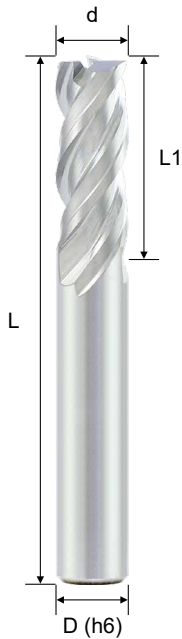
Material	Aluminum Alloy			
	150 ~ 350 m/min		120 ~ 300 m/min	
Vc	150 ~ 350 m/min		120 ~ 300 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6	16000	1280	13000	880
8	12000	1520	9500	960
10	9500	1520	7600	960
12	8000	1520	6400	960
16	6000	1520	4800	960
	 $ap = 1 \sim 2d$ $ae = 0.05 \sim 0.15d$		 $ap = 0.2d$ $ae = 1d$	

A100 - Square · Fine Finishing · 3F 平銑刀 · 超精銑型 · 3 刃

- U-flute and Mirror-like flute surface design.
- For medium to finishing cutting of aluminum alloys.
- High speed cutting.
- Is better for Aluminum alloy with Si ≥ 8%.

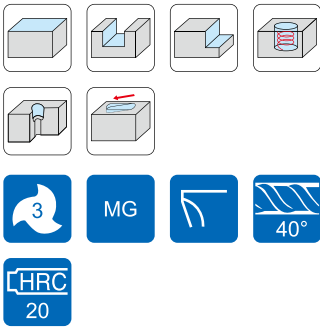


ENSSA



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSA303000	3	8	50	6	3
ENSSA304000	4	10	50	6	3
ENSSA305000	5	13	50	6	3
ENSSA306000	6	15	50	6	3
ENSSA307000	7	18	60	8	3
ENSSA308000	8	20	60	8	3
ENSSA309000	9	22	75	10	3
ENSSA310000	10	25	75	10	3
ENSSA312000	12	30	75	12	3
ENSSA316000	16	40	100	16	3
ENSSA318000	18	40	100	20	3
ENSSA320000	20	45	100	20	3

Solid End Milling



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

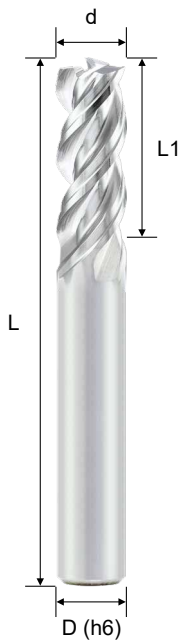
Material	Aluminum Alloy			
	180 ~ 380 m/min		150 ~ 350 m/min	
Vc	180 ~ 380 m/min		150 ~ 350 m/min	
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
6	20000	930	16000	640
8	15000	1100	12000	690
10	12000	1100	9600	690
12	10000	1100	8000	690
16	7500	1100	6000	690

A100 - Square · Variable Pitch · Standard · 3F 不等分割平銑刀 · 標準型 · 3 刃

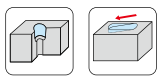
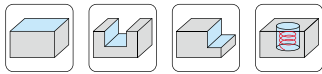
- Variable pitch is unequal flute spacing, good for high performance machining.
- No chattering surface due to anti-vibration design.
- **Polished and U flute designs** provide excellent chip evacuation.
- Good for semi-finishing and roughing of aluminum parts(5052/6061/7075).



ENSSV



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSV303000	3	9	50	6	3
ENSSV304000	4	12	50	6	3
ENSSV305000	5	15	50	6	3
ENSSV306000	6	18	50	6	3
ENSSV308000	8	24	60	8	3
ENSSV310000	10	30	75	10	3
ENSSV312000	12	35	75	12	3
ENSSV316000	16	40	100	16	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	Aluminum alloy (AL5052 / 6061 / 7075)			
	200 ~ 400 m/min		150 ~ 300 m/min	
Dia. (d)	RPM	fz (mm/z)	RPM	fz (mm/z)
3	31820	0.02	23870	0.01
4	23870	0.03	17900	0.02
5	19090	0.03	14320	0.02
6	15910	0.05	11930	0.03
8	11930	0.07	8950	0.04
10	9550	0.09	7160	0.06
12	7960	0.11	5970	0.08
16	5970	0.15	4480	0.10

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※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

A100 - Square · Virable Pitch · Chip Breaker · 3F 不等分割平銑刀 · 斷屑型 · 3刃

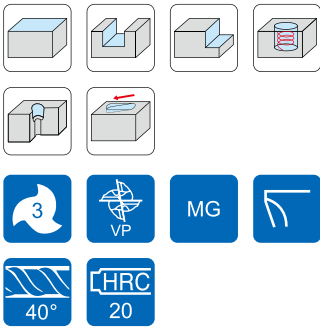
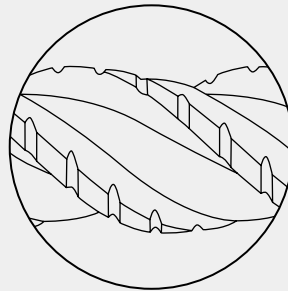
- The cutting edges incorporate chip breakers design.
- Variable pitch is unequal flute spacing designed for anti-vibration machining.
- **Polished and U flute designs** provide excellent chip evacuation.
- Good for semi-finishing and roughing of aluminum parts(5052/6061/7075).



ENSSVG



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSVG306000	6	18	50	6	3
ENSSVG308000	8	24	60	8	3
ENSSVG310000	10	30	75	10	3
ENSSVG312000	12	35	75	12	3
ENSSVG316000	16	40	100	16	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	Aluminum alloy (AL5052 / 6061 / 7075)			
	Vc	200 ~ 400 m/min		150 ~ 300 m/min
Dia. (d)	RPM	fz (mm/z)	RPM	fz (mm/z)
6	15910	0.05	11930	0.03
8	11930	0.07	8950	0.04
10	9550	0.09	7160	0.06
12	7960	0.11	5970	0.08
16	5970	0.15	4480	0.10

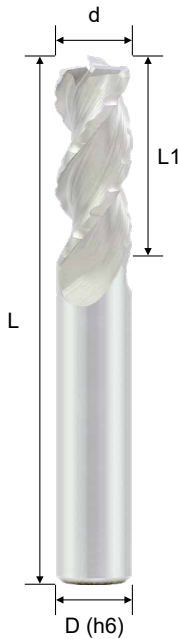
※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

A100 - Square · Roughing · 3F 平銑刀 · 粗銑型 · 3 刃

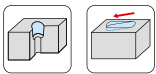
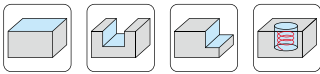
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides hi performance and avoids tip fracture.



ENSSR



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSR306000	6	15	50	6	3
ENSSR308000	8	20	60	8	3
ENSSR310000	10	25	75	10	3
ENSSR312000	12	30	75	12	3
ENSSR316000	16	40	100	16	3
ENSSR320000	20	45	100	20	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

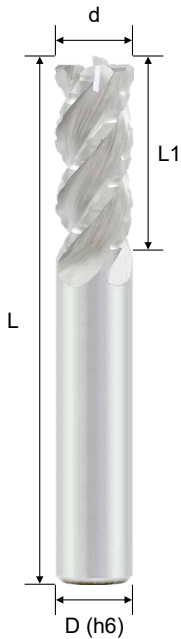


A100 - Square · Roughing · 4F 平銑刀 · 粗銑型 · 4刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
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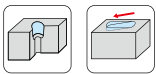
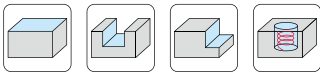


ENSSR



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSR406000	6	15	50	6	4
ENSSR408000	8	20	60	8	4
ENSSR410000	10	25	75	10	4
ENSSR412000	12	30	75	12	4
ENSSR416000	16	40	100	16	4
ENSSR420000	20	45	100	20	4

Solid End Milling



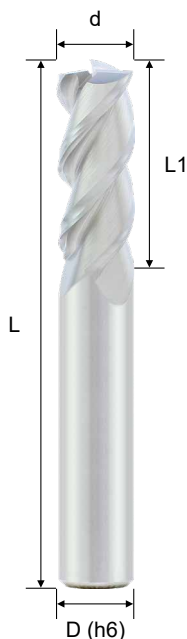
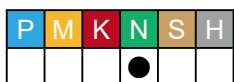
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

A100 - Square · Wave Edge · 3F 平銑刀 · 波浪型 · 3刃

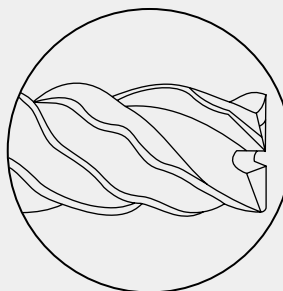
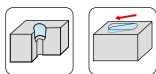
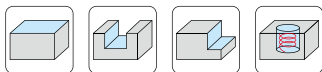
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
- Incredible toughness and vibration reduction at high speeds.
- Wave type increases the performance.



ENSSW



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSW306000	6	15	50	6	3
ENSSW308000	8	20	60	8	3
ENSSW310000	10	30	75	10	3
ENSSW312000	12	30	75	12	3



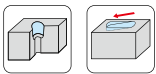
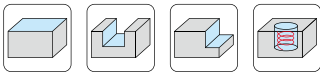
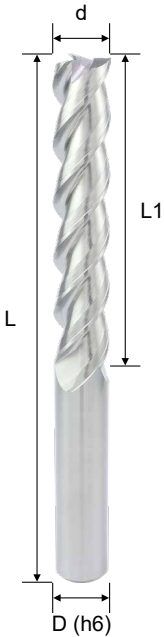
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

A100 - Square · Long Flute · 3F 平銑刀 · 長刃型 · 3刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.



ENSCS



d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSCS303000	3	15	60	6	3
ENSCS304000	4	20	60	6	3
ENSCS305000	5	25	60	6	3
ENSCS306000	6	30	75	6	3
ENSCS308000	8	45	100	8	3
ENSCS310000	10	55	100	10	3
ENSCS312000	12	55	100	12	3
ENSCS316000	16	75	150	16	3
ENSCS320000	20	90	150	20	3

Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Vc				
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

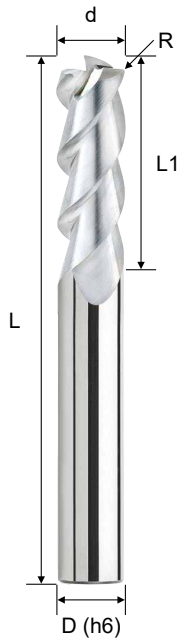
Solid End Milling

A100 - Corner Radius · Standard · 3F 圓鼻銑刀 · 標準型 · 3 刃

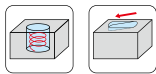
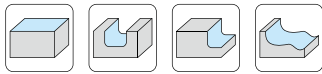
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20)
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.



ENCSS



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENCSS343005	3	0.5R	9	50	4	3
ENCSS344005	4	0.5R	12	50	4	3
ENCSS306005	6	0.5R	15	50	6	3
ENCSS308005	8	0.5R	20	60	8	3
ENCSS308010	8	1.0R	20	60	8	3
ENCSS310005	10	0.5R	30	75	10	3
ENCSS310010	10	1.0R	30	75	10	3
ENCSS312010	12	1.0R	30	75	12	3
ENCSS312015	12	1.5R	30	75	12	3
ENCSS316010	16	1.0R	40	100	16	3
ENCSS316020	16	2.0R	40	100	16	3



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	Aluminum Alloy			
	55 ~ 225 m/min		45 ~ 185 m/min	
Vc				
Dia. (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
1	17800	590	17800	470
2	17800	620	17800	500
3	15000	650	15000	520
4	13000	685	13000	550
5	12000	720	12000	580
6	10000	760	10000	610
8	8500	840	8500	670
10	7000	920	7000	740
12	6000	1010	6000	810

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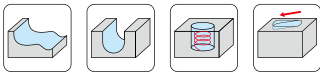
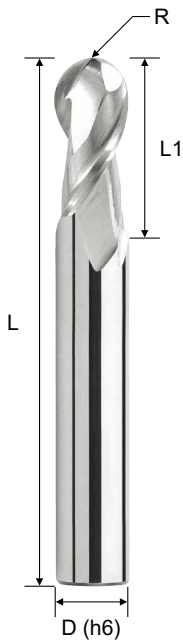
A100 - Ball Nose · Standard · 2F

球型銑刀 · 標準型 · 2 刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC < 20).
- Great chip evacuation.
- Due to polish surface grinding of cutting it provides an excellent surface.
- New tool geometry increases wear resistance and cutting force is decreased.

ASIA
(Metric)

ENBSA



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENBSA241000	0.5R	1	2	50	4	2
ENBSA242000	1.0R	2	4	50	4	2
ENBSA243000	1.5R	3	6	50	4	2
ENBSA244000	2.0R	4	8	50	4	2
ENBSA204000	2.0R	4	8	50	6	2
ENBSA205000	2.5R	5	10	50	6	2
ENBSA206000	3.0R	6	12	50	6	2
ENBSA208000	4.0R	8	16	60	8	2
ENBSA210000	5.0R	10	20	75	10	2
ENBSA212000	6.0R	12	24	75	12	2
ENBSA216000	8.0R	16	32	100	16	2

WORKING MATERIAL	ALLUMINUM ALLOY	
CODE	A5052	
Vc	327 m/min	
Dia. (d)	RPM	Feed (mm/min)
2mm	50,700	2,000
3mm	33,800	2,000
4mm	26,000	2,000
5mm	20,800	2,000
6mm	16,900	2,000
8mm	13,000	2,000
10mm	10,400	2,000
12mm	7,800	2,000
16mm	6,500	2,000
	ap = 0.1d pf = 0.1d	

Solid End Milling

A100 - Square · Standard · 4F (for CU & AL) 平銑刀 · 標準型 · 4刃

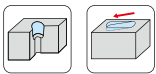
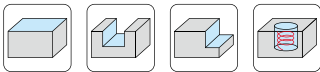
- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Multiple processing efficiency, coefficient of friction <0.1μm.
- Large positive rake angle and deep flute design, improves cutting efficiency.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.



ENSSC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENSSC405000L	5	13	50	6	4
ENSSC406000L	6	15	50	6	4
ENSSC408000L	8	20	60	8	4
ENSSC410000L	10	25	75	10	4
ENSSC412000L	12	30	75	12	4



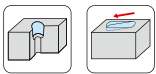
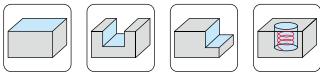
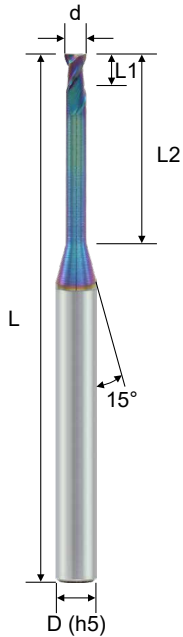
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

A100 - Long Neck · Square · 2F (for CU & AL) 長頸型 · 平銑刀 · 2刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Suitable for deep cutting application.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.



ENSRC



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ENSRC240501L	0.5	1	1.5	50	4	2
ENSRC240502L	0.5	1	2	50	4	2
ENSRC240503L	0.5	1	3	50	4	2
ENSRC240504L	0.5	1	4	50	4	2
ENSRC240506L	0.5	1	6	50	4	2
ENSRC241003L	1	2	3	50	4	2
ENSRC241004L	1	2	4	50	4	2
ENSRC241005L	1	2	5	50	4	2
ENSRC241006L	1	2	6	50	4	2
ENSRC241008L	1	2	8	50	4	2
ENSRC241010L	1	2	10	50	4	2
ENSRC241012L	1	2	12	50	4	2
ENSRC242006L	2	4	6	50	4	2
ENSRC242008L	2	4	8	50	4	2
ENSRC242010L	2	4	10	50	4	2
ENSRC242012L	2	4	12	50	4	2
ENSRC242014L	2	4	14	50	4	2
ENSRC242016L	2	4	16	50	4	2
ENSRC242020L	2	4	20	50	4	2
ENSRC243010L	3	6	10	50	4	2
ENSRC243016L	3	6	16	50	4	2
ENSRC243020L	3	6	20	50	4	2
ENSRC244016L	4	8	16	50	4	2
ENSRC244020L	4	8	20	50	4	2

Solid End Milling

(continued)

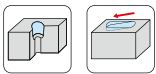
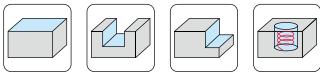
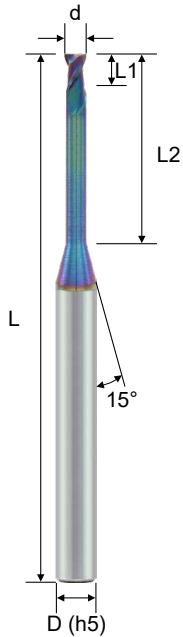
d Tolerance	
d	0 ~ -0.015

A100 - Long Neck · Square · 2F (for CU & AL) 長頸型 · 平銑刀 · 2 刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Suitable for deep cutting application.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

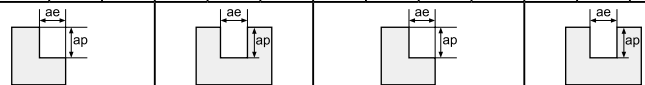


ENSRC



d Tolerance	
d	0 ~ -0.015

Material	Copper									Copper Tungsten (W70%-Cu30%)					
	Application			Side Milling			Slotting			Side Milling			Slotting		
Dia. (d)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)
0.5	1.5	40000	900	0.5	0.025	40000	800	0.070	30000	650	0.3	0.02	30000	550	0.05
	2	38000	800	0.5	0.02	35000	700	0.055	28000	550	0.3	0.016	26000	450	0.04
	3	35000	700	0.5	0.015	32000	600	0.040	26000	500	0.3	0.012	25000	400	0.03
	4	28000	550	0.5	0.008	26000	500	0.030	24000	400	0.3	0.005	22000	300	0.02
	6	18000	350	0.5	0.005	18000	300	0.015	15000	220	0.3	0.003	15000	180	0.01
1	3	24000	2200	1	0.06	24000	2000	0.22	20000	1600	0.8	0.04	20000	1400	0.16
	4	24000	2000	1	0.05	22000	1800	0.20	20000	1400	0.8	0.035	18000	1100	0.14
	5	22000	1700	1	0.04	20000	1500	0.16	18000	1200	0.8	0.028	16000	950	0.12
	6	20000	1500	1	0.03	18000	1200	0.14	16000	1000	0.8	0.02	14000	800	0.10
	8	16000	1200	1	0.025	15000	1000	0.10	14000	800	0.8	0.018	12000	650	0.08
	10	14000	1000	1	0.02	12000	800	0.07	12000	650	0.8	0.014	11000	550	0.05
2	12	10000	700	1	0.01	10000	650	0.05	9000	450	0.8	0.007	8000	400	0.035
	6	18000	2500	2	0.10	16000	2200	0.45	14000	1800	1.5	0.08	12000	1500	0.30
	8	16000	2200	2	0.09	14000	1900	0.40	12000	1500	1.5	0.07	12000	1400	0.28
	10	14000	1900	2	0.08	12000	1600	0.35	10000	1200	1.5	0.06	10000	1000	0.24
	12	12000	1600	2	0.07	11000	1400	0.28	10000	1100	1.5	0.05	9000	900	0.20
	14	11000	1400	2	0.06	10000	1200	0.24	9000	950	1.5	0.04	8000	800	0.16
	16	10000	1200	2	0.045	9000	1000	0.18	8000	800	1.5	0.03	7000	650	0.12
3	20	9000	1000	2	0.03	8000	850	0.12	7000	700	1.5	0.02	6000	550	0.08
	10	16000	2400	3	0.12	14000	2000	0.7	12000	1800	2.4	0.08	11000	1500	0.5
	16	14000	2100	3	0.10	12000	1600	0.6	11000	1600	2.4	0.07	9000	1100	0.4
	20	11000	1500	3	0.07	10000	1200	0.4	9000	1100	2.4	0.05	8000	900	0.3
4	25	10000	1300	3	0.05	9000	1000	0.2	8000	900	2.4	0.03	7000	700	0.15
	16	12000	2400	4	0.20	10000	2000	0.9	9000	1600	3	0.15	8000	1400	0.7
	20	10000	2000	4	0.15	8000	1600	0.7	8000	1400	3	0.10	6000	1000	0.5
	25	9000	1700	4	0.10	8000	1500	0.5	7000	1200	3	0.07	6000	1000	0.3

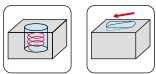
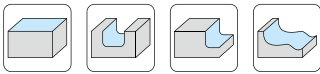
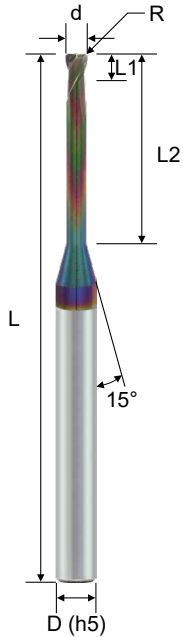
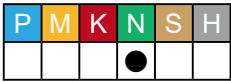


A100 - Long Neck · Corner Radius · 2F (for CU & AL) 長頸型 · 圓鼻銑刀 · 2 刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.



ENCRC



d Tolerance	
d	0 ~ -0.015

R Tolerance	
R	±0.0015

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ENCRC24050102L	0.5	0.1R	1	2	50	4	2
ENCRC24050103L	0.5	0.1R	1	3	50	4	2
ENCRC24050104L	0.5	0.1R	1	4	50	4	2
ENCRC24050105L	0.5	0.1R	1	5	50	4	2
ENCRC24100103L	1	0.1R	2	3	50	4	2
ENCRC24100104L	1	0.1R	2	4	50	4	2
ENCRC24100105L	1	0.1R	2	5	50	4	2
ENCRC24100106L	1	0.1R	2	6	50	4	2
ENCRC24100108L	1	0.1R	2	8	50	4	2
ENCRC24100110L	1	0.1R	2	10	50	4	2
ENCRC24100203L	1	0.2R	2	3	50	4	2
ENCRC24100204L	1	0.2R	2	4	50	4	2
ENCRC24100205L	1	0.2R	2	5	50	4	2
ENCRC24100206L	1	0.2R	2	6	50	4	2
ENCRC24100208L	1	0.2R	2	8	50	4	2
ENCRC24100210L	1	0.2R	2	10	50	4	2
ENCRC24200105L	2	0.1R	4	5	50	4	2
ENCRC24200108L	2	0.1R	4	8	50	4	2
ENCRC24200110L	2	0.1R	4	10	50	4	2
ENCRC24200115L	2	0.1R	4	15	50	4	2
ENCRC24200120L	2	0.1R	4	20	50	4	2
ENCRC24200305L	2	0.3R	4	5	50	4	2
ENCRC24200308L	2	0.3R	4	8	50	4	2
ENCRC24200310L	2	0.3R	4	10	50	4	2
ENCRC24200315L	2	0.3R	4	15	50	4	2
ENCRC24200320L	2	0.3R	4	20	50	4	2
ENCRC24300212L	3	0.2R	6	12	50	4	2
ENCRC24300215L	3	0.2R	6	15	50	4	2
ENCRC24300220L	3	0.2R	6	20	50	4	2
ENCRC24300512L	3	0.5R	6	12	50	4	2
ENCRC24300515L	3	0.5R	6	15	50	4	2
ENCRC24300520L	3	0.5R	6	20	50	4	2
ENCRC24400216L	4	0.2R	8	16	50	4	2
ENCRC24400220L	4	0.2R	8	20	50	4	2
ENCRC24400516L	4	0.5R	8	16	50	4	2
ENCRC24400520L	4	0.5R	8	20	50	4	2

Solid End Milling

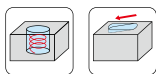
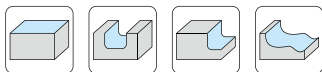
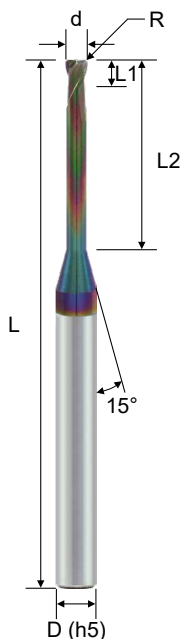
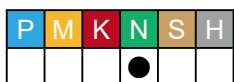
(continued)

A100 - Long Neck · Corner Radius · 2F (for CU & AL) 長頸型 · 圓鼻銑刀 · 2 刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.



ENCRC



d Tolerance	
d	0 ~ -0.015

R Tolerance	
R	±0.0015

Material			Copper				Copper Tungsten (W70%-Cu30%)			
Dia. (d)	Radius (R)	EFF-L	RPM	Feed (mm/min)	ap (mm)	ae (mm)	RPM	Feed (mm/min)	ap (mm)	ae (mm)
0.5	0.1R	2	40000	800	0.06	0.25	36000	720	0.054	0.23
		3	35000	640	0.05	0.25	32000	580	0.045	0.23
		4	30000	480	0.036	0.25	27000	420	0.032	0.23
		5	25000	400	0.024	0.25	23000	360	0.022	0.23
1	0.1R	3	25000	2400	0.06	0.6	23000	2200	0.054	0.55
		4	25000	2200	0.055	0.6	23000	2000	0.05	0.55
		5	22000	2000	0.05	0.6	20000	1800	0.045	0.55
		6	20000	1800	0.045	0.6	18000	1600	0.04	0.55
		8	16000	1400	0.04	0.6	14000	1200	0.036	0.55
		10	12000	1000	0.03	0.6	11000	900	0.027	0.55
	0.2R	3	25000	2400	0.12	0.6	23000	2200	0.11	0.55
		4	25000	2200	0.11	0.6	23000	2000	0.10	0.55
		5	22000	2000	0.10	0.6	20000	1800	0.09	0.55
		6	20000	1800	0.09	0.6	18000	1600	0.08	0.55
2	0.1R	5	16000	3000	0.06	1.2	14000	2700	0.054	1.1
		8	14000	2600	0.06	1.2	13000	2400	0.054	1.1
		10	12000	2000	0.06	1.2	11000	1800	0.054	1.1
		15	10000	1600	0.05	1.2	9000	1400	0.045	1.1
		20	8000	1200	0.04	1.2	7000	1100	0.036	1.1
	0.3R	5	16000	3000	0.18	1.2	14000	2700	0.16	1.1
		8	14000	2600	0.18	1.2	13000	2400	0.16	1.1
		10	12000	2000	0.18	1.2	11000	1800	0.16	1.1
		15	10000	1600	0.14	1.2	9000	1400	0.13	1.1
		20	8000	1200	0.10	1.2	7000	1100	0.09	1.1
3	0.2R	12	14000	3000	0.12	1.8	13000	2700	0.11	1.6
		15	13000	2600	0.12	1.8	12000	2400	0.11	1.6
		18	12000	2400	0.10	1.8	11000	2200	0.09	1.6
		24	10000	1800	0.08	1.8	9000	1600	0.07	1.6
	0.5R	30	8000	1400	0.07	1.8	7000	1200	0.06	1.6
		12	14000	3000	0.30	1.8	13000	2700	0.27	1.6
		15	13000	2600	0.30	1.8	12000	2400	0.27	1.6
		18	12000	2400	0.25	1.8	11000	2200	0.23	1.6
		24	10000	1800	0.20	1.8	9000	1600	0.18	1.6
		30	8000	1400	0.16	1.8	7000	1200	0.14	1.6
4	0.2R	16	10000	2800	0.14	2.8	9000	2500	0.13	2.5
		24	8000	2200	0.12	2.8	7000	1900	0.11	2.5
		32	6000	1600	0.10	2.8	5500	1400	0.09	2.5
		16	10000	2800	0.30	2.4	9000	2500	0.27	2.2
	0.5R	24	8000	2200	0.24	2.4	7000	1900	0.22	2.2
		32	6000	1600	0.18	2.4	5500	1400	0.16	2.2

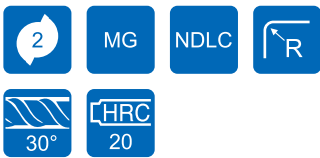
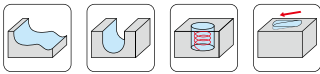
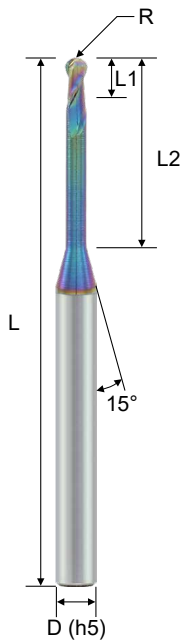


A100 - Long Neck · Ball Nose · 2F (for CU & AL) 長頸型 · 球型銑刀 · 2 刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.



ENBRC



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
ENBRC240502L	0.25R	0.5	0.35	2	50	4	2
ENBRC240503L	0.25R	0.5	0.35	3	50	4	2
ENBRC240504L	0.25R	0.5	0.35	4	50	4	2
ENBRC240505L	0.25R	0.5	0.35	5	50	4	2
ENBRC241003L	0.5R	1	0.75	3	50	4	2
ENBRC241004L	0.5R	1	0.75	4	50	4	2
ENBRC241005L	0.5R	1	0.75	5	50	4	2
ENBRC241006L	0.5R	1	0.75	6	50	4	2
ENBRC241008L	0.5R	1	0.75	8	50	4	2
ENBRC241010L	0.5R	1	0.75	10	50	4	2
ENBRC241012L	0.5R	1	0.75	12	50	4	2
ENBRC242004L	1.0R	2	1.5	4	50	4	2
ENBRC242006L	1.0R	2	1.5	6	50	4	2
ENBRC242008L	1.0R	2	1.5	8	50	4	2
ENBRC242010L	1.0R	2	1.5	10	50	4	2
ENBRC242012L	1.0R	2	1.5	12	50	4	2
ENBRC242016L	1.0R	2	1.5	16	50	4	2
ENBRC242020L	1.0R	2	1.5	20	50	4	2
ENBRC243008L	1.5R	3	2.5	8	50	4	2
ENBRC243010L	1.5R	3	2.5	10	50	4	2
ENBRC243016L	1.5R	3	2.5	16	50	4	2
ENBRC243020L	1.5R	3	2.5	20	50	4	2
ENBRC244012L	2.0R	4	3	12	50	4	2
ENBRC244016L	2.0R	4	3	16	50	4	2
ENBRC244020L	2.0R	4	3	20	50	4	2

Solid End Milling

(continued)

R Tolerance	
R	±0.01

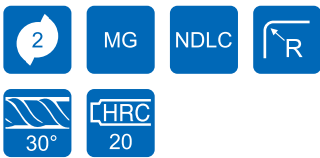
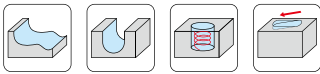
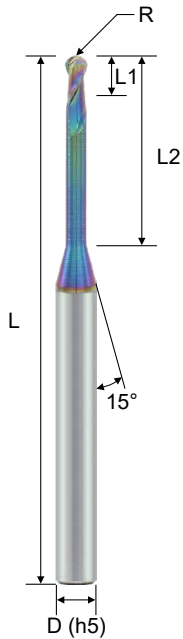
A100 - Long Neck · Ball Nose · 2F (for CU & AL)

長頸型 · 球型銑刀 · 2 刃

- Suitable for copper alloy, copper electrodes, aluminum processing special.
- Sharp cutting edge and flute polished.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

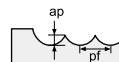


ENBRC



R Tolerance	
R	±0.01

Material	Copper					Copper Tungsten (W70%-Cu30%)				
	Radius (R)	EFF-L	RPM	Feed (mm/min)	ap (mm)	pf (mm)	RPM	Feed (mm/min)	ap (mm)	pf (mm)
0.25R	2		40000	800	0.08	0.15	30000	500	0.08	0.15
	3		35000	600	0.06	0.1	27000	400	0.06	0.08
	4		30000	400	0.04	0.08	22000	200	0.025	0.05
	5		25000	300	0.02	0.04	18000	150	0.01	0.02
0.5R	3		40000	2800	0.25	0.4	30000	2000	0.25	0.4
	4		40000	2400	0.2	0.4	30000	1600	0.2	0.4
	5		35000	2000	0.16	0.3	27000	1400	0.12	0.25
	6		30000	1600	0.14	0.3	25000	1000	0.1	0.25
	8		25000	1000	0.12	0.2	18000	500	0.06	0.1
	10		20000	800	0.08	0.15	16000	300	0.03	0.05
1.0R	12		16000	600	0.06	0.1	12000	200	0.015	0.04
	4		30000	4000	0.45	0.8	22000	2400	0.45	0.8
	6		27000	3000	0.45	0.8	20000	1800	0.45	0.8
	8		25000	2400	0.4	0.8	18000	1600	0.4	0.8
	10		22000	2000	0.3	0.6	16000	1400	0.25	0.5
	12		16000	1400	0.3	0.6	12000	900	0.25	0.5
	16		12000	1000	0.25	0.5	9000	500	0.12	0.25
	20		10000	800	0.15	0.3	8000	350	0.06	0.1
1.5R	25		8000	600	0.08	0.15	6000	200	0.03	0.05
	8		22000	3800	0.8	1.95	18000	2800	0.7	1.3
	10		20000	3400	0.7	1.5	16000	2400	0.6	1.2
	16		18000	3000	0.6	1.0	14000	2000	0.6	1.2
	20		16000	2400	0.5	0.8	12000	1400	0.4	0.6
	25		12000	1800	0.4	0.6	10000	900	0.2	0.3
2.0R	30		8000	1200	0.2	0.4	6000	500	0.08	0.15
	12		16000	4000	1.0	1.6	12000	2800	0.8	1.6
	16		16000	3400	0.8	1.6	12000	2400	0.8	1.6
	20		14000	3000	0.8	1.6	10000	2000	0.8	1.6
	25		14000	3000	0.6	1.2	10000	2000	0.5	1.0
	30		12000	2400	0.5	1.0	7000	1200	0.3	0.5
	40		8000	1200	0.4	0.8	5000	500	0.15	0.3



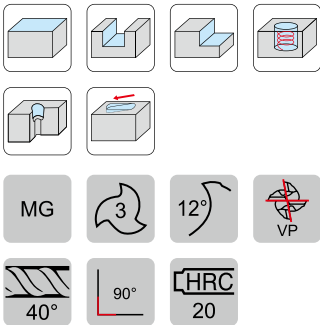
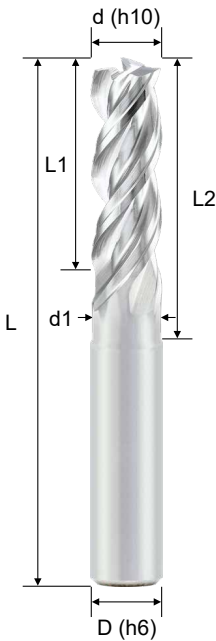
V47X - Square · Variable Pitch · Neck · 3F

不等分割平銑刀 · 帶頸型 · 3 刃

- Variable pitch design for anti-vibration machining.
- Good for semi-finishing and roughing of aluminum parts(5052/6061/7075).
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.

DIN
(Metric)

E 4 1 4 V



Order No.	Order No.	Dia.	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E414V302000	-	2	7	10	1.9	57	6	3
E414V303000	-	3	8	15	2.8	57	6	3
E414V304000	-	4	11	18	3.8	57	6	3
E414V305000	-	5	13	18	4.8	57	6	3
E414V306000	E414V306000W	6	13	20	5.7	57	6	3
E414V308000	E414V308000W	8	19	26	7.7	63	8	3
E414V310000	E414V310000W	10	22	30	9.5	72	10	3
E414V312000	E414V312000W	12	26	36	11.5	83	12	3
E414V314000	E414V314000W	14	26	36	13.5	83	14	3
E414V316000	E414V316000W	16	32	42	15.5	92	16	3
E414V318000	E414V318000W	18	32	42	17.5	92	18	3
E414V320000	E414V320000W	20	38	52	19.5	104	20	3

Solid End Milling

Material	Aluminum alloy (AL5052 / 6061 / 7075)			
	200 ~ 400 m/min		150 ~ 300 m/min	
Vc				
Dia. (d)	RPM	fz (mm/z)	RPM	fz (mm/z)
3mm	31820	0.02	23870	0.01
4mm	23870	0.03	17900	0.02
5mm	19090	0.03	14320	0.02
6mm	15910	0.05	11930	0.03
8mm	11930	0.07	8950	0.04
10mm	9550	0.09	7160	0.06
12mm	7960	0.11	5970	0.08
16mm	5970	0.15	4480	0.10

※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

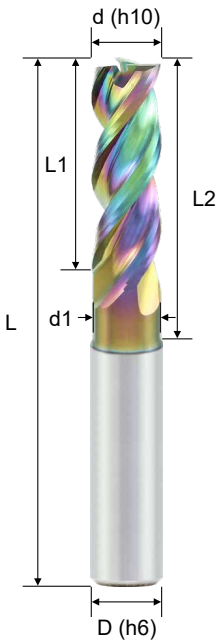
V47X - Square · Variable Pitch · Neck · 3F

不等分割平銑刀 · 帶頸型 · 3刃

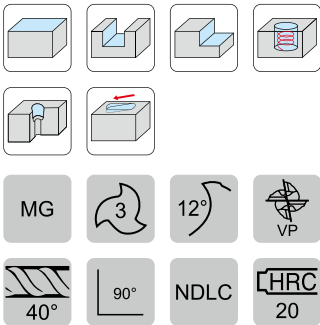
- Variable pitch design for anti-vibration machining.
- Good for semi-finishing and roughing of aluminum parts(5052/6061/7075).
- Neck design increases depth of cut.
- Manufactured according to DIN 6527.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.

DIN
(Metric)

E 4 1 4 V



Order No.	Order No.	Dia.	CL	EFF-L	ND	OAL	Shank	Flutes
Cylindrical	Weldon	(d)	(L1)	(L2)	(d1)	(L)	(D)	(Z)
E414V302000L	-	2	7	10	1.9	57	6	3
E414V303000L	-	3	8	15	2.8	57	6	3
E414V304000L	-	4	11	18	3.8	57	6	3
E414V305000L	-	5	13	18	4.8	57	6	3
E414V306000L	E414V306000LW	6	13	20	5.7	57	6	3
E414V308000L	E414V308000LW	8	19	26	7.7	63	8	3
E414V310000L	E414V310000LW	10	22	30	9.5	72	10	3
E414V312000L	E414V312000LW	12	26	36	11.5	83	12	3
E414V314000L	E414V314000LW	14	26	36	13.5	83	14	3
E414V316000L	E414V316000LW	16	32	42	15.5	92	16	3
E414V318000L	E414V318000LW	18	32	42	17.5	92	18	3
E414V320000L	E414V320000LW	20	38	52	19.5	104	20	3



Material	Aluminum alloy (AL5052 / 6061 / 7075)			
	200 ~ 400 m/min		150 ~ 300 m/min	
Vc	200 ~ 400 m/min		150 ~ 300 m/min	
Dia. (d)	RPM	fz (mm/z)	RPM	fz (mm/z)
3mm	31820	0.02	23870	0.01
4mm	23870	0.03	17900	0.02
5mm	19090	0.03	14320	0.02
6mm	15910	0.05	11930	0.03
8mm	11930	0.07	8950	0.04
10mm	9550	0.09	7160	0.06
12mm	7960	0.11	5970	0.08
16mm	5970	0.15	4480	0.10

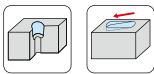
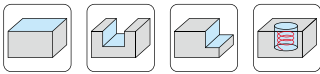
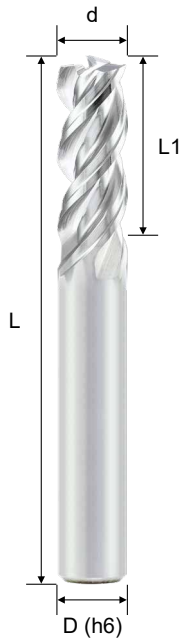
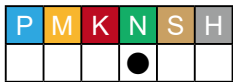
※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

A100 - Square · Virable Pitch · Standard · 3F (Inch) 不等分割平銑刀 · 3刃 (英寸)

- Variable pitch is unequal flute spacing, good for high performance machining.
- No chattering surface due to anti-vibration design.
- **Polished and U flute designs** provide excellent chip evacuation.
- Good for semi-finishing and roughing of aluminum parts(5052/6061/7075).



ENS□V



d Tolerance	
d	.000 ~ -.002"

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
ENS2V30120500	1/8	1/2	2	1/8	3
ENS2V30250300	1/4	3/8	2	1/4	3
ENS2V30310500	5/16	1/2	2	5/16	3
ENS2V30370600	3/8	5/8	3	3/8	3
ENS3V30371000	3/8	1	3	3/8	3
ENS2V30501000	1/2	1	3	1/2	3
ENS3V30621600	5/8	1 5/8	3 1/2	5/8	3

Solid End Milling

Material	Aluminum alloy (AL5052 / 6061 / 7075)			
	650 ~ 1300 SFM		490 ~ 980 SFM	
Vc	650 ~ 1300 SFM		490 ~ 980 SFM	
Dia. (d)	RPM	fz (inch/z)	RPM	fz (inch/z)
1/8	31820	.0008	23870	.0004
1/4	15910	.0020	11930	.0012
5/16	11930	.0028	8950	.0016
3/8	9550	.0035	7160	.0024
1/2	7960	.0043	5970	.0031
5/8	5970	.0059	4480	.0039

※When machining Aluminum alloy with Si ≥ 8% , reduce RPM 30% and Feed 30%.

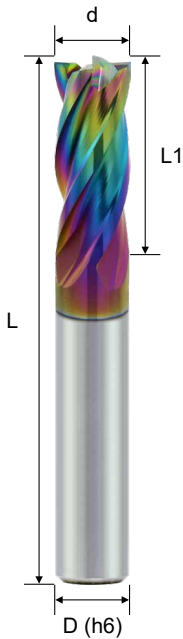
A200 - Square · Standard · 4F

平銑刀 · 標準型 · 4 刃

- Suitable for Graphite.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

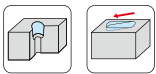
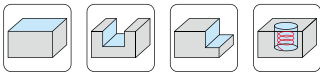
ASIA
(Metric)

EGSSC



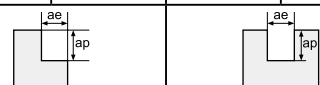
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EGSSC443000L	3	8	50	4	4
EGSSC444000L	4	10	50	4	4
EGSSC404000L	4	10	50	6	4
EGSSC405000L	5	13	50	6	4
EGSSC406000L	6	15	50	6	4
EGSSC408000L	8	20	60	8	4
EGSSC410000L	10	25	75	10	4
EGSSC412000L	12	30	75	12	4

* NDLC Nano DLC coating DIA Diamond Coating



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	Graphite						
	Dia (mm)	RPM	fz (mm/z)	Side Milling		Slot Milling	
				ap (mm)	ae (mm)	ap (mm)	ae (mm)
3	10000 ~ Max.	0.012 ~ 0.018	1×d	0.1×d	0.25×d	1×d	
4	10000 ~ Max.	0.016 ~ 0.024	1×d	0.1×d	0.25×d	1×d	
5	10000 ~ Max.	0.020 ~ 0.030	1×d	0.1×d	0.25×d	1×d	
6	10000 ~ Max.	0.024 ~ 0.036	1×d	0.1×d	0.25×d	1×d	
8	10000 ~ Max.	0.026 ~ 0.038	1×d	0.1×d	0.25×d	1×d	
10	10000 ~ Max.	0.032 ~ 0.048	1×d	0.1×d	0.25×d	1×d	
12	10000 ~ Max.	0.038 ~ 0.058	1×d	0.1×d	0.25×d	1×d	

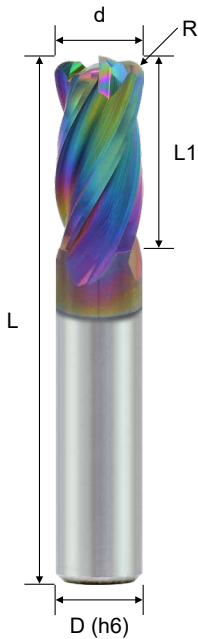


A200 - Corner Radius · Standard · 4F 圓鼻銑刀 · 標準型 · 4刃

- Suitable for Graphite.
- Corner radius with multiple design increases the finish milling surface.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

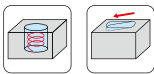
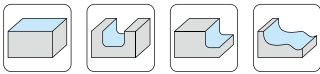


EGCSC



Order No.	Dia. (d)	Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EGCSC443003L	3	0.3R	6	50	4	4
EGCSC443005L	3	0.5R	6	50	4	4
EGCSC443010L	3	1.0R	6	50	4	4
EGCSC403003L	3	0.3R	6	50	6	4
EGCSC403005L	3	0.5R	6	50	6	4
EGCSC403010L	3	1.0R	6	50	6	4
EGCSC444003L	4	0.3R	8	50	4	4
EGCSC444005L	4	0.5R	8	50	4	4
EGCSC444010L	4	1.0R	8	50	4	4
EGCSC404003L	4	0.3R	8	50	6	4
EGCSC404005L	4	0.5R	8	50	6	4
EGCSC404010L	4	1.0R	8	50	6	4
EGCSC405005L	5	0.5R	10	50	6	4
EGCSC405010L	5	1.0R	10	50	6	4
EGCSC406003L	6	0.3R	12	50	6	4
EGCSC406005L	6	0.5R	12	50	6	4
EGCSC406010L	6	1.0R	12	50	6	4
EGCSC408005L	8	0.5R	16	60	8	4
EGCSC408010L	8	1.0R	16	60	8	4
EGCSC408015L	8	1.5R	16	60	8	4
EGCSC410005L	10	0.5R	20	75	10	4
EGCSC410010L	10	1.0R	20	75	10	4
EGCSC410015L	10	1.5R	20	75	10	4
EGCSC410020L	10	2.0R	20	75	10	4
EGCSC412005L	12	0.5R	24	75	12	4
EGCSC412010L	12	1.0R	24	75	12	4
EGCSC412015L	12	1.5R	24	75	12	4
EGCSC412020L	12	2.0R	24	75	12	4
EGCSC412030L	12	3.0R	24	75	12	4

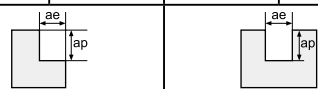
* NDLC Nano DLC coating DIA Diamond Coating



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Material	Graphite						
	Dia (mm)	RPM	fz (mm/z)	Side Milling		Slot Milling	
				ap (mm)	ae (mm)	ap (mm)	ae (mm)
	3	10000 ~ Max.	0.012 ~ 0.018	1×d	0.1×d	0.25×d	1×d
	4	10000 ~ Max.	0.016 ~ 0.024	1×d	0.1×d	0.25×d	1×d
	5	10000 ~ Max.	0.020 ~ 0.030	1×d	0.1×d	0.25×d	1×d
	6	10000 ~ Max.	0.024 ~ 0.036	1×d	0.1×d	0.25×d	1×d
	8	10000 ~ Max.	0.026 ~ 0.038	1×d	0.1×d	0.25×d	1×d
	10	10000 ~ Max.	0.032 ~ 0.048	1×d	0.1×d	0.25×d	1×d
	12	10000 ~ Max.	0.038 ~ 0.058	1×d	0.1×d	0.25×d	1×d



Solid End Milling

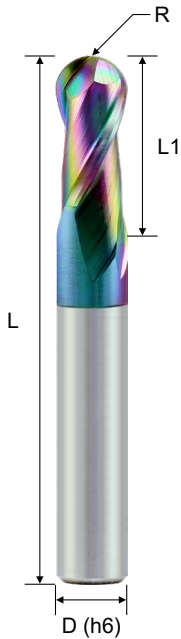
A200 - Ball Nose · Standard · 2F

球型銑刀 · 標準型 · 2 刃

- Suitable for Graphite.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

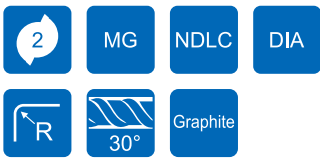
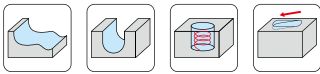


EGBSC



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
EGBSC240200L	0.10R	0.2	0.4	50	4	2
EGBSC240300L	0.15R	0.3	0.6	50	4	2
EGBSC240400L	0.20R	0.4	0.8	50	4	2
EGBSC240500L	0.25R	0.5	1.0	50	4	2
EGBSC240600L	0.30R	0.6	1.2	50	4	2
EGBSC240700L	0.35R	0.7	1.4	50	4	2
EGBSC240800L	0.40R	0.8	1.6	50	4	2
EGBSC240900L	0.45R	0.9	1.8	50	4	2
EGBSC241000L	0.50R	1.0	2.0	50	4	2
EGBSC241500L	0.75R	1.5	3.0	50	4	2
EGBSC242000L	1.00R	2.0	4.0	50	4	2
EGBSC243000L	1.50R	3.0	6.0	50	4	2
EGBSC244000L	2.00R	4.0	8.0	50	4	2
EGBSC204000L	2.00R	4.0	8.0	50	6	2
EGBSC205000L	2.50R	5.0	10.0	50	6	2
EGBSC206000L	3.00R	6.0	12.0	50	6	2
EGBSC208000L	4.00R	8.0	16.0	60	8	2
EGBSC210000L	5.00R	10.0	20.0	75	10	2
EGBSC212000L	6.00R	12.0	24.0	75	12	2

* NDLC Nano DLC coating DIA Diamond Coating



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Material	Graphite		
Dia (mm)	RPM	ap (mm)	ae (mm)
2	10000 ~ Max.	0.1	0.1
3	10000 ~ Max.	0.1	0.15
4	10000 ~ Max.	0.2	0.2
6	10000 ~ Max.	0.2	0.3
8	10000 ~ Max.	0.25	0.3
10	10000 ~ Max.	0.3	0.4
12	10000 ~ Max.	0.3	0.4



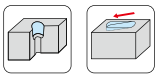
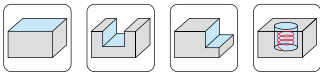
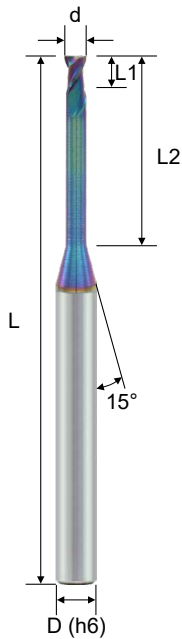
A200 - Long Neck · Square · 2F

長頸型 · 平銑刀 · 2刃

- Suitable for Graphite.
- Available in various effective length.
- Suitable for deep cutting application.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

ASIA
(Metric)

EGSRC

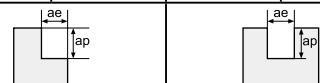


d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EGSRC240504L	0.5	0.6	4	50	4	2
EGSRC240506L	0.5	0.6	6	50	4	2
EGSRC240508L	0.5	0.6	8	50	4	2
EGSRC241006L	1.0	1.2	6	50	4	2
EGSRC241008L	1.0	1.2	8	50	4	2
EGSRC241012L	1.0	1.2	12	50	4	2
EGSRC241016L	1.0	1.2	16	50	4	2
EGSRC241020L	1.0	1.2	20	50	4	2
EGSRC241508L	1.5	1.8	8	50	4	2
EGSRC241512L	1.5	1.8	12	50	4	2
EGSRC241516L	1.5	1.8	16	50	4	2
EGSRC241520L	1.5	1.8	20	50	4	2
EGSRC242010L	2.0	2.5	10	50	4	2
EGSRC242016L	2.0	2.5	16	50	4	2
EGSRC242020L	2.0	2.5	20	50	4	2
EGSRC242025L	2.0	2.5	25	60	4	2
EGSRC203012L	3.0	3.5	12	50	6	2
EGSRC203020L	3.0	3.5	20	60	6	2
EGSRC203025L	3.0	3.5	25	60	6	2
EGSRC203030L	3.0	3.5	30	75	6	2
EGSRC204016L	4.0	4.5	16	50	6	2
EGSRC204020L	4.0	4.5	20	60	6	2
EGSRC204025L	4.0	4.5	25	60	6	2
EGSRC204030L	4.0	4.5	30	75	6	2
EGSRC204035L	4.0	4.5	35	75	6	2
EGSRC205020L	5.0	7.0	20	60	6	2
EGSRC205025L	5.0	7.0	25	60	6	2
EGSRC205030L	5.0	7.0	30	75	6	2
EGSRC205035L	5.0	7.0	35	75	6	2
EGSRC206020L	6.0	10.0	20	60	6	2
EGSRC206030L	6.0	10.0	30	75	6	2

* NDLC Nano DLC coating DIA Diamond Coating

Dia (mm)	RPM	fz (mm/z)	Graphite			
			Side Milling		Slot Milling	
			ap (mm)	ae (mm)	ap (mm)	ae (mm)
3	10000 ~ Max.	0.008 ~ 0.013	1×d	0.1×d	0.25×d	1×d
4	10000 ~ Max.	0.011 ~ 0.017	1×d	0.1×d	0.25×d	1×d
5	10000 ~ Max.	0.014 ~ 0.021	1×d	0.1×d	0.25×d	1×d
6	10000 ~ Max.	0.017 ~ 0.025	1×d	0.1×d	0.25×d	1×d
8	10000 ~ Max.	0.018 ~ 0.027	1×d	0.1×d	0.25×d	1×d
10	10000 ~ Max.	0.022 ~ 0.034	1×d	0.1×d	0.25×d	1×d
12	10000 ~ Max.	0.027 ~ 0.041	1×d	0.1×d	0.25×d	1×d



Solid End Milling

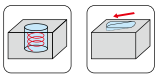
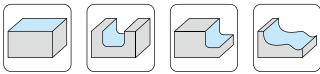
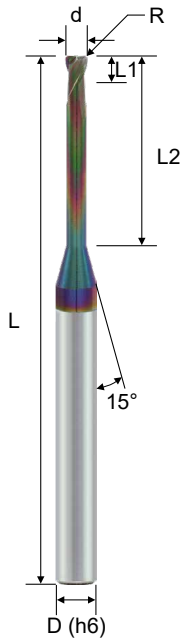
A200 - Long Neck · Corner Radius · 2F

長頸型 · 圓鼻銑刀 · 2 刃

- Suitable for Graphite.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

ASIA
(Metric)

EGCRC



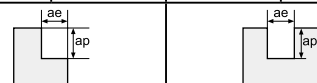
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

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

Order No.	Dia. (d)	Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EGCRC24100106L	1	0.1R	1	6	50	4	2
EGCRC24100108L	1	0.1R	1	8	50	4	2
EGCRC24100110L	1	0.1R	1	10	50	4	2
EGCRC24100112L	1	0.1R	1	12	50	4	2
EGCRC24200210L	2	0.2R	2	10	50	4	2
EGCRC24200216L	2	0.2R	2	16	50	4	2
EGCRC24200220L	2	0.2R	2	20	50	4	2
EGCRC24200225L	2	0.2R	2	25	60	4	2
EGCRC24200510L	2	0.5R	2	10	50	4	2
EGCRC24200516L	2	0.5R	2	16	50	4	2
EGCRC24200520L	2	0.5R	2	20	50	4	2
EGCRC24200525L	2	0.5R	2	25	60	4	2
EGCRC20300210L	3	0.2R	3	10	50	6	2
EGCRC20300220L	3	0.2R	3	20	60	6	2
EGCRC20300230L	3	0.2R	3	30	75	6	2
EGCRC20300510L	3	0.5R	3	10	50	6	2
EGCRC20300520L	3	0.5R	3	20	60	6	2
EGCRC20300530L	3	0.5R	3	30	75	6	2
EGCRC20400516L	4	0.5R	4	16	60	6	2
EGCRC20400525L	4	0.5R	4	25	60	6	2
EGCRC20400535L	4	0.5R	4	35	75	6	2
EGCRC20401016L	4	1.0R	4	16	60	6	2
EGCRC20401025L	4	1.0R	4	25	60	6	2
EGCRC20401035L	4	1.0R	4	35	75	6	2
EGCRC20500520L	5	0.5R	5	20	60	6	2
EGCRC20500530L	5	0.5R	5	30	75	6	2
EGCRC20600520L	6	0.5R	7	20	60	6	2
EGCRC20600530L	6	0.5R	7	30	75	6	2
EGCRC20601020L	6	1.0R	7	20	60	6	2
EGCRC20601030L	6	1.0R	7	30	75	6	2

* NDLC Nano DLC coating DIA Diamond Coating

Material	Graphite						
	Dia (mm)	RPM	fz (mm/z)	Side Milling		Slot Milling	
				ap (mm)	ae (mm)	ap (mm)	ae (mm)
	3	10000 ~ Max.	0.008 ~ 0.013	1×d	0.1×d	0.25×d	1×d
	4	10000 ~ Max.	0.011 ~ 0.017	1×d	0.1×d	0.25×d	1×d
	5	10000 ~ Max.	0.014 ~ 0.021	1×d	0.1×d	0.25×d	1×d
	6	10000 ~ Max.	0.017 ~ 0.025	1×d	0.1×d	0.25×d	1×d
	8	10000 ~ Max.	0.018 ~ 0.027	1×d	0.1×d	0.25×d	1×d
	10	10000 ~ Max.	0.022 ~ 0.034	1×d	0.1×d	0.25×d	1×d
	12	10000 ~ Max.	0.027 ~ 0.041	1×d	0.1×d	0.25×d	1×d



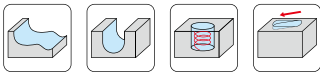
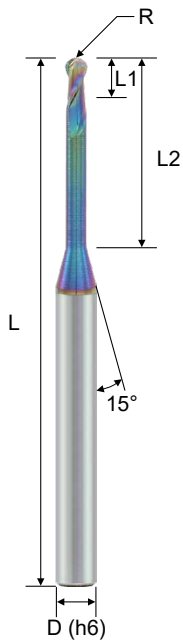
A200 - Long Neck · Ball Nose · 2F

長頸型 · 球型銑刀 · 2 刃

- Suitable for Graphite.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

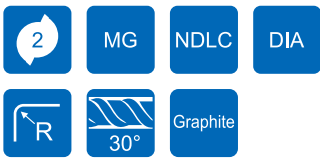
ASIA
(Metric)

EGBRC



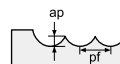
Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EGBRC240504L	0.25R	0.5	0.5	4	50	4	2
EGBRC240506L	0.25R	0.5	0.5	6	50	4	2
EGBRC240508L	0.25R	0.5	0.5	8	50	4	2
EGBRC241006L	0.50R	1.0	1.0	6	50	4	2
EGBRC241008L	0.50R	1.0	1.0	8	50	4	2
EGBRC241012L	0.50R	1.0	1.0	12	50	4	2
EGBRC241016L	0.50R	1.0	1.0	16	50	4	2
EGBRC241020L	0.50R	1.0	1.0	20	50	4	2
EGBRC241508L	0.75R	1.5	1.5	8	50	4	2
EGBRC241512L	0.75R	1.5	1.5	12	50	4	2
EGBRC241516L	0.75R	1.5	1.5	16	50	4	2
EGBRC241520L	0.75R	1.5	1.5	20	50	4	2
EGBRC242010L	1.00R	2.0	2.0	10	50	4	2
EGBRC242016L	1.00R	2.0	2.0	16	50	4	2
EGBRC242020L	1.00R	2.0	2.0	20	50	4	2
EGBRC242025L	1.00R	2.0	2.0	25	60	4	2
EGBRC203012L	1.50R	3.0	3.0	12	50	6	2
EGBRC203016L	1.50R	3.0	3.0	16	60	6	2
EGBRC203020L	1.50R	3.0	3.0	20	60	6	2
EGBRC203025L	1.50R	3.0	3.0	25	60	6	2
EGBRC203030L	1.50R	3.0	3.0	30	75	6	2
EGBRC204016L	2.00R	4.0	4.0	16	60	6	2
EGBRC204020L	2.00R	4.0	4.0	20	60	6	2
EGBRC204025L	2.00R	4.0	4.0	25	60	6	2
EGBRC204030L	2.00R	4.0	4.0	30	75	6	2
EGBRC205020L	2.50R	5.0	5.0	20	60	6	2
EGBRC205025L	2.50R	5.0	5.0	25	60	6	2
EGBRC205030L	2.50R	5.0	5.0	30	75	6	2
EGBRC206020L	3.00R	6.0	10.0	20	60	6	2
EGBRC206030L	3.00R	6.0	10.0	30	75	6	2

* NDLC Nano DLC coating DIA Diamond Coating



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Material	Graphite		
Dia (mm)	RPM	ap (mm)	ae (mm)
2	10000 ~ Max.	0.1	0.1
3	10000 ~ Max.	0.1	0.15
4	10000 ~ Max.	0.2	0.2
6	10000 ~ Max.	0.2	0.3
8	10000 ~ Max.	0.25	0.3
10	10000 ~ Max.	0.3	0.4
12	10000 ~ Max.	0.3	0.4



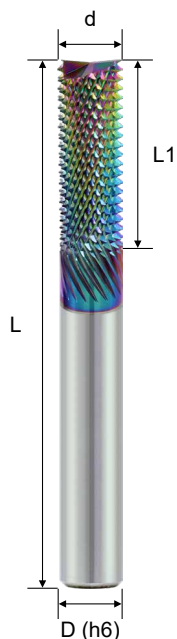
Solid End Milling

A300 - Square · CFRP Roughing · 7~17F 平銑刀 - CFRP 粗銑用 · 7~17 刃

- For CFRP/Kevlar rough milling.
- Right helix and left helix design.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.



ECSSR



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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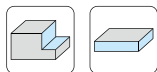
NDLC Nano DLC coating

ECSSR703000L	3	9	60	6	7
ECSSR804000L	4	12	60	6	8
ECSSR106000L	6	18	60	6	11
ECSSR408000L	8	24	60	8	14
ECSSR610000L	10	30	75	10	16
ECSSR712000L	12	36	100	12	17



DIA Diamond Coating

ECSSR703000D	3	9	60	6	7
ECSSR804000D	4	12	60	6	8
ECSSR106000D	6	18	60	6	11
ECSSR408000D	8	24	60	8	14
ECSSR610000D	10	30	75	10	16
ECSSR712000D	12	36	100	12	17



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

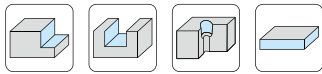
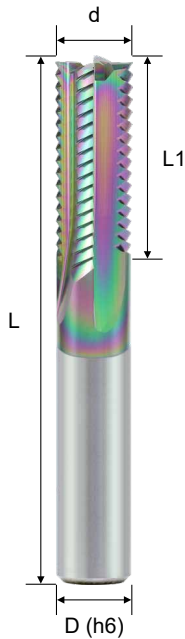
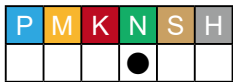
Material	CFRP		GFRP	
	Vc		Vc	
	140 ~ 200 m/min		90 ~ 140 m/min	
Dia. (d)	RPM	fz (mm/tooth)	RPM	fz (mm/tooth)
6	9020	0.020	6100	0.020
8	6760	0.030	4570	0.030
10	5410	0.030	3660	0.030
12	4510	0.035	3050	0.035
	$ap = 2d$ $ae \leq 0.35d$			

A300 - Square · Kevlar · 4F 平銑刀 - 克維拉纖維材料用 · 4 刃

- For Kevlar/CFRP general milling.
- Up & Down chip breaker and center cutting design.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.



ECSSK



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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NDLC Nano DLC coating

ECSSK404000L	4	12	60	6	4
ECSSK406000L	6	20	60	6	4
ECSSK408000L	8	25	75	8	4
ECSSK410000L	10	30	75	10	4
ECSSK412000L	12	35	100	12	4



DIA Diamond Coating

ECSSK404000D	4	12	60	6	4
ECSSK406000D	6	20	60	6	4
ECSSK408000D	8	25	75	8	4
ECSSK410000D	10	30	75	10	4
ECSSK412000D	12	35	100	12	4

Material	Kevlar / CFRP			
	150 ~ 450 m/min		125 ~ 150 m/min	
Vc				
Dia. (d)	RPM	fz (mm/tooth)	RPM	fr (mm/rev.)
4	23800	0.03	11000	0.05
6	16000	0.05	7400	0.07
8	12000	0.07	5500	0.10
10	9600	0.10	4400	0.15
12	8000	0.12	3700	0.20

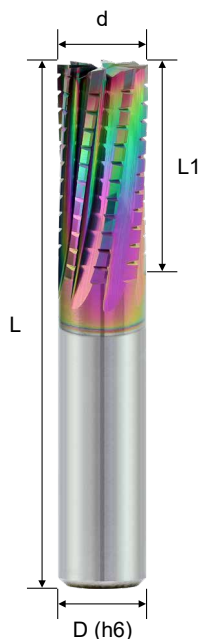
Solid End Milling

A300 - Square · CFRP Finishing · 6F / 8F 平銑刀 - CFRP 精銑用 · 6 刃 / 8 刃

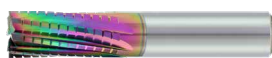
- For CFRP/GFRP multi-purpose finish milling.
- Multi flutes and fine pitch nick geometry design.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.



ECSSF



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (Z)
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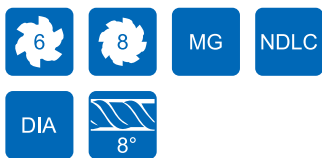
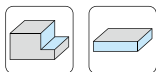
NDLC Nano DLC coating

ECSSF606000L	6	15	60	6	6
ECSSF608000L	8	20	75	8	6
ECSSF810000L	10	25	75	10	8
ECSSF812000L	12	30	100	12	8



DIA Diamond Coating

ECSSF606000D	6	15	60	6	6
ECSSF608000D	8	20	75	8	6
ECSSF810000D	10	25	75	10	8
ECSSF812000D	12	30	100	12	8



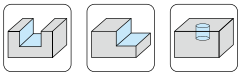
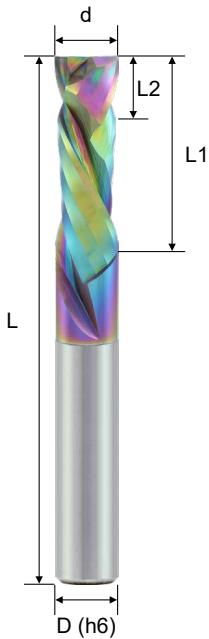
d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

Material	CFRP		GFRP	
	Vc		Vc	
	160 ~ 220 m/min		100 ~ 160 m/min	
Dia. (d)	RPM	fz (mm/tooth)	RPM	fz (mm/tooth)
6	10080	0.020	6900	0.020
8	7560	0.030	5170	0.030
10	6050	0.030	4140	0.030
12	5040	0.035	3450	0.035
	ap = 1.5d ae ≤ 0.35d			

- Suitable for CFRP/GFRP.
- Up and down cut design counteracts cutting forces to avoid burrs, tears and delamination.
- NDLC - Nano DLC coating provides exceptional wear resistance and good tool life.
- DIA - Diamond coating provides exceptional wear resistance and good tool life.

ASIA
(Metric)

ENSSD



2 3 MG NDLC
DIA

d Tolerance	
d ≤ 6	0 ~ -0.03
6 < d ≤ 12	0 ~ -0.04
d > 12	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	Overlap Center (L2)	OAL (L)	Shank (D)	Flutes (Z)
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NDLC Nano DLC coating

Unit : Metric

ENSSD206180L	6	18	6	60	6	2
ENSSD208240L	8	24	8	75	8	2
ENSSD210300L	10	30	10	75	10	2
ENSSD310300L	10	30	10	75	10	3
ENSSD212360L	12	36	12	75	12	2
ENSSD312360L	12	36	12	75	12	3

Unit : Inch

ENS3D20250700L	1/4	3/4	1/4	2 1/2	1/4	2
ENS3D20311000L	5/16	1	5/16	3	5/16	2
ENS3D20371100L	3/8	1 1/8	3/8	3	3/8	2
ENS3D30371100L	3/8	1 1/8	3/8	3	3/8	3
ENS3D20501500L	1/2	1 1/2	1/2	3	1/2	2
ENS3D30501500L	1/2	1 1/2	1/2	3	1/2	3



DIA Diamond Coating

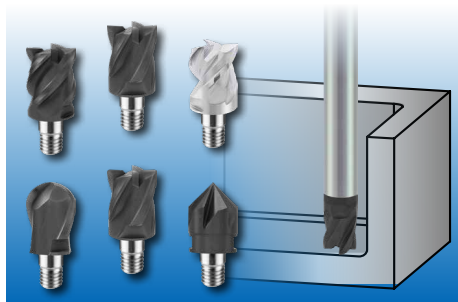
Unit : Metric

ENSSD206180D	6	18	6	60	6	2
ENSSD208240D	8	24	8	75	8	2
ENSSD210300D	10	30	10	75	10	2
ENSSD310300D	10	30	10	75	10	3
ENSSD212360D	12	36	12	75	12	2
ENSSD312360D	12	36	12	75	12	3

Unit : Inch

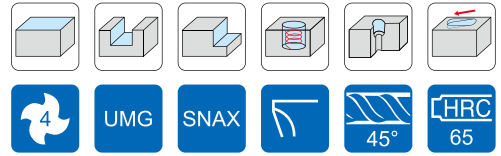
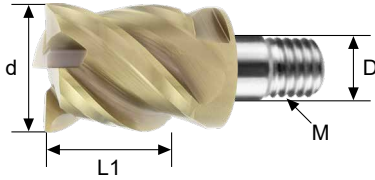
ENS3D20250700D	1/4	3/4	1/4	2 1/2	1/4	2
ENS3D20311000D	5/16	1	5/16	3	5/16	2
ENS3D20371100D	3/8	1 1/8	3/8	3	3/8	2
ENS3D30371100D	3/8	1 1/8	3/8	3	3/8	3
ENS3D20501500D	1/2	1 1/2	1/2	3	1/2	2
ENS3D30501500D	1/2	1 1/2	1/2	3	1/2	3

S910 Modular Endmills



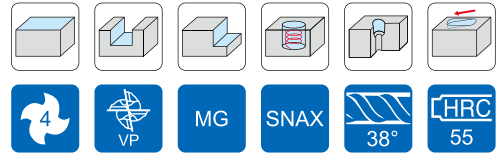
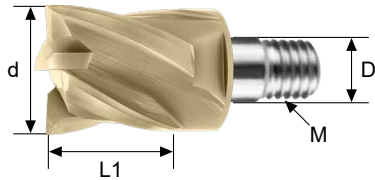
- ISO M thread, diameter 10~32mm.
- Carbide adapters max. lengths 300mm.
- More economical & flexible deep cutting solution.
- ANAX smooth coating.
- ISO M 牙設計，提供 10~32mm 外徑
- 鎢鋼抗震刀桿長度最大為 300mm
- 更經濟與彈性的深加工解決方案
- 含矽平滑塗層

EHSWH Square Solid Head (for hardened steel) 全鎢鋼平銑刀頭 (高硬鋼用)



Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHSWH410000S	10	10	6.5	M6	4
EHSWH412000S	12	12	6.5	M6	4
EHSWH416000S	16	16	8.5	M8	4
EHSWH420000S	20	20	10.5	M10	4

EPSWV Square Solid Head, Unequal spacing (for Exotic) 全鎢鋼平銑刀頭, 不等分割 (難切削材用)



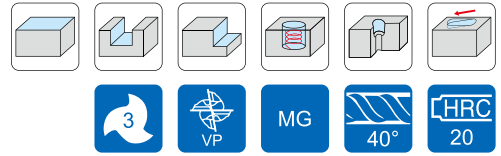
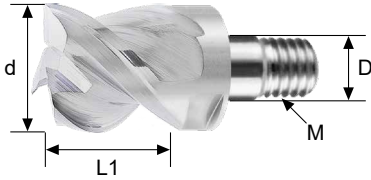
Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EPSWV410000S	10	10	6.5	M6	4
EPSWV412000S	12	12	6.5	M6	4
EPSWV416000S	16	16	8.5	M8	4
EPSWV420000S	20	20	10.5	M10	4

※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

S910 - Modular Endmills · Solid Head

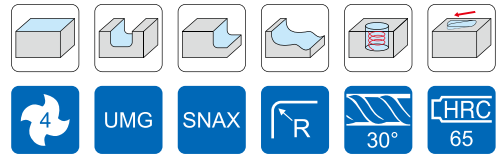
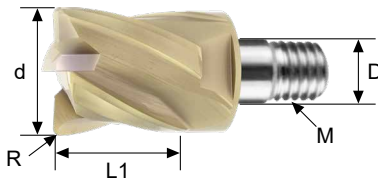
模組化銑刀 · 立銑刀頭

ENSWV Square Solid Head, Unequal spacing (for non-ferrous) 全鎢鋼平銑刀頭, 不等分割 (非鐵金屬用)



Order No.	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
ENSWV310000	10	10	6.5	M6	3
ENSWV312000	12	12	6.5	M6	3
ENSWV316000	16	16	8.5	M8	3
ENSWV320000	20	20	10.5	M10	3

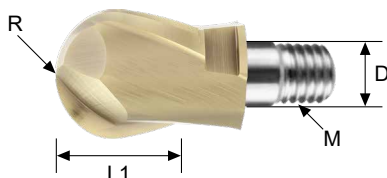
EHCWH Corner Radius Solid Head (for hardened steel) 全鎢鋼圓鼻銑刀頭 (高硬鋼用)



Order No.	Dia. (d)	Radius (R)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHCWH410005S	10	0.5R	10	6.5	M6	4
EHCWH410010S	10	1.0R	10	6.5	M6	4
EHCWH412005S	12	0.5R	12	6.5	M6	4
EHCWH412010S	12	1.0R	12	6.5	M6	4
EHCWH412020S	12	2.0R	12	6.5	M6	4
EHCWH412030S	12	3.0R	12	6.5	M6	4
EHCWH416010S	16	1.0R	16	8.5	M8	4
EHCWH416020S	16	2.0R	16	8.5	M8	4
EHCWH416030S	16	3.0R	16	8.5	M8	4
EHCWH416040S	16	4.0R	16	8.5	M8	4
EHCWH416050S	16	5.0R	16	8.5	M8	4
EHCWH420010S	20	1.0R	20	10.5	M10	4
EHCWH420020S	20	2.0R	20	10.5	M10	4
EHCWH420030S	20	3.0R	20	10.5	M10	4

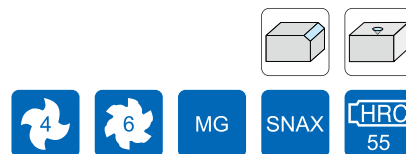
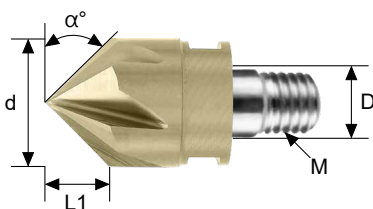
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿, 請參考刀具系統

EHBWH Ball Nose Solid Head (for hardened steel) 全鎢鋼球形銑刀頭 (高硬鋼用)



Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (D)	M (M)	Flutes (Z)
EHBWH210000S	5R	10	10	6.5	M6	2
EHBWH212000S	6R	12	12	6.5	M6	2
EHBWH216000S	8R	16	16	8.5	M8	2
EHBWH220000S	10R	20	20	10.5	M10	2

EHFWH Chamfer Solid Head (for universal) 全鎢鋼倒角刀頭 (泛用)



Order No.	Dia. (d)	CL (L1)	α°	ND (D)	M (M)	Flutes (Z)
EHFWH410090S	10	5	45°	6.5	M6	4
EHFWH412090S	12	6	45°	6.5	M6	4
EHFWH610090S	10	5	45°	6.5	M6	6
EHFWH612090S	12	6	45°	6.5	M6	6
EHFWH616090S	16	8	45°	8.5	M8	6

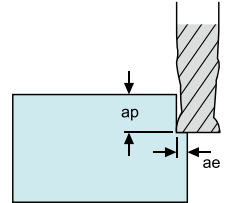
※ For screw-in type adapter, please refer to Tooling System 搭配鎖牙式刀桿，請參考刀具系統

Recommended Cutting Conditions 建議切削數據

EHSWH4, EHCWH4 (Square Head - 4F, Corner Radius Head - 4F)

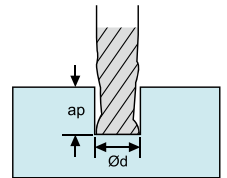
Shoulder Milling L/D ≤ 3 (Reference L/D ratio table, reduce vc, fz and ae value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	90 ~ 150(m/min)				80 ~ 120 (m/min)				70 ~ 100 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	3820	0.05	8.0	2.0	3190	0.05	8.0	1.5	2390	0.05	8.0	1.0
12mm	3190	0.05	9.6	2.4	2650	0.05	9.6	1.8	2000	0.05	9.6	1.2
16mm	2390	0.06	12.8	3.2	2000	0.06	12.8	2.4	1500	0.06	12.8	1.6
20mm	1910	0.06	16.0	4.0	1600	0.06	16.0	3.0	1190	0.06	16.0	2.0



Slot Milling L/D ≤ 3 (Reference L/D ratio table, reduce vc and fz value)

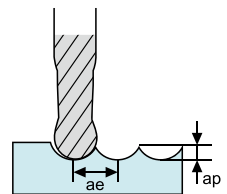
Material	Pre-Hardened Steels NAK80 CENA1			Hardened Steels SKD61,SKD11			Hardened Steels SKD11,SKH51		
Hardness	HRC 35~45			HRC 40~55			HRC 55~65		
VC	60 ~ 100(m/min)			50 ~ 90 (m/min)			40 ~ 80 (m/min)		
Dia	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)	RPM	fz (mm/tooth)	ap (mm)
10mm	2550	0.02	4.0	2390	0.02	4.0	1900	0.02	4.0
12mm	2120	0.02	4.8	2000	0.02	4.8	1590	0.02	4.8
16mm	1590	0.03	6.4	1490	0.03	6.4	1190	0.03	6.4
20mm	1275	0.03	8.0	1190	0.03	8.0	950	0.03	8.0



EHBWH2 (Ball Nose Head - 2F)

L/D ≤ 3 (Reference L/D ratio table, reduce vc and fz value)

Material	Pre-Hardened Steels NAK80 CENA1				Hardened Steels SKD61,SKD11				Hardened Steels SKD11,SKH51			
Hardness	HRC 35~45				HRC 40~55				HRC 55~65			
VC	100 ~ 190(m/min)				90 ~ 160 (m/min)				70 ~ 140 (m/min)			
Dia	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)	RPM	fz (mm/tooth)	ap (mm)	ae (mm)
10mm	4620	0.1	0.7	2	3980	0.05	0.4	1.5	3345	0.02	0.2	1.0
12mm	3850	0.1	0.84	2.4	3320	0.05	0.5	1.8	2790	0.02	0.2	1.2
16mm	2885	0.15	1.12	3.2	2485	0.075	0.64	2.4	2090	0.03	0.3	1.6
20mm	2300	0.2	1.4	4.0	2000	0.1	0.8	3.0	1670	0.04	0.4	2.0



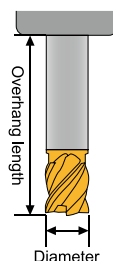
How to set cutting conditions on different overhang length

如何設置不同懸伸長度的切削參數

The recommended cutting condition is depended by the L/D factor.

L/D ratio table :

L/D	VC (m/min)	fz (mm/t)	ae (mm)
2 ~ 3	100%	100%	100%
4 ~ 5	70%	80%	50%
6 ~ 7	50%	70%	30%
8 ~ 9	40%	60%	20%



EX :

Tool : Ød=12mm Square Head
Overhang length : 50mm
L/D : 50/12 = 4.16
Material HRC : 35 ~ 45
Application : Shoulder Milling

Cutting condition is recommended as :

$Vc = 120 * 70\% = 84 \text{ m/min}$
 $fz = 0.05 * 80\% = 0.04 \text{ mm/t}$
 $ap = 9.6 \text{ mm}$
 $max \text{ ae} = 2.4 * 50\% = 1.2 \text{ mm}$

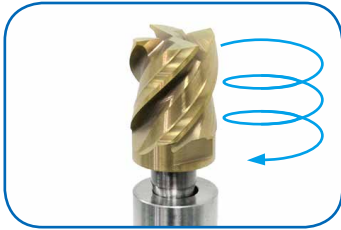
S910 - Modular Endmills Installation

安裝模組化銑刀

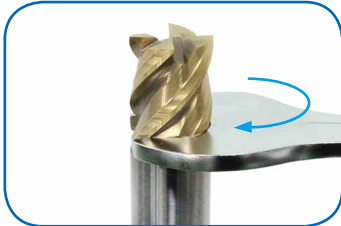
How to install the Modular Solid Head 如何安裝全鎢鋼銑刀頭至抗震刀桿



1. Screw the adapter to the holder and clean.
將抗震刀桿鎖在刀把上



2. Screw the Solid Head to the adapter.
將全鎢鋼銑刀頭鎖在抗震刀桿上

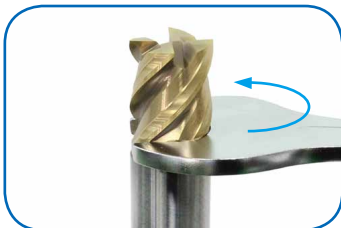


3. Use the spanner to screw the Solid Head.
使用板手鎖緊全鎢鋼銑刀頭



4. Complete installation.
完成安裝

How to uninstall the Modular Solid Head 如何拆卸全鎢鋼銑刀頭



When uninstall the Solid head, please push the spanner lightly for avoiding the neck broken.
拆卸全鎢鋼銑刀頭時，請輕輕推動板手，避免刀頭頸部斷裂

Recommended Torque 建議板手扭力值

Suitable Modular Solid Head Diameter	Recommended Clamping Torque (N · m)
10mm	10
12mm	10
16mm	12
20mm	12

S930 Barrel Endmills



- High performance profile cutting for 5-axis machine.
- Provide larger axial depth of cut, improve machining efficiency.
- Optimal surface finish and tool life.
- ANAX smooth coating.
- 高效能 5 軸輪廓加工銑刀
- 提供更大的軸向切削深度，提高加工效率
- 更佳的表面光潔度和刀具壽命
- 含鉻平滑塗層

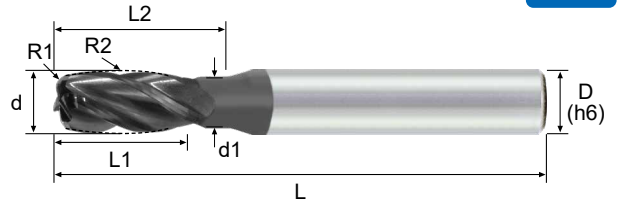
S930 Barrel Endmills - Barrel Shape · 4F

酒桶銑刀 - 酒桶形 · 4 刃

EBASB Series

ASIA
(Metric)

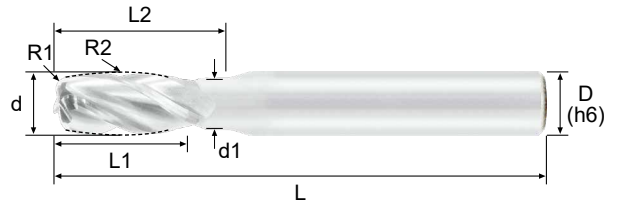
- For alloy steel, stainless steel, and high temperature alloy milling.
- 適用於合金鋼，不鏽鋼以及高溫合金加工



Order No.	d	R1	R2	L1	L2	d1	L	D	Flutes (z)
EBASB41010600A	10	1R	60R	21.5	30	8	75	10	4
EBASB41210700A	12	1R	70R	23	36	10	75	12	4

EBNSB Series

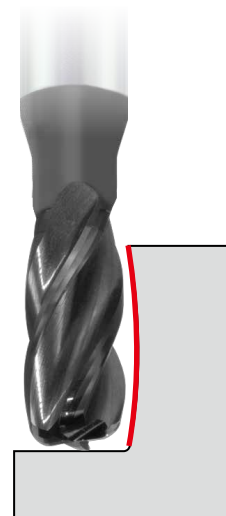
- For aluminum alloy milling.
- 適用於鋁合金加工



Order No.	d	R1	R2	L1	L2	d1	L	D	Flutes (z)
EBNSB41010600	10	1R	60R	21.5	30	8	75	10	4
EBNSB41210700	12	1R	70R	23	36	10	75	12	4

Barrel shape has a continuous double radii along the length of cut and a reduced neck, suitable for side profile milling.

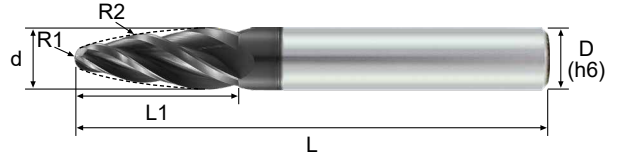
酒桶形酒桶銑刀沿著刃長具有 2 個 R 角和頸部，適用側邊曲面成形加工



EBASO Series

ASIA
(Metric)

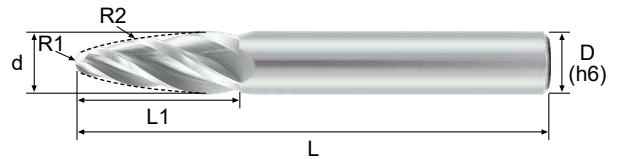
- For alloy steel, stainless steel, and high temperature alloy milling.
- 適用於合金鋼，不鏽鋼以及高溫合金加工



Order No.	d	R1	R2	L1	L	D	Flutes (z)
EBASO30610950A	6	1R	95R	22	60	6	3
EBASO30810900A	8	1R	90R	25	75	8	3
EBASO41020850A	10	2R	85R	26	75	10	4
EBASO41220800A	12	2R	80R	28	75	12	4

EBNSO Series

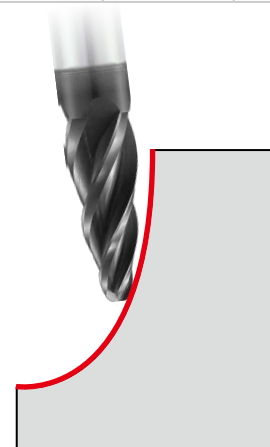
- For aluminum alloy milling.
- 適用於鋁合金加工



Order No.	d	R1	R2	L1	L	D	Flutes (z)
EBNSO30610950	6	1R	95R	22	60	6	3
EBNSO30810900	8	1R	90R	25	75	8	3
EBNSO41020850	10	2R	85R	26	75	10	4
EBNSO41220800	12	2R	80R	28	75	12	4

Oval shape has a side cutting geometry with a continuous radius ending at the cutting diameter, suitable for bevel face profile milling.

橢圓形酒桶銑刀具有側邊加工幾何設計，適用斜面成形加工



EBASL Series

ASIA
(Metric)

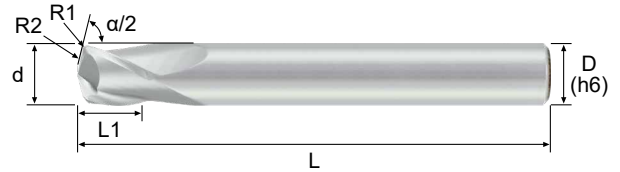
- For alloy steel, stainless steel, and high temperature alloy milling.
- 適用於合金鋼，不鏽鋼以及高溫合金加工



Order No.	$\alpha/2$	d	R1	R2	L1	L	D	Flutes (z)
EBASL30605100A	70°	6	0.50R	10R	6	60	6	3
EBASL30807150A	70°	8	0.75R	15R	8	75	8	3
EBASL31010200A	70°	10	1.00R	20R	10	75	10	3
EBASL31212250A	70°	12	1.25R	25R	12	75	12	3

EBNSL Series

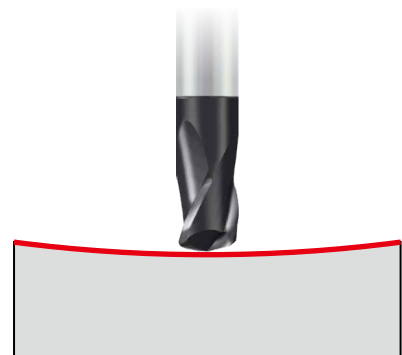
- For aluminum alloy milling.
- 適用於鋁合金加工



Order No.	$\alpha/2$	d	R1	R2	L1	L	D	Flutes (z)
EBNSL30605100	70°	6	0.50R	10R	6	60	6	3
EBNSL30807150	70°	8	0.75R	15R	8	75	8	3
EBNSL31010200	70°	10	1.00R	20R	10	75	10	3
EBNSL31212250	70°	12	1.25R	25R	12	75	12	3

Lens shape has a convex face cutting geometry, for contoured floor milling.

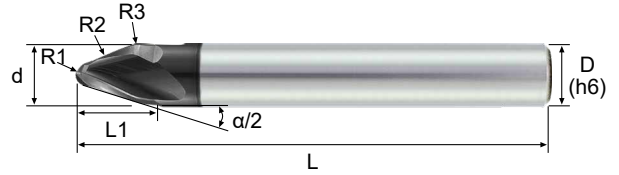
透鏡形酒桶銑刀具有凸面切削幾何形狀，可用於輪廓地板加工



EBAST Series

ASIA
(Metric)

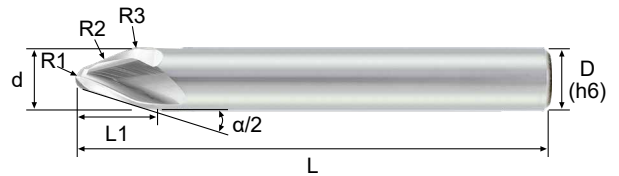
- For alloy steel, stainless steel, and high temperature alloy milling.
- 適用於合金鋼，不鏽鋼以及高溫合金加工



Order No.	$\alpha/2$	d	R1	R2	R3	L1	L	D	Flutes (z)
EBAST30610251A	17.5°	6	1.0R	250R	3.0R	9.5	60	6	3
EBAST30815252A	20°	8	1.5R	250R	4.0R	10.5	75	8	3
EBAST31020252A	20°	10	2.0R	250R	5.0R	12.5	75	10	3
EBAST31230252A	20°	12	3.0R	250R	6.0R	13.5	75	12	3

EBNST Series

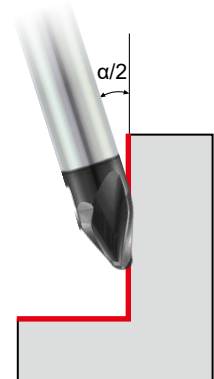
- For aluminum alloy milling.
- 適用於鋁合金加工



Order No.	$\alpha/2$	d	R1	R2	R3	L1	L	D	Flutes (z)
EBNST30610251	17.5°	6	1.0R	250R	3.0R	9.5	60	6	3
EBNST30815252	20°	8	1.5R	250R	4.0R	10.5	75	8	3
EBNST31020252	20°	10	2.0R	250R	5.0R	12.5	75	10	3
EBNST31230252	20°	12	3.0R	250R	6.0R	13.5	75	12	3

ST Taper shape has $\alpha/2 < 45^\circ$ geometry design for steep walls milling.

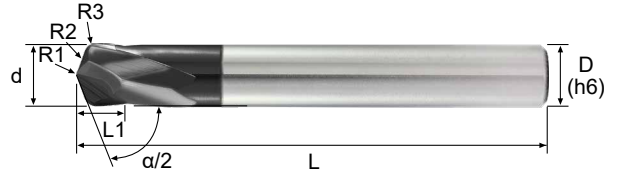
圓錐形酒桶銑刀具有 $\alpha/2 < 45^\circ$ 的端部幾何設計，適用於陡壁加工



EBAHT Series

ASIA
(Metric)

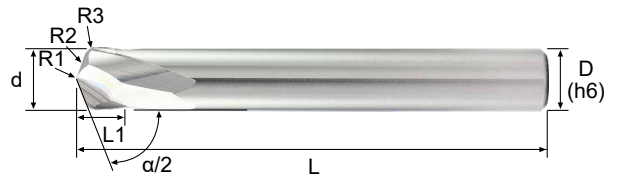
- For alloy steel, stainless steel, and high temperature alloy milling.
- 適用於合金鋼，不鏽鋼以及高溫合金加工



Order No.	$\alpha/2$	d	R1	R2	R3	L1	L	D	Flutes (z)
EBAHT21010206A	60°	10	1.0R	200R	1.5R	6.0	75	10	2

EBNHT Series

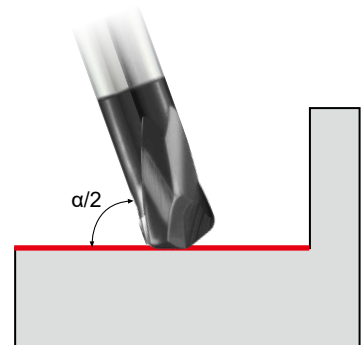
- For aluminum alloy milling.
- 適用於鋁合金加工



Order No.	$\alpha/2$	d	R1	R2	R3	L1	L	D	Flutes (z)
EBNHT21010206	60°	10	1.0R	200R	1.5R	6.0	75	10	2

HT Taper shape has $\alpha/2 > 45^\circ$ end cutting geometry design for workpiece floors milling.

短錐形酒桶銑刀具有 $\alpha/2 > 45^\circ$ 的端部幾何設計，適用於工件底板加工

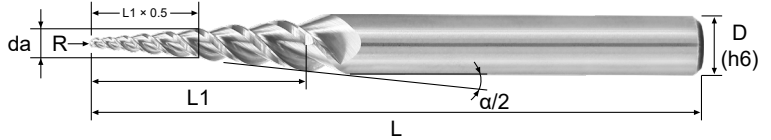


S930 Barrel Endmills - FT Taper Shape · 3F 酒桶銑刀 - FT 斜度球形 · 3 刃

EBNFT Series



- For aluminum alloy milling.
- 適用於鋁合金加工

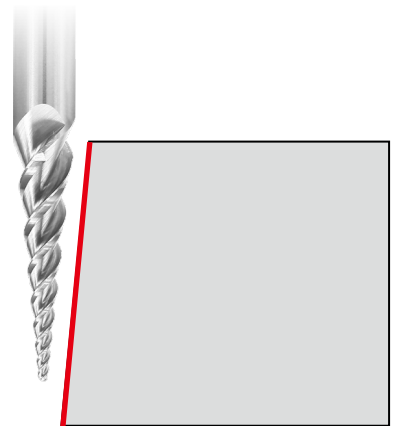


Order No.	R	$\alpha/2$	L1	L	da	D	Flutes (z)
EBNFT30605006	0.5R	6°	20	60	3.00	6	3
EBNFT30610006	1.0R	6°	19	60	3.80	6	3
EBNFT30605008	0.5R	8°	18	60	3.40	6	3
EBNFT30610008	1.0R	8°	15	60	3.85	6	3

※ The da value is average diameter at 0.5*L1

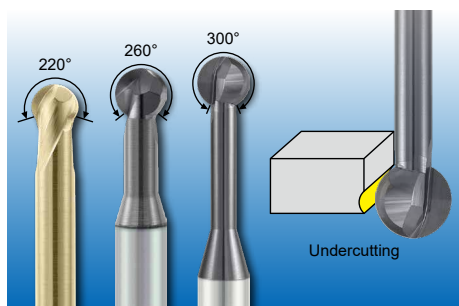
FT Taper shape has long cutting length design, for deep cavity milling.

斜度球形銑刀具有較長的切削刃設計，可用於深腔加工



Solid End Milling

S950 Spherical Ball Endmills



- 220°, 260°, 300° spherical ball design.
- Suitable for undercutting and deburring.
- Excellent surface finishing of vertical machining.
- ANAX smooth coating, SNAX smooth coating.

- 220°, 260°, 300°全球頭球設計
- 適用於底切及去毛刺加工
- 在垂直加工上有更佳的光潔度
- ANAX 為含鉻平滑塗層, SNAX 為含矽平滑塗層

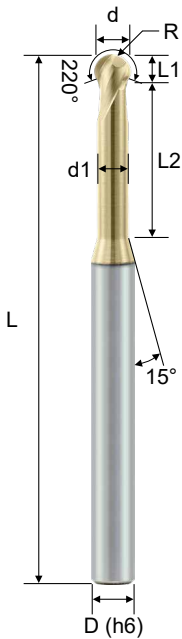
S950 - Spherical Ball 220° · 2F

球型銑刀 · 220°全球頭球型 · 2刃

- 220° spherical ball design.
- Suitable for undercutting, deburring and complex geometries machining in multi-axis machine.
- Excellent surface finishing of vertical machining.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.

ASIA
(Metric)

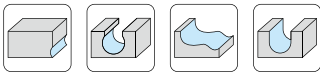
EHRRC



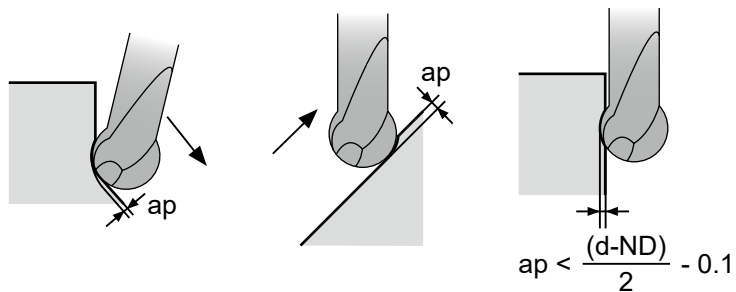
Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (d1)	NL (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHRRC2020221S	1.0R	2	1.4	1.7	3.6	60	6	2
EHRRC2020222S	1.0R	2	1.4	1.7	8.6	60	6	2
EHRRC2030221S	1.5R	3	2.0	2.6	6	75	6	2
EHRRC2030222S	1.5R	3	2.0	2.6	13	75	6	2
EHRRC2040221S	2.0R	4	2.7	3.4	7.3	75	6	2
EHRRC2040222S	2.0R	4	2.7	3.4	17.3	75	6	2
EHRRC2050221S	2.5R	5	3.4	4.3	8.6	75	6	2
EHRRC2050222S	2.5R	5	3.4	4.3	21.6	75	6	2
EHRRC2060221S	3.0R	6	4.3	5.1	10.7	75	6	2
EHRRC2060222S	3.0R	6	4.3	5.1	25.7	75	6	2
EHRRC2080221S	4.0R	8	5.6	6.8	14.4	75	8	2
EHRRC2100221S	5.0R	10	7.0	8.5	18	75	10	2
EHRRC2120221S	6.0R	12	8.4	10.2	21.6	75	12	2

※ To choose uncoated tools for aluminum alloy machining.

Material	Carbon Steel / Alloy Steel / Cast iron	Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)	Stainless Steel (SUS304, SUS316)	Aluminum Alloy	Hardened Steel										
Hardness	HRC < 30	HRC 30 ~ 45	-	-	HRC 45 ~ 60										
VC	220 ~ 300 m/min	150 ~ 220 m/min	70 ~ 150 m/min	280 ~ 360 m/min	130 ~ 150 m/min										
R (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)
1.0R	40,000	1,600	0.04	30,000	1,200	0.04	24,000	960	0.04	51,000	2,400	0.04	24,000	960	0.04
1.5R	32,000	1,920	0.06	23,000	1,380	0.06	16,000	960	0.06	34,000	2,880	0.06	16,000	960	0.06
2.0R	24,000	1,920	0.08	17,000	1,360	0.08	12,000	960	0.08	25,500	2,880	0.08	12,000	960	0.08
2.5R	19,200	1,920	0.10	14,000	1,400	0.10	9,600	960	0.10	20,400	2,880	0.10	9,600	960	0.10
3.0R	16,000	1,920	0.12	12,000	1,440	0.12	8,000	960	0.12	17,000	2,880	0.12	8,000	960	0.12



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020



Solid End Milling

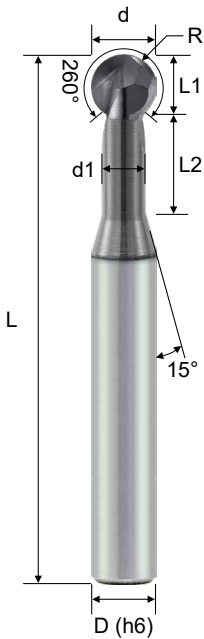
S950 - Spherical Ball 260° · 2F

球型銑刀 · 260°全球頭球型 · 2刃

- 260° spherical ball design.
- Suitable for undercutting, deburring and complex geometries machining in multi-axis machine.
- Excellent surface finishing of vertical machining.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.



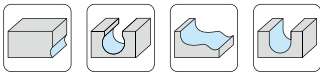
EPRRC



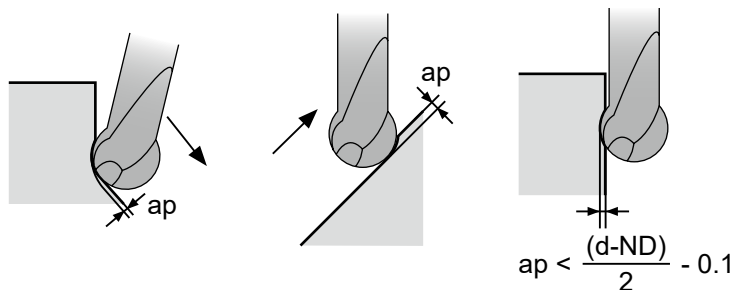
Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (d1)	NL (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPRRC2420261A	1.0R	2	1.63	1.53	3	50	4	2
EPRRC2430261A	1.5R	3	2.46	2.3	3	50	4	2
EPRRC2440261A	2.0R	4	3.3	3.06	5	50	4	2
EPRRC2050261A	2.5R	5	4.1	3.83	5	50	6	2
EPRRC2060261A	3.0R	6	4.93	4.6	5	50	6	2
EPRRC2080261A	4.0R	8	6.58	6.11	6	60	8	2
EPRRC2100261A	5.0R	10	8.22	7.65	8	75	10	2
EPRRC2120261A	6.0R	12	9.86	9.2	10	75	12	2
EPRRC2160261A	8.0R	16	13.37	11.86	10	100	16	2

※ To choose uncoated tools for aluminum alloy machining.

Material	Carbon Steel / Alloy Steel / Cast iron			Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)			Stainless Steel (SUS304, SUS316)			Aluminum Alloy			Hardened Steel		
Hardness	HRC < 30			HRC 30 ~ 45			-			-			HRC 45 ~ 60		
VC	220 ~ 300 m/min			150 ~ 220 m/min			70 ~ 150 m/min			280 ~ 360 m/min			130 ~ 150 m/min		
R (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)
1.0R	40,000	1,200	0.04	30,000	900	0.04	24,000	720	0.04	51,000	1,800	0.04	24,000	720	0.04
1.5R	32,000	1,440	0.06	23,000	1,035	0.06	16,000	720	0.06	34,000	2,160	0.06	16,000	720	0.06
2.0R	24,000	1,440	0.08	17,000	1,020	0.08	12,000	720	0.08	25,500	2,160	0.08	12,000	720	0.08
2.5R	19,200	1,440	0.10	14,000	1,050	0.10	9,600	720	0.10	20,400	2,160	0.10	9,600	720	0.10
3.0R	16,000	1,440	0.12	12,000	1,080	0.12	8,000	720	0.12	17,000	2,160	0.12	8,000	720	0.12



R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020



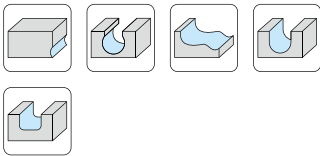
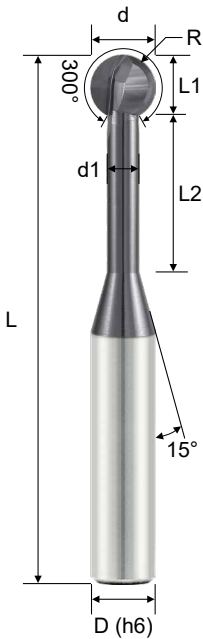
S950 - Spherical Ball 300° · 2F

球型銑刀 · 300°全球頭球型 · 2刃

- 300° spherical ball design.
- Suitable for undercutting, deburring and complex geometries machining in multi-axis machine.
- Excellent surface finishing of vertical machining.
- ANAX (Al, Ti, Cr, N) smooth coating provides a superior wear resistance and extend tool life.

ASIA
(Metric)

EPRRC

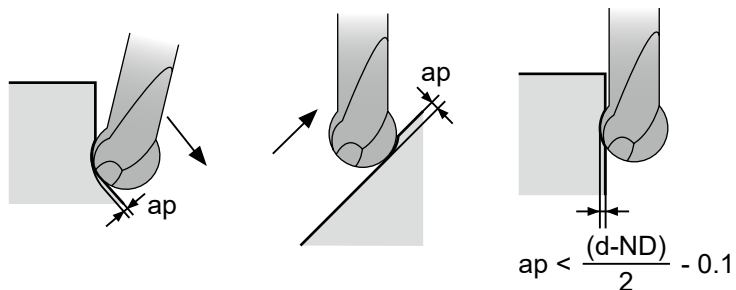


R Tolerance	
R ≤ 3	±0.015
R > 3	±0.020

Order No.	Radius (R)	Dia. (d)	CL (L1)	ND (d1)	NL (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPRRC2420301A	1.0R	2	1.9	0.95	3	50	4	2
EPRRC2440301A	2.0R	4	3.7	1.9	6	50	4	2
EPRRC2060301A	3.0R	6	5.56	2.85	9	50	6	2
EPRRC2080301A	4.0R	8	7.4	3.8	12	100	8	2
EPRRC2100301A	5.0R	10	9.3	4.75	15	100	10	2
EPRRC2120301A	6.0R	12	11.1	5.7	18	100	12	2

※ To choose uncoated tools for aluminum alloy machining.

Material	Carbon Steel / Alloy Steel / Cast iron			Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)			Stainless Steel (SUS304, SUS316)			Aluminum Alloy			Hardened Steel		
Hardness	HRC < 30			HRC 30 ~ 45			-			-			HRC 45 ~ 60		
VC	220 ~ 300 m/min			150 ~ 220 m/min			70 ~ 150 m/min			280 ~ 360 m/min			130 ~ 150 m/min		
R (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)	RPM	Feed (mm/min)	ap (mm)
1.0R	40,000	780	0.04	30,000	585	0.04	24,000	470	0.04	51,000	1170	0.04	24,000	470	0.04
1.5R	32,000	936	0.06	23,000	675	0.06	16,000	470	0.06	34,000	1400	0.06	16,000	470	0.06
2.0R	24,000	936	0.08	17,000	665	0.08	12,000	470	0.08	25,500	1400	0.08	12,000	470	0.08
2.5R	19,200	936	0.10	14,000	685	0.10	9,600	470	0.10	20,400	1400	0.10	9,600	470	0.10
3.0R	16,000	936	0.12	12,000	705	0.12	8,000	470	0.12	17,000	1400	0.12	8,000	470	0.12



Solid End Milling

S960 Engraving & Chamfering Endmills



- For alloy steel, stainless steel, cast iron, hardened steel & aluminum.
- Flat tipped engraving end mill with 30°, 60° or 90° angle.
- Provide side, dovetail, front/back, round corner chamfering tools.
- 適用於合金鋼，不鏽鋼，鑄鐵，硬度鋼及鋁合金
- 平底雕刻銑刀，頂夾角有 30°、60°或 90°可選
- 提供側邊，鳩尾槽，上 / 下，內 R 倒角加工刀具

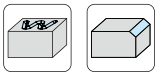
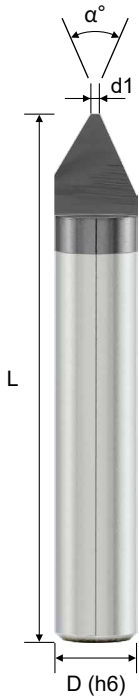
S960 - Engraving

雕刻銑刀

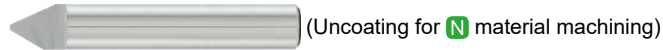
- Flat tipped engraving end mill with 30°, 60° or 90° angle.
- For steel, stainless steel, cast iron, aluminum alloy, titanium alloy and non-ferrous materials machining.
- TACO (Al, Ti, N) coating provide superior wear resistance.



EPESF



Order No.	Tip Dia. (d1)	Angle (α°)	OAL (L)	Shank (D)	Flutes (Z)
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EPESF1401030	0.1	30°	50	4	1
EPESF1402030	0.2	30°	50	4	1
EPESF1403030	0.3	30°	50	4	1
EPESF1405030	0.5	30°	50	4	1
EPESF1407030	0.7	30°	50	4	1
EPESF1403060	0.3	60°	50	4	1
EPESF1405060	0.5	60°	50	4	1
EPESF1407060	0.7	60°	50	4	1
EPESF1405090	0.5	90°	50	4	1
EPESF1407090	0.7	90°	50	4	1
EPESF1410090	1.0	90°	50	4	1
EPESF1415090	1.5	90°	50	4	1



EPESF1401030T	0.1	30°	50	4	1
EPESF1402030T	0.2	30°	50	4	1
EPESF1403030T	0.3	30°	50	4	1
EPESF1405030T	0.5	30°	50	4	1
EPESF1407030T	0.7	30°	50	4	1
EPESF1403060T	0.3	60°	50	4	1
EPESF1405060T	0.5	60°	50	4	1
EPESF1407060T	0.7	60°	50	4	1
EPESF1405090T	0.5	90°	50	4	1
EPESF1407090T	0.7	90°	50	4	1
EPESF1410090T	1.0	90°	50	4	1
EPESF1415090T	1.5	90°	50	4	1



Material	Carbon Steel	Stainless Steel	Cast Iron	Aluminum Alloys	Titanium Alloys	Plastic							
Vc	≥ 75 m/min												
Angle (α°)	Tip Dia. (d1)	RPM	F (mm/min)	RPM	F (mm/min)	RPM	F (mm/min)	RPM	F (mm/min)	RPM	F (mm/min)	RPM	F (mm/min)
30°	0.1~0.7	≥ 6000	60~90	≥ 6000	45~70	≥ 6000	100~150	≥ 6000	100~150	≥ 6000	45~70	≥ 6000	145~220
60°	0.3~0.7	≥ 6000	70~100	≥ 6000	60~90	≥ 6000	120~170	≥ 6000	120~170	≥ 6000	60~90	≥ 6000	180~260
90°	0.5~1.5	≥ 6000	90~120	≥ 6000	75~100	≥ 6000	150~200	≥ 6000	150~200	≥ 6000	75~100	≥ 6000	225~300
		ap ≤ 0.25											

Solid End Milling

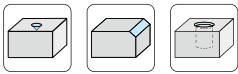
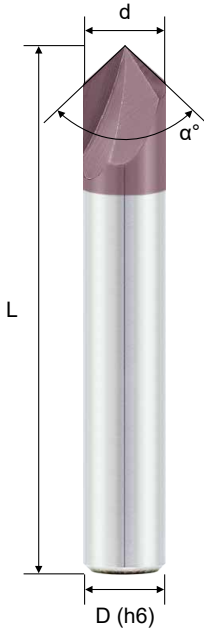
S960 - Chamfer Endmill · 2F

倒角銑刀 · 2 刃

- Sharp cutting edge design for milling machine or lathe chamfering.
- Chamfering angle is 45°.
- Suitable for alloy steel, stainless steel, cast iron, hardened steel & aluminum alloy.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.



EPFSA

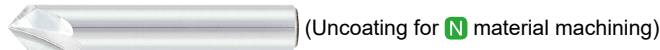


α° Tolerance	
α°	±1°

Order No.	Dia. (d)	OAL (L)	Shank (D)	Tip Angle α°	Flutes (Z)
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EPFSA233090U	3	50	3	90°	2
EPFSA244090U	4	50	4	90°	2
EPFSA206090U	6	50	6	90°	2
EPFSA208090U	8	60	8	90°	2
EPFSA210090U	10	75	10	90°	2
EPFSA212090U	12	75	12	90°	2



EPFSA233090	3	50	3	90°	2
EPFSA244090	4	50	4	90°	2
EPFSA206090	6	50	6	90°	2
EPFSA208090	8	60	8	90°	2
EPFSA210090	10	75	10	90°	2
EPFSA212090	12	75	12	90°	2

Material	Carbon Steel / Alloy Steel / Cast iron			Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)			Stainless Steel (SUS304, SUS316)			Hardened Steel			Aluminum Alloys		
Hardness	HRC < 30			HRC 30 ~ 40			-			HRC 40 ~ 55			-		
Vc	80 ~ 230 m/min			60 ~ 180 m/min			45 ~ 140 m/min			25 ~ 30 m/min			100 ~ 200 m/min		
Dia. (d)	fz (mm)	α = 90°		fz (mm)	α = 90°		fz (mm)	α = 90°		fz (mm)	α = 90°		fz (mm)	α = 90°	
		ap (mm)	ae (mm)		ap (mm)	ae (mm)		ap (mm)	ae (mm)		ap (mm)	ae (mm)		ap (mm)	ae (mm)
3mm	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2
4mm	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2	0.04	0.2	0.2
6mm	0.04	0.3	0.3	0.04	0.3	0.3	0.04	0.3	0.3	0.04	0.3	0.3	0.04	0.3	0.3
8mm	0.05	0.4	0.4	0.05	0.4	0.4	0.05	0.4	0.4	0.05	0.4	0.4	0.05	0.4	0.4
10mm	0.06	0.5	0.5	0.06	0.5	0.5	0.06	0.5	0.5	0.06	0.5	0.5	0.06	0.5	0.5
12mm	0.07	0.6	0.6	0.07	0.6	0.6	0.07	0.6	0.6	0.07	0.6	0.6	0.07	0.6	0.6

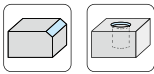
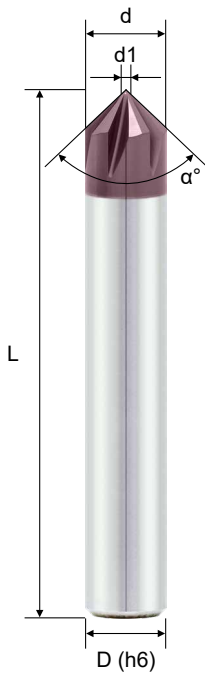
※ For machining on two sides, Feed rate reduce 20~30%.
For vertical plunging, Feed rate reduce 30~40%.

S960 - Chamfer Endmill · 4F / 5F / 6F 倒角銑刀 · 4刃 / 5刃 / 6刃

- Designed for chamfer milling.
- Chamfering angle can be divided into 30° or 45°.
- Suitable for alloy steel, stainless steel, cast iron & hardened steel.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.



EPFSA



α° Tolerance	
α°	±1°

Order No.	Dia. (d)	Tip Dia. (d1)	OAL (L)	Shank (D)	Tip Angle α°	Flutes (Z)
EPFSA444060U	4	0.5	50	4	60°	4
EPFSA406060U	6	1.0	60	6	60°	4
EPFSA508060U	8	1.5	60	8	60°	5
EPFSA610060U	10	1.5	75	10	60°	6
EPFSA612060U	12	2.0	75	12	60°	6
EPFSA444090U	4	0.5	50	4	90°	4
EPFSA406090U	6	1.0	60	6	90°	4
EPFSA508090U	8	1.5	60	8	90°	5
EPFSA610090U	10	1.5	75	10	90°	6
EPFSA612090U	12	2.0	75	12	90°	6

Material	Carbon Steel / Alloy Steel / Cast iron		Alloy Steel / Tool Steel / Pre-Hardened Steel (SCM, SKT, SKD)				Stainless Steel (SUS304, SUS316)				Hardened Steel									
	HRC < 30		HRC 30 ~ 40				-				HRC 40 ~ 55									
Hardness	HRC < 30		HRC 30 ~ 40				-				HRC 40 ~ 55									
Vc	80 ~ 230 m/min		60 ~ 180 m/min				45 ~ 140 m/min				25 ~ 30 m/min									
Dia. (d)	fz (mm)	α = 60°		α = 90°		α = 60°		α = 90°		α = 60°		α = 90°		α = 60°		α = 90°				
		ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)	ap (mm)	ae (mm)			
4mm	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2	0.04	0.30	0.2	0.2	0.2
6mm	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3	0.04	0.45	0.3	0.3	0.3
8mm	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4	0.05	0.60	0.4	0.4	0.4
10mm	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5	0.06	0.75	0.5	0.5	0.5
12mm	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6	0.07	0.90	0.6	0.6	0.6

※ Effective Cutter Diameter = (d + d1)/2
 For machining on two sides, Feed rate reduce 20~30%.
 For vertical plunging, Feed rate reduce 30~40%.

Solid End Milling

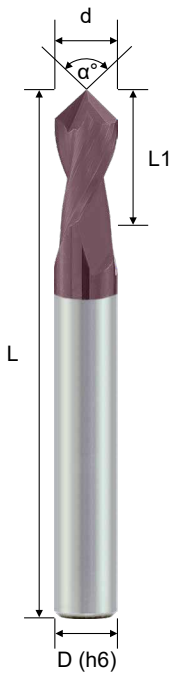
S960 - Drill Mills · 2F

倒角兼用銑刀 · 2 刃

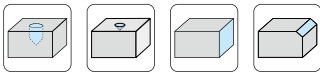
- Multiple application : drilling, chamfering, spotting, side milling, countersinking.
- Chamfering angle can be divided into 30°, 45° or 60°.
- Suitable for alloy steel, stainless steel and aluminum alloy.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.



EPFSC



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	α°	Flutes (Z)
EPFSC203060U	3	6	50	6	60°	2
EPFSC204060U	4	8	50	6	60°	2
EPFSC205060U	5	10	50	6	60°	2
EPFSC206060U	6	12	50	6	60°	2
EPFSC208060U	8	16	60	8	60°	2
EPFSC210060U	10	20	75	10	60°	2
EPFSC212060U	12	24	75	12	60°	2
EPFSC203090U	3	6	50	6	90°	2
EPFSC204090U	4	8	50	6	90°	2
EPFSC205090U	5	10	50	6	90°	2
EPFSC206090U	6	12	50	6	90°	2
EPFSC208090U	8	16	60	8	90°	2
EPFSC210090U	10	20	75	10	90°	2
EPFSC212090U	12	24	75	12	90°	2
EPFSC203012U	3	6	50	6	120°	2
EPFSC204012U	4	8	50	6	120°	2
EPFSC205012U	5	10	50	6	120°	2
EPFSC206012U	6	12	50	6	120°	2
EPFSC208012U	8	16	60	8	120°	2
EPFSC210012U	10	20	75	10	120°	2
EPFSC212012U	12	24	75	12	120°	2



Tolerance	
∅d ≤ 6	0 ~ -0.02
6 < ∅d ≤ 12	0 ~ -0.03
∅d > 12	0 ~ -0.04

Working Material	Normal Steel (S45C)		Alloy Steel / Tool Steel (SCM, SKT, SKD)		Stainless Steel (SUS304)		Aluminum Alloy					
Hardness	HRC < 20		HRC < 30~40		-		-					
Vc	60 m/min		50 m/min		40 m/min		100 m/min					
Dia. (d)	RPM	Feed (mm/min)		Feed (mm/min)		Feed (mm/min)		Feed (mm/min)				
		Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal			
3 mm	6400	25	50	5300	20	40	4200	20	40	10600	40	80
4 mm	4800	25	55	4000	20	45	3200	20	45	8000	40	85
6 mm	3200	25	60	2650	20	50	2100	20	50	5300	40	90
8 mm	2400	25	65	2000	20	55	1600	20	55	4000	40	110
10 mm	1900	25	70	1600	20	60	1300	20	60	3200	40	110
12 mm	1600	25	70	1350	20	60	1050	20	60	2700	40	120



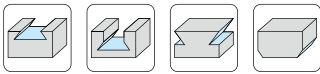
S960 - Dovetail Endmill · 4F

鳩尾槽銑刀 · 4 刃

- For dovetail slotting and side milling.
- Suitable for chamfering the bottom edge of the workpiece.
- Neck grinding is suitable for deep machining.
- Provide 30°, 60°, 90° and 120° included angle.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.



EPSDT



d Tolerance	
d ≤ 6	0 ~ -0.02
6 < d ≤ 12	0 ~ -0.03
d > 12	0 ~ -0.04

α° Tolerance	
α°	±1°

Order No.	Dia. (d)	α°	CL (L1)	NL (L2)	ND (d1)	OAL (L)	Shank (D)	Flutes (Z)
EPSDT40330030U	3	30°	2.0	3	2.0	50	6	4
EPSDT40360030U	3	60°	0.9	3	2.0	50	6	4
EPSDT40390030U	3	90°	0.8	3	1.5	50	6	4
EPSDT40312030U	3	120°	0.4	3	1.5	50	6	4
EPSDT40430040U	4	30°	2.6	4	2.6	50	6	4
EPSDT40460040U	4	60°	1.2	4	2.6	50	6	4
EPSDT40490040U	4	90°	1.0	4	2.0	50	6	4
EPSDT40412040U	4	120°	0.6	4	2.0	50	6	4
EPSDT40530050U	5	30°	3.3	5	3.3	50	6	4
EPSDT40560050U	5	60°	1.5	5	3.3	50	6	4
EPSDT40590050U	5	90°	1.3	5	2.5	50	6	4
EPSDT40512050U	5	120°	0.7	5	2.5	50	6	4
EPSDT40630060U	6	30°	3.9	6	3.9	50	6	4
EPSDT40660060U	6	60°	1.8	6	3.9	50	6	4
EPSDT40690060U	6	90°	1.5	6	3.0	50	6	4
EPSDT40612060U	6	120°	0.9	6	3.0	50	6	4
EPSDT40830080U	8	30°	5.2	8	5.2	60	8	4
EPSDT40860080U	8	60°	2.4	8	5.2	60	8	4
EPSDT40890080U	8	90°	2.0	8	4.0	60	8	4
EPSDT40812080U	8	120°	1.2	8	4.0	60	8	4
EPSDT41030100U	10	30°	6.5	10	6.5	75	10	4
EPSDT41060100U	10	60°	3.0	10	6.5	75	10	4
EPSDT41090100U	10	90°	2.5	10	5.0	75	10	4
EPSDT41012100U	10	120°	1.4	10	5.0	75	10	4
EPSDT41230120U	12	30°	7.8	12	7.8	75	12	4
EPSDT41260120U	12	60°	3.6	12	7.8	75	12	4
EPSDT41290120U	12	90°	3.0	12	6.0	75	12	4
EPSDT41212120U	12	120°	1.7	12	6.0	75	12	4

※ α° < 90°, helix angle = 15° ; α° ≥ 90°, helix angle = 0°.

Working Material	Carbon / Alloy steel (< HRC 30)		Stainless Steel		Aluminum Alloys	
	Vc	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
	25 - 30 - 35 m/min		20 - 25 - 30 m/min		50 - 60 - 70 m/min	
Diameter (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
4mm	2400	96	2000	77	4800	125
6mm	1600	96	1350	77	3200	125
8mm	1200	90	1000	72	2400	117
10mm	960	85	800	68	2000	111
12mm	800	85	670	68	1600	111

※If α° ≤ 90°, increase Vc and feed 30%.

Solid End Milling

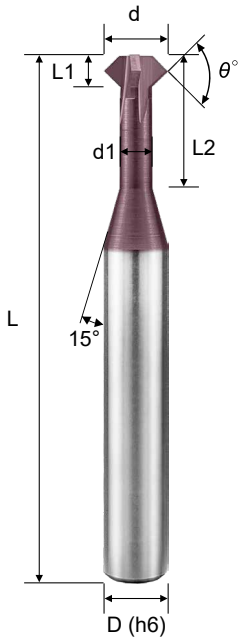
S960 - Front Back Chamfer Endmill · 4F

上下倒角銑刀 · 4 刃

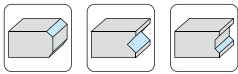
- For front / back chamfering.
- Suitable for alloy steel, stainless steel and aluminum alloy.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.



EPTSV



Order No.	Dia. (d)	Nd (d1)	Angle (θ)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EPTSV404090U	4	2.0	90°	2.0	8	50	6	4
EPTSV405090U	5	2.5	90°	2.4	10	50	6	4
EPTSV406090U	6	3.0	90°	2.8	12	60	6	4
EPTSV408090U	8	4.0	90°	3.8	16	60	8	4
EPTSV410090U	10	5.0	90°	4.8	20	75	10	4



α° Tolerance	
α°	±1°

Working Material	Carbon / Alloy steel (< HRC 30)		Stainless Steel		Aluminum Alloys	
	Vc	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
Vc	25 - 30 - 35 m/min		20 - 25 - 30 m/min		50 - 60 - 70 m/min	
Diameter (d)	RPM	Feed (mm/min)	RPM	Feed (mm/min)	RPM	Feed (mm/min)
4mm	2400	96	2000	77	4800	125
6mm	1600	96	1350	77	3200	125
8mm	1200	90	1000	72	2400	117
10mm	960	85	800	68	2000	111
12mm	800	85	670	68	1600	111

※If α° ≤ 90°, increase Vc and feed 30%.

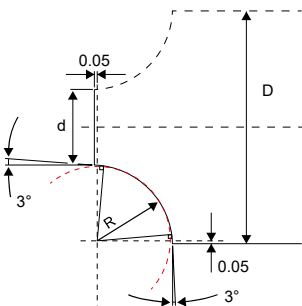
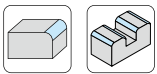
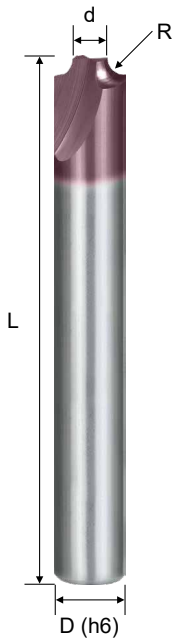
S960 - Inner Radius Endmill · 2F / 4F

內 R 角銑刀 · 2 刃 / 4 刃

- Inner radius tools are suitable for chamfering with round corner application.
- Suitable for alloy steel, stainless steel, cast iron & hardened steel.
- UNICO (Ti, Al, N) coating provides excellent wear resistance.

ASIA
(Metric)

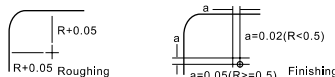
EPISA



Order No.	Radius (R)	Dia. (d)	OAL (L)	Shank (D)	Flutes (Z)
EPISA242905U	0.5R	2.9	50	4	2
EPISA204905U	0.5R	4.9	50	6	2
EPISA241910U	1.0R	1.9	50	4	2
EPISA203910U	1.0R	3.9	50	6	2
EPISA205910U	1.0R	5.9	60	8	2
EPISA204915U	1.5R	4.9	60	8	2
EPISA205920U	2.0R	5.9	75	10	2
EPISA204925U	2.5R	4.9	75	10	2
EPISA205930U	3.0R	5.9	75	12	2
EPISA203940U	4.0R	3.9	75	12	2
EPISA205950U	5.0R	5.9	75	16	2
EPISA203960U	6.0R	3.9	75	16	2

EPISA442905U	0.5R	2.9	50	4	4
EPISA404905U	0.5R	4.9	50	6	4
EPISA441910U	1.0R	1.9	50	4	4
EPISA403910U	1.0R	3.9	50	6	4
EPISA405910U	1.0R	5.9	60	8	4
EPISA404915U	1.5R	4.9	60	8	4
EPISA405920U	2.0R	5.9	75	10	4
EPISA404925U	2.5R	4.9	75	10	4
EPISA405930U	3.0R	5.9	75	12	4
EPISA403940U	4.0R	3.9	75	12	4
EPISA405950U	5.0R	5.9	75	16	4
EPISA403960U	6.0R	3.9	75	16	4

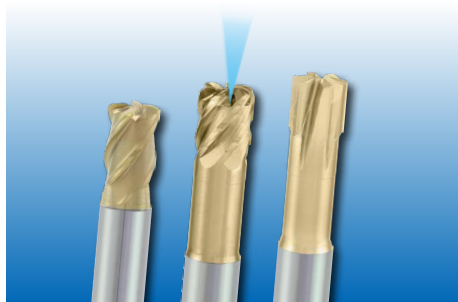
Working Material	CARBON STEEL			ALLOY STEEL / TOOL STEEL			HARDENED STEEL		
Hardness	HRC < 20			HRC 30 ~ 40			HRC 40~50		
Vc	30~40 m/min			20~30 m/min			15~25 m/min		
Diameter (d)	R.P.M	Roughing Feed (mm/min)	Finishing Feed (mm/min)	R.P.M	Roughing Feed (mm/min)	Finishing Feed (mm/min)	R.P.M	Roughing Feed (mm/min)	Finishing Feed (mm/min)
0.50R	8,800	50	80	6,400	40	55	5,100	30	50
0.75R	7,200	50	80	5,100	40	55	4,100	30	50
1.00R	5,000	50	80	3,500	40	55	3,400	30	50
1.25R	4,300	50	80	3,100	40	55	2,900	30	50
1.50R	3,000	50	80	2,200	40	55	2,600	30	50
2.00R	2,600	50	80	1,900	40	55	2,200	30	50
2.50R	2,200	50	80	1,800	40	55	2,000	30	50
3.00R	2,000	50	80	1,600	40	55	1,700	30	50
4.00R	1,500	50	80	1,200	40	55	1,300	30	50
5.00R	1,300	50	80	960	40	55	1,000	30	50
6.00R	1,200	50	80	880	40	55	900	30	50



- Divide the cutting depth into several time paths.
- Use cutting fluid.

Solid End Milling

S970 DuoFeed Endmills



- Duotec design for surface high feed milling.
- Provide center internal coolant hole endmill.
- SNAX smooth coating

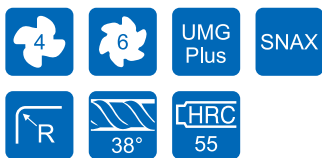
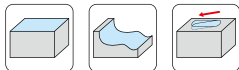
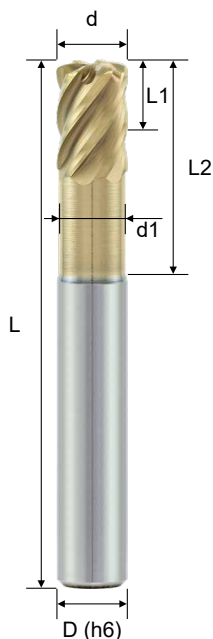
- Duotec 設計用於高進給面銑
- 提供含中心內出水孔銑刀
- SNAX 為含矽平滑塗層

S970 - DouFeed EndMill · 4F / 6F

高進給銑刀 · 4刃 / 6刃

- Duotec design and multi-flute geometry design.
- High feed and high metal removal rate in surface milling.
- UMG Carbide substrate possess high TRS and good wear resistance.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.

EHWSA



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

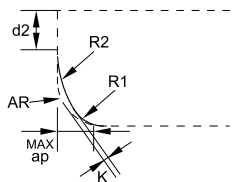
Order No.	Dia. (d)	ND (d1)	BD (d2)	ap (max)	Radius		Approx Radius (AR)	Uncut (K)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
					(R1)	(R2)							



EHWSA403101S	3.175(1/8")	-	0.4	0.18	0.3	2.0	0.64	0.08	3.175	-	63.5	6.35	4
EHWSA404701S	4.763(3/16")	-	0.6	0.30	0.5	3.0	0.815	0.17	4.763	-	63.5	6.35	4
EHWSA406001S	6	-	0.75	0.35	0.6	3.5	0.92	0.21	6	-	60	6	4
EHWSA406301S	6.35(1/4")	-	0.79	0.35	0.6	3.5	0.92	0.21	6.35	-	63.5	6.35	4
EHWSA408001S	8	-	1.6	0.40	0.8	4.5	1.16	0.22	8	-	75	8	4
EHWSA409501S	9.525(3/8")	-	1.9	0.55	1.0	5.5	1.47	0.28	9.525	-	76.2	9.52	4
EHWSA410001S	10	-	2.0	0.55	1.0	5.5	1.47	0.28	10	-	75	10	4
EHWSA412001S	12	-	2.4	0.70	1.2	6.5	1.77	0.34	12	-	75	12	4
EHWSA412701S	12.7(1/2")	-	2.5	0.70	1.2	6.5	1.77	0.34	12.7	-	76.2	12.7	4
EHWSA616001S	16	-	3.2	0.90	1.6	8.5	2.35	0.43	16	-	100	16	6



EHWSA406000S	6	5.6	0.75	0.35	0.6	3.5	0.92	0.21	9	18	60	6	4
EHWSA608000S	8	7.6	1.6	0.40	0.8	4.5	1.16	0.22	12	24	75	8	6
EHWSA610000S	10	9.4	2.0	0.55	1.0	5.5	1.47	0.28	15	30	75	10	6
EHWSA612000S	12	11.4	2.4	0.70	1.2	6.5	1.77	0.34	18	36	75	12	6

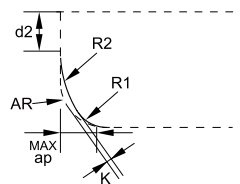
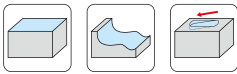
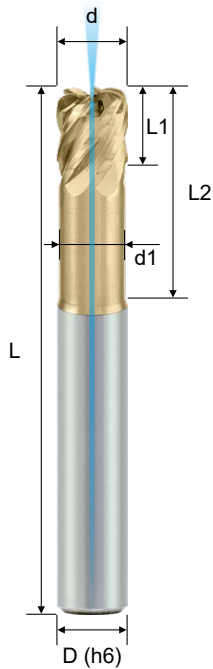


Working Material	Carbon / Alloy steel (< HRC 30)		Carbon / Alloy steel (HRC 35~45)		Stainless steel / Hardened steel (HRC 40~55)		High temperature alloy / Hardened steel (HRC 55~62)	
	Vc		Vc		Vc		Vc	
Vc	150 m/min		135 m/min		120 m/min		80 m/min	
Diameter (d)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)
6mm	8000	0.35	7200	0.35	6400	0.35	4300	0.35
8mm	6000	0.35	5400	0.35	4800	0.35	3200	0.35
10mm	4800	0.40	4300	0.40	3800	0.40	2600	0.40
12mm	4000	0.45	3600	0.45	3200	0.45	2100	0.45
		$\frac{ap}{0.04d} \quad \frac{ae}{0.5d}$ d ≤ 6		$\frac{ap}{0.04d} \quad \frac{ae}{0.6d}$ d > 6				

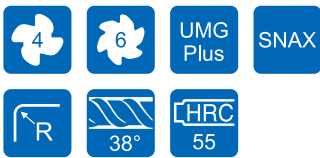
S970 - DouFeed EndMill · Internal Coolant · 4F / 6F 高進給銑刀 · 中心出水型 · 4刃 / 6刃

- Duotec design and multi-flute geometry design.
- High feed and high metal removal rate in surface milling.
- UMG Carbide substrate possess high TRS and good wear resistance.
- SNAX (Al, Ti, Si, N) smooth coating provides excellent wear resistance and low friction.
- With center internal coolant hole improve tool life.

EHWCA



Order No.	Dia. (d)	ND (d1)	BD (d2)	ap (max)	Radius		Approx Radius (AR)	Uncut (K)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
					(R1)	(R2)							
EHWCA406000S	6	5.6	0.75	0.35	0.6	3.5	0.92	0.21	9	18	60	6	4
EHWCA608000S	8	7.6	1.6	0.40	0.8	4.5	1.16	0.22	12	24	75	8	6
EHWCA610000S	10	9.4	2.0	0.55	1.0	5.5	1.47	0.28	15	30	75	10	6
EHWCA612000S	12	11.4	2.4	0.70	1.2	6.5	1.77	0.34	18	36	75	12	6



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

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

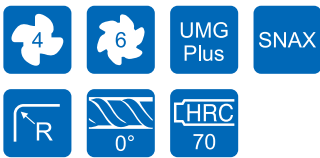
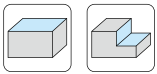
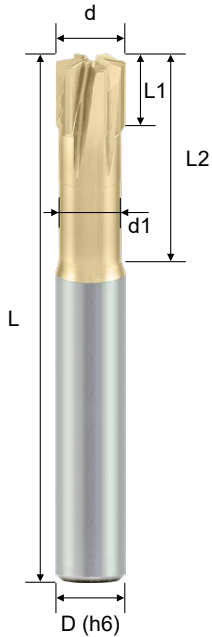
Working Material	Carbon / Alloy steel (< HRC 30)		Carbon / Alloy steel (HRC 35~45)		Stainless steel / Hardened steel (HRC 40~55)		High temperature alloy / Hardened steel (HRC 55~62)										
	Vc		Vc		Vc		Vc										
Vc	150 m/min		135 m/min		120 m/min		80 m/min										
Diameter (d)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)	RPM	fz (mm/z)									
6mm	8000	0.35	7200	0.35	6400	0.35	4300	0.35									
8mm	6000	0.35	5400	0.35	4800	0.35	3200	0.35									
10mm	4800	0.40	4300	0.40	3800	0.40	2600	0.40									
12mm	4000	0.45	3600	0.45	3200	0.45	2100	0.45									
		<table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>0.04d</td> <td>0.5d</td> </tr> </table>		ap	ae	0.04d	0.5d	<table border="1"> <tr> <td>ap</td> <td>ae</td> </tr> <tr> <td>0.04d</td> <td>0.6d</td> </tr> </table>		ap	ae	0.04d	0.6d				
ap	ae																
0.04d	0.5d																
ap	ae																
0.04d	0.6d																
		d ≤ 6		d > 6													

S970 - DouFeed EndMill · Straight Flute · 4F / 6F

高進給銑刀 · 直刃型 · 4 刃 / 6 刃

- Multi-flute and 0° helix geometry design.
- High feed and high metal removal rate in surface milling.
- Suitable for hardened steel HRC 48~70.
- SNAX smooth coating (Al, Ti, Si, N) provides excellent wear resistance and low friction.

EHWUS



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

Order No.	Dia. (d)	ND (d1)	ap (max)	Approx Radius (AR)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)
EHWUS404000S	4	3.70	0.16	0.36	4	12.00	57	6	4
EHWUS606000S	6	5.50	0.25	0.54	6	19.34	57	6	6
EHWUS608000S	8	7.40	0.33	0.72	8	25.29	63	8	6
EHWUS610000S	10	9.20	0.41	0.90	10	30.20	72	10	6
EHWUS612000S	12	11.00	0.50	1.08	12	36.13	83	12	6

Working Material	Hardened steel (HRC 48~56)			Hardened steel (HRC 50~60)			Hardened steel (> HRC 60)			Hardened steel (HRC 64~70)		
	Vc	90~140 m/min			50~90 m/min			40~70 m/min			25~40 m/min	
Diameter (d)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)	fz (mm/z)	ap (mm)	ae (mm)
2mm	0.07	0.06	1.50	0.05	0.05	1.50	0.05	0.05	1.50	0.02	0.04	1.50
3mm	0.11	0.09	2.25	0.08	0.08	2.25	0.07	0.08	2.25	0.04	0.06	2.25
4mm	0.14	0.14	3.00	0.11	0.12	3.00	0.09	0.10	3.00	0.05	0.08	3.00
5mm	0.18	0.18	3.75	0.14	0.15	3.75	0.11	0.13	3.75	0.06	0.10	3.75
6mm	0.15	0.21	4.50	0.14	0.18	4.50	0.12	0.15	4.50	0.06	0.12	4.50
8mm	0.20	0.28	6.00	0.17	0.24	6.00	0.14	0.20	6.00	0.07	0.16	6.00
10mm	0.25	0.35	7.50	0.18	0.30	7.50	0.15	0.25	7.50	0.09	0.20	7.50
12mm	0.29	0.42	9.00	0.22	0.36	9.00	0.18	0.30	9.00	0.11	0.24	9.00
16mm	0.39	0.56	12.00	0.24	0.48	12.00	0.20	0.40	12.00	0.12	0.32	12.00



Solid End Milling

ICONS Descriptions 圖標說明

Tool Material	
	Micro Grain
	Ultra Micro Grain
	Ultra Micro Grain $\leq 0.4\mu\text{m}$

Material Hardness	
	Material Hardness (HRC 35)

Coating	
	UNICO Coated (TiAlN)
	UNAX Smooth Coated (TiAlN)
	TACO Coated (AlTiN)
	ANAX Smooth Coated (AlTiCrN)
	SNAX Smooth Coated (AlTiSiN)
	PNAX Smooth Coated (AlTiXN+ZrN)
	Naco Blue Coated (Nano AlTiSiN)
	DIA Coated (Diamond)
	NDLC Coated (Diamond-like)

Tool Geometry	
	Helix Angle
	Variable Pitch (Unequal Flute Spacing)
	Variable Helix
	Sharp Edge
	Flatland Edge
	Chamfer Edge
	Radius Edge
	2 Flutes
	3 Flutes
	4 Flutes
	5 Flutes
	6 Flutes
	7 Flutes
	8 Flutes

Cutting Application	
	Face Milling
	Slot Milling
	Side Milling
	Helical Milling
	Runge Milling
	Ramping
	Trochoidal Milling
	Profile Milling
	Inner R Side Milling
	Chamfering
	Chamfering
	Undercutting
	Dovetail Slotting
	Dovetail Side Milling

Trouble 情況	Occurrences 原因	Countermeasures 對策
Chipping 崩刃	Too high feed 進給量太大	Reduce feed 降低進給量
	Up milling 逆銑 (向上切削)	Change down milling 順銑 (向下切削)
	Sharp cutting edge 切削刃太鋒利	Honing at the cutting edge-chamfering or rounding if needed 修磨切削刃 - 必要時倒角或倒圓
	Chattering 震動	Check spindle speed down 向下調整主軸轉速
	Too much overhang 刀具突出量太長	Adjust to minimize overhang 將刀具突出量調整為最小
	Unfixed chucking of Endmill 銑刀未牢固夾緊	Check the precision of chuck and collet 調整夾治具精度
Wear 磨損	High Cutting speed 切削速度過高	Decrease cutting speed 減低切削速度
	Low feed 進給量太小	Increase feed 增加進給量
	Up milling 逆銑 (向上切削)	Down milling 順銑 (向下切削)
	High-hardened work piece 材質硬度過高	Choosing special coating endmill 選用特殊鍍膜的銑刀
Tool Breakage 刀具折斷	Too much cutting amount 切削量太大	Decrease cutting amount 減少切削量
	High cutting force 切削力過大	Feed down; spindle speed up 降低進給；提高轉速
	Too much overhang 刀具突出量太長	Adjust to minimize overhang 將刀具突出量調整為最小
Surface Roughness 表面粗糙度	Chattering 震動	Change the cutting condition 改變切削條件
	Generation of built-up edge 排屑不良	Increasing cutting speed & Feed rate or down milling 提高切削速度 & 進給率或順銑
	high feed, low speed 高進給，低切削速度	Reduce feed & Increase speed 降低進給提高切削速度
Accuracy of finished work piece 加工精度	Incorrect Numbers of flute 刃數不夠	Replace more flutes Endmill 更換多刃銑刀
	Deflection of Tool 刀具偏差	Using big diameter tool & Minimize the overhang 使用大刃徑和突出量減至最小